

EXTRA!

for

Windows 98/

Windows NT

User's Guide

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INTRODUCTION

Welcome to *EXTRA!*. Delivering host type information to the familiar setting of Windows, *EXTRA!* takes PC-to-host communications several steps higher by streamlining how you work in an enterprise environment.

EXTRA! gives you access to IBM Mainframe hosts via most direct, remote, or LAN connections. From the point-and-click environment of your PC you can run host applications, transfer files, and integrate data into Windows programs. To simplify your interaction with host resources, use the *EXTRA!* graphical, navigational, and macro tools.

You can use *EXTRA!* in Windows 95, Windows 98 or Windows NT.

Using Display Sessions

EXTRA! gives you a host workspace in Windows called a Display Session. From this window you can enter and receive information directly from the host. This includes any special characters, commands, or functions unique to your host. A File Transfer feature makes it possible for you to send and receive files directly between your PC and a host. Because you are working in Windows you can:

- easily switch between *EXTRA!* sessions and other Windows applications
- resize session windows
- change fonts
- cut, copy, and paste information between your PC and a host

The New Session wizard makes it easy to create new sessions for any installed host type.

Using Printer Sessions

Using an *EXTRA!* Printer Session, you can print IBM Host documents on your local printer.

You can:

- set page layout features
- choose which font you want to use
- print an image of the display screen
- pause or cancel printing
- view the status of a printer or print job
- save the settings of your current printer session and page layout

After you start a print job from the host application in a display session, you can pause or cancel a print job, and monitor the print status of the host, your PC, and your printer.

Desktop Layouts and QuickPads

Desktop layouts let you start work with your windows in a prearranged position on your screen. This is especially useful for running multiple sessions. In addition, you may have a customized QuickPad open for each display session. If saved in a layout, the session windows and the customized QuickPads will always appear exactly as you like them.

QuickPad, a small movable window that “floats” on top of your session, makes frequently used host commands and macros available with a single mouse-click. You can use text and pictures to identify these commands.

Using File Transfer, HotSpots, and Recording Macros

Using the File Transfer feature, you can move files between your PC and the host. You can also use *EXTRA!* OLE capabilities to embed host data into your Windows applications. For example, use OLE to embed host data into a Microsoft Excel spreadsheet.

HotSpots brings Windows “point and click” commands to your host, putting program function keys, macros, *EXTRA!* commands at your fingertips with a click of your mouse.

With the Macro Recorder you can capture frequently used tasks, and then automatically re-play these tasks with a single mouse click or keystroke. You can also add macros to toolbars, QuickPads, and logon scripts. The Macro Editor enhances and expands the Macro Recorder.

Customizing *EXTRA!*

You can extend the standard features in *EXTRA!* and build upon its basic tools. For example, you can customize your toolbars in a number of ways:

- add and delete buttons
- use color or monochrome buttons, and make them large or small
- rearrange the buttons
- create multiple toolbars and load different ones for different sessions

EXTRA! Basic is a full-featured language tool. Use it to edit recorded macros, existing macros, or to create entirely new macros. *EXTRA!* Basic provides the flexibility of a standard Basic language and the power of specific functions for *EXTRA!* and connectivity tasks.

You can use the Keyboard Remapper to reassign host functions to your PC keyboard to fit your work style. You can also assign additional functions and custom macros to unused keys or key sequences.

Microsoft Office

EXTRA! is Microsoft Office Compatible. This means that its toolbars, menus, and accelerator keys are similar to those used by Microsoft Office. If you already know Microsoft Office, then you already know many *EXTRA!* tasks.

The *EXTRA!* for Windows 98 and Windows NT Print Documentation Set

In addition to this *User's Guide*, the *EXTRA!* for Windows 98 and Windows NT documentation set consists of the:

- *EXTRA! Basic Language Reference*
- *EXTRA! OLE Automation Programmer's Reference*

These can be purchased separately or as a set.

EXTRA! Basic Language Reference

The following information is included in the *EXTRA! Basic Language Reference*

- A language summary section
- A description of functions and statements in alphabetical order

OLE Automation Programmer's Reference

The following information is included in the *OLE Automation Programmer's Reference*:

- An overview of how OLE works with *EXTRA!*
- A description of Properties, Methods and Statements in alphabetical order

About This Manual

You'll probably want to get a session between your PC (client) and your host up and running as quickly as possible. The *EXTRA! User's Guide* is designed with this in mind.

- Chapters 1 through 6 cover the basics, including: opening and configuring a display session and a printer session, transferring files between your PC and mainframe, and printing mainframe files to your local printer.
- Chapters 7 through 10 cover the following customization topics: color mapping, using the QuickPad, programming HotSpots, and remapping your keyboard.
- Chapters 11 through 15 explore ways you can work more efficiently using *EXTRA!* -- with macros and the macro editor, security features, and the Status application.
- Appendix A provides information on how to understand mainframe messages.
- The glossary includes a list of common terms.

Conventions

Mouse Commands

If you see the terms “click” and “double-click” within a procedure, press the left mouse button one or two times, respectively. If you need to press the right mouse button as you work in *EXTRA!*, we'll let you know.

Shortcut Keys

EXTRA! provides shortcut keys for several of its commands. These keys are frequently used in combinations. For example, CTRL+T means to hold down the CONTROL key while pressing T.

You can also access *EXTRA!*'s menus by using shortcut keys. These keys function the same way as in your Windows applications. Using the ALT key in combination with the underlined letter of the menu you wish to access will open that menu. For example, (ALT+F) will open the File Menu.

Commands

Specific text you type at a command prompt appears in Courier typeface. Information, such as a filename, that you must supply yourself appears in Courier italic. For example,

- At the DOS command prompt, type:

```
set ind$file=new_name
```

Command keys appear in small capital letters. In the following example, the command ENTER indicates that you should press the Enter key.

- Type your user ID and press ENTER.

Notes

Note: As demonstrated in this paragraph, notes are separated from the rest of the text in your manuals by two margin rules. The information within a note provides helpful and often crucial supplementary material intended to aid you in understanding *EXTRA!* works.

Caution Text



Caution: Always read text that contains an exclamation point in the left margin. It means that there is important information that you need to be aware of. That information may be as simple as a reminder or as critical as a warning.

Let Us Know How We're Doing

Please fill out the Customer Documentation Feedback Card that comes with *EXTRA!* software package to let us know what you think about the documentation. Your comments are valuable to us.

Online Help

The online Help for this release of *EXTRA!* has been created using the advanced functionality of Windows '95 help. Provided below is information on using the Help system.

Note: If the custom installation option was selected during installation, only the Help topics that are applicable to the installation options selected appear in the Help file.

Using Help in *EXTRA!*

The following procedure explains how to access the Contents page in the Help file, and how to make a topic selection.

1. Open a session in *EXTRA!*.
2. Choose the Help menu.
3. Select *EXTRA!* Help Topics.
The Help Contents page appears.
4. Double-click any of the book icons that appear in the Contents page.
The contents of that book display.
5. Double-click any of the document icons located under a book icon.
The help topic associated with that heading appears.

Using Context-Sensitive Help

EXTRA! includes context-sensitive Help. This means that you can:

- access online Help by pressing F1 to view specific information about a dialog box or a menu command
- click the Help button that is located in each dialog box
- activate "What's This" mode by selecting an item in the dialog box and then clicking the right mouse button, or
- click the Help Mode toolbar button, then click the item for which you'd like help

EXTRA! Worksheet

You'll need to know the following information to effectively open and configure display and printer sessions in *EXTRA!*. Check with your system administrator if you are unsure about any of the information in this worksheet.

User ID:

User Password:

Other:

Mainframe Operating System:

- | | | | |
|-----------------------|----------|-----------------------|----------|
| <input type="radio"/> | VM/CMS | <input type="radio"/> | VMS/TSO |
| <input type="radio"/> | MVS/CICS | <input type="radio"/> | VSE/CICS |

Print Commands:

Path for EXTRA! Files:

Notes:

CHAPTER







*Getting Started
with EXTRA!*






This chapter gets you started with *EXTRA!*. It describes the *EXTRA!* icons, explains how to access a list of new features and updates, discusses the startup and shutdown options, introduces session windows and describes how to install *EXTRA!* on a Network using silent mode.

The EXTRA! Icons

The Setup application installs the following icons in your *EXTRA!* folder or program group. (Depending on the type of installation you selected, fewer icons may appear.)

Icon	Description
 EXTRA!	Provides access to the IBM Mainframe host.
 Macro Editor	Displays an editor for writing BASIC language macros, allowing you to automate and customize <i>EXTRA!</i> functions.
 Help	Displays help for <i>EXTRA!</i> .
 Readme File	Contains last-minute information not included in the Help or this User's Guide.
 Attachmate Forum on Microsoft Network	<p>Windows 95 and Windows 98 only. Automatically navigates to the Attachmate forum on the Microsoft Network, where you can retrieve updated product files, technical support material, and product information.</p>
 Uninstall	Removes the 32-bit <i>EXTRA!</i> product from your computer.
	<p>Note: This icon appears in Windows NT only. In Windows 95 and Windows 98, you must choose the Add/Remove Programs icon in the Control Panel. For uninstall details, refer to Appendix A.</p>

Icon	Description
 APPN Configurator	Configures the APPN (Advanced Peer-to-Peer Networking) Node, used to run LU6.2 applications.
 Start/Stop APPN Node	Two icons, one to start and one to stop the APPN Node.
 APPN Node Manager	Provides a visual representation of the APPN Node and its current status.

What's New

A list of the new features and updates included with the most current release of *EXTRA!* for Windows 98 and Windows NT can be found in online Help.

To access the list of new features

1. Open a session.
2. Choose *EXTRA!* Help Topics from the Help menu.
3. Select Using *EXTRA!*, then select Welcome to *EXTRA!*.
4. Select What's New to see a list and explanation of new features and updates included with the latest release.

Starting EXTRA!

You can run *EXTRA!* on Windows 95, Windows 98 or on Windows NT, version 3.51 or above. Follow the startup procedure applicable to your operating system.

To start EXTRA!

Use one of the following methods, depending on your environment.

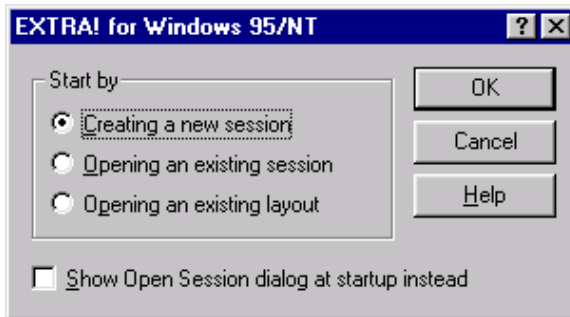
From Windows 95 or Windows 98

From Windows NT

1. Click the Start button, then point to Programs.
2. On the Programs menu, point to the *EXTRA!* folder.
3. Click *EXTRA!*.

1. Open the *EXTRA!* program group.
2. Double-click the *EXTRA!* icon.

You are prompted to select one of the following startup options.



If you choose to create a session, *EXTRA!* will display the New Session wizard, described in the next section.

If you choose to open a session, *EXTRA!* will display a list of available sessions, including demonstration sessions simulating connections to a mainframe.

For more information, refer to page 1-7.

If you choose to open a layout, *EXTRA!* will display a list of desktop layouts. A desktop layout defines how one or more session windows appear on your desktop. When opened, the layout positions the windows the way you defined them. For more information, refer to page 1-8.

Note: Unless you have previously created desktop layouts, none will be available to open.

Creating Sessions

Using the New Session wizard, you can create sessions of any installed host type. You have the option of creating a session when you first start *EXTRA!*. And when you're working in an open session, you can create additional sessions — as many as your PC memory can handle.


To create a session, you must provide the New Session wizard with the following information:

- Session type — display or printer.
- Connection type and settings.
- File transfer type applicable to the selected host type.

The wizard creates a session with many default settings, which determine how the session appears, operates, and interacts with you. You can later edit these settings to accommodate your preferences.

Tip: To create a new session with a profile identical or similar to an existing session, use the Save Session As command instead of the New Session wizard. Both procedures are described below.

To create a session with the New Session wizard

1. If you have a session open, do one of the following to create a new one:
 - From the File menu, choose New Session.
 - Choose the  button from the toolbar.
2. Select a host type and click Next.
3. Select a session type and click Next.
4. Select a connection type and click Next.
5. Set the options for the selected connection and click Next.

6. Select a file transfer type.
7. If you're satisfied with your settings, click Finish.

EXTRA! displays the new session.

8. From the File menu, choose Save.

You can save the session with any name. The default file extensions indicate the session type — .EDP for display sessions, and .EPP for printer sessions.

To create a session with the Save Session As Command

1. Switch to the session that you want to save to a new session.
2. From the session's File menu, choose Save Session As.
3. Type a filename for the new session.

So that you can distinguish between display and printer sessions, we recommend that you maintain the file extensions of .EDP (display session) and .EPP (printer session).

4. Choose Save.

To add a session icon to your *EXTRA!* program group in Windows NT 3.51

1. From the Program Manager File menu, choose New.
2. Select the Program Item option and choose the OK button.
The Program Item Properties dialog box is displayed.
3. In the Description field, type a short description of the icon.
4. Choose the Browse button.

The Browse dialog box is displayed.

5. In the Browse dialog box, change the Directories area from the working directory to the directory in which *EXTRA!* was installed. Double-click the subdirectory \SESSIONS.
6. Highlight the session that you want to include in your *EXTRA!* Program Group and choose the OK button.

The Browse dialog box closes and the path and session name are displayed in the Command Line field.


7. In the Working Directory field, type the path to *EXTRA!*.
For example, C:\Program Files\E!PC\Sessions.
8. Choose the OK button.

Opening Sessions

Opening a session connects your PC to the host and provides a window for accessing host data. You can open a session when you first start *EXTRA!*, and from that session you can open additional sessions — as many as your PC memory can handle.

You can open both display and printer sessions for any installed host type.

To open a session

1. If you have a session open, do one of the following to open another session:
 - If the desired session is one of the three most recently opened sessions, choose the session name from the bottom of the File menu.
 - From the File menu, choose Open Session.
 - Choose the  button from the toolbar.
2. Type a session filename, or select a file from the list box.

By default, session files are located in Sessions. Display sessions include the .EDP extension; printer sessions include the .EPP extension.

Note: The mainframe demo session simulates a connection to the host.

3. Choose Open.

The session window appears.

Desktop Layouts

Desktop layouts allow you to open one or more *EXTRA!* windows in a prearranged position on your screen. Desktop layouts are especially useful for running multiple sessions. For example, you may consistently work with three display sessions and one printer session. In addition, you may have a QuickPad assigned for each display session. If this arrangement of windows and utilities is saved as a layout, then you can re-open all of them with a single command.

Using a desktop layout involves defining the how you want *EXTRA!* windows to appear on your screen, saving this arrangement as a layout, and then starting *EXTRA!* by opening the layout.

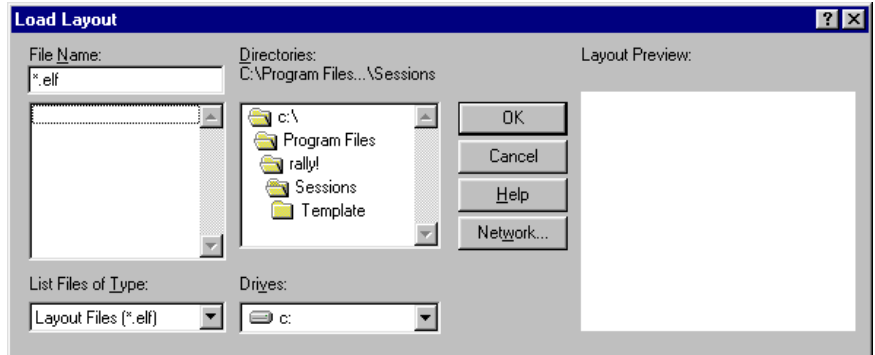
These procedures are described below.

To create a layout

1. Open sessions and any *EXTRA!* applications that you may want to run concurrently.
2. Set the size and position of the windows.
3. Using the Options menu commands, set your session preferences.
4. From the File menu, choose Save Layout.
5. Type a new desktop layout filename, or scroll through the Filename list and select an alternate layout file. (We suggest that you use the .ELF extension.)
6. Choose OK.

Open Layout Dialog Box

Use this dialog box to open a previously saved layout. If you already have a session running, that session will be disconnected and closed before the new session(s) are opened.



Load Layout Dialog Box

Open Layout: Opens a desktop layout — a set of *EXTRA!* windows whose appearance and positions on the screen you define. When loaded, the layout opens and positions the windows as previously saved.

Filename: Provides a text box for typing the layout filename. If the file exists in the specified path, it appears in the list box. You can use * (asterisk) as a wildcard. For example, you can type *.* to list all files. You can also include the full path of a file.

File List Box: Lists the files in the selected folder. When you select a file, the layout appears in the Layout Preview area. You can double-click the file to open the layout.

List Files of Type: Shows the types of files that you can display in the list box. By default, layouts include an ELF extension.

Drives: Lists the local and, if applicable, network drives that you can select.

Folders: Lists the folders on the selected drive. To open a folder, double-click it.

Network: Lists the network drives.

Layout Preview: Shows a preview of how the selected layout will appear to help you choose the correct layout.

To open a layout

1. From a desktop icon or Start menu, start *EXTRA!*.
2. In the Start by group, choose Opening an existing layout.
3. In the Open Layout dialog box, choose the name of the layout you want.
4. Choose Open.

–or–

From an open session, choose Open Layout from the File menu.

5. Select a desktop layout filename.
6. Choose Open.

One or more *EXTRA!* windows appear as saved in the layout.

The Session Window

Depending on the type of session that you opened or created, *EXTRA!* displays the window for a display or printer session. (If you open a desktop layout, multiple windows of either session type can appear.) This section provides an overview of each type of window.

Display Session Window

The illustration below shows a display session window for an IBM mainframe connection. (The user interface for a display session is the same for any type of host connection.) A display session includes the standard window elements, including a status bar. You can toggle the status bar on and off with the Status Bar command in the View menu.

The illustration shows a default session window as created by the New Session Wizard. You can, however, customize how a session window appears, operates, and interacts with you

Printer Session Window

The illustration below shows a printer session window, from which you can print IBM mainframe or AS/400 documents on a PC printer. For details, refer to Chapter 7, “Printing.”

Note: A printer session is not required to print from a VAX/VMS, UNIX, or asynchronous host.

Exiting Sessions

You can exit individual sessions, or you can exit *EXTRA!* completely with one command. Exiting *EXTRA!* simultaneously closes all open sessions and related programs, like Macro Editor.

Exiting from a single session breaks that session’s connection to the host and closes the session window. Exiting from an unused session frees up PC memory and makes a host resource available to other users. Other open sessions and *EXTRA!* applications are unaffected. (Exiting the last open session is equivalent to exiting the *EXTRA!* product.)

Note: To break a session’s host connection without closing its window, disconnect rather than exit the session.

This section tells you how to disconnect a session, exit a session, and exit from the *EXTRA!* product.

To disconnect a session

1. Log off the session.
2. From the Session menu, choose Disconnect.
3. If the session is connected, respond to the Disconnect prompt.
4. If you changed session settings without saving them, respond to the Save prompt.

To exit a single session

1. Log off the session.
2. From the File menu, choose Exit Session.
3. If the session is connected, respond to the Disconnect prompt.
4. If you changed session settings without saving them, respond to the Save prompt.

To exit EXTRA!

1. Log off sessions.
2. From the File menu, choose Exit *EXTRA!*
3. If you changed session settings without saving them, respond to the Save prompt.

CHAPTER

3270
Connection
Types



This chapter describes 3270 connection types available with *EXTRA!*. To configure a connection you will need information about your mainframe configuration, as well as your LAN configuration if you're running *EXTRA!* on a network.

To quickly find the connection type applicable to your connectivity, use the table below.

Connection Type	Page
802.2 Direct Connect	2-4
Attachmate Gateway via IPX/SPX	2-12
Attachmate Gateway via TCP/IP	2-15
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Connection Type	Page
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ZIP! Server via TCP/IP	2-129

802.2 Direct Connect (IBM Mainframe)

With the 802.2 Direct Connect protocol, you can connect token-ring or Ethernet workstations to a mainframe on a token-ring network. A gateway is not required. The mainframe, controller, or front-end processor requires a token-ring interface coupler (TIC). If you are connecting an Ethernet LAN to a token-ring network, a router that supports transparent source routing is also required.

802.2 Direct Connect - System Requirements (IBM Mainframe)

A DLC 802.2 connection requires:

- IBM's token-ring interface coupler (TIC), installed in a 3270, 3725, or 3745 front-end processor, a 3174 control unit, or a 9370 mainframe
- **Token-Ring LAN only:**

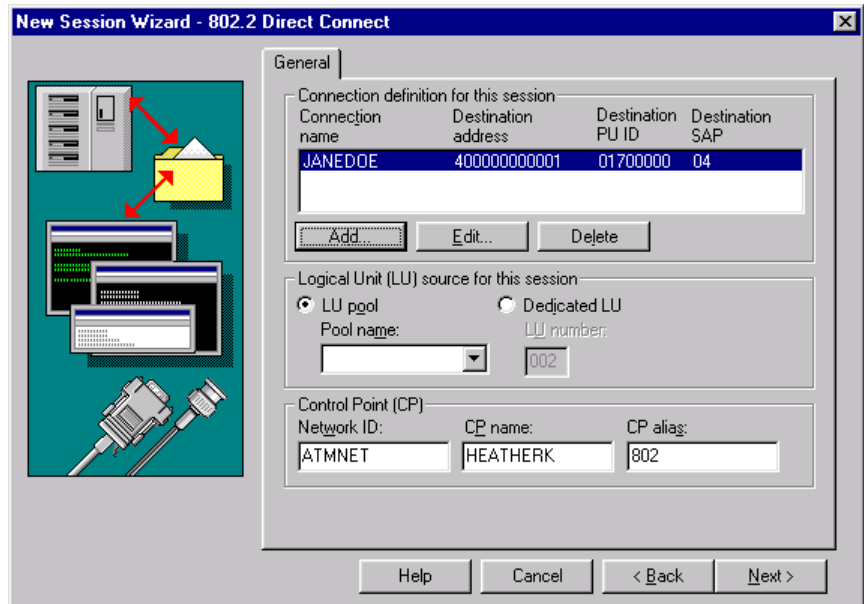
Any token-ring LAN adapter, such as an IBM PC Network Adapter II/A or an IBM Token-Ring Network PC Adapter (types /I, /II, or /A), installed in the workstation

- **Ethernet LAN only:**

An Ethernet adapter installed in the workstation, and a bridge supporting transparent source routing for connecting the Ethernet LAN to the token-ring network.

The 802.2 Direct Connect, General Page (IBM Mainframe)

Use the 802.2 Direct Connect, General pagebox to specify LU resources to be used for those connections. Consult your system administrator for the correct values.



New Session Wizard - 802.2 Direct Connect General page

You can change the following options or attributes:

Connection Definition list: Displays the currently available connection definitions and shows the parameters for each definition.

Connection Name: Displays the name of the connection definition. This name must be unique among all SDLC and 802.2 connections on your workstation.

Destination Address: Displays the address of the mainframe.

Destination PU ID: Identifies to the host a PU used by your workstation. The PU ID is an 8-digit hexadecimal number consisting of the 3-digit IDBLK value followed by the 5-digit IDNUM value from your VTAM definition.

Destination SAP: Identifies the Service Access Point (SAP) of the controller, front-end processor, or mainframe to which the workstation is connected. The SAP must be a hexadecimal multiple of 04 in the range of 04 to 254, for example, 08, 0C, 10, and so on. You can get this number from your system administrator. The default SNA SAP is 04.

Add: Adds a new connection definition with a name that you select and default connection settings.

Edit: Changes the values of an existing connection definition.

Delete: Removes the selected connection definition.

Logical Unit (LU) Source for This Session

LU Pool: Makes a connection using the first available Logical Unit (LU) from a given pool of LUs.

Pool Name: Lists the names of the LU pools that are configured for 802.2 connections.

Dedicated LU: Allows you to configure your session to a specific LU number. If you select this option, you must enter a valid LU Number.

LU Number: Displays the LU number that will be used to make a connection. For more information, contact your system administrator.

Control Point (CP)

Network ID: Combined with the CP Name, forms a fully qualified Control Point (FQCP) name.

CP Name: Combined with the Network ID, forms a fully qualified Control Point (FQCP) name.

CP Alias: A local name used for the fully qualified Control Point (FQCP) name, consisting of both the Network ID and the CP Name. It is set to the CP Name if not specified.

The Edit DLC 802.2 Definition Dialog Box (IBM Mainframe)

Use the Edit DLS 802.2 Definition dialog box to add a new 802.2 connection definition or to edit an existing one. Your system administrator can provide you with the necessary values.

Support DLUR on this connection:

Destination parameters:

Address and format:
 Destination LAN address (MAC): 400000000001
 Token ring
 Ethernet

Destination node type:
 APPN host (EN, NN)
 PU 2.1 (LEN)
 PU 2.0 (XID0)

Destination PU ID: 01700000 Destination SAP: 04

Workstation parameters:
 I-frame size: 2042 Workstation SAP: 04 LAN adapter number: 0

LU ranges:

Pool name	Base name	Minimum LU	Maximum LU
HEATHER	HEATH	1	27

Buttons: Add... Edit... Delete

Buttons: OK Cancel Help

Edit DLC 802.2 definition dialog box

This dialog box has the following fields:

Support DLUR on This Link: Select this option to allow a connection through a Dependent LU Requester (DLUR) to a Dependent LU Server (DLUS).

Destination Parameters

Destination LAN Address (MAC): Indicates the address on the mainframe. The format can be Ethernet or Token Ring based on your mainframe configuration.

Token Ring: Indicates that you will be using a Token Ring address.

Ethernet: Indicates that you will be using a Ethernet address.

Destination Physical Unit ID: Identifies to the host a PU used by your workstation. The PU ID is an 8-digit hexadecimal number consisting of the 3-digit IDBLK value followed by the 5-digit IDNUM value from your VTAM definition.

Destination SAP: Identifies the Service Access Point (SAP) of the controller, front end processor, or the mainframe to which the workstation is connected. The SAP must be a hexadecimal multiple of 04 in the range of 04 to 254, for example, 08, 0C, 10, and so on. You can get this number from your system administrator. (The default SNA SAP is 04.)

Workstation Parameters

I-Frame Size: Specifies the packet size of an information frame (I-Frame), which the host uses to transfer data through your LAN adapter to your workstation. Choose an I-Frame size that is consistent with your workstation's LAN Adapter and the I-Frame size specified on the mainframe network. The default is 2042

Workstation SAP: Identifies the Service Access Point (SAP) for your workstation.

LAN Adapter Number: Specifies which adapter you are using. You can have up to two LAN adapters installed on your PC. If you are configuring *EXTRA!* for a second adapter, change this value to 1; otherwise use the default value

Destination Node Type

APPN Host (EN, NN): Select this option to connect to an up-level PU type 2.1 node (Network Node or End Node).

PU 2.1 (LEN): Select this option to connect to a back-level Low-Entry Networking (LEN) node. LEN nodes do not support APPN function.

PU 2.0 (XID0): Select this option to connect to a type 2.0 node.

LU Ranges

Pool Name: The name of the LU pool the range of LUs will belong to.

Base Name: The name of the LU range to which the LUs belong.

Minimum LU: The minimum LU value for the range.

Maximum LU: The maximum LU value for the range.

Add: Creates a new LU range.

Edit: Changes the LU range.

Delete: Permanently removes the selected LU range.

To configure a DLC 802.2 (IBM Mainframe) connection

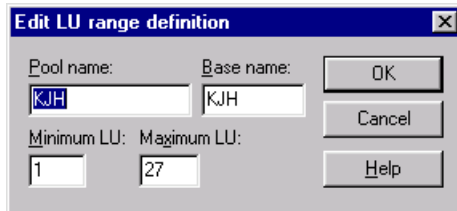
1. Start a new session, and select 802.2 Direct Connect as your Connection type.
2. From the General page, select a connection definition.
3. Choose the Edit button to change the settings.

The Edit dialog box opens.

4. Set the appropriate destination parameters, workstation parameters, and destination node type.
Refer to the Related Topics button below for more details on each option. Contact your system administrator if you have any questions.
5. Choose the OK button to save your changes.
6. Select the appropriate Logical Unit source.
7. Enter the Control Point Network ID and Name for your node.

The Edit LU Range Definition Dialog Box (IBM Mainframe)

Use the Edit LU Range Definition dialog box to add a new LU range definition or edit an existing one.



Edit LU Range definition dialog box

This dialog box has the following fields:

Pool Name: Enter the name of the LU pool to which the range of LUs will belong.

Base Name: Enter the name of the LU range to which the LUs belong.

Minimum LU: Enter the minimum LU value for the range.

Maximum LU: Enter the maximum LU value for the range.

To add a DLC 802.2 (IBM Mainframe) LU range)

1. From the 802.2 Direct Connect General page, select the connection definition for which you want to add an LU range and choose the Edit button.

The Edit DLC 802.2 Definition dialog box opens.

2. Choose the Add button.

The Add LU Range Definition dialog box opens.

3. Type the LU range definition.

4. Choose the OK button.

To change a DLC 802.2 (IBM Mainframe) LU range

1. From the 802.2 Direct Connect General page, select the connection definition for which you want to add an LU range and choose the Edit button.

The Edit DLC 802.2 Definition dialog box opens.

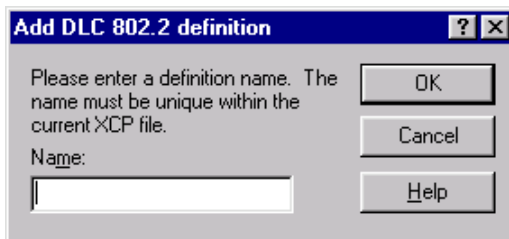
2. Select the LU range that you want to change. Choose the Edit button.

The Edit LU Range Definition dialog box opens.

3. Type the appropriate changes.
4. Choose the OK button.

The Add DLC 802.2 Definition Dialog Box (IBM Mainframe)

Use the Add DLC 802.2 Definition dialog box to type in a name for your connection definition. This name must be unique for all 802.2, SDLC, COAXDFT, NCIA, and DLUR connections.



Add DLC 802.2 definition dialog box

You can change the following options or attributes:

Name: Type in a unique name for your definition.

To create a new DLC 802.2 (IBM Mainframe) connection

1. Start a new session, and select **802.2 Direct Connect** as your connection type.
2. From the **General** page, choose the **Add** button to define a connection definition.

The **Add DLC 802.2 Definition** dialog box opens.

3. Type a name for the new connection definition, then review and change the default parameters as necessary.
4. Choose **OK**.

A new **Connection Name** will appear in the list of connection definitions.

For more information on a particular field, refer to the **General** page topic within this section. You may also use the **What's This?** feature to get a brief description of each field.

To delete a DLC 802.2 (IBM Mainframe) connection definition

1. With an **802.2 Direct Connect** session open, from the **802.2 Connection Definition** list, select the connection definition that you want to delete, then choose the **Delete** button.
2. Choose the **Delete** button.
3. Choose **OK** when asked for confirmation.

Attachmate Gateway via IPX/SPX

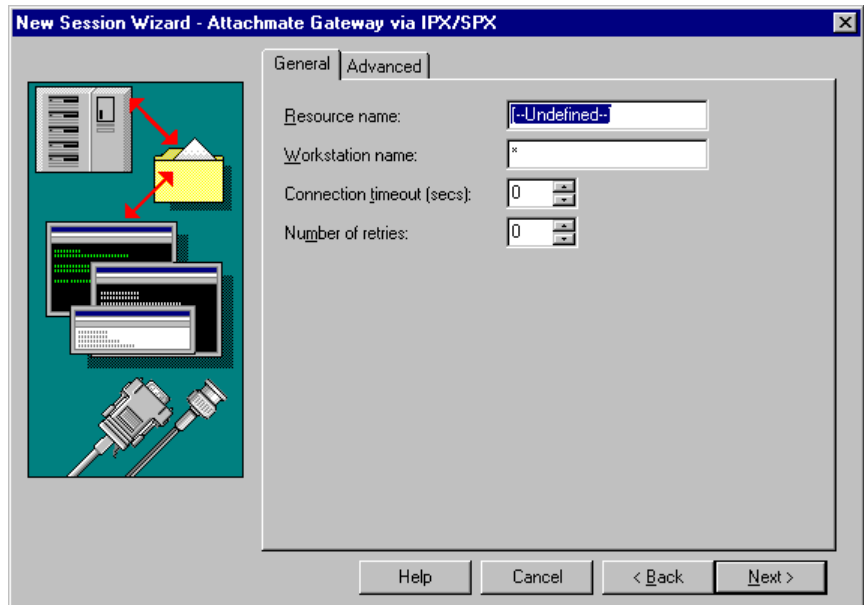
You can communicate with IBM mainframes via an Attachmate Gateway, using the **IPX/SPX** (Internetwork Packet Exchange/Sequenced Packet Exchange) protocol.

Attachmate Gateway via IPX/SPX - System Requirements

Workstation requirements are listed below. If any of the Novell NetWare files listed are not located on the workstation, check the NetWare server, or contact your SAA Gateway administrator.

- A LAN adapter that supports **IPX**.
- Client service for **NetWare**.
- **IPX/SPX** Compatible transport.

The Attachmate Gateway via IPX/SPX General Page



New Session Wizard - Attachmate Gateway via IPX/SPX General page

Use this page to define the Attachmate Gateway connection via IPX/SPX protocol. From this page you will need to set the Resource Name and your Workstation Name. You also have the option of setting how long the system will try to connect and the number of retries.

The following section describes the individual fields on this page.

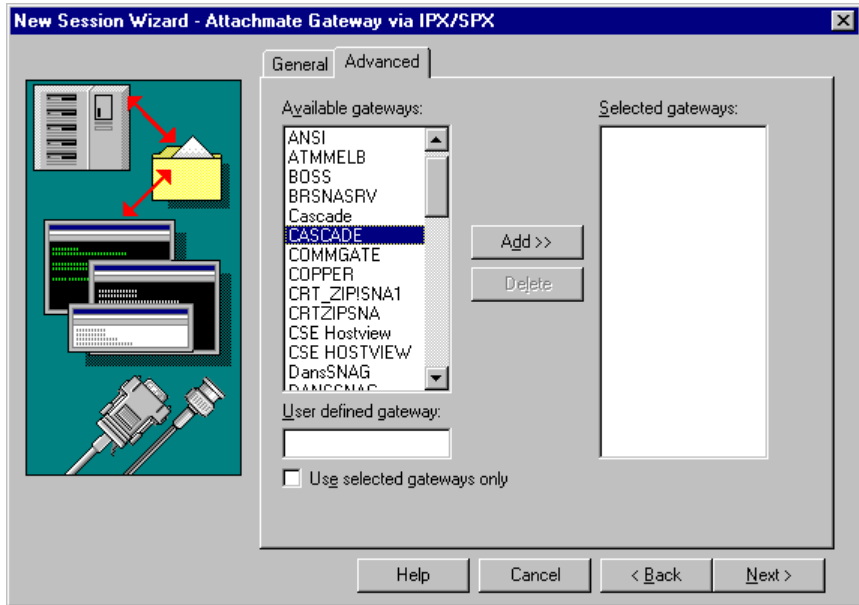
Resource Name: Identifies the name of the resource to which the workstation will connect.

Workstation Name: Identifies the name of the workstation that will connect to the server.

Connection Timeout (secs): Specifies how long *EXTRA!* for Windows 98 and Windows NT will wait before it aborts a connection.

Number of Retries: Specifies the number of times *EXTRA!* will try to connect.

The Attachmate Gateway via IPX/SPX Advanced Page



New Session Wizard - Attachmate Gateway via IPX/SPX Advanced page

Use this page to set the gateway options for your IPX/SPX connection. You can choose from a list of available gateways or you can define your own gateway.

The following section describes the individual fields on this page.

Available Gateways: Displays the available gateways based on your existing network connection.

User Defined Gateway: Entry field where you can specify a gateway name. The gateway name will then be added to the Select Gateway list.

Use Selected Gateways Only: Specifies that *EXTRA!* will only attempt to make a connection with the gateways specified in the Selected Gateway list.

Selected Gateways: Displays the gateway names that will be used to establish a connection.

Add: Adds a gateway name to the Selected Gateway list.

Delete: Removes a gateway name from the Selected Gateway list.

To configure an Attachmate Gateway connection via IPX/SPX

1. Start a new session, and select Attachmate Gateway via IPX/SPX as your connection type.
2. From the General page, enter the resource to which the workstation will connect.
3. Enter your workstation name. Each session can use a different workstation name even when going to the same Attachmate Gateway.
4. Enter a connection timeout value. The default is 10 seconds.
5. From the Advanced page, select a gateway from the Available Gateway list or enter a gateway name or address in the User Defined Gateway field.
6. Select Add.
7. Repeat Steps 5 and 6 for each gateway to which you want to try to connect.

Attachmate Gateway via TCP/IP

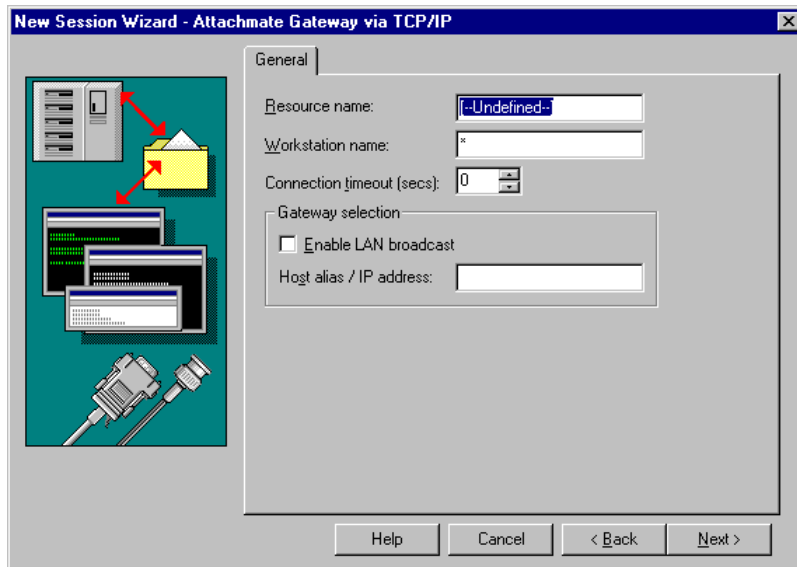
You can communicate with IBM mainframes via an Attachmate Gateway, using a TCP/IP (Transmission Control Protocol/Internet Protocol) protocol.

Attachmate Gateway via TCP/IP - System Requirements

A TCP/IP connection requires:

- A communications adapter (Token-Ring or Ethernet adapter) or modem using the Microsoft dial-up Networking adapter that passes TCP/IP packets.
- A TCP/IP stack compliant with the Windows Sockets (WinSock) 1.1 specification.

The Attachmate Gateway via TCP/IP General Page



New Session Wizard - Attachmate Gateway via TCP/IP General page

Use this page to define the Attachmate Gateway connection via TCP/IP protocol. From this page you will need to set the Resource Name and your Workstation Name. You also have the option of setting how long the system will try to connect and the number of retries.

The following section describes the individual fields on this page.

Resource Name: Identifies the name of the resource to which the workstation will connect.

Workstation Name: Identifies the name of the workstation that will connect to the server.

Connection Timeout (secs): Specifies how long *EXTRA!* will wait before it aborts a connection. The default is 0, which causes no timeout.

Gateway Selection

Enable LAN Broadcast: When selected, *EXTRA!* will broadcast a resource request to all gateways on the LAN, connecting to the resource of the first gateway that responds.

Host Alias/IP Address: Specifies the host name or IP address to which the session will connect.

To configure an Attachmate Gateway connection via TCP/IP

1. Start a new session, and select Attachmate Gateway via TCP/IP as your connection type.
2. From the General page, enter the resource to which the workstation will connect.
3. Enter your workstation name.
4. Enter a connection timeout value. The default is 10 seconds.
5. Enter the Host Alias/IP Address of the Attachmate Gateway.
-or-

Select the Enable LAN Broadcast option and *EXTRA!* will try to connect to any available resource on your LAN (Local only).

Attachmate SNA Gateway via IPX/SPX Connection

With *EXTRA!* you can communicate with IBM mainframes via Attachmate SNA Gateway, using an IPX/SPX (Internetwork Packet Exchange/Sequenced Packet Exchange) protocol. This section describes the Attachmate SNA Gateway connectivity options for IPX/SPX. To set these options, you will need information about gateway names, group names, and resource names.

Attachmate SNA Gateway via IPX/SPX - System Requirements

Workstation requirements are listed below. If any of the Novell NetWare files listed are not located on the workstation, contact your system administrator.

- A LAN adapter that supports IPX
- Client Service for NetWare
- IPX/SPX compatible transport

The gateway computer must run version 2.0 or later of Attachmate SNA Gateway.

The Attachmate SNA Gateway via IPX/SPX General Page

Use this page to configure an Attachmate SNA Gateway connection via IPX/SPX. You can define a new connection configuration, edit an existing configuration, or you can enable or disable a configuration from the Connection list. This page also has copy/paste features which make it easier to create a series of connection configurations.



New Session Wizard - Attachmate SNA Gateway via IPX/SPX General Page

The following section describes the fields on this page.

Connection list: Displays the currently available connection definitions and shows the parameters for each definition. You can configure up to six connections for each session..

You can clear the check box to the left of each server to disable a specific configuration. If a server displayed in the list is going to be down for an extended period of time, you can disable it (without deleting it), and reconfigure the server later.

Gateway Name: Specifies the names of the gateways to which you want to attach. Place a check in the box next to the gateways to which you want to attempt to connect for your session.

Group Name: Specifies a group to which the gateway belongs. *EXTRA!* will connect to the gateway from this group with the lightest load.

Resource Name: Specifies a selected resource from the gateway. This resource is common to the other gateways in the selected gateway's group as well.

Add: Configures a new connection.

Edit: Modifies the selected Connection.

Delete: Removes the selected connection entry from the Connection list.

Copy: Copies the selected entry from the connection list to a temporary buffer.

Paste: Pastes the selected entry from the temporary buffer into the Connection list.

List Retries

Enable Infinite List Retries: Continues to attempt a connection until successful.

Number of Retries: Indicates the number of times *EXTRA!* will try to make a connection after each unsuccessful attempt. Use the arrows to increase or decrease the number of retries. You can select a number between 0 and 99. The default is 0.

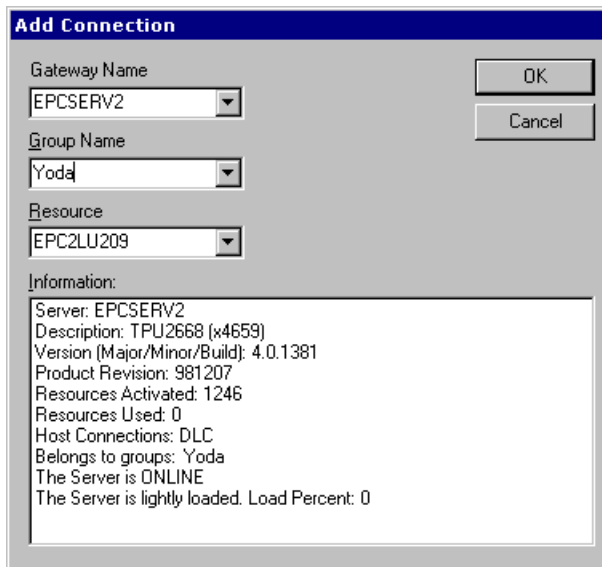
Delay Between Servers (secs): Indicates the amount of time (seconds) *EXTRA!* will wait before trying the next selected gateway in the Connection list. The default is 3 seconds.

Connection Timeout (secs): Indicates the amount of time (seconds) *EXTRA!* will wait to establish a connection. The default is 10 seconds.

Up/Down Buttons: Reorders the gateway names within the Connection list. The order determines which gateway name is tried first, then second, and so on until a connection is made.

Enable Server Failure Rollover: If this option is selected and the connected gateway fails after the session is established, *EXTRA!* attempts to continue the session by connecting to the next gateway in the Connection list.

The Add/Edit Connection Dialog Box



Add/Edit Connection dialog box

Use this dialog box to define a connection for an Attachmate SNA Gateway via IPX/SPX or to edit an existing connection definition.

This dialog box has the following options:

Gateway Name: Specifies the gateway to use. Type in a gateway name, or select one from the list.

Group Name: Displays the group or groups to which the specified gateway belongs. To help balance the load on related gateways, *EXTRA!* connects to the least-loaded gateway from the selected group. To connect only to the specified gateway and not another gateway in the same group, select the asterisk (*).

Resource: Displays the resource pools connected to the selected gateway or group. Selecting the asterisk (*) is equivalent to selecting “Clients” from the list.

Information: Displays various details about the selected gateway.

To configure an Attachmate SNA Gateway connection via IPX/SPX

1. Start a new session, and select Attachmate SNA Gateway via IPX/SPX as your connection type.
2. From the General page, click the Add button.
The Add/Edit Connection dialog box appears.
3. In the Gateway Name field, type the name of the Attachmate SNA Gateway to which you want to attach, or select a gateway from the list.
4. From the Group Name list, select the name of the group to which the gateway belongs. If you select the asterisk (*), *EXTRA!* will connect only to the gateway specified in the Gateway Name field; it will not attempt to connect to any of other gateways grouped with the specified gateway.
5. From the Resource list, select a resource pool to use. Selecting the asterisk (*) is equivalent to selecting “Clients” from the list.
6. When you are satisfied with your selections, click the OK button to save the configuration.

The connection configuration will now appear in the connection list on the Attachmate SNA via IPX/SPX Gateway General page.

Attachmate SNA Gateway via TCP/IP Connection

With *EXTRA!* you can communicate with IBM mainframes via Attachmate SNA Gateway, using TCP/IP (Transmission Control Protocol/Internet Protocol). This section describes the Attachmate SNA Gateway connectivity options for TCP/IP. To set these options, you will need information about gateway names, group names, resources, and IP addresses.

Attachmate SNA Gateway via TCP/IP - System Requirements

To establish an Attachmate SNA Gateway connection via TCP/IP, *EXTRA!* requires:

- A TCP/IP compatible transport on the workstation.
- Attachmate SNA Gateway version 2.0 or later on the gateway computer.

The Attachmate SNA Gateway via TCP/IP General Page

Use this page to configure an Attachmate SNA Gateway connection via TCP/IP. You can define a new connection configuration, edit an existing configuration, or you can enable or disable a configuration from the Connection list. This page also has copy/paste features which make it easier to create a series of connection configurations.



New Session Wizard - Attachmate SNA Gateway via TCP/IP General page

The following section describes the fields on this page.

Connection list: Displays the currently available connection definitions and shows the parameters for each definition. You can configure up to six connections for each session.

You can clear the check box to the left of each server to disable a specific configuration. If a server displayed in the list is going to be down for an extended period of time, you can disable it (without deleting it), and reconfigure the server later.

Gateway Name: Specifies the names of the gateways to which you want to attach. Place a check in the box next to the gateways to which you want to attempt to connect for your session.

Group Name: Specifies a group to which the gateway belongs. *EXTRA!* will connect to the gateway from this group with the lightest load.

Resource Name: Specifies a selected resource from the gateway. This resource is common to the other gateways in the selected gateway's group as well.

Add: Configures a new connection.

Edit: Modifies the selected connection.

Delete: Removes the selected connection entry from the Connection list.

Copy: Copies the selected entry from the Connection list to a temporary buffer.

Paste: Pastes the selected entry from the temporary buffer into the Connection list.

List Retries

Enable Infinite List Retries: Continues to attempt a connection until successful.

Number of Retries: Indicates the number of times *EXTRA!* will try to make a connection after each unsuccessful attempt. Use the arrows to increase or decrease the number of retries. You can select a number between 0 and 99. The default is 0.

Delay Between Servers (secs): Indicates the amount of time (seconds) *EXTRA!* will wait before trying the next selected gateway in the Connection list. The default is 3 seconds.

Connection Timeout (secs): Indicates the amount of time (seconds) *EXTRA!* will wait to establish a connection. The default is 10 seconds.

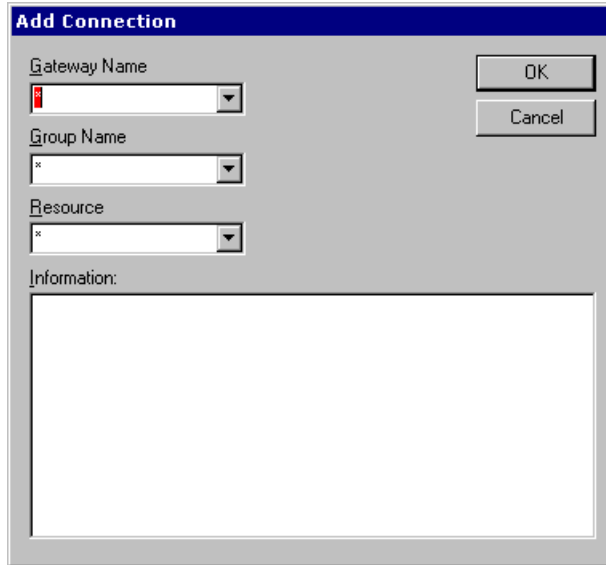
Up/Down Buttons: Reorders the gateway names within the Connection list. The order determines which gateway name is tried first, then second, and so on until a connection is made.

Port Number: Port 2317 is assigned to *EXTRA!*. It is recommended that this value remain unchanged unless it conflicts with another TCP application.

Enable Server Failure Rollover: If this option is selected and the connected gateway fails after the session is established, *EXTRA!* attempts to continue the session by connecting to the next gateway in the Connection list.

The Add/Edit Connection Dialog Box

Use this dialog box to define a connection for an Attachmate SNA Gateway via TCP/IP or to edit an existing connection definition. To define a connection you need to select a gateway, server, and resource.



Add/Edit Connection dialog box

This dialog box has the following fields:

Gateway Name: Specifies the gateway to use. Type in the name or IP address of an Attachmate SNA gateway.

Group Name: Displays the group or groups to which the specified gateway belongs. To help balance the load on related gateways, *EXTRA!* connects to the least-loaded gateway from the selected group. To connect only to the specified gateway and not another gateway in the same group, select the asterisk (*).

Resource Name: Displays the resources connected to the selected gateway or group. Selecting the asterisk (*) is equivalent to selecting “Clients” from the list.

Information: Displays various details about the selected gateway.

To configure an Attachmate SNA Gateway connection via TCP/IP

1. Start a new session, and select Attachmate SNA Gateway via TCP/IP as your connection type.
2. From the General page, click the Add button.
The Add/Edit Connection dialog box appears.
3. In the Gateway Name field, type the name or IP address of the Attachmate SNA Gateway to which you want to attach, or select a gateway from the list.
4. From the Group Name list, select the name of a group to which the gateway belongs. If you select the asterisk (*), *EXTRA!* will connect only to the gateway specified in the Gateway Name field; it will not attempt to connect to any of other gateways grouped with the specified gateway.
5. Select a resource from the Resource list.
6. When you are satisfied with your selections, click the OK button to save the configuration.

The connection configuration will now appear in the connection list on the Attachmate SNA via TCP/IP Gateway General page.

Cisco NCIA Connection

You can communicate with IBM mainframes via a Cisco NCIA (Native Client Interface Architecture) Connection. NCIA is a communication protocol that simulates a direct connection to a host by encapsulating SNA traffic into TCP/IP packets for media independent transmission. This method creates a direct connection to the host without the critical transmission timing requirements of a true direct connection. If you are connecting an Ethernet LAN to a Token-Ring network, a router that supports Transparent Source Routing is also required.

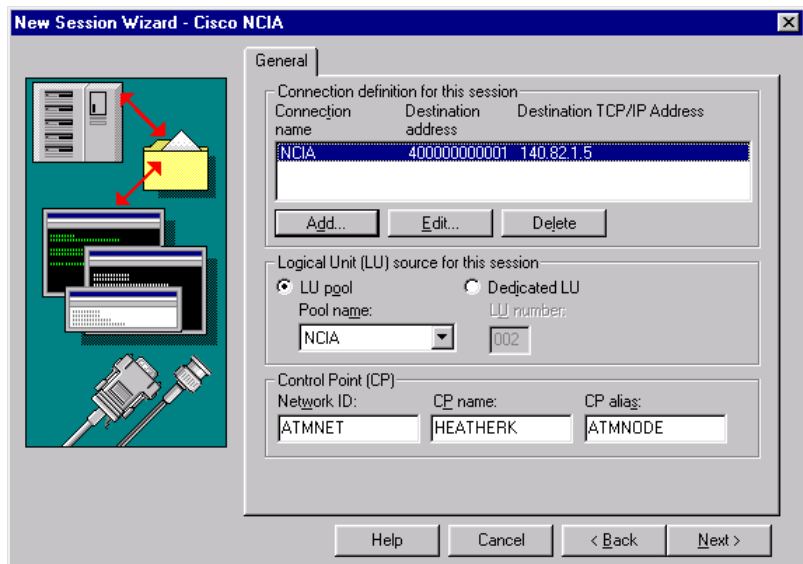
EXTRA! also provides Dependent LU Requester (DLUR) connections using NCIA protocol.

Cisco NCIA - System Requirements

A Cisco NCIA connection requires:

- An IBM Token-Ring Interface Coupler (TIC), installed in a 3270, 3725, or 3745 Front End Processor, a 3174 Control Unit, or a 9370 mainframe.
- A communications adapter (Token-Ring or Ethernet adapter) or modem that passes TCP/IP packets.
- A TCP/IP protocol compliant with the Windows Socket (WinSock) 1.1 specification.
- A Cisco router with Remote Source Route Bridging installed and enabled.
- Your workstation's TCP/IP address configured on the Cisco router.

The Cisco NCIA General Page



New Session Wizard - Cisco NCIA General page

Use this page to select and create connection definitions for your Cisco NCIA connection. A connection definition consists of a Connection Name that you supply, a Destination Address, and a Destination TPC/IP Address (if applicable). The link can also be DLUR (Dependent LU Requester) enabled.

You can also opt to enter the fully-qualified Control Point name (or alias). The following section describes the fields on this page.

Connection Definition list: Displays the currently available connection definitions and shows the parameters for each definition.

Connection Name: A name that you specify for a connection definition. This name must be unique within all 802.2, SDLC, COAXDFT, NCIA, and DLUR connections for your workstation.

Destination Address: The address of the mainframe. Change this value in the Edit dialog box.

Destination TCP/IP Address: The TCP/IP address of the Cisco router to which the workstation connects.

Add: Creates a new connection definition with a name that you select and default connection settings.

Edit: Allows you to change settings for the selected connection definition.

Delete: Removes the selected connection definition.

Logical Unit Source for This Session

LU Pool: Makes a connection using the first available Logical Unit (LU) from a given pool of LUs. If you select this option, you must enter a valid LU Range (minimum and maximum).

Pool Name: Lists the names of the LU pools that are configured for NCIA connections.

Dedicated LU: Allows you to configure your session to a specific LU number. If you select this option, you must enter a valid LU Number.

LU Number: Enter a valid Logical Unit #. For more information, contact your system administrator.

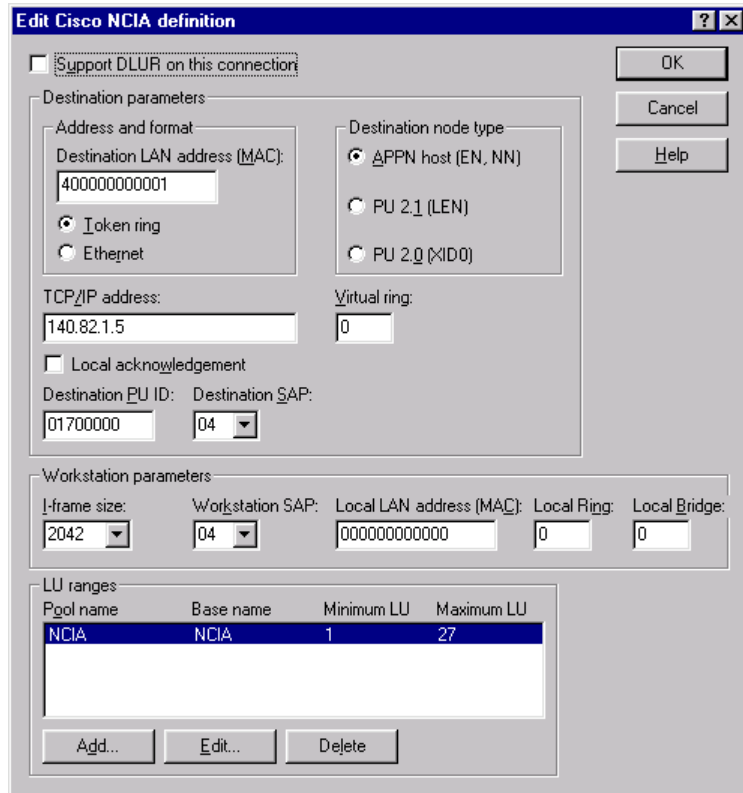
Control Point (CP)

Network ID: Combined with the CP Name, forms a fully qualified Control Point (FQCP) name.

CP Name: Combined with the Network ID, forms a fully qualified Control Point (FQCP) name.

CP Alias: A local name used for the fully qualified Control Point (FQCP) name, consisting of both the Network ID and the CP Name. It is set to the CP Name if not specified.

The Edit Cisco NCIA Definition Dialog Box



Edit Cisco NCIA Definition dialog box

Use this dialog box to configure an NCIA connection. You will need to select the appropriate destination parameters and workstation parameters.

The following section describes the fields within this dialog box.

Support DLUR on This connection: Select this option to allow a connection through a Dependent LU Requester (DLUR) to a Dependent LU Server (DLUS).

Destination Parameters

Destination LAN Address: Indicates the address on the mainframe. The format can be Ethernet or Token Ring based on your mainframe configuration.

Token Ring: Indicates that you will be using a Token Ring address.

Ethernet: Indicates that you will be using a Ethernet address.

APPN Host (EN, NN): Select this option when connecting to an up-level PU type 2.1 node (Network Node or End Node).

PU 2.1 (LEN): Select this option when connecting to a back-level Low-Entry Networking (LEN) node. LEN nodes do not support APPN function.

PU 2.0 (XID0): Select this option when connecting to a type 2.0 node.

TCP/IP Address: Identifies the TCP/IP address of the Cisco router to which the workstation connects.

Virtual Ring: Identifies the virtual ring on the Cisco router that your TCP/IP address is configured on.

Local Acknowledgment: Uses your TCP/IP address for local acknowledgment by the Cisco router.

Destination PU ID: Identifies your workstation to the mainframe.

Destination SAP: Identifies the Service Access Point (SAP) of the controller, front end processor, or the mainframe to which the workstation is connected.

Workstation Parameters groupbox

I-Frame Size: Defines the packet size of an information frame (I-Frame), which the mainframe uses to transfer data through your LAN adapter to your workstation.

Workstation SAP: Identifies the Service Access Point (SAP) of your workstation.

Local LAN Address (MAC): Identifies the LAN address of your workstation.

Local Ring: Identifies the network ring of your workstation.

Local Bridge: Identifies the network bridge that the network ring uses to communicate to different rings.

LU Ranges

Pool Name: The name of the LU pool the range of LUs will belong to.

Base Name: The name of the LU range the LUs belong to.

Minimum LU: The minimum LU value for the range.

Maximum LU: The maximum LU value for the range.

Add: Creates a new LU range.

Edit: Modifies the LU range.

Delete: Permanently removes the selected LU range.

To configure a Cisco NCIA connection definition

1. Start a new session, and select Cisco NCIA as your connection type.
2. From the General page, select a connection definition.
3. Choose the Edit button to change the settings.

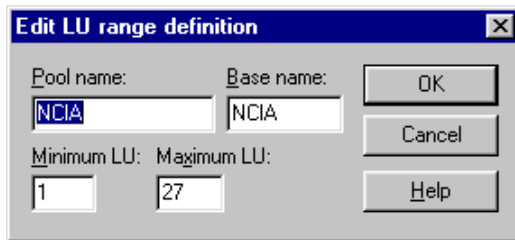
The Edit dialog box opens.

4. Set the appropriate destination parameters and workstation parameters.

Refer to the Related Topics button below for more details on each option. Contact your system administrator if you have any questions.

5. Choose the OK button to save your changes.
6. Select the appropriate Logical Unit source.
7. Enter the Control Point Network ID and Name for your node.

The Edit LU Range Definition Dialog Box



Edit LU Range Definition dialog box

Use this dialog box to add a new LU range definition or edit an existing one.

The following section describes the fields within this dialog box.

Pool Name: Enter the name of the LU pool the range of LUs will belong to.

Base Name: Enter the name of the LU range the LUs belong to.

Minimum LU: Enter the minimum LU value for the range.

Maximum LU: Enter the maximum LU value for the range.

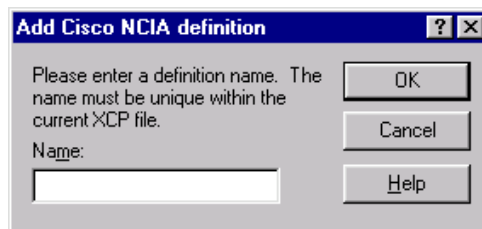
To add an LU range

1. From the Cisco NCIA General page, select the connection definition for which you want to add an LU range and choose the Edit button.
The Edit Cisco NCIA Definition dialog box opens.
2. Choose the Add button.
The Add LU Range Definition dialog box opens.
3. Type the LU range definition.
4. Choose OK.

To change an LU range

1. From the Cisco NCIA General page, select the connection definition for which you want to add an LU range and choose the Edit button.
The Edit Cisco NCIA Definition dialog box opens.
2. Select the LU range that you want to change. Choose the Edit button.
The Edit LU Range Definition dialog box opens.
3. Type the appropriate changes.
4. Choose OK.

The Add NCIA Definition Dialog Box



Add Cisco NCIA Definition dialog box

Name: Type in a unique name for your definition.

Use this dialog to type in a name for your connection definition. This name must be unique for all 802.2, SDLC, COAXDFT, NCIA, and DLUR connections.

To add a Cisco NCIA connection definition

1. Start a new session, and select Cisco NCIA as your connection type.
2. From the General page, choose the Add button.
The Add Cisco NCIA Definition dialog box opens.
3. Enter a valid name, then review and change the default parameters as necessary.
4. Click OK.
A new Connection Name will appear in the list of connection definitions.

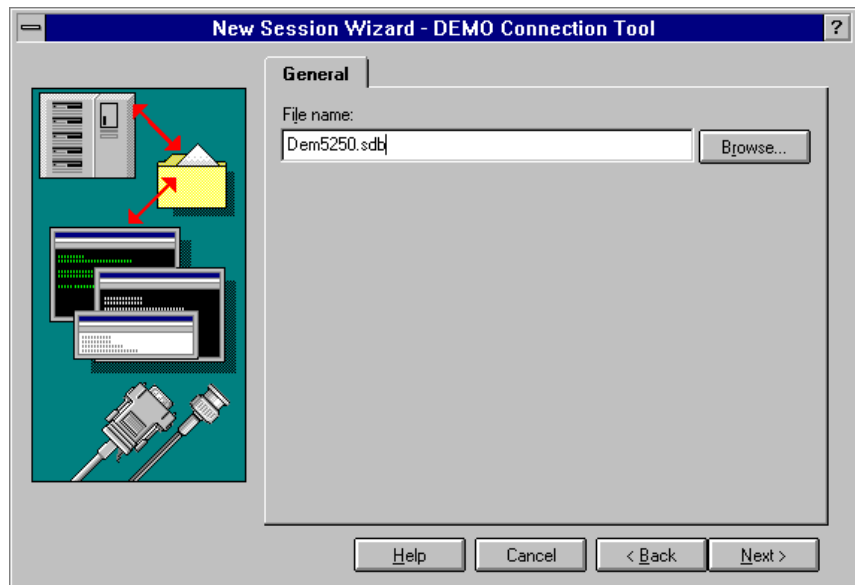
To delete a Cisco NCIA connection definition

1. With a Cisco NCIA session open, from the Cisco NCIA Connection Definition list, select a connection definition.
2. Choose the Delete button.
3. Choose OK when asked for confirmation.

Demo Connection Tool

The Demo feature provides demo files (.SDB) that you can select to simulate a connection to the host.

Demo Connection Tool - General Page



Demo Connection Tool General page

Filename: Type the name of the demonstration file (.SDB) you wish to view.

Browse button: Choose to search for a specific demonstration file.

From this page, you can select a demonstration file (.SDB) that simulates a host session.

To setup a demo connection

1. Start a new session, and select Demo as your connection type.
2. From the next page, select the name of the demonstration file (.SDB) you wish to view. Choose Browse to view a list of demonstration files.

Dependent LU Requestor (DLUR)

By establishing DLUR connections with *EXTRA!*, you can route 3270 LU information through APPN traffic. *EXTRA!* supports DLUR with the following connectivity types:

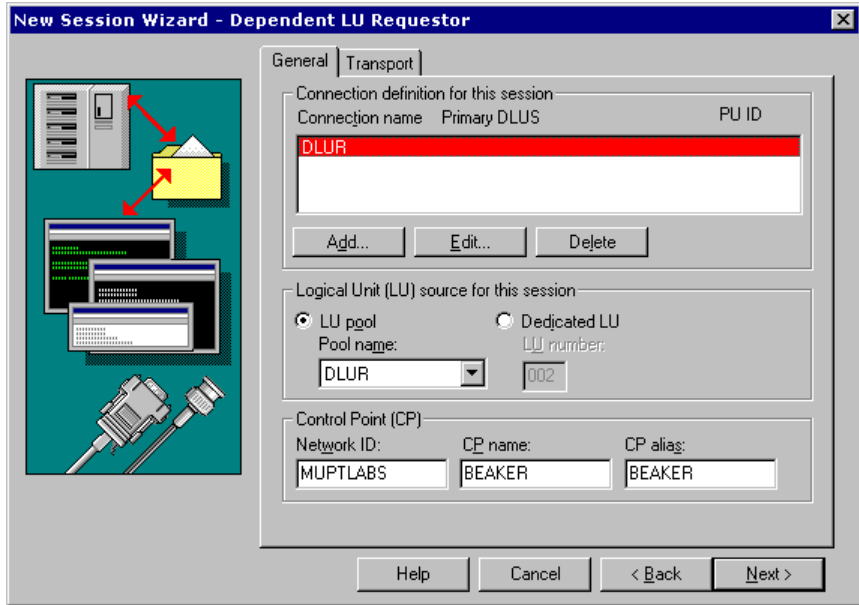
- Cisco NCIA
- DLC 802.2
- DLSw
- Hayes AutoSync
- SDLC

Dependent LU Requestor (DLUR) - System Requirements

To establish a 3270 connection using DLUR, *EXTRA!* requires one or more of the connectivities which support DLUR (Cisco NCIA, DLC 802.2, DLSw, Hayes AutoSync, SDLC) to be installed on the workstation. Alternately, you can install one or more of the APPN Node variations of these connectivities while installing *EXTRA!* by choosing Custom as your Setup Type.

The Dependent LU Requestor General Page

Use this page to select and create DLUR connection definitions and to specify LU resources to be used for those connections. Consult your system administrator for the correct values.



New Session Wizard - Dependent LU Requestor General page

The following section describes the fields on this page.

Connection Definitions for This Session: Displays the currently available connection definitions and shows the parameters for each definition.

Connection Name: Displays the unique name by which the connection is listed in the current node configuration file.

Primary DLUS: Displays the name of the connection's primary DLU server.

PU ID: Identifies to the host the PU used by your workstation. The PU ID is an 8-digit hexadecimal number consisting of the 3-digit IDBLK value followed by the 5-digit IDNUM value from your VTAM definition.

Add: Adds a new connection definition with a name and settings that you provide.

Edit: Changes the settings of the selected connection definition.

Delete: Removes the selected connection definition.

Logical Unit (LU) Source for This Session: Indicates whether the connection will use a dedicated LU or an LU from a pool.

LU Pool: Makes a connection using the first available Logical Unit (LU) from a given pool of LUs.

Pool Name: Lists the names of LU pools configured for DLUR connections. The default pool name is the first LU pool that belongs to the connection definition highlighted in the connection definition list. Other LU pools may be used as well.

Dedicated LU: Indicates that the session will use a specific LU number. If you select this option, you must enter a valid LU Number.

LU Number: your system, contact your system administrator.

Control Point (CP)

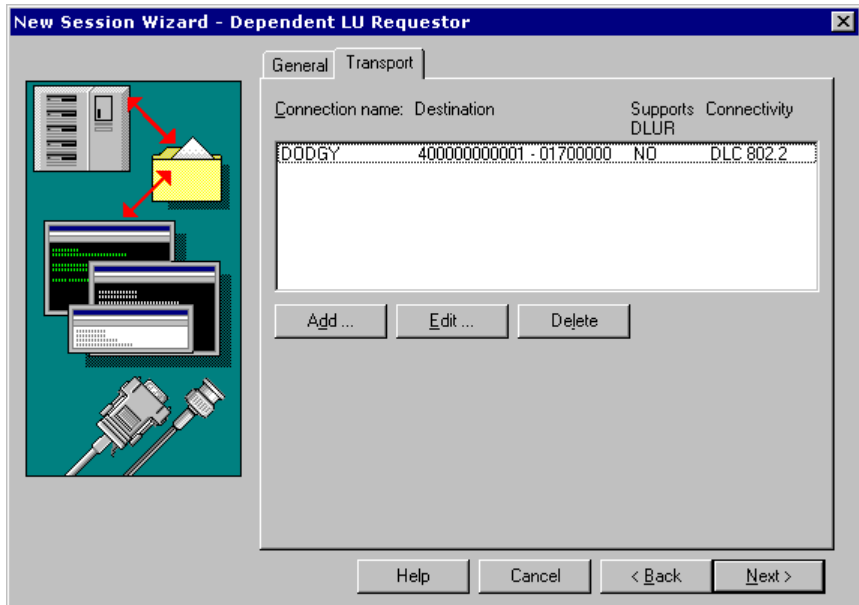
Network ID: Combined with the CP Name, forms a fully qualified Control Point (FQCP) name.

CP Name: Combined with the Network ID, forms a fully qualified Control Point (FQCP) name.

CP Alias: A local name used for the fully qualified Control Point (FQCP) name, consisting of both the Network ID and the CP Name. It is set to the CP Name if not specified.

The Dependent LU Requestor Transport Page

Use this page to add, edit, and delete connection definitions for connectivities which support DLUR. Consult your system administrator for the correct values.



New Session Wizard - Dependent LU Requestor Transport page

The following section describes the fields on this page.

Connection Name: The unique name by which the connection is listed in the current node configuration file.

Destination: The LAN address of the LU with which the session will connect.

Supports DLUR: Indicates whether the connection supports DLUR.

Connectivity: The connectivity to be used for the connection.

Add: Choose to create a new connection.

Edit: Choose to edit the selected connection's settings.

Delete: Deletes the selected connection from the list of connections.

To configure a DLUR connection

1. Start a new session, and select Dependent LU Requestor as your connection type.
2. From the General page, choose an action as follows:

To	Do this
Add a new DLUR connection definition	Choose the Add button.
Edit a connection	Select a DLUR definition from the list, then choose the Edit button.
Delete a connection	Select a DLUR definition from the list, then choose the Delete button.

3. From the connection definition list, highlight the definition you want to use.
4. Select LU Pool, then choose an LU pool name from the Pool Name list.
 -or-
 Select Dedicated LU, then enter the LU number for the LU you want to use.
5. Edit the Control Point information in the Network ID, CP Name, and CP Alias fields as needed.
6. From the Transport page, choose an action as follows:

To	Do this
Add a new DLUR transport connection definition	Choose the Add button.
Edit the selected transport connection definition	Select a connection from the list, then choose the Edit button.
Delete the selected transport definition	Select a connection from the list, then choose the Delete button.

DFT/Coax Direct Connect

The DFT/Coax Direct Connect protocol allows you to communicate with an IBM mainframe using a coax adapter board.

To establish the physical connection between a PC and a compatible host system, you only need to install a coax adapter into the PC and connect it to a coax port on the host. This product supports IBM, IRMA, and Attachmate coax adapters.

If you are configuring a connection under Windows NT, you must first select a coax adapter.

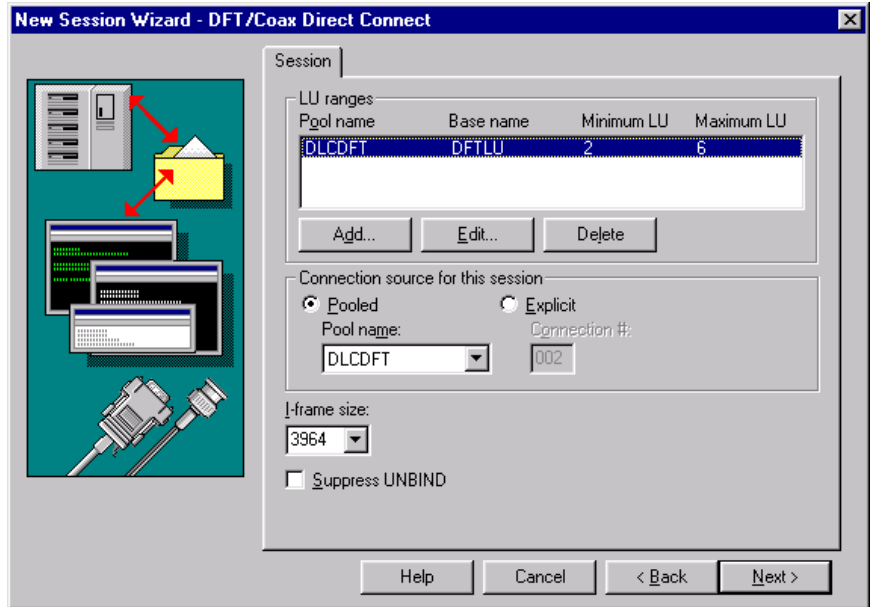
DFT/Coax Direct Connect - System Requirements

A coax connection requires:

- One of the following adapters installed on your PC.
 - Attachmate Advanced 3270 Adapter (PC/AT)
 - Attachmate IRMA3t Adapter
 - Attachmate MacIRMA PCI Coax
 - IBM Coax
 - PCMCIA Coax
- A compatible host system, such as one of the following:
 - 3174, 3274, or 3276 Control Unit
 - 360, 370, 3081, 3083, 3090, 4300, or 9370 mainframe

Note: To configure a connection under Windows NT, you must first select an adapter. To use Irma3 Coax hardware, you need to download the microcode that came with the hardware before you run the client software. The downloaded microcode should match how the hardware was installed through the .INF process, either IRMA in PJ Mode, or IRMA in IBM Mode.

The DFT/Coax Direct Connect Session Page



New Session Wizard - DFT/Coax Direct Connect Session page

Use this page to specify the Connection Type needed for a Coax DFT connection. You can specify a pooled connection or you can specify a specific connection number. You also have the option of activating this connection during startup.

The following section describes the fields on this page:

LU Ranges: The Pool Name, Base Name, Minimum LU and Maximum LU for the LU ranges.

Add: Displays the Add LU Range Definition dialog so that you can create a new LU range.

Edit: Displays the Edit Add LU Range Definition dialog so that you can change values associated with your LU ranges.

Delete: Permanently removes the selected LU range.

Connection source for this session: Allows you to set your Logical Unit Type to Pooled or Explicit.

Pooled: Makes a connection using the first available connection from a given pool of connections.

Pool Name: Lists the names of the LU pools that are configured for NCIA connections.

Explicit: Configures your session to a specific connection #. You must enter a valid connection # in the Connection # field.

Connection #: Specifies a specific connection #. For more information, contact your system administrator.

I-Frame Size: Defines the packet size of an information frame (I-frame), which the mainframe uses to transfer data through your LAN adapter to your workstation. Choose an I-frame size that is consistent with your workstations's LAN adapter and the I-frame size specified on the mainframe network.

Suppress UNBIND: Suppresses inbound UNBIND requests.

To configure a 3270 adapter

1. From the Control Panel, select the 3270 Coax adapter.
The 3270 Adapter Configuration dialog box appears.
2. Select the appropriate adapter from the Adapter Type list.
3. Modify the Adapter Parameters if necessary.
4. Choose OK to save and exit the 3270 Adapter Configuration dialog box.
5. When prompted, restart your computer.

You are now ready to configure a 3270 Coax connection.

Note: If you are using IRMA3 Coax hardware, you need to download the microcode that came with the hardware before you run the client software. The downloaded microcode should match how the hardware was installed through the .INF process, either IRMA in PJ Mode, or IRMA in IBM Mode.

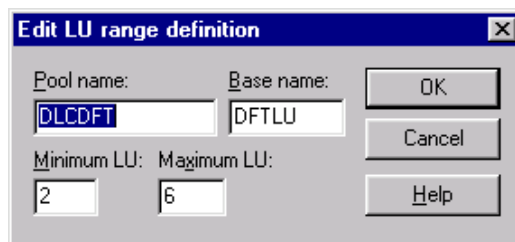
To configure a coax connection

Note: If you are configuring a connection under Windows NT, you must first configure a 3270 adapter.

1. Start a new session, and select DFT/COAX Direct Connect as your Connection type.
2. From the Session page and choose Pooled Connection or Explicit Connection. If you choose Explicit you must enter a logical unit number in the field provided.
3. (Optional) Set the Activate on Startup option if you want this session to automatically connect during startup.

For more information on a particular field, refer to the Session page topic within this section. You may also use the What's This? feature to get a brief description of each field.

The Edit LU Range Definition Dialog Box



Edit LU Range Definition dialog box

Use this dialog box to add a new LU range definition or edit an existing one.

The following section describes the fields within this dialog box.

Pool Name: Enter the name of the LU pool to which the range of LUs will belong.

Base Name: Enter the name of the LU range to which the LUs belong.

Minimum LU: Enter the minimum LU value for the range.

Maximum LU: Enter the maximum LU value for the range.

To add an LU range

1. From the DFT/Coax Session page, choose the Add button.
The Add LU Range Definition dialog box opens.
2. Type the LU range definition.
3. Choose OK.

To edit an LU range

1. From the DFT/Coax Session page, select the connection definition for which you want to add an LU range and choose the Edit button.
The Edit LU Range Definition dialog box opens.
2. Type the appropriate changes.
3. Choose OK.

DLSw Direct Connect (IBM Mainframe)

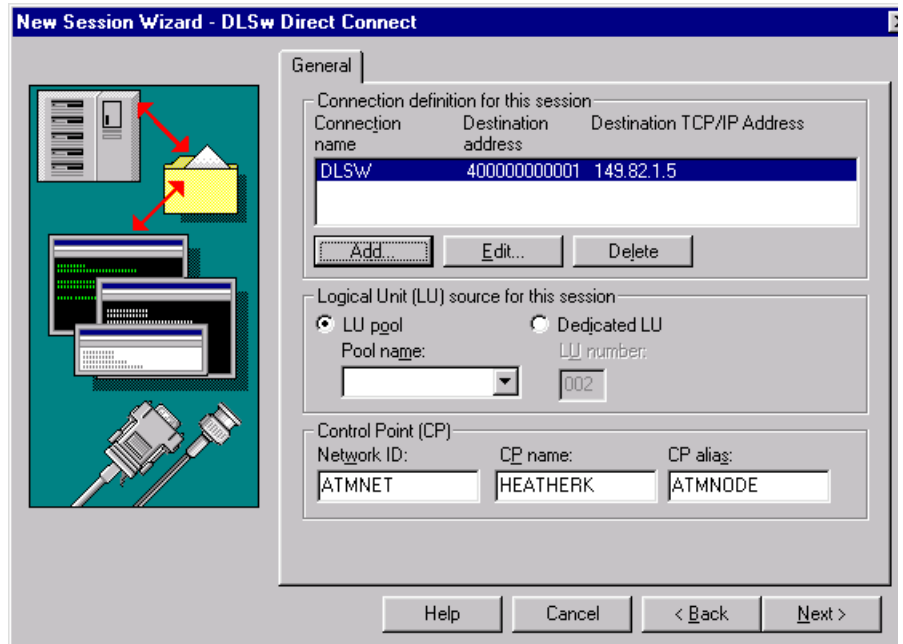
You can communicate with IBM mainframes via a Data Link Switching (DLSw) Direct Connection. DLSw Direct Connect is an industry standard for encapsulating LLC2 or DLC 802.2 data within TCP/IP data packets. While DLSw is normally used for communicating between routers, it can be used for communicating between a workstation and a router to pass LLC2 data over a TCP network or over the Internet to a host without the timing limitations of DLC 802.2.

DLSw Direct Connect - System Requirements (IBM Mainframe)

An IBM mainframe-DLSw connection requires a TCP/IP connection to a router that supports and is configured for each specific workstation. A Token Ring or Ethernet card is not required on the workstation if using a modem with the Dial Up Networking support from Microsoft.

The DLSw Direct Connect General Page (IBM Mainframe)

Use the DLSw Direct Connect, General page to select and create connection definitions for your DLSw Direct connection. A connection definition consists of a Connection Name that you supply, a Destination Address and a Destination TCP/IP Address on the mainframe. The link can also be DLUR (Dependent LU Requester) enabled.



New Session Wizard - DLSw Direct Connect General page

This page has the following fields:

Connection Definition For This Session list

Displays the currently available connection definitions and shows the parameters for each definition.

Add: Displays the Add DLSw Connection Definition dialog box from which you can create a new connection definition.

Edit: Displays the Edit DLSw Connection Definition dialog box from which you can change values associated with your connection definition.

Delete: Permanently removes the selected connection definition.

Logical Unit Source for This Session

LU Pool: Makes a connection using the first available Logical Unit (LU) from a given pool of LUs. If you select this option, you must enter a valid LU Range (minimum and maximum).

Pool Name: Lists the names of the LU pools that are configured for NCIA connections.

Dedicated LU: Configures your session to a specific LU number. If you select this option, you must enter a valid LU Number.

LU Number: Allows you to enter a number for a specific LU to be used when you connect to the host with this session setting. If you use a specific LU, if the LU is already in use, you may have to wait until it becomes available.

Control Point (CP)

Network ID: Combined with the CP Name, forms a fully qualified Control Point (FQCP) name.

CP Name: Combined with the Network ID, forms a fully qualified Control Point (FQCP) name.

CP Alias: A local name used only on this workstation. It is set to the CP Name if not specified.

The Edit DLSw Connection Definition Dialog Box (IBM Mainframe)

Edit DLSw definition [?] [X]

Support DLUR on this connection

Destination parameters

Address and format
 Destination LAN address (MAC):

Token ring
 Ethernet

Destination node type
 APPN host (EN, NN)
 PU 2.1 (LEN)
 PU 2.0 (XID0)

TCP/IP address:

Destination PU ID: Destination SAP:

Workstation parameters

I-frame size: Workstation SAP: Local LAN address (MAC):

LU ranges

Pool name	Base name	Minimum LU	Maximum LU
DLSw	DLSw	1	27

Add... Edit... Delete

OK Cancel Help

Edit DLSw Definition dialog box

Use the Edit DLSw Definition dialog box to configure a DLSw connection. You will need to select the appropriate destination parameters, workstation parameters, and destination node type. You may also choose whether or not to support DLUR with this link.

You can change the following options or attributes:

Support DLUR on This Link: Allows a connection through a Dependent LU Requester (DLUR) to a Dependent LU Server (DLUS).

Dependent LU Server (DLUS)

Destination LAN Address (MAC): Indicates the address on the mainframe. The format can be Ethernet or Token Ring based on your mainframe configuration.

Token Ring: Indicates that you will be using a Token Ring address.

Ethernet: Indicates that you will be using an Ethernet address.

TCP/IP: Indicates the TCP/IP address of the router to make the DLSw connection to. The router passes the LLC2 data to the host.

Destination PU ID: A number that identifies your workstation to the mainframe.

Destination SAP: Identifies the Service Access Point (SAP) of the controller, front end processor, or the mainframe to which the workstation is connected.

I-Frame Size: Defines the packet size of an information frame (I-Frame), which the mainframe uses to transfer data through your LAN adapter to your workstation.

Workstation SAP: Identifies the Service Access Point (SAP) for your workstation.

Local LAN Address (MAC): Indicates the LAA or MAC address of the workstation to be sent to the router. This value does not have to be the same as the value for the workstation's real LAA or MAC address. Enter a value 12 hex characters long whether you have a real network card or not.

APPN Host (EN, NN): Indicates a connection to an up-level PU type 2.1 node (Network Node or End Node).

PU 2.1 (LEN): Indicates a connection to a back-level Low-Entry Networking (LEN) node. LEN nodes do not support APPN function.

PU 2.0 (XID0): Indicates a connection to a type 2.0 node.

LU Ranges: Displays a list of LU ranges which includes the name of the LU pool, the name of the LU range and the minimum and maximum LU value for the range.

Pool Name: Enter the name of the LU pool to which the range of LUs will belong.

Base Name: Enter the name of the LU range to which the LUs belong.

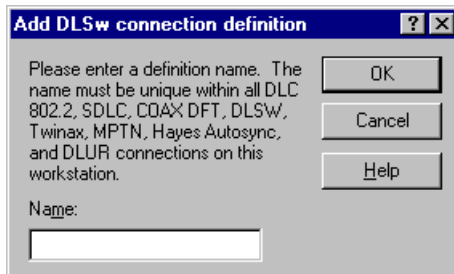
Minimum LU: Enter the minimum LU value for the range.

Maximum LU: Enter the maximum LU value for the range.

To configure a DLSw connection (IBM Mainframe)

1. Start a new session, and select DLSw Direct Connect as your Connection type.
2. From the General page, select a connection definition.
3. Choose the Edit button to change the settings.
The Edit DLSw Connection Definition dialog box opens.
4. Set the appropriate destination parameters, workstation parameters, and destination node type and enter the alias or the TCP/IP Address.
Contact your system administrator if you have any questions.
5. Choose the OK button to save your changes.
6. Select the appropriate Logical Unit type and range (if necessary).
7. Enter the Control Point Network ID and Name for your node.

The Add Connection Definition Dialog Box (IBM Mainframe)



Add DLSw Connection Definition dialog box

Use the Add Connection Definition dialog box to type in a name for your connection definition. This name must be unique for all DLC 802.2, SDLC, COAX DFT, DLSw, Twinax, MPTN, Hayes AutoSync, and DLUR connections.

To create a new connection definition (IBM Mainframe)

1. Start a new session, and select DLSw Direct Connect as your Connection type.
2. From the General page, choose the Add button.

The Add DLSw Connection Definition dialog box opens.

3. Enter a valid name.
4. Click OK.

A new Connection Name will appear in the list of connection definitions.

For more information on a particular field, refer to the General page topic within this section.

To delete a connection definition (IBM Mainframe)

1. From the DLSw Direct Connect General page, select a connection definition.
2. Choose the Delete button.
3. Choose Yes when asked for confirmation.

Eicon Gateway via IPX/SPX Connection

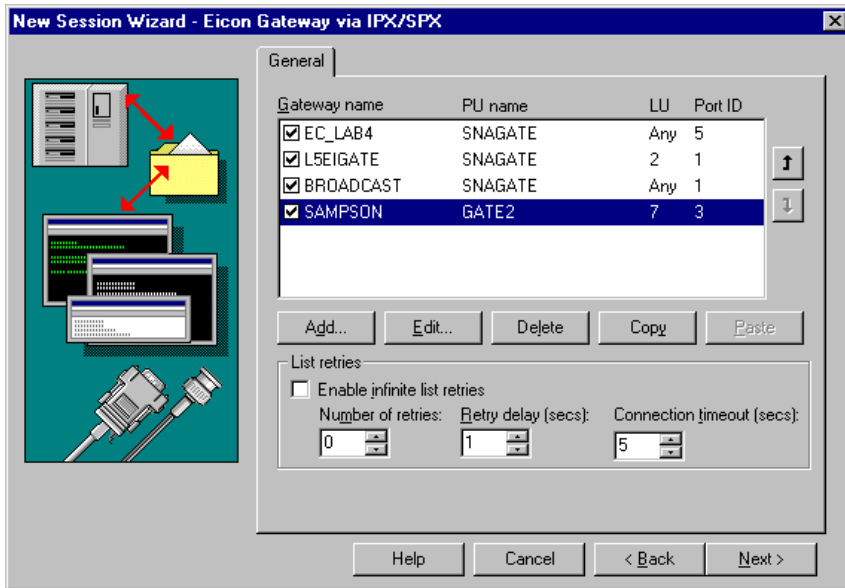
Using *EXTRA!* you can communicate with IBM mainframes via the Eicon Gateway, using an IPX/SPX (Internetwork Packet Exchange/Sequenced Packet Exchange) protocol. This section describes the Eicon gateway connectivity options. To set these options, you will need information about gateway names, PU names, LU numbers, and port IDs.

Eicon Gateway via IPX/SPX - System Requirements

Workstation requirements are listed below. If any of the Novell NetWare files listed are not located on the workstation, contact your system administrator.

- A LAN adapter that supports IPX
- Client Service for NetWare
- IPX/SPX compatible transport

The Eicon Gateway via IPX/SPX General Page



New Session Wizard - Eicon Gateway via IPX/SPX General page

Use this page to configure an Eicon Gateway connection via IPX/SPX. You can define a new connection, edit an existing connection, or you can enable or disable a connection from the Connection list. This page also has copy/paste features which make it easier to create a series of connections.

Connection list: Displays the currently available connection definitions and shows the parameters for each definition. You can configure up to six connections for each Eicon session.

You can clear the check box to the left of each server to disable a specific configuration. If a server displayed in the list is going to be down for an extended period of time, you can disable it (without deleting it), and reconfigure the server later.

Add: Configures a new connection.

Edit: Modifies the selected configuration.

Delete: Removes a connection entry from the Connection list.

Copy: Copies the selected entry from the Connection list to a temporary buffer.

Paste: Pastes the copied entry from the temporary buffer into the Connection list.

List Retries

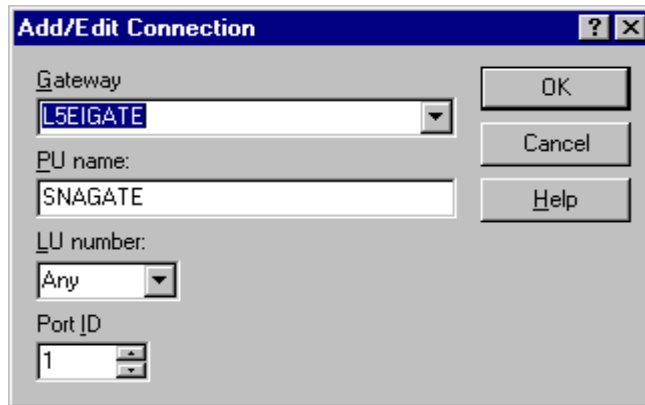
Enable Infinite List Retries: Indicates that *EXTRA!* will continue to attempt a connection until successful.

Number of Retries: Indicates the number of times *EXTRA!* will try to make a connection after each unsuccessful attempt. Use the arrows to increase or decrease the number of retries. You can select a number between 0 and 99. The default is 0.

Retry Delay (secs): Indicates the amount of time (seconds) *EXTRA!* will wait between retries. The default is 1 second.

Connection Timeout (secs): Indicates the amount of time (seconds) *EXTRA!* will wait to establish a connection. The default is 5 seconds.

The Add/Edit Connection Dialog Box



Add/Edit Connection dialog box

Use this dialog box to define a connection for an Eicon Gateway via IPX/SPX. To define a connection you need to specify a gateway name, a PU name, an LU number, and a port ID. Each field you will need to define is described in detail below.

Gateway: Specifies the names of the Eicon Gateways to which you want to attach. To add a gateway name, select one of the names in the list and type a new name in its place. BROADCAST will always remain in the list. If you select BROADCAST, your workstation will broadcast to the first gateway that responds (if it matches the PU name).

PU Name: Specifies the name of the PU (physical unit) as defined on the gateway. The default is SNAGATE.

LU Number: Specifies the LU (logical unit) number. The LU number you select must match an LU type defined on the gateway that supports the terminal characteristics you require. If you select ANY, *EXTRA!* will select the next available LU number.

Port ID: Selects the number assigned to the EiconCard or a port on a multiport Eicon Card. The Port ID identifies the line you want to use on an Eicon Gateway (the ID is assigned to a PU name when the gateway is configured). A maximum of 15 ports is available on a gateway.

To configure an Eicon Gateway connection via IPX/SPX

1. Start a new session, and select Eicon Gateway via IPX/SPX as your connection type.

2. From the General page, click the Add button.

The Add/Edit Connection dialog box appears.

3. In the Gateway field, type the names of the Eicon Gateways to which you want to attach. BROADCAST will always remain in the list. If you select BROADCAST, your workstation will broadcast to the first gateway that responds (if it matches the PU name).
4. In the PU Name field, select the name of the PU (physical unit) as defined on the gateway. The default is SNAGATE.
5. From the LU Number list, select the LU (logical unit) number you want to use. The LU number you select must match an LU type defined on the gateway that supports the terminal characteristics you require. If you select ANY, *EXTRA!* will select the next available LU number.
6. From the Port ID list, select the number assigned to the EiconCard or a port on a multiport EiconCard. The port ID identifies the line you want to use on an Eicon Gateway (the ID is assigned to a PU name when the gateway is configured). A maximum of 15 ports is available on a gateway.
7. Click the OK button to save the connection.

The connection will now appear in the Connection list on the Eicon Gateway General page.

Eicon SNA via NetBIOS Connection

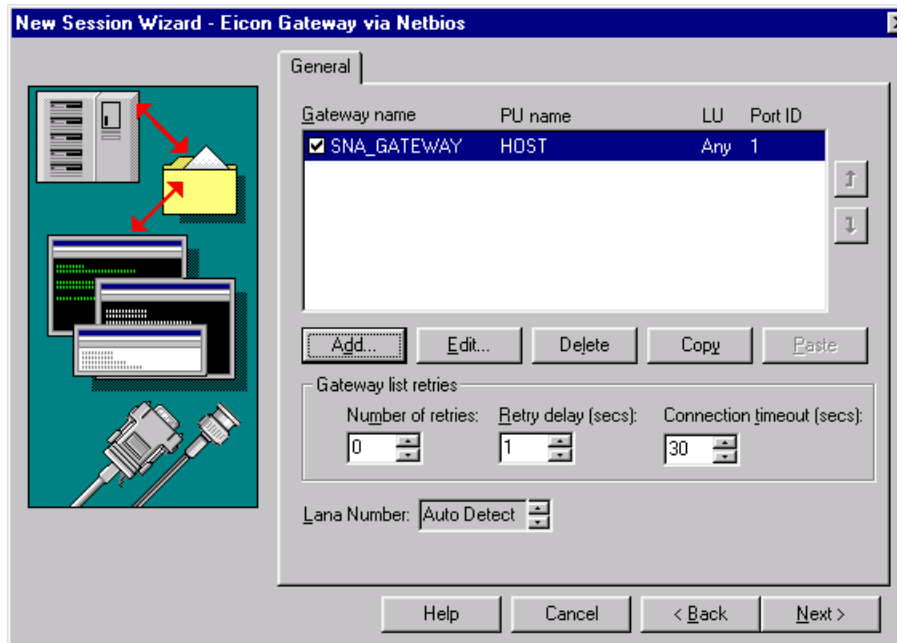
You can communicate with IBM mainframes via the Eicon gateway using a NetBEUI protocol over NetBIOS. This section describes the Eicon gateway connectivity options. To set these options, you will need information about gateway names, PU names, LU numbers, and port IDs.

Eicon SNA via NetBIOS - System Requirements

In addition to the general system requirements of *EXTRA!*, please note the following NetBEUI NetBIOS connection requirements.

- A LAN adapter that supports NetBIOS.
- A NetBEUI Protocol over an IBM compatible NetBIOS.
- An Eicon Technology SNA Gateway version 3.1 or later running on the local area network.

The Eicon SNA via NetBIOS General Page



New Session Wizard - Eicon Gateway via NetBIOS General page

Use this page to configure an Eicon SNA connection via NetBIOS. You can define a new connection, edit an existing connection, or you can enable or disable a connection from the Connection list. This page also has copy/paste features which make it easier to create a series of connections.

The following section describes the individual fields on this page.

Connection list: Displays the currently available connection definitions and shows the parameters for each definition.

You can clear the check box to the left of each server to disable a specific configuration. If a server displayed in the list is going to be down for an extended period of time, you can disable it (without deleting it), and reconfigure the server later.

Add: Opens the Add/Edit Connection dialog box where you can configure a new connection.

Edit: Opens the Add/Edit Connection dialog box where you can edit the current connection.

Delete: Removes the selected connection entry from the Connection list.

Copy: Copies the selected entry from the Connection list to a temporary buffer.

Paste: After a connection entry is copied using the Copy button, press the Paste button to re-insert a copy of the entry into the Connection list.

Gateway List Retries: Specify retry settings for connection attempts.

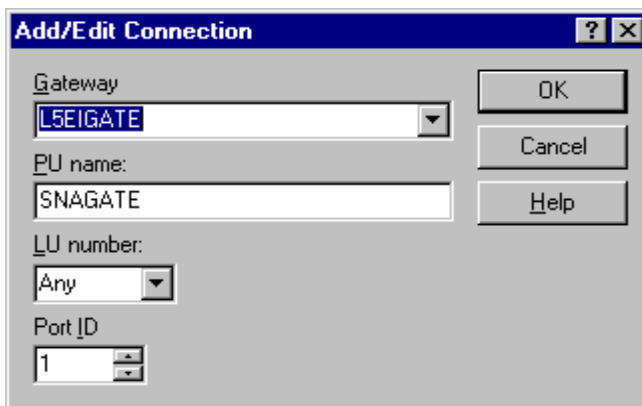
Number of Retries: Indicates the number of times the system will try to make a connection after each unsuccessful attempt. Use the arrows to increase or decrease the number of retries. You can select a number between 0 and 9999. The default is 0.

Retry Delay (secs): Indicates the amount of time (seconds) *EXTRA!* will wait between retries. The default is 1 second.

Connection Timeout (secs): Indicates the amount of time (seconds) *EXTRA!* will wait to establish a connection. The default is 5 seconds.

Lana Number: Identifies logical adapter number defined in this machine for the NetBEUI transport stack.

The Add/Edit Connection Dialog Box



Add/Edit Connection dialog box

Use this dialog box to define a connection for an Eicon SNA via NetBIOS. To define a connection you need to specify a gateway name, a PU name, an LU number, and a port ID. Each field you will need to define is described in detail below.

The following section describes the individual fields on this page.

Gateway: Specifies the names of the Eicon Gateways to which you want to attach. To add a gateway name, select one of the names in the list and type a new name in its place.

PU Name: Specifies the name of the PU (physical unit) as defined on the gateway. The default is SNAGATE.

LU Number: Specifies the LU (logical unit) number. The LU number you select must match an LU type defined on the gateway that supports the terminal characteristics you require. If you select ANY, *EXTRA!* will select the next available LU number.

Port ID: Use this option to select the number assigned to the Eicon Card or a port on a multiport EiconCard. The Port ID identifies the line you want to use on an Eicon Gateway (the ID is assigned to a PU name when the gateway is configured). A maximum of 15 ports is available on a gateway.

To configure an Eicon SNA connection via NetBIOS

1. Start a new session, and select Eicon SNA via NetBIOS as your connection type.
2. From the General page, choose the Add button.
The Add/Edit Connection dialog box appears.
3. In the Gateway field, type the names of the Eicon gateways to which you want to attach.
4. In the PU Name field, select the name of the PU (physical unit) as defined on the gateway. The default is SNAGATE.
5. From the LU Number list, select the LU (logical unit) number you want to use. The LU number you select must match an LU type defined on the gateway that supports the terminal characteristics you require. If you select ANY, *EXTRA!* will select the next available LU number.
6. From the Port ID list, select the number assigned to the EiconCard or a port on a multiport Eicon Card. The port ID identifies the line you want to use on an Eicon Gateway (the ID is assigned to a PU name when the gateway is configured). A maximum of 15 ports is available on a gateway.
7. Choose the OK button to save the connection.

The connection will now appear in the Connection list on the Eicon Gateway General page.

Hayes AutoSync (SDLC)

Hayes AutoSync Direct Connect is a support option for *EXTRA!* that runs on an IBM mainframe such as a 3270. You can choose to run the mainframe host session using a printer or display. The Hayes AutoSync connection only works with the display host type at the current time, and you must use a Hayes AutoSync-compatible modem.

You can connect to a mainframe using the Hayes AutoSync connection. Hayes AutoSync is typically used for remote connections, where workstations and mainframe computers use synchronous modems to communicate over public or leased telephone lines.

Hayes AutoSync (SDLC) - System Requirements

To use Hayes AutoSync as a method of connecting to a mainframe host, you must first install a Hayes AutoSync-compatible modem.

Note: A modem that is Hayes-compatible is not automatically Hayes *AutoSync*-compatible.

Using the New Session wizard, you can create a display host type session. You have the option of creating a new session when you first start *EXTRA!*, or, while working in an open session, you can create additional sessions.

To create a session, you must provide the New Session wizard with the following information:

- Host type—IBM Mainframe
- Session type (IBM hosts only)—display or printer
- Connection type and settings
- File transfer type applicable to the selected host type

The wizard creates a session with many default settings, which determine how the session appears, operates, and interacts with you. You can later edit these settings to accommodate your preferences.

To configure a Hayes AutoSync adapter

1. From your Windows Control Panel, select the Modems icon.

The Adapter Configuration dialog box is shown.

2. Select the appropriate adapter from the Available list, then select Add.

Your selection will be added to the Installed list. You must now configure the installed adapter.

3. Select the adapter from the Installed list, then select Configure.

The system displays the default settings associated with that adapter. Check with your system administrator if you have any questions.

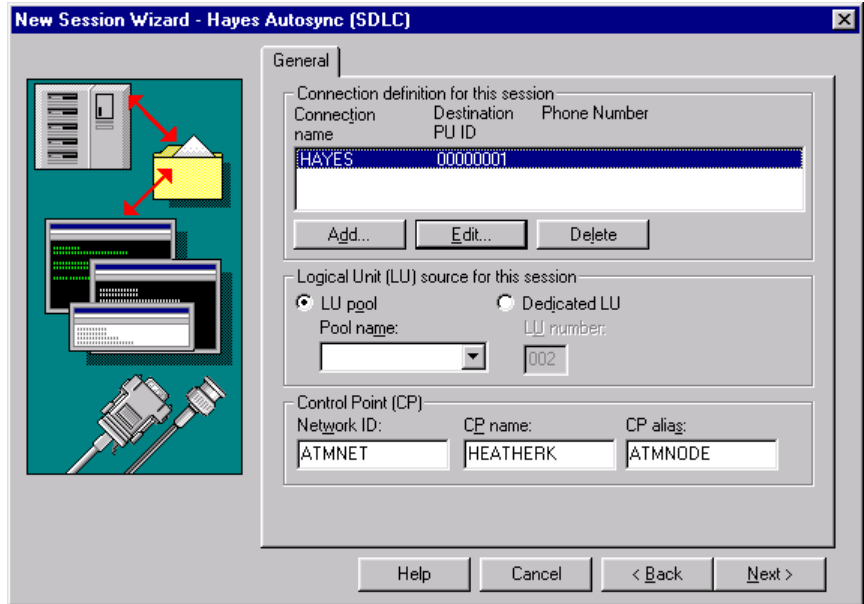
4. Choose the OK button to save and exit the Adapter Settings dialog box.
5. From the Adapter Configuration dialog box, choose the OK button to save and exit.

You are now ready to configure a Hayes AutoSync connection.

To create a new Hayes AutoSync connection

1. Start *EXTRA!* and choose OK to create a new session.
2. Select IBM Mainframe as your host type, and then choose Next.
3. Select 3270 Display as your session type, and then choose Next.
4. Select Hayes AutoSync Direct Connect, and then choose Next.
5. Configure options on the General and DLUR pages to conform to your needs, then choose Next.
6. Select one of the listed file transfer protocol types from the File Transfer list, and then choose Finish.
7. Choose OK to accept the session described in the New Session Information dialog box, or choose Cancel so that the session is not created.

The Hayes AutoSync (SDLC) General Page



New Session Wizard - Hayes AutoSync (SDLC) General page

Use this page to select and create connection definitions for your Hayes AutoSync connection. A connection definition consists of a Connection Name that you supply, a Destination PU ID, and a Poll Address. The connection can also be DLUR (Dependent LU Requester) enabled.

You can also opt to enter the fully-qualified CP (Control Point) name (or alias).

The following section describes the fields on this page.

Connection Definition for this Session: Displays the currently available connection definitions and shows the parameters for each definition.

Add: Creates a new connection definition with a name that you select and default connection settings.

Edit: Modifies values associated with your connection definition.

Delete: Removes the selected connection definition.

Logical Unit (LU) Source for This Session: Indicates whether the connection will use a dedicated LU or an LU from a pool. Specifies whether the connection will use a dedicated LU or an LU from a pool.

LU Pool: Causes the system to make a connection using the first available Logical Unit (LU) from a given pool of LUs. If you select this option, you must enter a valid LU Range (minimum and maximum).

Pool Name: Lists the names of the LU pools that are configured for NCIA connections.

Dedicated LU: Allows you to configure your session to a specific LU number. If you select this option, you must enter a valid LU Number.

LU Number: Allows you to enter a number for a specific LU to be used when you connect to the host with this session setting. If you use a specific LU, if the LU is already in use, you may have to wait until it becomes available.

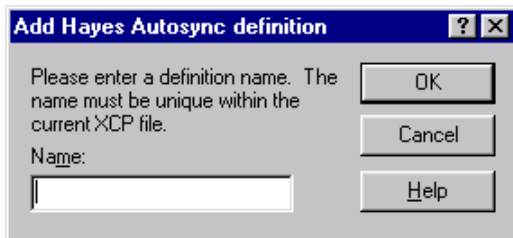
Control Point (CP)

Network ID: Combined with the Control Point Name, the Network ID forms an FQCP name for the host.

CP Name: Combined with the Network ID, forms an FQCP name for the host.

CP Alias: A local name used for the FQCP name. This field is set to the CP Name if an alias is not specified.

The Add Hayes AutoSync Definition Dialog Box



Add Hayes AutoSync Definition dialog box

Type in a name for your connection definition. This name must be unique within all DLC, 802.2, SDLC, COAX DFT, NCIA, Twinax, MPTN, Hayes AutoSync, and DLUR connections for your workstation.

A new connection name, with default settings, will appear in the list of connection definitions.

The Edit Hayes AutoSync Definition Dialog Box

Support DLUR on this connection

Destination parameters

Destination PU ID:

Destination node type:

APPN host (EN, NN)

PU 2.1 (LEN)

PU 2.0 (XID0)

Country code:

Area code:

Phone number:

Workstation parameters

Connect using:

Poll address: I-frame size:

NRZ

NRZ

NRZI

Pool name	Base name	Minimum LU	Maximum LU
HAYES	HAYES	1	27

Add... Edit... Delete

OK Cancel Help

Edit Hayes AutoSync Definition dialog box

Use this dialog box to configure a Hayes AutoSync connection. You will need to select the appropriate destination parameters, workstation parameters, and other connection parameters.

The following fields are available from this dialog box:

Support DLUR on This Connection: Select to enable DLUR support for this connection session.

Destination Parameters

Destination PU ID: A 5-digit hexadecimal number that identifies your workstation to the mainframe. If your network is connected directly to the mainframe, or via an FEP, you must enter the PU ID that the mainframe has assigned to your workstation. If your network is connected through a controller, your workstation will be identified by either its locally administered address (LAA) or its “burned-in” network adapter address. Your system administrator can provide you with your PU ID.

APPN Host (EN,NN): Select to connect to an up-level PU type 2.1 node (Network Node or End Node).

PU 21 (LEN): Select to connect to a back-level Low-Entry Networking (LEN) node. LEN nodes do not support APPN functions.

PU 20 (XDO): Select to connect to a type 2.0 node.

Country Code: Select your country code.

Area Code: Type in the area code of the destination host’s phone number.

Phone Number: Type in the destination phone number of the host to which you want to connect. You can configure up to two phone numbers. Only one phone number can be used at a time.

Workstation Parameters

Connect Using: Select from the list of modems the one you will use. If no options appear in this list, you can leave this option blank. Remember that a Hayes-compatible modem does not necessarily mean that it is Hayes *AutoSync*-compatible. The modem you choose here must be Hayes *AutoSync*-compatible.

Poll Address: The 2-digit hexadecimal number that identifies your workstation’s address to the mainframe.

I-Frame Size: Defines the packet size of an I-Frame (Information Frame), which the mainframe uses to transfer data through your LAN adapter to your workstation. Choose an I-Frame size that is consistent with your workstation’s LAN Adapter and the I-Frame size specified on the mainframe network. Ask your system administrator for help determining the correct I-Frame size.

NRZ (NRZ/NRZI): Enables the Non-Return to Zero Inverted (NRZI) option that specifies the data stream encoding type. Your system administrator can give you this information.

LU Ranges

Pool Name: The name of the LU pool to which the range of LUs will belong.

Base Name: The name of the LU range to which the LUs belong.

Minimum LU: The minimum LU value for the range.

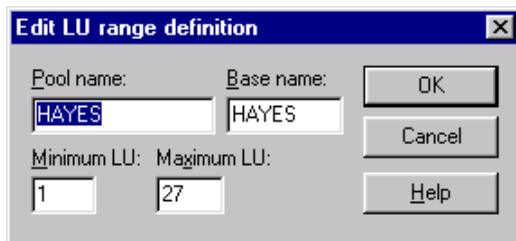
Maximum LU: The maximum LU value for the range.

To configure a Hayes AutoSync connection definition

Note: If you are configuring a connection under Windows NT, you must first configure a Hayes AutoSync adapter.

1. Start a new session, and select Hayes AutoSync as your connection type.
2. From the General page, choose the Add button.
The Add Hayes AutoSync Definition dialog box displays.
3. Enter a valid name, then review and change the default parameters as necessary.
4. Choose the OK button to save your connection.
A new Connection Name will appear in the list of connection definitions.

The Edit LU Range Definition Dialog Box



Edit LU Range Definition dialog box

Use this dialog box to add a new LU range definition or edit an existing one.

The following section describes the fields within this dialog box.

Pool Name: Enter the name of the LU pool to which the range of LUs will belong.

Base Name: Enter the name of the LU range to which the LUs belong.

Minimum LU: Enter the minimum LU value for the range.

Maximum LU: Enter the maximum LU value for the range.

IBM CICS Server

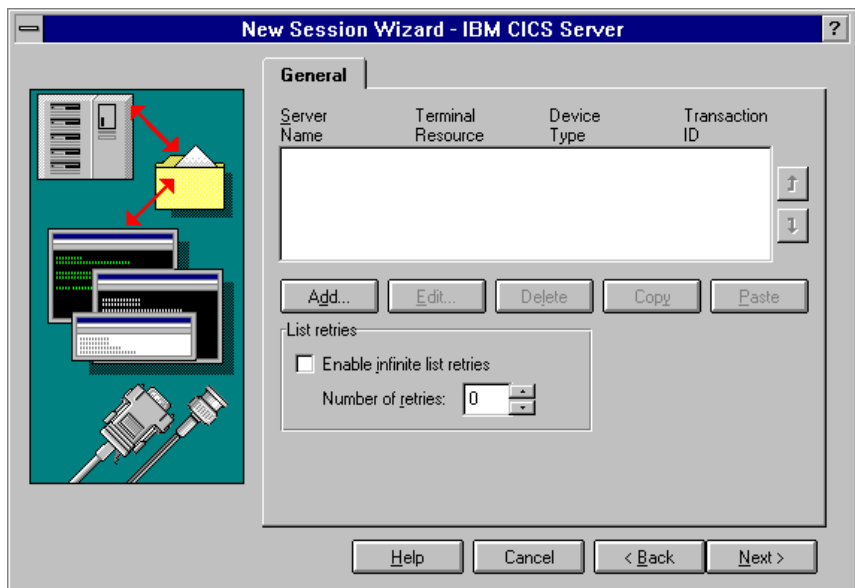
You can communicate with IBM mainframes using IBM CICS Server via TCP/IP or NetBEUI protocol.

IBM CICS Server - System Requirements

A connection to the IBM CICS Server requires:

- IBM Client software running on each client workstation.
- TCP/IP or NetBEUI transport protocol, installed on the IBM CICS Server and on the client workstations.

The IBM CICS Server General Page



New Session Wizard - IBM CICS Server General page

Use this page to edit or create IBM CICS Server connection definitions. Using the copy/paste features, you can easily create a series of connections.

The following section describes the fields on this page.

Connection Definitions: Displays the currently available connection definitions and shows the parameters for each definition. The system attempts to connect with each server in the list, beginning with the first, until a connection is made.

You can clear the check box to the left of each server to disable a specific configuration. If a server displayed in the list is going to be down for an extended period of time, you can disable it (without deleting it), and reconfigure the server later.

Server Name: Specifies the name of the server to which the session will connect.

Terminal Resource: Specifies the name of the terminal resource used to make a connection.

Device Type: Specifies the device type used to make a connection.

Initial Transaction ID: Specifies the 4-character string value that is sent to the host during startup, which will cause the host to send back an appropriate response.

Move Up/Move Down buttons: Reorder the list of connection definitions. The order in the list determines the order in which the connection definitions are tried when making a connection.

Add: Creates a new connection definition with a name that you select and default connection settings.

Edit: Changes the values of an existing connection definition.

Delete: Removes the selected connection definition.

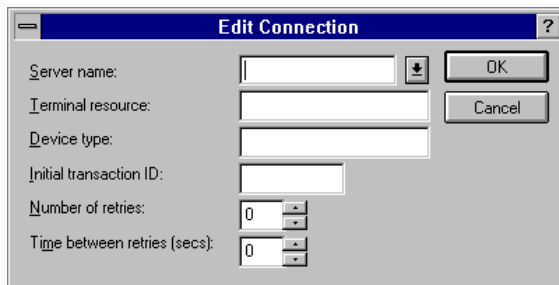
Copy: Makes a copy of an existing connection definition.

Paste: Pastes a copy of an existing connection definition to the list.

Enable Infinite List Retries: When selected, the system goes through the entire list of connection definitions repeatedly, until a connection is made.

Number of Retries: Specifies the number of additional times the session will try to connect if the first attempt fails. The default is 0. If more than one connection definition is listed, the system will go through the whole list the specified number of times.

The Edit Connection Dialog Box



Edit Connection dialog box

Use this dialog box to configure an IBM CICS connection. To define a connection, you will need to specify the Server Name, Terminal Resource, and Device Type. You can also set the Initial Transaction ID, Number of Retries, and Time Between Retries.

The following section describes the fields within this dialog box.

Server Name: Type the name of the server to which the session will connect.

Terminal Resource: Type the name of the terminal resource used to make a connection.

Device Type: Type the device type used to make a connection.

Initial Transaction ID: Type the 4-character string value that is sent to the host during startup, which will cause the host to send back an appropriate response. (Same as Transaction ID on the General Page.)

Number of Retries: Specifies the number of additional times the session will try to connect if the first attempt fails. The default is 0. If more than one connection definition is listed, the system will go through the whole list the specified number of times.

Time Between Retries (secs): Specifies the number of seconds the session will wait between retries. The default is 0.

To remove an IBM CICS Server connection

- With an IBM CICS Server session open, in the Connection Definitions list, select the connection you want to disable, then clear the check box to the left of it.

The connection remains on the list for future use (re-enable it by selecting the check box).

–or–

- With an IBM CICS Server session open, in the Connection Definitions list, select the connection you want to delete, then choose the Delete button.

The connection is permanently removed from the list.

IrmaLAN Server via Banyan VINES

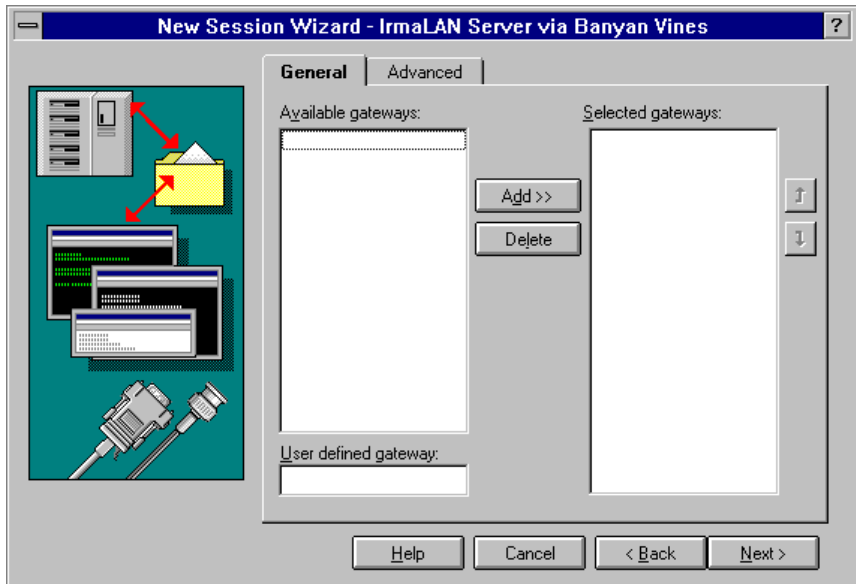
You can connect to the mainframe using IrmaLAN server gateway, via Banyan VINES. You can configure any number of gateways for connection, as well as the level of security when accessing each of these gateways.

IrmaLAN Server via Banyan VINES - System Requirements

A Banyan VINES connection requires:

- A LAN adapter that supports Banyan VINES
- Banyan VINES Enterprise Client (5.56 or later) for Windows NT, Windows 95 or Windows 98

The IrmaLAN Server via Banyan VINES General Page



New Session Wizard - IrmaLAN Server via Banyan VINES General page

Use this page to define gateway information when using an IrmaLAN for Banyan VINES gateway to access a host. You can select from a list of available gateways or you can define a specific gateway name or address. The gateway provides the host session support for the Mainframe Terminal and Mainframe Printer applications.

The following section describes the fields on this page.

Available Gateways: Displays the gateways currently available for connection.

User Defined Gateway: Type a gateway name, then choose Add>> to add the gateway name to the Selected Gateways list.

Selected Gateways: Displays the gateway names that will be used to establish a connection. The session attempts to connect with each gateway in the list, beginning with the first, until a connection is made.

Add>>: Adds a gateway name to the Selected Gateways list.

Delete: Removes a gateway name from the Selected Gateways list.

Move Up/Move Down buttons: Reorder the gateway names within the Selected Gateways list. The order in the list determines the order in which the gateway names are tried when making a connection.

To configure an IrmaLAN for Banyan VINES connection

1. Start a new session, and select IrmaLAN Server via Banyan VINES as your connection type.
2. From the General page, select a gateway from the Available Gateway list.

-or-

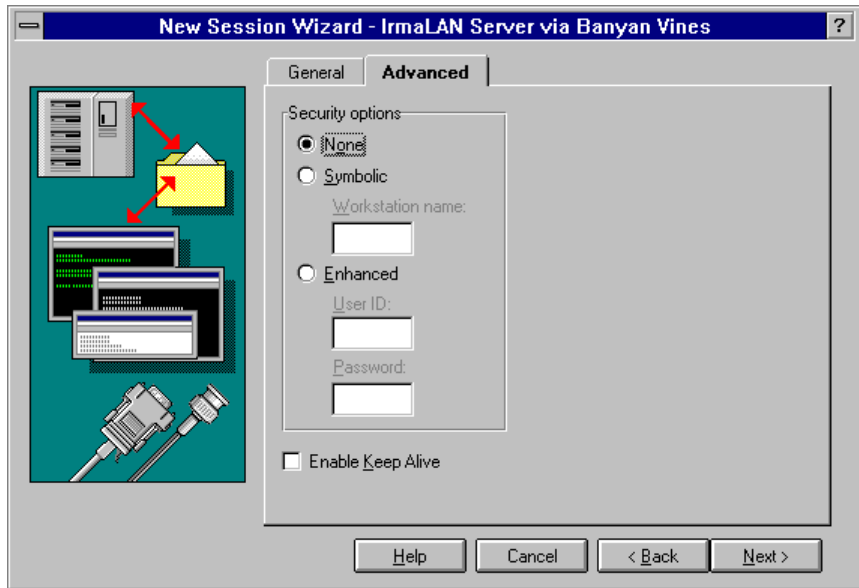
Enter a gateway name or address under User Defined Gateway.

When specifying a gateway address, you need to delimit the network and node address by a period (.), for example 0000300A.4000000061.

3. Choose the Add button.
4. From the Advanced page, select the security option for your connection (the default is None).
5. Repeat Steps 2, 3, and 4 for each gateway you want to have available for connection.

For more information on a particular field, refer to the General page topic within this section.

The IrmaLAN via Banyan VINES Advanced Page



New Session Wizard - IrmaLAN Server via Banyan VINES Advanced page

Use this page to define security settings when accessing an IrmaLAN Gateway. You can specify no security, security for a particular workstation, or user-specific access.

The following section describes the fields on this page.

Security Option: Define the level of security for accessing an IrmaLAN gateway. You can specify no security, security for a particular workstation, or user-specific access.

None: Select if no security (Workstation Name, or User ID and Password) is required to connect to the gateway.

Symbolic: Select to reserve LUs for a specific workstation without requiring User IDs and passwords.

Workstation Name: Type a workstation name that consists of a maximum of 8 alphanumeric characters. The Workstation Name is case-sensitive.

Enhanced: Select if a User ID and password are required to connect to the gateway.

User ID: Type a User ID that consists of a maximum of 8 alphanumeric characters. The User ID is case-sensitive.

Password: Type a password that consists of a maximum of 8 alphanumeric characters. The password is case-sensitive.

Enable Kkeep Alive: Select to provide a constant check between your session and the gateway.

IrmaLAN Server via IPX/SPX (NetWare)

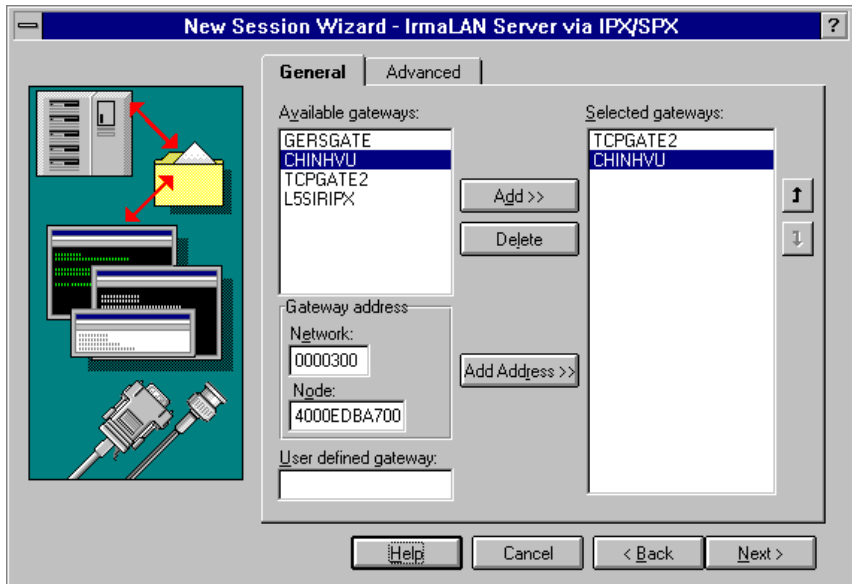
You can connect to the mainframe using IrmaLAN server gateway, via IPX/SPX (Internetwork Package Exchange/Sequenced Packet Exchange). You can configure any number of gateways for connection, as well as the level of security when accessing each of these gateways.

IrmaLAN Server via IPX/SPX - System Requirements

Workstation requirements are listed below. If any of the required Novell NetWare files are not on the workstation, check the NetWare server, or contact your SAA Gateway administrator. (You can also download these files from CompuServe or the Novell NetWire service.)

- A LAN adapter that supports IPX
- Client service for NetWare
- IPX/SPX compatible transport

The IrmaLAN Server via IPX/SPX General Pages



New Session Wizard - IrmaLAN Server via IPX/SPX General page

Use this page to define gateway information when using an IrmaLAN for IPX/SPX gateway to access a host. You can select from a list of available gateways or you can define a specific gateway name or address. The gateway provides the host session support for the Mainframe Terminal and Mainframe Printer applications.

The following section describes the fields on this page.

Available Gateways: Displays the gateways currently available for connection.

Gateway Address: Displays the network address and node address value for the gateway selected in the Available Gateways list.

Network: Displays the network address value of the selected gateway in the Available Gateways list. This field is read-only.

Node: Displays the node address value of the selected gateway in the Available Gateways list. This field is read-only.

User Defined Gateway: Type a gateway name or address, then choose Add>> to add the gateway name to the Selected Gateways list. When specifying a gateway address, you need to delimit the network and node address by a period (.), for example 0000300A.4000000061.

Selected Gateways: Displays the gateway names that will be used to establish a connection. The session attempts to connect with each gateway in the list, beginning with the first, until a connection is made.

Add>>: Adds a gateway name to the Selected Gateways list.

Delete: Removes a gateway name from the Selected Gateways list.

Add Address: Adds a user-defined gateway address (Network Address.Node Address) to the Selected Gateways list.

Move Up/Move Down buttons: Reorder the gateway names within the Selected Gateways list. The order in the list determines the order in which the gateway names are tried when making a connection.

The IrmaLAN Server via IPX/SPX Advanced Page



New Session Wizard - IrmaLAN Server via IPX/SPX Advanced page

Use this page to define security settings when accessing an IrmaLAN Gateway. You can specify no security, security for a particular workstation, or user-specific access.

The following section describes the fields on this page.

Security Options: Define the level of security for accessing an IrmaLAN gateway. You can specify no security, security for a particular workstation, or user-specific access.

None: Select if no security (Workstation Name, or User ID and Password) is required to connect to the gateway.

Symbolic: Select to reserve LUs for a specific workstation without requiring User IDs and passwords.

Workstation Name: Type a workstation name that consists of a maximum of 8 alphanumeric characters. The Workstation Name is case-sensitive.

Enhanced: Select if a User ID and password are required to connect to the gateway.

UserID: Type a User ID that consists of a maximum of 8 alphanumeric characters. The User ID is case-sensitive.

Password: Type a password that consists of a maximum of 8 alphanumeric characters. The password is case-sensitive.

Enable Keep Alive: Select to provide a constant check between your session and the gateway.

To configure an IrmaLAN Connection via IPX/SPX

1. Start a new session, and select IrmaLAN Server via IPX/SPX as your connection type.
2. From the General page, select a gateway from the Available Gateway list.

-or-

Enter a gateway name or address under User Defined Gateway.

When specifying a gateway address, you need to delimit the network and node address by a period (.), for example 0000300A.400000061.

3. Choose the Add button.

4. From the Advanced page, select the security option for your connection (the default is None).
5. Repeat Steps 2, 3, and 4 for each gateway you want to have available for connection.

For more information on a particular field, refer to the General page topic within this section.

IrmaLAN Server via NetBIOS

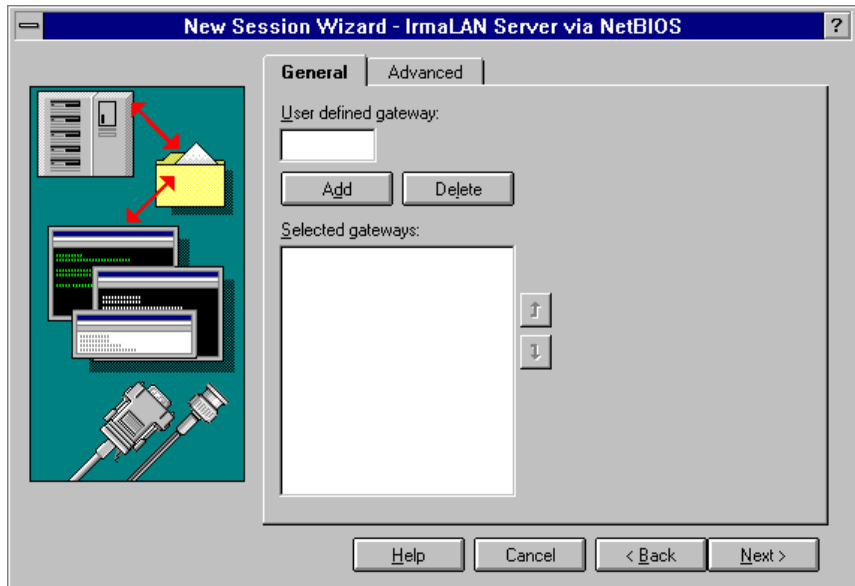
You can connect to a mainframe using IrmaLAN server gateway, via NetBEUI protocol over NetBIOS. You can configure any number of gateways for connection, as well as the level of security when accessing each of these gateways.

IrmaLAN Server via NetBIOS - System Requirements

An IrmaLAN Server via NetBIOS connection requires:

- A LAN adapter that supports NetBIOS
- A NetBEUI Protocol over an IBM compatible NetBIOS
- A gateway running ZIP! SNA Gateway or IrmaLAN for NetBIOS Server

The IrmaLAN Server via NetBIOS General Page



New Session Wizard - IrmaLAN Server via NetBIOS General page

Use this page to define gateway information when configuring an IrmaLAN for NetBIOS connection. You can choose from a list of selected gateways, or you can define a specific gateway name or address.

The following section describes the fields on this page.

User Defined Gateway: Type a gateway name or address, then choose Add to add the gateway name to the Selected Gateways list.

Add: Adds a gateway name to the Selected Gateways list.

Delete: Removes a gateway name from the Selected Gateways list.

Selected Gateways: Displays the gateway names that will be used to establish a connection. The session attempts to connect with each gateway in the list, beginning with the first, until a connection is made.

Up/Down buttons: Reorder the gateway names within the Selected Gateways list. The order in the list determines the order in which the gateway names are tried when making a connection.

To define a gateway

1. Enter a gateway name in the User Defined Gateway field.
2. Click Add.

The gateway name appears in the Selected Gateways list. You can also remove a gateway name by using the Delete button. If a gateway name already appears in the list, it is not added again.

The IrmaLAN Server via NetBIOS Advanced Page



New Session Wizard - IrmaLAN Server via NetBIOS Advanced page

Use this page to define security settings when accessing an IrmaLAN Gateway. You can specify no security, security for a particular workstation, or user-specific access.

The following section describes the fields on this page.

Security Options: Define the level of security for accessing an IrmaLAN gateway. You can specify no security, security for a particular workstation, or user-specific access.

None: Select if no security (Workstation Name, or User ID and Password) is required to connect to the gateway.

Symbolic: Select to reserve LUs for a specific workstation without requiring User IDs and passwords.

Workstation Name: Type a workstation name that consists of a maximum of 8 alphanumeric characters. The Workstation Name is case-sensitive.

Enhanced: Select if a User ID and password are required to connect to the gateway.

UserID: Type a User ID that consists of a maximum of 8 alphanumeric characters. The User ID is case-sensitive.

Password: Type a password that consists of a maximum of 8 alphanumeric characters. The password is case-sensitive.

Lana Number: Specify the NetBIOS to NetBEUI lana (LAN adapter) number for your workstation. The default is Auto Detect.

To define security settings

1. Select Symbolic or Enhanced option.
2. If you chose Symbolic, enter a workstation name in the appropriate field.

-or-

If you chose Enhanced, enter a valid User ID and Password in the appropriate fields.

To set the number of lana options

- From the Advanced page, enter the NetBIOS to NetBEUI lana number for your workstation.

The default is set to Auto Detect.

To configure an IrmaLAN Connection via NetBEUI NetBIOS

1. Start a new session, and select IrmaLAN Server via NetBIOS as your connection type.
2. From the General page, enter a gateway name under User Defined Gateway.
3. Choose the Add button.
4. From the Advanced page, select the security option for your connection (the default is None).
5. Repeat Steps 2, 3, and 4 for each gateway you want to have available for connection.

For more information on a particular field, refer to the General page topic within this section.

LUA/LU0/RUI

You can connect to the mainframe using the LUA/LU0/RUI application programming interface (API), which will be referred to here as LUA. *EXTRA!* supports the following LUA vendor stacks:

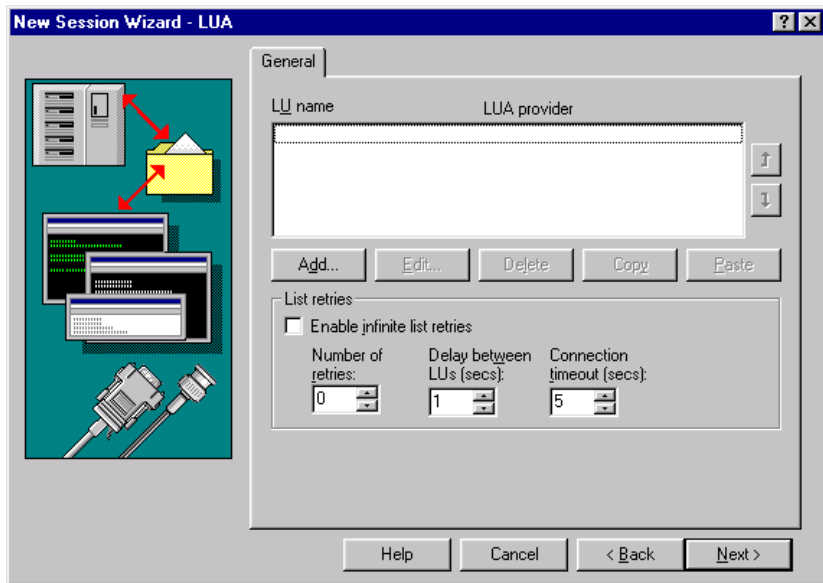
- Attachmate APPN Node
- Attachmate SNA Gateway
- Attachmate SNA Gateway Client
- Microsoft SNA Server Client

Using Attachmate APPN Node, you can make an LUA connection over the following connectivity types:

- Cisco NCIA
- Coax DFT
- DLC 802.2
- DLSw
- Hayes AutoSync
- SDLC

System requirements vary depending on the connectivity type you choose.

The LUA/LU0/RUI General Page



New Session wizard - LUA General page

Use this page to define the LUs to which you want to connect via LUA. The following section describes the features on this page.

LU Name: Displays the names of LUs to which *EXTRA!* will attempt to connect. *EXTRA!* tries to connect to the topmost LU in the list first. If the attempt fails, *EXTRA!* tries to connect to the next LU, and continues down the list in this manner until a connection is made. You can change the order of LUs in the list using the up and down arrows to the right of the list. The list holds up to 6 LUs.

LUA Provider: Displays the LUA provider stack selected for each LU.

Up/Down Buttons: Reorders the LU names within the Connection list. The order determines which LU is tried first, then second, and so on until a connection is made.

Add: Displays the Add Connection dialog box from which you can name a new LU and select its LUA provider stack. The new LU will be placed at the bottom of the LU list.

Edit: Displays the Edit LUA Session dialog box from which you can edit the connection information for the selected LU.

Delete: Deletes the selected LU from the LU list.

Copy: Copies the selected LU connection information to a local memory buffer.

Paste: Pastes previously-copied LU connection information from the local memory buffer into a new LU element in the LU list immediately above the currently selected LU element.

List Retries

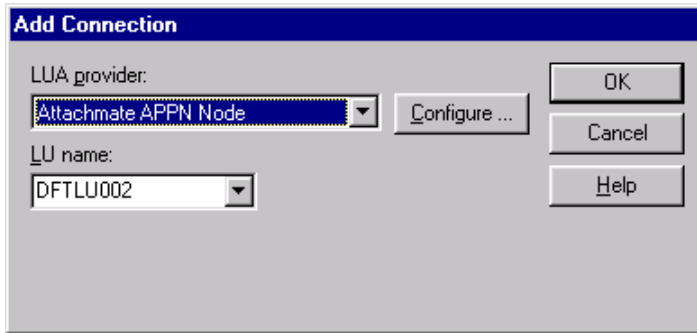
Enable Infinite List Retries: Specifies that *EXTRA!* will go through the list of LUs continuously until a successful connection is made.

Number of Retries: Displays the number of additional times *EXTRA!* will try to connect if the first connection attempt fails. *EXTRA!* will always try to connect to each LU in the list once. The default number of additional attempts is 0.

Delay Between LUs (secs): Specifies the number of seconds to wait before connecting to the next LU. The default is 1 second.

Connection Timeout (secs): Indicates the number of seconds the session waits for a successful connection before stopping. The default is 10 seconds. The maximum value is 300 seconds; 0 implies no timeout.

The Add Connection Dialog Box



Add Connection dialog box

Use the Add Connection dialog box to add LUs to the list of LUs to which *EXTRA!* will attempt to connect. The following section describes the fields on this page.

LUA Provider: Displays the LUA provider stack to be used. If you select “Any”, *EXTRA!* will attempt to connect to the LU using each supported LUA stack.

LU Name: Displays the LUs available from the currently selected LUA provider stack. If you chose “Any” in the LUA Provider list, LU Name displays the LUs available on all supported LUA provider stacks. If the desired LU does not appear in this list, you can enter it manually.

Configure button: Starts the configurator for the currently selected LUA provider. If you chose “Attachmate APPN Node” in the LU Provider list, the Configure Attachmate APPN Node dialog box appears.

To configure an LUA connection

1. Start a new session, and select LUA as your connection type.
2. From the General page, choose an action as follows:

To	Do this
Delete the connection.	Select an LU from the list, then choose the Delete button.
Copy the LU's connection settings to the Clipboard	Select an LU from the list, then choose the Copy button.
Paste the copied settings into the selected connection	Choose the Paste button.

3. Select Enable Infinite List Retries if you want *EXTRA!* to go through the list of configured connections repeatedly until a successful connection is made.
4. From the Connection Timeout field, enter a value in seconds. The default is 10 seconds.
5. From the Number of retries field, enter a value for the number retries. The default is 0.
6. Select Enable Infinite List Retries if you want *EXTRA!* to go through the list of LUs repeatedly until a successful connection is made.

-or-

In the Number of retries field, enter a value for the number of retries. The default is 0.

7. In the Delay Between LUs field, enter a delay value in seconds. The default is 1 second.
8. In the Connection Timeout field, enter a timeout value in seconds. The default is 10 seconds.

To add or edit an LUA connection

1. Start a new session, and select LUA as your connection type.
2. From the General page, select an LU from the list, then choose the Add button.

The Add connection dialog box appears.

-or-

From the General page, select an LU from the list, then choose the Edit button.

The Edit LUA dialog box appears.

3. From the LUA Provider list, select an LUA stack.
4. Choose Configure to edit your LUA stack settings.
5. From the LU name list, select an LU.
6. Choose OK.

Microsoft SNA Server

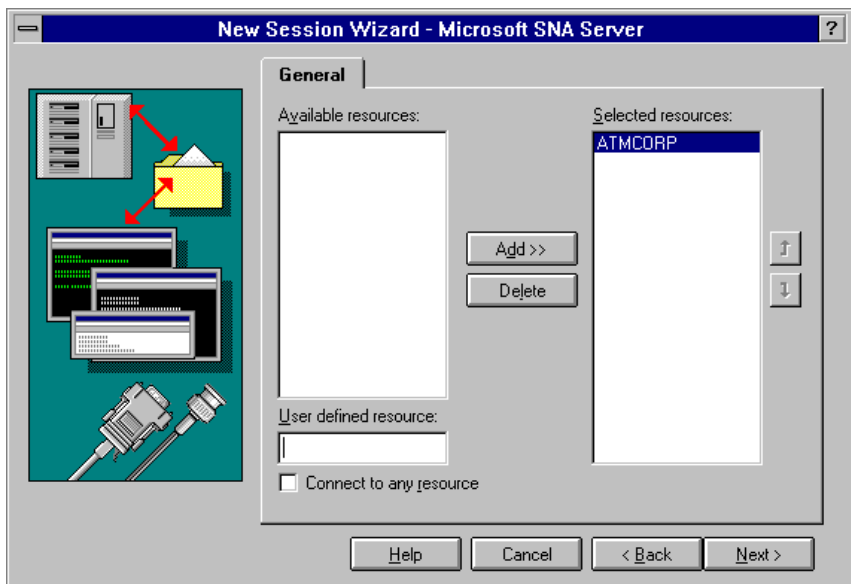
You can connect to an IBM mainframe via a Microsoft SNA Server. A Microsoft SNA Server connection supports the complete range of terminal and printer types, on single or multiple hosts, and IND\$FILE transfer.

Microsoft SNA Server - System Requirements

A connection to the Microsoft SNA Server requires:

- Microsoft SNA Client software running on each client workstation. Two clients are available: one specifically for NT, and the second made to run under Windows 95, Windows 98 and Windows NT 3.51 (included with *EXTRA!*).
- TCP/IP, Novell NetWare (IPX/SPX), or MS Networking (Named Pipes) transport protocol, installed on the SNA Server and on the client workstations.

The Microsoft SNA Server General Page



New Session Wizard - Microsoft SNA Server General page

Use this page to configure a Microsoft SNA Server connection. You can select from a list of available resources or you can define a specific resource.

The following section describes the fields on this page.

Available Resources: Displays the available resources for your workstation.

User Defined Resource: Type a resource name, then choose Add>> to add the resource to the Selected Resources list.

Note: You can enter a resource that is not yet configured on the SNA Server (and thus does not appear in the Available Resources list), which allows you to enter a resource to be made available at a later date.

Connect to any resource: Select to allow the session to connect with all available resources, not just those specified in the Selected Resources list.

Selected Resources: Displays the resources that will be used to establish a connection (unless the Connect to Any Resources option is selected). The session attempts to connect with each resource in the list, beginning with the first, until a connection is made.

Add>>: Adds a resource to the Selected Resources list.

Delete: Removes a resource from the Selected Resources list.

Move Up/Move Down buttons: Reorder the resources within the Selected Resources list. The order in the list determines the order in which the resources are tried when making a connection.

To configure a Microsoft SNA Server connection

1. Start a new session, and select MS SNA Server as your connection type.
2. From the next page, select a resource from the Available Resources list.

-or-

Enter a resource name under User Defined Resource.

4. Choose Add.
5. Choose OK.

For more information on a particular field, refer to the General page topic within this section.

NetWare for SAA via IPX/SPX

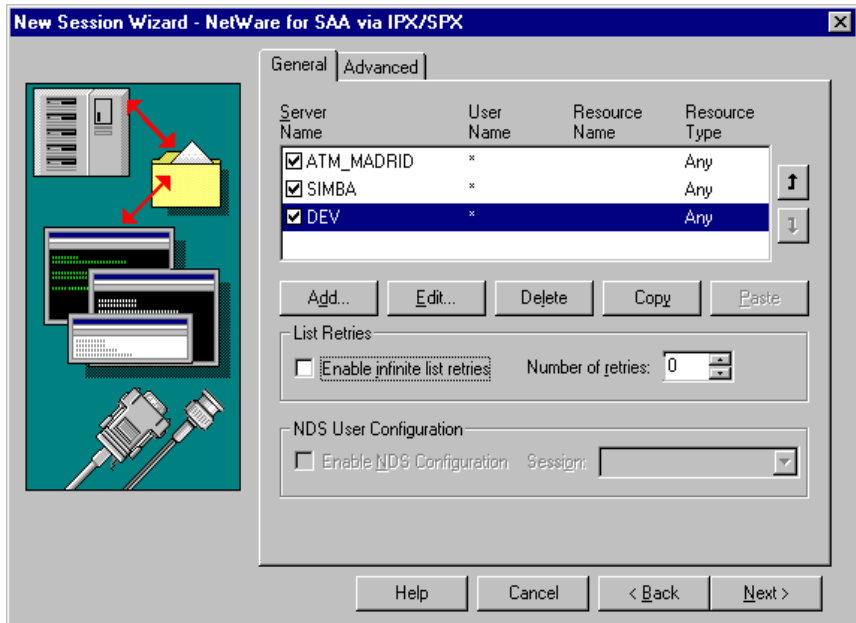
You can connect to IBM mainframes via the Novell SAA Gateway, using an IPX/SPX (Internetwork Packet Exchange/Sequenced Packet Exchange) protocol.

NetWare for SAA via IPX/SPX - System Requirements

Workstation requirements are listed below. If any of the Novell NetWare files listed are not located on the workstation, check the NetWare server, or contact your SAA Gateway administrator. (You can also download these files from CompuServe or the Novell NetWire service.)

- A LAN adapter that supports IPX
- Client Service for NetWare
- IPX/SPX compatible transport

The NetWare for SAA via IPX/SPX General Page



New Session Wizard - NetWare for SAA via IPX/SPX General page

Use this page to configure a NetWare for SAA connection via IPX/SPX. You can define a new connection, edit an existing connection, or you can enable or disable a connection from the Connection Definition list. This page also has copy/paste features which makes it easier to create a series of connections.

Connection Definitions

Displays the currently available connection definitions and shows the parameters for each definition. The system attempts to connect with each server in the list, beginning with the first, until a connection is made.

You can clear the check box to the left of each server to disable a specific configuration. If a server displayed in the list is going to be down for an extended period of time, you can disable it (without deleting it), and reconfigure the server later.

Server Name: Indicates the server name to which you are connecting.

User Name: Indicates the user who is making the connection.

Resource Name: Indicates the resource name for this connection.

Resource Type: Indicates the resource type for this connection.

Add: Opens the Add Connection dialog box where you can configure a connection.

Edit: Opens the Edit Connection dialog box where you can edit the current configuration.

Delete: Removes a connection entry from the Connection list.

Copy: Copies the selected entry from the Connection list to a temporary buffer.

Paste: After a connection entry is copied using the Copy button, press the Paste button to re-insert a copy of the entry into the Connection list.

Move Up/Move Down buttons: Reorder the list of connection definitions. The order in the list determines the order in which the connection definitions are tried when making a connection.

List Retries

Enable Infinite List Retries: When selected, the system goes through the entire list of connection definitions repeatedly, until a connection is made.

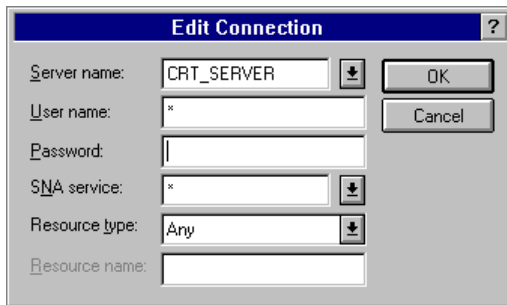
Number of Retries: Specifies the number of additional times the session will try to connect if the first attempt fails. The default is 0. If more than one connection definition is listed, the system will go through the whole list the specified number of times.

NDS User Configuration: NDS User Configuration works only on a NetWare Server version 2.2 or later, with the client running over a NetWare IPX stack. If the client is running over a Microsoft IPX stack, or if supporting DLLs for the NetWare stack are unavailable, the NDS User Configuration option will be unavailable.

Enable NDS Configuration: Select to allow the session to use a pre-defined configuration (an NDS user configuration) on the NetWare server. Using a server session selected from the Session list, you can assign users, or groups of users, to different servers and share the configuration. Make sure you are logged into NDS from your Windows directory before using an NDS user configuration.

Session: Provides a list of sessions defined on the server that are available for you to use for an NDS user configuration.

The Edit Connection Dialog Box



Edit Connection dialog box

Use this dialog box to define a NetWare for SAA connection via IPX/SPX. To define a connection, you need to specify a server name, a user name and password, SNA service, resource name, and resource type. The following section describes each field in detail.

Server Name: Enter the name of the server to which you want to connect. To connect to the first server that has a matching User Name, SNA Service Name, Resource Name, and Resource Type, select the asterisk (*).

User Name: Type the login ID set up for you by your NetWare for SAA administrator, or use an asterisk (*) to use the current NetWare User ID. The User Name identifies your workstation to the server and the LAN. It must be unique and from 1 to 47 characters long.

Password: Type the password defined with your login ID.

SNA Service: To provide access to multiple service profiles, select a service name from the list, or type a service name provided by your NetWare for SAA administrator. The service name is case-sensitive. To use the first service that is available on the specified server, select the asterisk (*).

Resource Type: Select a resource type from the list. Your options are Any (default), Public, Pooled, or Dedicated.

Any: Specifies a connection to the first available LU that you are authorized to use.

Pooled: Specifies a connection to the first available LU in the pool specified by the Resource Name. If all pools are unavailable, the session connects to a public LU. Workstations that are authorized in a named pool can access this resource. The NetWare for SAA administrator may have defined a pool of users for those who need access to specific applications.

Public: Specifies a connection to the first available public LU.

Dedicated: Specifies a workstation that needs access to a specific LU is dedicated to this resource.

Resource Name: Type the name of the resource to which the workstation will connect. Each Resource Name is associated with a Resource Type. The Resource Name is case-sensitive.

To configure a NetWare for SAA connection via IPX/SPX

Note: In most cases, the default settings will automatically make a connection with the first available resource based on your current network connection. Change the settings only if you wish to specify a specific resource.

1. Start a new session, and select NetWare for SAA via IPX/SPX as your connection type.
2. From the next page, choose Add.
The Edit Connection dialog box appears.
3. From the Edit Connection dialog box, review the default options and change as necessary.
4. Type your user name and password, if required.
5. Choose OK.

For more information on a particular field, refer to the General page topic within this section.

To remove a NetWare for SAA via IPX/SPX connection

- With a NetWare for SAA via IPX/SPX session open, in the Connection Definitions list, select the connection you want to disable, then clear the check box to the left of it.

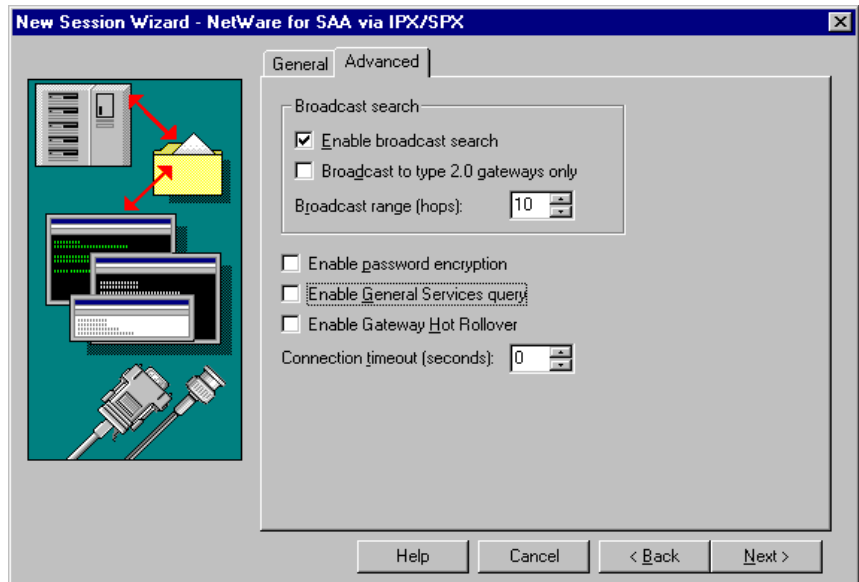
The connection remains on the list for future use (re-enable it by selecting the check box).

–or–

- With a NetWare for SAA via IPX/SPX session open, in the Connection Definitions list, select the connection you want to delete, then choose the Delete button.

The connection is permanently removed from the list.

The NetWare for SAA via IPX/SPX Advanced Page



New Session Wizard - NetWare for SAA via IPX/SPX Advanced page

Use this page to set advanced connection features such as broadcast search, which allows your workstation to search for the first available gateway. You can also set password encryption, general service query, and gateway hot rollover options.

The following section describes the fields on this page.

Broadcast Search

Enable Broadcast Search: Select to specify that, upon session startup, your workstation will broadcast a request for all available resources and return a list of available servers, which are then listed in the Connection Definition list on the General page.

Broadcast to Type 2.0 Gateway Only: Select to restrict the broadcast search to 2.0 gateway types.

Broadcast Range (Hops): Limit the range of the broadcast search to those responding servers that are within the specified number of routers or rings away, known as hops. This option is useful when you do not want to use a resource that is several hops away. The default is 10. To use the local ring only, enter 1; to disable this option, enter 0.

Note: If the Enable General Services Query option is selected, it overrides the Broadcast Search settings.

Enable Password Encryption: Select to use Novell public key encryption when making a connection.

Enable General Services Query: Select to send a general broadcast to all available resources and return a list of available servers, which are then listed in the Connection Definition list on the General page. This option overrides any Broadcast Search options set above.

Enable Gateway Hot Rollover: Select to roll over to the next configuration specified in the Connection Definitions list when an error occurs after a connection is made, or when a system administrator intervenes.

Connection Timeout (seconds): Displays the number of seconds the system will wait for a successful connection before stopping. The default is 0, which causes no timeout.

NetWare for SAA via TCP/IP

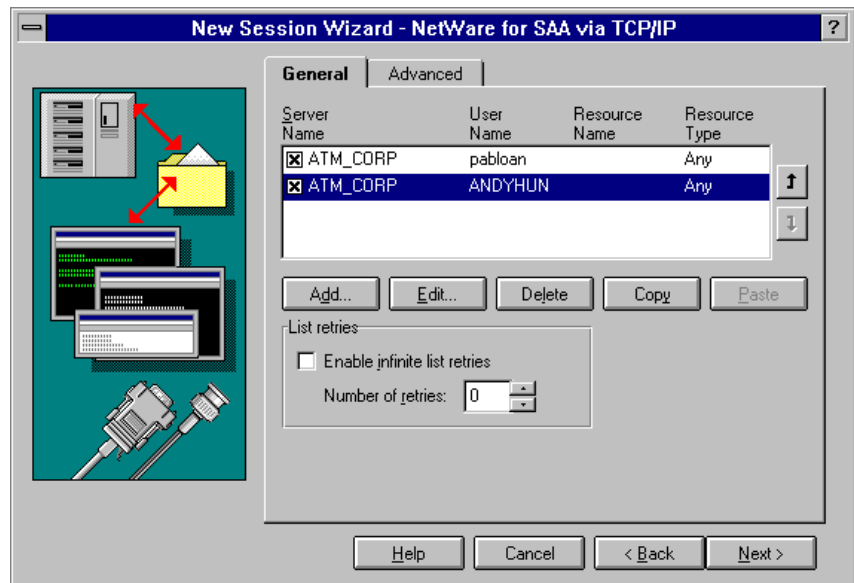
You can connect to IBM mainframes via the Novell SAA Gateway, using a TCP/IP (Transmission Control Protocol/Internet Protocol) protocol.

NetWare for SAA via TCP/IP - System Requirements

An SAA connection via TCP/IP requires:

- A communications adapter (token-ring or Ethernet adapter) that passes TCP/IP packets
- A TCP/IP stack compliant with the Windows Sockets (WinSock) 1.1 specification

The NetWare for SAA via TCP/IP General Page



New Session Wizard - NetWare for SAA via TCP/IP General page

Use this page to define resources for a NetWare for SAA via TCP/IP connection. You can define a new connection, edit an existing connection, or you can enable or disable a connection from the Connection Definition list. This page also has copy/paste features which makes it easier to create a series of connections.

The following section describes the fields on this page.

Connection Definitions: Displays the currently available connection definitions and shows the parameters for each definition. The system attempts to connect with each server in the list, beginning with the first, until a connection is made.

You can clear the check box to the left of each server to disable a specific configuration. If a server displayed in the list is going to be down for an extended period of time, you can disable it (without deleting it), and reconfigure the server later.

Server Name: Indicates the server name to which you are connecting.

User Name: Indicates the user who is making the connection.

Resource Name: Indicates the resource name for this connection.

Resource Type: Indicates the resource type for this connection.

Add: Adds a new connection definition with a name that you select and default connection settings.

Edit: Changes the values of an existing connection definition.

Delete: Removes the selected connection definition.

Copy: Makes a copy of an existing connection definition.

Paste: Pastes a copy of an existing connection definition to the list.

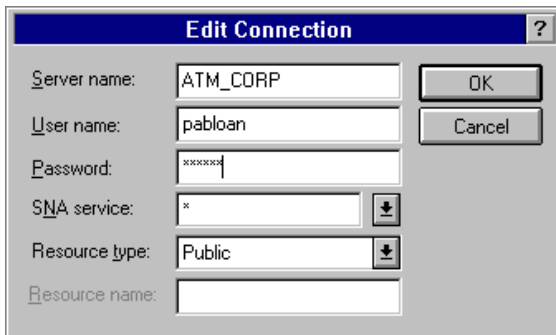
Move Up/Move Down buttons: Reorder the list of connection definitions. The order in the list determines the order in which the connection definitions are tried when making a connection.

List Retries

Enable Infinite List Retries: When selected, the system goes through the entire list of connection definitions repeatedly, until a connection is made.

Number of Retries: Specifies the number of additional times the session will try to connect if the first attempt fails. The default is 0. If more than one connection definition is listed, the system will go through the whole list the specified number of times.

The Edit Connection Dialog Box



Edit Connection dialog box

Use this dialog box to define a NetWare for SAA via TCP/IP connection. You need to specify a server name, a username and password, SNA service, resource name, and resource type. The following section describes each field in detail.

Server Name: Type the address or Domain Name Service (DNS) that will establish your connection. Ask your system administrator for available addresses or valid DNS names.

User Name: Type the login ID set up for you by your NetWare for SAA administrator, or type an asterisk (*) to use the current NetWare User ID. The User Name identifies your workstation to the server and the LAN. It must be unique and from 1 to 47 characters long.

Password: Type the password defined with your login ID.

SNA Service: To provide access to multiple service profiles, select a service name from the list, or type a service name provided by your NetWare for SAA administrator. The service name is case-sensitive. To use the first service that is available on the specified server, select the asterisk (*).

Resource Type: Select a resource type from the list. Your options are Any (default), Public, Pooled, or Dedicated.

Any: Specifies a connection to the first available LU that you are authorized to use.

Public: Specifies a connection to the first available public LU.

Pooled: Specifies a connection to the first available LU in the pool specified by the Resource Name. If all pools are unavailable, the session connects to a public LU. Workstations that are authorized in a named pool can access this resource. The NetWare for SAA administrator may have defined a pool of users for those who need access to specific applications.

Dedicated: Specifies a workstation that needs access to a specific LU is dedicated to this resource.

Resource Name: Type the name of the resource to which the workstation will connect. Each Resource Name is associated with a Resource Type. The Resource Name is case-sensitive.

To configure a NetWare for SAA via TCP/IP connection

1. Start a new session, and select NetWare for SAA via TCP/IP as your connection.
2. From the next page, choose Add.
The Edit Connection dialog box appears.
3. From the Edit Connection dialog box, enter the required information.
4. (Optional) Set the appropriate List Retry options as necessary.
5. Choose OK.

For more information on a particular field, refer to the General page topic within this section.

To remove a NetWare for SAA via TCP/IP connection

- With a NetWare for SAA via TCP/IP session open, in the Connection Definitions list, select the connection you want to disable, then clear the check box to the left of it.

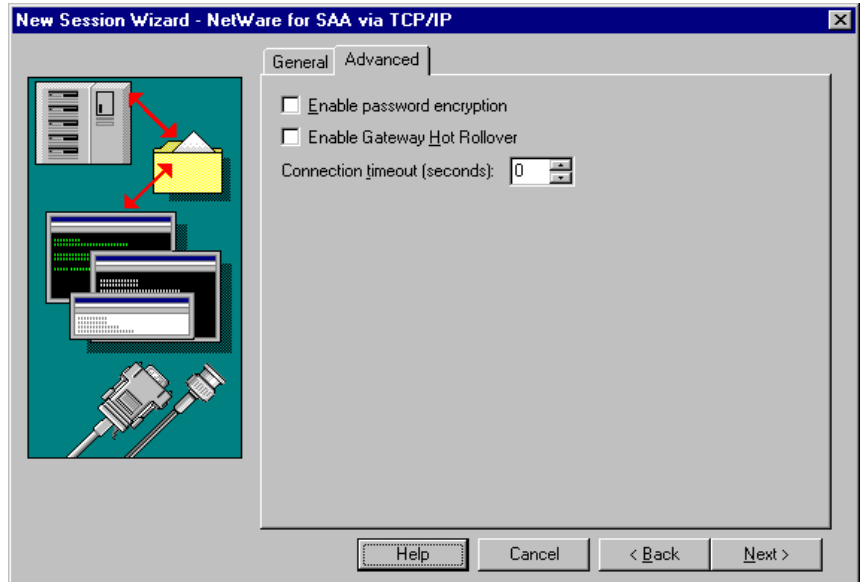
The connection remains on the list for future use (re-enable it by selecting the check box).

–or–

- With a NetWare for SAA via TCP/IP session open, in the Connection Definitions list, select the connection you want to delete, then choose the Delete button.

The connection is permanently removed from the list.

The NetWare for SAA via TCP/IP Advanced Page



New Session Wizard - NetWare for SAA via TCP/IP Advanced page

Use this page to set advanced options when connecting to the host. The advanced features include password encryption, gateway hot rollover, and connection timeout.

These features are described below.

Enable Password Encryption: Select to use Novell public key encryption when making a connection.

Enable Gateway Hot Rollover: Select to roll over to the next configuration specified in the Connection Definitions list when an error occurs after a connection is made, or when a system administrator intervenes.

Connection Timeout (seconds): Displays the number of seconds the system will wait for a successful connection before stopping. The default is 0, which causes no timeout.

SDLC Direct Connect

An SDLC (Synchronous Data Link Control) connection allows you to communicate with an IBM mainframe via Synchronous DLC (Data Link Control), typically over a public or leased telephone line.

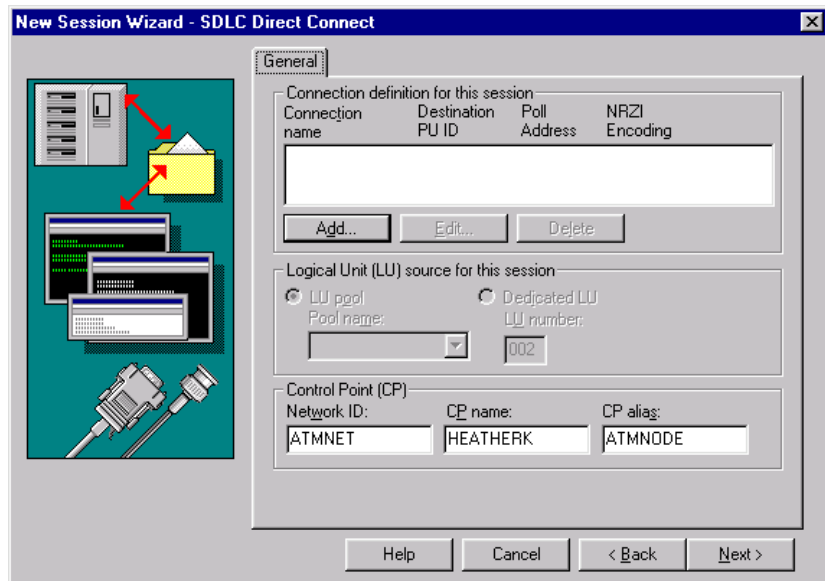
To define an SDLC connection, you need the SDLC configuration settings for the host (check with your system administrator). You may also need to consult your modem and SDLC adapter documentation. If you are configuring a connection under Windows NT, you must first select an SDLC adapter.

SDLC Direct Connect - System Requirements

An SDLC (Synchronous Data Link Control) connection requires one of the following adapters:

- Attachmate SCA Adapter
- Attachmate SDLC Adapter
- IBM SDLC Adapter
- IBM MPCA Adapter

The SDLC Direct Connect General Page



New Session Wizard - SDLC Direct Connect

General

Connection definition for this session

Connection name	Destination PU ID	Poll Address	NRZI Encoding

Agd... Edit... Delete

Logical Unit (LU) source for this session

LU pool Dedicated LU

Pool name: LU number:

Control Point (CP)

Network ID: CP name: CP alias:

Help Cancel < Back Next >

New Session Wizard - SDLC Direct Connect General page

Use this page to select and create SDLC connection definitions and to specify LU resources to be used for those connections. Consult your system administrator for the correct values.

The following section describes the fields on this page.

Connection Definition list: Displays the currently available connection definitions and shows the parameters for each definition.

Connection Name: Displays the name of the connection definition. This name must be unique among all SDLC and 802.2 connections on your workstation.

Destination PU ID: Identifies to the host a PU used by your workstation. The PU ID is an 8-digit hexadecimal number consisting of the 3-digit IDBLK value followed by the 5-digit IDNUM value from your VTAM definition.

Poll Address: Identifies your workstation to the host. The poll address is a 2-digit hexadecimal number; the default is C1.

NZRI Encoding: Indicates the type of data-stream encoding used. Yes indicates NRZI encoding, No indicates NRZ.

Add: Adds a new connection definition with a name that you select and default connection settings.

Edit: Changes the values of an existing connection definition.

Delete: Permanently removes the selected connection definition.

Logical Unit Source for This Session

LU Pool: Select to make a connection using the first available Logical Unit (LU) from a given pool of LUs. If you select this option, you must enter a valid LU Range (minimum and maximum).

Pool Name: Lists the names of the LU pools that are configured for SDLC connections.

Select to configure your session to a specific LU number. If you select this option, you must enter a valid LU Number.

LU Number: Displays the LU number that will be used to make a connection. For more information, contact your system administrator.

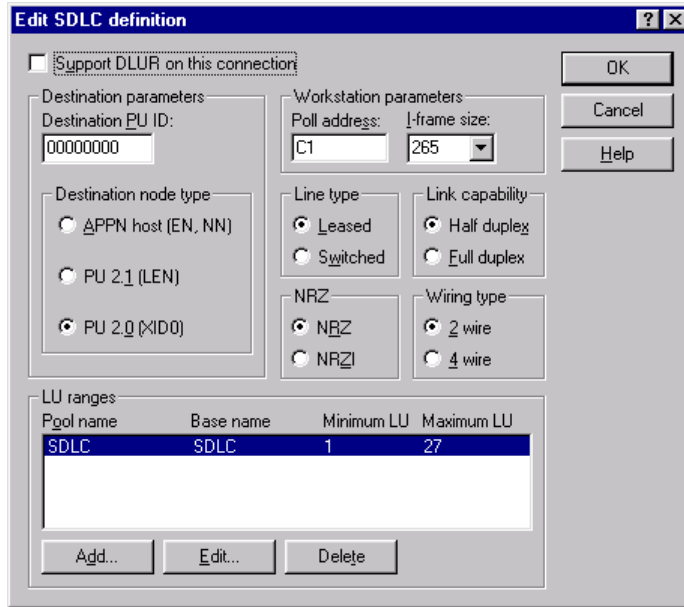
Control Point (CP)

Network ID: Combined with the CP Name, forms a fully qualified Control Point (FQCP) name.

CP Name: Combined with the Network ID, forms a fully qualified Control Point (FQCP) name.

CP Alias: A local name used for the fully qualified Control Point (FQCP) name, consisting of both the Network ID and the CP Name. It is set to the CP Name if not specified.

The Edit SDLC Definition Dialog Box



Edit SDLC Definition dialog box

Use this dialog box to configure an SDLC connection. You will need to select the appropriate destination parameters, workstation parameters, and other connection parameters. You may also choose whether or not to support DLUR with this link.

The following section describes the fields within this dialog box.

Support DLUR on This Connection: Select this option to allow a connection through a Dependent LU Requester (DLUR) to a Dependent LU Server (DLUS).

Destination Parameters

Destination PU ID: Identifies to the host a PU used by your workstation. The PU ID is an 8-digit hexadecimal number consisting of the 3-digit IDBLK value followed by the 5-digit IDNUM value from your VTAM definition.

APPN Host (EN, NN): Select to connect to an up-level PU type 2.1 node (End Node or Network Node).

PU 2.1 (LEN): Select to connect to a back-level Low-Entry Networking (LEN) node. LEN nodes do not support APPN function.

PU 2.0 (XID0): Select to connect to a type 2.0 node.

Workstation Parameters

Poll Address: Identifies your workstation to the host. The poll address is a 2-digit hexadecimal number; the default is C1.

I-Frame Size: Specifies the packet size of an information frame (I-Frame), which the host uses to transfer data through your LAN adapter to your workstation. Choose an I-Frame size that is consistent with your workstation's LAN Adapter and the I-Frame size specified on the mainframe network. The default is 265.

Line Type

Leased: Indicates a dedicated line.

Switched: Indicates a dial-up line.

Link Capability

Half Duplex: Indicates the type of link capability set by your system administrator.

Full Duplex: Indicates the type of link capability set by your system administrator.

NRZ

NRZ: Specifies the data-stream encoding type.

NRZI: Indicates Non-Return to Zero Inverted data-stream encoding.

Wiring Type

2 Wire: Used mainly for a switched (dial-up) connection to your host. May be used on leased multi-drop lines.

4 Wire: Used mainly for a dedicated (no phone) connection to your host.

LU Ranges

Pool Name: The name of the LU pool to which the range of LUs will belong.

The name of the LU range to which the LUs belong.

Minimum LU: The minimum LU value for the range.

Maximum LU: The maximum LU value for the range.

Add: Creates a new LU range.

Edit: Modifies the LU range.

Delete: Permanently removes the selected LU range.

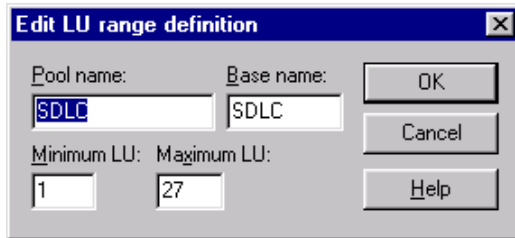
To configure an SDLC connection definition

Note: If you are configuring a connection under Windows NT, you must first configure an SDLC adapter.

1. Start a new session, and select SDLC Direct Connect as your connection type.
2. From the General page, select a connection definition.
3. Choose the Edit button to change the settings.
The Edit dialog box opens.
4. Set the appropriate destination parameters, workstation parameters, and other linking parameters.
Refer to the Related Topics button below for more details on each option. Contact your system administrator if you have any questions.
5. Choose the OK button to save your changes.
6. Select the appropriate Logical Unit type and range (if necessary).
7. Enter the Control Point Network ID and Name for your node.

For more information on a particular field, refer to the General page topic within this section.

The Edit LU Range Dialog Box



Edit LU Range Definition dialog box

Use this dialog box to add a new LU range definition or edit an existing one.

The following section describes the fields within this dialog box.

Pool Name: Enter the name of the LU pool to which the range of LUs will belong.

Base Name: Enter the name of the LU range to which the LUs belong.

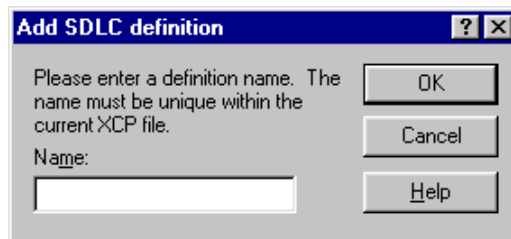
Minimum LU: Enter the minimum LU value for the range.

Maximum LU: Enter the maximum LU value for the range.

To configure an SDLC adapter for a version Windows NT earlier than 4.0

1. From the Control Panel, select the SDLC icon.
The SDLC Adapter Configuration dialog box appears.
2. Select the appropriate adapter from the Available list, then select Add.
Your selection will be added to the Installed list. You must now configure the installed adapter.
3. Select the adapter from the Installed list, then choose Configure.
The system displays the default settings associated with that adapter. Check with your systems administrator if you have any questions.
4. Choose OK to save and exit the SDLC Adapter Settings dialog box.
5. Choose OK again to save and exit the SDLC Adapter Configuration dialog box.
6. When prompted, restart your computer.
You are now ready to configure an SDLC connection.

The Add SDLC Definition Dialog Box



Add SDLC Definition dialog box

Use this dialog box to enter a name for your new connection definition.

To add an SDLC connection definition

1. Start a new session, and select SDLC as your connection type.
2. From the General page, choose the Add button to define a connection definition.

The Add SDLC Connection Definition dialog box appears.

3. Type a name for the new connection definition, then review and change the default parameters as necessary.
4. Choose OK.

A new Connection Name, with default settings will appear in the list of connection definitions.

For more information on a particular field, refer to the General page topic within this section.

To delete an SDLC connection definition

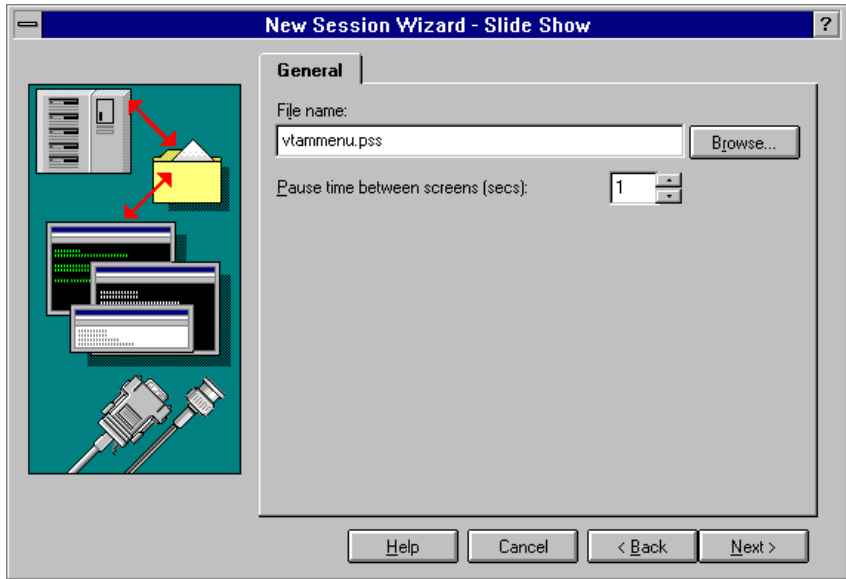
- With an SDLC Direct Connect session open, from the SDLC Connection Definition list, select the connection you want to delete, then choose the Delete button.

The connection is removed from the list.

SlideShow/Mainframe Demo

The SlideShow/Mainframe Demo option is a demonstration feature that lets you simulate a connection and the response time when you go from one host screen to another.

The SlideShow General Page



New Session Wizard - SlideShow General page

Use this page to select a sample slideshow file (.PSS), which simulates a mainframe session.

The following section describes the fields on this page.

Filename: Type the filename of the SlideShow file (.PSS) you wish to view.

Pause Time Between Screens (secs): Type the number of seconds to delay between screens. This allows you to simulate the response time of a real host connection.

Browse button: Choose to search for a specific SlideShow file.

To configure a Mainframe Demo connection

1. Start a new session for the host and select Mainframe Demo as your connection type.
2. From the next page, select the name of the SlideShow file (.PSS) you wish to view. Choose Browse to view a list of SlideShow files.

For more information on a particular field, refer to the General page topic within this section.

TN3270

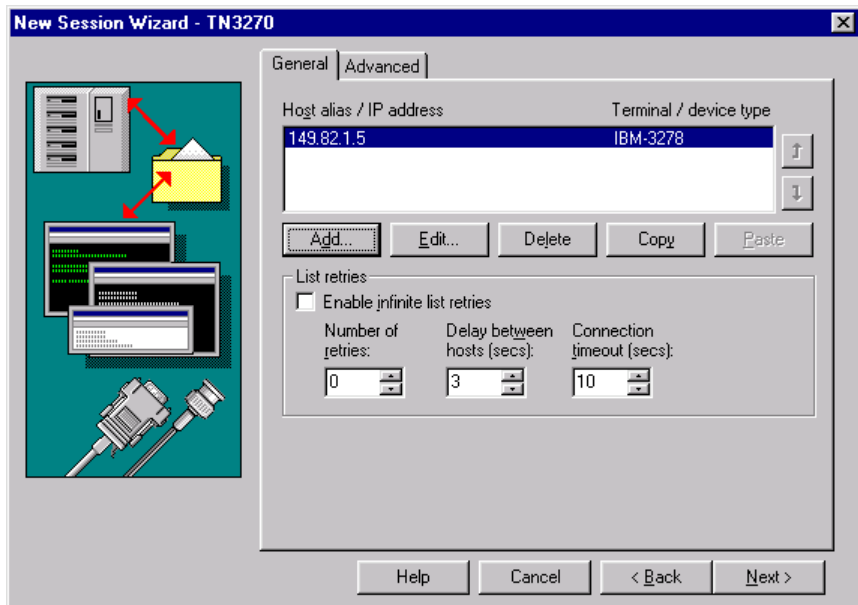
You can connect to the mainframe using the TCP/IP application protocol TN3270. The TN3270 connectivity option supports TCP/IP software that is compliant with the Windows Sockets (WinSock) 1.1 specification, and also supports the complete range of terminal types (3278/3279 models 2 through 5 with EABs) — on single or multiple hosts — and file transfer.

TN3270 - System Requirements

A TN3270 connection requires:

- Any Telnet server that supports TN3270 devices (clients).
- A communications adapter (token-ring or Ethernet adapter) that passes TCP/IP packets.
- A TCP/IP protocol compliant with the Windows Sockets (WinSock) 1.1 specification.

The TN3270 General Page



New Session Wizard - TN3270 General page

Use this page to define your TN3270 connection. You will need to know the host alias name or IP address and the port number to properly set up your connection.

The following section describes the fields on this page.

Host Alias/IP Address/Terminal/Device Type: Host Alias/IP Address, displays either the alias name or numeric IP address of the remote host.

Terminal/Device Type displays a terminal/device type string to be negotiated with the TN3270 server.

Up/Down Arrow: Moves the selection up or down on the list to assist in reprioritizing.

Add: Displays the Configure Connection dialog box where you can define TN3270 connections (enter the host alias or IP address, set the terminal type and port number) to add to the list of connections.

Edit: Displays the Configure Connection dialog box where you can edit the connection information for the selected host.

Delete: Deletes the selected host from the list.

Copy: Copies the selected connection information to a local buffer.

Paste: Pastes the selected connection information from the local buffer into the currently selected host.

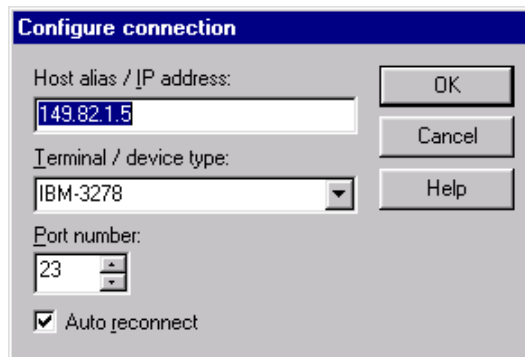
Enable Infinite List Retries: Specifies that *EXTRA!* will go through the list of configured connections continuously until a successful connection is made.

Number of Retries: Displays the number of additional times the session will try to connect if the first attempt fails. The default is 0.

Delay Between Hosts (secs): Displays the number of seconds the session waits before connecting to the next host. The default is 3.

Connection Timeout (secs): Indicates the number of seconds the session waits for a successful connection before stopping. The default is 10 seconds. The maximum value you can enter here is 300 seconds; 0 implies no timeout.

The Configure Connection Dialog Box



Configure Connection dialog box

Use the Configure Connection dialog box to add or edit TN3270 connections. You can configure up to 32 hosts. From the TN3270 General page choose Add to add a connection or select a connection from the list box and click Edit to edit a connection. You will need to know the Host Alias Name or IP Address and the port number to properly set up your connection(s).

Host Alias/IP Address: Indicates the name of the remote host. Enter either the numeric IP address or the alias name, using up to 32 characters. This option is case-sensitive.

Terminal/Device Type: Displays the terminal/device type string that is negotiated with the TN3270 server. The default is IBM-3278.

Port Number: Specifies the Telnet port address on the server. An address can be up to 4 digits long. The default is 23.

Auto Reconnect: Specifies whether *EXTRA!* reconnects or remains disconnected when the TN3270 session is logged off. In a TCP/IP network, a session disconnects when you log off from it--a useful feature when network traffic (bandwidth) is an issue. However, you may prefer that *EXTRA!* maintain the connection by automatically reconnecting at logoff. (The default is On.)

The TN3270 Advanced Page

Use this page to define the advanced TN3270 features, such as NVT (Network Virtual Terminal) options, TN3270-defined keys (ATTN and SYSREQ), and TN3270 enhanced protocol.

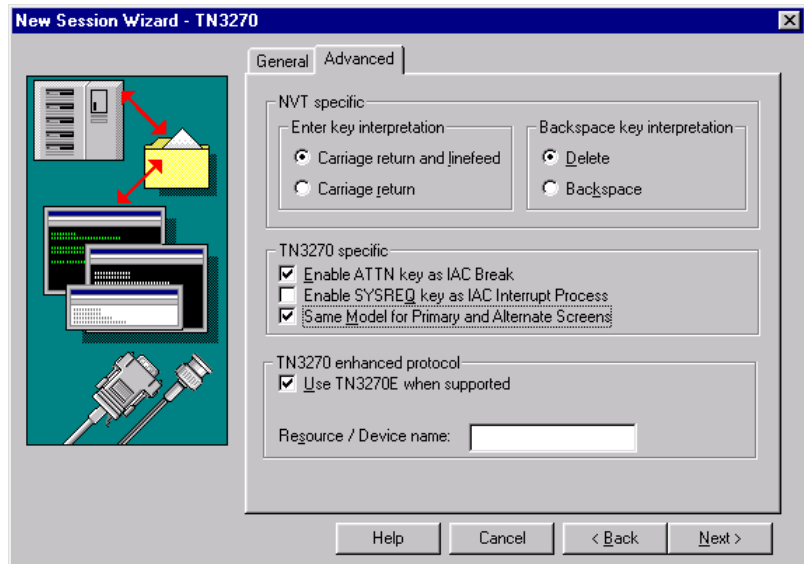
The TN3270E server maintains sets of both general device pools and specific device pools.

General Device Pools General device pools are pools of terminal and printer LUs from which the server assigns any available LU when no specific device-name is requested.

For example, if a user does not request a specific terminal, the server assigns any available device-name from the general terminal device pool.

Specific Device Pools Specific device pools are pools of terminal and printer LUs that can only be used for specific terminal or printer session requests.

For example, if a user requests a particular LU by specifying a device-name, the server assigns from a specific device pool.



New Session Wizard - TN3270 Advanced page

The following section describes the fields on this page.

NVT Specific: Specifies the function of the ENTER and BACKSPACE keys during a session.

Enter Key Interpretation: Specifies the function of the ENTER key.

Carriage Return and Linefeed: Feeds a blank line and then positions the cursor at the beginning of the next line when the ENTER key is pressed.

Carriage Return: Positions the cursor at the beginning of the next line when the ENTER key is pressed.

Backspace Key Interpretation: Moves the cursor back one character and deletes that character when the BACKSPACE key is pressed.

Delete: Moves the cursor back one character and deletes that character when the BACKSPACE key is pressed.

Backspace: Moves the cursor back one character without deleting the character when the BACKSPACE key is pressed.

TN3270 Specific: Enables non-TN3270-defined SNA AID keys (ATTN and SYSREQ), and the use of the same model for both primary and alternate screen sizes.

Enable ATTN Key as IAC Break: Select to send an IAC Break Telnet command when an ATTN is pressed during a host session.

Enable SYSREQ Key as IAC Interrupt Process: Select to send an IAC Interrupt Telnet command when a SYSREQ key is pressed during a host session.

Same Model for Primary and Alternate Screens: Select to use the same model type for both primary and alternate screen sizes. When selected, you can use a model type other than model 2 for primary screens.

Use TN3270 When Supported: Enables TN3270 enhanced protocols when supported.

Resource/Device Name: Specify a particular LU on the host. If no device name is entered, the server connects to any available LU at that port.

The TN3270E server maintains sets of both general device pools and specific device pools.

To configure a TN3270 connection

1. Start a new session, and select TN3270 as your connection type.

Do this	To
Choose the Add button	Add a new TN3270 connection type.
Select a connection type from the list and choose the Edit button	Edit a connection.
Select a connection type from the list and choose the Delete button	Delete a connection.
Select a connection type from the list and choose the Copy button	Copy a connection type to the Clipboard.
Choose the Paste button	Paste the copied connection into the list.

3. Select Enable Infinite List Retries if you want *EXTRA!* to go through the list of configured connections again and again until a successful connection is made.

4. From the Connection Timeout field, enter a value in seconds. The default is 10 seconds.
5. From the Number of retries field, enter a value for the number retries. The default is 0.

If you are adding or editing a connection, the Configure Connection dialog box displays. Follow these instructions.

1. Enter either the numeric IP address or the alias name, using up to 32 characters. This option is case-sensitive.
2. From the Terminal/Device Type list, select a device type. The default is IBM-3278.
3. From the Port Number field, enter a number. The default is 23.
4. (Optional) Select the Auto Reconnect option to specify whether *EXTRA!* is to reconnect or is to remain disconnected when the TN3270 session is logged off.

Note: If you are using the Microsoft Network, you may experience problems when loading your TN3270 session. The Microsoft Network dialog box may appear during the connection process.

To avoid this problem, in the Windows Control Panel, double-click the Internet icon and clear the Use Autodial option. This prevents the dialog box from appearing when loading a session.

VINES to Banyan SNA Service

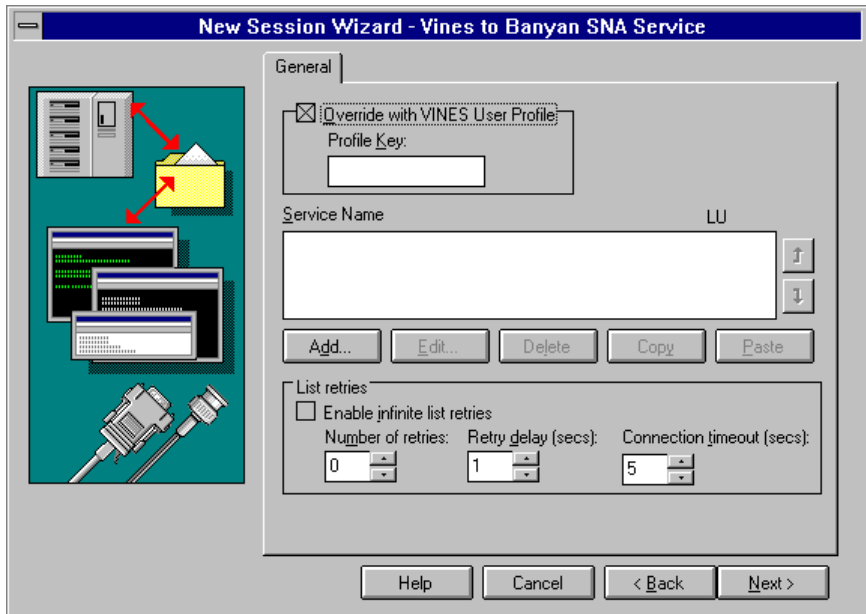
You can connect to the mainframes via a Banyan VINES SNA Server using Banyan VINES. You have two ways of configuring a connection: you can specify a Service Name and Logical Unit (LU), or you can specify a predefined Profile Key. The first option allows you to set specific values for the connection. The second option obtains the default settings from the Banyan VINES Server. To use the profile key option, your system administrator must define it on the Banyan server.

VINES to Banyan SNA Service - System Requirements

A Banyan SNA Service connection requires:

- Banyan SNA Base or Advanced Option package installed on the Banyan VINES Server
- A LAN adapter that supports Banyan VINES
- Banyan VINES Enterprise Client (5.56 or later) for Windows NT or Windows 95

The VINES to Banyan SNA Service - General Page



New Session Wizard - VINES to Banyan SNA Service General page

Use this page to define session information when using Banyan SNA Service to access a host. You can define up to five different service names or you can provide a profile key, which uses the default settings from the server. Contact your system administrator for a valid profile key.

The following section describes the fields on this page.

Override with VINES User Profile: Select this to use the service names and LUs defined in the profile key on the server. Contact your system administrator for a valid profile key.

Profile Key: Type a valid profile key as specified by your system administrator. The profile key provides predefined service names and LUs.

Connection Definitions: Displays the currently available connection definitions and shows the parameters for each definition. The system attempts to connect with each service in the list, beginning with the first, until a connection is made.

You can clear the check box to the left of each server to disable a specific configuration. If a server displayed in the list is going to be down for an extended period of time, you can disable it (without deleting it), and reconfigure the server later.

Add: Adds a profile to the Connection Profile list.

Edit: Changes the values of an existing profile.

Delete: Removes a profile from the Connection Profile list.

Copy: Makes a copy of an existing profile.

Paste: Pastes a copy of an existing profile in the list.

Move Up/Move Down buttons: Reorder the profile entries within the Connection Profile list. The order determines which profile name is tried first, then second, and so on until a connection is made.

List Retries

Enable Infinite List Retries: When selected, the system goes through the entire list of connection definitions repeatedly, until a connection is made.

Number of Retries: Specifies the number of additional times the session will try to connect if the first attempt fails. The default is 0. If more than one connection definition is listed, the system will go through the whole list the specified number of times.

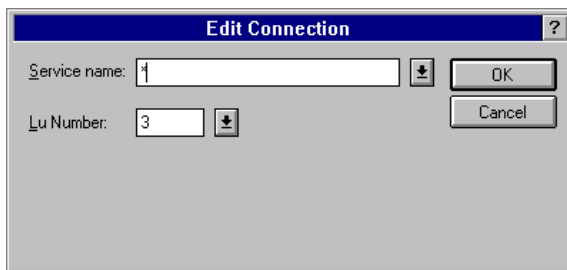
Note: This setting controls the number of times the session will go through the list of connection definitions. Each connection definition also has an individual setting for Number of Retries. On each pass through the list, the session makes the number of attempts specified

in the individual setting for each connection definition, then moves on to the next connection definition.

Retry Delay: Indicates the number of seconds the session waits between retries.

Connection Timeout (secs): Indicates the number of seconds the session waits for a successful connection before stopping. The default is 10 seconds. The maximum value is 300 seconds; 0 implies no timeout.

The Edit Connection Dialog Box



Edit Connection dialog box

Use this dialog box to add or edit a connection definition.

Service Name: Lists the available service names. An asterisk (*) specifies that the connection will access the first available service name.

LU Number: Lists the available LUs. The default is Any, with the range of 2-255.

To configure a VINES to Banyan SNA Service connection

1. Start a new session, and select VINES to Banyan SNA Service as your connection type.
2. From the next page, choose Add.

The Add Connection dialog box appears.

–or–

Select the Override with VINES User Profile check box, then enter a valid profile key in the appropriate field and skip Steps 3 and 4.

3. From the Add Connection dialog box, select a service name and LU.
4. Choose OK.

5. (Optional) Set the appropriate List Retry options as necessary.

For more information on a particular field, refer to the General page topic within this section.

Using the Profile Key

Before you can use the Profile Key option, your system administrator must set up a profile key on the Banyan Server using the following format:

```
!profile_key number_of_retries retry_delay
connection_timeout Service_Name LU_Number ...
Service_Name LU_Number
```

The maximum length of the entire string is 255 characters. The List Retries parameters are interpreted in order from left to right; if one or more of the parameters is omitted, the system defaults to the values listed on the General page. If the service name starts with a number or has a space in it, the service name must be enclosed in double quotes, for example: "1banyan" or "banyan service." If an LU number is omitted, the system defaults to "Any."

Example

```
!PROFILE1 5 30 "Banyan SNA Service1" 4 "Banyan SNA
Service2" "Banyan SNA Service3" 20
```

In the example above, the profile key is PROFILE1. The number of retries is 5, the retry delay is 30 seconds, and the connection timeout on the General page will be used. The system will first attempt to connect to Banyan SNA Service 1 using LU 4. If that attempt fails, it will next try Banyan SNA Service 2 using the next available LU between 2 and 255. If that fails, the system will next try Banyan SNA Service 3 using LU 20. If that fails, it will start over with Banyan SNA Service 1.

ZIP! Server via Banyan VINES

You can connect to IBM mainframes via a ZIP! Server, using a Banyan VINES protocol.

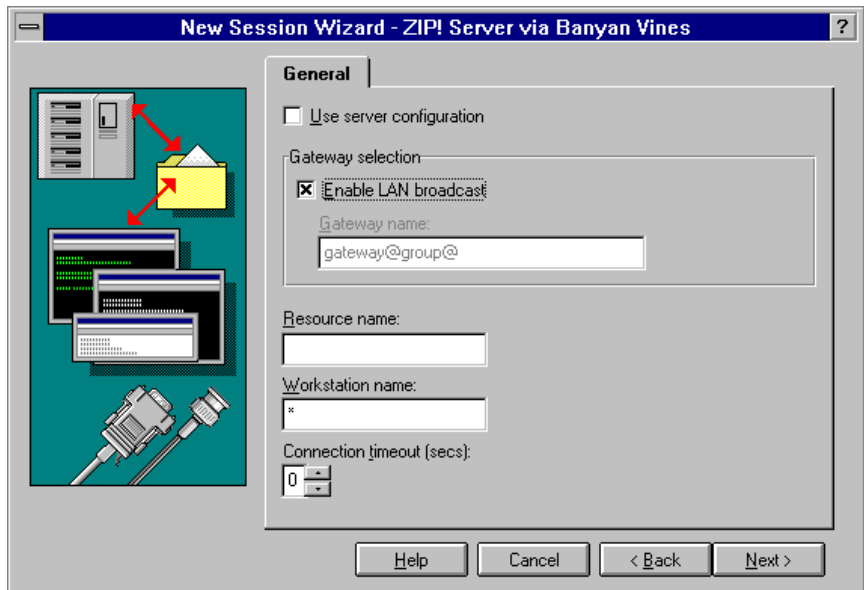
Before you can make a connection, you must first log on to your Banyan Server.

ZIP! Server via Banyan VINES - System Requirements

A Banyan VINES Connection requires:

- A LAN adapter that supports Banyan VINES
- Banyan VINES Enterprise Client (5.56 or later) for Windows NT, Windows 95 or Windows 98

The ZIP! Server via Banyan VINES General Page



New Session Wizard - ZIP! Server via Banyan VINES General page

Use this page to define the ZIP! Server connection via Banyan VINES protocol.

The following section describes the individual fields on this page.

Use Server Configuration: Select this option to use the information defined within the StreetTalk profile located on your Banyan Server.

Note: All other options on this page are unavailable when Use Server Configuration is selected.

Gateway Selection

Enable LAN Broadcast: Select to specify that, upon session startup, you workstation will broadcast a resource request to all gateways on the LAN, connecting to the resource of the first gateway that responds. A LAN broadcast is local; it will not traverse any internetworking devices.

Gateway Name: Type the name of the specific gateway to which the workstation will connect. Use the following syntax:

MachineName@GroupName@OrganizationName

Contact your systems administrator for valid gateway names.

Resource Name: Type the name of the resource to which the workstation will connect.

Workstation Name: Type the name of the workstation that will connect to the server. To have the server assign a unique workstation name for you, use an asterisk (*) in place of a workstation name.

Connection Timeout (secs): Specifies how long *EXTRA!* will wait before it aborts a connection.

To configure a ZIP! Server connection via Banyan VINES

Before you can make a connection, you must first log on to your Banyan Server as your connection type.

1. Start a new session, and select ZIP! Server via Banyan VINES as your connection type.
2. To use the server's configuration when you make a connection, from the General page, select Use Server Configuration.

-or-

To connect to any available resource on your LAN, from the General page, select Enable LAN Broadcast.

-or-

To connect to a specific gateway, from the General page, under Gateway Name, type the name of the gateway to which you want to connect. Use the following syntax:

MachineName@GroupName@OrganizationName

3. Enter a Resource Name.
4. Enter a Workstation Name. You can use the asterisk (*) symbol in place of a workstation name to have the server assign a unique workstation name for you.
5. Choose OK.

For more information on a particular field, refer to the General page topic within this section.

ZIP! Server via IPX/SPX

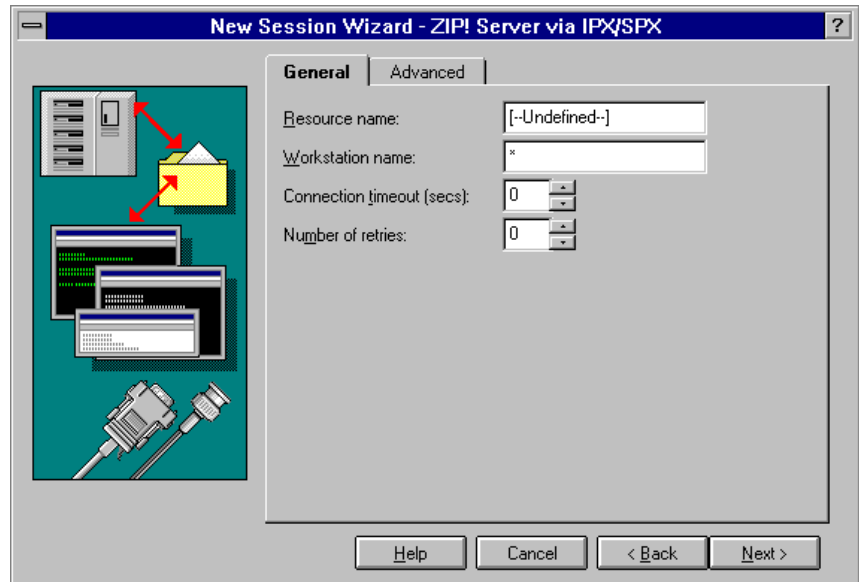
You can connect to IBM mainframes via a ZIP! Server, using the IPX/SPX (Internetwork Packet Exchange/Sequenced Packet Exchange) protocol.

ZIP! Server via IPX/SPX - System Requirements

Workstation requirements are listed below:

- A LAN adapter that supports IPX.
- Client service for NetWare.
- IPX/SPX Compatible transport.

The ZIP! Server via IPX/SPX General Page



New Session Wizard - ZIP! Server via IPX/SPX General page

Use this page to define the ZIP! Server connection via IPX/SPX protocol.

The following section describes the individual fields on this page.

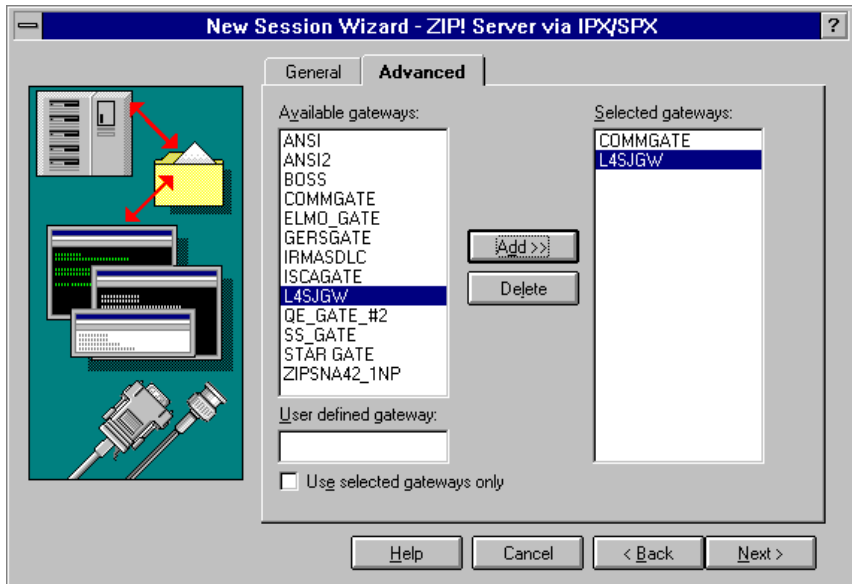
Resource Name: Type the name of the resource to which the workstation will connect.

Workstation Name: Type the name of the workstation that will connect to the server. To have the server assign a unique workstation name for you, use an asterisk (*) in place of a workstation name.

Connection Timeout (secs): Displays the number of seconds the system will wait for a successful connection before stopping. The default is 0, which causes no timeout.

Number of Retries: Displays the number of additional times the session will try to connect if the first attempt fails. The default is 0.

The ZIP! Server via IPX/SPX Advanced Page



New Session Wizard - ZIP! Server via IPX/SPX Advanced page

Use this page to set the gateway options for your IPX/SPX connection. You can choose from a list of available gateways or you can define your own gateway. The following section describes the individual fields on this page.

Available Gateways: Displays the available gateways currently available for connection.

User Defined Gateway: Type a gateway name, then choose Add>> to add the gateway name to the Selected Gateways list.

Use Selected Gateways Only: Select to limit session connections with the gateways specified in the Selected Gateway list.

Selected Gateways: Displays the gateway names that will be used to establish a connection (if the Use Selected Gateways Only option is selected).

Add>>: Adds a gateway name to the Selected Gateways list.

Delete: Removes a gateway name from the Selected Gateways list.

To configure a ZIP! Server connection via IPX/SPX

1. Start a new session, and select ZIP! Server via IPX/SPX as your connection type.
2. From the General page, enter a Resource Name, then enter a Workstation Name, if desired. You can use the asterisk (*) symbol in place of a workstation name to have the server assign a unique workstation name for you.
3. Change the Connection Timeout and Number of Retries, if desired.
4. From the Advanced page, select a gateway from the Available Gateway list or type a gateway name or address under User Defined Gateway, then choose Add>>.
5. Repeat Step 4 for each gateway to which you want to connect.
6. Choose OK.

For more information on a particular field, refer to the General page topic within this section.

ZIP! SNA via NetBIOS

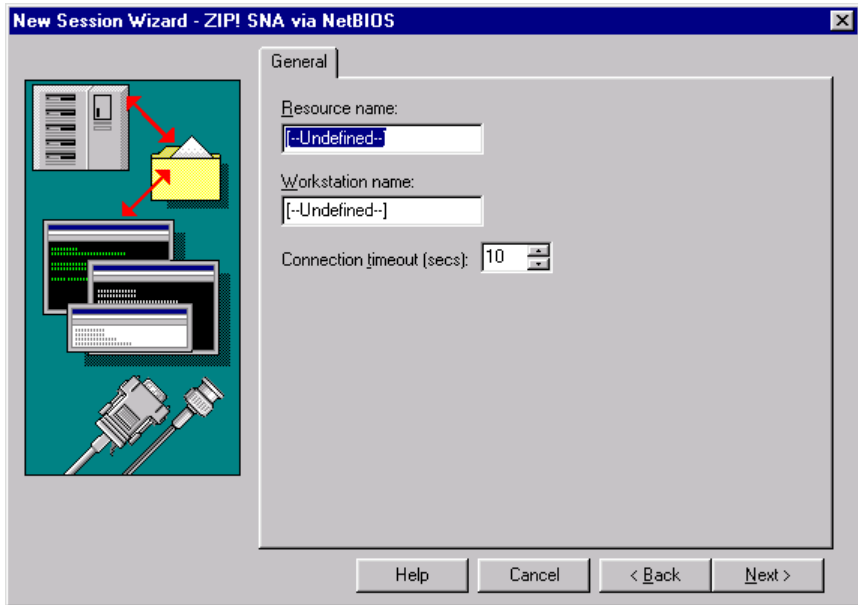
You can connect to IBM mainframes via a ZIP! Server, using the NetBEUI protocol over NetBIOS.

ZIP! SNA via NetBIOS - System Requirements

In addition to general system requirements, please note the following NetBEUI NetBIOS connection requirements:

- A LAN adapter that supports NetBIOS.
- A NetBEUI Protocol over an IBM compatible NetBIOS.
- A gateway running ZIP! SNA Gateway or IrmaLAN Server.

The ZIP! SNA via NetBIOS General Page



New Session Wizard - ZIP! SNA Server via NetBIOS General page

Use this page to define the ZIP! Server connection via NetBEUI protocol over NetBIOS

The following section describes the individual fields on this page.

Resource Name: Type the name of the resource to which the workstation will connect.

Workstation Name: Type the name of the workstation that will connect to the server. To have the server assign a unique workstation name for you, use an asterisk (*) in place of a workstation name.

Connection Timeout (Secs): Indicates the number of seconds the session waits for a successful connection before stopping. The default is 10 seconds. The maximum value you can enter here is 300 seconds; 0 implies no timeout.

To configure a ZIP! SNA connection via NetBIOS

1. Start a new session, and select ZIP! Server via NetBIOS as your connection type.
2. From the General page, enter a Resource Name, then enter a Workstation Name, if desired. You can use the asterisk (*) symbol in place of a workstation name to have the server assign a unique workstation name for you.
3. Choose OK.

For more information on a particular field, refer to the General page topic within this section.

ZIP! Server via TCP/IP

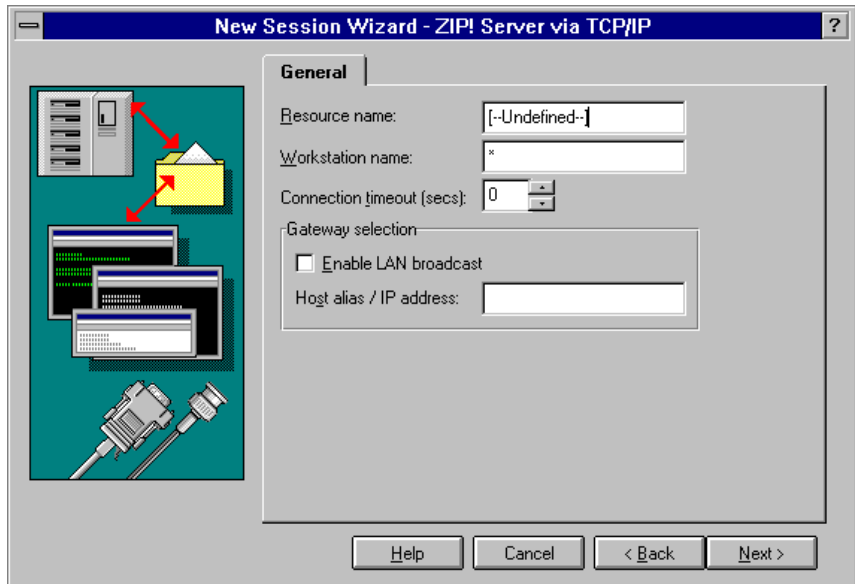
You can connect to IBM mainframes via a ZIP! Server, using a TCP/IP (Transmission Control Protocol/Internet Protocol) protocol.

ZIP Server via TCP/IP - System Requirements

A TCP/IP connection requires:

- A communications adapter (Token-Ring or Ethernet adapter) that passes TCP/IP packets.
- A TCP/IP stack compliant with the Windows Sockets (WinSock) 1.1 specification.

The ZIP! Server via TCP/IP General Page



New Session Wizard - ZIP! Server via TCP/IP General page

Use this page to define the ZIP! Server connection via TCP/IP protocol

The following section describes the individual fields on this page.

Resource Name: Type the name of the resource to which the workstation will connect.

Workstation Name: Type the name of the workstation that will connect to the server. To have the server assign a unique workstation name for you, use an asterisk (*) in place of a workstation name.

Connection Timeout (secs): Displays the number of seconds the system will wait for a successful connection before stopping. The default is 0, which causes no timeout.

Gateway Selection

Enable LAN Broadcast: Select to specify that, upon session startup, your workstation will broadcast a resource request to all gateways on the LAN, connecting to the resource of the first gateway that responds. A LAN broadcast is local; it will not traverse any internetworking devices.

Host Alias/IP Address: Type either the alias name or the IP address of the remote host.

To configure a ZIP! Server Connection via TCP/IP

1. Start a new session, and select ZIP! Server via TCP/IP as your connection type.
2. From the General page, enter a Resource Name.
3. Select Enable LAN Broadcast to have the session connect to any available resource on your LAN.

-or-

Enter the Host Alias/IP Address of the ZIP! Server.

4. Enter a Workstation Name, if desired. You can use the asterisk (*) symbol in place of a workstation name to have the server assign a unique workstation name for you.
5. Choose OK.

For more information on a particular field, refer to the General page topic within this section.

CHAPTER

Changing Session Settings



E*XTRA!* provides many ways to customize how your sessions look and act. You can decide what is displayed on your screen, which colors and fonts are used, which display settings are used, as well as how you cut, copy, and paste host information.

In addition, using the Options menu you can decide which type of session you are using, which preferences a specific session can have, as well as global preferences that determine how all your sessions act.

Customizing *EXTRA!* can help you identify specific sessions at a glance, speed up your performance with custom functions, and give you the flexibility to make your job easier.

Using a Startup Macro

By assigning a macro to a session, you can automatically run that macro whenever you open the session. For example, you can assign macro that automates logging on to your host and opening a host application. Another good choice is a macro that performs a batch operation. For example, you can create a startup macro that logs on to the host, uploads a PC file, then logs off — all with little to no user interaction.

You can also assign a macro to a specific host page. When you access that page — regardless of navigation method — the macro executes.

To assign a startup macro to a session

1. From the Edit menu, choose Settings.
2. Select the Macro category.
The Macro General page is displayed.
3. Type the name of a macro file, or choose Browse to select from a list of files.
4. Choose OK.

Note: When you secure the startup macro, it removes the (name) command from the Edit menu. The user can no longer set a macro to run at startup.

To remove a startup macro from a session

1. From the Edit menu, choose Settings.
2. Select the Macro category.
The Macro General page is displayed.
3. In the File Name text box, delete the name of the macro file.
4. Choose OK.

To select a macro file to run at startup

1. From the Options menu, choose Settings.
2. Choose the Macro category.
3. In the Startup Macro File box, either type the path and name of the macro file or choose the Browse button and select the macro file you want to run.
4. Choose OK.
The macro you selected will be run automatically the next time you load *EXTRA!*.

To assign a macro to a host screen

1. From the Tools menu, select Record Pages.
EXTRA! is now in Record Pages mode. Any page that you move to will be recorded.
If the host screen page that you want to add a macro to is already recorded, skip this step and the next step.
2. Enter a Page Name for the host screen, or leave the name as the default, and select the Stop button.
EXTRA! is no longer in Record Pages mode.
3. From the Tools menu, select Page Settings.
The Page Settings dialog box opens, with all recorded pages for this session listed in their groups on the left.
4. Select the Page Name from the list and choose the Settings tab.

5. Under the Available Settings list, open the folder labeled Macros.
6. Highlight the desired Macro and choose the Add button to add the macro to the host screen.
7. Choose OK to save your changes.

Every time you access the recorded page — regardless of navigation method — the macro you specify will execute.

Global Preferences

Global preferences are options that affect the way all *EXTRA!* sessions operate. They are not specific to a particular session.

For example, you can specify whether to be prompted when you disconnect a session from the host. If you select this option, *EXTRA!* will ask you if you want to disconnect from the session when you choose Exit Session or Exit *EXTRA!*

You can set the following types of options:

- Session and application opening and closing options (General page)
- Advanced options for the Record Pages command (General page)
- Assign and remove HLLAPI short names to sessions, and select the HLLAPI transport type (Advanced page)
- Change the type (physical configuration) of Keyboard assigned during the Setup routine (Advanced page)
- Specify the default paths for startup macros and the locations of schemes and settings files (Files/Directories page)

The Global Preferences General Page

You can use this dialog box to specify whether sessions will be saved automatically, whether the Open dialog box should appear when you run *EXTRA!*, and whether you will be prompted for verification when you disconnect a session from a host.

You can change the following options or attributes:

On Close Session/Application Exit: Choose Auto-Save Session Settings to save the changes to session configuration automatically upon closing the session or exiting the application, or Prompt for Session Saves to prompt you about saving session configuration changes.

Auto-Save Session Settings: Saves any changes to the session configuration automatically upon closing the session or exiting the application.

Prompt for Session Saves: Prompts you to save session configuration changes upon closing the session or exiting the application.

Show Open Session Dialog at Startup: Displays the Open Session dialog box each time you run *EXTRA!*. This might be preferable if you run *EXTRA!* from the Windows 95 Start menu. You may also want to use this option if you open sessions by double-clicking them in My Computer or Windows Explorer, or by double-clicking shortcuts on your desktop.

If you clear this option, the Open dialog box will not appear when you run the application.

Prompt for Disconnection: Select this option if you want to be prompted for confirmation before disconnecting from a host. This can be helpful in preventing accidental host disconnections.

If you clear this option, you will not be prompted when you disconnect from a host; the session will disconnect immediately.

Expand Page Settings dialog box: This page lets you edit the navigational path and page identification information for recorded pages (Tools, Record Pages command.)

Assign ENTER Key to Left Mouse Button Double-Click: Assigns the left mouse button, when double-clicked, the same function as the ENTER key.

To save settings when closing a session or exiting *EXTRA!*

1. From the Options menu, choose Global Preferences.
2. On the General page, select the Auto-save Session Settings check box.

-or-

Select the Prompt for Session Saves check box.

To show the Open Session dialog box at startup

1. From the Options menu, choose Global Preferences.
2. On the General page, select the Show Open Session Dialog at Startup option.

The Open dialog box will display each time you run *EXTRA!*.

To be prompted to disconnect sessions upon exiting *EXTRA!*

1. From the Options menu, choose Global Preferences.
2. On the General page, select the Prompt for Disconnection option.

You will be prompted for confirmation before disconnecting from a host.

The Global Preferences Advanced Page

Use this page to assign a short name to a session for HLLAPI purposes, select a HLLAPI transport type and select a keyboard type different from the one selected during installation.

You can change the following options or attributes:

Browse button: Search for a session file to assign to a short name.

HLLAPI Short Name text box: Displays the short name and the session file assigned to it. You must assign a HLLAPI short name before you connect to a session, or if you already have session connections, you must exit all sessions and restart the sessions before the HLLAPI short name settings will take effect.

Remove button: Select a HLLAPI short name and remove the session profile associated with it.

Keyboard Type: Changes the keyboard type from the one selected during the Setup program.

Standard Transport Type (HLLAPI): Select for standard transport.

Enhanced Transport Type (HLLAPI): Select for enhanced transport.

To associate a HLLAPI short name with a session

Note: You must assign a HLLAPI short name before you connect to a session, or if you already have session connections, you must exit all sessions and restart the sessions before the HLLAPI short name settings will take effect.

1. From the Options menu, choose Global Preferences.
2. Choose the Advanced tab.
3. Choose the Browse button and select the session you want to assign to a short name, then choose OK.

To remove a session association with a HLLAPI short name

1. From the Options menu, choose Global Preferences.
2. Choose the Advanced tab.
3. Select a HLLAPI short name and session profile associated with it.
4. Choose the Remove button, then choose Apply or OK.

The session profile is no longer associated with that short name.

The Global Preferences Files/Directories Page

Use this page to specify a startup macro (if desired), the macro search path, and the locations of schemes and settings files.

This page has the following fields:

Macro Search Path: Displays the name of the directory where macros are stored.

To use a different directory, choose Browse and select the desired directory from the Browse for Folder dialog box.

Browse button: Select the desired file or folder from a list of available files or folders.

Local Path: Displays the name of the directory on your PC where schemes, keyboard maps, and QuickPads are stored. By default, all new schemes, keyboard maps, and QuickPads are created in this location.

Remote Path: Displays the name of the network directory where schemes, keyboard maps, and QuickPads are stored.

To use a different directory, choose Browse and select the desired directory from the Browse for Folder dialog box.

Browse: Enables the user to select the desired file or folder from a list of available files or folders.

To select a scheme or settings file using the local or remote path

1. From the Options menu, choose Global Preferences.
2. Choose the Files/Directories tab.
3. In the Settings Information box, choose the Browse button and select the scheme or settings file you want to use, then choose OK.

Securing Global Preferences

When you secure Global Preferences, it removes the command from the Options menu. The user can no longer:

- Set startup and exit functions, and advanced page settings
- Assign short names to sessions for HLLAPI purposes
- Browse to find macro, scheme, or settings files to use

For more information on setting Security, see Chapter 14, "Using Security."

Viewing Session Properties

EXTRA! provides you with a quick way to view the properties of your sessions. You can view:

- General properties (General page) such as the session type, location of the session file, the size of the file, and the dates the session file was created, modified, and last accessed.
- Statistics (Statistics page) such as the host type, connection type, terminal type, and file transfer protocol used by the session.
- Current session properties (Session page) such as communications status, server information, resource name, local address and workstation name, as well as any miscellaneous information regarding the connection.

In addition to the properties mentioned above, a Summary page is provided where you can enter the author's name, session description, and comments.

To view a Properties page

1. From the File menu, choose Properties to display the Properties dialog box.
2. Choose the page that contains the properties you want to view: General, Statistics, or Session.

To define summary information

3. From the File menu, choose Properties to display the Properties dialog box.
4. Choose the Summary tab to display the Summary page.
5. Enter the author's name.
6. Enter a description of the session.
7. Add any comments about the session.
8. Click OK.

Changing the Look of Your Sessions

This section explains how to change what is displayed on your screen. It covers how to display HotSpots, how to remove and display the toolbar, as well as how to display the keyboard map you are using and any QuickPads associated with your sessions.

HotSpots

Using *EXTRA!*, you can associate a function with a specific area on your screen so you can double-click the left mouse button on that area to carry out the function, macro, or command. The area you specify is known as a HotSpot. You can create your own HotSpots and use them individually associated with a session, or you can create a group of them called a scheme and associate them with any session or host screen.

For more information on HotSpots, see Chapter 7, "Using HotSpots."

To view HotSpots in your session

1. From the View Menu, choose HotSpots.
The Settings - HotSpots dialog box appears.
2. On the General page, select the Enable HotSpots check box and choose OK.

Toolbars

EXTRA! comes with default toolbars (*.ETB) that appear when you create a new session or open one of the default sessions. Toolbars can help you perform tasks that are hard to remember or that you have to repeat routinely. They are also useful if you prefer using a mouse to using the keyboard to execute commands.

Toolbars display small color buttons, and a ToolTip appears when the mouse pointer is over a button for more than one or two seconds. Once you add a toolbar to a session and then save the session, that toolbar loads automatically the next time you open that session. You can load multiple toolbars for a session.

For more information on toolbars in general, or on creating, editing, or removing toolbars, see Chapter 11, "Using QuickPads and Toolbars."

To add a toolbar to your session

1. From the View menu, choose the Toolbars command.
This displays the Settings dialog with the Toolbars category selected. A list of available toolbar schemes is displayed. You can select more than one toolbar to be loaded during a session.
2. Choose the name of the toolbar to load by selecting its checkbox.
You have other options in this dialog, such as displaying large toolbar buttons, choosing between color and monochrome buttons, or whether to show ToolTips for the buttons.

Keyboard Maps

To enable your PC to communicate with a host in the same way as a terminal, *EXTRA!* uses a “keyboard map” which substitutes a PC key (or combination of keys) for the terminal function. You can use the default keyboard map, choose from a list of pre-made maps, or create your own.

To view the keyboard map associated with the current session

- From the View menu, choose Keyboard Map.

You can use the mouse to click the keys on the keyboard map, and the corresponding characters appear on the session window. When you click on an action key, the corresponding actions are taken in the session. For information on keyboard maps, see Chapter 8, “Customizing the Keyboard.”

QuickPads

A QuickPad is a small window that you can load during a session that can contain text, buttons, bitmaps, icons, and other graphic elements, each of which initiates an action when chosen. QuickPads can help you perform tasks that are hard to remember or that you have to repeat routinely. They are also useful if you prefer using a mouse to using the keyboard to execute commands.

The buttons and icons on QuickPads can perform the following tasks:

- send keystrokes
- run a macro
- run an application
- load a scheme
- perform any function that can be performed using *EXTRA!* menus

Once you add a QuickPad to a session and then save the session, that QuickPad loads automatically the next time you open that session. You can load multiple QuickPads for a session.

EXTRA! comes with predefined QuickPads that are already set up and ready to use. You can use the predefined QuickPads, you can edit them, or you can create your own to meet your unique needs. For more information on QuickPads in general, or on creating, editing, or removing QuickPads, see Chapter 9, “Using QuickPads and Toolbars.”

To add a QuickPad to your session

1. From the View menu, choose QuickPads.

This displays the Settings dialog box with the QuickPads category selected. A list of available QuickPad schemes is displayed. You can select more than one QuickPad to be added during a session.

2. Select the check boxes for the QuickPads that you want to add to the session display. Clear the check boxes for the QuickPads you want to remove from the session display.

To define summary information

1. From the File menu, choose Properties to display the Properties dialog box.
2. Choose the Summary tab to display the Summary page.
3. Enter the author's name.
4. Enter a description of the session.
5. Add any comments about the session.
6. Click OK.

Customizing Colors

The following section discusses how you can customize *EXTRA!* to change the colors displayed in your session or graphics window.

Changing Color Settings

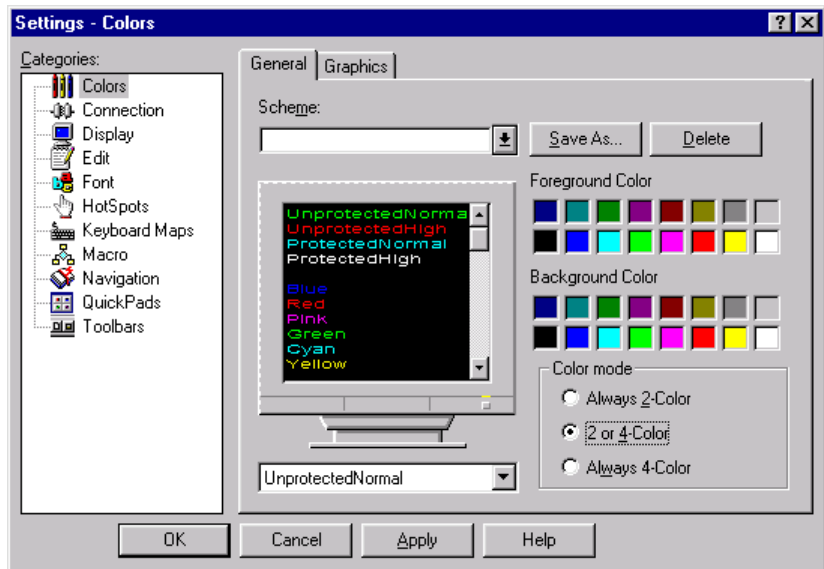
You can change the colors in a display or graphics session including the foreground and background of the text colors sent from the mainframe. The foreground consists of the text within an area while the background is the area surrounding that text. Think of these areas as the basic colors of your screen. You can change the color of your cursor.

You can also change colors of the more advanced areas of your screen, including host attributes, such as protected and unprotected fields.

After changing the colors on your screen, you can save those changes to a scheme, which can then be assigned to another session or a specific host screen. *EXTRA!* also comes with its own color schemes from which you can choose. Changing colors might make certain areas of the display session easier to read or perhaps make it easier to differentiate one session or host screen from another that has a different color scheme.

The 3270 Settings - Colors General Page

The Settings-Colors Page is used to change the colors of your display screen and create color schemes that you can use with any session.



The 3270 Settings - Colors General Page

Scheme: Lists color schemes you can choose from to apply to a session. The list includes those schemes provided by *EXTRA!* and the schemes you have created.

Save As button: Opens the Save As dialog box where you can save a color scheme to be used later.

Delete button: Deletes the color scheme selected in the Scheme list box.

Host Monitor: Shows the colors and display areas that can be mapped to other colors. Once you have mapped an item on this list using the Host list box and the Mapping palette, that item displays in the new color.

Mapping Palette

Foreground Color: Provides colors from which you can choose to map the foreground of your display.

Background Color: Provides colors from which you can choose to map the background of your display.

Host List: Lists the colors and display areas that can be mapped to other colors. Select an item from this list, then use the Mapping palette to change its color.

Color Mode: Lists the color options for mapping display colors to host field attributes.

Always 2-Color: Maps colors to protected and unprotected host field attributes.

2 or 4-Color: Choose this option to have the host determine the host field attributes available to the user for color mapping, either two or four.

Always 4-Color: Maps colors to protected normal, protected high, unprotected normal, and unprotected high host field attributes.

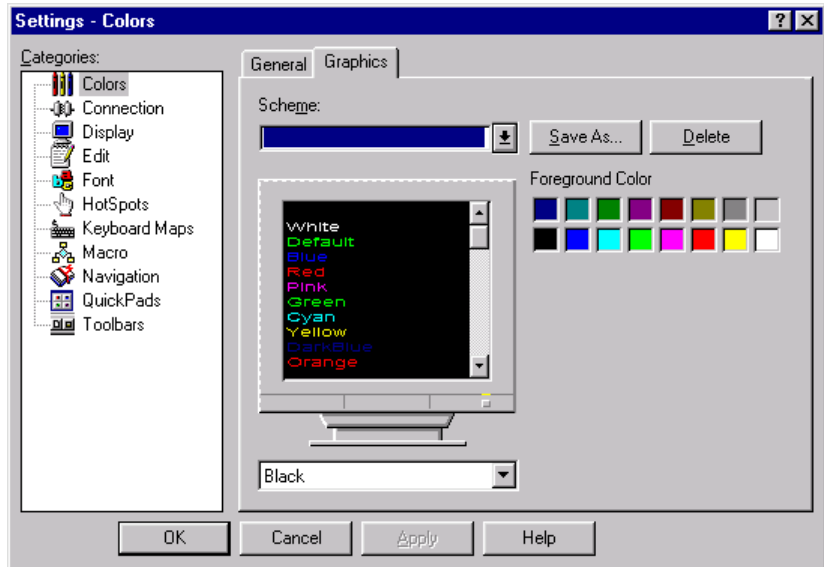
To change 3270 screen colors

1. From the Options menu, choose Settings.
2. From the Categories list, choose Colors.
3. On the General page, select the item you want to map from the Host list box located below the monitor.
4. Select the color you want to map the item to on the mapping palette.
The item mapped changes to the new color on the monitor.
5. Choose Apply or OK.

The Colors Graphics Page is used to change the colors of your graphics screen and create color schemes that you can use.

The 3270 Settings - Colors Graphics Page

The Settings-Colors Graphics Page is used to change the colors of your graphics screen and create color schemes that you can use.



3270 Settings - Colors Graphics Page

Scheme: Lists color schemes you can choose from to apply to a session. The list includes those schemes provided by *EXTRA!* and the schemes you have created.

Save As button: Opens the Save As dialog box where you can save a color scheme to be used later.

Delete button: Deletes the color scheme selected in the Scheme list box.

Host Monitor: Shows the colors and display areas that can be mapped to other colors. Once you have mapped an item on this list using the Host list box and the Mapping palette, that item displays in the new color.

Mapping Palette: Gives you the colors to choose from for mapping purposes.

Host List: Lists the colors and display areas that can be mapped to other colors. Select an item from this list, then use the Mapping palette to change its color.

To change 3270 graphics colors

1. From the Options menu, choose Settings.
2. From the Categories list, choose Colors.
3. On the Graphics page, select the item you want to map from the Host list box located below the monitor.
4. Select the color you want to map the item to on the mapping palette.
The item mapped changes to the new color on the monitor.
5. Choose Apply or OK.

To change 3270 host attribute colors

1. From the Options menu, choose Settings.
2. From the Categories list, choose Colors.
3. On the General page, select the color mode you want from the available options. The mode you choose will determine what is available to choose from in the Host list box.
4. From the Host list box below the sample host monitor, select the item you want to map.
5. Select the foreground and background colors you want to map the item to on the mapping palette.

Note: The item you mapped has changed to the new color on the sample host monitor.

6. Choose Apply or OK.

To create a 3270 color scheme

1. From the Options menu, choose Settings.
2. From the Categories list, choose Colors.
3. Map the colors that you want to change.

4. Choose the Save As button.
5. In the Save Scheme dialog box, enter the name of your new scheme and choose the Local or Remote option button, then choose OK.

Note: The path for Local copy is a default setting. The path for Remote copy can be set using Options Global Preferences.

To delete a 3270 color scheme

1. From the Options menu, choose Settings.
2. From the Categories list, choose Colors.
3. In the Scheme list box, choose the scheme you want to delete.
4. Choose the Delete button, then choose OK.

Securing 3270 Colors

When you secure colors, it removes Colors from the Categories list in the Options Settings dialog box. The user can no longer map colors or create color schemes. For more information on setting Security, see Chapter 13, “Using Security.”

For more information on setting Security, see Chapter 14, “Using Security.”

Changing Display Session Fonts

Using *EXTRA!*, you can change the font displayed in your display session window. You can change the display font and its size; and you can specify whether you want the font to be adjusted automatically when you resize the display session window. The following section discusses how you can customize *EXTRA!* to change the font displayed in your session window.

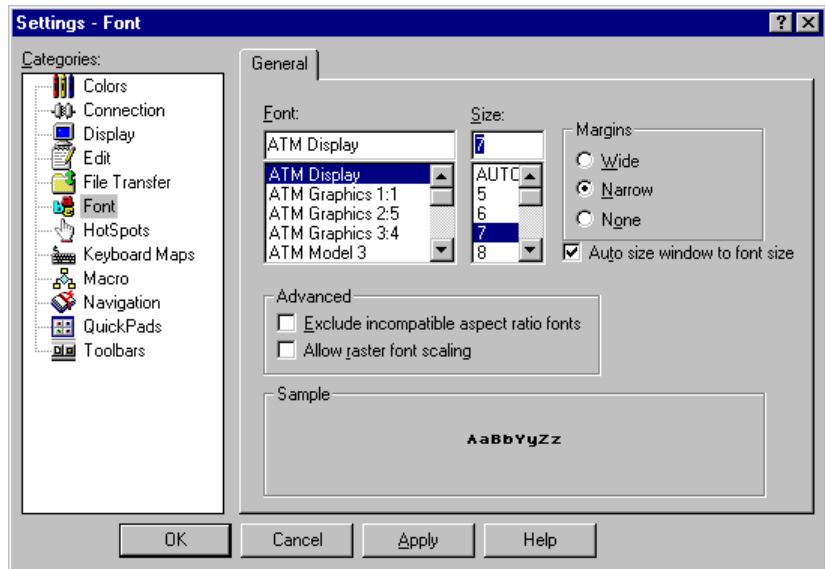
In *EXTRA!*, you can change the display session font to:

- Use a different font type.
- Use a different font point size.
- Exclude incompatible aspect ratio fonts.
- Scale raster fonts.
- Automatically resize when you resize the display session window.
- Automatically resize the display session window to best fit around the selected text.
- Use a different margin width.

Changing 3270 Display Fonts

The 3270 Settings - Font General Page

Use this page to customize the font displayed in your display session window. The following section describes the fields within this dialog box.



The 3270 Settings - Font General page

Font: Displays a list of the available fonts from which to select for your display session window. Your display session appears in the font you select.

Size: Displays a list of available point sizes for the font you have selected. The default point size for each font is AUTO which automatically selects the most appropriate font size to fit your display session window.

Margins: Select either Wide or Narrow to adjust the margin width in your display session window. Select Wide to use a wide margin setting where characters are centered in your display window. Select Narrow to reduce extra margin spacing around the text by expanding characters and distributing them using the entire window area. This makes text more readable.

Margins - Wide: Uses a wide margin setting where characters are centered in your display window.

Margins - Narrow: Reduces extra margin spacing around the text by expanding characters and distributing them using the entire window area. This makes text more readable.

Margins - None: Removes the margin and expands characters over the entire window area.

Autosize Window to Font Size: Resizes the display session window automatically based on the font size being used. This reduces empty space around the text.

Advanced: Offers the options to exclude incompatible aspect ratio fonts and allow raster font scaling.

Exclude Incompatible Aspect Ratio Fonts: Excludes fonts with incompatible aspect ratios (the normal height-to-width relationship of the characters). Some scaleable fonts have an unusually large or small number of characters per inch because the image of each character is stretched or squeezed horizontally. Because this stretching and squeezing can make a scaleable font less attractive, selecting this option will allow *EXTRA!* to only use fonts that are readable.

Allow Raster Font Scaling: When selected, raster fonts can be scaled. Raster fonts are fonts that are stored as bitmaps.

Sample: Displays an example of the font in the size you have selected.

To change 3270 font, point size, and margins

1. From the Edit or Options menu, choose Settings.
2. From the Categories List, select Font.
3. On the General page, choose from the font, size, margin and advanced options:

You can preview your selection in the Sample box.

4. Choose the OK or Apply button.

Automatic 3270 Session Window Sizing

When you select Autosize Window, *EXTRA!* adjusts the display window size to best fit the current font. This eliminates extra margin spacing around the text once a font is established.

To size your 3270 session window automatically

1. From the Options menu, choose Settings.
2. From the Categories List, select Font.
3. From the General page, select the Auto Size Window to Font Size check box.
4. Choose the OK or Apply button.

If you do not want the display window to resize automatically, clear the Auto Size Window to Font Size check box.

Changing Display Settings

Using *EXTRA!* you can change the settings of your display sessions to fit your specific requirements. For example, you can change the type, size, and style of fonts used, change the cursor size, and define show attributes, in addition to other settings.

Most of the work you do in *EXTRA!* takes place in a display session window. This is the window that emulates your host terminal session, and allows you to transfer information between your PC and mainframe environments or between two or more mainframe sessions.

Once you establish a connection between your PC and the mainframe, the *EXTRA!* display session window opens on your screen. You will see the host's logon screen. The exact appearance of this screen depends on the way your system administrator set up the host system. After you log on, you can access all of your host's programs.

Once you have successfully logged on to the host through *EXTRA!*, you can access and manipulate any of your host's applications or files as though you were working on a host terminal.

You can change the model type of the host you are emulating, change the host code page, define show attributes, and start a graphics session, in addition to many other settings.

3270 Display Sessions

The display session window presents information from the mainframe, bringing the same capabilities of a mainframe terminal to your PC.

EXTRA! can emulate one or more sessions at a time, giving you a display session window for each terminal emulated. While you work in a display session window, your PC keyboard no longer generates PC characters, but instead produces 3270 display keyboard characters and special functions. Each display session has its own connection to the mainframe.

EXTRA! can emulate mainframe terminal models 2, 3, 4, and 5. These models differ by the number of rows and columns of text that they display. The host graphics features in *EXTRA!* provide graphics terminal emulation.

You use the Display Settings pages to define options for a 3270 display or graphics session. Depending on your specific requirements, you may want to make changes to the appearance of your display or graphics session window.

Use the following tabbed pages to define your session window:

General: Use this page to select the display or graphics model for your session window, the appearance of the graphics cursor, and support for extended attributes, and program symbols.

Host Code Page: Use this page to specify the type of host code page you need to use for your display session. If you are not sure which country and code page you should be using, check with your system administrator. The default is English U.S., code page 037.

Miscellaneous: Use this page to select numeric field override and the APL (A Programming Language) mode for your keyboard map. You can also use this page to access the Print utilities, and mouse options.

Attributes: Use this page to select show attribute options such as field attribute value, unprotected attributes, uppercase only, and host beep attribute. This page also provides options to change the appearance of blinking text and the cursor.

To define settings for 3270 display sessions

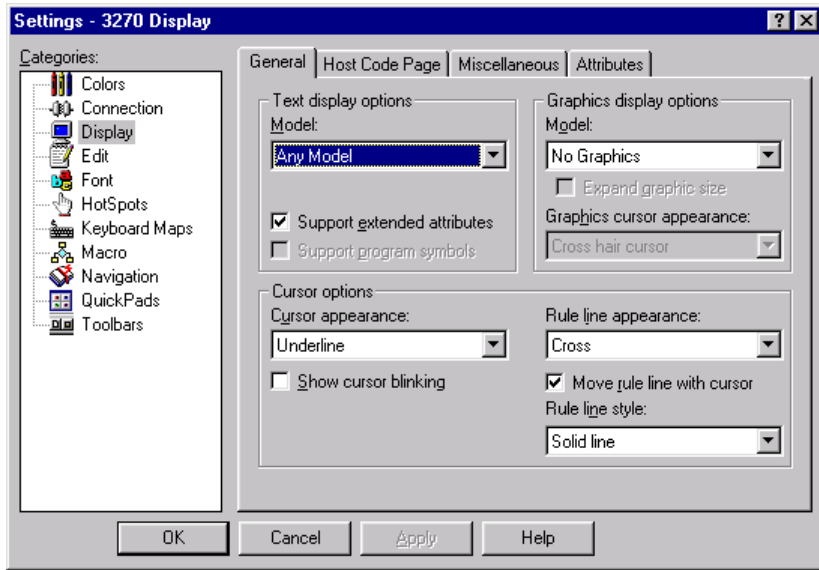
1. From the Edit or Options menu, choose Settings.
2. Click Display from the Category list to open the Settings - 3270 Display pages.
3. From the General page, set the appropriate display session options.
4. From the Host Code page, set the appropriate host code options, listed below. The default is English U.S., code page 037.
5. From the Miscellaneous page, set the Numeric Field Override, APL, Profs Print, PS Print and mouse options.
6. From the Attributes page, set the appropriate attributes options, listed below.
7. Click OK when you have finished defining your display settings.

To define settings for 3270 graphics session

1. Open a display session in *EXTRA!*.
2. From the Settings dialog box, select Display.
3. From the General Page, set the appropriate Text Display graphics sessions options
4. Choose the Graphics Display options.
5. Choose the Cursor options.
6. Choose the OK button to save settings and return to the session.
7. Select Yes in the dialog box to disconnect from your current session and to start the graphics session.

The Settings - 3270 Display General Page

Use this dialog to make changes to your 3270 display session window.



The Settings - 3270 Display General page

Text Display Options: Lists the types of models from which you can select and also list the support options.

Model: Specifies the type of mainframe terminal model emulated for 3270 display sessions. You can choose from: Any model, 2 - 24 x80, 3 - 32 x 80, 4 - 43 x 80, or 5 - 27 x 132.

Support Extended Attributes: Enables support of Extended Attribute Bytes (EABs). EABs are codes used by many mainframe applications to display highlighting, reverse image, blinking, and seven colors. If selected, the EABs option allows the PC to emulate the full capability of the mainframe screen.

Support Program Symbols: Enables loadable symbols support. Loadable symbols, also called graphic symbol sets, are sets of symbols that are treated as small, individual bitmaps. Loadable symbols can appear in the graphics layer or the text layer. In the text layer, they are referred to as Program Symbols and are used as custom text. These are turned on by default for the 3279S3G graphics model.

Graphics Display Options: Includes types of graphics models to select from as well as selections for graphic size and graphics cursor appearance.

Model: Choose from the graphics terminal models for your session. Note that the Support extended attributes option must be on for you to choose one of these terminal models.

Expand Graphic Size: Tells the host that the screen size being requested needs to be bigger than the current monitor resolution.

Graphics Cursor Appearance: Choose the type of graphics cursor you want to use with your graphics session. This option is available only for the 3179G, 3472G, and 3270PCG graphics terminal models only.

Crosshair Cursor: Displays the crosshair graphics cursor for your graphics session when selected.

Box Cursor: Displays the box graphics cursor for your graphics session when selected.

Cursor Options: Displays cursor and rule line appearance choices.

Cursor Appearance: Specifies whether the cursor should be full block, half block or underlined.

Show Cursor Blinking: If selected, this option indicates that you want a blinking cursor. If not selected, the cursor will be solid.

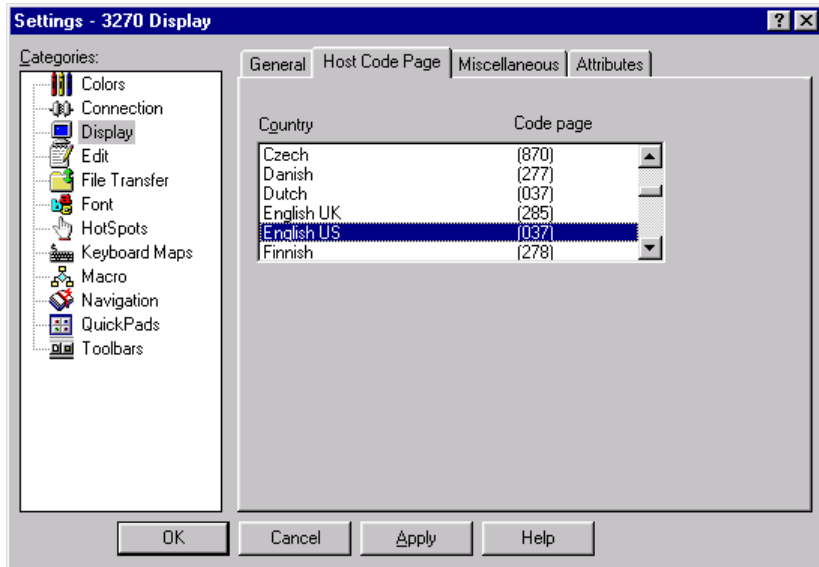
Rule Line Appearance: Specifies the appearance of the rule line, which displays to provide a visual cue of your location on the screen. You can select a vertical line, a horizontal line or cross (vertical and horizontal) lines.

Move Rule Line With Cursor: If selected, indicates that the rule line should follow the cursor. If not selected, the rule line will not move with the cursor but can be positioned by selecting the Rule Lines option from the View menu once in the session.

Rule Line Style: Specifies whether the rule line should be a solid or dotted line.

The Settings - 3270 Display Host Code Page

Use this dialog to specify the type of host code page you want to use with your 3270 display session.



The Settings - 3270 Display Host Code Page

Country: Lists the country languages from which you can select for your 3270 display session. The default is English U.S.

Code Page: Lists the character display code page numbers associated with the country language. The default code page is 037.

Following is a list of the country code languages and their corresponding code pages:

Country Code Language	Code Page	Country Code Language	Code Page
Austrian	273	International	500
Austrian Euro	1141	International Euro	1148
Belgian	274	Italian	280
Belgian New	500	Italian Euro	114
Belgian New Euro	1148	Latin 1/Open Systems	1047
Brazilian	275	Cyrillic Macedonian	1025
Brazilian New	037	Norwegian	277
Brazilian New Euro	1140	Norwegian Euro	1142
Cyrillic Bulgarian	1025	Polish	870
Canadian Bilingual	037	Portuguese	037
Canadian Bilingual Euro	1140	Portuguese Euro	1140
Croatian	870	Romanian	870
Czech	870	Russian	1025
Danish	277	Serbian	870
Danish Euro	1142	Cyrillic Serbian	1025
Dutch	037	Slovak	870
Dutch Euro	1140	Slovenian	870
English UK	285	Spanish	284
English UK Euro	1146	Spanish Euro	1145
English US	037	Spanish Speaking	284
English US Euro	1140	Spanish Speaking Euro	1145
Finnish	278	Swedish	278
Finnish Euro	1143	Swedish Euro	1143
French	297	Swiss French	500
French Euro	1147	Swiss French Euro	1148
German	273	Swiss German	500
German Euro	1141	Swiss German Euro	1148
Greek New	875	Turkish New	1026
Hungarian	870		
Icelandic	871		
Icelandic Euro	1149		

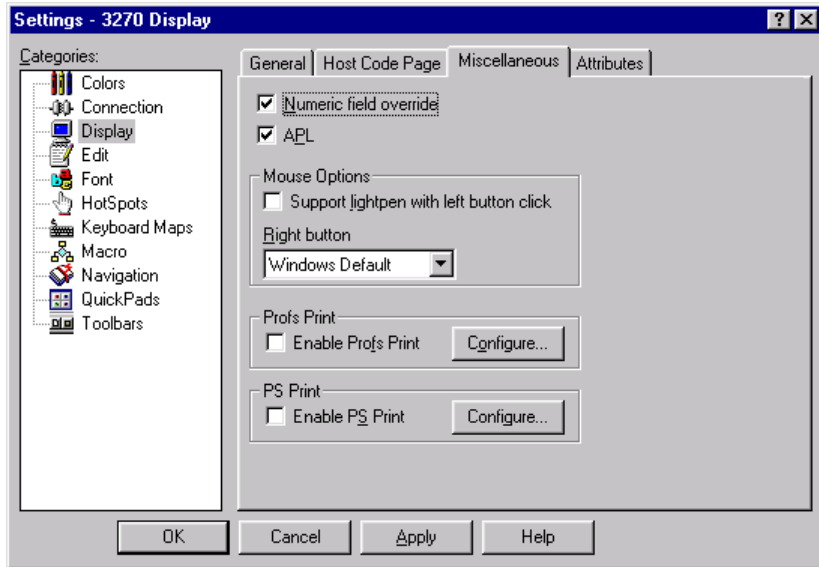
If you are not sure which country and code page you should be using, check with your system administrator. The default is English U.S., code page 037.

The Settings - 3270 Display Miscellaneous Page

Use this dialog to enable miscellaneous options for your 3270 display session.

EXTRA! supports lightpen-detectable fields in a 3270 application.

Note: *EXTRA!* supports lightpen-detectable fields in a 3270 application. Make sure that your lightpen device is recognized by the operating system and configured to emulate a mouse.



The Settings - 3270 Display Miscellaneous page

Numeric Field Override: Enables the numeric field override feature.

APL: Enables your keyboard to support the “A Programming Language” (APL) character set. The default is on. Note that if you are installing over an earlier version of *EXTRA!*, you must enable this option to use your keyboard in the APL mode.

Mouse Options

Support Lightpen with Left Button Click: Enables support for the lightpen (a light-sensitive device that can be used to select fields on the screen) configured as a mouse.

Right Button: Allows you to choose the configuration for the right mouse button. You can select Windows Default, Emulate Lightpen or Send ENTER Key

Profs Print - Enable Profs Print: Configures the Profs Print utility. Profs Print monitors the PROFS or OfficeVision/VM session from which you select it. When you use the PF key print function in that session to print a note, calendar, notelog, or other text, Profs Print prints it on the default printer selected in Microsoft Windows instead of the host printer.

PS Print - Enable PS Print: Configures the PS Print utility. PS Print is a Windows utility that redirects notes and documents from a PS/CICS mainframe session to the printer defined in your Windows Control Panel Print settings, while maintaining all system maintenance between the mainframe and PC connections. PS Print will not print the formatting of the target document, only the text.

To configure a 3270 session to accept lightpen

1. From the Options menu, choose Settings.

The Settings dialog displays.

2. Choose the Display category.

The General page displays.

3. Choose the Miscellaneous tab. The Miscellaneous page displays.

4. Select the Support Lightpen with left button click option.

–or–

If you want to use the right mouse button to emulate lightpen then select Enable Lightpen from the Right Button drop-down list.

5. Choose the OK button.

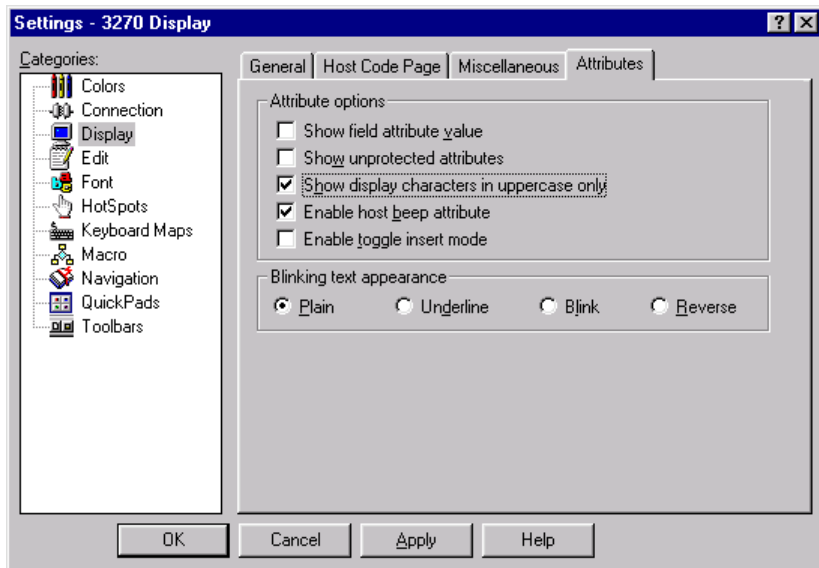
The session is now ready to recognize lightpen-detectable fields.

If no lightpen is available or if you want to use the keyboard instead of the lightpen, the text cursor and cursor select key can be substituted. Move the session's text cursor to a lightpen-detectable field and then press the Cursor Select key to simulate lightpen input.

To determine which key is configured as the Cursor Select key for your keyboard:

1. From a session View menu, choose Keyboard Map.
2. Scan the keyboard map for either the Cursor or CURSEL key — it is often the SCROLL LOCK key.
3. Close the keyboard map.

The Settings - 3270 Display Attributes Page



The Settings - 3270 Display Attributes page

Attribute options: Display attributes are characters that appear on your screen indicating where text formatting begins and ends. Use the options in this group box to specify how attributes are shown.

Show Field Attribute Value: When selected, the display attributes appear as small hexadecimal numbers before and after each field in the display session.

Show Unprotected Attributes: When selected, selected data in a display session is shown in an unprotected field.

Show Display Characters in Uppercase Only: When selected, all text is displayed in uppercase characters.

Enable Host Beep Attribute: When selected, your display session's blinking text style beeps.

Enable Toggle Insert Mode: When selected, the insert mode is toggled on.

Blinking Text Appearance: Use the options in this group box to specify where text formatting begins and ends. You can select the style of blinking text from one of the following: plain, underline, blink, or reverse.

Plain: When selected, the style of blinking text is plain.

Underline: When selected, the style of blinking text is underlined.

Blink: When selected, this option allows you to enable specific text to blink.

Reverse: When selected, the blinking text style is reverse.

Changing Edit Settings

Some of the most common tasks performed in a display session connected to a host computer are those involving cutting, copying, and pasting text. This can be moving text within a session, moving text between sessions, or moving text to or from a separate application. In order to change the way that *EXTRA!* handles cutting, copying, or pasting text, you must change the Edit settings.

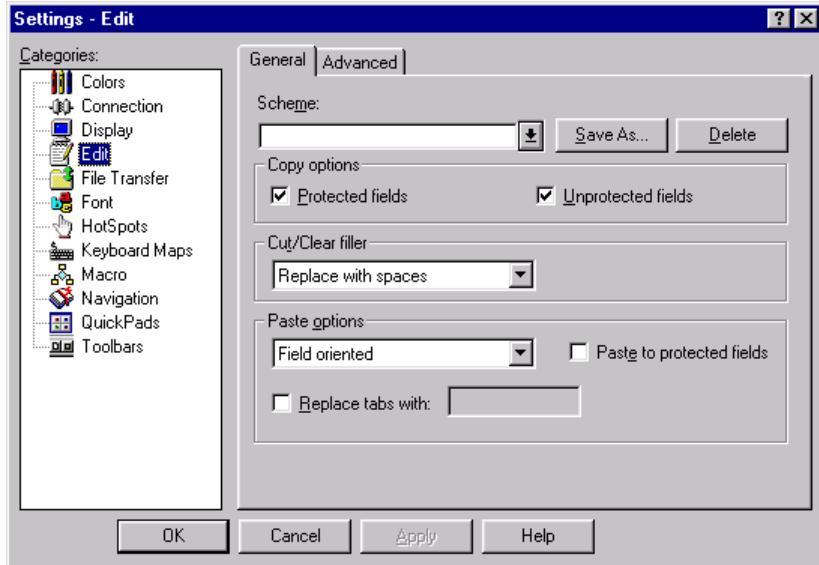
3270 Edit Settings

The way in which data or text is copied or pasted from a session depends upon the Edit settings. Edit settings include options such as:

- copying to protected fields
- copying to unprotected fields
- replacing cut or cleared text with space or NULL characters
- pasting as text rows, with or without word wrap to keep from truncating data
- pasting field by field, which can help get an accurate "fit" from the copied space to the pasting space
- a character or characters with which to replace tabs when pasting tab-delimited information

The 3270 Settings - Edit General Page

Using this page, you can specify the settings that you prefer for cutting, copying, and pasting text to and from sessions.



The 3270 Settings - Edit General Page

Scheme: Select the scheme you wish to edit, or delete.

Save As: Saves the current Edit settings under another name as a new scheme.

Delete: Removes the current scheme from the scheme list.

Copy Options: Protected fields copies from areas on the screen where input is not allowed and Unprotected copies from areas on the screen where input is allowed.

Protected Fields: Allows copying from areas on the screen where input is not allowed.

Unprotected Fields: Allows copying from areas on the screen where input is allowed.

Cut/Clear Filler: Replace with Spaces - Replaces cut or cleared characters with an equal number of spaces. Only unprotected fields can be cleared.

Replace with Nulls - Replaces cut or cleared characters with an equal number of nulls. Only unprotected fields can be cleared.

Paste Options

Row Oriented: Pastes rows of text that end with carriage returns or line feeds. The first row is pasted to the first unprotected field in the current session, the second row is pasted to the second unprotected field, and so on until the buffer is empty. If a row of copied text is larger than the unprotected field it is pasted into, extra characters are truncated (unless you select Word Wrap).

Field Oriented: Pastes field information. The first field is pasted to the first field in the current session, the second field is pasted to the second field in the current session, and so on until the buffer is empty.

Character Oriented: Pastes characters.

Word Wrap: Causes information which would have been truncated at the end of a field (or the selected paste area) to be pasted to the next unprotected field instead of truncating it.

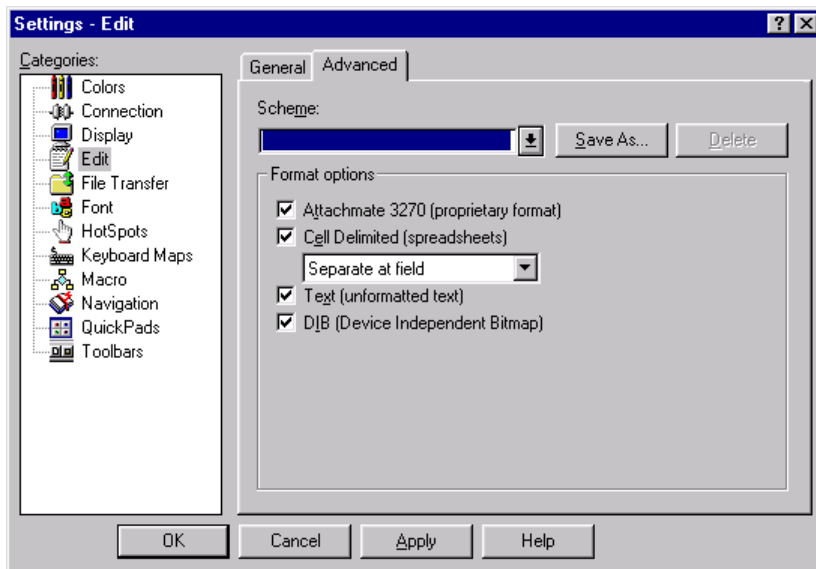
Paste to Protected Fields: Pastes from the Clipboard to the selected area of the host destination screen field, regardless of whether these fields are protected or unprotected. You cannot paste over a protected field.

Replace Tabs With: Specifies the character(s) to replace any tabs in the data being pasted, if, for example, you are pasting tab-delimited data from Microsoft Word.

The 3270 Settings - Edit Advanced Page

The 3270 Edit Settings - Advanced page lets you specify advanced settings for cutting, copying and pasting text to and from sessions. Using this page, you can specify advanced settings that you prefer for cutting, copying, and pasting text to and from sessions.

The following describes the options available on the Edit Settings - Advanced page.



The 3270 Settings - Edit Advanced Page

Scheme: Type the filename of an existing Edit scheme, or select a scheme from the list.

Save As: Choose this button to save the selected option as an Edit scheme.

Delete

Choose this button to delete the displayed Edit scheme.

Format Options: Includes cutting, copying and pasting options which include; proprietary format, spreadsheet format, unformatted text and bitmap format.

Attachmate 3270 (proprietary format): This clipboard format allows the cutting, copying, and pasting of 3270 information such as APL characters, and field attributes.

Cell Delimited (spreadsheet): This clipboard format allows the cutting, copying and pasting of spreadsheet or other cell-based information. Use this format for spreadsheet or databases.

Separate at field/Separate at word: Choose Separate at field when cutting or copying information to the clipboard, the information is separated according to 3270 fields. Choose Separate at word when cutting or copying information to the clipboard, the information is separated according to word boundaries.

Text (unformatted text): This clipboard format allows the cutting, copying, and pasting of plain text, which is the most common format used in Windows programs.

DIB (Device Independent Bitmap): This clipboard format allows you to cut or copy device independent bitmap images (DIB's) to the clipboard.

Changing Session Types and Preferences

The following section discusses how you can customize *EXTRA!* to change the type of session you are using and how to change settings, which can be session specific or global in nature.

Editing Session Types

Your session type includes the connection type, the display/device type, and the file transfer protocol. When you create a new session, you choose one of each of these. However, you can change some of these settings later using the Session Type command from the Options menu. The file transfer protocol can be changed while you are working in your session. However, we recommend that you log off from your host applications and disconnect from the current session before you change the connection type. You cannot change a session from display to printer, or from printer to display, in the display/device type field.

The Session Type Page

Use this page to change the connection type and the file transfer protocol used for the current session. This changes the settings you chose when using the New Session wizard to create a session. You cannot change the display/device type of your session.

Note: When choosing a different connection type, it is best to first log off from your host applications and disconnect from your session using the Session Disconnect command.

This feature is composed of the following elements:

Host Type: Displays the host type with which you currently have a session.

Connection Type: Lists the connection types available to the current session.

Note: When choosing a different connection type, it is best to first log off from your host applications and disconnect from your session using Session Disconnect.

Display/Device Type: Displays the display/device type of the current session. The display/device type can be either display or printer.

File Transfer Protocol: Lists the file transfer protocols available to the current session.

Settings Button: Opens the Options Settings page(s) pertaining to the item you have currently selected. You can then edit that item's settings.

To verify your Host type

- From the Options menu, choose Session Type.

The Host Type display lists the type of host to which your current session is connected.

To edit your connection type

1. From the Options menu, choose Session Type.
2. From the Connection Type list, select the new connection type and then choose OK.

Note: When choosing a different connection type, it is best to first log off from your host applications and disconnect from your session using the Session Disconnect Command.

To edit your connection option settings

1. From the Options menu, choose Session Type.
2. From the Connection Type list, select a connection.
3. Choose the Settings button.

The Settings - Connection page appears.

To edit your display option settings

1. From the Options menu, choose Session Type.
2. From the Display/Device type list, select a display/device type.
3. Choose the Settings button.

The Settings - Display page appears. For more information on editing display settings, see “Changing Display Settings” earlier in this chapter.

To edit your file transfer protocol

1. From the Options menu, choose Session Type.
2. From the File Transfer Protocol list, select the new protocol and choose OK.

To edit your file transfer option settings

1. From the Options menu, choose Session Type.
2. From the File Transfer Protocol list, select a protocol.

You must select a protocol from the list; you cannot select None.

3. Choose the Settings button.

The Settings - File Transfer page appears. For more information on editing file transfer settings, see Chapter 6, “File Transfer.”

CHAPTER

*Working
With Text*



Some of the most common tasks performed in a display session connected to a host computer involve cutting, copying, and pasting text. For example, moving text within a session, moving text between sessions, or moving text to or from a separate application.

This chapter tells how you can select, cut, copy, and paste text into and out of EXTRA!. It includes sections on:

- Appending text to the Clipboard so that you can add information to the existing contents of the Clipboard (at the end).
- Pasting Clipboard contents (Paste Continue) that are larger than the destination host screen.
- Pasting OLE links from EXTRA! into other applications such as Microsoft Excel.

Selecting Text in EXTRA!

When a session is open, you can select text on the session window in three ways:

- Hold down the SHIFT key and use the ARROW keys to select a contiguous stream of characters, from the starting cursor position to the ending cursor position.

Note: If you are using a keyboard map that has defined these keystrokes to perform different functions, the functions associated with the keyboard map override the default functions described here.

- Hold down the left mouse button and drag it to select a contiguous stream of characters, from the starting cursor position to the ending cursor position (stream selection).
- Hold down the left mouse button. Drag it to select a rectangular block of text that includes all lines and columns from the starting cursor position to the ending cursor position (rectangle selection).

Tip: You can toggle the method of text selection (stream selection or rectangle selection) dynamically during a session by holding down the CTRL key while selecting text. Toggling applies only to selecting text using a mouse.

To select text in a session window

- Position the mouse pointer where you want to begin the text selection, hold down the left mouse button, and drag the mouse pointer across the text that you want to select.

You can select either a contiguous stream of characters from the starting pointer position to the ending pointer position (stream selection), or a rectangular block of text that includes all lines and columns from the starting pointer position to the ending pointer position (rectangle selection).

You can toggle the method of text selection (stream selection or rectangle selection) dynamically during a session by holding down the CTRL key while selecting text. Toggling applies only to selecting text using a mouse.

–or–

- Position the cursor where you want to begin the text selection, hold down the SHIFT key, and use the ARROW keys to highlight the text. If you are using a keyboard map that has defined these keystrokes to perform different functions, the functions associated with the keyboard map override the default functions described here.

–or–

- If the left mouse button double-click has been configured to select a word, then double-click the word that you want to select.

To toggle the text selection method

1. In the session window, press the CTRL key and begin selecting text with the mouse.
2. Release the CTRL key, but do not release the mouse button.
3. Release the mouse button.

To select all text in a session window

- From the Edit menu, choose Select All.

To clear selected text from a session window

1. In an open session, select the text that you want to clear.
2. From the Edit menu, choose Clear.

Note: Cleared text is removed from the display. It is not placed on the PC Clipboard and cannot be pasted.

To cut text to the Clipboard from a session window

1. Select the text that you want to cut.
2. From the Edit menu, choose Cut (CTRL+X).

To copy text to the Clipboard from a session

1. Select the text that you want to copy.
2. From the Edit menu, choose Copy (CTRL+C).

Click the Copy button on the toolbar.

To cut text from a session and append it to the Clipboard

1. Select the text that you want to cut.
2. From the Edit menu, choose Cut and Append.

Note: The information is placed at the end of the Clipboard.

To copy text from a session and append it to the Clipboard

1. Select the text that you want to copy.
2. From the Edit menu, choose Copy and Append.

Note: The information is placed at the end of the Clipboard.

To paste text into a session window

1. Position the cursor where you want to insert the cut or copied text.
2. From the Edit menu, choose Paste (CTRL+V).

To continue pasting when text in Clipboard is too large for destination host screen

1. Position the cursor where you want to insert the cut or copied text.
2. From the Edit menu, choose Paste Continue.

Linking EXTRA! to Other Applications

Use EXTRA! OLE linking and embedding to exchange information between EXTRA! and documents created in other applications. Use linking when you want the information to be updated dynamically as the information in your host application changes.

For example, you can link accounting application information to a Microsoft Excel chart. Whenever the information changes in your host application, your changes are displayed in the chart in the Microsoft Excel document if it is open. If the Microsoft Excel document is not open, the chart is updated the next time you open the document. To create a link between an EXTRA! and a document in another application, that application must be running, and it must support object linking and embedding (OLE).

For information about how to use the OLE capabilities of EXTRA! from an external program, refer to the *EXTRA! OLE Automation Programmer's Reference*.

To embed selected information from an EXTRA! session

1. Start EXTRA! (the “source application”) and navigate to the host screen page that contains the data you want to embed.
2. Start the application in which you want to embed EXTRA! session information (the “target application”).
3. Select the portion of the host screen containing your information.
4. Switch to the target application and select the location where you would like to embed the information.
5. From the Edit menu in your target application, choose Paste Special.
6. In the Paste Special dialog box, select Text data type from the As box, and select the Paste Link option.
7. Choose the OK button.

To embed an entire EXTRA! session

1. Start the application in which you want to embed the EXTRA! session (the “target application”).
2. From the Insert menu, choose Object.
3. Choose the Create From File tab.
4. Select the EXTRA! session file that you want to embed. If the file does not appear in the current file list, select the correct directory, or use the Network button or the Find File button to locate it.
5. Choose the OK button.

Edit Settings

The way in which data or text is copied or pasted from a session depends upon the Edit settings. In the Edit Settings dialog box, you can specify options that include:

- Copying to protected fields
- Copying to unprotected fields
- Replacing cut or cleared text with space or NULL characters
- Pasting as text rows, with or without word wrap to keep from truncating data
- Pasting field by field (or in “blocks”), which can help get an accurate “fit” from the copied space to the pasting space
- A character or characters with which to replace tabs when pasting tab-delimited information

To access the Edit Settings dialog box

1. From the Edit menu, choose Settings.
2. From the Options menu, choose Settings, then click the Edit category.

The Edit Menu

With the Edit menu commands, you can move information into and out of sessions. Standard editing commands such as Cut, Copy, and Paste are included here. Also included are Cut and Append and Copy and Append commands which allow you to add text from a display session to the existing contents of the Clipboard. Paste Continue is another command offered which lets you paste the remaining portion of the contents of the Clipboard if a Clipboard item is larger than the destination host screen. Finally, the Settings command allows you to set defaults for editing methods.

Using the Edit Menu

With the Edit menu commands, you can use information from one session in another session or in a desktop application, or to configure settings that control these operations. The commands available in the Edit menu are:

This feature is composed of the following elements:

Cut: Removes selected text from the session and stores it in the Clipboard.

Copy: Stores the selected text on the Clipboard, but leaves the selected text unchanged in the display.

Cut and Append: Removes selected text from a session and appends it to the existing contents of the Clipboard.

Note: You can only append information to the Clipboard within a single session. You cannot append information from one session and then append additional information from another session to the Clipboard.

Copy and Append: Adds the selected text from a session to the existing contents of the Clipboard but leaves the selected text unchanged in the display.

Note: You can only append information to the Clipboard within a single session. You cannot append information from one session and then append additional information from another session to the Clipboard.

Paste: Places the contents of the Clipboard into the display session at the cursor position (or into the selected area), subject to the Edit Settings specifications.

Paste Continue: Pastes the remaining portion of the contents of the Clipboard, if a Clipboard item is larger than the destination host screen.

Clear: Removes selected text from the session without storing it in the Clipboard.

Select All: Selects the entire contents of the current session display, making it available for cutting, copying, or clearing.

Settings: Opens the Settings dialog box, with the Edit Settings selected. Use this dialog box to set Copy, Paste, and Cut/Clear options.

Securing Edit Menu Commands

The Security dialog boxes can be used to restrict access to all Edit menu commands, as well as access to the Edit Settings dialog boxes. If you clear the check boxes for the Edit commands in the Security Action dialog box, the commands will no longer be available from the Edit menu.

If you clear the check box for the Settings command in the Security Action dialog box, the program removes the Settings command from the Edit menu. The user will not be able to start the Settings dialog box from the Edit menu to modify how Cut, Copy, and Paste work on their host screen when this command is secured.

To secure the Cut, Copy, and Paste commands

- 1 From the Options menu, choose Security.
The Security dialog box is displayed.
3. Select the security scheme you want to edit. The name of the security scheme is listed in the Scheme field. Click Browse if you want to select a different scheme.
4. Choose the Options tab.
5. If asked for a password, enter the password in the Security Password dialog box and click OK.
6. From the Category list, choose Edit.
7. In the Commands list, clear the check boxes for the Edit commands you want to secure: Cut, Copy, Paste, Clear, Select All, or Settings.
8. To save the scheme, go to the File page and click Save As.

CHAPTER

Printing



Using *EXTRA!* you can print Host files on your local printer. You can:

- open and configure printing sessions
- print multiple screens
- specify how many host screens to print per page
- define page layouts
- print an image of the display screen
- hold or cancel printing
- access printer session status information
- save printer session configuration and page layout settings

A printer session sets up the communications link between the host and your local printer. A display session is used to enter the necessary host print commands. Like display sessions, printer sessions are created, opened, and closed. With *EXTRA!* you can configure Host print job settings as you would a PC print job. You can set parameters that range from margins and fonts, to advanced host printing parameters such as hex passthrough data stream processing. Once print commands are issued from the display session, the print job can be controlled and monitored from the printer session using printer controls and the status feature.

Opening a Printer Session

Before you can print host data, a printer session must be opened. A printer session may be opened from a display session, an open printer session, or in a variety of file-oriented methods.

Opening a printer session establishes connections between your PC, the host, and the printer. You can open a printer session when you first start *EXTRA!*, and from that session you can open additional sessions — as many as your PC memory can handle.

You can open printer sessions for any installed host type, with the exception of a VAX/VMS, UNIX, or asynchronous host. Unlike IBM hosts, printing from a VAX/VMS, UNIX, or asynchronous host does not require a printer session.

You open a printer session by selecting a file with an .EPP extension. A profile defines how a session appears, operates, and interacts with you. As a file consisting of settings, a profile specifies a session's connection type, and other attributes, all of which you can change to accommodate your preferences.

To open a printer session from the display session

1. From the display session File menu, choose Open Session (CTRL+O).

–or–

Choose the  button from the toolbar.

2. Select the session filename.
3. Choose Open.

To open another printer session from the printer

1. From the printer session File menu, choose Open Session (CTRL+O).

–or–

Choose the  button from the toolbar.

2. Select the session filename.
3. Choose Open.

Creating a Printer Session

Using the New Session wizard, you can create printer sessions of any installed host type. You have the option of creating a printer session when you first start *EXTRA!*. And when you're working in an open session, you can create additional printer sessions— as many as your PC memory can handle.

To create a session, you must provide the New Session wizard with the following information:

- Host type
- Session type — printer for IBM hosts.

Note: Unlike the IBM hosts, printing from a VAX/VMS, UNIX, or asynchronous host does not require a printer session.

- Connection type and settings.

The wizard creates a printer session with many default settings, which determine how the printer session appears, operates, and interacts with you. You can later edit these settings to accommodate your preferences.

Tip: To create a new session with a profile identical or similar to an existing session, use the Save As command instead of the New Session wizard.

To create a printer session

1. From the File menu, choose New Session.

–or–

Choose the  button from the toolbar.

2. In the New Session wizard, select Printer Session, and then choose Next.
3. Select a printer session type and choose Next.
4. Select a connection type and choose Next.

5. Set the options for the selected connection and choose Next.
6. If you're satisfied with your settings, choose Finish.
EXTRA! displays the new session.
7. From the File menu, choose Save Session.
You can save the session with any name. The default file extension of .EPP indicates a printer session.

Closing a Printer Session

Closing a printer session breaks the session's connection to the host and closes the printer session's window. By closing a session, you free up PC memory and make the host printing resource available to other users.

You can close printer sessions individually. Closing the last open printer session is equivalent to exiting *EXTRA!*. If you have multiple sessions open, you can simultaneously close all sessions by exiting the program.

Note: If you want to break the host connection without closing the session window, disconnect rather than close the session.

To close a printer session

1. Log off from the session.
2. From the File menu, choose Exit Session.
3. If the session is connected, respond to the Disconnect prompt.
4. If you changed session settings without saving them, respond to the Save prompt.

Selecting a Printer

The printer you select either receives your print job directly or its local definition is used to format a file on your PC. You may select any local printer that is installed in Windows NT, Windows 95 or Windows 98.

To select a printer

1. From the printer session Options menu, choose Settings.

-or-

From the printer session File menu, choose Print Setup.

-or-

Choose the  button from the toolbar.

The Settings dialog box appears.

2. Select the Printer category.

The Settings - Printer dialog box appears.

3. On the Printer property page, select Printer, then select the Printer name from the list.

Note: The choice of Default will make use of your currently installed default Windows printer. If you select another printer, choose the Apply button before moving on to other printer settings.

4. Choose OK to save your changes and close the printer settings dialog box.

-or-

Choose Apply if you wish to save your changes and continue to configure printer settings.

3270 Printer Settings

With *EXTRA!* you can configure your Host print job settings as you would a PC print job, setting parameters such as margins, fonts, and orientation. In addition, advanced host printing parameters may be set, including substitution of the default host escape character, enablement of hex passthrough data stream processing, and custom handling of form feeds.

To set up 3270 printer settings

1. From the printer session Options menu, choose Settings.

-or-

Choose the  button from the toolbar.

The Settings dialog box appears.

2. Select the Printer category.

The Settings - 3270 Printer dialog box appears.

3. Choose one of the following tabs that appear:

Printer, General, Margins, Fonts, LU1/LU4, LU3, or Data Stream.

4. Configure your settings under the tab that you select.

5. Choose OK to save your changes and close the printer settings dialog box.

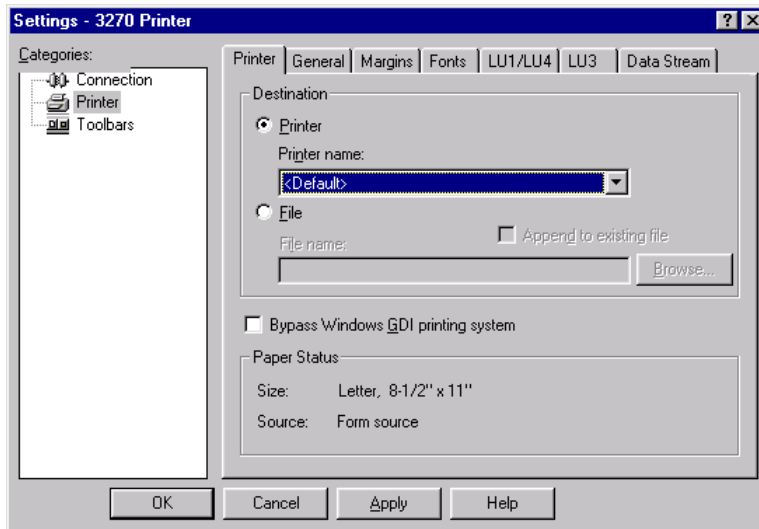
-or-

Choose Apply if you wish to save your changes and continue to configure printer settings.

6. Repeat steps 1 through 5 for printer settings that appear under other tabs on the Settings - 3270 Printer dialog box.

The Settings - 3270 Printer Printer Page

Use the 3270 Printer page to set options such as printer name and destination (printer or file), and the option to bypass the Windows Graphics Device Interface.



The Settings - 3270 Printer Printer page

Destination: Displays print destination options.

Printer: Sends print data to printer.

Printer Name: Select the printer name to which you want to print. You must choose the Apply button before moving on to other printer settings.

File: Sends print data to disk file.

File Name: Enter the filename to print to.

Append to Existing File: When checked, the print job will be added to the end of the specified filename. If the file does not exist, one will be created.

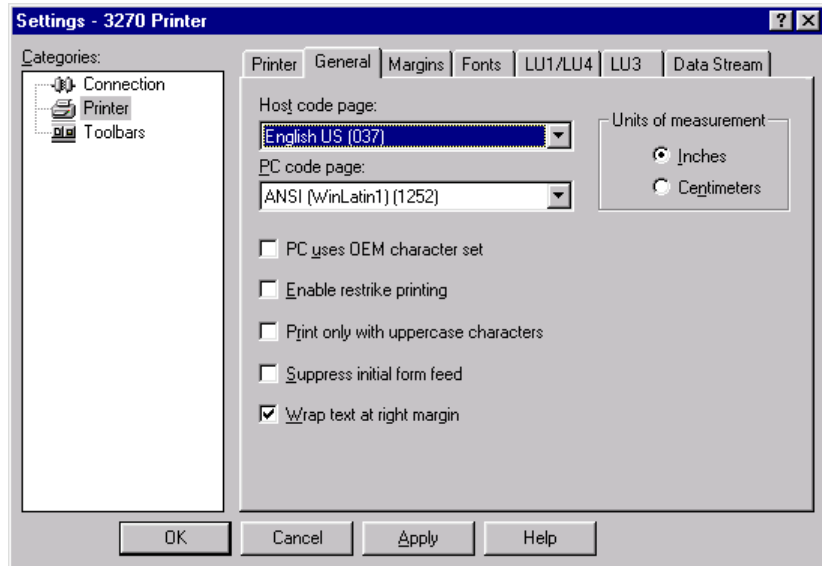
Browse button: Choose this button to search for an existing file to print to.

Bypass Windows GDI printing system: Translates the print datastream directly to raw ASCII, and strips the datastream of host printing control commands.

Paper Status: Displays the current paper size and source.

The Settings - 3270 Printer General Page

Use the 3270 Printer General page to set host code page options, units of measurement to be used in the printer session, line and page formatting options, and font options.



The Settings - 3270 Printer General page

Host Code Page: Defines the character display code page used by the host. (IBM 3812 printer switch = c04.)

PC Code Page: Defines the character display code page used by the PC.

Units of Measurement: Provides the choice of displaying measurement units in centimeters or inches.

Inches: Displays units of measurement in inches.

Centimeters: Displays units of measurement in centimeters.

PC Uses OEM Character Set: Enables the PC to use the OEM character set.

Enable Restrike Printing: Also known as “near letter quality,” restrrike printing enables dot matrix printers to type each character multiple times on the same page.

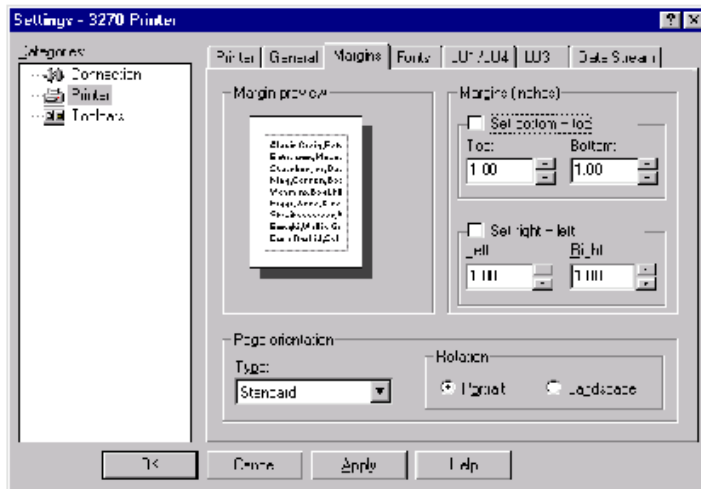
Print only with Uppercase Characters: Prints all alphabetic characters in uppercase. (IBM 3812 printer switch = c08.)

Suppress Initial Form Feed: Instructs the printer to disregard the first form feed command that it receives with the print job.

Wrap Text at Right Margin: Continues words that exceed the line length onto the next line.

The Settings - 3270 Printer Margins Page

Use the 3270 Printer Margins page to configure the printable area of the page. The Margins page provides a Margin Preview, which displays the general page layout, margin size selections, and page orientation choices (standard, host defined, COR, or compressed).



The Settings - 3270 Printer Margins page

Margin Preview: Displays image of sample page with the defined orientation, margins, and line spacing.

Margins (inches) or (cm): Displays margin selections.

Top: Defines the size of the printing area at the top of the page.

Bottom: Defines the size of the printing area at the bottom of the page.

Set Bottom = Top: Sets the bottom margin size equal to the top margin size.

Left: Defines the size of the printing area on the left side of the page.

Right: Defines the size of the printing area on the right side of the page.

Set Right = Left: Sets the right margin size equal to the left margin size.

Page Orientation: Defines the page definitions and direction that the print job will print on the page.

Type: Lists the possible sources of page definitions for the print job. (IBM 3812 printer switch = c01.)

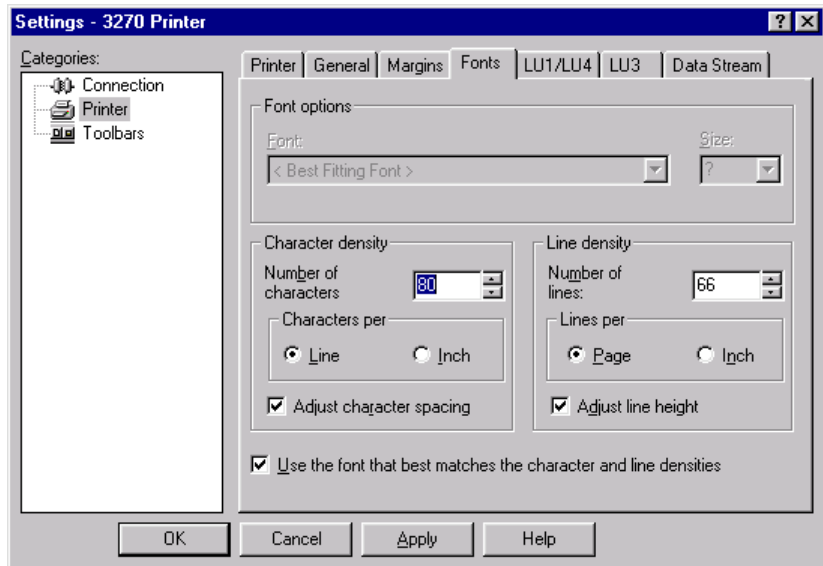
Rotation: Displays the rotation options.

Portrait: Prints the document in portrait mode.

Landscape: Prints the document in landscape mode.

The Settings - 3270 Printer Fonts Page

Use the 3270 printer Fonts page to configure typeface names, sizes, character density, and automatic adjustments that *EXTRA!* makes to the printed page. Automatic adjustments include using line spacing adjustments and the insertion of additional character spacing, when desired.



The Settings - 3270 Printer Fonts page

Font Options: Lists the available font choices and sizes.

Font: Lists the available font choices based on your printer selection. If you have recently changed your printer selection, make sure you choose the Apply button from the Printer Page to update the font list.

Size: Lists the available font sizes.

Character Density: Defines the density of text on the page.

Number of Characters: Defines the number of characters to set per line or inch.

Characters Per: Displays the option to set the number of printed characters to per line or per inch.

Characters Per Line (CPL): Sets the number of printed characters to characters per line.

Characters Per Inch (CPI): Sets the number of printed characters to characters per inch.

Adjust Character Spacing: Proportionally increases character spacing so that text is left and right justified.

Line Density: Defines the density of lines on the page.

Number of Lines: Defines the number of lines per page or inch.

Lines Per: Displays the options to sets the number of printed lines to per page or per inch.

Lines Per Page (LPP): Sets the number of printed lines to lines per page.

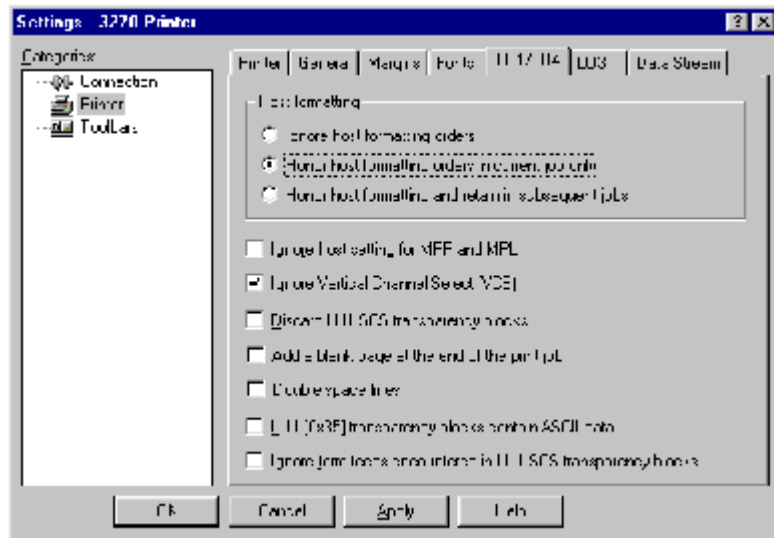
Lines Per Inch (LPI): Sets the number of printed lines to lines per inch.

Adjust Line Height: Increases text leading so that the lines of text fit proportionally between the top and bottom margins of the page.

Use the font that best matches the character and line densities: Instructs *EXTRA!* to select a font based on page width, margin width, character density, and line density.

The Settings - 3270 Printer LU1/LU4 Page

Use the 3270 Printer LU1/LU4 page to configure printer session options for LU1 datastream printers. These are Host printer types that can support advanced printing options. The LU1 options instruct *EXTRA!* in how to process host printing information contained in LU1 SCS transparency blocks, in both ASCII and EBCDIC formats.



The Settings - 3270 Printer LU1/LU4 page

Host Formatting: Establishes *EXTRA!* treatment of host control codes.

Ignore Host Formatting Orders: Disregards host control codes.

Honor Host Formatting Orders in Current Job Only: Recognizes host control codes for the current job only.

Honor Host Formatting and Retain in Subsequent Jobs: Recognizes host control codes for all jobs.

Ignore Host Setting for MPP and MPL: Disregards host settings for maximum print position (MPP) and maximum page length (MPL). (IBM 3812 printer switch = c06.)

Ignore Vertical Channel Select (VCS): Disregards incoming Vertical Channel Select (VCS) codes.

Discard LU1 SCS Transparency Blocks: Discards host print formatting commands.

Add Blank Page at the End of the Print Job: Prints a blank page after the print job ends.

Double Space Lines: Formats the print job with double spaced lines. (IBM 3812 printer switch = c06.)

LU1 [0x35] Transparency Blocks Contain ASCII Data: Allows embedding of ASCII printer control codes in the host data stream.

Ignore Form Feeds Encountered in LU1 SCS Transparency Blocks: Disregards the form feed command in the host print data stream.

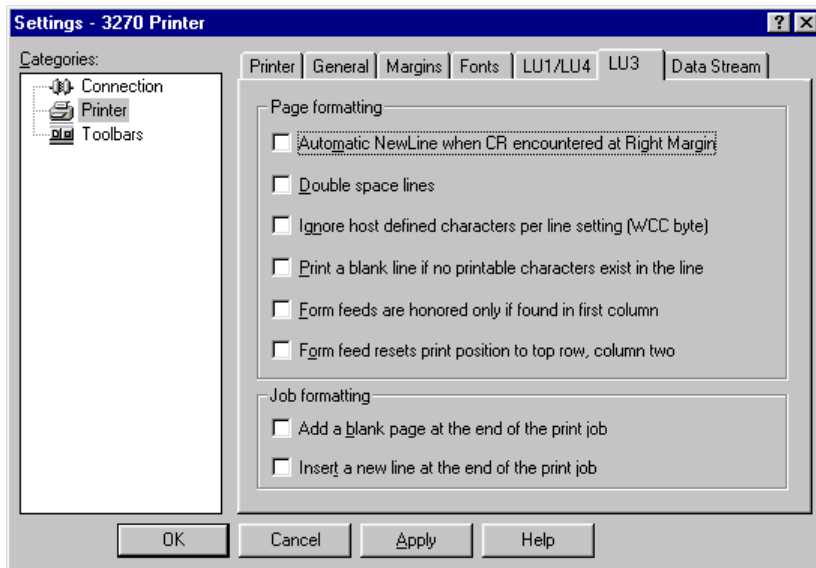
Printer Type: Specifies the type of printer emulated by the printer session. Choose either Laser (IBM 3812) or Dot Matrix (IBM 5224).

Laser: Selects a laser (IBM 3812) printer for the printer session to emulate.

Dot Matrix: Selects a dot matrix (IBM 5224) printer for the printer session to emulate.

The Settings - 3270 Printer LU3 Page

Use the 3270 Printer LU3 (DSC/DSE) page to configure printer session options for LU3 type Host printers. These are Host printer types that support basic formatting commands. These include page and job formatting options such as form feed recognition and line feed insertion into a print job.



The Settings - 3270 Printer LU3 page

Page Formatting: Sets page settings for LU3 (DSC/DSE) printers.

Automatically Insert a New Line Character at the End of Each Line:

Advances the printer one line when a carriage return occurs after the maximum print position. The next print position is the current line plus one, column 1. (IBM 3812 printer switch = c18.)

Double Space Lines: Formats the print job with double space lines. (IBM 3812 printer switch = c06.)

Ignore Host-Defined Characters per Line Setting (WCC):

Disregards the characters per line setting received from the host.

Print a Blank Line if no Printable Characters Exist in the Line:

Adds a line feed character if no printable characters exist in the line. (IBM 3812 printer switch = c22.)

Form Feeds are Honored Only if Found in First Column: The first column of the print job is the only area where form feeds are recognized. (IBM 3812 printer switch = c23.)

Form Feed Resets Print Position to Top Row, Column Two:

Reinitializes the print position after form feed. (IBM 3812 printer switch = c20.)

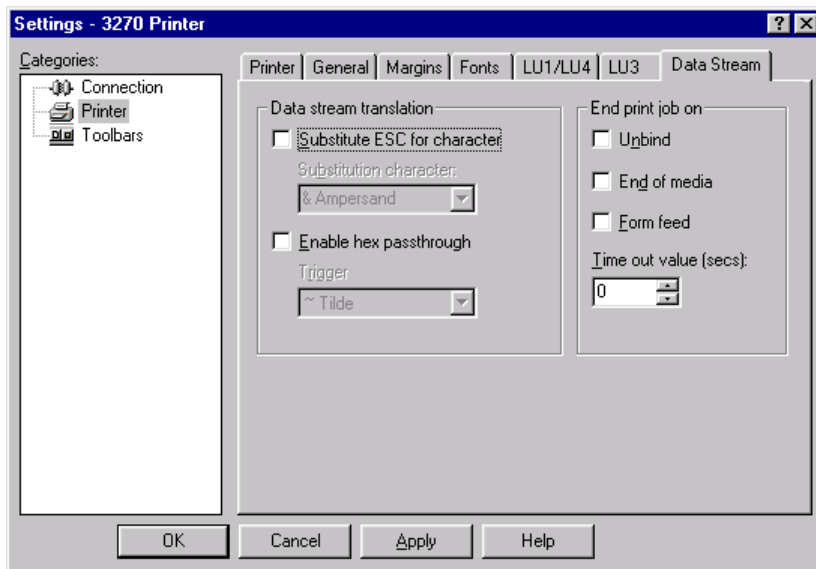
Job Formatting: Sets formatting for LU3 (DSC/DSE) print jobs.

Add a Blank Page at End of the Print Job: Prints a blank page after the print job. (IBM 3812 printer switch = c16.)

Insert a New Line at the End of the Print Job: Inserts a new line after the print job. (IBM 3812 printer switch = c21.)

The Settings - 3270 Printer Data Stream Page

Use the 3270 Printer Data Stream page to configure the interpretation of host printing commands. Hex data translation of printing commands and print job control options are configurable options.



The Settings - 3270 Printer Data Stream page

Data Stream Translation: Displays options for handling host printing instructions.

Substitute ESC for Character: Enables substitution of the standard host escape character with a user-defined character.

Substitution Character: Lists possible character replacements for the host escape character.

Enable Hex Passthrough: Switches how *EXTRA!* processes the data stream from normal text to hexadecimal conversion.

Trigger: Lists possible characters that signal the beginning and end of hexadecimal format data in the data stream.

End Print Job On: Ends print job on host unbind signal.

End Bracket: Ends print job on the end bracket that delimits print data buffers.

End of Media: Ends print job on the end of media.

Form Feed: Ends print job on form feed.

Time Out Value (secs): Specifies the amount of time a printer will wait for data before aborting a print job.

Printing from the Host

Using *EXTRA!* you can print directly to your local printer or to a file (including an ASCII file). Before printing, you may want to perform the following actions to verify your setup:

- Make sure that you have at least one Printer Session configured.
- Make sure that you have set the correct print destination.
- Set page layout options to define how the printed page should appear. For example, you can set font, margins, and line and character spacing.
- Set the printer time-out, which is the maximum amount of time *EXTRA!* will wait for information while it is printing
- Send a form feed to the printer, immediately ejecting the current page from the printer.

To print to a printer

- From your display session, enter your host print commands.

To view the printer's status, refer to the Print Status option in the printer session window. For more information, see "Printer Status" later in this chapter.

To print to a file

- From your display session, enter the host print commands.

To view the printer's status, refer to the Print Status option in the printer session window. For more information, see "Printer Status" later in this chapter.

Printer Controls

As *EXTRA!* prints, you can perform any of the following actions:

Hold Print : Temporarily suspends print jobs in the mainframe's spooler. You can use this command to store several print jobs so they can be printed at one time, or to temporarily halt printing to change page layout options. Hold print enables the PA1, PA2, Form Feed, Cancel Print, and Align Form commands. The mainframe suspends all spooled print jobs until you again choose the Hold Print command.

PA1 and PA2: Sends PA1 and PA2 commands to your mainframe application. These keys simulate the PA1 and PA2 keys on a 3287 printer control panel. The functions performed by these keys depend on the mainframe application from which you are printing. (Some applications may not support these functions.)

The PA 1 and PA2 commands are available to you if the session is configured for an LU1 printer resource. To confirm that you are configured for an LU1 printer resource, choose Session Status from the View menu of the printer session.

Cancel Print: Cancels a print job at any time if you are configured for an LU1 printer resource. To confirm that you are configured for an LU1 printer resource, choose Session Status from the View menu of the printer session.

Form Feed: Sends a Form Feed command to your printer, immediately ejecting the current page from the printer.

Align Form: Tests the alignment of text on preprinted forms on the printer. You can specify the text to print and the row and column at which it should be printed.

To hold printing

- From the printer session Control menu, choose Hold Print.

-or-

Choose this  button on the toolbar.

The Job Status field in Print Status will indicate that the printer is on hold. (A check mark also appears next to the Hold Print command in the Control menu.)

To send a PA1 or PA2 command

1. From the printer session Control menu, choose Hold Print. (A check mark appears next to the Hold Print command.)
2. Choose either PA1 or PA2 from the Control menu.
3. Choose Hold Print from the Control menu to bring your session back on line.

To cancel printing

1. From the printer session Control menu, choose Hold Print. (A check mark appears next to the Hold Print command.)
2. Choose Cancel Print from the Control menu.
3. Choose Hold Print from the Control menu to bring your session back on line.

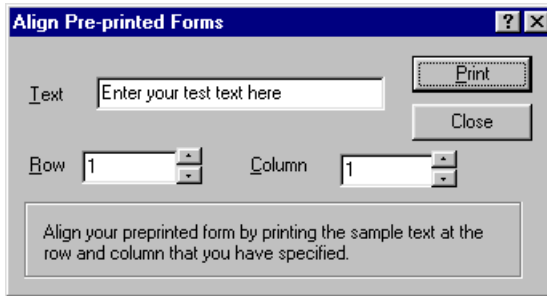
To send a form feed command

1. From the printer session Control menu, choose the Hold Print command. (A check mark appears next to the Hold Print command.)
2. From the Control menu, choose the Form Feed command.
EXTRA! sends a form feed to the selected printer.
3. To bring your session back online, choose the Hold Print command from the Control menu.

The Align Pre-printed Forms Dialog Box

Use the Align Pre-Printed Forms dialog box to help align data from the host onto pre-printed forms or non-standard paper sizes. For example, printing inventory forms or mailing labels.

The Align Pre-printed Forms dialog box remains active until you close it.



The Align Pre-printed Forms dialog box

Refer to the following field descriptions for the Align Pre-printed Forms dialog box.

Text: Specifies the text that will print as a sample to test your form alignment settings.

Row: Defines the vertical starting point for the form data (represented by the sample Text).

Column: Defines the horizontal starting point for the form data (represented by the sample Text).

Print button: Prints a test page containing your sample Text.

Close button: Closes the Align Pre-printed Forms dialog box. The dialog box will not close until this button is selected.

To align forms

1. From the printer session Tools menu choose Align Form.
2. Enter the sample text you want printed on the form in the Text field.
3. Enter the row and column values to change the starting point for the sample text.
4. Choose the Print button.

Printer Status

From the Printer Session you can access status information about your print job. Refer to the following sections.

Viewing Session Status

The following information appears in the client area for a 3270 printer session:

Device Info: Indicates the type of printer resource, for example LU1 or LU3.

Session State: “Active and not bound” appears when the session was only activated by the SSCP and BIND has not been received. “Bound” appears when the BIND is successful and the printer session is ready to accept print jobs. “Inactive” appears if the printer session has been deactivated by the SSCP.

Server Info: Displays the server name and server software version.

Resource Name: The LU, or LU pool if your workstation is connected to the host via a gateway. This field will also display the name for this LU on the host.

Resource Address: Displays the resource name. Displays the LU number where applicable.

The following information appears in the client area for a 5250 (AS/400) printer session:

Device Type: Displays the printer type that the session is emulating.

Device Name: The name of the virtual device that the session is emulating.

Message Queue: The message queue where printer messages are sent. The default message queue is contained in library QSYSOPR.

To view session status

- From the printer session View menu choose the Session Status command.

-or-

Choose the  button on the toolbar.

Viewing Print Status

The following information appears in the client area for a 3270 printer session:

Job Status: Displays the state of your local printer. The states include: Idle, Printer Inactive, Printing in progress, Print job on hold, and Print Job in error.

Pages Printed: Displays the number of pages printed.

Printer Name: Displays the name of the printer and printer port the session is using.

Driver Name: Displays the name of the printer driver the session is using.

Output Name: The name of the port for a printer or the name of the file for file output. If the printer is a network printer, the printer name is repeated in this field.

The following information appears in the client area for a 5250 (AS/400) printer session:

Job Status: Displays the state of your local printer: Not Started, Running, or On Hold.

Pages Printed: Displays the number of pages printed.

Printer Name: Displays the name of the printer the session is using.

Driver Name: Displays the name of the printer driver the session is using.

To view print status

- From the printer session View menu choose the Print Status command.

-or-

Choose the  button on the toolbar.

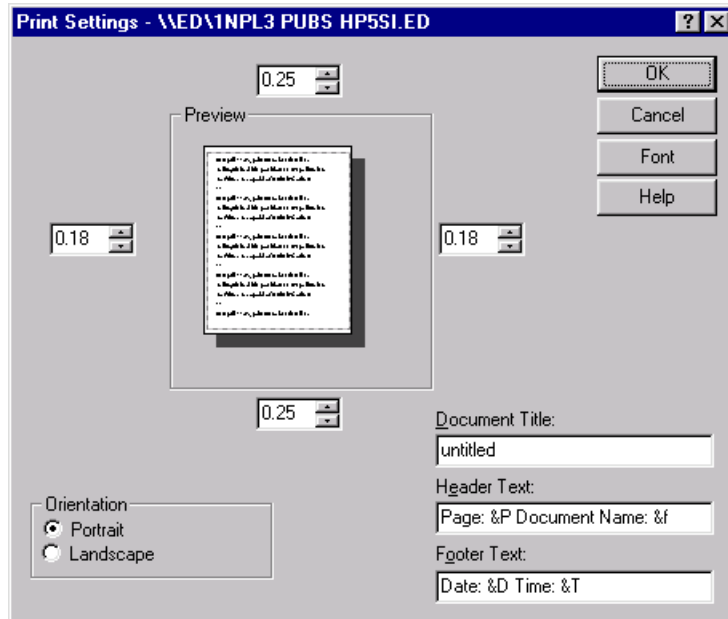
Printing a Screen

The Print Screen feature prints an image of the display screen to the printer specified in the Print Screen dialog box. You can print the whole image, even if it is not all currently displayed in the display window.

Refer to the following sections on setting options for printing the screen image.

The Print Settings Dialog Box

Using the Print Settings dialog box, you can configure various page set-up options such as page orientation, and margins and you can assign a document name as well as header and footer information.



The Print Settings dialog box

Refer to the following field descriptions for the Print Settings dialog box.

Preview: Shows how the page layout will look. As you change the options, the page layout example changes.

Orientation - Portrait or Landscape: Specifies how the document is positioned on the page. Portrait orients the paper vertically. Landscape rotates the paper 90 degrees clockwise.

Left Margin: Defines the distance between the left edge of the page and the left end of each line, in inches.

Top Margin: Defines the distance between the top of the page and the top of the first line on the page, in inches.

Right Margin: Defines the distance between the right edge of the page and the right end of each line, in inches.

Bottom Margin: Defines the distance between the bottom of the page and the bottom of the last line on the page, in inches.

Document Title: Specifies a "title" for the document you are going to print. The header and footer text appears just outside of the pages margins. You can type text for the header and footer, or used the &F variable to include the document filename in either the header or footer.

Header Text: Specifies the text that will appear in the header of the printed document (up to 80 characters). This header appears one line above the top margin. If you do not want to use a header, delete the default values.

Footer Text: Specifies the text that will appear in the footer of the printed document (up to 80 characters). This footer appears one line below the bottom margin. If you do not want to use a footer, delete the default values.

Font: Selects the font for the header or footer text. You can also change font styles such as bold, italic, or bold and italic.

To configure page setup

1. From the display session File menu choose Print Settings.
2. Complete the Print Settings dialog box.

For information about a specific field in this dialog box, refer to the field descriptions listed previously in this section.

To specify the print orientation

1. From the display session File menu choose the Printer Settings option.
2. In the Orientation group box, select the option that indicates how the document should be positioned on the page.

As you select each option, the sample at the top of the dialog box changes to show how the orientation affects the page layout.

To specify the printing margins

1. From the display session File menu choose Printer Settings.
2. In the left, right, top, and bottom boxes, select the number of inches or centimeters from the edges of the paper where printing should not occur.

As you select these numbers, the sample in the middle of the dialog box changes to show how the changes affect the page layout.

To specify the document name for the printed header or footer

1. From the display session File menu choose Printer Settings.
2. Enter a name in the Document Title text box.

You can use the &F variable in both the Header or Footer text boxes, to have the title you typed appear on the page.

To specify the printed header

1. From the display session File menu choose Printer Settings.
2. In the Header text box, type the information that you want to appear in the header of the printed document (up to 80 characters).

This header appears one line above the top margin. If you do not want to use a header, delete the default values. You can also use these variables:

To print	Type
The page number	&P
The document name (as specified in the Document Name text box)	&F
The date	&D
The time	&T

To specify the printed footer

1. From the display session File menu choose Printer Settings.
2. In the Footer text box, type the information that you want to appear in the footer of the printed document (up to 80 characters).

This footer appears one line below the bottom margin. If you do not want to use a footer, delete the default values. You can also use these variables:

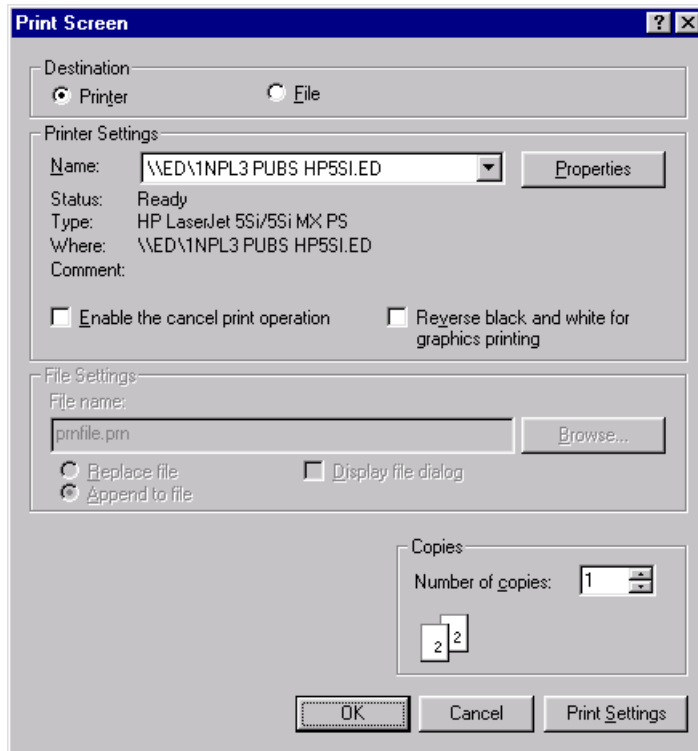
To print	Type
The page number	&P
The document name (as specified in the Document Name text box)	&F
The date	&D
The time	&T

To choose the print font

1. From the display session File menu choose Print Screen.
2. Choose the Font button.
3. Complete the Font dialog box.

The Print Screen Dialog Box

Using the Print Screen dialog box, you can configure various printing options, such as the printer to print to and the number of copies to print. You can also select the destination for the print job.



The Print Screen dialog box

Refer to the following field descriptions for the Print Screen dialog box.

Destination: Select the destination for the print job. You can send it to either a printer or to a file.

Printer: Sends the data to a printer instead of a file.

File: Sends the data to a file instead of a printer.

Printer Settings: Allows you to choose printer options if you chose to send your file to the printer rather than to file.

Properties: Choose this button to set up options for this printer. The options available depend on the features of the printer.

Enable the Cancel Print Operation: Displays the Cancel Print Screen dialog box while printing is in progress. This enables you to stop a print job before it has completed. You can select this option only if you have chosen to print to file.

Reverse Black and White for Graphics Printing: Prints black areas of the image as white, and white areas as black. (Useful when the host display is white text on a black background.)

File Settings: Allows you to choose options if you chose to send your file to print.

File Name: Enter the name of the file you want to print to file.

Browse button: Choose this button to select an existing file if you chose to print or append the data to a file.

Replace File: Replaces data. The new data will overwrite any existing data in the file.

Append to File: Adds the data to the end of any existing data in the file.

Display File Dialog: Displays the File Open dialog box when you choose the Print Screen command from the toolbar.

Host Screens: Specify how many host screens you want to print per page. From the display session file menu you can choose Print Multiple Screens to create a queue of host screens and send them to the printer at one time. This field only displays if the Print Multiple Screens command has been selected.

Host Screens Per Page: Specify the number of host screens that at most will print per page. From the display session file menu you can choose Print Multiple Screens to create a queue of host screens and send them to the printer at one time. . This field only displays if the Print Multiple Screens command has been selected.

Copies: Specify the number of copies to print.

Number of copies: Specify the number of copies to print.

Print Settings: Choose this button to configure more printing options. Refer to the Print Settings Dialog Box section for more information.

To print a screen

1. From the display session File menu choose Print Screen.
2. Choose the destination Printer and complete the Print Settings section of the dialog box.

For information about a specific field in this dialog box, refer to the field descriptions listed previously in this section.

To configure the print screen options for the current printer

1. From the display session File menu choose Print Screen.
2. Choose the destination Printer and complete the Print Settings section of the dialog box.

For information about a specific field in this dialog box, refer to the field descriptions listed previously in this section.

To print the screen to a file

1. From the display session File menu choose Print Screen.
2. Choose File as the destination.
3. Select Replace File to overwrite any existing data in the specified file with new data.

–or–

Select Append to File to add the new data to the end of any existing data in the specified file.

To configure print settings options

1. From the display session File menu choose Print Screen.
2. Choose the Print Settings button.
3. Complete the Print Settings information.

For information about a specific field in this dialog box, refer to the field descriptions listed previously in this section.

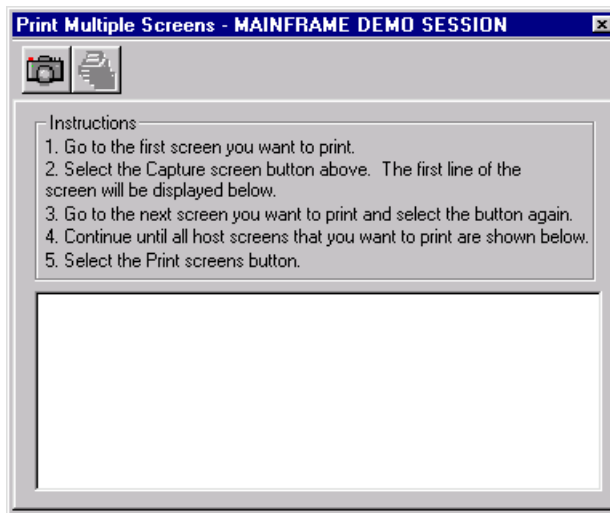
To display the Cancel Print dialog box during printing

1. From the display session File menu, choose Print Screen.
2. Choose Enable the cancel print operation to display the Cancel Print dialog box while printing is in progress.

Note: You can select this option only if you are printing to a file and the destination File is selected.

Printing Multiple Screens

Using the Print Multiple Screens dialog box, you can create a queue of host screens and send them to the printer at one time.



The Print Multiple Screens dialog box

To print multiple screens

1. From the display session file menu, choose Print Multiple Screens.
2. Go to the first screen you want to print.
3. Choose the capture button (in the top left corner of the dialog box.)
The first line of the screen displays in the window.
4. Go to the next screen you want to print and select the capture button again.
5. Continue until all host screens that you want to print are shown in the window.
6. Choose the Print button.

Note: The option Host Screens Per Page which appears on the Print Screen Dialog Box allows you to specify how many host screens you want to print per page.

Printer Session Troubleshooting

This section describes how you can recognize and solve some of the most common problems you may encounter when printing. If you cannot locate your particular problem in this list or if the remedies presented here do not eliminate your problem, contact your system administrator or call our Customer Support department.

Refer to the following sections to solve some common printing issues.

If You Can't Print From the Host

Check for the following conditions if you cannot print from the host.

- **Is the host resource you are using defined as a printer resource at the host?**

If it isn't, either reconfigure the session for a different resource, or have your system administrator change the resource at the host to a printer resource.

Choose Session Status from the View menu. Make sure you are using the correct resource and session profile. If you find an error, reconfigure *EXTRA!*. Also check to see that the host has sent a Bind ID to *EXTRA!*. If there is no Bind ID, contact your system administrator and find out if the host's printing application is running.

- **Is the host resource active and not in use?**

If the resource is inactive or already in use, reconfigure *EXTRA!* for a different resource.

- **Is the printer online?**

If your printer is offline, or, if your printer is on a network, an "off-line" message may indicate that the network is down.

- **Is your printer an active Windows printer?**

Open the Windows Print Manager and see if your printer is listed. For information on using the Print Manager, refer to your *Microsoft Windows User's Guide*.

- **Has Windows been set up to print?**

There are several ways to check to see if Windows is configured for printing. Try any of the following tests to see if Windows is sending the job to your printer.

- Try to print using the Windows Notepad.
- Try to print one of the Windows online Help topics.

No matter which test you choose, you should be able to track the print job in the Microsoft Windows Print Manager. The Print Manager displays each print job as it is received. It tells you if the job is spooled, or if it has been sent to the printer.

The Printed Page Looks Incorrect

Check for the following conditions if the text on your printed page does not look quite right.

Your output is missing tab settings or other formatting options.

Choose Session Status from the View menu and make sure the LU type is correct. More than likely, this should be an LU1 resource. LU1 host printers support a wider variety of format options than LU3 printers.

If it is not the correct LU type, either select a different session or reconfigure the current session for the correct resource.

***EXTRA!* is not formatting the output correctly.**

Check to ensure that the output settings are configured correctly by checking the Printer Settings. For information on Printer Settings and how to view them, refer to the Printer Settings section previously in this chapter.

The Printer Stops before the Job is Completed

The printer time-out value may be set for too short a period of time. To change the printer time-out setting, refer to “Printer Settings - The Data Stream Page” earlier in this chapter.

Formatting Print Output

EXTRA! provides two methods for formatting print output: emulation of SCS (IBM’s SNA Control Set) orders, and emulation of the Hewlett-Packard PCL5 printer control language. SCS is the control set used in Logical Unit 1 (LU1) printing. Minimal formatting (newline and form feed) is defined by IBM for LU3 printing.

In addition to full support of the IBM control sets for each of these LU types, *EXTRA!* supports emulation of PCL5 in all three LU types. PCL5 is the printer control language used by Hewlett-Packard in their popular LaserJet and InkJet printers. Many other printer vendors emulate PCL5 in their printers. *EXTRA!* emulates PCL5 by recognizing PCL commands within the print stream and making the equivalent series of calls to the Windows GDI (Graphics Device Interface) service. This means that you can use PCL commands to format output even on printers which do not have built-in support for PCL (because Windows transforms the GDI calls into the appropriate commands for those printers).

On rare occasions, you may need more specialized control over formatting. You may wish to use capabilities of a specific printer (such as a Postscript printer) which are not available in SCS nor in PCL. Or you may want to suppress all output formatting entirely. For example, you might want to “print” to a disk file which will become input to another program, such as a database.

EXTRA! offers the Raw Output Mode option for this purpose. In Raw Output Mode, the print datastream from the host is translated from EBCDIC to ASCII, SCS formatting controls are stripped from the stream, and the resulting ASCII stream is copied directly to the printer or disk file. Most of the *EXTRA!* processing is skipped, and the Windows GDI and printing system is bypassed entirely. Formatting control sequences in the print data (if any) are performed by the printer itself. This provides complete access to the print device's capabilities.

Printer Emulation in the Windows Environment

Unlike DOS host applications, emulating a printer in the Windows environment presents a special challenge. Windows expects you to perform positioning, line and box drawing, and other formatting operations through the Windows Graphics Device Interface (GDI), instead of using the traditional text stream with embedded formatting control codes employed by DOS.

EXTRA! provides two ways to perform formatting:

GDI Mode intercepts SCS and PCL5 commands within the host print datastream (either embedded in text, or within LU1 SCS transparency blocks) and emulates them through the Windows GDI. Because *EXTRA!* emulates PCL commands by transforming them into GDI service calls, PCL commands can be “performed” on *any* Windows graphics printer, whether it has built-in support for PCL or not.

Raw Output Mode bypasses the Windows GDI altogether. Formatting commands in the printer's “native” command language (whether embedded in text or placed in LU1 transparency blocks) are sent directly to the printer. *EXTRA!* discards standard SCS controls for Raw Output Mode. Raw Output Mode can be used with any manufacturer's printer. Typical uses for Raw Output Mode include printing to Postscript or other non-PCL printers, and creating text files for input to other PC programs such as databases.

To set up Windows for GDI or Raw Output Modes

1. From the printer session Options Menu, choose Settings.

-or-

Choose the  button from the toolbar.

The Settings - Connection dialog box appears.

2. Choose the OK button to save your changes and close the printer settings dialog box.

-or-

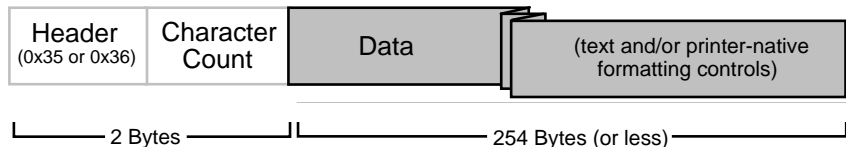
Choose the Apply button if you wish to save your changes and continue to configure printer settings.

Transparency Block Configurations

LU1

For LU1 sessions, *EXTRA!* supports three transparency-block formats containing ASCII data.

The following figure shows the SCS transparency block configuration defined by IBM. This applies to LU1 sessions only—LU3 and LU4 do not define a “transparency block” control.



The first is the standard IBM transparency block. In an LU1 session, each transparency block must be preceded by a 2-byte header containing either hexadecimal code 0x35 or 0x36, and a character count.

0x35 indicates that the data block is in EBCDIC, the native IBM host character set. *EXTRA!* will translate the block to ASCII before sending it to the printer.

0x36 is an Attachmate extension to the LU1 SCS control set, which indicates that a block contains ASCII data. *EXTRA!* does not perform translation.

A second format, specific to *EXTRA!* and configured in the LU1 page of Printer settings, allows you to indicate that transparency blocks

beginning with 0x35 contain ASCII data rather than EBCDIC. If selected, this option will apply to all transparency blocks in all print jobs run by the session.

The third format, also defined by IBM, created an extension to its SCS controls that has a three-byte header:



In Raw Mode, the data block is sent directly to the print device. In GDI Mode, the data block is broken down and interpreted through the Windows Graphics Device Interface. In GDI mode, all formatting within transparency blocks must be done with PCL printer commands. (In raw mode, you would use commands native to your printer instead.) *EXTRA!* versions 5.x and earlier required that a PCL command be completed within the transparency block in which it starts. In *EXTRA!*, a PCL command may start within one transparency block and complete in a subsequent block.

LU3 and LU4

LU3 does not support SCS. PCL commands may be embedded directly into the text stream to perform formatting in LU3. You can also put PCL commands in the text stream in LU1 as well.

To configure [0x35] transparency blocks in EXTRA!

1. From the printer session Options menu, choose Settings.

-or-

Choose the  button from the toolbar.

The Settings - Connection dialog box appears.

2. Select the Printer Category.
3. Select the LU1 tab.

The LU1 printer settings dialog box appears.

4. Select LU1 [0x35] transparency blocks contain ASCII data.

Choose the OK button to save your changes and close the printer settings dialog box.

–or–

Choose the Apply button if you wish to save your changes and continue to configure printer settings.

Hex Passthrough Blocks

EXTRA! supports an alternative method for embedding “transparency” data within a text stream, called hex passthrough. A one- or two-character user-selected “trigger signature” switches the *EXTRA!* processing of the datastream from normal text to hexadecimal conversion. Hex blocks consist of a combination of hexadecimal digits and spaces. The trigger signature character is not printed in the output. It simply signals that the job is entering hex passthrough mode, and then the signature character is discarded. Hex passthrough blocks may be embedded in LU1, and LU3 print streams.

You may select the appropriate trigger from the *EXTRA!* Data Stream settings dialog.

To enable hex passthrough blocks

1. From the printer session Options menu, choose the Settings command.

–or–

Choose the  button from the toolbar.

The Settings - Connection dialog box appears.

2. Select the Printer Category.
3. Choose the Data Stream tab.

The Data Stream printer settings dialog box appears.

4. Select the Enable Hex Passthrough option.
5. Select the appropriate Trigger signature from the drop-down list.

6. Choose the OK button to save your changes and close the printer settings dialog box.

–or–

Choose the Apply button if you want to save your changes and continue to other configure printer settings.

Hex Passthrough Trigger Signatures

You can enable the processing of hexadecimal characters in mid-data stream by defining a trigger character and choosing the Enable Hex Passthrough option.

Once *EXTRA!* “sees” the start trigger character, it expects the following text to consist only of hexadecimal digits (0-9, A-F) and optional spaces. Hex passthrough processing stops when *EXTRA!* “sees” a non-hex character. This non-hex character is then stripped out of the data stream, and processing of the data stream returns to normal text. One exception to this is the “double-percent” (%%) trigger character used specifically for the Tangram Arbiter product. In the event that %% is used for the start and termination trigger character, then both %% termination characters will be discarded from the beginning and end of the hex block. If any other single non-hex, non-%% termination character is encountered, only that single termination character will be discarded from the end of the hex block.

Hex Passthrough Processing Examples

The following four examples demonstrate various processing scenarios of hex passthrough blocks embedded within text streams.

%% as Start and End trigger

This EBCDIC input

```
Fourscore and%%4031323340%%years ago
```

Results in this ASCII output

```
Fourscore and 123 years ago
```

This example uses the Arbiter-specific “double-percent” as both start and end trigger characters. The “%%” characters are stripped from the beginning of the hex block, and hex conversion proceeds until the non-hex “%%” characters are encountered at the end of the block. Both “%%” characters are then stripped from the data stream, and processing returns to normal text.

Hex 40 is an ASCII [space]. Hex 31, 32, and 33 are ASCII characters '1', '2', and '3', respectively. No further translation is completed.

%% as Start trigger only

This EBCDIC input

```
Fourscore and%%4031323340&years
```

Results in this ASCII output

```
Fourscore and 123 years ago
```

This example uses the Arbiter-specific “double-percent” character as the start trigger. The “%%” characters are stripped from the beginning of the hex block, and hex conversion proceeds until a non-hex character (&) is encountered, and that non-hex character is stripped from the data stream. Processing then returns to normal text.

Hex 40 is an ASCII [space]. Hex 31, 32, and 33 are ASCII characters '1', '2', and '3', respectively. No further translation is completed.

Start trigger only used

This EBCDIC input

```
Fourscore and@4031323340years ago
```

Results in this ASCII output

```
Fourscore and 123 years ago
```

This example demonstrates processing when a start trigger character (@) is encountered at the beginning of the block, but no trigger character is inserted at the end of the block. The start trigger character is stripped from the data stream, and hex conversion proceeds until a non-hex character is encountered. That non-hex character is stripped from the data stream. Without the insertion of a non-hex end trigger character into the block, a valid data character is stripped out of the print data stream.

Hex 40 is an ASCII [space]. Hex 31, 32, and 33 are ASCII characters '1', '2', and '3', respectively. No further translation is completed.

Start and End trigger used

This EBCDIC input

```
Fourscore and@4031323340^years ago
```

Results in this ASCII output

```
Fourscore and 123 years ago
```

This example demonstrates processing when a start trigger character (@) is encountered at the beginning of the block, and a single non-hex character is inserted into the data stream as the end trigger character. The start trigger character is stripped from the data stream, and hex conversion continues until the non-hex trigger character (^) is encountered. The non-hex end trigger character is stripped from the data stream, and processing returns to normal text.

Hex 40 is an ASCII [space]. Hex 31, 32, and 33 are ASCII characters '1', '2', '3', respectively. No further translation is completed.

The Hex Passthrough Data Stream - Byte Values and Spaces

Byte Values

One or two hex digits represent a byte. If two digits are available, *EXTRA!* assumes that both contribute to the byte's value. If only one is available, it is considered to be the low-order value of the byte. For example,

```
%%01234%%
```

converts to three bytes ([01] [23] [04] decimal)

Spaces

[Spaces] are skipped within a hex block. This assists in debugging binary values by making them more readable. A [space] does not contribute to a byte's value, but it does terminate a byte value. That is,

```
%%4 4%%
```

is read as two bytes [04] [04] rather than as a single [44].

Note: Because the host sees the hex passthrough block as "normal text," and is written in the native character set of the host, you should not write hex values using ASCII characters.

Deciding Between GDI and Raw Output Mode

There are several factors to take into consideration when determining which printing mode to use. This section further defines GDI Mode and Raw Output Mode, and describes the advantages and disadvantages associated with both.

GDI Mode

In GDI mode, *EXTRA!* scans the text stream and transparency blocks for supported PCL5 page description language commands, and then simulates those PCL5 commands using GDI calls. You can use PCL5 control codes to switch between fonts, apply type styles (such as bold and italic), draw lines and boxes, shade rectangular areas, move anywhere on the page, and so forth.

GDI Mode gives your host application access to all fonts available under Windows. These include fonts built into your laser printer, and Windows system and “soft” fonts such as TrueType, Adobe Type Manager, Bitstream Facelift, and other third-party font engines. Refer to the section “Font Support Within Transparency Blocks” for additional information.

The emulation provided by *EXTRA!* supports a large subset of of the PCL5 language, but not the complete language. PCL commands which create downloadable soft fonts or draw bitmaps are not supported. Also, *EXTRA!* does not emulate the HP-GL/2 vector drawing language. If your print job contains such items, you must select Raw Output Mode and configure the job accordingly.

Raw Output Mode

Raw Output Mode bypasses the Windows GDI altogether; an entire print job is sent directly to the printer or to a disk file.

Raw Output Mode will accommodate any printer, page description language, or printer-control syntax. It also allows you to generate an output file or page which contains no printer commands whatsoever, not even the initialization “setup” automatically generated by most Windows printer device drivers.

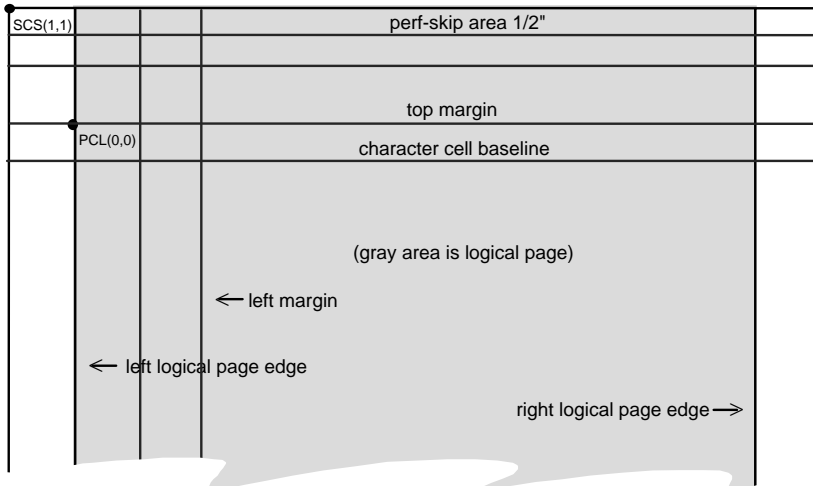
Disadvantages

Any formatting done in Raw Output Mode must be specified in native printer commands embedded in the text stream or within LU1 transparency blocks. Formatting SCS controls in LU1 and LU4 jobs (such as Set Vertical Format, Presentation Position and so on) are discarded in Raw Output Mode, since *EXTRA!* has no way of knowing what native printer commands they could be translated into.

EXTRA! does not track the number of lines and pages printed. The only progress indication given is a message showing that the job is still bound to the host application.

SCS and PCL Coordinate System Differences

SCS and PCL use different page coordinate systems. These differences must be taken into consideration when using GDI Mode. As shown in the figure on the next page, PCL uses a coordinate system with an origin of 0,0 which is located at the intersection of the left edge of the logical page and the PCL top margin (usually below the top edge of the logical and physical page). Numbering increases down and to the right from the origin. SCS, on the other hand, considers the logical page to be a grid of rows and columns. The origin cell is row 1, column 1, and is located at the upper left corner of the physical page.



SCS and PCL coordinates

It is important to note that SCS row 1 is NOT located immediately below the PCL top margin (PCL row 0). For example, with the default three-line PCL top margin, SCS row 1 corresponds to PCL row -3. When the top margin is changed (using SCS Set Vertical Format or PCL Set Top Margin) or when the height of a row is changed (SCS Set Line Density or PCL Set Vertical Motion Index), the correspondence between SCS row numbering and PCL row numbering will also change.

Note: While *EXTRA!* converts between SCS and PCL movements as accurately as possible, generally it is easier to design a document using one command set exclusively. Mixing SCS and PCL commands is supported but can lead to unexpected results, because of differences in the two coordinate systems.

Font Support within Transparency PCL Blocks

PCL enables you to select the characteristics for a desired font by sending a series of commands that specify each of the characteristics. For instance, to select as the primary PCL font, a non-proportional, bold, 12-point Courier font with 10-character-per-inch pitch, upright style, using the normal Roman-8 character set, you would send the sequence:

```
[ESC](8U[ESC](s0P[ESC](s10H[ESC](s12v[ESC](s0S[ESC](s3B[ESC](s3T
```

where

[ESC](8U	specifies the Roman-8 symbol set
[ESC](s0P	specifies fixed spacing
[ESC](s10H	specifies 10 characters per inch
[ESC](s12v	specifies 12-point height
[ESC](s0S	specifies upright style
[ESC](s3B	specifies bold weight
[ESC](s3T	specifies the Courier typeface family

Note: PCL will accept a partial font description; the omitted portions are carried over from the previous font selection. **THIS CAN LEAD TO UNEXPECTED RESULTS AND IS NOT RECOMMENDED.** As a rule, you should specify all of the characteristics when selecting a new font.

Specifying a Windows Scaleable Font

Windows scaleable fonts include the TrueType fonts introduced in Windows 3.1. Fonts provided by many third-party font engines such as Adobe Type Manager and Bitstream Facelift are scaleable, as are some of the standard LaserJet fonts (like CG Times and Univers) and certain fonts available on ROM cartridges. For these scaleable fonts, Windows may be able to change the “aspect ratio” (the normal height-to-width relationship of the characters). As a result, some scaleable fonts can be used with an unusually large or small number of characters per inch by stretching or squeezing the image of each character horizontally.

Because this stretching and squeezing can make a scaleable font less attractive, the *EXTRA!* GDI Mode lets you specify a pitch of “zero characters per inch” using the command `[ESC] (s0H`. This special value is a signal to the font selection algorithm that the height and quality of the font is more significant than the width of the characters. Windows will then select a font based on height alone and calculate an appropriate width to ensure that the character images do not appear distorted.

Enabling Fonts for GDI Mode

The *EXTRA!* printer settings Fonts page provides default font choices. These are all fixed-space fonts corresponding to the original IBM concept for LU1 and LU3 printing on a rectangular grid of rows and columns. Because GDI Mode allows you to use *all* fonts available in Windows, you must tell the PCL algorithm how to choose them.

Windows and PCL both use numeric parameters to specify a font's size, width, stroke weight and other characteristics. However, Windows and PCL use very different methods to identify the name of the typeface, and to specify what character glyphs can be printed in the font (its symbol set).

Windows identifies a typeface by the string naming it. PCL assigns to the typeface a number that identifies both the typeface base value and the face's vendor.

Note: A vendor is a company, such as Linotype Co., Adobe Systems, or AGFA, that creates typefaces and licenses their use. Their versions of a common face such as Times Roman have the same base value, but different vendor codes.

PCL also specifies one or more symbol sets that can be printed in a given font. The most common, Roman-8, includes the letters, numbers and punctuation used for English text. More exotic symbol sets can print languages such as Cyrillic (Russian), Thai, or Arabic, line-drawing characters, special symbols for chemistry, mathematics and other sciences, bar-codes, or decorative glyphs such as “dingbats.” Windows supports only five symbol sets—ANSI, Windows, Symbols (math and decoratives), Shift-JIS (Japanese), and “OEM” which is defined by the vendor or original equipment manufacturer. Each Windows font is assigned exactly one of these sets.

Note: All fonts on the Windows printer are available to *EXTRA!* print jobs. However, *EXTRA!* has no way to equate the name by which Windows knows a typeface with the number which PCL uses to refer to it. *EXTRA!* will ignore a PCL face specification and choose a font based on the other specified characteristics (character height, width, weight, style, and so on). This can easily result in selection of an “incorrect” font, if it matches those other characteristics.

To select a default font in EXTRA!

1. From the printer session Options menu, choose the Settings command.

–or–

Choose the  button from the toolbar.

The Settings - Connection dialog box appears.

2. Select the Printer Category.
3. Choose the Fonts tab.
The Fonts dialog box appears.
4. In the Font Options group, select the Use PC Font Setting option.
5. Choose a font type from the Font List.
6. (Optional.) Select a font size from the Size list.
7. Choose the OK button to save your changes and close the printer settings dialog box.

–or–

Choose the Apply button if you wish to save your changes and continue to configure printer settings.

SCS and PCL5 Printer Control Sequences

The following tables list the SCS and PCL5 printer controls that are supported in *EXTRA!* using GDI Mode. Substitute the appropriate numeric parameter string for the # sign. Numeric parameter strings can include a leading plus or minus sign, any number of decimal digits, and an optional decimal point and fraction. The numeric parameter string can also be empty.

Refer to the following Hewlett-Packard publications for additional information:

PCL 5 Printing Language Technical Reference Manual
 Hewlett-Packard Part Number 33459-90903

PCL 5 Comparison Guide
 Hewlett-Packard Part Number 33481-90968

Supported SCS Control Sequences

Function	Code	Description	Comment
BEL	0x2F	Bell	Ignored by <i>EXTRA!</i>
CR	0x0D	Carriage return	
FF	0x0C	Form-feed	
GE	0x08 +	Graphic Escape	Prints a hyphen, followed by the next byte treated as an ASCII character
HT	0x05	Horizontal tab	
IRS	0x1E	Interchange record separator	Treated like NL
LF	0x25	Line feed	
NL	0x15	New line	
NUL	0x00	Null	Ignored by <i>EXTRA!</i>

Note: A plus sign indicates a multi-byte sequence.

Function	Code	Description	Comment
RFF	0x3A	Required form feed	Treated like FF
RNL	0x06	Required new line	Treated like NL
SA	0x28 +	Set attribute	Subfunctions enable/disable underlining and select standard fonts
SHF	0x2B +	Set horizontal format	Sets left and right margins and tabstops
SLD	0x2B +	Set line density	
SPD	0x2B +	Set print density	
SVF	0x2B +	Set vertical format	Sets top and bottom margins and vertical tabstops
TRN	0x35	Transparency	Begins a transparency block with EBCDIC-to-ASCII translation — block may contain both text and PCL5 commands (which will be emulated)
ATRN	0x36	Absolute transparency	Begins an untranslated transparency block
VT	0x0B	Vertical tab	

Note: A plus sign indicates a multi-byte sequence.

Supported PCL5 Control Sequences

Note the following:

- [ESC] represents the ASCII escape character (hexadecimal 1B).
- In codes containing an ampersand (&), the character following the ampersand is almost always a lowercase alphabetic character. Be careful not to mistake a lowercase L (l) for the numeral one (1).

Supported PCL5 Font Selection and Characteristics Control Sequences

Code	Description	Comment
[ESC]&a#P	Print direction	
[ESC]&l#0	Page orientation	
[ESC]&d#D	Enable underline	
[ESC]&d@	Disable underline	
[ESC](3@	Select primary font as default*	
[ESC](s#B	Primary font stroke weight*	
[ESC](s#H	Primary font pitch*	
[ESC]&k#S	Primary font pitch mode*	Defaults to pica, elite, compressed
[ESC](s#P	Primary font spacing*	
[ESC](s#S	Primary font style*	
[ESC](s#T	Primary font typeface family*	
[ESC](s#V	Primary font height*	
[ESC]([font_ID])	Primary font symbol set*	Provides support for special fonts (like bar-codes, for example)

* For secondary font, substitute) for (in code sequence. For example, [ESC])3@ selects the secondary font as the default instead of the primary.

Supported PCL5 Positioning Control Sequences

Code	Description	Comment
[ESC]&l#A	Page size (type of paper)	For example, letter, legal, A4, Executive
[ESC]&k#H	Horizontal motion index	Sets column size
[ESC]&l#C	Vertical motion index	Sets row size
[ESC]&a#C	Horizontal cursor positioning (measured in columns)	
[ESC]*p#X	Horizontal cursor positioning (measured in pixels)*	
[ESC]&a#H	Horizontal cursor positioning (measured in decipoints)*	
[ESC]&a#R	Vertical cursor positioning (measured in rows)*	
[ESC]*p#Y	Vertical cursor positioning (measured in pixels)*	
[ESC]&a#V	Vertical cursor positioning (measured in decipoints)*	

* Hewlett-Packard LaserJets can position by pixels (300 pixels to an inch), decipoints (720 decipoints to an inch), or rows and columns (as set by the horizontal motion index and the vertical motion index). The actual position is rounded to the nearest pixel.

Code	Description	Comment
[ESC]&f#S	Push/pop cursor position	
[ESC]&l#D	Line spacing	
[ESC]&=#	Half-line feed	
[ESC]&l#E	Top margin	
[ESC]&l#F	Text length	
[ESC]&a#L	Left margin	
[ESC]&a#M	Right margin	
[ESC]9	Clear horizontal margins	

* Hewlett-Packard LaserJets can position by pixels (300 pixels to an inch), decipoints (720 decipoints to an inch), or rows and columns (as set by the horizontal motion index and the vertical motion index). The actual position is rounded to the nearest pixel.

Supported PCL5 Rectangle Management Control Sequences

Code	Description	Comment
[ESC]*c#A	Horizontal rectangle size (measured in pixels)*	
[ESC]*c#H	Horizontal rectangle size (measured in decipoints)*	
[ESC]*c#B	Vertical rectangle size (measured in pixels)*	
[ESC]*c#V	Vertical rectangle size (measured in decipoints)*	
[ESC]*v#T	Select current pattern	User-defined patterns or transparencies not permitted — standard patterns only
[ESC]*c#G	Area fill pattern ID	
[ESC]*c#P	Fill rectangular area	
[ESC]*v#N	Source transparency mode	Affects how background and foreground combine
[ESC]*v#O	Pattern transparency mode	Affects how background and foreground combine

* Hewlett-Packard LaserJets can position by pixels (300 pixels to an inch), decipoints (720 decipoints to an inch), or rows and columns (as set by the horizontal motion index and the vertical motion index). The actual position is rounded to the nearest pixel.

Supported PCL5 Job/Paper Control Sequences

Code	Description	Comment
[ESC]&l#X	Number of copies	Refers to number of copies of each page (does not collate)
[ESC]&l#H	Paper source	For example, upper or lower tray, envelope
[ESC]&l#G	Paper destination	Refers to the upper output bin
[ESC]&l#L	Perforation skip	Controls whether text and graphics are clipped or printed at the top and bottom edges of the physical page

Supported PCL5 Simplex/Duplex Printing

Code	Description	Comment
[ESC]&l#S	Simplex/duplex printing	Double-sided printing (Laserjet IID and IIID only)

Supported Miscellaneous PCL5 Control Sequences

Code	Description	Comment
[ESC]&l#P	Page length	
[ESC]&s#C	End-of-line wrap always disabled; text past end-of-line is truncated	
[ESC]E	Printer reset	

Unsupported PCL5 Command Sequences

The following controls sequences are ignored during GDI Mode. If such control sequences are required, use Raw Output Mode.

Unsupported PCL5 Raster (Bitmap) Graphics Control Sequences

Code	Description	Comment
[ESC] *r#A	Start raster graphics	Functionally identical to Windows bitmap graphics operations
[ESC] *r#F	Raster graphics presentation	
[ESC] *t#R	Raster graphics resolution	
[ESC] *r#T	Raster height	
[ESC] *r#S	Raster width	
[ESC] *b#Y	Raster Y offset	
[ESC] *b#M	Set compression mode	
[ESC] *b#W	Transfer raster data	
[ESC] *rB	End raster graphics	

Unsupported PCL5 Rectangle Management Control Sequences

Code	Description
[ESC] c#W	User-defined pattern
[ESC] c#Q	User-defined pattern control
[ESC] p#R	Set pattern reference point

Unsupported PCL5 Soft Font Management Control Sequences

Code	Description
[ESC] *c#D	Assign font ID
[ESC] *c#E	Character code
[ESC] *c#F	Font control
[ESC] (s#W	Character descriptor and data
[ESC])s#W	Font descriptor
[ESC] *c#R	Set symbol set
[ESC] (f#W	Define symbol set
[ESC] *c#S	Symbol set control

Unsupported Miscellaneous PCL5 Control Sequences

Code	Description	Comment
[ESC]&l#U	Left (long-edge) offset	Measured in decipoints
[ESC]&l#Z	Right (short edge) registration	
[ESC] &f#X	Macro control	
[ESC] &f#Y	Assign macro ID	
[ESC] %#A	Enter PCL mode	
[ESC] %#B	Enter HP-GL/2 mode	
[ESC] *c#K	HP-GL/2 plot horizontal size	
[ESC] *c#L	HP-GL/2 plot vertical size	
[ESC] *c#T	Set picture frame anchor point	
[ESC] *c#X	Picture frame horizontal size	
[ESC] *c#Y	Picture frame vertical size	

CHAPTER

*Transferring
Files*



File transfer is the process of moving files between your PC and the host. You can transfer a file from your PC to the host so that other host users can access it. Conversely, you can transfer a host file to your PC where you might, for example, bring it into a word processing program or spreadsheet application.

To transfer files, *EXTRA!* must communicate with a file transfer tool on the host. Each host type has certain types of file transfer tools that are designed to support it.

Using *EXTRA!* you can transfer files in the background in one host session while you continue to work uninterrupted in another. You can also monitor the progress of your file transfer and even send a file to the mainframe in one session while receiving a file in another session.

Here are the general steps required for a file transfer:

Note: Be at the “Ready” prompt before initiating a file transfer.

1. Determine your session type and start a new session.
2. Configure your file transfer options, which creates transfer schemes.
3. Open the Transfer File dialog box.
4. Select a scheme.
5. Start File Transfer and observe the progress.

3270 File Transfer

EXTRA! 3270 file transfer sends and receives files using three different file transfer tools: IND\$FILE, DISOSS, FTP. To use transfer files using IND\$FILE, one of the following must be resident on your host: VM/CMS; MVS/TSO; or MVS/CICS or VSE/CICS, or PS/CICS (IND\$FILE only). The table below includes a description of each host type. The host type is often displayed as part of the Startup screen when you log on. If yours isn't and you don't know your mainframe host type, check with your system administrator.

Note: To use DISOSS, you must have PS/CICS resident on your host.

For information about transferring files using FTP, see “FTP File Transfer” later in this chapter.

Host Type	Description
VM/CMS	VM/CMS stands for Virtual Machine/Conversational Monitor System. CMS is an interactive mainframe application that resides under the VM operating system. This system works with IBM's CMS IND\$FILE program (#5664-281) to transfer files.
MVS/TSO	MVS/TSO stands for Multiple Virtual Storage/Time Sharing Option. TSO is an interactive mainframe application that resides under the MVS operating system. This system works with IBM's TSO IND\$FILE program (#5665-311) to transfer files.
MVS/CICS or VSE/CICS	MVS/CICS stands for Multiple Virtual Storage/Customer Information Control System, and VSE/CICS stands for Virtual Storage Extended/Customer Information Control System. Under these operating systems, <i>EXTRA!</i> supports file transfers using IBM's DISOSS (Distributed Office Support System) (MVS: #5665-290; VSE: #5666-270). MVS/CICS can also use IBM's IND\$FILE program (#5665-311) for file transfer.
PS/CICS	<i>EXTRA!</i> utilizes a separate transfer facility called DISOSS for OV/MVS (PS/CICS) mainframe systems. This file transfer method is initiated and controlled by the mainframe, and works differently from IND\$FILE transfers. This method is also referred to as a Host-Initiated transfer.

You can use the same commands for transferring files individually or in a batch, regardless of the protocol you choose.

Tip: You can send a file to a host using whichever transfer method you have selected by dragging the file from the Windows Explorer, My Computer, or the NT File Manager, and dropping it on a session that is connected to the host.

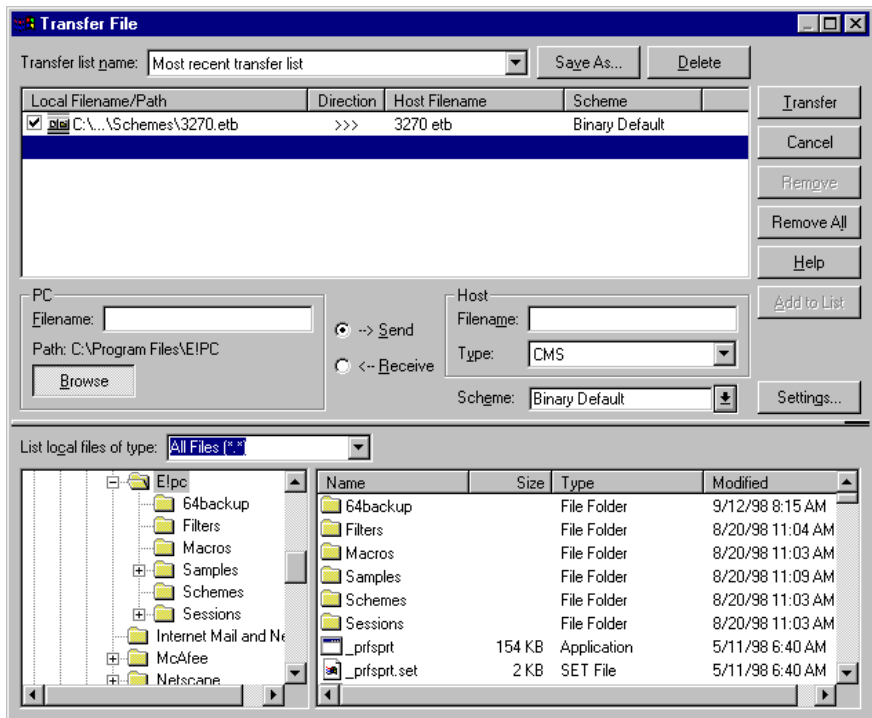
The Transfer File Dialog Box

Open a session and choose Transfer File from the Tools menu to display the Transfer File dialog box. Use the options in this box to create a list of files and transfer them as a batch to or from one of the available host environments.

You can edit the transfer options for individual files and you can save a list of files to display and transfer again.

Before transferring files, it may be helpful to set up a file transfer scheme (define settings) which specifies the way a particular file will be transferred.

Tip: You can use drag-and-drop to add files from Windows Explorer, My Computer, or the NT Explorer to the Transfer List in this dialog box. If you are using Windows 95, Windows 98, or Windows NT 4.0, you can also copy and paste files to the Transfer List.



Transfer File dialog box with Browse selected

Transfer List Name: Select a name from the list to display a previously saved list of files. The names of saved transfer lists are based on the transfer type. Your most recently used transfer list is available, even if you did not specifically save it.

Save As: Saves the displayed transfer list under a different name so that you can reuse it at a later time.

Delete: Removes the transfer list displayed in the Transfer List Name box.

Transfer List: Displays a list of transfers that can be selected for transfer. Click the checkbox to the left of the transfer to select which transfers to actually perform. Click a header button to sort the list accordingly.

Note: When files are dragged to this area the host name is assigned based on the host type chosen and it is accepted as a send transfer.

PC: Specifies the PC files to transfer.

Filename: Type a filename to add to the transfer list.

Path: Displays the current path to the file on your PC.

Browse: Choose to search for a specific PC file.

Send: Sends the specified file to the host when you start a file transfer.

Receive: Receives the specified file from the host when you start a file transfer.

Host: Specifies the Host files to transfer and the host system type.

Filename: Type a filename to add to the transfer list.

Type: Select the host system type: CMS, TSO, or CICS.

Transfer: Initiates the file transfer.

Cancel: Closes this dialog box without transferring files.

Remove: Removes the selected file from the transfer list.

Remove All: Removes all files displayed in the transfer list.

Help: Displays more general Help for this dialog box.

Scheme: Specifies the scheme that will be used for the transfer. If there is no chosen scheme, "Current settings" displays.

Settings: Displays the Settings pages for your file transfer method where transfer options for the file selected in the transfer list can be edited.

Add To List/Apply Changes: Adds your selection to the Transfer List or applies changes made to an item in the Transfer List.

Splitter bar: Adjusts the sizes of the two window areas when the PC Browser is displayed. This does not change the window size.

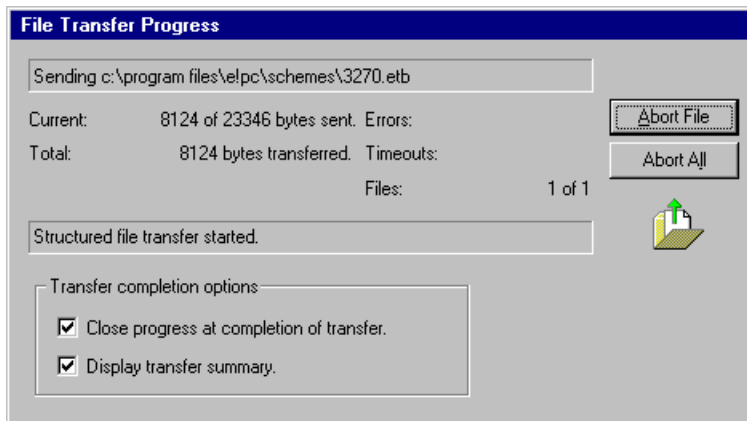
List Local Files Of Type: Filters the displayed list of PC files by type.

Folder List: Displays a list of folders located on your PC.

File List: Displays a list of files in the selected folder.

The File Transfer Progress Dialog Box

The File Transfer Progress dialog box displays the transfer progress for the current transfer. You can stop the transfer of an individual file or the entire batch by choosing either the Abort File or the Abort All button.



The File Transfer Progress dialog box

Progress Message: Displays the transfer progress message for the file currently being transferred.

Current: Displays the transfer progress (number of bytes sent or received) for the file currently being transferred.

Total: Displays the transfer progress (number of bytes sent or received) for the entire transfer batch.

Errors: Displays the number of transmission errors that have occurred during the transfer session.

Timeouts: Displays the number of timeouts that have occurred during the transfer session.

Files: Displays the number of successfully transferred files out of the total number of files to transfer.

Abort File: Aborts the transfer of the current file. When a transfer fails, this button changes to Close.

Abort All: Aborts the transfer of the entire transfer batch.

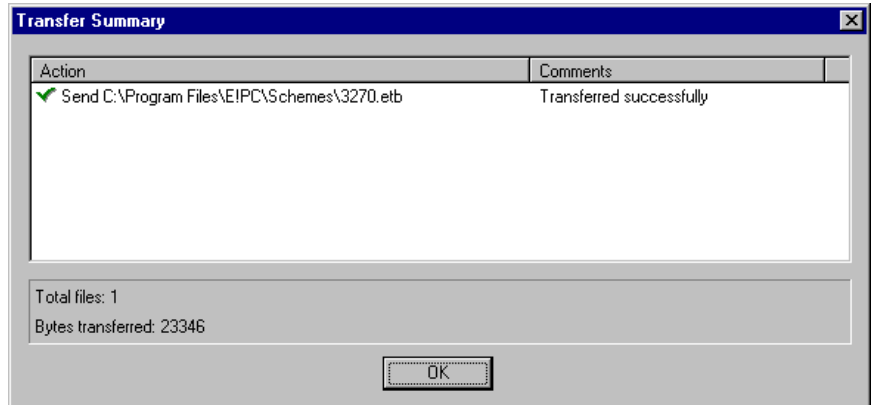
Transfer Completion Options

Close Progress at Completion of Transfer: Closes the File Transfer Progress dialog box immediately upon completion of the last transfer.

Display Transfer Summary: Displays the Transfer Summary dialog box when the File Transfer Progress dialog box closes.

The Transfer Summary Dialog Box

The Transfer Summary dialog box displays when all transfers are complete, providing a summary of how each transfer completed as well as the statistics for the transfer session.



Transfer Summary dialog box

Transfer Schemes

A file transfer scheme specifies the way a particular file will be transferred, the type of translation, and any special parameters required by the receiving environment. Schemes allow you to save all of these settings in a file that you can reuse. This saves time and ensures consistency if you repeatedly run file transfers that require the same transfer settings. File transfer schemes are saved in files with an .EIS extension.

Schemes include the option to set send and receive parameters for each host type. The send and receive options you set for one host type are different from the options for other host types. However, you can select options for all three environments in each file transfer scheme so that you can use the same scheme regardless of environment constraints.

Access the File Transfer Settings dialog box by choosing the Settings button from the Transfer File dialog box, or by choosing Settings from the Edit or Options menu.

You can do one of the following:

- Choose an existing scheme to edit.
- Choose the Save As button and type a new scheme name to create a new scheme. The new scheme will have the settings of the scheme you copied, which you can then change to suit your needs.
- Remove an existing scheme.

To create a file transfer scheme

1. Open a session and from the Tools menu, choose Transfer File.
2. From the Transfer File dialog box, choose Settings to display the File Transfer Settings dialog box.

You can also access this dialog box if you choose Settings from the Options menu.

3. From the General Settings page, (or Local Options page for FTP file transfers) set the appropriate transfer scheme parameters.
4. If necessary, go to the CMS, TSO, or CICS pages to adjust the settings for your host type.
5. Choose the Save As button.

6. Enter the name of the new scheme using the .EIS extension in the Save Scheme dialog box and choose whether to save it in a local or remote destination.
7. Choose OK in the File Transfer Settings dialog box. The new scheme name appears in the Scheme list and can be selected at any time.

To copy a file transfer scheme

1. From the Transfer File dialog box, choose Settings to display the File Transfer Settings dialog box.

You can also access this dialog box if you choose Settings from the Options menu.

2. Select the file transfer scheme you want to copy.
3. Choose the Save As button.
4. Enter the name of the new scheme using the .EIS extension in the Save Scheme dialog box.
5. Choose OK in the File Transfer Settings dialog box. The new scheme name appears in the scroll list and can be selected at any time.

To delete a file transfer scheme

1. From the Transfer File dialog box, choose Settings to display the File Transfer Settings dialog box.

You can also access this dialog box if you choose Settings from the Options menu.

2. Select the file transfer scheme you want to delete.
3. Choose the Delete button.

3270 IND\$FILE File Transfer

This section describes the procedures used to send and receive files on hosts set up for IND\$FILE transfers.

EXTRA! supports the IND\$FILE file transfer program which can be used on CMS, TSO, and CICS systems. Send and receive procedures using the IND\$FILE are different depending on the host system you are using. Because *EXTRA!* can be configured to run using several different host types, you will have to set file transfer options on the Settings page before you send or receive files.

Preparing for IND\$FILE File Transfers

If you want to change the file transfer type while in a session, follow these procedures before you send or receive files.

Notes:

- You must have an active session with a host before attempting to transfer files.
 - You can use the same commands for transferring files individually or in a batch.
 - You can both send and receive files in the same batch.
-

Tip: You can send a file to a host using whichever transfer method you have selected by dragging the file from the Windows Explorer, My Computer, or the NT File Manager, and dropping it on a session that is connected to the host.

To change a file transfer type

1. Open a display session.
2. From the Options menu, choose Session Type.
3. Select the file transfer protocol and click OK..
4. Depending on the host type you are using, type one of the following commands (at your display session command line) to turn off unsolicited messages:

To	Type this command and press Enter
Turn off messages for a CMS session	<code>set msg off</code>
Turn messages back on after you have finished transferring files using CMS	<code>set msg on</code>
Turn off messages for a TSO session	<code>prof nointercom</code>

Sending and Receiving Transfers Using IND\$FILE

This section describes the procedures to use for sending and receiving files on hosts set up for IND\$FILE transfers using settings for CMS, TSO and CICS host environments.

To send a PC file using IND\$FILE

1. Open the Transfer File dialog box by choosing Transfer File from the Tools menu.
2. When the dialog box displays, choose Send.

Note: Send is the default direction of transfer when this dialog box is opened.

3. Under PC, in the Filename box, enter the name of the existing PC file.
Either type the name (and path, if required) directly in the field or choose the Browse button to access the Select PC File dialog box. From this dialog box, make your selection and then choose OK.
4. Under Host, in the Filename box, enter the name of the new mainframe file (or existing mainframe file, if you are appending).
When you send a file and you supply a Host Filename that already exists, the PC file overwrites the mainframe file unless you select the Append to Host File option from the IND\$FILE Settings General page.
5. Select the host type from the list. For most file transfers, the default settings are adequate. However, you can change the settings to control how the PC file you are transferring will be stored on the mainframe
6. (Optional) To edit the settings of the transfer scheme you are using, choose the Settings button. For information on editing file transfer schemes, see “Transfer Schemes” earlier in this chapter.
7. Choose the Transfer button to begin the transfer.
The File Transfer Progress dialog box is displayed during the transfer informing you of the transfer status.

To receive a file using IND\$FILE

1. Open the Transfer File dialog box by choosing Transfer File from the Tools menu.
2. When the dialog box displays, select Receive.
3. Under PC in the Filename box, enter the name of the new file (or existing file, if you are appending)..

Either type the name (and path, if required) directly in the field or choose the Browse button to access the Select PC File dialog box. From this dialog box, make your selection and then choose OK.

When you receive a file and you supply a PC Filename that already exists, the Host file overwrites the PC file unless you select the Append to PC File option in the IND\$FILE Settings General page (see step 6, below).

4. Under Host, in the Filename box, enter the name of the existing mainframe file.
5. Select the Host Type from the list. For most file transfers, the default settings are adequate. However, you can change the settings to control how the PC file you are transferring will be stored on the mainframe.
6. (Optional) To edit the settings of the transfer scheme you are using, choose the Settings button. For information on editing file transfer schemes, see "Transfer Schemes" earlier in this chapter.
7. Choose the Transfer button to begin the transfer operation.

The File Transfer Progress dialog box is displayed during the transfer informing you of its status.

File Transfer Settings - IND\$FILE

You use the File Transfer Settings pages to create, edit, or delete a file transfer scheme. Each scheme can include specific information for each file transfer type - CMS, TSO, and CICS and when you send and receive files, you can use the same transfer scheme regardless of the file transfer type. Choose from the following tabbed pages:

General: Sets the basic parameters for a file transfer scheme. The parameters include the file format, host options if a file exists when a PC file is sent to the host, PC options if a file exists when a file is received from the host, structured field size and transfer path information.

CMS: Sets options for a file transfer scheme specific to CMS file transfer. The options include record format, record length, and CMS send and receive parameters.

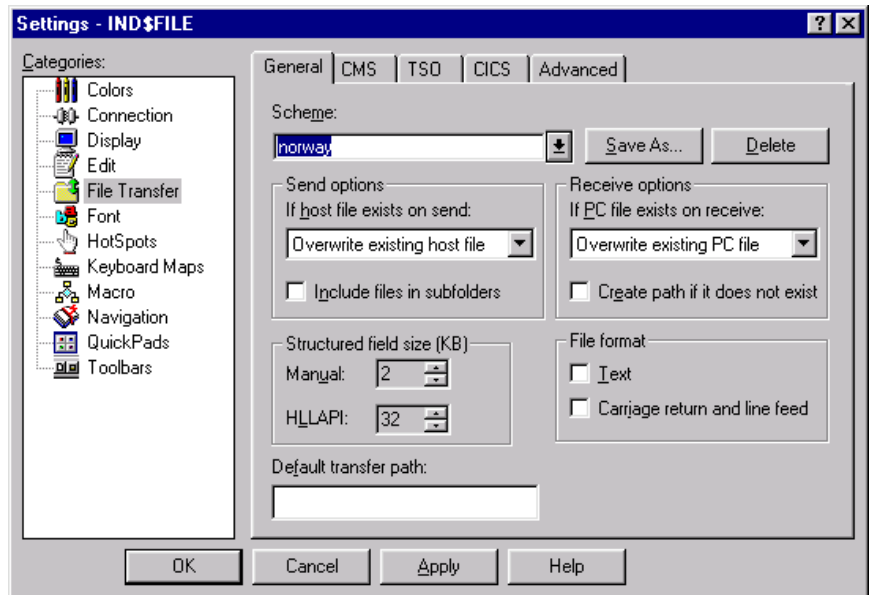
TSO: Sets options for a file transfer scheme specific to TSO file transfer. The options include record format, record length, space allocation, and TSO send and receive parameters.

CICS: Sets options for a file transfer scheme specific to CICS file transfer. The options include host file, CICS comments, and CICS send and receive parameters.

Advanced: Sets the advanced parameters for a file transfer scheme. The parameters include host program options such as transfer program name, timeout, and lead key.

The Settings - IND\$FILE General Page

Use the options in the Settings - IND\$FILE General page to define the parameters for a file transfer scheme.



The Settings - IND\$FILE General page

Scheme: Choose an existing transfer scheme or create a new transfer scheme.

Save As: Saves your transfer scheme under the filename and location you provide..

Delete: Choose to delete the selected file transfer scheme.

Send Options

If Host File Exists On Send: Contains the options to overwrite or append if the file already exists on the host.

Note: Host file options are not available for CICS file transfer.

Include Files In Subfolders: Select to send all files (or file types, if you are using a wildcard) in the subdirectories of the directory selected in PC, under Filename, on the Transfer File dialog box.

Receive Options

If PC File Exists On Receive: Select to save the file with a unique name, rename the existing PC file, abort the transfer, overwrite the existing PC file, append the existing PC file, or prompt for action.

Create Path if it Does Not Exist: Choose to have the path (for the received file) automatically assigned if it does not already exist.

Structured Field Size (KB): With structured fields, files are transferred in blocks of data which can be between 2 K and 32 K in size. In addition, structured field transfer compresses the file during the transfer. The larger block size and file compression reduce the amount of time required to transfer a file. The larger the block size, the greater the increase in speed.

Manual: Specifies the field size when performing a manual transfer. The field size can be between 2KB and 32KB.

HLLAPI: Specifies the field size when performing a HLLAPI transfer.

File Format

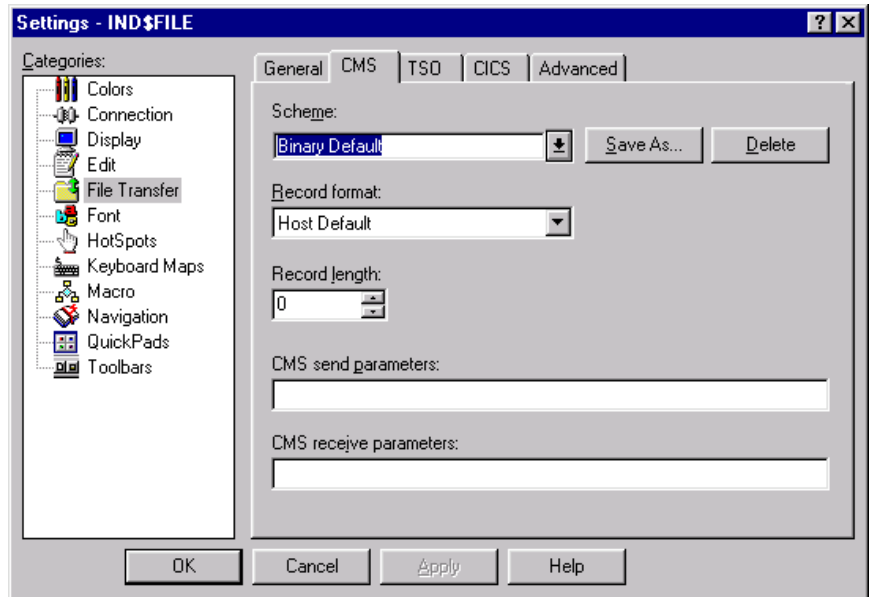
Text: Specifies that files are transferred with default settings for all host types. Files sent to the host are converted from ASCII (the character code set used by the PC) to EBCDIC (the code set used by the host). Files received from the host are converted from EBCDIC to ASCII.

Carriage Return and Line Feed: When you are receiving a file, this option inserts end-of-line characters during the file transfer. When you are sending a file to the mainframe, this option leaves (that is, it does not remove) those characters during the file transfer. Generally, you should use this option because the host file separates information with end-of-line characters, whereas the PC uses carriage return and line feed.

Default Transfer Path: If the file does not already exist on the PC, displays the path specified in the Transfer File dialog box.

The Settings - IND\$FILE CMS Page

CMS is an interactive mainframe application that resides under the VM (Virtual Machine) operating system. This system works with IBM's CMS IND\$FILE program to transfer files. The send and receive options using CMS are different from the options for the other host environments, such as TSO and CICS. However, you can select options for all three environments in each scheme so that you can use the same scheme regardless of environment constraints.



The Settings - IND\$FILE CMS page

Scheme: Choose an existing transfer scheme or create a new transfer scheme.

Save As: Saves your transfer scheme under the filename and location you provide.

Delete: Choose to delete the selected file transfer scheme.

Record Format: Specifies the record format of the mainframe file. You can choose from Host Default, Fixed, or Variable. The default is Host Default.

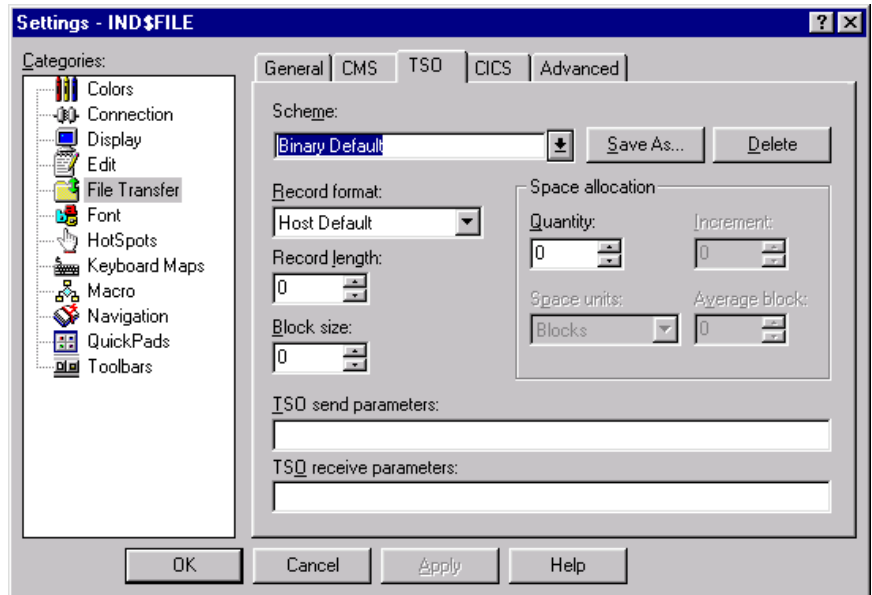
Record Length: Specifies the logical record length for the file, where the value is the number of characters in each record. The acceptable range of values is based on the selected record format. The default record length is 0 bytes. If the record format is variable or fixed, enter a value of 5 to 32767 (inclusive). If you are appending to an existing file, the record length is ignored. For most file transfers, you won't need to change this option.

CMS Send Parameters: Specifies any additional file transfer parameters needed to send a PC file.

CMS Receive Parameters: Specifies any additional file transfer parameters needed to receive a PC file.

The Settings - IND\$FILE TSO Page

TSO is an interactive mainframe application that resides under the MVS (Multiple Virtual Storage) operating system. This system works with IBM's TSO IND\$FILE program to transfer files. The TSO send and receive options are different from the options for the other host environments, such as CMS and CICS. However, you can select options for all three environments in each scheme so that you can use the same scheme regardless of environment constraints.



The Settings - IND\$FILE TSO page

Scheme: Choose an existing transfer scheme or create a new transfer scheme.

Save As: Saves your transfer scheme under the filename and location you provide.

Delete: Choose to delete the selected file transfer scheme.

Record Format: Specifies the record format of the mainframe file. You can choose from Host Default, Fixed, Variable, or Undefined. The default is Host Default.

Record Length: Specifies the logical record length for the file, where the value is the number of characters in each record. The acceptable range of values is based on the selected record format. The default record length is 255 bytes. If the record format is variable or fixed, enter a value of 5 to 32767 (inclusive). If you are appending to an existing file, the record length is ignored. For most file transfers, you won't need to change this option.

Block Size: Specifies the appropriate size of the TSO data set, where the value is the number of bytes per block.

Space Allocation

Quantity: Specifies the amount of space to be allocated on the host for a new data set.

Increment: Specifies an additional increment of space units on the host for a new data set. If the amount of space defined in the Quantity field is insufficient, use this option to specify an additional amount of space on the host.

Space Units: Specifies whether space on the mainframe is assigned in blocks, tracks, or cylinders. If you select blocks, you must also enter an Average Block Size.

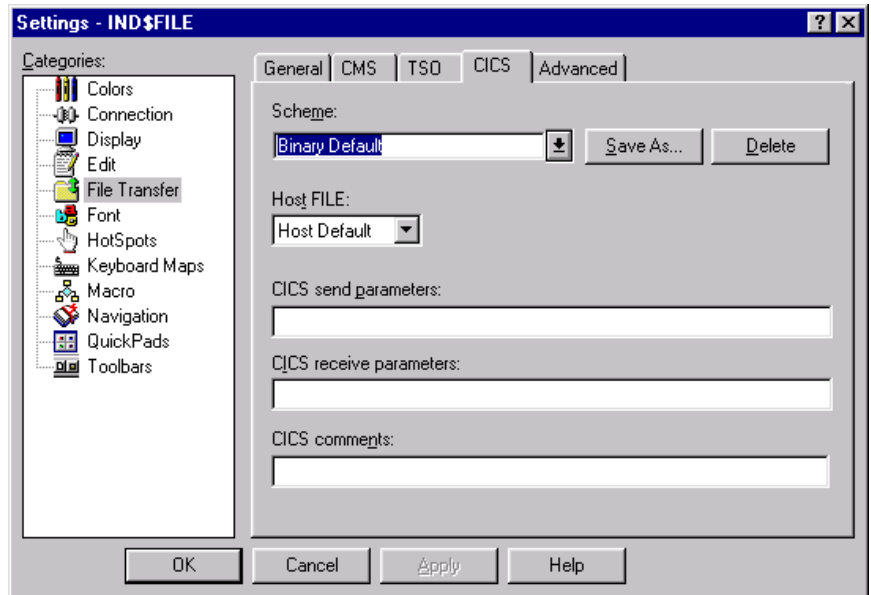
Average Block: If the type of space unit specified was blocks, enter the average block size.

TSO Send Parameters: Any additional parameters needed to send a PC file.

TSO Receive Parameters: Any additional parameters needed to receive a PC file.

The Settings - IND\$FILE CICS Page

EXTRA! supports two different types of CICS transfers: IND\$FILE, and DISOSS (Distributed Office Support System). All three types of file transfer are known as host-based transfer because they are controlled by programs running on the host. The IND\$FILE file transfer program is run from an interactive mainframe application that works with IBM's CICS IND\$FILE program to transfer files. DISOSS is run using PS/CICS or OfficeVision/MVS, programs available on many CICS systems, and works in conjunction with the PC program TRANSFER. See "3270 DISOSS File Transfer" if you are interested in using DISOSS file transfers. For CICS IND\$FILE file transfer, the send and receive options are different from the options for the other host environments, such as CMS and TSO. However, you can select options for all three environments in each scheme so that you can use the same scheme regardless of environment constraints.



The Settings - IND\$FILE CICS page

Scheme: Choose an existing transfer scheme or create a new transfer scheme.

Save As: Saves your transfer scheme under the filename and location you provide.

Delete: Choose to delete the selected file transfer scheme

Host File: This option allows you to specify where the mainframe stores a file before the file is sent or after it is received. The default is the host default. Options include:

- HTF Indicates the file is to be stored in the Host Transfer File.
- TS Indicates the file is to be stored in a CICS temporary storage queue.
- LST Indicates the file is to be stored in the VSE (Virtual Storage Extended) power list queue.
- RDR Indicates the file is to be stored in the VSE power reader queue.
- PUN Indicates the file is to be stored in the VSE power punch queue.

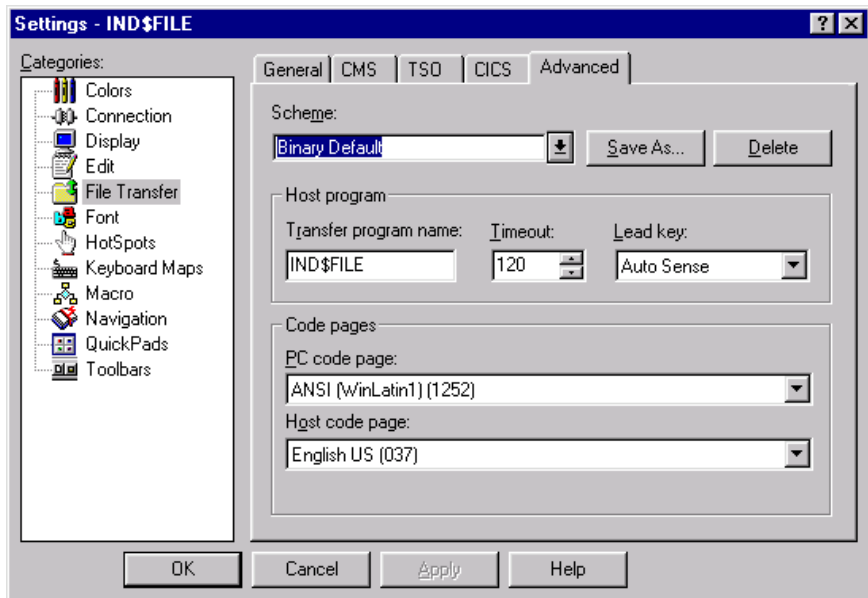
CICS Send Parameters: Specify any additional IND\$FILE parameters needed to send a PC file.

CICS Receive Parameters: Specify any additional IND\$FILE parameters needed to receive a PC file.

CICS Comments: (Optional) Add comments to a file. Use any combination of letters and numbers, but do not use parentheses.

The Settings - IND\$FILE Advanced Page

Use the Advanced page to define the advanced parameters for a file transfer scheme. All three host types share common advanced IND\$FILE settings.



The Settings - IND\$FILE Advanced page

Scheme: Choose an existing transfer scheme or create a new transfer scheme.

Save As: Saves your transfer scheme under the filename and location you provide.

Delete: Choose to delete the selected file transfer scheme.

Host Program:

Transfer Program Name: Specifies an IND\$FILE compatible host transfer program name.

Timeout: Specifies the number of seconds the file transfer program waits for the host transfer program to respond to a command before file transfer is terminated. The default is 60 seconds. You can enter any number between 1 and 999 seconds.

Lead Key: Allows you to specify certain actions before transferring files. Your choices are None, Clear, Erase input, Erase to end of field, and Auto Sense.

Code Pages

PC Code Page: Specifies the PC code page. Check with your system administrator if you don't know which code page is appropriate.

Host Code Page: Specifies the character display code page used by the host. The default setting corresponds with your Windows default setting. IND\$FILE file transfer can be executed in another language without making any modifications to your PC environment. Check with your system administrator if you don't know which code page is appropriate.

Troubleshooting IND\$FILE Transfers

- Be at the "Ready" prompt before initiating a file transfer.
- Do not turn the power off in a terminal session that is performing a transfer.
- Do not change to a new screen layout while you are transferring a file.
- Do not close a session during file transfer.

Problems with Files that have been Transferred

A successfully transferred file may be unusable at the destination if the original file is not readable on the system it has been transferred to, or if the parameters controlling the transfer were inappropriate.

If a File Sent to the Mainframe is Unreadable

Make sure that the file you sent from your PC was saved as a text-only file and that you selected the correct options in the Transfer Send dialog box.

If You Cannot Open a File Received on Your PC

Verify that the Host Filename and PC Filename you specified prior to the file transfer are correct. Also make sure that the file you sent from the mainframe was a text format file.

If a Received File has Only One “Paragraph”

Make sure that the Remove Line Ends parameter in the transfer scheme used for the transfer is set correctly.

A File Sent and then Received has a Different Number of Bytes

In some circumstances the mainframe strips spaces from, or adds them to, the end of each record. Except for these spaces, the information in the file should be unaffected.

Problems with the IND\$FILE Program

In some installations, the name of your mainframe Send/Receive program may be different from the name *EXTRA!* expects. If the Send/Receive program has been installed on your mainframe under a name other than IND\$FILE, you will need to go to the Transfer Options dialog box and specify the new program name in the Transfer Program field.

3270 DISOSS File Transfer

This section describes how to send and receive files for host-initiated file transfers using PS/CICS DISOSS (Distributed Office Support System). DISOSS works in conjunction with an IBM PC program called TRANSFER. DISOSS transfers are performed using PC/CICS menu commands.

Before you can transfer files using DISOSS, your mainframe must meet the following requirements:

- PS/CICS must be available on the mainframe with appropriate VTAM settings.
- CICS must be active on the DISOSS network.
- Must have a DFT connection and be able to receive EDS (Extended Data Stream) from the mainframe.
- The TRANSFER program must be running in the PC display session.

The following information on configuring CICS and VTAM is optional:

- Uppercase translation should be off to support both uppercase and lowercase characters. If uppercase translation is on, all lowercase characters are translated to uppercase.
- Dual-case keyboard should be supported. If uppercase translation is off, both cases need to be supported.
- Program symbols must be supported.
- Query must be set to ALL.
- A logmode table entry must be defined for EDS (Extended Data Stream).

To send a file using DISOSS

1. Open a mainframe session and log on to your PS/CICS system.
2. From the PS/CICS main menu, choose option 4, Create a Document.
3. From the Create a Document menu, choose option 3, Import a Document from the Workstation.

The next screen lets you provide information that PS/CICS will use to identify the imported file.

4. In the first field, type the path and filename of the PC file you want to send to the mainframe.
5. Click the Tab button to move to the next field, Document Name. Enter the name you want the file to have on the mainframe.
6. Click the Tab button to move to the other fields and enter information as appropriate. When finished, press enter to start the transfer operation.
7. Return to your PC session. The transfer begins when you are in your PC session and continues only while you remain in the PC session. The File Transfer Progress dialog box displays the status of the transfer.
8. When the transfer is completed, your CICS session displays the message shown below.

```
File Transfer Completed
```

To receive a file using DISOSS

Before you can send a file using DISOSS, you need to open a mainframe session and log on to your PS/CICS system.

1. From the PS/CICS main menu, choose option 5, Work with File Cabinet Items.
2. In the Select items by field, select 1 or 2 to get a list of files listed by Date filed or Date due.
3. Select the file you want to export by typing an x in the CMD field and press enter.
4. Choose option 22 to bring up the export menu.
5. Move to Copy to workstation. In the File Identifier field, type the path and name you want the file to be given on your PC. You can also specify whether to replace an existing PC file. Press enter to start the transfer operation.
6. Return to your PC session. The transfer begins when you are in your PC session and continues only while you remain in the PC session. The File Transfer Progress dialog box displays the status of the transfer.
7. When the transfer is completed, your CICS session displays the message shown below.

```
File Transfer Completed
```

FTP File Transfer

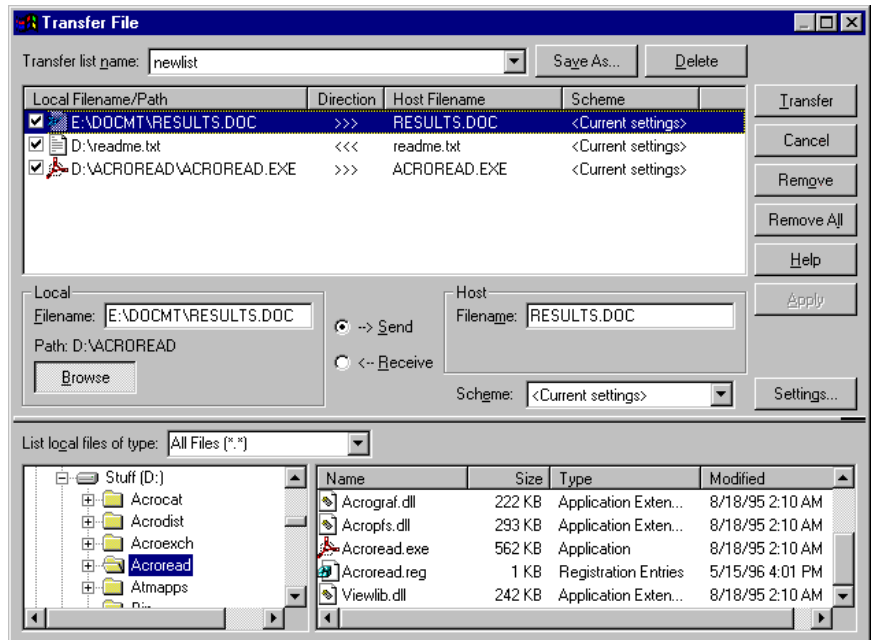
FTP is the Internet standard File Transfer Protocol. It is generally the fastest method for transferring files. It always makes its own connection, outside of any active display session. With FTP, you can both send and receive files in a single batch.

The Transfer File Dialog Box

The Transfer File dialog box is displayed when you choose Transfer File from the Tools menu. Use the options in this box to create a list of files and transfer them as a batch to or from the host.

You can edit the transfer options for individual files and you can save a list of files to display and transfer again.

Tip: You can drag and drop files from the Windows Explorer, My Computer, or the NT File Manager to add them to the Transfer List in this dialog box. If you are using Windows 95 or Windows 98, you can also copy and paste files to the transfer list.



Transfer File dialog box

Transfer List Name: Select a name from the list to display a previously saved list of files. Your most recently used transfer list is available, even if you did not specifically save it.

Save As: Saves the displayed transfer list under a different name so that you can reuse it at a later time.

Delete: Removes the transfer list displayed in the Transfer List Name box.

Transfer List: Displays a list of files that can be selected for transfer. Click the check box to the left of a file to select which transfers to actually perform. Click a label at the top of the list to sort the list by that attribute.

Local: Specifies the PC files to transfer.

Filename: Type a file name to add to the transfer list.

Path: Displays the current path to the file on your PC.

Browse: Choose to search for a specific PC file.

Send: Sends the specified file to the host when a file transfer is started.

Receive: Receives the specified file from the host when a file transfer is started.

Host: Specifies the host files to transfer.

Filename: Type a file name to add to the transfer list.

If the files are to be transferred to a PDS (partitioned data set) on the host, type the name of the PDS followed by an asterisk. For example, type MyPDS* to transfer files to the PDS, MyPDS.

When the files are transferred to the host, they become members of the named PDS and lose the file name extensions they had as local files. For example, when the local file newfile.txt is transferred to the host and becomes a member of MyPDS, its file name becomes MyPDS(newfile).

Transfer: Initiates the file transfer.

Cancel: Closes this dialog box without transferring files.

Remove: Removes the selected file from the transfer list.

Remove All: Removes all files displayed in the transfer list.

Help: Displays more general Help for this dialog box.

Add To List/Apply: Adds your selection to the transfer list or applies changes you made to an item in the transfer list.

Settings: Displays the Settings pages for your file transfer method where transfer options for the file selected in the transfer list can be edited.

Scheme: Specifies the scheme that will be used for the transfer. If you do not select a scheme, "Current settings" displays.

Splitter bar: Adjusts the sizes of the two window areas when the PC Browser is displayed. This does not change the window size.

List Local Files Of Type: Filters the displayed list of PC files by type.

Folder List: Displays a list of folders located on your PC.

To transfer a file or batch of files

1. From the Tools menu, choose Transfer File.
2. To add files to your transfer list, use the Local and Host Filename options to choose the files you want to transfer, then choose Add To List.

-or-

Under Local, choose the Browse button. From the list that appears, double-click the file you want to add.

-or-

From Windows Explorer, find the file you want to transfer and drag it onto the transfer list.

-or-

Select an existing transfer list from the Transfer List Name list.

You can both send and receive files in a single batch.

3. Choose Transfer. When the transfer completes, a summary window displays the results of the transfer.

Note: If you use Windows 95 or Windows 98, you can also copy and paste files to the transfer list.

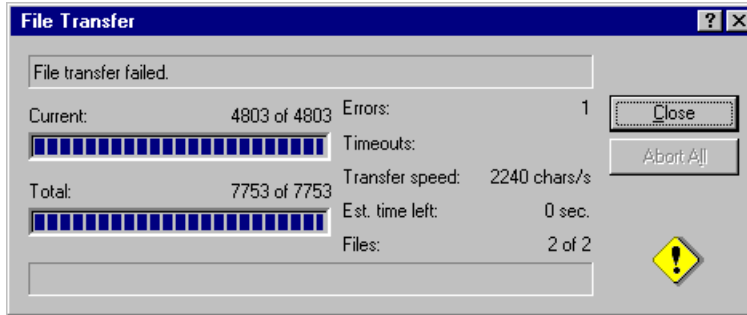
To edit the transfer list

- Make changes as follows:

To	Do this
Change the transfer direction for a particular file	Select the file, then select either Send or Receive and choose Apply.
Remove an individual file from the transfer list	Select the file and choose Remove, or press the Delete key on your keyboard.
Exclude a particular file from the current transfer batch without removing it from the transfer list	Clear the check mark next to the file name in the transfer list.
Save your transfer list	Choose Save As.

The File Transfer Dialog Box

The File Transfer dialog box displays the transfer progress for the current transfer. You can stop the transfer of an individual file or the entire batch by choosing either the Abort File or the Abort All button.



File Transfer dialog box

Current: Displays the transfer progress (number of bytes sent or received) for the file currently being transferred.

Total: Displays the transfer progress (number of bytes sent or received) for the entire transfer batch.

Errors: Displays the number of transmission errors that have occurred during the transfer session.

Timeouts: Displays the number of timeouts that have occurred during the transfer session.

Transfer Speed: Displays the file transfer progress measured in characters per second.

Est. time left: Displays the estimated time until the transfer is completed.

Files: Displays the number of successfully transferred files out of the total number of files to transfer.

Abort File: Aborts the transfer of the current file. When a transfer fails, this button changes to Close.

Abort All: Aborts the transfer of the entire transfer batch.

Transfer Schemes

You can select a group of file transfer options and save them as a scheme. Then, you need only select the scheme to apply the group of options to a particular file transfer. When you save a scheme, options on the File Handling, Folders, and File Types pages are saved. Options on the General and Proxies pages are not saved.

Schemes are saved with the file name extension .EDT in the SCHEMES subfolder of the *EXTRA!* program folder.

To save file transfer options as a scheme

1. From the Options menu, choose Settings.
2. Under Categories, choose File Transfer.
3. In the File Handling, Folders, and File Types pages, set transfer options to suit your requirements.
4. In the File Handling page, choose Save As and provide a file name and location for your scheme.

Tip: If you use the navigation feature to record host pages and attach a scheme of transfer options to a particular host application screen, the scheme that you attach is used whenever you view that screen, even when you do not use navigation to display it. You can use this feature to force an individual host screen to use a specific set of transfer options.

To apply a scheme of transfer options to a file transfer batch

1. From the Tools menu, choose Transfer File.
2. In the Transfer File dialog box under Scheme, select an existing file transfer scheme.
3. If you want to edit the transfer options or create a new scheme, choose Settings.

File Transfer Settings - FTP

You use the File Transfer Settings pages to select options for transferring files during your session. You can also create, edit, or delete a file transfer scheme. When you save a scheme, options on the File Handling, Folders, and File Types pages are saved. Options on the General and Proxies pages are not saved. Choose from the following tabbed pages:

General: Set options for connecting to your host.

Proxies: Configure your FTP or SOCKS version 4.0 proxy server options.

File Handling: Save or delete your file transfer scheme. Set options for processing an incoming file when a file of the same name already exists on the PC. Set the end-of-line character for files sent to the host.

Folders: Set options for determining the destination location of files on the PC and the host.

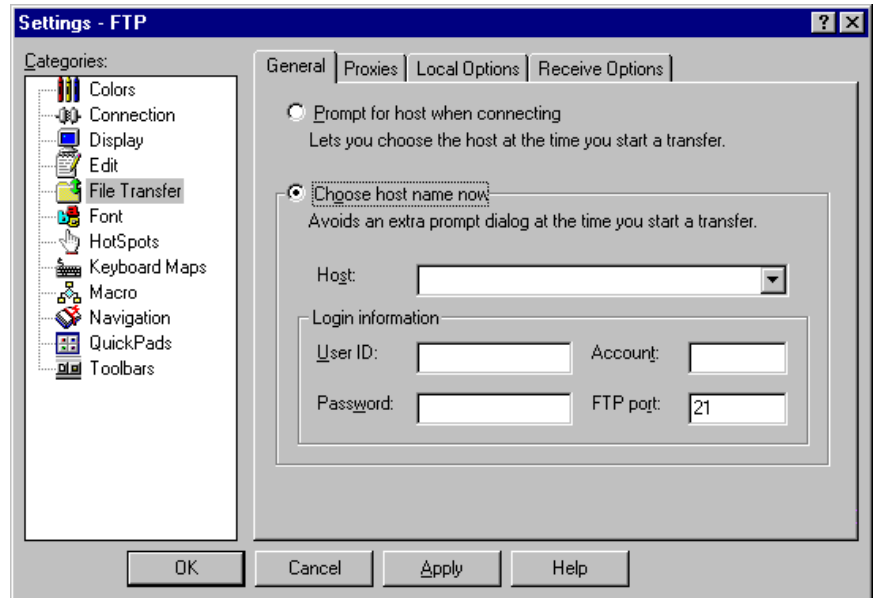
File Types: Set options for determining the file type during file transfer.

The Settings - FTP General Page

Use the options in the FTP General page to set your default FTP login options.

If you have already selected FTP as your File Transfer Protocol, you can access the File Transfer FTP General page by choosing Settings from the Options menu. Otherwise, choose Session Type from the Options menu and change your File Transfer Protocol, then choose Settings.

If you select Choose Host Name Now, and include your login information, the information you type is saved when you save your session, and used when you make an FTP connection using the same session profile.



The Settings - FTP General page

Prompt For Host When Connecting: Choose the host when you initiate a connection. When you select this option, all other options on this page are unavailable.

Choose Host Name Now: Choose the host now and avoid having to choose the host when you initiate a connection. When you select this option, you should also enter or select a Host Name.

Host: Type the name or IP address of the host to which you want to connect, or select a Host name from the list. The list displays up to four of your most recently used Host names, and the Host names in the Windows Sockets Hosts File if it exists. The Host name you type does not have to be one of those displayed in the list.

Login Information

User ID: Type your user name here.

Password: Type your password here. This password is encrypted when it is saved as part of your session configuration.

Account: If the host requires your account name before you can log on, type your account name here.

FTP Port: Specifies the number of your host's FTP port and provides a space for you to change it. The usual FTP port is 21.

To set up FTP file transfers

1. From the Options menu, choose Session Type.
2. Under File Transfer Protocol, select FTP.
3. Choose Settings to display the Settings dialog box, and under Categories, select File Transfer.
4. In the FTP General page, select either Prompt For Host When Connecting or Choose Host Name Now.
5. If you select Choose Host Name Now, also type a host name or IP address in the Host text box, or select a Host name from the list. Type your User ID and Password, if required.

Note: If you use an FTP proxy, Host name lookup for the remote host is performed by the proxy. The proxy might use a different Domain Name Server than you would use locally. In order to be sure that Host names are resolved correctly, do not use abbreviated names for hosts outside your local area network.

6. If you use an FTP or SOCKS proxy server, in the FTP Proxies page, configure the options that suit your requirements.
7. In the File Handling, Folders, and File Types pages, select the options that suit your requirements.

The information you select is saved when you save your session, and used whenever you make an FTP connection using the same session profile.

Note: If you select Prompt For Host When Connecting, all other options in the General page become unavailable. You are prompted to select a host and provide your login information when you attempt to make a connection.

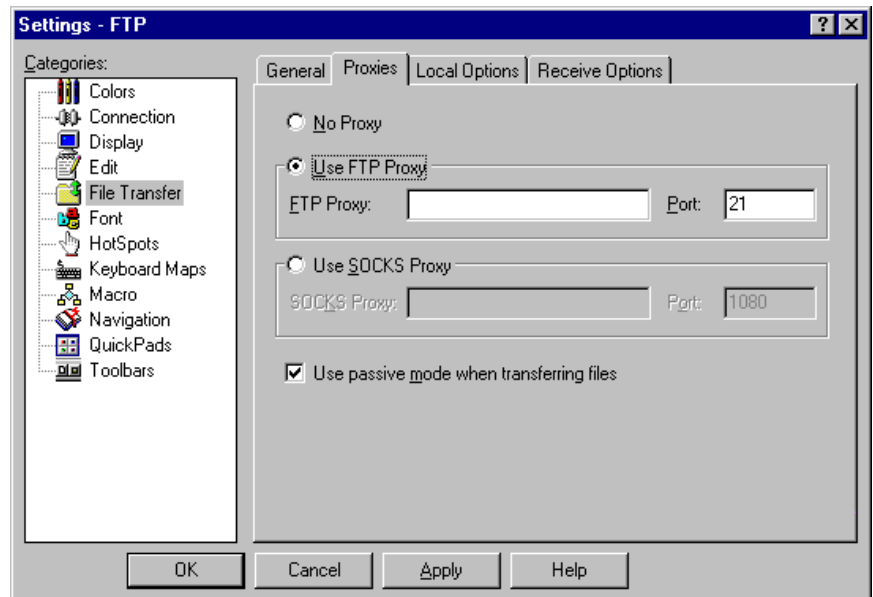
The Settings - FTP Proxies Page

A proxy is a server that works in conjunction with a firewall (often as part of the same system) to provide network security. A proxy acts as an intermediary to limit access between clients in an internal network and servers outside the network.

EXTRA! supports FTP and SOCKS version 4.0 proxies.

Use the options in the FTP Proxies page to configure your FTP or SOCKS version 4.0 proxy server options.

Note: If you have already selected FTP as your File Transfer Protocol, you can access the File Transfer FTP Proxies page by choosing Settings from the Options menu. Otherwise, choose Session Type from the Options menu and change your File Transfer Protocol, then choose Settings.



The Settings - FTP Proxies page

No Proxy: Select this option if you have a direct connection to the Internet. That is, you do not connect through a proxy.

Use FTP Proxy: Select this option if you use an FTP proxy. If you select this option, also select Use Passive Mode When Transferring Files.

FTP Proxy: Type the Host name or IP address of your FTP proxy server.

Port: Type the port number for your FTP proxy server.

Use SOCKS Proxy: Select this option if you use a SOCKS proxy. A SOCKS proxy can be used for FTP sessions.

SOCKS Proxy: Type the Host name or IP address of your SOCKS proxy server.

Port: Type the port number for your SOCKS proxy server.

Use Passive Mode When Transferring Files: Establish the FTP connection by the client (your PC), rather than by the server. Select this option if you use an FTP proxy. This works for most servers and is sometimes necessary if the client is behind a firewall. If your FTP connection fails with this option selected, try reconnecting with this option cleared. The default is cleared.

To configure EXTRA! to use an FTP proxy server

1. From the Options menu, choose Session Type.
2. Under File Transfer Protocol, select FTP.
3. Choose Settings to display the Settings dialog box, and under Categories, select File Transfer.
4. In the FTP Proxies page, select either Use FTP Proxy or Use SOCKS Proxy. If you use an FTP proxy, under FTP Proxy, type the Host name or IP address of your FTP proxy server. Under FTP Port, type the port number of your FTP proxy server. Also select the FTP Passive Mode Transfers option.

-or-

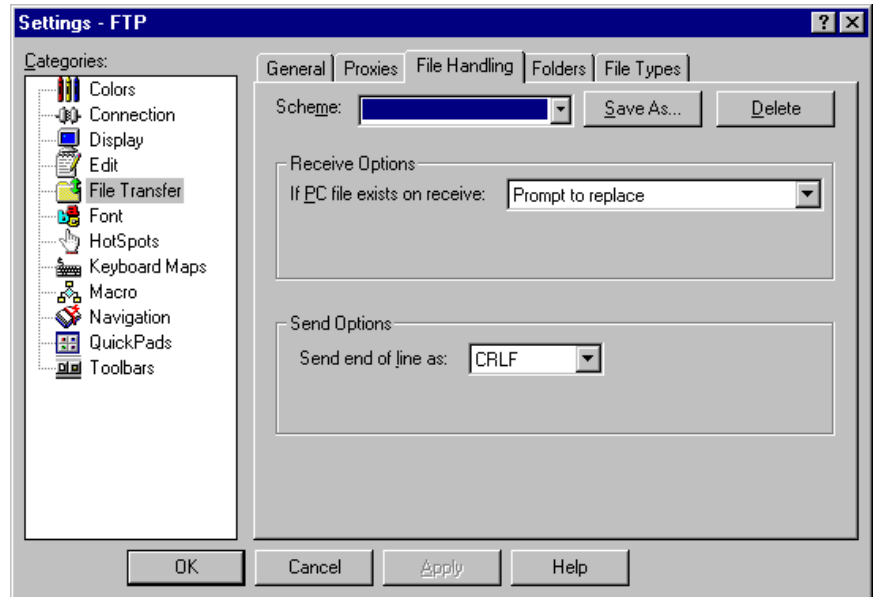
If you use a SOCKS proxy, under SOCKS Proxy, type the Host name or IP address of your SOCKS proxy server. Under SOCKS Port, type the port number of your SOCKS proxy server. *EXTRA!* supports SOCKS version 4.0 proxies using an FTP connection.

The Settings - File Handling, Folders, and File Types Pages

Use the options in the File Handling, Folders, and File Types pages to select transfer options for FTP file transfers.

The options you select here are saved when you save your session, and used as defaults whenever you use the same session profile. In addition, you can save these options as a scheme in a file that can be reused whenever you need to transfer files using the same settings.

To access the Settings - File Transfer pages, from the Options menu choose Settings. Under Categories, select File Transfer.



The Settings - FTP File Handling page

Scheme: Choose an existing transfer scheme or create a new transfer scheme.

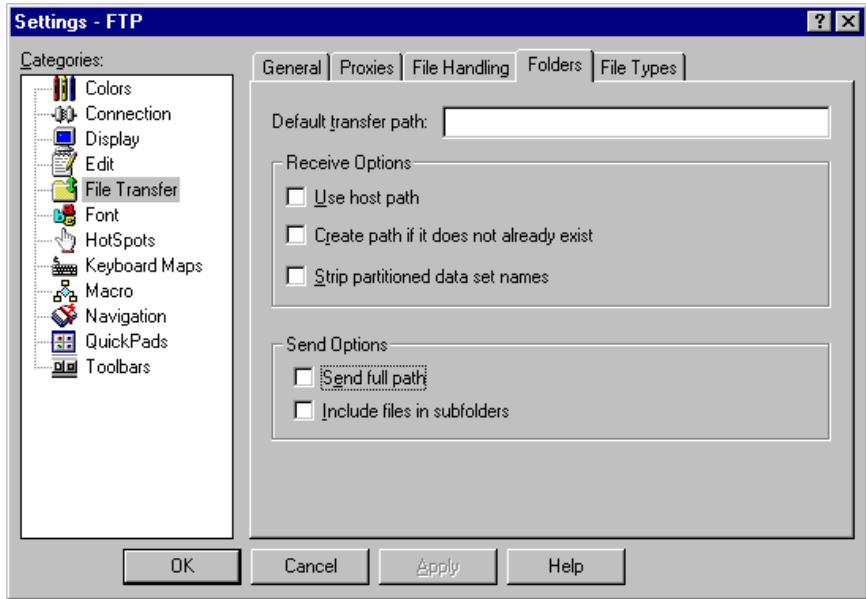
Save As: Saves your transfer scheme under the file name and location you provide.

Delete: Deletes the displayed scheme of transfer options.

If PC File Exists on Receive: Select how to process an incoming file that has the same name as another file in the target folder. The Rename value renames the incoming file by adding numbers or incrementing numbers in the file name. The extension is not changed. The default is Prompt To Replace.

Send End Of Line As: Select the end of line character that your host uses when transferring text files. The default is CRLF (carriage return-linefeed).

The Settings - Folders Page



The Settings - FTP Folders page

Default Transfer Path: If the file does not already exist on the PC, displays the path specified in the Transfer File dialog box.

Use Host Path: Select this option to store the file based on the path supplied by the host, which is appended to the local receive path.

Create Path If It Does Not Already Exist: Choose to have the path (for the received file) automatically assigned if it does not already exist.

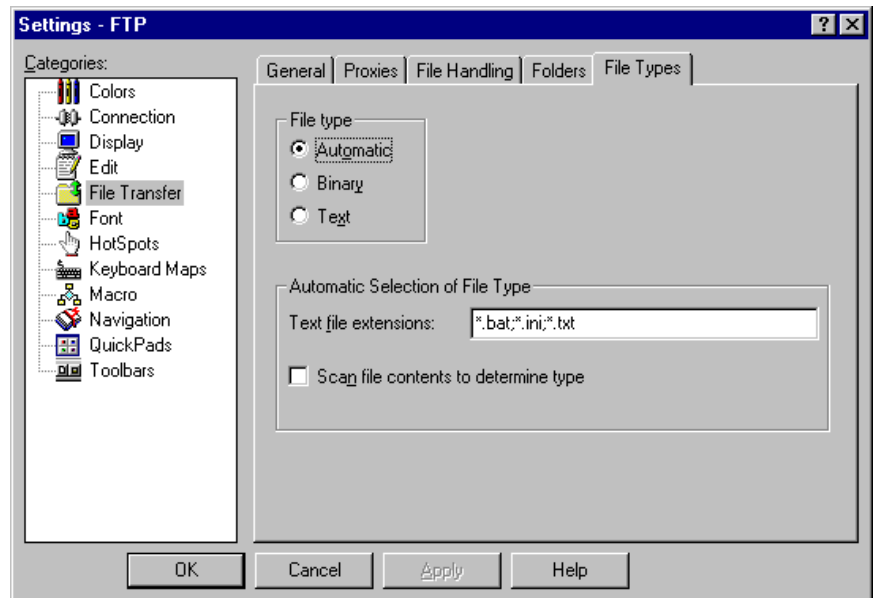
Strip Partitioned Data Set Names: When this option is selected, files downloaded from a PDS (partitioned data set) on the host are given local file names that do not include the PDS in the path. For example, when transferred to the folder C:\DATA, a file named MyPDS(NEWFILE) on the host becomes C:\DATA\NEWFILE on the PC.

If this option is cleared and the Create Path option is selected, the PDS is added to the local path when a file is received from the host. If the Create Path option is not selected, the PDS is used only if there is already a folder of that name in the specified path.

Send Full Path: Select this option to send the file's complete path information, excluding the drive letter and colon. See also the Include Files In Subfolders option.

Include Files In Subfolders: Select this option to send all files (or file types, if you use a wildcard) in the subfolders of the folder selected in the Transfer File dialog box under Local Filename.

The Settings - File Types Page



The Settings - FTP File Types page

Automatic: Select this option to enable automatic file type processing based on the file name extension and file scanning options.

Binary: Select this option to send files in binary mode. Typically, binary files are object code or executable files.

Text: Select this option to send files in text mode. When receiving files, single LF characters are converted to CRLF. When sending files, you can select the end of line character. See Send End Of Line As under Send Options in the File Handling page.

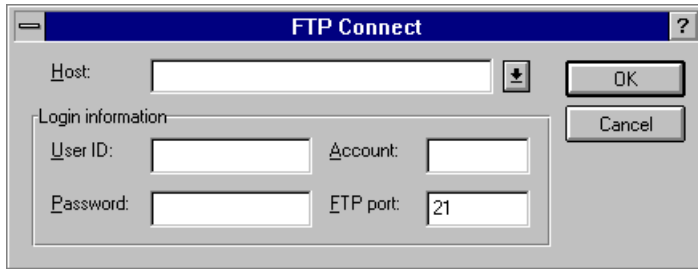
Text File Extensions: Specify the file extensions you want to identify as text files. This option is available only if File Type Automatic is selected.

Scan File Contents To Determine Type: Select this option to read a portion of the file to determine if it contains any 8-bit or control codes. If it does, use binary for the file type. This option is available only if File Type Automatic is selected.

The FTP Connect Dialog Box

The FTP Connect dialog box is displayed when you attempt to make an FTP connection, if you selected Prompt For Host When Connecting in the FTP General page.

Information you supply in the FTP Connect dialog box is used only for the current connection.



The FTP Connect dialog box

Host: Type the name or IP address of the host to which you want to connect, or select a Host name from the list. The list displays up to four of your most recently used Host names, a double line separator, and the Host names in the Windows Sockets Hosts File if it exists. The Host name you type does not have to be one of those displayed in the list.

Login Information

User ID: Provides a space for you to type your user name.

Password: Provides a space for you to type your password. This password is encrypted when it is saved as part of your session configuration.

Account: If the host requires your account name before you can log on, type your account name here.

FTP Port: Specifies the number of your host's FTP port and provides a space for you to change it. The usual FTP port is 21.

CHAPTER

*Using
HotSpots*



EXTRA! HotSpots let you associate host functions, macros, or commands with a specific area or text that appears in the terminal area of a display session. Afterwards, you can use your left mouse button to select that area or text to carry out the function, macro, or command. The area you specify is known as a HotSpot. You can create and use HotSpots individually within a session, or as a group or scheme and then associate that scheme with any session or host screen.

Using HotSpots, you can create shortcuts that will decrease the time it takes to finish your tasks. Here is how you can accomplish this. A region HotSpot is a HotSpot that is associated with an area on the display screen and has an action assigned to it. Let's say you use Notepad a lot during your day. If you assign the action of opening Notepad to a region HotSpot, whenever you double-click the region using the left mouse button, Notepad opens. This replaces all the steps you would have to go through to open Notepad the conventional way.

Text HotSpots and Region HotSpots

Text HotSpots are specific words or characters that have an action assigned to them. Each time that word or character occurs on your display screen, you can double-click it to perform an action.

Region HotSpots are areas on the display screen that you define. They also have an action assigned to them and that action will execute when you double-click anywhere in the region.

Using a HotSpot

HotSpots can be enabled or disabled. They can also be visible or invisible, but as long as they are enabled, visible or not, you can use them to execute an action.

Note: If you define a region HotSpot that is out of the display area, it gets clipped off or doesn't show at all if the boundaries are completely outside the display area.

HotSpot Hierarchy

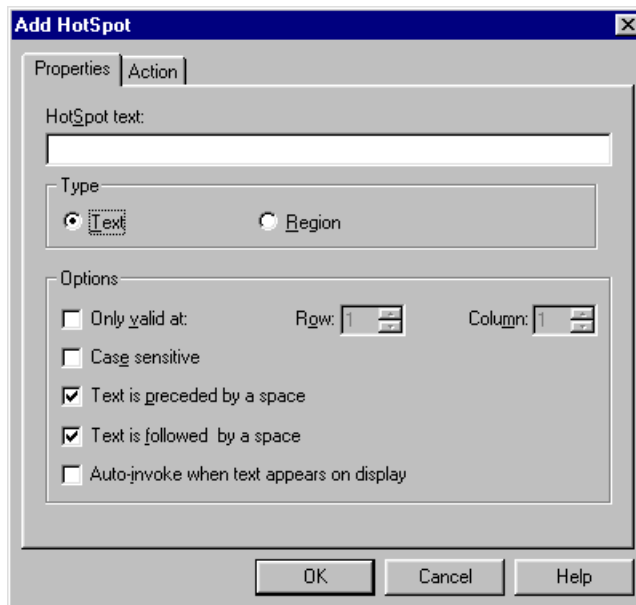
HotSpots can overlap, which means that there are some rules about which HotSpot takes precedence over another. Text HotSpots take precedence over region HotSpots. For example, if you have a text HotSpot sitting in the middle of a region HotSpot, when you double-click it, the action assigned to the text HotSpot executes. As for region HotSpots that overlap one another, the first region HotSpot you create takes precedence over the next one created and so on.

Adding and Editing HotSpots

You use the HotSpot Properties page, to add or edit HotSpots. The appearance of the Properties page changes depending on which type of HotSpot you are working with. For more information about the Properties page as it pertains to text and region HotSpots, see “The Add/Edit Properties Page - Text” and “The Add/Edit Properties Page - Region” later in this chapter.

The Add/Edit HotSpot Properties Page - Text

You use the Text version of the HotSpot Properties page to add or edit a text HotSpot and define its properties.



Add/Edit HotSpot Properties Page - Text

HotSpot Text: Type the character(s) or word(s) that you want to use as a HotSpot.

If you selected characters or words on the session window before accessing this dialog box, your selection appears in this text box automatically.

If Only Valid At is cleared, the text for the HotSpot must be unique within the session or scheme.

Type: Select the type of HotSpot to create: a text HotSpot or a region HotSpot.

The available options changes, depending on your choice of HotSpot type.

Text: Creates a text-type HotSpot.

Region Option Button: Creates a region-type HotSpot.

Options (text): Select options you want to apply to your text HotSpot.

Only Valid At: Specify that text should be a HotSpot only if it occurs in a specific row or column.

If you select this option, you must specify the row or column number in the adjacent text boxes, otherwise text will be a HotSpot wherever it occurs in the session window.

Case Sensitive: Specify that text should be a HotSpot only if it appears in the same combination of lowercase and uppercase characters as specified in the Text text box.

Text is Preceded by a Space: Specify that text should be a HotSpot only if it is preceded by a space or field delimiter.

Text is Followed by a Space: Specify that text should be a HotSpot only if it is followed by a space or field delimiter.

Auto-invoke When Text appears on Display: Actions associated with this HotSpot are invoked whenever the HotSpot appears in the session window.

Row: Type the row number where the specified text must occur in order to be a HotSpot. Available when you also select the Only Valid At option.

Column: Type the column number where the specified text must occur in order to be a HotSpot. Available when you also select the Only Valid At option.

To add or edit text HotSpots

1. From the Options menu, choose Settings.
2. From the Categories list, select HotSpots.
3. Select the Assignments Tab.
4. If you want to add a new HotSpot, choose the Add button.

-or-

If you want to edit a HotSpot, select the HotSpot from the Defined HotSpots list and choose the Edit button.

The Properties page appears.

5. If you want to add a text HotSpot, choose the Text option button and type the name of the HotSpot text in the HotSpot Text box. Then select the options you want and choose Apply or OK.

-or-

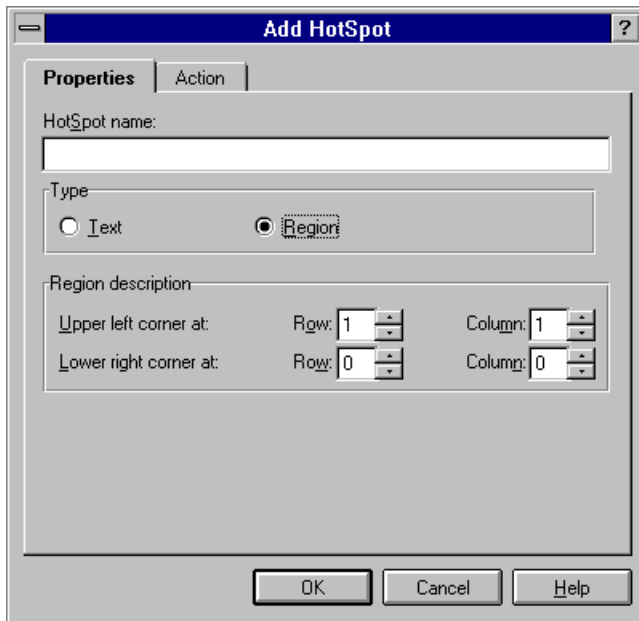
If you want to edit a text HotSpot, change the options you want and choose Apply or OK.

Note: You can also access the HotSpots Settings pages directly using the View menu.

The Add/Edit HotSpot Properties Page - Region

Use this dialog page to add or edit a region HotSpot and define its properties.

You can change the following options or attributes:



Add/Edit HotSpot Properties Page - Region

HotSpot Name: Type the character(s) or word(s) to use as a HotSpot.

If you selected characters or words on the session window before accessing this dialog box, your selection appears in this text box automatically.

If Only Valid At is cleared, the text for the HotSpot must be unique within the session or scheme.

Text: Select the type of HotSpot to create.

This dialog box changes, depending on whether the HotSpot is a text HotSpot or a region HotSpot.

Region: Select the type of HotSpot to create.

This dialog box changes, depending on whether the HotSpot is a text HotSpot or a region HotSpot.

Region Description: Type the coordinates of your region HotSpot.

Upper Left Corner at Row and Column: Type the row and column number where the upper left corner of the HotSpot occurs.

Lower Right Corner at Row and Column: Type the row and column number where the lower right corner of the HotSpot occurs.

To add or edit region HotSpots

1. From the Options menu, choose Settings.
2. From the Categories list, select HotSpots.
3. Select the Assignments Tab.
4. If you want to add a new HotSpot, choose the Add button.

-or-

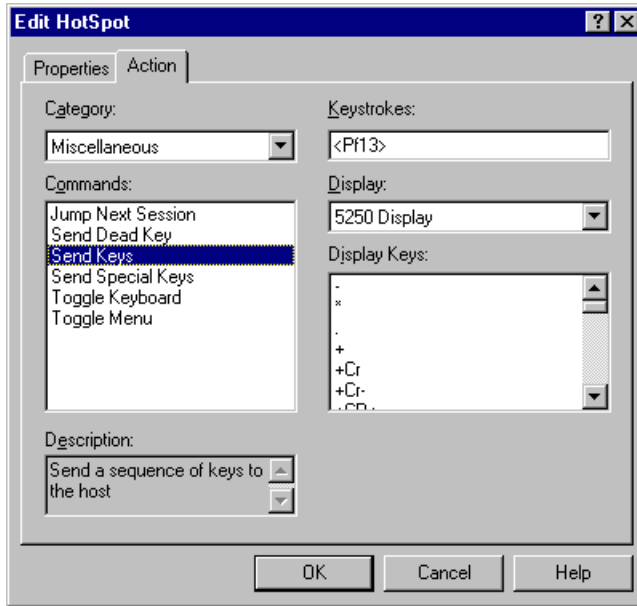
If you want to edit a HotSpot, select the HotSpot from the Defined HotSpots list and choose the Edit button.

5. If you want to add a region HotSpot, choose the Region option button and type the name of the HotSpot identifier text in the HotSpot Name box, then select the options you want and choose Apply or OK.

-or-

If you want to edit a region HotSpot, change the options you want and choose Apply or OK.

The Add/Edit HotSpot Action Page



Add/Edit HotSpot Action Page

From this page, the user can assign (or edit an assigned action) to a text or region HotSpot. Actions can include executing menu commands, macros, or functions, or starting applications. The options available depends on the Catagory and Command selected.

Actions are divided into categories. HotSpot you can see and assign at any one time are defined by the category you have selected. You may have to supply additional information in order to assign some actions, such as the keystroke to send for a SendKeys command.

Category: Choose the type of action to perform. The actions in the Commands list box change, depending on the Category selected.

Commands: Choose the action to perform. Depending on which action you choose, the dialog box might prompt you for additional information. For example, if you click Run Application, you must specify which program to run. If you click Send Keystrokes, you must specify which keystrokes to send.

Description: Displays a description of the selected command.

Application: Type the name of the application to run, including the drive and directory where the application is located. If desired, click the

Browse button to display the Browse dialog box, then select the desired application from the list of available applications.

Scheme/Session/Page: When this box is labeled Scheme, it displays a drop-down menu of the available schemes this action can load.

When this box is labeled Session, it displays a drop-down menu of the available session profiles this action can load.

When this box is labeled Page, it displays a drop-down menu of the recorded host screen pages to which this action can navigate.

Macro: Type the name of the macro to run, including the drive and directory where the macro is located. If desired, click the Browse button to display the Browse dialog box, then select the desired macro from the list of available macros.

Page: Select the name of the host screen to which to navigate.

Keystrokes: Type the keystroke(s) to be performed. You can double-click one or more keystrokes from the Display Keys list box to select them. When you double-click a keystroke, it appears in the Keystrokes text box. All control code strings (for example, <BS>, <CR>, or <ESC>) must include angle brackets.

When *EXTRA!* encounters a control code string, it checks to see if that string is among its recognized strings. If the string is valid, *EXTRA!* passes the corresponding control code character to the display session. If the string is not valid, *EXTRA!* passes the string directly to the display session so that the display session can determine if it is a valid keystroke string for that display session.

If you do not want *EXTRA!* to interpret the control code string, you must include an accent grave (') in front of the string.

Display: Choose the Display type from the drop-down list.

Display Keys: Double-click the keystroke(s) to add to the Keystrokes text box.

To assign or edit a HotSpot action

1. From the Options menu, choose Settings.
2. From the Categories list, select HotSpots.
3. Select the Assignments tab.
4. Follow the procedure to add a HotSpot.

-or-

Select a HotSpot from the Defined HotSpots box and choose the Edit button.

5. Select the Action tab.

The Action page appears.

6. Select the appropriate Category from Category list.
7. Select the appropriate command that you want to assign to the HotSpot from the Command list.

Other text boxes may appear depending on what you have chosen.

8. Type in the information and choose OK.

To use a HotSpot

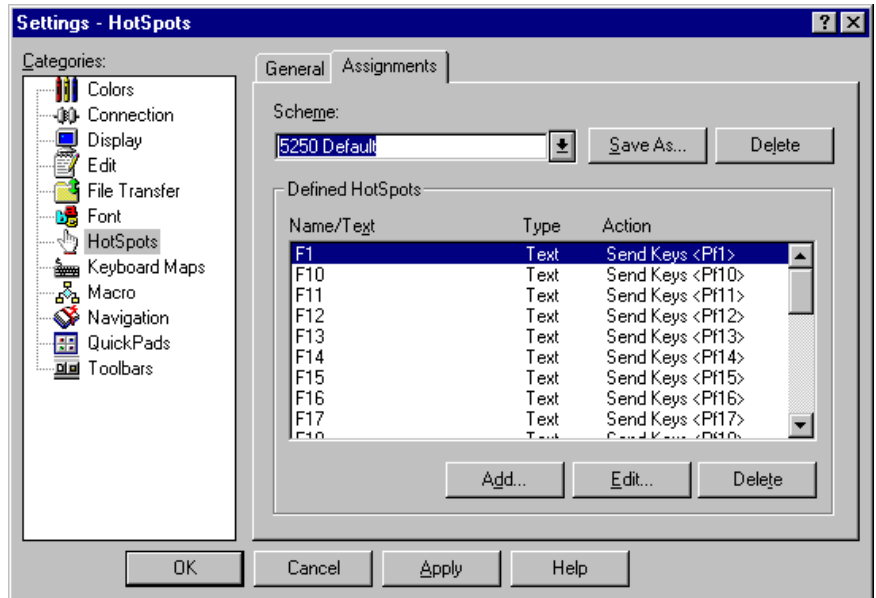
- Double-click the defined HotSpot area of the display window and the action assigned to the HotSpot will execute.

If you have selected Auto-invoke When Text Appears on Display on the HotSpot Properties page, the action will execute as soon as the display session appears in the window.

The HotSpots Settings Assignments Page

You can use the Settings - HotSpots, Assignment page to add, edit, or delete HotSpots. You can view the current HotSpot assignments, save the existing settings as a scheme, and delete HotSpot schemes.

You can change the following options or attributes:



The Settings - HotSpots Assignments Page

Scheme: Select the scheme that you want to apply, edit, or delete.

The HotSpots associated with the selected scheme appear in the Defined HotSpot box.

Save As: Saves the current list of HotSpots as a scheme. Use to copy defined HotSpots as a new scheme.

Delete: Deletes the selected scheme. All HotSpots associated with that scheme are deleted.

Defined HotSpots: Lists the HotSpots that have been defined for during the current session or the selected scheme.

To edit or delete a HotSpot, select the desired HotSpot in this list and choose Edit or Delete.

Add Button: Add a HotSpot to the session or selected scheme.

Edit Button: Edit the HotSpot selected in the Defined HotSpot list.

Delete Button: Delete the HotSpot selected in the Defined HotSpot list.

To delete a HotSpot

This page has the following fields:

1. From the Options menu, choose Settings.
2. From the Categories list, select HotSpots.
3. Select the Assignments tab.
4. In the Defined HotSpots box, select the HotSpot you want to delete.
5. Choose the Delete button below the Defined HotSpots box.

Using HotSpot Schemes

A collection of individual HotSpots grouped together and then named is called a scheme of HotSpots. You can apply a scheme to as many display sessions as you choose. This is different than an individual HotSpot, which can only be applied to the session in which it is created.

You can also apply a scheme to an individual host screen. Whenever you access that host screen{bmc emdash.bmp} — regardless of the navigation method used{bmc emdash.bmp} — the HotSpot scheme you specify will be automatically enabled.

To create a scheme of HotSpots

1. Create the HotSpots you want to have in your scheme.

For more information about creating HotSpots, see “To add or edit text HotSpots” and “To add or edit region HotSpots” above.

2. Choose the Save As button.

The Save Scheme dialog appears.

3. Enter a name for the scheme in the Save This Scheme As box.
4. Select from the Local Copy or Remote Copy options depending on where you want the scheme file to be saved, then choose OK.

To edit a scheme of HotSpots

1. From the Options menu, choose Settings.
2. From the Categories list, select HotSpots.
3. Select the Assignments tab.
4. In the Scheme list box, select the scheme you want to edit.
5. In the Defined HotSpots box, select the HotSpot(s) you want to change and choose Edit.
6. When you are finished making changes to the HotSpot(s) in the scheme, choose OK.

To delete a scheme of HotSpots

1. From the Options menu, choose Settings.
2. From the Categories list, select HotSpots.
3. Select the Assignments tab.
4. In the Scheme list box, select the scheme you want to delete.
5. Choose the Delete button.

All the HotSpots in that scheme are deleted.

To apply a HotSpot scheme to a host screen

1. From the Tools menu, select Record Pages.
EXTRA! is now in Record Pages mode. Any page that you move to will be recorded.
If the host screen page that you want to add a HotSpot scheme to is already recorded, skip this step and the next step.
2. Enter a Page Name for the host screen, or leave the name as the default, and select the Stop button.
EXTRA! is no longer in Record Pages mode.
3. From the Tools menu, select Page Settings.
The Page Settings dialog box opens, with all recorded pages for this session listed in their groups on the left.
4. Select the Page Name from the list and choose the Settings tab.
5. Under the Available Settings list, open the folder labeled HotSpots.

6. Highlight the desired HotSpot scheme and choose the Add button to add the scheme to the host screen.
7. Choose OK to save your changes.

Every time you access the recorded page--regardless of navigation method--the HotSpot scheme you specify will be enabled.

Displaying HotSpots

HotSpots have many states; they can be enabled, disabled, visible, or invisible. When they are visible, you can choose their appearance. When they are invisible, the mouse pointer still turns into a pointing hand when it is over a HotSpot.

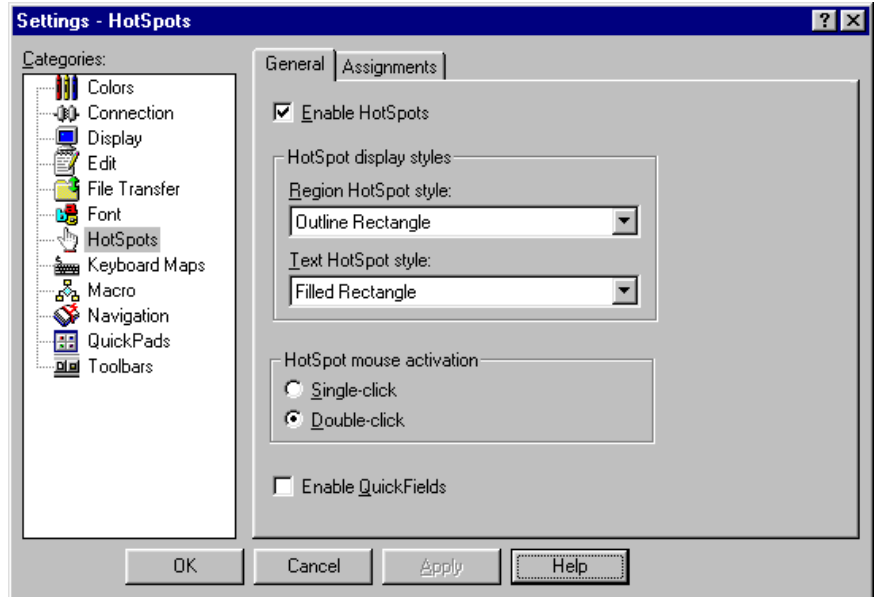
Visible text HotSpots can appear on the screen in three ways: outline rectangle, recessed panel, and filled rectangle. Visible region HotSpots can appear as outline rectangles or recessed panels.

Note: The recessed panel option works well only when you have your display colors set in the mid-range. If your background color is black or white, you will only see part of the recessed panel.

The Settings - HotSpots General Page

You can use the Settings - HotSpots, General Page to set HotSpots. on or off, determine how HostSpots will look (both Text and Region) and how they are activated.

You can change the following options or attributes:



Settings - HotSpots General Page

Enable HotSpots check box: Enables HotSpots.

When HotSpots are enabled, the mouse pointer turns into a pointing hand when it is over a HotSpot.

Region HotSpot Style: Determines (along with Text HotSpot Style) how HotSpots will appear in the client area:

Text HotSpot Style box: Determines (along with Region HotSport Style) how HotSpots will appear in the client area.

Note: The recessed panel option works well only when you have your display colors set in the mid-range. If your background color is black or white, you will only see part of the recessed panel.

Single-click: Activates the HotSpot (when the pointer is on the HotSpot) with a single-click of the mouse.

Double-click: Activates the HotSpot (when the pointer is on the HotSpot) with a double-click of the mouse.

Enable QuickFields check box: Enables or disables all QuickFields.

When QuickFields are enabled, all enterable (unprotected) fields are highlighted for easy recognition. If you clear this option, all QuickFields will be disabled.

To enable HotSpots

1. From the Options menu, choose Settings.
2. From the Categories list, select HotSpots.
3. Select the Enable HotSpots check box, then choose Apply or OK.

To disable HotSpots

1. From the Options menu, choose Settings.
2. From the Categories list, select HotSpots.
3. Clear the Enable HotSpots check box and choose Apply or OK.

To enable QuickFields

1. From the Options menu, choose Settings.
2. From the Categories list, select HotSpots.
3. Select the Enable QuickFields check box, then select the Enable HotSpots check box.
4. Choose Apply or OK.

To disable QuickFields

1. From the Options menu, choose Settings.
2. From the Categories list, select HotSpots.
3. Clear the Enable QuickFields check box and choose Apply or OK.

To set a HotSpot display style

1. From the Options menu, choose Settings.
2. From the Categories list, select HotSpots.
3. On the General page, select the option that indicates how you want to display all region HotSpots.
4. Select the option that indicates how you want to display all text HotSpots.
5. Choose Apply or OK.

Securing HotSpots

When you secure HotSpots, it removes HotSpots from the Categories list in the Options Settings dialog box. The user can no longer create HotSpots or HotSpot schemes.

CHAPTER

*Customizing
the Keyboard*

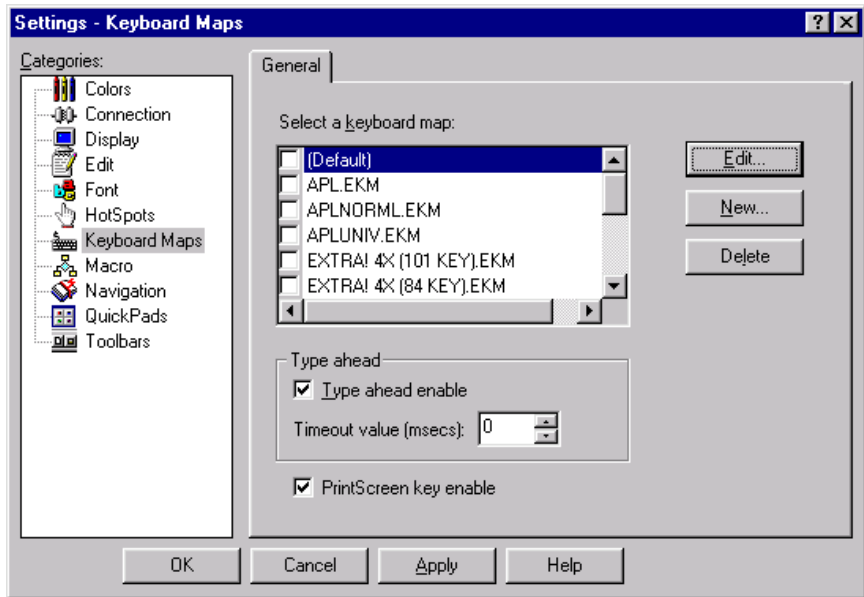


Terminal and PC keyboards have different sets of keys. For example, many terminal keyboards have a Transmit key, PC keyboards do not. To enable your PC to communicate with a host in the same way as a terminal, EXTRA! uses a “keyboard map” which substitutes a PC key (or combination of keys) for the terminal function. For example, you might perform the function associated with the Transmit key by pressing the plus (+) key on the PC’s numeric keypad.

You can use the default keyboard map, pick from a list of pre-made maps, or create your own. In either case, you can assign different maps to each session. (Initially, each session uses the default keyboard map.)

Loading a Keyboard Map

EXTRA! offers several pre-made keyboard maps. You can also create your own maps or modify existing ones. You can assign any one of these keyboard maps to a particular session from a list in the Settings - Keyboard Maps dialog box.



Keyboard Map General Page

You can change the following options or attributes:

Select a Keyboard Map: Lists the available keyboard maps to load or edit.

Edit: Opens the selected keyboard map in the Keyboard Map Editor where you can add or edit the commands, functions, and macros assigned to the current keyboard map.

New: Opens a new keyboard map template in the Keyboard Map Editor for you to create a new keyboard map.

Delete: Deletes the selected keyboard map from the list of available keyboard maps.

Type Ahead Enable: Allows you to continue typing into the keystroke buffer while the host is busy. When the host is ready, the keystrokes are sent to the host.

Timeout Value: Indicates the amount of time (milliseconds) that EXTRA! will wait before it sends the keystrokes to the host. The maximum value you can enter is 5000 milliseconds. The default value is 0.

PrintScreen Key Enable: Enables the PrintScreen key to capture just the client area and not the title bar or toolbar buttons.

To load a keyboard map

1. From any open session, choose the Settings command in the Options menu.
2. Under Categories, select Keyboard Maps.
3. In the Settings - Keyboard Maps dialog box, select the keyboard map from the Select a Keyboard Map list.
4. Choose the OK button to assign this keyboard map to the current session.

Note: The list of available keyboard maps may be limited to the options defined by your system administrator.

Viewing a Keyboard Map

You can view the keyboard map associated with the current session. As you click keys on the keyboard map, the corresponding characters appear in the session window, or the corresponding actions are taken.

To view a keyboard map

1. Open a session by choosing Open Session from the File Menu.

2. From the View menu, choose Keyboard Maps.

The keyboard map for your keyboard is displayed.

3. Click the keys on the keyboard map to display them in your session, or to perform actions.

Deleting a Keyboard Map

You can delete a keyboard map from the Settings dialog box or from the DOS prompt with the proper security authorization. Before deleting a keyboard map, make sure that it is the map you want to delete.

To delete a keyboard map

1. From the Options menu, choose Settings.
2. Choose Keyboards to display the list of available keyboards.
3. Highlight the keyboard you want to delete.
4. Click Delete.
5. Answer "Yes" to "Are you sure that you want to delete this Keyboard Mapping?"

The keyboard map you selected is deleted.

Also, from the DOS prompt, you can delete the appropriate .EKM file to delete a keyboard map.

Using a Keyboard Map in the APL Mode

You can change your keyboard state from normal to the APL (Programming Language) mode by using a key that is mapped to the Toggle Keyboard command in the Action page. By default all 3270 keyboard maps have ALT+BACKSPACE key mapped to the Toggle Keyboard command in the Action page. You can, however, map any key to Toggle Keyboard. See “Assigning APL Characters to Keys” for more information.

Note: If you are installing over an earlier version of EXTRA!, you must enable the APL option in the Miscellaneous Page of the Settings dialog box to be able to use your keyboard map in the APL mode. In version 6.2 of EXTRA!, the default for this option is on.

To set a keyboard map to the APL mode

- From the session window, click ALT+BACKSPACE.

You are now in APL mode and “APL” is displayed on the status line in your session window, and the list of available keyboard maps displayed in the Settings dialog box is prefaced with APL.

- To return your keyboard map to the normal mode, click ALT+BACKSPACE again.

Keyboard Map Editor

The Keyboard Map Editor displays a graphic representation of a PC keyboard. Using the Keyboard Map Editor you can create customized keyboard maps, or edit existing keyboard maps. You can also load the keyboard map to use with your sessions. Depending on the security, you may have only restricted access to the functionality of the Keyboard Map Editor. You may view or print your keyboard map but you will not be able to remap it. Contact your system administrator for your security options.

Using the Keyboard Map Editor, you can perform a number of tasks.

- Copy a function or character from one location to another on the working keyboard map.

For example, if the transmit function may be assigned to the plus (+) key on the numeric keypad, you can change it to F2 by copying the function from the current location to the desired location.

- Copy a function or character from the default keyboard map to the working keyboard map.

The default keyboard map has certain terminal tool-specific functions associated with various keys. You cannot edit the default keyboard map, but you can display it while you are creating or editing another keyboard map. When the default keyboard map is displayed, you can drag and drop functions from the default keyboard map onto your working keyboard map.

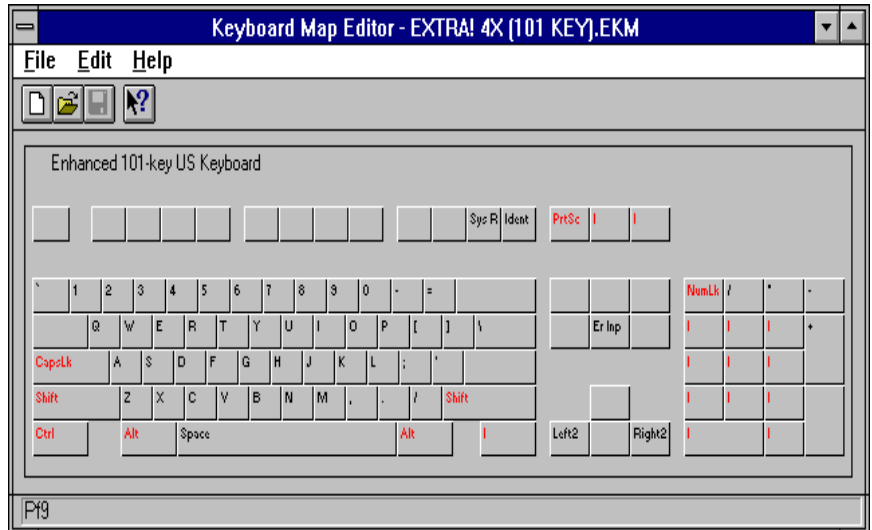
- Assign a function to a key.

Functions include sending keystrokes, running an application, a script, or a macro, and performing any function that appears on the menus, such as connecting to a host, navigating to a host screen, transferring a file, or printing.

The keys on each map are color-coded. The red keys cannot be mapped; the black and blank keys can be mapped. In addition, several keystrokes, such as ALT+SCROLL LOCK, are reserved by Windows functions. These keys are unavailable for remapping and will always perform their standard Windows functions. See “Keys Reserved By Windows” later in this chapter for more information.

You can also undo any editing action you perform, such as deleting a keystroke.

Keyboard Map Editor Menu Commands



Keyboard Map Editor

The menu commands for the Keyboard Map Editor are described below.

New: Creates a new keyboard map.

Open: Displays a list of maps for your keyboard type. Selecting from this list opens an existing keyboard for your EXTRA! session.

Save: Saves the open keyboard. If you edit the default map, you are prompted to save it under another name to prevent the default map from being overwritten.

Save As: Saves the open keyboard under a different name.

Exit: Exits the Keyboard Map Editor.

Undo: Reverses the changes made on the keyboard map and restores the keyboard map editor to the previous state.

Show Defaults: Displays a keyboard map with all the default keystrokes of the terminal type for the current session.

Keyboard Map Editor Help: Displays the online Help for the Keyboard Map Editor.

Displaying the Default Keyboard Map

You can display or hide the default keyboard map for a session. The default keyboard map contains the default terminal emulation keystrokes inherent in the emulator.

To display or hide the default keyboard map

1. Open a keyboard map.
2. To display the default keyboard map, from the Edit menu, choose Show Defaults.

The default keyboard map is displayed. A check mark appears in front of Show Defaults when the default keyboard map is displayed.

3. To hide the default keyboard map, from the Edit menu, choose Show Defaults once again.

Opening a Keyboard Map

You can open a keyboard map from a session window or from the Keyboard Map Editor. The keyboard maps you can open may be limited depending on the security set up by your system administrator.

To open a keyboard map from the session window

1. Open a session by choosing Open Session from the File Menu.
2. From the Options menu, choose Settings.
3. Choose Keyboard Maps.
4. Double-click the keyboard map that you want to open.

To open a keyboard map from the Keyboard Map Editor

1. From the File menu, choose Open.
2. Complete the Open dialog box by selecting the keyboard map you want from the list displayed or by entering a filename (.EKM) and clicking Open.

Since you can have only one keyboard map open at a time, you will be prompted to save changes to the current keyboard map before the selected map opens.

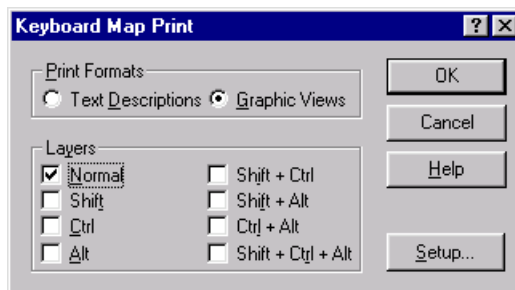
Printing a Keyboard Map

You can print a keyboard map from the Keyboard Map Editor, then you can:

- print the text description showing a text format listing of the mappings
- print a graphic view showing a graphic bitmap of the current keyboard map
- print selected layers (shift-state combinations) in the keyboard map

The Keyboard Map Print Dialog Box

From the Keyboard Map Print dialog box, you can print either a text description or a graphic view of the keyboard map, and choose shift-state combinations.



The Keyboard Map Print dialog box

Print Formats: Offers a choice of either printing a text format listing of the mappings or a graphic view of the current keyboard map.

Text Descriptions: Prints a text format list of the mappings for the current keyboard map. The list includes the name of each key, the action to which it is mapped, and a description of the mapping.

Text Descriptions: Prints a text-format list of the mappings for the current keyboard map. The list includes the name of each key, the action to which it is mapped, and a description of the mapping.

Graphic Views: Prints a graphic bitmap of the current keyboard map, similar to what appears in the editor window.

Layers: Lists all the layers (shift-state combinations) in the keyboard map.

Normal: Identifies the keyboard state that has no shifted keys (SHIFT, CONTROL or ALT) held down.

Shift: Identifies the keyboard state when only the SHIFT key is held down.

Ctrl: Identifies the keyboard state when only the CONTROL key is held down.

Alt: Identifies the keyboard state when only the ALT key is held down.

Shift + Ctrl: Identifies the keyboard state when only the SHIFT and CONTROL keys are simultaneously held down.

Shift + Alt: Identifies the keyboard state when only the SHIFT and ALT keys are simultaneously held down.

Ctrl + Alt: Identifies the keyboard state when only the CONTROL and ALT keys are simultaneously held down.

Shift + Ctrl + Alt: Identifies the keyboard state when SHIFT, CONTROL and ALT are simultaneously held down.

Help: Choose this to display an overview of this dialog box. For information on any item in the dialog box, click the question mark in the upper right corner of the dialog box and then click the desired item.

Setup: Displays the Print dialog box where you can select which printer to print to, the print range and how many copies to print.

To print a keyboard map

1. To print a text description, from the File menu, choose Print, then from the Keyboard Map Print dialog box, under Print Formats, select Text Descriptions.

-or-

To print a graphic view, from the File menu, choose Print, then from the Keyboard Map Print dialog box, under Print Formats, select Graphic Views.

2. Under Layers, select specific layers (shift-state combinations) to print, then choose OK.

Note: From the Keyboard Map Print dialog box you can also choose the Setup button to display the Print dialog box.

- From the File menu, choose Print Setup, then select the desired printer, the print range, and the number of copies to print, then choose OK.

Keys Reserved by Windows

Certain keys and key combinations are reserved by Windows or are translated by the keyboard driver. These keys are unavailable for remapping. Below is a chart of the keys and key combinations that cannot be mapped. These keys usually display the name of the key in red letters or they display a small red square.

The marked columns, in combination with the PC key listed, cannot be mapped.

PC KEY	NORMAL	SHIFT	CTRL	ALT	SHIFT+ CTRL	SHIFT+ ALT	CTRL+ ALT	SHIFT+ CTRL+ ALT
TAB								
ENTER								
SPACE								
ESCAPE								
PRNT SCRN 101								
PRNT SCRN 84								
SCRL LOCK								
PAUSE								
NUM LOCK								

Keys Reserved by Windows

Creating a Keyboard Map

You can create a new keyboard map from a session or from the Keyboard Map Editor.

To create a keyboard map from a session

1. Open a session (if not already open) by choosing Open Session from the File Menu.
2. From the Edit or Options menu, choose Settings.
3. Choose Keyboard Maps.
4. Click New.
5. Double-click the key you want to assign a function to and complete the Action page. (See instructions for assigning functions to keys.)

You can also display the default map and copy functions to the new map. You can save the map under a new name, if you wish.

To create a keyboard map from the Keyboard Map Editor

1. Display an existing keyboard map from the Settings dialog box.
2. From the File menu, choose New or click the New button.
The Keyboard Map Editor displays a new keyboard.
3. Create your new keyboard map by assigning functions to keys. (See instructions on assigning functions to keys.)
4. Save your keyboard map when prompted.

Copying a Function

You can copy the key functions from the working keyboard map and/or from the default keyboard map.

To copy a function on the working keyboard map

1. Open a keyboard map.
2. Click the key whose function you want to copy. Hold the button until the cursor turns from an arrow to a black key with a plus (+) sign.

Note: If you are copying a combination keystroke (for example, a keystroke preceded by a SHIFT, ALT, or CTRL), be sure to press the SHIFT, ALT, or CTRL key before clicking the key.

3. Drag the function to the desired key and release the mouse button.
The new function overwrites any function currently assigned to the key.

Note: If you are assigning the function to a combination keystroke (for example, a keystroke preceded by a SHIFT, ALT, or CTRL), be sure to press the SHIFT, ALT, or CTRL key before releasing the mouse button.

To copy a function from the default keyboard map

1. Open a keyboard map.
2. Display the default keyboard map by choosing Show Defaults from the Edit menu.
3. Click the key on the default keyboard map whose function you want to copy. Hold the button until the cursor turns from an arrow to a black key with a plus (+) sign.

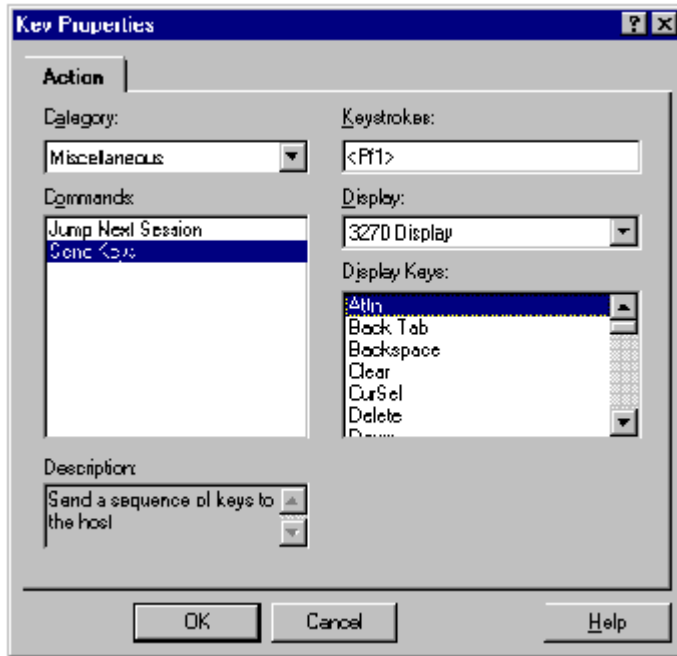
Note: If you are copying a combination keystroke (for example, a keystroke preceded by a SHIFT, ALT, or CTRL), be sure to press the SHIFT, ALT, or CTRL key before clicking the key.

4. Drag the function to the desired key on the working keyboard map and release the mouse button.
The new function overwrites any function currently assigned to the key.

Note: If you are assigning the function to a combination keystroke (for example, a keystroke preceded by a SHIFT, ALT, or CTRL), be sure to press the SHIFT, ALT, or CTRL key before releasing the mouse button.

Assigning Keyboard Map Actions

You can use the Action page to assign an action for a key on a keyboard map. Select the Send Keys from Commands in the dialog box to specify the keystrokes you want to send to the host.



Key Properties dialog box Action page

Category: Performs the function when you click the name of the menu or category. Select Miscellaneous for keyboard maps.

Commands: Performs the action you click on. Click Send Keys to specify the keystrokes to send to the host.

Description: Describes the command highlighted in Commands.

Keystrokes: Displays the keystroke you double-clicked on the keyboard map.

Display: Displays the terminal type.

Display Keys: Displays the keys associated with the terminal display.

OK button: Assigns the function you selected in Display Keys to the keystroke in Keystrokes.

Cancel button: Closes the Action page without any saving any changes.

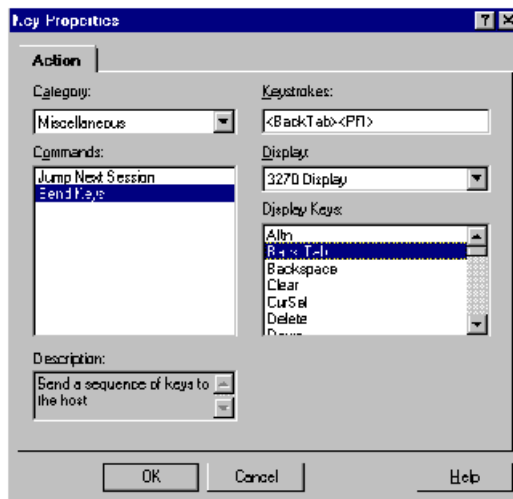
Apply button: Applies the function to the key.

Help: Displays the Help for the Action page.

To assign an action to a key

1. Open the keyboard map.
2. Double-click the key to which you want to assign an action.

The Key Properties dialog box Action page is displayed.



Key Properties Dialog Box, Action Page

Note: If you are assigning the function to a combination keystroke (for example, a keystroke preceded by a SHIFT, ALT, or CTRL), be sure to press the SHIFT, ALT, or CTRL key before double-clicking the key.

3. Choose Send Keys in Commands to specify the keystrokes to send. Keystrokes shows the key you selected on the keyboard.
4. Double-click the function you want the key to perform in Display Keys.
The function is displayed along with the key you chose in Keystrokes.
5. Click OK.
6. Repeat the above steps for assigning actions to other keys and save the keyboard map.

Assigning APL Characters to Keys

You can use APL characters from a normal keyboard, even when you are not in the APL mode by mapping keys to APL characters in the Action page.

To assign an APL character to a key

1. From the Keyboard Map Editor, double-click on the desired key.
2. From Category, choose Miscellaneous.
3. From Commands, choose Send Special Keys.
The Key Properties dialog box Action page is displayed.
4. From Keystrokes, choose the desired APL character.
5. Click OK.

Mapping Keys to Toggle to APL Mode

In all 3270 keyboard maps, the ALT+BACKSPACE key is mapped by default to toggle the APL mode on and off. You can, however, assign the Toggle Keyboard command to any key you want.

To map a key to toggle to the APL mode

1. From the Keyboard Map Editor, double-click on the desired key.
2. From Category, choose Miscellaneous.
3. From Commands, choose Toggle Keyboard.
4. Click OK.

The key now toggles your keyboard map on and off the APL mode.

Deleting a Function

You can delete a function that is currently assigned to a key.

To delete a function for a key

1. Open a keyboard.
2. Double-click the key whose function you want to delete.

The Key Properties dialog box Action page is displayed.

Note: If you are deleting a combination keystroke (for example, a keystroke preceded by a SHIFT, ALT, or CTRL), be sure to press the SHIFT, ALT, or CTRL key before clicking the key.

3. In Keystrokes, highlight and delete the function currently assigned to key only (not the key).
4. Click OK.

Saving a Keyboard Map

You can save an existing keyboard map, a new keyboard map, or an existing keyboard map under a new name.

To save a keyboard map

- From the File menu, choose Save to save an existing keyboard map.
The keyboard map is saved under its current name and remains open until you close it.
- From the File menu, choose Save As and complete the dialog box to save a new keyboard map or to save an existing menu under a different name.

The keyboard map remains open until you close it.

Exiting the Keyboard Map Editor

You can exit the Keyboard Map and if you want, save the changes made to the keyboard map.

To exit the Keyboard Map Editor

- Choose Exit from the File menu.

You will be prompted to save any changes you made to the keyboard map.

CHAPTER

*Using
QuickPads
and Toolbars*



Some of the most common tasks performed in an *EXTRA!* session can be simplified by using the QuickPads and toolbars provided with the product or by creating your own QuickPads and toolbars. Using QuickPads, you can create a custom tool that includes pictures or text to assist you in using it. Using toolbars, you can perform tasks with a familiar type of tool.

This chapter tells you how to attach QuickPads and toolbars into your sessions, create new ones, and edit existing ones. The QuickPads section is first, followed by the Toolbars section.

QuickPads

A QuickPad is a customized window with text, buttons, bitmaps, icons, or other graphic elements that allow you to quickly perform basic actions. *EXTRA!* includes some sample QuickPads for you to use, or you can create your own. QuickPads can be any shape or size, and as simple or as complex as you want.

The buttons and icons on QuickPads can perform the following tasks:

- Send keystrokes to the host
- Run a macro
- Run an application
- Assign a scheme
- Perform any function that can be performed using *EXTRA!* menus

Basically, QuickPads can help you perform tasks that are hard to remember or that you routinely repeat. They are also useful if you prefer using a mouse instead of the keyboard.

This section covers the following topics:

- Attaching QuickPads your host session or page
- Creating new QuickPads
- Customizing existing QuickPads
- Setting Security for QuickPads

Attaching QuickPads

To use a QuickPad, you must attach it to a session or an individual host screen.

When you open a QuickPad and then save the session, that QuickPad will load automatically the next time you open that session. The QuickPad will remain visible on any host screen until you remove it. You can attach multiple QuickPads for each session.

You can also attach a QuickPad to an individual host screen in a session. Any time you access that host screen, regardless of how you navigated to the screen, the QuickPad will load automatically.

EXTRA! includes several predefined QuickPads that are ready to attach and use. You can use or edit predefined QuickPads or create your own.

To attach a QuickPad to a session

1. From the View menu, choose QuickPads.

The Settings dialog box appears, with the QuickPads category selected, and a list of available QuickPad schemes displayed. You can select more than one QuickPad to be loaded during a session.

2. Select the check boxes for the QuickPads that you want to load; clear the check boxes for the QuickPads you don't want to use.

To attach a QuickPad to a host screen

1. From the Tools menu, choose Record Pages.

EXTRA! is now in Record Pages mode. Any page that you move to will be recorded.

If the host screen page to which you want to add a QuickPad is already recorded, skip this step and the next step.

2. Navigate to the host screen where you want the QuickPad to appear.
3. In the Record Pages control bar, type a name for the host screen, or leave the default name, and then click the Stop button.
4. From the Tools menu, choose Page Settings.

The Page Settings dialog box appears, with all recorded pages for this session listed in their groups on the left.

5. Select the page name in the list, then choose the Settings tab.

6. From the Available Settings list, open the folder labeled QuickPads.
7. Select the QuickPad you want to use, then click the Add button.

The QuickPad is added to the host screen.

8. Choose OK to save your changes.

Every time you access the recorded page—regardless of navigation method—the QuickPad you specify will appear.

Toolbars

EXTRA! comes with default toolbars (*.ETB) that appear when you create a new session or open one of the default sessions.

Toolbars contain buttons that can perform certain actions, when selected by the user.

You can customize a toolbar in a number of ways:

- Display color or monochrome buttons
- Display large or small buttons
- Show or hide ToolTips
- Rearrange the buttons
- Delete buttons
- Add buttons that can send keystrokes, run macros, run applications, load schemes, or perform any other function that you can perform using the *EXTRA!* menus
- Add or delete spacing between the toolbar buttons
- Move a toolbar from its default position at the top of the screen to any location lower on the screen to better fit the layout of your screen

You can create multiple toolbars and load different ones for different sessions. Any toolbar you use is saved as part of the session profile when you save the session.

Attaching Toolbars

For you to use a toolbar, you must attach it to an entire session or just an individual host screen.

When you open a toolbar and then save the session, that toolbar will load automatically the next time you open that session. The toolbar will remain visible on any host screen until you remove it. You are allowed to load multiple toolbars for each session.

You can also attach a toolbar to an individual host screen in a session. Any time you access that screen, regardless of how you navigated to the screen, the toolbar will load automatically.

EXTRA! includes predefined toolbars that are already set up and ready to use. You can use the predefined toolbars, you can edit them, or create your own to meet your unique needs.

To attach a toolbar to a session

1. From the View menu, choose the Toolbars command.

This displays the Settings dialog box, with the Toolbars category selected, and a list of available toolbar schemes displayed. You can select more than one toolbar.

2. Select the name of the toolbar to attach.

You have other options in this dialog box, such as displaying large toolbar buttons, or choosing between color and monochrome buttons.

To attach a toolbar to a host screen

1. From the Tools menu, choose Record Pages.

EXTRA! is now in Record Pages mode. Any page that you move to will be recorded.

If the host screen page to which you want to add a toolbar to is already recorded, skip this step and the next step.

2. Enter a Page Name for the host screen, or leave the name as the default, then choose the Stop button.
3. From the Tools menu, choose Page Settings.

The Page Settings dialog box appears, with all recorded pages for this session listed in their groups on the left.

4. Select the Page Name from the list, then choose the Settings tab.

5. From the Available Settings list, open the folder labeled Toolbars.
6. Select the desired toolbar, then choose the Add button.

The toolbar is added to the host screen.

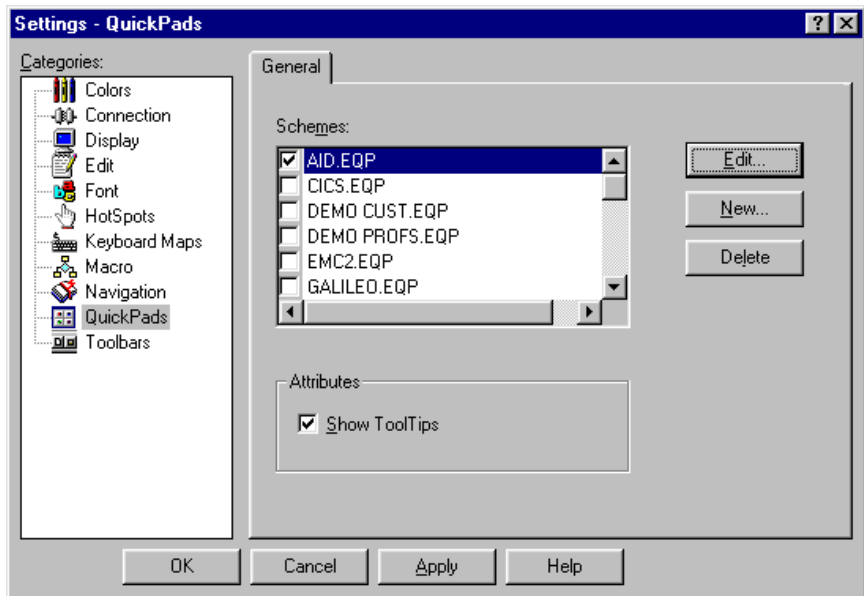
7. Choose OK to save your changes.

Every time you access the recorded page—regardless of navigation method—the toolbar you specify will appear.

QuickPad Settings

Using the Settings - QuickPads General page, you can:

- Specify which QuickPad(s) to attach or unattach for this session
- Create a new QuickPad
- Edit an existing QuickPad
- Select the ToolTips check box to display the title of the button when pausing over it with the cursor



The Settings - QuickPads General Page

Toolbar Settings

Use the Settings - Toolbars, General pagebox to select one or more toolbars to load into a session, add a new toolbar to the schemes list, or select a toolbar to edit or delete.

You can also choose the following options:

- Display all toolbars with color buttons
- Display all toolbars with large buttons
- Display the title of the button when the cursor pauses over it

Creating and Modifying QuickPads

You can easily create your own QuickPads, or modify existing ones to suit your needs. *EXTRA!* comes with several pre-made QuickPads that provide ready to use functions or ideas you can use in creating your own QuickPad or Toolbar.

The *EXTRA!* built-in QuickPad editors are similar to each other so they are very easy to use. However, because there are slightly different functions between QuickPads and Toolbars, their respective editors also have minor differences.

Creating QuickPads

During a session, you can use the QuickPads that are included with *EXTRA!* — you can edit them or create your own using the QuickPad editor.

The QuickPad Editor

Using the QuickPad editor, you can perform the following tasks:

- Specify the size, title, color, and layout of the QuickPad
- Add graphic elements such as text, rectangles, group boxes, and bitmaps
- Add buttons and icons to perform actions such as sending keystrokes; running an application, script, or macro; and performing any command that appears on *EXTRA!* menus, such as connecting to a host, navigating to a host screen, transferring a file, or printing
- Make single or multiple copies of QuickPad objects
- Align QuickPad objects on a grid
- Resize the QuickPad
- Move layered objects to the foreground or background

To create a QuickPad from a session

1. From the View menu, choose QuickPads.

The Settings dialog box appears, with the QuickPads category selected, displaying a list of available QuickPad schemes.

2. Choose New.

To create a QuickPad from the QuickPad editor

- On the QuickPad toolbar, click the New QuickPad button.

-or-

- From the File menu, choose New.

Since you can open only one QuickPad at a time, you will be prompted to save changes to the current open QuickPad before opening the new QuickPad.

To open a QuickPad to edit from a session window

1. From the View menu, choose QuickPads.

The Settings dialog box appears, with the QuickPads category selected, and a list of available QuickPad schemes displayed.

2. Select the check box for the QuickPads that you want to change.
3. Choose Edit.

To open a QuickPad from the QuickPad editor

1. From the File menu, choose Open (or use the Open button on the toolbar).
2. Choose a QuickPad from the displayed list.

Since you can open only one QuickPad at a time, if you have made changes to the QuickPad that is currently open, you will be prompted to save the changes before opening another QuickPad.

Customizing QuickPads

The most powerful feature of the *EXTRA!* QuickPad is that it allows you to set up QuickPads according to your needs.

You can customize a QuickPad in the following ways:

- Change the title
- Change the background color
- Add new objects (buttons, icons, group boxes, and so on)
- Move and align objects

QuickPad Properties

One way to customize your QuickPad is to give it a unique name. Using the QuickPad editor, you can enter a name for your QuickPad. When you specify a name, try to use a name that helps explain its purpose. For example, a QuickPad that contains functions for a mail utility might be named "MAIL."

You can also choose one of sixteen colors for the background color of your QuickPad.

The QuickPad Properties Dialog Box

Use this dialog box to assign a title to the QuickPad and set its background color.

To name a QuickPad

1. Open a QuickPad.
2. Double-click an empty area of the QuickPad.
-or-
From the Edit menu, choose QuickPad Properties.
3. Enter a name in the Title field.

To set the color of a QuickPad

1. Open a QuickPad.
2. Double-click an empty area of the QuickPad.
-or-
From the Edit menu, choose QuickPad Properties.
3. Select a color from the Background Color list.

To resize a QuickPad

1. Open a QuickPad.
2. Using the left mouse button, click one of the QuickPad handles. Continue to hold down the mouse button and drag the handle until the QuickPad is the desired size.
-or-
From the Layout menu, choose Resize to Fit. The QuickPad is reduced to the smallest size that will still accommodate the objects on the QuickPad.

QuickPad Objects

Every object that you can place on a QuickPad has a set of properties. These properties range in complexity from the bitmap, which has only a filename, to the buttons, which have a label, a font, and an action. Typically, you will be assigning actions to objects so that in a session you can click the QuickPad to perform a function.

The different objects that you can place onto a QuickPad are:

- A labeled button that performs a specific action when clicked
- An outlined or filled-in colored rectangle
- A labeled group box to group a set of objects
- A customized text field
- A bitmap picture (*.BMP file)
- An icon (*.ICO file) that performs a specific action when clicked
- A bitmap button that performs a specific action when clicked

To place an object on a QuickPad

1. Open a QuickPad.
2. From the toolbar, click the type of object to place on the QuickPad:
 - Button
 - Rectangle
 - Group box
 - Text
 - Bitmap
 - Icon
 - Bitmap button
3. Move the mouse pointer to the QuickPad. Hold down the left mouse button and drag the pointer to make the object the desired size.

Objects on a QuickPad can overlap one another. For example, you can have text overlap a bitmap. Icons on a QuickPad are a fixed size; they cannot be enlarged or reduced. The size of a bitmap is determined by the bitmap itself rather than by any action performed on the QuickPad.

4. Release the mouse button.

To create a QuickPad button

1. Open a QuickPad.
2. Click the Button button on the toolbar.
3. Move the mouse pointer to the QuickPad, hold down the left mouse button and drag the pointer to make the button the desired size, then release the mouse button.

Note: Objects on a QuickPad can overlap one another.

4. From the edit menu, choose Object Properties.
5. On the Font page, select a font type, size, and style.
6. On the Action page, choose an action Category, then select Command from the list for that category.
7. On the Label page, type in the text for the button, choose an accelerator key for the button (optional), and type in a ToolTip label.
8. Choose the OK button.

To create a QuickPad rectangle

1. Open a QuickPad.
2. Click the Rectangle button on the toolbar.
3. Position the mouse pointer on the QuickPad, hold down the left mouse button and drag the pointer to make the object the desired size, then release the mouse button.

Note: Objects on a QuickPad may overlap one another.

4. From the Edit menu, choose Object Properties.
5. On the Rectangle page, choose a color and style (outline or filled) for the rectangle.
6. Choose the OK button.

To create a QuickPad group box

1. Open a QuickPad.
2. Click the Group box button on the toolbar.
3. Position the mouse pointer on the QuickPad, hold down the left mouse button and drag the pointer to make the object the desired size, then release the mouse button.

Note: Objects on a QuickPad can overlap one another.

4. From the Edit menu, choose Object Properties.
5. On the Font page, select a font type, size, and style.
6. On the Label page, type in the text for the group box, choose the alignment of the text, and choose a color for the group box.
7. Choose the OK button.

To add text to a QuickPad

1. Open a QuickPad.
2. Click the Text button on the toolbar.
3. Move the mouse pointer to the QuickPad, hold down the left mouse button and drag the pointer to make the object the desired size, then release the mouse button.

Note: Objects on a QuickPad may overlap one another.

4. From the Edit menu, choose Object Properties.
5. On the Font page, select a font type, size, and style.
6. On the Label page, type in the text for the field, choose the alignment of the text, and choose a color for the text.
7. Choose the OK button.

To add a bitmap to a QuickPad

1. Open a QuickPad.
2. Click the Bitmap button on the toolbar.
3. Move the mouse pointer to the QuickPad, hold down the left mouse button and drag the pointer to make the object the desired size, then release the mouse button.

Note: Objects on a QuickPad may overlap one another.

4. From the Edit menu, choose Object Properties.
5. Browse and select a bitmap file.

To create a QuickPad icon

1. Open a QuickPad.
2. Click the Icon button on the toolbar.
3. Move the mouse pointer to the QuickPad, hold down the left mouse button and drag the pointer to make the object the desired size, then release the mouse button.

Note: Objects on a QuickPad may overlap one another.

4. From the Edit menu, choose Object Properties.
5. On the Icon page, choose an icon listed or browse for another icon file, choose an accelerator key for the icon (optional), and type in a ToolTip label.
6. On the Action page, choose an action Category, then select Command from that category's list.
7. Choose the OK button.

To create a QuickPad bitmap button

1. Open a QuickPad.
2. Click the Bitmap Button on the toolbar.
3. Move the mouse pointer to the QuickPad, hold down the left mouse button and drag the pointer to make the object the desired size, then release the mouse button.

Note: Objects on a QuickPad may overlap one another.

4. From the Edit menu, choose Object Properties.
5. On the Action page, choose an action Category, then select Command from that category's list.
6. Choose the Customize button to change the bitmap that appears on the button.
7. On the Bitmap Button page, choose an accelerator key for the button (optional), and type in a ToolTip label.
8. Choose the OK button.

The Font Page

Using this page, you can specify the font (family), font size, and font style (such as normal, bold, or italic) to use for the text that appears on the QuickPad in a text area, on a button, or on a group box label.

Font: Selects the font (family) of the text that appears on the QuickPad button, text area, or group box label.

Size: Selects the font size for the text that appears on the QuickPad. The options available vary, depending on which font you select.

Style: Selects the font style (such as normal, bold, or italic) for the text that appears on the QuickPad. The available options vary, depending on which font you select.

Sample: Shows an example of how the text will appear on the QuickPad using the currently selected font, size, and style.

The Button Dialog Box Label Page

Use this dialog box page to specify the text that appears on the QuickPad button and an accelerator key to initiate the action associated with this button.

Text: Defines the text that appears on the QuickPad button.

Accelerator: Defines the accelerator key (or keystrokes) that can be used to initiate the action associated with the QuickPad button. If you are using a keyboard map that has defined this keystroke to perform a different function, the function associated with the keyboard map takes precedence.

The Rectangle Dialog Box

Use this dialog box to define the properties of the rectangle you are placing on your QuickPad. You can select a color for the rectangle, and specify whether the color is to apply to the rectangle as an outline, or if the color is to fill the rectangle.

Color: Sets the color of the outline or fill color for the rectangle.

Outline: Defines rectangles placed on the QuickPad as outlines. The interior of the rectangle is transparent.

Filled: Defines rectangles placed on the QuickPad as solid rectangles in the selected color. The interior of the rectangle is opaque.

The Group Box Dialog Box Label Page

Use this page to specify the text, text color, and text alignment for the top line of the group box.

Text: Defines the text that appears on the top line of the group box.

Left: Aligns the defined group label text on the left side of the group box.

Center: Aligns the defined group label text at the center of the group box.

Right: Aligns the defined group label text on the right side of the group box.

Color: Sets the color for the outline of the group box and the group box text label.

The Text Dialog Box Label Page

Use this page to specify the font, font size, and font style for text objects that appear on the QuickPad.

Text: Type the text that you want to appear on the QuickPad.

Left: Aligns all text on the left side of the text object boundary.

Center: Aligns all text in the center of the text object boundary.

Right: Aligns all text on the right side of the text object boundary.

Color: Sets the color for the text objects that appear on the QuickPad.

The Open Bitmap Dialog Box

Use this dialog box to choose a bitmap to display on the QuickPad.

The Icon Dialog Box Icon Page

Use this page to select an icon to place on the QuickPad.

Icon: Selects the icon to be placed on the QuickPad. You can also use the Browse button to look for other icon resources.

Browse: Searches for other icon resources.

Accelerator: Defines the keyboard accelerator key to initiates the action associated with the selected icon. If you are using a keyboard map that has defined this keystroke to perform a different function, the function associated with the keyboard map takes precedence.

The Bitmap Button Dialog Box Bitmap Button Page

Using this page, you can select the accelerator key combination for the button you are placing on the QuickPad. You can also enter the text that appears as the ToolTip when the cursor pauses over the button.

Help Text: Defines the text you want to be used as the ToolTip for this button.

Accelerator: Defines the accelerator key (or keystrokes) that can be used to initiate the action associated with the QuickPad icon. If you are using a keyboard map that has defined this keystroke to perform a different function, the function associated with the keyboard map takes precedence.

ToolTip: Defines the text that appears when the user pauses the cursor over the button.

To select a QuickPad object

1. Open a QuickPad.
2. Select an object using one of the following methods:

To select	Do this
A single object	Click the desired object.
Multiple objects	Hold down the SHIFT key and click each object.
All objects	From the Edit menu, choose Select All.

The appearance of handles indicates that the object is selected.

To edit a QuickPad object

1. Open a QuickPad.
2. Double-click the object that you want to modify and complete the dialog box associated with that object.

-or-

Select the object that you want to modify, choose Object Properties from the Edit menu, and complete the dialog box associated with that object.

To move a QuickPad object

1. Open a QuickPad.
2. Select the object that you want to move.

You can move one QuickPad object at a time, or you can select multiple objects and move all of them at once.

3. Place the mouse pointer anywhere on the object except on the handles and hold down the left mouse button.
4. Drag the object until it is positioned where you want it on the QuickPad, then release the mouse button.

To rearrange a QuickPad object

1. Open a QuickPad.
2. Select the object that you want to move.
3. From the Arrange menu, click the action you want to perform on the selected object:

Choose	To move the selected object
Move Forward	One step closer to the front of a stack of objects.
Move to Front	To the front of a stack of objects.
Move Backward	One step toward the back of a stack of objects.
Move to Back	To the back of a stack of objects.

To resize a QuickPad object

1. Open a QuickPad.
2. Select the object that you want to resize.
You can resize any object except icons, which are always a fixed size.
In addition, the size of any bitmap is determined by the bitmap rather than by any action performed on the QuickPad.
3. Using the left mouse button, click one of the object handles. Hold down the mouse button and drag the handle until the object is the desired size.

To delete a QuickPad object

1. Open a QuickPad.
2. Select the object that you want to delete.
3. Press the DELETE key.

–or–

From the Edit menu, choose Clear.

To cut a QuickPad object

1. Open a QuickPad.
2. Select the object(s) that you want to cut.
3. From the Edit menu, choose Cut.

The selected object is removed from the QuickPad, but remains in the PC Clipboard until you cut or copy a different object.

To copy a QuickPad object (one copy) using the mouse

1. Open a QuickPad.
2. Select the object(s) that you want to copy.
3. Position the cursor anywhere on the object except the handles.
4. Press and hold down the CTRL key, hold down the left mouse button, and drag the copy to the desired location.
5. Release the CTRL key and the mouse button.

The copy has all the attributes of the original object, except for the label associated with that object (if any). For example, if you copy a button named Transmit, the copy will be the same size and perform the same function, but the label on the button might be Button1.

6. If you are copying a button, group box, or text object, double-click the copy and type a new label for the object.

To copy a QuickPad object (one copy) using the keyboard

1. Open a QuickPad.
2. Select the object that you want to copy.
3. From the Edit menu, choose Copy.
4. From the Edit menu, choose Paste.
5. Drag the copied object to the desired location.

The copy has all the attributes of the original object, except for the label associated with that object (if any). For example, if you copy a button named Transmit, the copy will be the same size and perform the same function, but the label on the button might be Button#.

6. If you are copying a button, group box, or text object, double-click the copy and type a new label for the object.

To copy a QuickPad object (multiple copies)

1. Open a QuickPad.
2. Select the object that you want to copy.
3. Position the pointer on one of the handles of the object.
4. Press and hold down the CTRL key, hold down the left mouse button, and drag the handle of the object. The handles disappear, and a dotted square surrounds the object. As you drag the square, it becomes filled with copies of the selected object.
5. Drag the dotted square until it contains the desired number of copies.
6. Release the CTRL key and the mouse button. The dotted square disappears, and all the duplicate objects are selected.

The copies have all the attributes of the original object, except for the label associated with that object (if any). For example, if you copy a button named Transmit, the copies will be the same size and perform the same function, but the labels on the buttons might be Button1, Button2, and so on.

7. If you are copying a button, group box, or text object, double-click each copy and type a new label for the object.

To paste a QuickPad object

1. Open a QuickPad.
2. Select the desired QuickPad object.
3. From the Edit menu, choose either Cut or Copy.
4. From the Edit menu, click Paste and drag the object to the desired location.

You can paste a cut or copied QuickPad object in a different location or in a different QuickPad.

The QuickPad Grid

The QuickPad grid helps you align objects within a QuickPad. With the grid enabled, horizontal and vertical lines appear over your QuickPad in a grid formation. This grid does not appear on the saved QuickPad, it only appears in the QuickPad editor. This section shows you how to enable and disable the grid, modify the spacing of the grid lines, and how to align your objects using the grid.

The Grid Settings Dialog Box

Using this dialog box, you can specify the grid spacing on a QuickPad. The smaller the values you enter into this dialog box, the more flexibility you have in placing QuickPad objects. A larger grid spacing might help you align objects more easily on the QuickPad.

To change the QuickPad grid spacing

1. Open a QuickPad.
2. From the Layout menu, choose Grid Settings.
3. Complete the Grid Settings dialog box.

For information about any item on this dialog box, click the Help button in the upper right corner of the dialog box and then click the desired item.

To show or hide the QuickPad grid

1. Open a QuickPad.
2. From the Layout menu, choose Show Grid.

A check mark appears next to this command when the grid is displayed.

To align a QuickPad object to the grid

1. Open a QuickPad.
2. From the Layout menu, choose Show Grid.

Displaying the grid will give you a better idea of where the objects will be positioned. The closer the spacing on the grid, the more flexibility you have for placing objects on the grid. The looser the spacing on the grid, the easier it is to align objects because there are fewer grid lines to align to.

3. (Optional) To change the grid settings, choose Grid Settings from the layout menu, then enter the desired settings.
4. Select the objects that you want to align. To choose more than one object, hold down the SHIFT key and click the objects.
5. From the Layout menu, choose Snap to Grid. Drag any objects that you want to reposition.

Saving QuickPads

You can save a QuickPad using the current name, or you can save a QuickPad under a new name and in a new directory. This section provides instructions for both methods, , and explains how to exit the QuickPad editor.

To save a QuickPad

1. Click the Save button on the toolbar.

-or-

From the File menu, choose Save.

2. If you are saving a new QuickPad, complete the Save As dialog box.

-or-

If you are saving an existing QuickPad, the QuickPad is saved under its current name and remains open until you close it.

To save a QuickPad under a different name

1. From the File menu, choose Save As.
2. Complete the Save As dialog box.

The QuickPad remains open until you close it.

To exit the QuickPad editor

- From the File menu, choose Exit.
- or-
- From the Control menu, choose Close.
- or-
- Double-click the Control-menu icon.
- or-
- Press ALT+F4.

You will be prompted to save changes you have made to the open QuickPad. If *EXTRA!* is being run programmatically by another application, *EXTRA!* closes when you close the last open session or editor.

QuickPad Security

You can restrict access to QuickPad Settings, and, in doing so, to restrict access to the QuickPad editor. If you clear the check boxes for the QuickPads command in the Security Action dialog box, the command will no longer be available from the View menu.

To set QuickPad security

1. From the Options menu, choose Security.
The Security dialog box appears.
2. Select the security scheme you want to edit. The name of the security scheme is listed in the Scheme field. Click Browse if you want to select a different scheme.
3. Choose the Options tab.
4. If asked for a password, enter the password in the Security Password dialog box, then click OK.
5. From the Category list, choose View.
6. In the Commands list, clear the QuickPads check box.
7. To save the scheme, from the File page, click Save As.

Creating and Modifying Toolbars

You can easily create your own Toolbars, or modify existing ones to suit your needs. *EXTRA!* comes with several pre-made Toolbars that provide ready to use functions or ideas you can use in creating your own Toolbar.

EXTRA!'s built-in QuickPad and Toolbar editors are similar to each other so they are very easy to use. However, because there are slightly different functions between QuickPads and Toolbars, their respective editors also have minor differences.

Creating Toolbars

During a session, you can use the toolbars that are included with *EXTRA!* — you can edit them or create your own using the Toolbar editor.

The Toolbar Editor

During a session, you can use one of the default toolbars that come with your emulator, or you can edit one of them or create your own using the Toolbar editor.

Buttons on the toolbar can be large or small, color or black-and-white. They can be configured to send keystrokes, run a macro, or perform any command that appears on *EXTRA!* menus, such as connecting to a host, accessing a host screen, transferring a file, or printing.

With the Toolbar editor, you can perform the following tasks:

- Specify the size and appearance of the toolbar buttons
- Add, delete, cut, copy, and paste the functions of toolbar buttons
- Rearrange the buttons on the toolbar
- Add or delete spacing between the toolbar buttons
- Resize the toolbar to fit the toolbar buttons

To create a new toolbar

1. From the View menu, choose the Toolbars command.

This displays the Settings dialog box with the Toolbars category selected, and a list of available toolbar schemes displayed. You can select more than one toolbar to be loaded during a session.

2. Select a toolbar from the list.
3. Choose the New button.

The Toolbar editor runs, displaying an untitled toolbar.

To open an existing toolbar

1. From the View menu, choose Toolbars.

This displays the Settings dialog box with the Toolbars category selected, and a list of available toolbar schemes displayed. You can select more than one toolbar to be loaded during a session.

2. Select a toolbar from the list.
3. Choose the Edit button.

–or–

Double-click the toolbar that you want to edit.

The Toolbar editor runs, displaying the selected toolbar.

Customizing Toolbars

The *EXTRA!* Toolbar editor allows you to set up toolbars according to your needs.

You can customize a toolbar in the following ways:

- Change the title
- Change the buttons from color to monochrome
- Change the size of the buttons
- Add and remove buttons
- Move buttons

Toolbar Properties

Toolbar properties affect the toolbar as a whole. One way to customize your toolbar is to give it a unique name. Using the Toolbar editor, you can enter a title for your Toolbar.

You can also choose color or monochrome, or you can change the size of the buttons.

The Toolbar Title Dialog Box

Using this dialog box, you can assign a title to the toolbar that will be visible whenever the toolbar is undocked from the application window.

Title: Type in the title that you want displayed at the top of the toolbar when it is loaded during a session and undocked.

Help: This button displays Help for the dialog box.

To set a toolbar's title

1. Open a toolbar.
2. Double-click an empty area of the toolbar.
-or-
From the Edit menu, choose Toolbar Properties.
3. Type the desired title into the Toolbar Properties dialog box.
4. Choose the OK button.

To set the color of a toolbar

1. In the *EXTRA!* main window, choose Toolbars from the View menu.
This displays the Settings dialog box with the Toolbars category selected, and a list of available toolbar schemes displayed.
2. Select the Color Buttons attribute if you want all toolbar buttons to be displayed in color.
If this attribute is not selected, the buttons will display in monochrome.
3. Choose the OK button.

To set a toolbar's button size

1. In the *EXTRA!* main window, choose Toolbars from the View menu.
This displays the Settings dialog box with the Toolbars category selected, and a list of available toolbar schemes displayed.
2. Select the Large Buttons attribute if you want all toolbar buttons to have large icons.
If this attribute is not selected, the buttons will display smaller icons.
3. Choose the OK button.

To set toolbar ToolTips on or off

1. In the *EXTRA!* main window, choose Toolbars from the View menu.
This displays the Settings dialog box with the Toolbars category selected, and a list of available toolbar schemes displayed.
2. Select the Show ToolTips attribute if you want every toolbar's buttons to show ToolTips when the user's cursor pauses over them.
If this attribute is not selected, ToolTips will not appear.
3. Choose the OK button.

Toolbar Buttons and Separators



A toolbar is comprised of a series of buttons. When a user chooses a button (by clicking it using a mouse), that button will then perform a programmed action.

If your toolbar has many (more than three or four) buttons, try to organize them into similar groups. You can then place separators in between the groups.

This section describes how to add buttons and separators, how to assign actions to buttons, and how to place buttons and separators in their desired positions.

To add a button or separator on a toolbar

1. Open a toolbar.
2. From the Toolbar editor toolbar, click the type of object to place on the toolbar:

Click	To place
	A button
	A separator

The corresponding object type appears at the end of the toolbar. Until you assign an action to a toolbar button, a number appears on the button.

3. Repeat the previous step until the toolbar contains all the buttons and separators that you need.

To customize a toolbar button

1. Open a toolbar.
2. Double-click the button to which you want to assign the action.
The Action page for that button opens. For more information on this page, see the section “The Action Page.”
3. Select a Category and a Command from that Category for the button’s action to be performed when the user selects the button.
4. Type in a brief description in the field provided.
5. Choose the Bitmap Button page.
6. Type in the title of your button in the ToolTip field and select an accelerator key (optional).
7. Choose the OK button.

To assign a bitmap to a toolbar button

1. Open a toolbar.
2. Double-click the button to which you want to assign the bitmap.
The Action page for that button opens.
3. Choose the Customize button in the Bitmap group box.
The Select Bitmap dialog box opens.
4. Select a bitmap from the list, browse for a *.BMP file, or edit the existing bitmap.
5. Choose the OK button.
The button’s bitmap appears next to the Customize button.
6. Choose the OK button.

To move a toolbar button or separator

1. Open a toolbar.
2. Select the button or separator that you want to move. You can move only one object at a time.
3. Place the mouse pointer anywhere on the object except on the handles and hold down the left the mouse button.

4. Drag the object until it is positioned where you want it on the toolbar.
5. Release the mouse button.

To cut a toolbar button or separator

1. Open a toolbar.
2. Select the object(s) that you want to cut.
3. From the Edit menu, choose Cut.

The selected object is removed from the toolbar, but remains on the Windows Clipboard until you cut or copy a different object.

To copy a toolbar button or separator

1. Open a toolbar.
2. Select the object(s) that you want to copy.
3. From the Edit menu, choose Copy.
4. To paste the copied object, choose Paste from the Edit menu and drag the copy to the desired location.

The copy has all the attributes of the original object.

5. If you copied a button, double-click the button and assign the desired action to it.

To paste a toolbar button or separator

1. Open a toolbar.
2. Select the desired toolbar object.
3. From the Edit menu, choose Cut.

-or-

From the Edit menu, choose Copy.

4. From the Edit menu, choose Paste then drag the object to the desired location.

You can paste a cut or copied toolbar object in a different location or in a different toolbar.

To delete a toolbar button or separator

1. Open a toolbar.
2. Select the object(s) that you want to delete.
3. Press the DELETE key.

-or-

From the Edit menu, choose Clear.

To save a toolbar

1. Click the Save button on the Toolbar editor toolbar.

-or-

From the File menu, choose Save.

2. If you are saving a new toolbar, complete the Save As dialog box.

-or-

If you are saving an existing toolbar, the toolbar is saved under its current name and remains open until you close it.

To save a toolbar under a different name

1. From the File menu, choose Save As.
2. Complete the Save As dialog box.

The toolbar remains open until you close it.

To exit the Toolbar editor

- From the File menu, choose Exit.

-or-

- From the Control menu, choose Close.

-or-

- Double-click the Control-menu icon.

-or-

- Press ALT+F4.

You will be prompted to save any changes you have made to any open toolbar. If *EXTRA!* is being run programmatically by another application, *EXTRA!* closes when you close the last open session or editor.

Toolbar Security

You can restrict access to Toolbar setting, and, in doing so, restrict access to the Toolbar editor. If you clear the check box for the Toolbars command in the Security Action dialog box, the command will no longer be available from the View menu.

To set toolbar security

1. From the Options menu, choose Security.

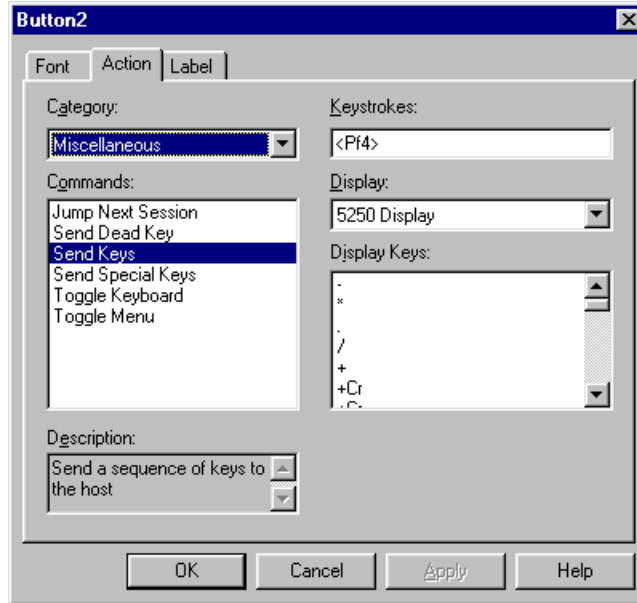
The Security dialog box appears. Select the security scheme you want to edit. The name of the security scheme is listed in the Scheme field. Click Browse if you want to select a different scheme.

2. Choose the Options tab.
3. If asked for a password, enter the password in the Security Password dialog box, then click OK.
4. From the Category list, choose View.
5. In the Commands list, clear the Toolbars check box.
6. To save the scheme, from the File page, click Save As.

Assigning an Action or Function

You can use the Action page to assign an action or function to a keyboard key, a QuickPad object, a Toolbar button, or a HotSpot. Actions are divided into categories, and the actions available for assignment to a key, QuickPad, Toolbar or HotSpot depends on the selected category. Some functions also require additional information such as the keystrokes to send for a SendKeys command.

The Action Page



Sample Action Page (from QuickPads)

Depending upon the type of control you are assigning an action to, you may be able to change the following options or attributes:

Category: Selects the type of action to perform. The actions in the Commands list box change, depending on the Category selected.

Commands: Select the action to perform. Depending on which action you choose, the dialog box might prompt you for additional information. For example, if the Run Application command, requires you to specify the program to run.

Description: Shows a description of the selected command.

Keystrokes: Type the keystroke(s) to be performed. You can double-click one or more keystrokes from the Display Keys list box to select them. When you double-click a keystroke, it appears in the Keystrokes text box. All control code strings (for example, <BS>, <CR>, or <ESC>) must include angle brackets.

When *EXTRA!* encounters a control code string, it checks to see if that string is among its recognized strings. If the string is valid, *EXTRA!* passes the corresponding control code character to the display session. If the string is not valid, *EXTRA!* passes the string directly to the display session so that the display session can determine if it is a valid keystroke string for that display session.

If you do not want *EXTRA!* to interpret the control code string, you must include an accent grave (') in front of the string.

Display: Choose the Display type from the drop-down list.

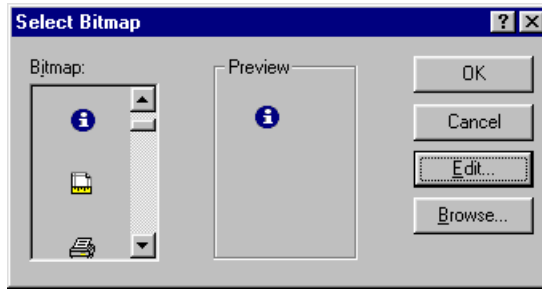
Display Keys: Adds keystrokes to the Keystroke text box. Double-click one or more keystroke(s) strings to add new Keystrokes to the text box.

To assign an action to a key, QuickPad object, toolbar, or HotSpot

1. Open the editor for the object to which you are attaching the action:
2. Choose the Action tab in the dialog using the appropriate method:
 - b For Keys, in the Keyboard editor, double click the keyboard key.
 - b For QuickPad objects, in the QuickPad editor, double click on the object, and then choose the Action page.
 - b For Toolbar buttons, in the Toolbar editor, double click on the button, and then choose the Action page.
 - b For HotSpots, from the Settings - HotSpots dialog box, choose either New or Edit, and then choose the Action page..
3. In the Action page, select a category from the Category list. The actions in that category appear in the Commands list.
4. In the Command list, select a command. Depending on your selection, you may have to supply other information, such as the keystroke to send for a SendKeys command.
5. Click OK.

The Select Bitmap Dialog Box

Use the Select Bitmap, box to select the bitmap to appear on the Toolbar or QuickPad button that you are editing. You can use any bitmap image that is 16-by-16 pixels. Use the Browse button to locate bitmaps in other directories. You can use the Edit button to edit an existing bitmap.



Select Bitmap Dialog Box

You can change the following options or attributes:

Bitmap List: Selects the bitmap you want to appear on the QuickPad or Toolbar button. The Preview box shows the selected bitmap.

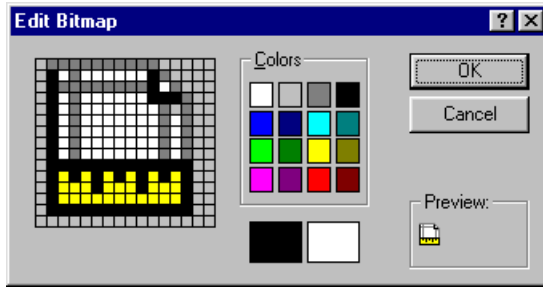
Preview: Shows an actual-size image of the bitmap that is selected.

To select a bitmap for a button

1. Select or create the toolbar button or QuickPad bitmap button.
2. Double click the button or choose the Object Properties command from the Edit menu.
3. Choose the Action page, and then choose the Customize button in the Bitmap group.
4. In the Bitmap list, select the button you want to use.
5. Choose OK.

The Edit Bitmap Dialog Box

Use the Edit Bitmap dialog box to edit the appearance of a bitmap on a Toolbar or QuickPad button. The left and right mouse buttons can independently apply colors.



Edit Bitmap Dialog Box

You can change the following options or attributes:

Preview: Displays an actual-size preview of the icon, updated continuously as you edit.

Editing Area: Displays the bitmap and allows you to edit bitmap pixels.

Colors: Select a color from this palette by clicking it. Click the left mouse button on a color to “attach” it to the left mouse button; click the right mouse button on a color to “attach” it to the right mouse button.

Left Mouse Button Color: Displays the color attached to the left mouse button. Click the left mouse button on a color to attach a different color.

Right Mouse Button Color: Displays the color attached to the right mouse button. Click the right mouse button on a color to attach a different color.

To edit the bitmap on a bitmap button

1. Select or create the toolbar button or QuickPad bitmap button.
2. Double click the button or choose the Object Properties command from the Edit menu.
3. Choose the Action page, and then choose the Customize button in the Bitmap group.
4. Select the bitmap you want to edit, and then choose Edit.
5. Click the right or left mouse buttons on the larger image at left to change them. You can see your results in the Preview area.
6. You can select different colors for the right or left mouse buttons by clicking that button on the desired color in Colors.

Adjusting Page Recording Time for Host “Settle”

EXTRA! adds from 2 to 20 seconds of buffer time between recorded pages to give the host time to “settle” or recognize the new screen. A page recorded with an inadequate settle time may play back as partial, blank, or missing or its keystrokes may be associated with the previous or next screen. Your host’s settle time requirement can be greater when response is slow due to connection type or because of heavy traffic.

Based on host and connection type, *EXTRA!* automatically selects an appropriate settle time for you. If this default settle time is inadequate or excessive, you can override the default from the Settings dialog box. Choose the Navigations category, General page.

Navigation Settings

Use this page to alter the host “settle time” delay or choose to do so manually during the page recording process. The slider bar is automatically set to an appropriate settle time derived from your host and connection type.

This feature is composed of the following elements:

Slider bar: Adjust the slider bar to between 2 and 20 seconds by using the mouse cursor to drag the control. Increase or decrease the settle time in four-second increments by clicking the mouse cursor on the bar either to the right or left of the control. Your settle time selection is indicated to the right of the slider bar.

To alter host settle time

1. From the Options menu, choose Settings.
The Settings dialog box is displayed.
2. Choose the Navigations category.
The Navigations General page is displayed.
3. Use the mouse cursor to move the slider bar right or left to increase or decrease the settle time.

CHAPTER

*Host
Graphics*



Host Graphics Emulation

This chapter gives you a brief introduction to host graphics emulation in *EXTRA!*. If you have not worked with host graphics software before, this overview may help you to understand the basic concepts of host graphics emulation.

The *EXTRA!* host graphics emulation provided by *EXTRA!* allows you to emulate a host graphics terminal and to work with vector graphics applications on the mainframe. Vector graphics consist of lines and arcs as opposed to bitmaps which consist of rows and columns of dots. *EXTRA!*'s host graphics emulation gives you true graphics terminal emulation. This means that the mainframe computer treats your computer as if it were a mainframe graphics terminal. *EXTRA!* supports four mainframe graphics applications: AS, SAS, GDDM, and GRAFPAK. You have three graphics models to choose from for your emulation: 3179G, 3192G, 3472G, and 3270PCG.

Note: Many GDDM applications may not support display models 4 and 5.

The terms you will encounter frequently while using *EXTRA!*'s host graphics emulation are explained below.

A *graphics session* is a terminal session that supports host graphics. It has options that work specifically with host graphics applications.

The *graphics cursor* is the pointer that affects the host graphic image. It is different from and operates differently from the Windows pointer and can be displayed as crosshair or boxed crosshair.

Graphics Terminal Characteristics

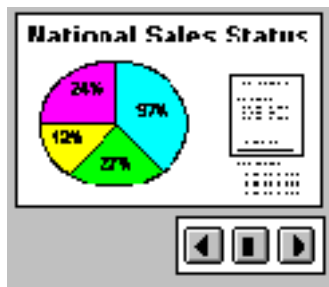
A standard terminal displays text characters in rows and columns. A model 2 terminal screen displays 1920 cells of 24 rows with 80 characters in each row. Each cell can display a character defined in the character set for the terminal.

These characters cells, however, are not the smallest display unit on the screen. Each cell is composed of rows and columns of pixels, tiny areas of light that can be turned off or on individually. To form a character in a cell, the terminal lights up only those pixels that form a representation of the character.

A graphics terminal uses pixels to draw characters or graphic images. It does this by processing instructions from the mainframe application that tell it to construct images using basic graphics elements. These elements, called primitives, consist of objects such as lines, ellipses, arcs, curves, and patterns. When these elements are received by the graphics terminal, the terminal then searches its character definition set and constructs the elements on the screen by lighting up the appropriate pixels.

This type of graphics construction, where the terminal can process the primitives directly, is called vector graphics. It is also called All Points Addressable (APA) graphics.

Host graphics applications have two layers: a text layer and a graphics layer as shown in the figure below.



The text layer contains the application interface text, such as menus, list of commands, and display characters. The graphics layer contains an image and the space surrounding it.

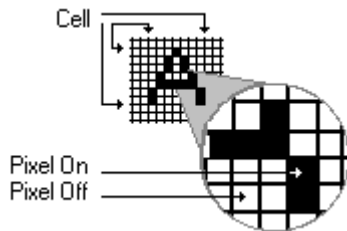
The text layer is superimposed over the graphics layer to form the image you see in the display space. The text layer can contain both transparent text (which allows the graphical image to show through) and non transparent text (which overlays the graphical image). These layers are the same size. On a standard IBM 3179G terminal, the size would be 720x384 pixels.

Loadable Symbols

Loadable symbols, also called graphic symbol sets, are sets of symbols up to 32x32 pixels in size that are treated as small, individual bitmaps.

There are different uses of loadable symbols. They can appear in the graphics layer or the text layer. In the graphics layer, they are commonly referred to as Graphics Symbol Sets and can be used as markers, fill patterns, or custom text. In the text layer, they are referred to as Program Symbols and are used as custom text. In either case, the symbol sets are created on a mainframe host graphics application and then downloaded to the graphics terminal. The application then selects a symbol or group of symbols to display on the text or graphics layer.

For example, if loadable symbols were used to draw custom text, and the character size was 9x12 pixels, an "A" might appear as shown in the following illustration.



True Graphics Terminal Emulation

Graphics Terminal Emulation has the capability of displaying all the primitives as an IBM graphics terminal, such as the 3179G or the 3472G, would. Primitives such as lines, ellipses, arcs, patterns, and loadable symbols are all rendered correctly and scaled to fit within the terminal window on your display screen. This is important since certain mainframe graphics applications will perform properly only on terminals having certain display characteristics. Using this program your display can appear as an IBM 3179G, a 3192G, a 3472G, or a 3270PCG.

The window dimensions for the terminal emulation session might not be the same as configured for the display (3179G, or 3472G). If the dimensions deviate significantly from the proportions of the configured display resolution, the image may appear stretched or compressed as it is sized to fit the terminal window. *EXTRA!*'s display fonts allows you to display graphics correctly.

To display your graphics correctly, in your graphics session, choose from ATM Graphics 2.5, or ATM Graphics 3.4 from Fonts in the Settings dialog box.

Customizing Your Graphics Sessions

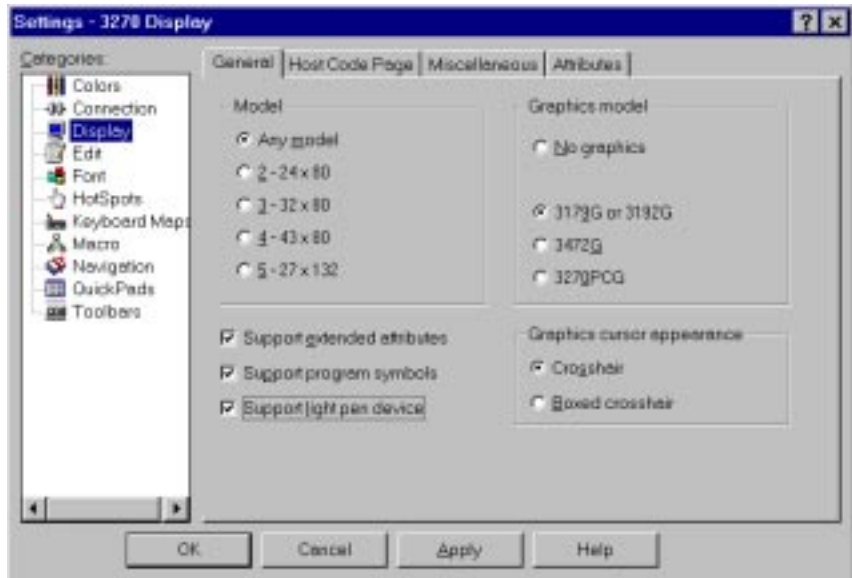
EXTRA!'s host graphics emulation lets you customize host sessions to fit your needs. You can choose the IBM graphics terminal to emulate, and customize your terminal emulation. Emulating a mainframe graphics terminal in Windows gives you a very powerful tool in an easy-to-use-environment, with various display and performance options to choose from.

You can customize your graphics by using the options on the Display page. The graphics options include selecting the graphics cursor type and the colors for your session.

Starting a Graphics Session

You can start a graphics session using the Settings dialog box after you have started a terminal session. On the General Page in Display, you can choose the following:

- graphics model for your graphics session
- support for extended attributes
- program symbols and the light pen device
- graphics cursor type for the session



The Settings - 3270 Display General Page

To start a graphics session

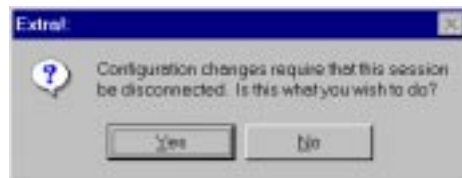
1. Open a display session in *EXTRA!*.
2. From the Settings dialog box, select Display.
3. From the General Page, set the appropriate graphics sessions options listed below.

Support Extended Attributes: Select this to choose your graphics terminal model.

Program Symbols Support: Enables loadable symbols support. Loadable symbols, also called graphic symbol sets, are sets of symbols that are treated as small, individual bitmaps. Loadable symbols can appear in the graphics layer or the text layer. In the text layer, they are referred to as Program Symbols and are used as custom text.

No Graphics: Displays a non-graphics session when selected.

4. Choose from one of the graphics terminal models listed below.
 - 3179G or 3192G:** Displays a graphics terminal with the screen size 720x512. Model 2 cell size is 9x16, and model 3 cell size is 9x12.
 - 3472G:** Displays a graphics terminal with the screen size 720x384. Model 2 cell size is 9x21, and model 3 cell size is 9x16.
 - 3270PCG:** Displays a graphics terminal with the screen size. Model 2 cell size is 9x21, and model 3 cell size is 9x16.
- Graphics Cursor Appearance:** Specifies the appearance of the graphics cursor. You can choose from Crosshair or Boxed crosshair
5. Choose the OK button to save settings and return to the session.
6. Select Yes in the dialog box to disconnect from your current session.



Note: Changing these settings closes the current session and starts the graphics session. Also note that the data in your current session will be lost.

Changing Host Graphics Colors

With host graphics, you can change the colors of the image as they are displayed in the session using the Colors page in the Settings dialog box. The color changes affect how the image is displayed and captured.

When you save part or all of the image to the Clipboard or file, you will save the colors displayed on the screen. Each session has its own color settings.

Interacting With Graphics

Some mainframe graphics applications have interactive features that allow you to manage graphics input. These applications allow you to select and move an object in a drawing. The host graphics emulation in *EXTRA!* supports many of these interactive applications through your PC mouse. *EXTRA!* provides a graphics cursor that you can display as a crosshair or a boxed crosshair cursor. The graphics cursor you choose in *EXTRA!* allows you to move the host interactive cursor as necessary. The left mouse button acts as the host mouse button.

Working With Graphics and Text

Some mainframe graphics images contain text and graphics, and some contain only graphics. The images you display and the type of graphics you choose determine how you work with text and graphics, as All Points Addressable (APA) or Programmed Symbols (PS). In *EXTRA!*, the text is considered standard 3270 text, and the graphic is considered a graphic image. However, note that some graphics can contain elements that appear to be text, but are actually graphics.

When you copy all or part of a graphic that contains both text and graphics, you can paste the graphic into other Windows applications in the metafile or bitmap format. In the metafile format, only text or graphic elements can be pasted, depending on the part of the image that was copied. In the bitmap format, all elements of the image are pasted in. You can choose the format after you copy the image to the Clipboard by choosing Picture or Bitmap.

Copying and Pasting Graphic Images

After you display a drawing or image, you can copy and paste the contents of the text or graphics window to other Windows applications such as CorelDRAW!, PC Paintbrush, PageMaker, or Ventura Publisher. You can copy all or part of your terminal screen, the text only or the text and graphics together. You need to select the area you want to copy.

You can select the area as you would in any Windows application, by clicking where you want to start and dragging across the area.

To copy and paste graphic images

1. Select the area you want to copy.
2. From the Edit menu, choose Copy.

The text or graphics are copied to the Clipboard in Windows Metafile Format (WMF) or as a bitmap image.

3. Open the Windows application you want and paste the contents of the Clipboard into the application.

Note: You can paste text into any unprotected text field in your terminal session. However, you cannot paste graphics into any session, including a graphics session.

CHAPTER

*Setting Up
and Using
Navigation
Paths*



One of the most time-consuming tasks in a host session is often that of merely getting to the particular host application screen in which you are interested. In *EXTRA!* we have included a feature to take the repetition out of navigating through your host applications. Using *EXTRA!*, you can record the “path” that you take to and from your host applications, then replay this recording later to automatically perform the navigation. We refer to the various screens you traverse on the host as “pages.”

In addition, using *EXTRA!* you can “bookmark” a host screen page. Later, when you want to return to that page, you can select the bookmark, which then takes you to the selected point in the navigation path. This chapter covers the procedures necessary to record, replay, and edit navigation path recordings.

Recording Host Screen Pages

You can record a series of host screen pages by using the procedures you would normally use to navigate through the host application.

Then, any time you want to display a particular host screen, you can choose Go To Bookmark/Page from the Tools menu and select the desired screen name.

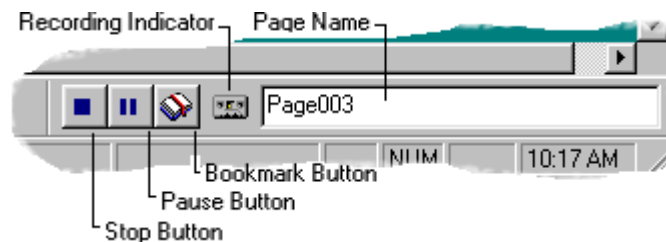
Once you have recorded host screens, you can also perform the following tasks:

- Rename a host screen (for example, renaming Page001 to “Logon Screen,” Page002 to “Main Menu,” and so on).
- Associate a QuickPad, macro, toolbar, or scheme (such as a color scheme or a HotSpot scheme) with specific host screen or group of host screens. Any time you access that host screen, the associated item is started (for example, the toolbar or QuickPad loads, the macro runs, the colors or HotSpots are applied, and so on).
- Specify which host screens to use as bookmarks. Bookmarks make it easy to work with only the recorded pages in which you are most interested. For example, you might record ten host screens, but only be interested in navigating to the last one. When you specify that the last screen is a bookmark, only that screen will appear in the list box when you choose Go To Bookmark/Page from the Tools menu and select View Bookmarks.

- Create groups of host screens that you want to handle in a similar way. For example, if you want a particular group of host screens to use a specific color scheme, you can put those host screens together in a group and apply the color scheme to the group, rather than having to apply it to each host screen one at a time.
- Perform advanced functions, such as customizing how the host screen is accessed or identified.

The Record Pages Tool bar

When you start to record the path to the screen you want to bookmark, the Record Page toolbar appears at the bottom right of your session's window. As you navigate through your host screens, the tool bar shows the default name associated with each recorded page, and lets you edit this name, mark a recorded page with a bookmark, pause the recording of pages, and stop recording.



Record Page Toolbar

You can change the following options or attributes:

Stop button: Stops the recording of host screen navigation, and cancels the dialog box. Any previously recorded host screen pages are saved.

Pause button: Pauses the recording of pages. Any actions that cause a new screen to appear will not be recorded. To continue recording, choose this button again.

Add Bookmark button: Marks the currently displayed page name as a bookmark. Bookmarks make it easy to work with only the recorded pages in which you are most interested.

Page Name: Displays the name assigned to the currently recorded host screen page. You can edit this name while recording, or edit it later in the Page Settings dialog box.

Recording Indicator: An animated record indicator indicates that the recording of page navigation is in progress.

To record host pages

1. Starting at your log on screen (recommended), choose the Record Pages command from the Tools menu.

The Record Pages toolbar appears on the session.

2. Wait until a name appears in the Record Pages window. Until this happens, the program is reading the host screen and recording identifiers.



Important: If you don't wait long enough at each screen, you may record partial screens. Also, make sure you do not type any additional keystrokes as they will be associated with the navigation to this screen.

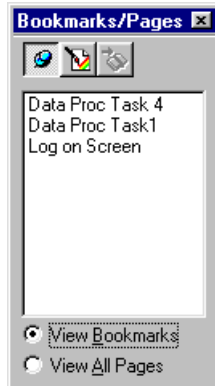
3. (Optional) In the Page Name box of the Record Pages tool bar, type a name to identify this screen. You can also rename the screen pages later by using the Page Settings dialog box.
4. Use your usual procedures for navigating through the host application screens, repeating steps 2 and 3 for each host screen page.
5. When you have navigated through all the host screens that you want to record, choose the Stop button on the Record Pages window to stop recording.



Important: For best results, return to the screen from which you started before stopping the recording.

The Bookmark/Pages Dialog Box

Use the Bookmarks/Pages dialog box to “play back” a recorded navigation path and to go directly to a recorded host screen page or bookmark.



The Bookmarks/Pages dialog box

You can change the following options or attributes:

Stay Visible button: Keeps the Bookmarks/Pages dialog box visible (on top) of all other session windows.

Page Settings button: Opens the Page Settings dialog box where you can change the properties (for example, change the page name, add bookmarks, group pages into navigation schemes, and so on) of the recorded pages.

Go button: Shows the screen associated with the page selected in the Bookmark/Pages list.

Bookmark or Page List: Lists the recorded pages in the selected category: Bookmarked only or All Pages.

View Bookmarks option: Shows all pages (in the Bookmarked/Pages list) that are bookmarked.

View All Pages option: Shows all recorded pages in the Bookmarked/Pages.

To go to a recorded host page

1. From the Tools menu, choose the Go To command, then choose the More command.
2. In the Bookmarks/Pages dialog box, select the View All Pages option at the bottom of the dialog box.

Note: If you want to go to more than one page, choose the Stay Visible button (pushpin).

3. In the Bookmarks/Pages list, select the page, and then choose the Go button from the toolbar:



To go to a bookmark

1. From the Tools menu, choose the Go To command.
2. From the Go To commands list, choose the name of the bookmarked page you want.

To select several bookmark pages sequentially:

1. From the Tools menu, choose the Go To command, and then choose the more command.
2. In the Bookmarks/Pages dialog box, choose the Stay Visible button



3. Choose the View Bookmarks option at the bottom of the dialog box.
4. Select a bookmark from the list, then choose the Go buttonGo button.



Working with Recorded Host Screen Pages

The Page Settings dialog box contains controls you can use to:

- View an image of a recorded page
- Attach one or more settings (such as a macro, color scheme, QuickPad, or toolbar) to a recorded page or group of pages
- Designate certain recorded pages as bookmarks
- Create groups of recorded pages so that you can more easily attach settings to many recorded pages at once
- Edit recorded paths
- Edit page names and other identification for pages

The general options on the Page Settings dialog box are as follows:

“Session_Name” Pages: Displays the name of the recording.

Page list: Displays the names of the recorded host screen pages.

Rename: Choose this button to rename the selected page.

The Page Settings Preview Page

Using this page, you can view an image of the selected host screen.

Page Preview: Displays the selected page as it appeared when it was recorded.

Choose Page Preview to display the selected page as it appeared when it was recorded.

To preview a recorded host page

1. Choose the Page Settings command from the Tools menu to display the Page Settings dialog box. You can display this dialog box only if you have recorded host screens.
2. From the “Session_Name” Pages list box, choose the screen that you want to preview.
3. Choose the Preview tab.

The Page Settings, Settings Page

Using this page, you can associate a file transfer type, QuickPad, macro, toolbar, or scheme (such as a color scheme or a HotSpot scheme) with specific host screen or group of host screens.

Every time a user accesses a recorded screen — by using a bookmark that passes through the screen, or just by logging on normally — the screen shows your settings.

Page Settings: Displays the QuickPads, macros, toolbar, or schemes that are currently associated with the selected host screen or group of host screens.

Add: Associates the selected QuickPad, macro, toolbar, or scheme with the selected host screen.

Delete: Removes the selected QuickPad, macro, toolbar, or scheme from the list of items associated with the selected host screen.

Available Settings: Displays the QuickPads, macros, toolbars, or schemes that can be associated with the selected host screen.

To add settings to a host page

1. From the Tools menu, choose Page Settings to display the Page Settings dialog box, or choose the Page Settings button on the toolbar, if it is available. This may vary depending on the toolbar that is attached to your session.

You can display this dialog box only if you have recorded host screens.

2. From the "Session_Name" Pages list box, choose the screen or group of screens with which you want to associate a setting.
3. Choose the Settings tab.
4. From the Available Settings list box, double-choose the folder that contains the setting that you want to add.

Folders preceded by a plus symbol (+) contain settings that can be associated with host screens. When you choose a folder preceded by this symbol (or choose the plus symbol), the settings associated with the selected folder appear in the list box.

A minus symbol (-) appears in front of folders that you can collapse. When you choose a folder preceded by this symbol (or choose the minus symbol), the listed settings no longer appear in this list box.

5. Choose the setting to add to the host screen or group of screens.

All configured settings appear in the Available Settings list box, but not all settings might be appropriate for each host screen. Be sure to associate only those settings that are appropriate for the selected host screen. Every time a user accesses a recorded screen — by using a bookmark that passes through the screen, or just by logging on normally — the screen shows your settings.

6. Choose Add.

The Page Settings Bookmarks Page

Using this page, you can specify which host screens should be bookmarks. Following is a description of the options available on the Page Settings Bookmarks page.

Add: Adds the selected host screen to the list of bookmarks.

Delete: Removes the selected host screen from the list of bookmarks.

Page list: Displays the host screens that are currently specified as bookmarks.

To bookmark recorded host pages

1. From the Tools menu, choose Page Settings to display the Page Settings dialog box, or choose the Page Settings button on the toolbar, if it is available. Whether the button is available depends on the toolbar that is attached to your session.

You can display this dialog box only if you have recorded host screens.

2. From the “Session_Name” Pages list box, select the screen that you want to specify as a bookmark.
3. Choose the Bookmarks tab.
4. Choose Add.

The Page Settings Groups Page

Using this tab, you can create groups of host screens. This makes it easier to associate settings with host screens, since you can associate the settings with an entire group rather than with one screen at a time.

For example, if you want a particular group of host screens to use a specific color scheme, you can put those host screens together in a group and apply the color scheme to the entire group. It often makes sense to group all pages from a particular host application.

Note: Every time a user accesses a recorded screen — by using a bookmark that passes through the screen, or just by logging on normally — the screen shows your settings. Therefore, you must use caution when setting multiple screens at once with the same schemes.

Following is a description of the options available on the Page Settings Groups page.

Group list: Displays the name of the group to which you want to add host screens or from which to delete host screens. If you have not created any groups yet, this text box is blank. Select New Group to create a group.

New Group: Creates a new group.

Remove: Choose to delete the selected group.

Add: Adds the selected host screen to the specified group.

Delete: Removes the selected host screen from the specified group.

Page list: Displays the host screens that are currently in the specified group.

To group host screen pages

1. From the Tools menu, choose Page Settings to display the Page Settings dialog box, or choose the Page Settings button on the toolbar, if it is available. This may vary depending on the toolbar that is attached to your session.

You can display this dialog box only if you have recorded host screens.

2. Choose the Groups tab.
3. If you have not already created a group for your host screen pages, choose New Group. Complete the New Group dialog box, creating a name for the new group.
4. From the "Session_Name" Pages list box, choose the screen that you want to include in the group.
5. Choose Add.
6. Repeat steps 4 and 5 until the group contains all the desired host screen pages.

To delete a group of host screen pages

1. From the Tools menu, choose Page Settings to display the Page Settings dialog box, or choose the Page Settings button on the toolbar, if it is available. This may vary depending on the toolbar that is attached to your session.

You can display this dialog box only if you have recorded host screens.

2. Choose the Groups tab.
3. On the Groups page, select the group that you want to remove from the Group list box.
4. Choose Remove.

Note: The group is removed, but none of the host screen pages included in the group are removed.

To remove a host page from a group

1. From the Tools menu, choose Page Settings to display the Page Settings dialog box, or choose the Page Settings button on the toolbar, if it is available. This may vary depending on the toolbar that is attached to your session.

You can display this dialog box only if you have recorded host screens.
2. Choose the Groups tab.
3. From the Group pull-down list, select the group from which you want to remove a host screen.
4. From the pages list box, select the host screen that you want to remove from the specified group.
5. Choose Delete. The page is removed from the group, but not from the recording.

The Page Settings Advanced Page

Using this page, you can edit either a recording (of a navigation path) to a particular host screen page, or edit Page Identification, such as the name of a recorded page.

Note: The Advanced Page is available only if you select the Expand Page Settings Dialog Box option in the Global Preferences dialog box.

The ability to edit recorded navigations provides a powerful method for tailoring the paths to your host screen pages, eliminating any unnecessary steps on the way. *EXTRA!* provides five dialog boxes with which you can manipulate your recorded paths. Depending on your selections, you might encounter the same dialog box at different points in the process. The five dialog boxes are:

- Edit Recording
- Edit Screen
- Edit Path
- Edit Field
- Edit Identification Field

Following is a description of the options available on the Page Settings Advanced page.

Edit Paths: Choose here to open the Edit Recording dialog box.

Edit Page Identification: Choose here to open the Edit Screen dialog box.

The Edit Recording Dialog Box

This dialog box shows the navigation path that your recording represents. From this dialog box, you can edit either the included host screen pages or the path itself.

Following is a description of the options available on the Edit Recording dialog box.

Expand/Collapse button: Choose this button to show or hide the list of recorded screens or the list of recorded paths.

Add: Adds a new element into the path or screen list.

Edit: Allows you to edit a path, a field, or an identification field.

Delete: Removes the selected element from the screen or path list.

Variable Length Recorded Data: Contains the list of recorded screens and paths.

Information window: Displays information about the paths and screens in the current recording.

OK: Closes the window and saves any changes you have made.

Cancel: Closes the window and without saving any changes you have made.

The Edit Screen Dialog Box

This dialog box shows the terminal fields, identification fields, and paths from the selected screen page, so that you can:

- Change any of the terminal field names for the selected screen page
- Change the way *EXTRA!* recognizes an identification field
- Add an identification field
- Remove an identification field
- Remove or change any of the recorded paths from the selected screen
- Add a path from the selected screen

Following is a description of the options available on the Edit Screen dialog box.

Screen Name: Displays the name of the selected host screen page in the recording.

Expand/Collapse: Choose this button to show or hide the list of terminal fields, the list of identification fields, or the list of paths.

Add: Adds a new element into the identification field list or the direct path list.

Edit: Displays the dialog box to edit a path, a field, or an identification field.

Delete: Removes the selected element from the identification field list or the direct path list.

Variable Length Recorded Data: Contains the list of terminal fields, identification fields, and paths away from the selected screen page.

Information Area: Displays information about the paths and screens in the current recording.

OK: Closes the window and saves any changes you have made.

Cancel: Closes the window without saving any changes you have made.

The Edit Path Dialog Box

This dialog box shows the user entries, terminal keystrokes, and the path from the selected screen page, so that you can:

- add a prompt for the user to enter text
- type in any text you want to be entered as if it were user input; for example, a logon ID
- select keystrokes from a list to be added to the path entries
- insert, replace, or delete key entries in the path

Following is a description of the options available from the Edit Path dialog box.

Prompt User for Input Text: You can type in an appropriate prompt for text that the user must enter, such as a password. It displays the prompt in a text entry dialog box at the designated point in the path.

Edit Entry: Specify the text that you would like added, or inserted, or that should replace an entry in the Key Entries path list. You can type the text in directly for a logon ID or host command, or you can select keystrokes from the Terminal Keys list.

Terminal Keys: Choosing a key name from this list causes it to appear in the Edit Entry box, from which you can add or insert it into the list, or replace another entry.

Insert: Inserts the contents of the Edit Entry text box into the Key Entries list. The item is inserted above the selected entry.

Add: Adds the contents of the Edit Entry text box to the Key Entries list. The item is added below the selected entry.

Replace: Replaces the selected entry in the Key Entries list with the contents of the Edit Entry text box.

Delete: Deletes the selected entry in the Key Entries list.

Key Entries in Path: Contains all of the text and keystrokes that either were entered as the path was recorded or added within this dialog box.

OK: Closes the window and saves any changes you have made.

Cancel: Closes the window without saving any changes you have made.

To edit a recorded path

1. From the Page Settings dialog box, choose the Advanced tab.
2. Choose Edit Paths.
3. Edit the appropriate items and choose OK. From the Edit Recording dialog box, you can edit paths, screens, or both.

When you edit a *path*, you are editing the keystrokes that *EXTRA!* sends to the host when playing back a recording. When you edit a *screen*, you are editing the labels on fields, or defining or modifying which fields *EXTRA!* uses to identify screen pages.

The Edit Field Dialog Box

This dialog box shows the field number, row, column, length of the selected host screen field, along with its field attributes. From this dialog box, you can assign a new name to the field.

Following is a description of the options available on the Edit Field dialog box.

Field Name: Displays the name of the field and allows you to change the field name.

Field Information: Displays the field number, row, column, length of the selected host screen field, along with its field attributes.

OK: Closes the window and saves any changes you have made.

Cancel: Closes the window without saving any changes you have made.

The Edit Identification Field Dialog Box

From this dialog box, you can specify the row position, column position, and length for a field used to identify the host screen page. You can have the program use asterisk (*) wildcard characters.

Following is a description of the options available on the Edit Identification Field dialog box.

Row: Displays the beginning row of the screen identification field.

Column: Displays the beginning column of the screen identification field.

Length: Displays the length of the screen identification field.

Absolute Position: Saves both the row and column position on which the field is to begin.

Anywhere on this Row: Saves the row position but replaces the column position with a wildcard character (*).

Anywhere in this Column: Saves the column position but replaces the row position with a wildcard character (*).

Anywhere in Screen: Replaces both the row and column position with wildcard characters (*).

Data: Displays the characters on the selected host screen page at the selected positions.

OK: Closes the window and saves any changes you have made.

Cancel: Closes the window without saving any changes you have made.

To edit an identification field

1. With a host screen selected in the Page Settings dialog, choose the Advanced tab.
2. Choose the Edit Page Identification button. The Edit Screen dialog is displayed.
3. Choose the Identification Fields icon, then choose Expand.
4. Choose Add to add a new identification field
-or-
Select a field and choose Edit to edit an existing identification field.
5. Select appropriate values for the row, column, and length settings.
6. Select whether you would like absolute positioning, a row wildcard, a column wildcard, or both.
7. Choose OK if you are satisfied with the changes you have made.

Recording Pages Security

You can restrict access to all page recording commands. If you clear the check boxes for the Record Pages, Page Settings, or Go To Bookmark/Page commands in the Security Action dialog box, the commands will no longer be available from the Tools menu, and the program removes the commands from the Category list in the Action dialog box. The user will not be able to record host screen pages, associate settings with pages or page groups, or select a page or bookmark to go to when these commands are disabled in the Security dialog box.

To set recording pages security

1. Select Security from the Options menu.
The Security dialog box is displayed.
2. Select the security scheme you want to edit. The name of the security scheme is listed in the Scheme field. Choose Browse if you want to select a different scheme.
3. Choose the Options tab.
4. If asked for a password, enter the password in the Security Password dialog box then choose OK.
5. From the Category list, choose Tools.
6. In the Commands list, clear the checkboxes for the navigation commands you want to secure: Record Pages, Page Settings, or Go To Bookmark/Page.
7. To save the scheme, go back to the File page and choose Save As.

CHAPTER

*Recording
and Editing
Macros*



A macro is a series of recorded keystrokes, actions, or special commands that you can combine into a single file. This file can then be associated with a menu command, key combination, at the opening of a session, a particular host screen, HotSpot, QuickPad and more. Macros automate repetitive tasks and can simplify complex ones — into a single command or keystroke.

You can create macros by recording keystrokes you enter as you're working, create them using the Macro Editor in conjunction with the full-featured *EXTRA!* Basic Macro Language, or using a combination of both methods.

This chapter provides step-by-step instructions for both methods.

Here are some common uses for macros:

- Simplifying complex tasks such as transferring a series of files from your host to your PC.
- Automating repetitive tasks such as logging into your host, typing your user ID, password, and pressing the ENTER key, then navigating to your host application.
- Extend or create new *EXTRA!* functions. For example, the provided macro CAPTUR32.EBM grabs an entire screen of data from the host and lets you edit the data in Notepad.

Recording a Macro

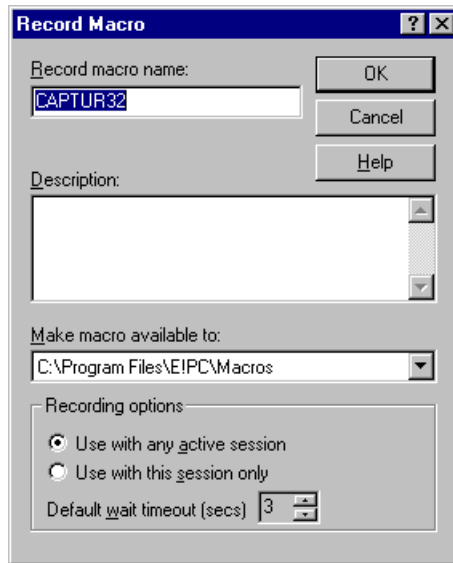
The fastest way to create a macro is to record it. Start the macro recorder by choosing Record from the Macro menu. *EXTRA!* records your actions until you stop the macro recorder. When you run the macro, it “plays back” what you recorded — but it does so much more quickly.

EXTRA! also includes a Macro Editor that you can use to edit your recorded macro code or to create more complex macros with the *EXTRA!* Basic macro language. This editor has a built-in compiler and several debugging tools so you can check the syntax of your macro and make sure it will run correctly.

The Record Macro Dialog Box

Use the Record Macro dialog box to record a macro. When you record a macro, you can temporarily pause the recording. For example, if you forget the name of a file to be included in the macro, you can pause the recording, look up the file name, and then resume recording.

In addition, you can insert several special macro functions into a macro as you record it.



The Record Macro dialog box

Record Macro Name: Enter a unique name for your macro.

Description: (Optional) In the Description field, enter a brief description of the macro. Your description provides a quick reference, especially in installations where many different macros have been created.

Make Macro Available To: Enter the location to which you want to make your macro available.

Recording Options

Use with any Active Session: When selected, your macro is used with any session that is active.

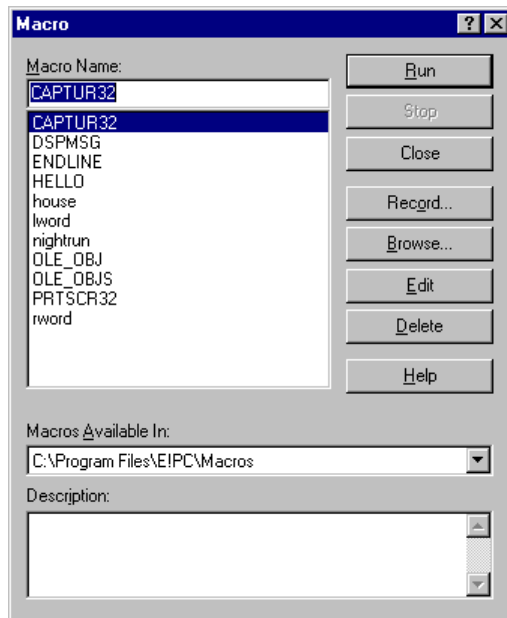
Use with this Session Only: When selected, your macro is used only with the current session.

Default Wait Timeout: Indicates the amount of time the macro waits before continuing to record actions. The default is 3 seconds.

To record a macro

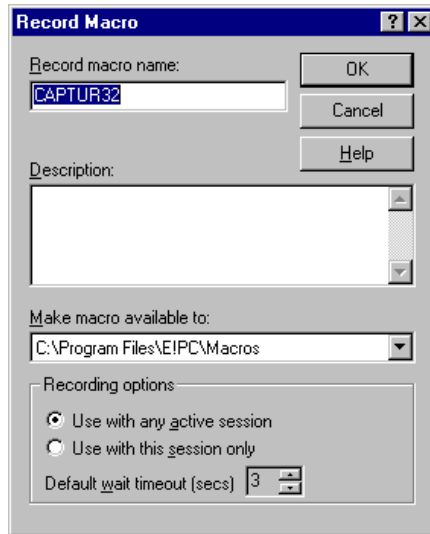
1. From a session, choose Macro from the Tools menu.

The Macro dialog box appears on your screen.



2. Choose the Record button.

The Record Macro dialog box opens.



3. In the Macro Name field, enter a unique name for your macro.
4. (Optional) In the Description field, enter a brief description of the macro. Your description provides a quick reference, especially in installations where many different macros have been created.
5. In the Make Macro Available To field, enter the location to which you want to make your macro available.
6. Select from the recording options listed below:

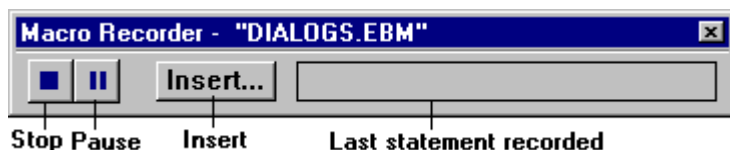
Use with any Active Sessions: When selected, your macro is used with any session that is active.

Use with this Session Only: When selected, your macro is used only with the current session.

Default Wait Timeout: Indicates the amount of time the macro waits before continuing to record actions. The default is 3 seconds.

7. Choose the OK button.

The macro recording panel displays.



- 8 Perform the actions you want to record.

To stop recording temporarily, press the Pause button. Press the Pause button again to continue recording.

To pause the macro and insert a special macro command into the script, press the Insert button. The special macro commands that can be inserted include:

- Wait Functions
- Move Cursor Position
- Prompt Message Text

9. To stop recording after the last action, press the Stop button.

To run a macro from the Macro Editor

When all syntax errors have been located and corrected and your macro compiles successfully, you can further test the macro by running it.

1. If you have more than one macro displayed, make sure the appropriate macro is active.
2. From the Run menu, choose Go.

To run a macro from EXTRA!

The following steps describe how you can run a macro after you've recorded it, or saved it in the Macro Editor.

1. From the Options menu, choose Macro.
The Macro dialog box appears on your screen.
2. Type the name of the macro you want to run or select Browse to locate the macro file, and then choose the Run button.

To stop macro execution from within the Macro Editor

To stop execution of a macro while it is running,

- From the Run menu, choose Stop.

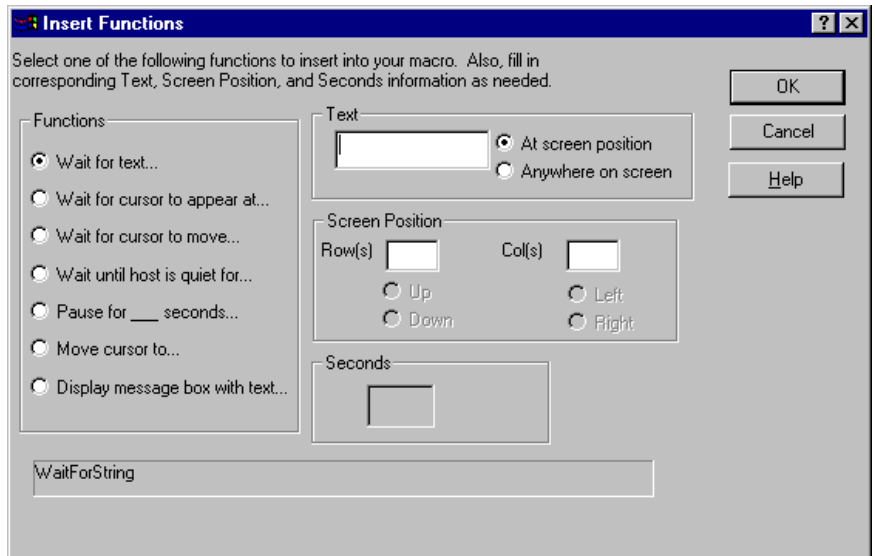
Inserting Special Macro Commands

You can pause a macro recording and insert special macro functions into the script. The following types of special macro functions are included:

- Wait functions cause the macro to wait until specified host conditions are met before resuming (specific text appears, host is ready, a specified number of seconds has elapsed, the cursor is positioned at a specified row and column, the cursor moves up, down, left, or right a specified amount). Wait functions are useful in macros that require the host to do time-consuming processing.
- Moving cursor position moves the cursor to a new position on the host screen.
- Entering text pauses the macro and displays a text prompt. When responded to, the macro resumes.

The Insert Functions Dialog Box

In this dialog box, you can insert a wait command which pauses the macro until the specified host conditions are met, move the cursor to a new position on the host or pause the macro and display a text prompt.



The Insert Functions dialog box.

Functions

Wait for Text: Causes the macro to wait until specified text appears. You can choose to have it appear at a specific position (Row(s), Col(s)) or you can choose no specific position (Anywhere On Screen).

Wait for Cursor to Appear at: Causes the macro to wait until the cursor is at the designated row and column.

Wait for Cursor to Move: Causes the macro to wait until the cursor moves to the designated location, relative to its current (up/down, left/right) location.

Wait Until Host is Quiet for: Causes the macro to wait until the host is quiet (ready) for the designated number of seconds.

Pause for ___ Seconds: Causes the macro to wait the designated number of seconds before resuming.

Move Cursor To: Indicates what row and column you want the cursor position to be on the host.

Display Message Box With Text: Causes the macro to wait until the user responds to the message box with this text.

Text: Enter the text that you would like to appear in the prompt message.

Anywhere On Screen: Indicates that the specified text may appear anywhere on the screen to satisfy the wait condition.

At Screen Position: Indicates that the text must appear at a designated screen position (Row and Col) to satisfy the wait condition.

Screen Position

Row (s): If the Wait Until Cursor Moves function is selected, this field indicates a relative move up or down this many rows.

Column(s): If the Wait Until Cursor Moves function is selected, this field indicates a relative move left or right this many columns.

Up: Indicates the cursor must move this many rows (up) from its current position before the macro resumes.

Down: Indicates the cursor must move this many rows (down) from its current position before the macro resumes.

Left: Indicates the cursor must move this many columns (left) from its current position before the macro resumes.

Right: Indicates the cursor must move this many columns (right) from its current position before the macro resumes.

Seconds: Enter the number of seconds to wait before resuming. You can enter the number of seconds the host is quiet or you can enter the number of seconds the macro should wait before resuming.

To insert special macro functions

The following steps describe how to insert special macro functions as you record a macro.

1. From the Macro Recorder panel, press the Insert button.
2. Select the function you'd like to insert.
 - Wait functions cause the macro to wait until specified host conditions are met before resuming (specific text appears, host is ready, a specified number of seconds has elapsed, the cursor is positioned at a specified row and column, the cursor moves up, down, left, or right a specified amount). Wait functions are useful in macros that require the host to do time-consuming processing.
 - Moving the cursor position moves the cursor to a new position on the host screen.

Note: This function repositions the cursor only when the macro is running. As you record, you must move the cursor manually.

- Entering text pauses the macro and displays a text prompt. When responded to, the macro resumes.
3. Choose the OK button.
 4. Finish recording your macro.

EXTRA! Basic Language

If you've worked with macros or done some Basic programming before, much of the material here will be familiar to you. If you haven't had any experience with macros or programming in Basic, you may find it helpful to consult a book on fundamental programming skills or get help from your system administrator.

You can create a macro by recording a series of actions in *EXTRA!*, writing it from scratch using the *EXTRA!* Basic Language, or by recording some parts and writing others. Recording is best for simple macros, while more complex macros typically use macro instructions that cannot be recorded.

Note: Each *EXTRA!* Basic statement, function, and OLE automation call online Help topic includes an example. To copy the example code into your macro code, choose the Copy button in the example window, then position the cursor in the Editor workspace and choose Paste from the Edit menu. Then rework the example as needed.

Whether you record a macro or use the Macro Editor to create a macro, it's important that the commands you use are carefully worded and punctuated. Each command must conform to specific rules, or syntax. If the syntax is incorrect, your macro won't compile.

The list below will help you understand the syntax that *EXTRA!* Basic uses for its macros:

- A function line always starts with a variable assignment. Everything that follows the function name is enclosed in parentheses.
- You can include text strings, numbers, and other required or optional parameters within the parentheses. Separate each item with a comma.
- Text strings are surrounded by quotation marks. For example, "This is a text string." Notice that the period within the quotation marks is part of the string.
- Comments begin with an apostrophe (') or the letters REM, and end at the end of the line. You can start a comment at the beginning of a line or place it at the end, but you can't embed a comment within a function line. Once a comment begins, the rest of the function line is ignored when the macro is running.

The Macro Editor

EXTRA! provides the Macro Editor to write and edit macros. The Macro Editor is an editing environment in which you can type your own commands, or insert function, statement, or object templates by choosing from a Functions and Objects list. Refer to the *EXTRA! User's Guide* for details about using the Macro Editor.

One of the nice things about using the templates provided by the Macro Editor is that they already contain the correct syntax. All you have to do is supply actual variable names or strings as required.

Using the Macro Editor, you can also debug your macro by:

- Printing your macro source code or viewing it in the Macro Editor.
- Inserting a breakpoint by selecting the sidebar directly opposite a function or statement. (Breakpoints can be toggled on or off during the debugging process.)
- Single-stepping through your macro code.
- Watching specific variable values as your macro runs.
- Compiling your macro and checking for syntax errors.

Tip: To display a detailed online Help topic about a particular *EXTRA!* Basic or OLE element, highlight the function, statement, or call in the Editor workspace and press F1. The Help Index is displayed pointing to the highest-level entry pertaining to the highlighted language item or object. Choose an appropriate sub-entry, if desired, and then choose the Display button.

To start the Macro Editor

1. Choose the Macro Editor icon from the *EXTRA!* program group in the Program Manager or the *EXTRA!* folder in the Windows 95 Explorer.

-or-

Choose Macro from the Tools menu of *EXTRA!*.

The Macro dialog box appears.

2. To edit an existing macro, highlight the desired macro filename and choose the Edit button.

-or-

To create a new macro, enter the name of the new macro in the Macro name text field and choose the Edit button.

The Macro Editor is displayed.

To start the Dialog Editor

- Choose Dialog Editor from the Macro Editor Tools menu.

To exit the Macro Editor

1. Make sure you have saved your macro.
2. Choose Exit from the File menu.

To code a new macro

1. From the Macro dialog box, enter the name of the new macro in the Macro name text field and choose the Edit button.

-or-

From the Macro Editor, choose New from the File menu.

The Sub Main...End Main structure is supplied automatically.

2. Type the statements or functions you want in your macro, or insert them from the Functions and Objects browser.
3. To save your macro, choose Save As from the File menu, and give your macro a unique name.

EXTRA! provides the filename extension (.EBM) for all macro files.

Note: Each time you run your macro, *EXTRA!* automatically compiles the macro and checks for syntax errors.

To copy and paste online Help example code into your macro

Each *EXTRA!* Basic statement, function, and OLE automation call online Help topic includes an example.

1. Display the online Help topic for the appropriate function, statement, or OLE automation call. (Navigate to the topic using the online Help index, or by highlighting the language element in the Functions and Objects browser and choosing the small question mark button.)
2. From the function, statement, or OLE automation topic, choose the Example button.
3. From the Example window, choose the Copy button.
4. Position the cursor at the appropriate location in the Editor workspace.
5. Choose Paste from the Macro Editor Edit menu.
6. Rework the example, as required.

To open an existing macro

1. Start the Macro Editor from the *EXTRA!* Program Group or from the Windows 95 Explorer.

–or–

Choose Macro from the Tools menu of *EXTRA!*.












The Macro dialog box appears.














2. Highlight the desired macro filename and choose the Edit button.
The Macro Editor displays your macro source code.
3. If you want to edit more than one macro at the same time, choose Open or New from the Macro Editor File menu until all the macros you need are displayed.

If you are working on more than one macro, you can display them in the Editor the same way you display any window in the Windows environment. You can display them as objects, you can use the Tile or Cascade command, and so on.

The Macro Editor Toolbar, Status Bar, Side Bar, and Editing Workspace

Refer to the following chart for details about the various toolbar options available with the Macro Editor.

Choose	To do this	Or
	Create a new macro.	From the File menu, choose New.
	Access the Open dialog box so that you can open an existing macro.	From the File menu, choose Open.
	Save changes to the current macro.	From the File menu, choose Save.
	Print your macro source code.	From the File menu, choose Print.
	Cut the selection to the Clipboard.	From the File menu, choose Cut.
	Copy the selection to the Clipboard.	From the File menu, choose Copy.
	Paste from the Clipboard to the cursor location.	From the File menu, choose Paste.
	Undo the last edit.	From the File menu, choose Undo.
	Toggle the current line from code to remark or remark to code.	From the File menu, choose Toggle REM.
	Access the Find dialog box so that you can search for a string in the current macro.	From the Search menu, choose Find or Replace.
	Repeat the last Find procedure.	From the Search menu, choose Repeat Find.

Choose	To do this	Or
	Display the Functions and Object browser.	From the View menu, choose Functions and Objects.
	Go to the Dialog Editor.	From the Tools menu, choose Dialog Editor.
	Display the Variable Watch window.	From the View menu, choose Variable Watch.
	Add the current variable to the Variable Watch window.	
	Compile your macro.	From the Run menu, choose Compile.
	Run or continue the current macro.	From the Run menu, choose Go.
	Stop execution of the current macro.	From the Run menu, choose Stop.
	Single-step through the macro source code.	From the Run menu, choose Step.
	Step into a called procedure.	From the Run menu, choose Step Into.
	Step out of a called procedure.	From the Run menu, choose Step Out.
	Move to the previous bug.	From the Search menu, choose Previous Error.
	Move to the next bug.	From the Search menu, choose Next Error.
	Activate the context-sensitive Help cursor.	

Moving the Cursor within the Macro Editor Workspace

As with any Windows-based editor or word processing application, you can use your mouse to reposition the cursor. Refer to the table below for a list of keyboard shortcuts you can use to move the cursor.

Press	To move
LEFT ARROW	LEFT ONE CHARACTER
RIGHT ARROW	Right one character
UP ARROW	Up one line
DOWN ARROW	Down one line
HOME	To the beginning of the current line
END	To the end of the current line
CTRL+LEFT ARROW	Left one word
CTRL+RIGHT ARROW	Right one word
PGUP	Up one screen
PGDN	Down one screen
CTRL+HOME	To the beginning of the macro source code
CTRL+END	To the end of the macro source code

Macro Properties

Using the Properties and Security dialog box, the Macro Editor provides a way to track macro author name and current revision number and to limit access to the macro source code.

The Properties Dialog Box

In this dialog box, you can list the macro author, provide a macro description for the most-recently-used macro list, provide Windows 95 Explorer keywords, provide command line execution information, or choose or edit the bitmap icon associated with the macro. This dialog box also allows you to limit access to its source code.

Refer to the following field descriptions for more information.

General page:

Macro Name: This is the name of the macro currently displayed in the Macro Editor.

Revision: This is the revision number of the source code associated with the named macro.

Author: (Optional) Enter the name of the macro author.

Description: (Optional) Enter a brief description of the macro. This description will appear in the most-recently-used macro list.

Keywords: (Optional) Enter keywords for use in the Windows 95 Explorer search feature.

Command Line: (Optional) If you want this macro to be executable from the operating system, enter the command required.

Customize button: (Optional) By default, the Macro Editor assigns the bitmap icon shown to the left of the Customize button to the current macro. To assign a different icon, or to edit the current icon, choose the Customize button.

Bitmap Preview area: The bitmap you selected is displayed here for verification.

Security page:

No Restrictions: Choose this option for unlimited access to the source code for this macro.

Require Password to Edit: Choose this option to require a password in order to access the source code for this macro. Supply the password in the Password text box described below.

Read-only - No Edits Allowed: Choose this option to provide read-only access to the macro source code, but not write privileges.

Read-only Recommended - Warn Before Allowing Edits: Choose this option to provide read-only access to the macro source code along with a warning message that cautions other users to edit the source code at their own risk.

Password text field: (Only required if you select the Read-Only or Require Password to Edit options.) Enter the password you want to associate with this macro. The next time anyone tries to open the macro source code, they will be asked to supply this password.

To set macro properties and security access

1. From the Macro Editor File menu, choose Properties.
The Properties and Security dialog box is displayed with the General page active.
2. Supply the necessary information in the General page.
3. Choose the Security tab to display the Security page.
4. Choose the appropriate security option and provide a password, if necessary.

Associating an Existing Bitmap with a Macro

Any macro you create, whether recorded or written using *EXTRA!* Basic, can have a bitmap assigned to it. This bitmap can then be included in an *EXTRA!* Toolbar or QuickPad.

The Select Bitmap Dialog Box

Use the Select Bitmap dialog box to choose a bitmap to assign to your macro. From this dialog box, you can also choose to edit one of the bitmaps provided.

Access this dialog box from the Properties and Security dialog box, General page, Customize button.

Refer to the following field descriptions for more information.

Available Bitmaps list: Select one of the bitmaps provided with *EXTRA!*. You can either accept this bitmap as is, or edit it to better illustrate your macro's functionality.

Preview area: This area displays how the selected bitmap will look as an icon.

Edit button: Choose this to access the Edit Bitmap dialog box. From the Edit Bitmap dialog box, you can alter the selected bitmap.

To associate an existing bitmap with a macro

1. From the Properties and Security dialog box, choose the Customize button.

The Select Bitmap dialog box is displayed.

2. Scroll through the list of available bitmaps and select one.

–or–

Choose the Browse button to locate a bitmap not included in the default collection supplied with *EXTRA!*.

The one you selected is displayed in the Preview area.

3. Choose OK to associate the bitmap you selected with the current macro.

Editing the Bitmap Associated with a Macro

The stock icons included with *EXTRA!* should illustrate most of the typical macros you might create. You will probably at some point, however, create a macro for which there is no suitable stock icon. For this reason, *EXTRA!* provides a simple icon editor that allows you to manipulate a base icon pixel by pixel.

The Edit Bitmap Dialog Box

Use the Edit Bitmap dialog box to alter the selected bitmap design.

Access this dialog box from the Select Bitmap dialog box, Edit button.
Refer to the following field descriptions for more information.

Preview area: This area displays how the working bitmap will look as a finished icon.

Bitmap Workspace: This area is where you can edit your bitmap icon, pixel by pixel.

To edit the bitmap associated with a macro

1. From the Properties and Security dialog box, choose the Customize button.

The Select Bitmap dialog box is displayed.

2. Scroll through the list of available bitmaps and select a bitmap that resembles the one you want to create.

-or-

Choose the Browse button to locate a bitmap not included in the default collection supplied with *EXTRA!*.

The one you selected is displayed in the Preview area.

3. Choose Edit to display the selected bitmap in the Edit Bitmap dialog box.
4. Use the color palette to paint the pixels in the bitmap work area.
5. Look at the Preview area to see how the finished icon will look.
6. Choose OK to accept the icon and add it to the list of available bitmaps in the Select Bitmap dialog box.
7. Choose OK to associate the bitmap you selected with the current macro.

Reviewing Your Macro Code

The first step in locating errors is to compile your macro source code.

After an unsuccessful compile, the Macro Editor displays a “bug” symbol in the side bar, next to the statement containing the error.



In addition, a description of the error appears in the status bar.

Review this description for syntax or usage errors. If you cannot find an error, examine adjacent lines of code as well.

The Print Dialog Box

The Print dialog box enables you to print the source code in the active macro window. Use this dialog box to specify the printer name, print range, and the number of copies to print.

To print your macro code

If you prefer to review your macro source code on paper instead of on the screen, you can print it out.

1. From the File menu, choose Print.
The Print dialog box appears.
2. Select the print range and print quality (dots per inch).
3. Specify the number of copies and indicate whether multiple copies should be collated.
4. Choose OK.

Editing Macro Code

You can add functions to your macro by typing each line in yourself, including all the function's parameters, or you can let the Macro Editor insert a statement or function template for you. All you have to do is supply the appropriate parameter values or variable names. In addition to saving time, using the Macro Editor's template feature means you don't have to worry about syntax errors.

Tip: To display a detailed online Help topic about a particular *EXTRA!* Basic or OLE element, highlight the function, statement, or call in the Editor workspace and press F1. The Help Index is displayed pointing to the highest-level entry pertaining to the highlighted language item or object. Choose an appropriate sub-entry, if desired, and then choose the Display button.

To edit existing or recorded macro code

1. Start the Macro Editor from the *EXTRA!* Program Group or from the Windows 95 Explorer.

-or-

Choose Macro from the Tools menu of *EXTRA!*.

The Macro dialog box appears.

2. Highlight the desired macro filename and choose the Edit button.

The Macro Editor displays your macro source code in the Macro Editor workspace.

Undoing the Last Edit

Use the Undo feature to reverse the last edit performed.

To undo the last edit

- Choose Undo from the Edit menu.

Your macro is restored to the way it was before your last edit.

Cutting the Highlighted Code Block

With the Macro Editor, you can cut a block of macro source code to the Clipboard and, optionally, paste it from the Clipboard to another location within the same macro or into a different macro.

To cut the highlighted code block

1. Position the cursor to the left of the first character in the code block and drag to the right of the last character in the code block.

2. From the Edit menu, choose Cut.

Your code selection is removed from the Editor workspace and copied to the Clipboard.

3. (Optional) Position the cursor where you want to insert the cut source code.

4. From the Edit menu, choose Paste.

Your code selection is copied from the Clipboard to the Editor workspace at the cursor location.

Copying the Highlighted Code Block

With the Macro Editor, you can copy a block of macro source code to the Clipboard and paste it from the Clipboard to another location within the same macro or into a different macro.

Note: Each *EXTRA!* Basic statement, function, and OLE automation call online Help topic includes an example. To copy the example code into your macro code, choose the Copy button in the example window, then position the cursor in the Editor workspace and choose Paste from the Edit menu. Rework the example, as needed.

To copy the highlighted code block

1. Position the cursor to the left of the first character in the code block and drag to the right of the last character in the code block.

2. From the Edit menu, choose Copy.

Your code selection is copied to the Clipboard.

3. Position the cursor where you want to insert the copied source code.
4. From the Edit menu, choose Paste.

Your code selection is copied from the Clipboard to the Editor workspace at the cursor location.

Pasting from the Clipboard to the Cursor Location

With the Macro Editor, you can cut or copy a block of macro source code to the Clipboard and paste it from the Clipboard to another location within the same macro or into a different macro.

Note: Each *EXTRA!* Basic statement, function, and OLE automation call online Help topic includes an example. To copy the example code into your macro code, choose the Copy button in the example window, then position the cursor in the Editor workspace and choose Paste from the Edit menu. Rework the example, as needed.

To paste from the Clipboard to the cursor location

1. Position the cursor where you want to insert the copied source code.
2. From the Edit menu, choose Paste.

Your code selection is copied from the Clipboard to the Editor workspace at the cursor location.

To move text within a macro

1. Position the cursor to the left of the first character in the code block and drag to the right of the last character in the code block.
2. From the Edit menu, choose Cut.

Your code selection is copied to the Clipboard.

3. Position the cursor where you want to insert the cut source code.
4. From the Edit menu, choose Paste.

Your code selection is copied from the Clipboard to the into the Editor workspace at the cursor location.

Marking the Current Line or Code Block as a Remark

To isolate a bug in your macro source code logic, you may want to temporarily skip a line (or more) of code by tagging the line as a comment.

To mark the current line or code block as a remark

1. Position the cursor anywhere on the line.
2. From the Edit menu, choose Line REM.

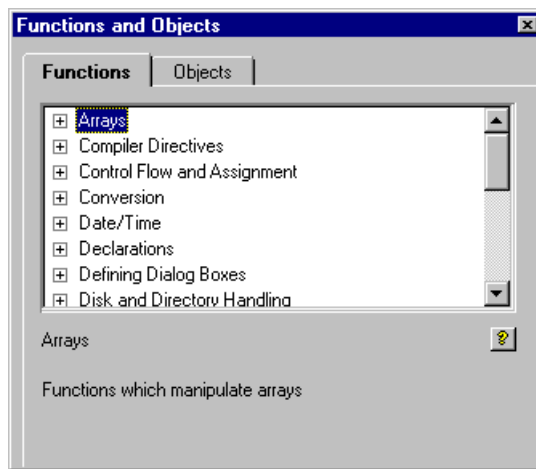
This feature is a toggle. Repeat the procedure above to unmark the line.

Adding a Function or Object Shell to Your Macro Code

The Macro Editor provides a browser from which you can select *EXTRA!* Basic statements and functions or Object Linking and Embedding calls. Using the browser ensures that your syntax will be correct and eliminates the need to memorize or look up complex syntax and parameter lists.

The Functions and Objects Browser

The Browser inserts a “shell” or “template” for the selected language call into your macro source code at the cursor position. All you have to do is substitute your macro-specific parameter names for the ones supplied by the browser.



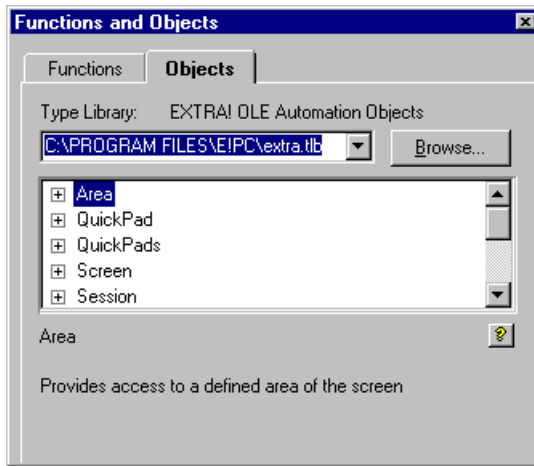
The Functions and Objects browser, Functions page.

Functions page: Choose this to display a list of *EXTRA!* Basic functions and statements.

Functions list: These are the *EXTRA!* Basic statements or functions. Double-click a category to reveal the available statements and functions. Double-click a statement or function to insert the syntax shell in your source code.

Syntax: This area displays the syntax for the highlighted statement or function. For more information, right-click on the window above.

Description: This area provides a brief description of the highlighted statement or function.



The Functions and Objects browser, Objects page.

Objects page: Choose this to display a list of OLE Automation objects, properties, and methods.

Type Library: These are the most-recently-used type libraries. EXTRA.TLB is displayed the first time you access the Macro Editor.

Objects list: These are the OLE automation calls. Double-click a call to insert the syntax shell in your source code.

Object syntax: This area displays the syntax for the highlighted OLE object call.

Description: This area provides a brief description of the highlighted OLE object call.

To add a function or object shell to your macro code

1. From the View menu, choose Functions and Objects.
The Functions and Objects browser appears.
2. Choose the appropriate tab.
3. Choose the plus sign to the left of a folder to display the calls in that category.
4. Scroll through the list until the call you want is displayed.
5. Choose the language call to display the syntax and a brief description in the lower section of the browser.

Tip: Choose the small question mark button to the right of the syntax to display the full online Help topic for that function, statement, or object.

6. Choose the language call to copy a shell of the call to the current cursor position in the Editor workspace.
7. From the Editor workspace, substitute your macro-specific parameter names for the generic ones supplied with the shell.

Altering the Macro Editor User Interface

To gain more real-estate in the Macro Editor workspace, you can toggle off the display of the Status bar, the Side bar, and line numbers. These features are most important during the debugging phase of macro development.

Toggling the Status Bar

The Status bar is located at the bottom of the Macro Editor. It displays Editor information, compiler errors, and current cursor location.

To toggle the Status Bar on or off

- From the View menu, choose Status bar.
A check mark is displayed to the left of the Status bar option when the Status bar is displayed.

Toggling the Side Bar

The Side bar is located to the left of the Macro Editor workspace. This is where items such as compilation errors and breakpoints are indicated. A compilation error is indicated by a bug symbol:



and breakpoints are indicated by a stop sign:



When you are not actively debugging your macro source code, you may opt to not show the Side bar. This will allow more room on the display for your source code.

To toggle the Side Bar

- From the View menu, choose Side Bar.

A check mark is displayed to the left of the Side Bar option when the Side Bar is displayed.

Toggling Line Numbers

Line numbers are located to the left of the Macro Editor workspace and to the right of the Side bar (if it is toggled on). Line numbers are important when trying to locate compiler errors.

To toggle line numbers

- From the View menu, choose Line Numbers.

A check mark is displayed to the left of the Line Numbers option when Line Numbers are displayed.

Changing the Display Font

By default, the Macro Editor displays your macro source code using in 10-point Courier font. You can switch to a different font, if you'd like. Note that the display font you select is also the font used to print your macro source code.

The Toolbar Dialog Box

Use the Toolbar dialog box to change the way in which the toolbar buttons are displayed.

Refer to the following field descriptions for more information.

Show Toolbar: Select this option to display the Macro Editor toolbar.

If you clear this option, the toolbar does not appear.

Large Buttons: Select this option to display large buttons on the Macro Editor toolbar.

If you clear this option, the Macro Editor displays small buttons.

Color Buttons: Select this option to display color buttons on the Macro Editor toolbar.

If you clear this option, the Macro Editor displays monochrome buttons.

Show ToolTips: Select this option to display a brief description of the function of the Macro Editor toolbar button when the mouse pointer is over the button for more than one or two seconds.

If you clear this option, ToolTips do not appear.

To change the display font

1. From the Tools menu, choose Font.

The Font dialog box is displayed.

2. Choose a font, font style, and point size.

–or–

Choose a previously-defined font script.

3. Review the sample and revise your selections, if necessary.
4. Choose OK.

Searching for Specific Text, a Line Number, or Errors

The Macro Editor allows you to search for a specific word, statement, function, parameter, or OLE call in your macro. For example, you may need to update a logon parameter for a new user ID. Using the Find command, you can locate the old ID faster than if you search for it manually. After finding and changing it, you can then use the Repeat Find command to search the rest of the macro for any other IDs.

The Search menu also allows you to go to a particular line number or from one compiler error to the next.

The Find Dialog Box

The find criteria used in a search are specified in the Find dialog box.

Refer to the following field descriptions for more information.

Find What: Type the string you want to locate.

Match Case: Select this option to find only those occurrences of the Find What string with the identical capitalization.

Direction Up: Select this option to search from the cursor location to the beginning of the macro.

Direction Down: Select this option to search from the cursor location to the end of the macro.

Find Next: Choose this button to locate the next occurrence of the search string.

To find macro code text

1. Place the cursor at the point in the macro source code where you want to begin the search.
2. Choose Find from the Search menu.

The Find dialog box appears on your screen.

3. In the Find What text box, enter the exact word or phrase for which you want to search.

Make sure your search string is spelled correctly and doesn't include extra blank spaces.

4. Select any of the other options, if desired.
5. Choose the Find Again button.

Going to a Particular Line Number

In addition to searching for a particular string or jumping from one compiler error to the next, you can also jump to a particular line number in your macro source code. This feature is most useful when used in conjunction with the compilation error report to jump directly to a particular syntax error.

The Go To Dialog Box

This dialog box is used to specify the number of the line you want to jump to within your macro source code.

In the Go To Line text box, specify the number of the line to which you want the Macro Editor to jump.

To go to a particular line number

1. From the Search menu, choose Go To.
The Go To dialog box is displayed.
2. Specify the number of the line to which you want to jump.
3. Choose OK.

To repeat the previous find action

1. Place the cursor at the point in the macro source code where you want to continue the search.
2. Choose Repeat Find from the Search menu.

The Replace Dialog Box

The find criteria used in a search are specified in the Find and Replace dialog box.

This feature is composed of the following elements:

Find What: Type the string you want to locate.

Replace With: Type the replacement text.

Match Case: Select this option to find only those occurrences of the Find What string with the identical capitalization.

Find Next button: Choose this button to locate the next occurrence of the search string.

Replace button: Choose this button to replace the current Find What text with the Replace With text.

Replace All button: Choose this button to replace all occurrences of the Find What text with the Replace With text.

To replace text

1. Place the cursor at the point in the macro source code where you want to begin the search and replace command.

2. Choose Replace from the Search menu.

The Replace dialog box appears on your screen.

3. In the Find What text box, enter the exact word or phrase for which you want to search.

Make sure your search string is spelled correctly and doesn't include extra blank spaces.

4. In the Replace With text box, enter the exact word or phrase with which you want to replace the Find What text.

5. (Optional) Choose the Match Case option to find only those occurrences of the Find What text with the identical capitalization.

6. Choose the Find Next button to jump to the next occurrence of the Find What text.

7. Choose the Replace button to replace the current Find What text with the Replace With text.

-or-

Choose the Replace All button to replace all occurrences of the Find What text with the Replace With text.

To repeat the previous find and replace action

1. Place the cursor at the point in the macro source code where you want to continue the search.
2. Choose Replace from the Search menu.
Make sure that the Find What and Replace With string is correct.
3. Choose the Find Next button.
4. Choose the Replace button.

–or–

Choose the Replace All button to replace all of the occurrences of the Find What text with the Replace With text from the cursor location through the end of the macro source code.

To go to the next or previous compiler error

- To jump to the next error, from the Search menu, choose Next Error.

–or–

- To jump to the previous error, from the Search menu, choose Previous Error.

To save a macro

- If you are working on an existing file and you want to save your edits, choose Save from the File menu. The macro is saved under its original name.

–or–

If you are working on several existing macros and you want to save all of them, choose Save All from the File menu. The macros are saved under their original names.

To save a macro under a different name

- 1.. If this is a new macro or you want to save it under a different name, choose Save As from the File menu.

The Save As dialog box appears on your screen.

- 2.. In the Directories list box, select the directory to which you want to save the macro.

By default, the Macro Editor looks for macros in the \E!PC\Schemes directory. For consistency, you should save your macros to this directory.

- 3.. In the File Name field, enter a filename for the macro.

The Macro Editor automatically assigns the filename extension (.EBM) to the file.

- 4.. Choose OK.

The macro is saved; its new name is displayed in the title bar of the Macro Editor.

To delete a macro

Before you delete a macro, make sure it is not assigned to the Toolbar or a QuickPad. Use the Unassign procedure before deleting.

1. Open the Windows File Manager or open the Windows 95 Explorer.
2. Locate the macro you want to delete and select it.

Unless you specified otherwise, the macro will be located in the \E!PC\Schemes directory and will have the filename extension .EBM.

3. Choose Delete from the File menu and then choose OK.

Compiling and Debugging Your Macro Code

Before you can run a macro, it must compile successfully — that is, without syntax or semantic errors. A syntax error violates the grammatical rules of *EXTRA!* Basic including spelling errors — for example:

```
rc = CurrDir$(drivename$)
` Function name has an extra ``r``
```

And incorrect form — for example:

```
rc = CurDir$( )
` Function is missing the drive name parameter.
```

as well as missing or incorrect punctuation.

A semantic error is often syntactically correct but logically incorrect. For example:

```
rc = CurDir$("1")
` Numbers are not valid drive names.
```

Sometimes semantic errors are not detected by the Compiler. If your macro compiles correctly but does not operate as expected when you run it, your macro source code undoubtedly contains one or more semantic errors. The Macro Editor comes with a variety of debugging tools that will help you isolate such semantic errors.

To compile your macro

- From the Run menu, choose Compile.

The Macro Editor compiles your macro source code.

Note: Your macro is compiled automatically when you choose Go.

About Stepping

Step through your macro source code to execute the code one instruction at a time in the same order in which the instructions are executed when you actually run the macro. Stepping is the best way to pinpoint errors in source code logic.

If the current line is a call to an *EXTRA!* Basic subroutine or function, use the Step Into command to jump to the first line of the called subroutine or function. Use the Step Out command to break out of the subroutine or function and return to the next line of the calling procedure.

Note: If you do not explicitly Step Into a called subroutine or function, it will be executed as a single line of code.

To step through your source code

1. From the Run menu, choose Step.

The first instruction to be executed is highlighted.

2. Repeat until you have located the logical error or until you have single-stepped through the entire macro.

–or–

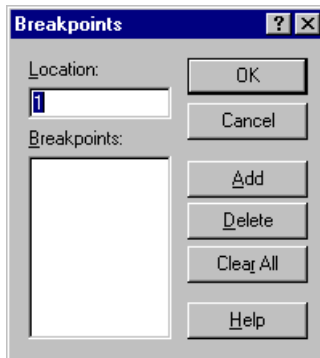
If the current instruction is a call to a subroutine or function, choose Step Into from the Run menu to single-step through the subroutine or function instead of executing the entire call at once. Choose Step Out to break out of the subroutine or function and return to the next line of the calling procedure.

Setting Breakpoints

To suspend execution at a particular line so that the state of your macro can be examined, set a breakpoint. This method is most effective when you have narrowed your search for a bug to a few specific lines.

The Breakpoints Dialog Box

From the Breakpoints dialog box you can add, delete, and clear breakpoints. It provides a list box of all of the breakpoints set for the current macro.



The Breakpoints dialog box.

Refer to the following field descriptions for more information.

Location: If an existing breakpoint is selected in the Breakpoints list box, the line number of the breakpoint is listed here. If you want to create a new breakpoint, type the breakpoint line number here.

Breakpoints: This list box displays the line numbers of the current breakpoints.

Add: Choose this button to add a new breakpoint at the line number indicated in Location.

Delete: Choose this button to delete the breakpoint currently highlighted in the Breakpoints list box.

Clear All: Choose this button to remove all breakpoints.

To set breakpoints

1. Place the cursor anywhere within the line in which you want to set a breakpoint.
2. From the Run menu, choose Toggle Breakpoint.

–or–

Choose on the side bar next to the line in which you want to set a breakpoint.

The Macro Editor places a breakpoint symbol in the side bar directly opposite the line with the breakpoint. The breakpoint symbol looks like this:



3. From the run menu, choose Go to run the macro.
Execution stops at the first line with a breakpoint.

To clear a breakpoint

1. Place the cursor anywhere within the line containing the breakpoint.
2. From the Run menu, choose Toggle Breakpoint.

–or–

Choose the Breakpoint icon in the side bar.

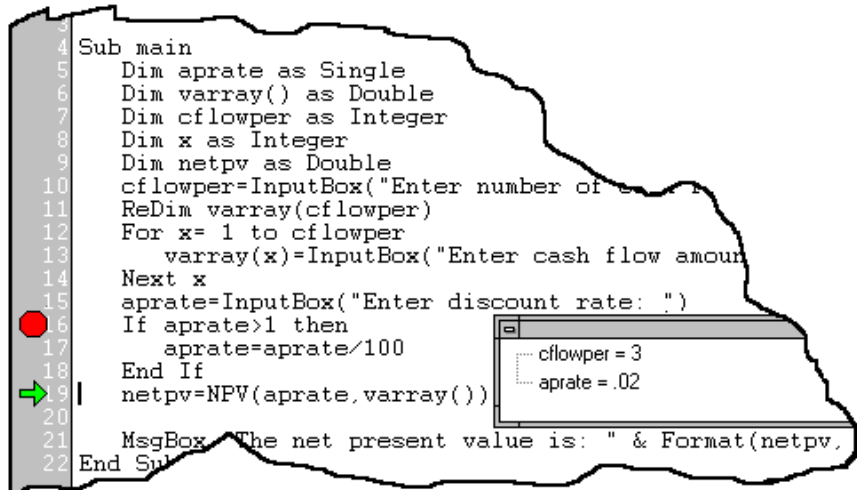
The breakpoint is cleared and the breakpoint symbol is removed from the side bar.

To clear all breakpoints

- From the Run menu, choose Clear All Breakpoints.

Monitoring the Value of a Particular Variable

The variable window is used, when debugging, to examine the contents of the variables associated with a particular function or procedure.



```
3
4 Sub main
5   Dim aprate as Single
6   Dim varray() as Double
7   Dim cflowper as Integer
8   Dim x as Integer
9   Dim netpv as Double
10  cflowper=InputBox("Enter number of cash flows")
11  ReDim varray(cflowper)
12  For x= 1 to cflowper
13      varray(x)=InputBox("Enter cash flow amount")
14  Next x
15  aprate=InputBox("Enter discount rate: ")
16  If aprate>1 then
17      aprate=aprate/100
18  End If
19  netpv=NPV(aprate,varray())
20
21  MsgBox "The net present value is: " & Format(netpv,
22  End Sub
```

The Variable Watch window.

The graphic above illustrates a variable watch at line number 19.

To watch the value of a variable, single-step through your macro source code.

CHAPTER

*Using the
Macro Dialog
Editor*



The Dialog Box Editor is used to graphically edit the layout of dialog boxes used in the Macro Editor. The Macro Editor invokes the dialog box editor with the Dialog Editor command in the Tools menu. You can run the dialog box editor directly, with input from the Clipboard or from a file.

Creating, Opening, and Saving Dialog Box Editor Files

Refer to the following procedures to create a file, open an existing file, and save a file.

To create a new file

- Choose New from the File menu (CTRL+N).

This command clears the contents of the current dialog box and creates the default dialog box.

To open an existing file

- Choose Open from the File menu (CTRL+O).

This command replaces the contents of the current dialog box with a new dialog box read in from a file.

To save a file

- Choose Save from the File menu (Ctrl+S).

This command saves the contents of the current dialog box to a file.

To save a file as a different name

- 0 Choose Save As from the File menu.

This command saves the contents of the current dialog box to a file with a new name.

To use the Recent File Command

- Choose a file name in the list to re-open the file.

This command displays a list of the most recently opened files.

Configuration Options

The Dialog Editor allows you to set configuration options for the dialog box code. The configuration options include undo levels, grid size, 3D controls, and input/output units.

The Options Dialog Box

The following configuration options are available in the Options dialog box.

Undo Levels: The number of operations that will be remembered for undo (memory permitting). For more information about undo actions, refer to Undoing and Redoing Actions.

Grid: Configures the horizontal and vertical grid size. For more information about the grid, refer to Using the Grid Command later in this chapter.

3D Controls: Changes the look of the controls in the dialog box.

Word 6 Units: Indicates whether the input and output units for the dialog box are the units used by Microsoft Word, Version 6.0 or the standard dialog box units.

To set configuration options

1. Choose Options from the View menu.

–or–

Select the Options button  from the toolbar.













2. Set the configuration options as desired.
3. Select OK.

Dialog Box Controls

The Dialog Box controls appear on a floating control palette in the Dialog Editor's desktop. Controls can be added to the dialog box and then moved and sized as needed. Each control has a set of properties, such as a label and a unique ID. This section discusses how to use the control palette and identifies each control and the control's properties.

The Control Palette

The Control Palette is displayed as a floating toolbar in the Dialog Box Editor workspace. The following controls appear in the palette.

-  Selection Tool
-  Button Control
-  OptionButton Control
-  Text Control
-  TextBox Control
-  CheckBox Control
-  ListBox Control
-  StaticComboBox Control
-  DropComboBox Control
-  DropListBox Control
-  GroupBox Control
-  Picture Control

For more information on each control, refer to the section that covers the specified control.

To view the Control Palette

- Choose Control Palette from the View menu to show or hide the palette.

To add a control

1. Click and hold the control button on the Control Palette.
2. Drag the control onto the dialog box where you want it to appear.
3. Release the mouse button.

– or –

1. Select a control from the Control menu.
2. Drag a frame in the dialog box with the mouse to indicate where you want the control to appear.
3. Release the mouse button.

The selected control will appear in the area you indicated.

Control Properties

There are several attributes of a control that may be edited in the control's property sheet.

Examples of control properties include the control's position and size. In addition, many controls have a control ID, which is the identifier used to access the control from a Basic script and a control Label.

Control labels are either strings or Basic expression, which when executed in Basic result in a string. This resulting string is then used to visually identify a control in the dialog box and to assist in keyboard navigation of the dialog box. Characters preceded by an ampersand (&) in a label are underlined. For example, setting a label to &Name causes Name to be displayed on the control with which the label is associated. This underlined letter indicates the hot key associated with this control. For Buttons, OptionButtons, and CheckBoxes the action is the same as clicking the mouse on the control. For Text Controls, the hot key causes the control following the text control in the Tab Order to be activated. This provides a mechanism for labeling controls that do not have labels of their own, such as TextBoxes and ListBoxes. For more information on Tab Order, refer to "Setting the Tab Order" later in this chapter.

For information on properties particular to individual controls, see the description of those controls.

To open the control's property sheet

1. Add the control to your dialog box by clicking the control in the Control Palette and dragging it onto the dialog box.
2. Double-click the control, or select the control and press ENTER.

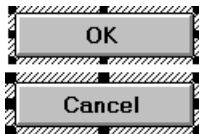
The Selection Tool

The Selection tool is used to manipulate a dialog box's controls. Modifications to existing controls are typically made by executing commands which act on the currently selected controls in the dialog box. There are several ways to modify the selection.

Clicking on a control with the Selection tool active selects that control and deselects any other controls that may be selected. Pressing the SHIFT key on the keyboard and clicking on a control toggles its selection state without modifying the selection state of any of the other controls in the dialog box.

The Selection tool may also be used to select a set of controls touching a rectangular region — just drag out a frame. All controls inside or touching the rectangle become the current selection. Pressing the SHIFT key on the keyboard while dragging out a rectangle adds all controls inside or touching the rectangle to the current selection.

Selected controls look like this:



Some editing commands in the dialog box editor use size and position attributes of the primary control to modify the size and position attributes of other controls in the selection. In this example, the Cancel button is the primary control. Selected controls can be moved, sized, deleted, and cut or copied to the clipboard.

To activate the selection tool

- Choose the  tool on the Control Palette, or choose Select from the Control menu.

The Button Control

The button control is used to create push buttons in the dialog box. There are three kinds of push buttons in dialog boxes:

Normal Button: These are the most basic push buttons. These buttons may have labels and IDs.

OK Button: These buttons are like normal buttons except their labels cannot be modified and there can only be one OK Button in a dialog box.

Cancel Button: These buttons are like normal buttons except their labels cannot be modified and there can only be one Cancel Button in a dialog box.

For information on adding a control and opening the control's property sheet, refer to "The Control Palette" earlier in this chapter.

Button Properties

To open the Properties dialog box, double-click the control.

Button Type: If the button is an OK or Cancel button, the label cannot be modified and only one OK or Cancel button can appear in a dialog box. The Normal button has a label and an ID.

Button Label: Labels are either strings or a Basic expression, which when executed in Basic result in a string. This resulting string is then used to visually identify a control in the dialog box and to assist in keyboard navigation of the dialog box. Characters preceded by an ampersand (&) in a label are underlined. For example, setting a label to &Name causes Name to be displayed on the button. This underlined letter indicates the hot key associated with the button.

Button ID: The identifier used to access the control from a Basic script and a control label.

Label is a macro variable: Select this option if the label is a macro variable.

Size and Position: The X and Y coordinates of the button, indicating the button's position in the dialog box, and the width and height of the button.

The OptionButton Control

OptionButtons are used to present a set of options to the user of the dialog box. Every option button belongs to a particular OptionGroup, which is configurable from the OptionButton Group drop down combo box in the OptionButton Properties dialog box.

For information on adding a control and opening the control's property sheet, refer to "The Control Palette" earlier in this chapter.

OptionButton Properties

To open the Properties dialog box, double-click the control.

OptionButton label: Labels are either strings or a Basic expression, which when executed in Basic result in a string. This resulting string is then used to visually identify a control in the dialog box and to assist in keyboard navigation of the dialog box. Characters preceded by an ampersand (&) in a label are underlined. For example, setting a label to &Name causes Name to be displayed next to the option button. This underlined letter indicates the hot key associated with the option button.

OptionButton ID: The identifier used to access the control from a Basic script and a control label.

OptionButton group: The group to which the option button belongs.

Label is a macro variable: Select this option if the label is a macro variable.

Size and position: The X and Y coordinates of the option button, indicating the option button's position in the dialog box, and the width and height of the option button.

The Text Control

Text controls are typically used to label other controls that do not have a visible label. To use them as a navigation aid, place them immediately before the control they are labeling in the Tab Order. For more information on Tab Order, refer to "Setting the Tab Order" later in this chapter.

For information on adding a control and opening the control's property sheet, refer to "The Control Palette" earlier in this chapter.

Text Properties

To open the Properties dialog box, double-click the control.

Text Label: Labels are either strings or a Basic expression, which when executed in Basic result in a string. This resulting string is then used to visually identify a control in the dialog box and to assist in keyboard navigation of the dialog box. Characters preceded by an ampersand (&) in a label are underlined. For example, setting a label to &Name causes Name to be displayed as the text. This underlined letter indicates the hot key associated with the text.

Text ID: The identifier used to access the control from a Basic script and a control label.

Label is a macro variable: Select this option if the label is a macro variable.

Size and position: The X and Y coordinates of the text, indicating the text's position in the dialog box, and the width and height of the text.

The TextBox Control

TextBox controls are used to gather input from the user of the dialog box. Normally, the TextBox control echoes characters as the user of the dialog box types them in. Selecting No Echo in the Text Box Properties dialog box causes the edit control to echo asterisks instead.

For information on adding a control and opening the control's property sheet, refer to "The Control Palette" earlier in this chapter.

TextBox Properties

To open the Properties dialog box, double-click the control.

TextBox ID: The identifier used to access the control from a Basic script and a control label.

Password/no echo style: Select this option if you want the edit control to echo asterisks instead of the actual password when entered.

Size and position: The X and Y coordinates of the text box, indicating the text box's position in the dialog box, and the width and height of the text box.

The CheckBox Control

CheckBox controls are used to present the dialog box user with a two-state switch.

For information on adding a control and opening the control's property sheet, refer to "The Control Palette" earlier in this chapter.

CheckBox Properties

To open the Properties dialog box, double-click the control.

CheckBox Label: Labels are either strings or a Basic expression, which when executed in Basic result in a string. This resulting string is then used to visually identify a control in the dialog box and to assist in keyboard navigation of the dialog box. Characters preceded by an ampersand (&) in a label are underlined. For example, setting a label to &Name causes Name to be displayed next to the check box. This underlined letter indicates the hot key associated with the check box.

CheckBox ID: The identifier used to access the control from a Basic script and a control label.

Label is a macro variable: Select this option if the label is a macro variable.

Size and position: The X and Y coordinates of the check box, indicating the position of the control in the dialog box, and the width and height of the check box.

The ListBox Control

ListBox controls are used to present the dialog box user with a list of strings.

For information on adding a control and opening the control's property sheet, refer to "The Control Palette" earlier in this chapter.

ListBox Properties

To open the Properties dialog box, double-click the control.

ListBox ID: The identifier used to access the control from a Basic script and a control label.

ListBox Contents: The list of options to appear in the ListBox.

Contents are a macro variable expression: Select this option if the contents of the ListBox are macro variable expressions.

Size and position: The X and Y coordinates of the ListBox, indicating the position of the control in the dialog box, and the width and height of the ListBox.

The StaticComboBox Control

StaticComboBox controls are similar to ListBox controls, except that the user may type in a new string instead of selecting one of the strings in the list.

For information on adding a control and opening the control's property sheet, refer to "The Control Palette" earlier in this chapter.

StaticComboBox Properties

To open the Properties dialog box, double-click the control.

StaticComboBox ID: The identifier used to access the control from a Basic script and a control label.

StaticComboBox Contents: The list of options to appear in the StaticComboBox. The user may type in a new string instead of selecting one of the strings in the list.

Contents are a macro variable expression: Select this option if the contents of the StaticComboBox are macro variable expressions.

Size and position: The X and Y coordinates of the StaticComboBox, indicating the position of the control in the dialog box, and the width and height of the StaticComboBox.

The DropComboBox Control

DropComboBox controls are similar to DropListBox Controls, except that the user may type in a new string instead of selecting from one of the strings in the list.

For information on adding a control and opening the control's property sheet, refer to "The Control Palette" earlier in this chapter.

DropComboBox Properties

To open the Properties dialog box, double-click the control.

DropComboBox ID: The identifier used to access the control from a Basic script and a control label.

DropComboBox Contents: The list of options to appear in the DropComboBox. The user may type in a new string instead of selecting one of the strings in the list.


Contents are a macro variable expression: Select this option if the contents of the DropComboBox are macro variable expressions.

Size and position: The X and Y coordinates of the DropComboBox, indicating the position of the control in the dialog box, and the width and height of the DropComboBox.

The DropListBox Control

DropListBox controls differ from ListBox controls in appearance only. Typically, drop list boxes look like this:



If a string from the control is selected, it appears in the control. When the user clicks on the , the control expands to present the list of the strings.

For information on adding a control and opening the control's property sheet, refer to "The Control Palette" earlier in this chapter.

DropListBox Properties

To open the Properties dialog box, double-click the control.

DropListBox ID: The identifier used to access the control from a Basic script and a control label.

DropListBox Contents: The list of options to appear in the DropListBox. The user may type in a new string instead of selecting one of the strings in the list.

Contents are a macro variable expression: Select this option if the contents of the DropListBox are macro variable expressions.

Size and position: The X and Y coordinates of the DropListBox, indicating the position of the control in the dialog box, and the width and height of the DropListBox.

The GroupBox Control

GroupBox controls visually group controls in a dialog box. In addition, they can be used to provide a navigational hierarchy to the dialog box user.

For information on adding a control and opening the control's property sheet, refer to "The Control Palette" earlier in this chapter.

GroupBox Properties

To open the Properties dialog box, double-click the control.

GroupBox Label: Labels are either strings or a Basic expression, which when executed in Basic result in a string. This resulting string is then used to visually identify a control in the dialog box and to assist in keyboard navigation of the dialog box. Characters preceded by an ampersand (&) in a label are underlined. For example, setting a label to &Name causes Name to be displayed above the GroupBox. This underlined letter indicates the hot key associated with the GroupBox.

GroupBox ID: The identifier used to access the control from a Basic script and a control label.

Label is a macro variable: Select this option if the label is a macro variable.

Size and position: The X and Y coordinates of the GroupBox, indicating the position of the control in the dialog box, and the width and height of the GroupBox.

The Picture Control

Picture controls are used to place bitmaps into the dialog box. Picture controls get their contents from either the clipboard or a Windows bitmap (.BMP) file. The Picture Filename, the Browse button and the Filename is a Macro Variable checkbox are unavailable if the Picture Source is set to Clipboard.

For information on adding a control and opening the control's property sheet, refer to "The Control Palette" earlier in this chapter.

Picture Properties

To open the Properties dialog box, double-click the control.

Picture source: Choose File or Clipboard to specify the source of the picture.

Picture file name: If you chose the File option above, enter the .BMP filename in this field, or choose the Browse button to specify the .BMP file that you want to use.

Picture ID: The identifier used to access the control from a Basic script and a control label.

Suppress message: Specifies that the picture control not display the "missing picture" warning if the picture for the dialog box cannot be located.

Filename is a macro variable: Specifies that the string in the Picture File field is a formula.

Size and position: The X and Y coordinates of the Picture, indicating the position of the control in the dialog box, and the width and height of the Picture.

Designing the Dialog Box Layout

Use the following commands and tools to modify the layout of the dialog box.

Aligning Controls

Use the following Align Controls commands to arrange groups of controls.

The first control selected in the dialog box becomes the primary control. The Align Controls command uses size and position attributes of the primary control to modify the size and position attributes of other controls in the selection.

Left: Align the selected controls to the left edge of the primary control (keyboard shortcut: CTRL + LEFT ARROW).

Right: Align the selected controls to the right edge of the primary control (keyboard shortcut: CTRL + RIGHT ARROW).

Top: Align the selected controls to the top edge of the primary control (keyboard shortcut: CTRL + UP ARROW).

Bottom: Align the selected controls to the bottom edge of the primary control (keyboard shortcut: CTRL + DOWN ARROW).

Vert. Centers: Align the selected controls so that their vertical center is the same as that of the primary control (keyboard shortcut: F9).

Horiz. Centers: Align the selected controls so that their horizontal center is the same as that of the primary control (keyboard shortcut: SHIFT + F9).

To align controls

1. Choose Align Controls from the Layout menu.
2. From the submenu, choose Right, Left, Top, Bottom, Vert. Centers, or Horiz. Centers.

Spacing Controls Evenly

This command is used to equalize the horizontal or vertical spacing of three or more selected controls.

Across: The leftmost and rightmost controls are not moved. The remaining controls are spaced evenly between the leftmost and rightmost controls in their tab order. (keyboard shortcut: ALT + RIGHT ARROW).

Down: The uppermost and bottom controls are not moved. The remaining controls are spaced evenly between the topmost and bottom controls in their tab order. (keyboard shortcut: ALT + DOWN ARROW).

To space controls evenly

1. Choose Space Evenly from the Layout menu.
2. From the submenu choose Across or Down.

Centering a Control in the Dialog Box

This command is used to center the controls in the dialog box.

Vertical: Center the bounding frame of the selected controls vertically in the dialog box (keyboard shortcut: CTRL + F9).

Horizontal: Center the bounding frame of the selected controls horizontally in the dialog box (keyboard shortcut: CTRL + SHIFT + F9).

To center a control in the dialog box

1. Choose Center in Dialog from the Layout menu.
2. From the submenu choose Vertical or Horizontal.

Arranging Buttons

The Arrange Buttons command aligns selected buttons.

Right: This command lines up the selected buttons on the right side of the dialog box. The buttons are arranged in tab order from top to bottom (keyboard shortcut: CTRL + B).

Bottom: This command lines up the selected buttons centered on the bottom of the dialog box. The buttons are arranged in tab order from left to right (keyboard shortcut: CTRL + SHIFT + B).

To arrange buttons

1. Choose Arrange Buttons from the Layout menu.
2. From the submenu choose Right or Bottom.

Making Controls the Same Size

The Make Same Size commands size the selected controls to match that of the primary control.

The first control selected in the dialog box becomes the primary control. The Make Same Size command uses size and position attributes of the primary control to modify the size and position attributes of other controls in the selection.

Width: Size the selected controls so that their width is the same as that of the primary control (keyboard shortcut: CTRL + -).

Height: Size the selected controls so that their height is the same as that of the primary control (keyboard shortcut: CTRL + \).

Both: Size the selected controls so that their width and height is the same as that of the primary control (keyboard shortcut: CTRL + =).

To make controls the same size

1. Choose Make Same Size from the Layout menu.
2. From the submenu choose Width, Height or Both.

Sizing to Content

This command changes the size of various controls to be the right size for the control's contents. For Text, CheckBox, Button and OptionButton controls, the control size is adjusted to accommodate the labels for these controls. For the picture control, the control is resized to be either the size of the picture or the maximum picture size that preserves aspect ratio and fits in the dialog box, whichever is smaller.


To size to content

- Choose Size to Content (CTRL + =) from the Layout menu.

Moving, Sizing, and Deleting





Dialog box controls can be moved within the dialog box, modified to a different size and deleted. The dialog box can be moved and sized.

To move a control

1. Position the mouse over the selected control until the cursor turns into .
2. Press and hold the mouse button and drag the control to the desired position.
3. Release the mouse button.

Collections of selected controls can be moved in a similar manner — drag one of the selected controls and the rest will follow.





To size a control

1. Click the control so that the hatched frame appears around it. The sizing handles of a selected control are the solid black squares that appear in the hatched border around the selected control.
2. Move the cursor over on of these black squares until the cursor changes to , , , or .
3. Press and hold the mouse button and drag the control to the desired size.
4. Release the mouse button.

To delete a control

1. Click the control so that the hatched frame appears around it, indicating that it is selected.
2. Choose Delete from the Edit menu, or press the DEL button.

To size the dialog box

1. Move the mouse over the borders of the dialog box until the cursor changes to either , , , or .
2. Press and hold the mouse button and move the mouse until the outline shows the desired size.
3. Release the mouse button to complete the operation.

The size and position of the dialog box as well as other properties of the dialog box can be modified in the Dialog Box Properties dialog box.

To move the dialog box

1. Move the mouse into the caption of the dialog box.
2. Press and hold the mouse button and move the mouse until the dialog box is in the desired position.
3. Release the mouse button.

The size and position of the dialog box as well as other properties of the dialog box can be modified in the Dialog Box Properties dialog box. For more information on dialog box properties, refer to “Dialog Box Properties” later in this chapter.

Setting the Tab Order

The tab order is the order in which focus shifts when the user of the dialog box presses the tab button. Also, the tab order is used to associate Text controls with the controls they label, that is, TextBox, ListBox, DropDownList, StaticComboBox, and DropComboBox.

When this mode is activated, the tab order of the controls is indicated by the number that appears in the upper left corner of each control. The control with the number one (1) is the control that will receive the focus when the dialog box is opened by the user.

To set the tab order

1. Choose Set Tab Order from the Layout menu. Set Tab Order mode is indicated by the number that appears in the upper left corner of each control. The number indicates the control's place in the tab order.
2. Change the tab order by clicking each control in the sequence you want the tab order to be. The tab order number in the upper left corner will change accordingly.

Pressing ESC, clicking on anything but a control, or reaching the end of the tab list exits the tab order setting mode.

Undoing and Redoing Actions

Use the following procedures to undo and redo actions.

To undo an action

- Choose Undo from the Edit menu (CTRL+Z).

The number of operations that can be undone is limited by the size of memory and is configurable in the Options dialog box. For more information, refer to "Configuration Options" earlier in this chapter.

To Redo an action

- Choose Redo from the Edit menu (CTRL+R).

This command re-executes the last undone editing operation.

Cutting, Copying, Deleting and Pasting

Use these commands to remove, copy and paste controls within the dialog box.

To use the Cut command

- Choose Cut from the Edit menu (CTRL+X).

This command copies the current selection to the clipboard and then deletes the current selection.

To use the Copy command

- Choose Copy from the Edit menu (CTRL+C).

This command copies the code for the current selection to the clipboard. If there is no current selection, this command copies the entire dialog box to the clipboard.

To use the Delete command

- Choose Delete from the Edit menu (DEL).

This command removes the selected control(s) from the dialog box.

To use the Paste command

- Choose Paste from the Edit menu (CTRL+V).

This command pastes the controls on the clipboard into the current dialog box and makes the pasted controls the selection. If there is an entire dialog box on the clipboard, the current dialog box is replaced with that dialog box.

Copying the Dialog Box to the Clipboard

This command copies the entire dialog box to the Clipboard. The dialog box will stay in the Clipboard until something else is copied to the Clipboard.

To copy the entire dialog box to the Clipboard

- From the Edit menu choose Copy Entire Dialog to the Clipboard.

Using the Parse Command

The Parse command compiles the dialog box code.

To use the Parse Command


- Choose Parse from the Edit menu.

Using the Grid Command

The Grid is a layout aid which forces controls to be aligned on configurable horizontal and vertical intervals. Turning the grid on and off has no effect on the controls in the dialog box. Rather, the effect is realized when creating, moving and sizing controls in the dialog box.

When the grid is turned on, the dialog box will display black dots to indicate the horizontal and vertical alignment intervals. When controls are sized, the coordinates being modified are aligned to the alignment intervals. When controls are moved or created, the upper left corner of the controls is aligned to the alignment intervals. When a control is created by dragging a frame with the mouse, the lower right corner of the control is aligned as well.

To activate the grid

- Choose the  button from the toolbar to turn the grid on and off.

Viewing the Toolbar

This command will show or hide the toolbar.

To view the toolbar

- Choose **Toolbar** from the **View** menu to show or hide the toolbar.

Viewing the Status Bar

This command shows or hides the status bar.

To view the status bar

- Choose **Status Bar** from the **View** menu to show or hide the status bar.

Viewing the Code

This command displays a dialog box which shows the Basic code that represents the dialog box being edited. You may modify this code and press the **Update** button to replace the current dialog box with the one represented by the code in the dialog box.

To view the code

1. Choose **Code** from the **View** menu to open the **Dialog Code** dialog box.
2. Choose the **Update** button to replace the current dialog box with modified code.
3. Choose **Cancel** to close the **Dialog Code** dialog box.

Dialog Box Properties

The dialog box has several properties that affect its behavior in your basic program. The size and relative position of the dialog box may be modified directly by changing the size and position of the dialog box window in the dialog box editor.

The Dialog Properties Dialog Box

The following is a description of the properties that can be modified in the Dialog Box Properties dialog box:

Dialog ID: This specifies the type name of the dialog box used in your Basic script.

Caption type & Caption: The Caption Type field specifies the type of caption to use for your dialog box. If None is selected, the Caption field of this dialog box is disabled and the dialog box caption is set to the application's default dialog box caption. If Caption Type is set to String, the Caption field is enabled and its contents is used to set the caption of the dialog box. If Caption Type is set to Expression, the Caption field is assumed to contain a Basic expression. In this last case, the Basic expression is not interpreted by the dialog box editor, but will be properly interpreted by Basic when the program using the Basic dialog box is executed.

Macro function name: This field specifies the name of the optional dialog box function associated with this Basic dialog box.

ButtonGroup ID: This field specifies the name of the optional ButtonGroup associated with this Basic dialog box.

Size and Position: The position of the dialog box relative to the upper left corner of the application can be set by selecting the Position check box and modifying the X and Y fields of the Dialog Box Properties dialog box. If X and/or Y contains a valid number, the position of the dialog box window in the dialog box editor is modified accordingly. Non-numeric values for X and/or Y are assumed to be Basic expressions which are interpreted when the program using the Basic dialog box is executed. If the Position check box is not selected, the dialog box is centered on the application. The Width and Height fields of the dialog box are used to change the size of the dialog box.

To display the Dialog Properties dialog box

- Double click on an area of the dialog box window that does not contain any controls, or press ENTER if there are no controls selected.

Inserting the Dialog Box Code into the Macro Editor

Once the dialog box code is completed, copy the code into the Macro Editor by using the following procedure.

To insert the dialog box code into the Macro Editor

1. From the Edit menu, choose Copy Entire Dialog Box to Clipboard.
2. Move to the Macro Editor and place the cursor where you want the dialog box code to appear.
3. From the Macro Editor Edit menu, choose Paste.

Exiting the Dialog Editor

Use the following procedure to close the Macro Dialog Box Editor.

To exit Macro Dialog Box Editor

- Choose Exit from the File menu (ALT+F4).

CHAPTER

*Using
Security*



Using *EXTRA!* Security you can control how *EXTRA!* performs. By making parts of *EXTRA!* secure, you can remove commands from menus, disable buttons on toolbars and QuickPads, and disable keys on keyboard maps.

For example, if you want to stop all users from creating a new session, you can secure the New Session command. The next time a user tries to create a new session, the New Session command will no longer appear in the File menu, and any keystrokes or buttons that are supposed to open a new session will be disabled as well. (If the user tries to use the keystroke or button to open a new session, a security error message is displayed.)

In addition to making parts of *EXTRA!* secured, you can limit who can use Security by adding password-protection to Security. When you set a Security password, the user will have to enter the password before he or she can change any security settings.

Important: The Security dialog box contains commands that may not be available with different configurations of *EXTRA!*. For example, if you have not configured a File Transfer protocol, file transfer commands will not appear in the Tools menu or the toolbar. Also, if you remove all commands from a menu, that menu name will not appear on the menu bar.

For quick reference, the procedures in this chapter are listed below. If you are not familiar with all the commands that can be secured or you don't know which category a command is in, read the following section first and then go to the procedures.

To	Go to page
Select a scheme to edit	13
Select the active scheme	14
Secure a command	13
Set a password	14

Commands You Can Secure

The following commands can be removed from *EXTRA!*. To select a command, you will need to know which category it is in.

Application Commands

Run Application: Removes Run Application from the commands available on the Action page. The user will not be able to run applications using keyboard maps, Toolbars, HotSpots, or QuickPads when this command is secured.

Run Keyboard Map Editor: Removes Keyboard Map Editor from the commands available on the Action page. The user will not be able to edit maps from a Toolbar, HotSpot, QuickPad, or another keyboard map when this command is secured.

The Keyboard Map Editor will be still available through the Settings dialog box.

Run QuickPad Editor: Removes Run QuickPad Editor from the commands available on the Action page. The user will not be able to edit QuickPads from a keyboard map, Toolbar, HotSpot, or another QuickPad when this command is secured.

The QuickPad Editor will be still available through the Settings dialog box.

Run Toolbar Editor: Removes Run Toolbar Editor from the commands available on the Action page. The user will not be able to edit Toolbars from a keyboard map, HotSpot, QuickPad, or another Toolbar when this command is secured.

The Toolbar Editor will be still available through the Settings dialog box.

Help Menu Commands

Help Topics: Removes the Help Topics command from the Help menu and from the commands available on the Action page. The user can still activate Help from Help buttons and from the What's This button.

Help Instructions: Removes the Using Help command from the Help menu.

Office Compatible Help: Removes the Office Compatible command from the Help menu.

About: Removes the About *EXTRA!* command from the Help menu.

Edit Menu Commands

Cut Command: Removes the Cut command from the Edit menu and from the commands available on the Action page. The user will not be able to cut selected text from sessions and save it to the clipboard when this command is secured.

Copy Command: Removes the Copy command from the Edit menu and from the commands available on the Action page. The user will not be able to copy selected text from sessions when this command is secured.

Cut Append Command: Removes the Cut Append command from the Edit menu and from the commands available on the Action page. The user will not be able to cut selected text and append it to sessions when this command is secured.

Copy Append Command: Removes the Copy Append command from the Edit menu and from the commands available on the Action page. The user will not be able to copy selected text and append it to sessions when this command is secured.

Paste Command: Removes the Paste command from the Edit menu and from the commands available on the Action page. The user will not be able to paste text to his or her sessions when this command is secured.

Paste Continue Command: Removes the Paste Continue command from the Edit menu and from the commands available on the Action page. The user will not be able to paste the remaining portion of the contents of the Clipboard if a Clipboard item is larger than the destination host screen.

Clear Display Command: For VT sessions only. Removes the Clear Display command from the Edit menu and from the commands available on the Action page.

Select All Command: Removes the Select All command from the Edit menu and from the commands available on the Action page. The user will not be able to select all the display with a single command when Select All is secured.

Select Display Command: For VT sessions only. Removes the Select Display command from the Edit menu and from the commands available on the Action page.

Settings Command: Removes the Settings command from the Edit menu and from the commands available on the Action page. The user will not be able to open the Settings dialog box from the Edit menu when this command is secured.

The Settings dialog box will still be available through the Options menu and from the Session Type dialog box.

File Menu Commands

New Session Command: Removes the New Session command from the File menu and from the commands available on the Action page. In addition, the prompt for adding a new session during setup is also removed.

The user will not be able to create a new session when this command is secured.

Open Session Command: Removes the Open Session command from the File menu and from the commands available on the Action page. In addition, the prompt for opening an existing session during setup is also removed.

The user will not be able to open an existing session when this command is secured.

Open Specific Session Command: Removes the Open Session command from the commands available on the Action page.

Save Session Command: Removes the Save Session command from the File menu and from the commands available on the Action page. The user will not be able to save a session under its existing name when this command is secured.

Save Session As Command: Removes the Save Session As command from the File menu and from the commands available on the Action page. The user will not be able to save a session under a new name when this command is secured.

Open Layout Command: Removes the Open Layout command from the File menu and from the commands available on the Action page. The user will not be able to open a different layout when this command is secured.

Save Layout Command: Removes the Save Layout command from the File menu and from the commands available on the Action page. The user will not be able to save any changes he or she has made to the layout of their session when this command is secured.

Properties Command: Removes the Properties command from the File menu and from the commands available on the Action page. The user will not be able to see information about his or her session when this command is secured.

Print Settings Command: Removes the Print Settings command from the File menu and from the commands available on the Action page. The user will not be able to change page options when this command is secured.

Print Screen Dialog Command: Removes the Print Screen Dialog command from the File menu and from the commands available on the Action page. The user will not be able to change printer settings when this command is secured.

Print Screen Command: Removes the Print Screen command from the File menu and from the commands available on the Action page. The user will not be able to print what is on his or her screen when this command is secured.

Print Multiple Screens Command: Removes Print Multiple Screens from the File menu and from the commands available on the Action page. The user will not be able to print multiple screens when this command is secured.

Finish Printing Command: For VT sessions only. Removes the Finish Printing command from the File menu and from the commands available on the Action page.

Exit Session Command: Removes the Exit session command from the File menu and from the commands available on the Action page. The user will not be able to exit an individual session when this command is secured.

Exit *EXTRA!* Command: Removes the Exit *EXTRA!* command from the File menu and from the commands available on the Action page. The user will not be able to exit *EXTRA!* when this command is secured.

Session MRU Command: Removes the Session MRU command from the File menu. The user will not be able to see the session most recently used list when this command is secured.

Macro Commands

Run Macro: Removes the Run button from the Macro dialog box and removes Run Macro from the Action page. The user will not be able to run macros when this command is secured.

Run Macro Editor: Removes the Edit button from the Macro dialog box and removes Run Macro Editor from the Action page. The user will not be able to edit macros when this command is secured.

Record Macro: Removes the Record button from the Macro dialog box and removes Record Macro from the Action page. The user will not be able to record macros when this command is secured.

Miscellaneous Commands

Advanced Global Preferences: Removes the Global Preferences command from the Action page. The user will not be able to use this command in his or her keyboard maps, toolbars or QuickPads.

Terminal Setup: Removes the Terminal Setup command from the Action page. The user will not be able to change the data stream attributes.

Options Menu Commands

Settings Command: Removes Settings from the Options menu, from the Action page, and disables the Settings buttons in Session Type dialog box.

The Settings dialog box will still be available through the Settings command in the Edit menu and the Toolbar, QuickPad, and HotSpot commands in the View menu.

Session Type Command: Removes Session Type from the Options menu and from the commands available on the Action page. The user will not be able to view information about his or her session when this command is secured.

Global Preferences Command: Removes Global Preferences from the Options menu and from the commands available on the Action page.

Security Command: Removes Security from the Options menu and from the commands available on the Action page. The user will not be able to change what commands are secured when this command is removed.

Session Menu Commands

Connect: Removes Connect from the Sessions menu and from the commands available on the Action page. The user will not be able to connect a session when this command is secured.

Disconnect Command: Removes Disconnect from the Sessions menu and from the commands available on the Action page. The user will not be able to disconnect his or her session when this command is secured.

Reset Display Command: Removes Reset Display from the Sessions menu and from the commands available on the Action page.

Change Settings Commands

Color Settings: Removes Color from the Category list in the Settings dialog box and from the commands available on the Action page. The user will not be able to customize the colors of his or her session, including create color schemes, when this command is secured.

Connection Settings: Removes Connection from the Category list in the Settings dialog box and from the commands available on the Action page.

Display Settings: Removes Display from the Category list in the Settings dialog box and from the commands available on the Action page.

Edit Settings: Removes Edit from the Category list in the Settings dialog box and from the commands available on the Action page. The user will not be able to modify the way Cut, Copy, and Paste work on his or her host screen when this command is secured.

We recommend securing Settings in the Edit category when Edit Settings is secured.

File Transfer Settings: Removes File Transfer from the Category list in the Settings dialog box and from the commands available on the Action page. The user will not be able to create a File Transfer scheme when this command is secured.

Users can still transfer files.

Font Settings: Removes Font from the Category list in the Settings dialog box and from the commands available on the Action page. The user will not be able to select a different font, or change the Autosize Font and Autosize Window settings when this command is secured.

HotSpot Settings: Removes HotSpots from the Category list in the Settings dialog box and from the commands available on the Action page. The user will not be able to create HotSpots when this command is secured.

We recommend securing HotSpots in the View category when HotSpot Settings is secured.

Keyboard Maps: Removes Keyboard Maps from the Category list in the Settings dialog box and from the commands available on the Action page. The user will not be able to create a keyboard map when this command is secured.

Macro Settings: Removes Macro from the Category list in the Settings dialog box and from the commands available on the Action page. The user will not be able to create Macros when this command is secured.

Navigation Settings: Removes Navigation from the Category list in the Settings dialog box and from the commands available on the Action page. The user will not be able to record paths when this command is secured.

QuickPads: Removes QuickPads from the Category list in the Settings dialog box and from the commands available on the Action page. The user will not be able to create QuickPads when this command is secured.

We recommend securing QuickPads in the View category when QuickPad Settings is secured.

Toolbars: Removes Toolbars from the Category list in the Settings dialog box and from the commands available on the Action page. The user will not be able to create, edit, or delete Toolbars when this command is secured.

We recommend securing Toolbars in the View category when Toolbar Settings is secured.

Printer Settings: Removes Printer from the Category list in the Settings dialog box and from the commands available on the Action page.

Tools Menu Commands

Transfer File Command: For 3270 and VT sessions only. Removes Transfer Files from the Tools menu and from the commands available on the Action page. The user will not be able to transfer files one at a time when this command is secured.

FTP file transfer will still allow transfer of multiple files.

5250 File Transfer Command: For 5250 sessions only. Removes Transfer Files from the Tools menu and from the commands available on the Action page. The user will not be able to transfer files one at a time when this command is secured.

FTP file transfer will still allow transfer of multiple files.

Transfer Multiple Files Command: For FTP file transfer only. Removes Transfer Multiple Files from the Tools menu and from the commands available on the Action page. The user will not be able to transfer multiple files when this command is secured.

The user can still transferring single files.

Macro Editor Command: Removes Macro from the Tools menu and from the commands available on the Action page. The user will not be able to create, edit, or run macros when this command is secured.

Record Pages Command: Removes Record Pages from the Tools menu and from the commands available on the Action page. The user will not be able to record his or her host pages when this command is secured.

Page Settings Command: Removes Page Settings from the Tools menu and from the commands available on the Action page. The user will not be able to modify any host page recordings when this command is secured.

Go to Bookmark/Page: Removes Go To Bookmark/Page from the Tools menu and from the commands available on the Action page. The user will not be able to jump to a specific bookmark or page when this command is secured.

Status Application: Removes Status Application from the Tools menu and from the commands available on the Action page. The user will not be view the Audit log, trace API calls, or trace Communications traffic when this command is secured.

Macro MRU: Removes Macro MRU from the Tools menu and from the commands available on the Action page. The user will not be view the list of macros most recently used when this command is secured.

Password Protection: Shows passwords when macros, HLLAPI, screen copy, and navigation are used.

View Menu Commands

Toolbars Command: Removes Toolbars from the View menu and from the commands available on the Action page. The user will not be able to display the Settings dialog box with Toolbars selected when this command is secured.

The Settings dialog box will still be available through the Settings command on the Edit and Options menu.

Toggle Status Bar Command: Removes Statusbar from the View menu and from the commands available on the Action page. The user will not be able to toggle between viewing the Status bar when this command is secured.

QuickPads Command: Removes QuickPads from the View menu and from the commands available on the Action page. The user will not be able to display the Settings dialog box with QuickPads selected when this command is secured.

The Settings dialog box will still be available through the Settings command on the Edit and Options menu.

HotSpots Command: Removes HotSpots from the View menu and from the commands available on the Action page. The user will not be able to display the Settings dialog box with HotSpots selected when this command is secured.

The Settings dialog box will still be available through the Settings command on the Edit and Options menu.

Keyboard Map Command: Removes Keyboard Map from the View menu and from the Category list in the Action dialog box. The user will not be able to display their keyboard map when this command is secured.

Rule Lines Command: Removes Rule Lines from the View menu and from the Category list in the Action dialog box. The user will not be able to toggle the rule lines option on or off when this command is secured.

Setting Security

When you are ready to secure a set of commands, or a single command, you will be editing a Security scheme. You can edit the default scheme (DEFAULT.ESF) that is supplied with *EXTRA!*, or you can create your own schemes. Creating your own schemes will allow you to limit what your users will be able to do. For example, if you have a group of users that should not be transferring files, you can create a new Security scheme for them where the File Transfer command is no longer available.

We recommend using DEFAULT.ESF whenever possible.

To select a scheme to edit

1. Open a session.
2. From the Options menu, choose Security.
The Security dialog box appears.
3. From the File page, choose Browse to display the Browse for Security File dialog box.
4. Select the Security file you want to use, then click OK.

To secure a command

1. Open a session.
2. From the Options menu, choose Security.
The Security dialog box appears.
3. Make sure the scheme you want to edit is displayed in the Scheme field. If it is not, choose Browse to select the correct file.
4. Choose the Options tab.
5. If asked for a password, enter the password in the Security Password dialog box, then click OK.
6. Select the Category that contains the command(s) you want to set.
7. Clear the check mark from the command(s) you want secured.
8. Repeat steps 6 and 7 for all the commands you want secured.
9. To save the scheme, go to the File page and choose Save As.

Selecting the Active Scheme

Although you can edit any Security scheme, you need to go into your Registry to change which scheme is active. For that reason, we recommend using the default scheme (DEFAULT.ESF) whenever possible.

To select the active scheme

1. Using your Registry editor, open the HKey root of the registry.
2. Go to Software\Attachmate\EXTRA!\Security.
3. Change the path to correspond to your security file (extension .ESF).

Setting a Security Password

By setting a password for Security, you can control who has access to a Security scheme. You can set a password for the default scheme (DEFAULT.ESF), as well as any other new schemes you create. The password you set limits who can change a specific scheme; it does not limit access to security.

To set a password

1. Open a session.
2. From the Options menu, choose Security.
The Security dialog box appears.
3. Select the security scheme you want to edit. The name of the security scheme is listed in the Scheme field.
4. Choose the Change Password tab.
5. If asked for a password, enter the password in the Security Password dialog box, then click OK.
6. If the password has been changed already, enter the old password in the Old Password field.
7. Enter a new password in the New Password field.
8. Verify the password you entered by typing it in the Verify New field.

CHAPTER

*Using
the Status
Application*



There are three types of information you can gather using the Status window. The first type of information is an Audit Log that tracks the work *EXTRA!* is doing. The second and third types of information are traces, one of API calls and the other of communications traffic. *EXTRA!* also provides support for host response measurements, or Response Time Monitoring (RTM).

The main sections of this chapter describe in more detail the Audit Log, tracing API calls, tracing communications, and Response Time Monitoring (RTM).

The Audit Log

The Audit Log is automatically generated while you use *EXTRA!*. When you are using *EXTRA!*, the Audit Log keeps track of all the critical events that take place. These events are displayed on the Audit Log page and saved to a file with the extension .LOG. Audit log information can accumulate in the audit log file up to 1 MB. If the file grows to this size, the last half of the file is deleted and *EXTRA!* continues to add events to the beginning of the file.

The events in the Audit Log are always listed with the most recent event at the top of the list.

The Audit Log provides the following information for each critical event:

- The date of the event.
- The time of the event.
- The type of event that occurred. (The text in the Category column is defined by the application using the *EXTRA!* session, not by *EXTRA!*.)
- A brief description of the event. (The text in the Description column is defined by the application using the *EXTRA!* session. It is not defined by *EXTRA!*.)
- Additional detail for each event. The Audit Details dialog box (displayed by choosing an event) provides a closer look at the data sent to the Audit log when the event occurred. This dialog box shows whether the event succeeded or failed, and it also allows you to view the data involved.

To view the Audit Log

1. Select Status in the Tools menu.
2. If the Audit page is not displayed, choose the Audit tab at the bottom of the window.
3. To view details of a single event, choose the event to display the Audit Details dialog box.
4. To see details on other events close by, use the Previous and Next buttons.
5. Choose Close to close the Audit Details dialog box.

Tracing your APIs

API traces contain information on the calls made by one or more of your common API applications. For example, if you have an OLE application that is not working as you think it should, you could capture all the API calls that the application sends and receives. This information is displayed on the API Trace page, and is also saved to a file.

The events in the API Trace page are always listed with the most recent call at the bottom of the trace.

The API Trace page shows the following information:

- The date the call was executed.
- The time the call was executed.
- The type of API that made the call. This is very helpful when tracing more than one type of API.
- The name of the call that was made.

The API Trace page can also be split into two panes. The first pane contains the list of calls. The second pane, called the Parameter Details pane, provides the details for a specific call.

The Parameter Details pane shows the following information:

- The type of value the parameter has.
- The name of the parameter.
- The value of the parameter.

To record a new API trace

1. From the Tools menu, choose Status to open the Status window.
2. If the API Trace page is not displayed, choose the API Trace tab.
3. From the Options menu, choose Settings to select the types of API you want to trace.
4. Choose the Record button to start the trace.
5. To view more information about a specific call, double-choose the call to display the Parameter Details pane.
6. Choose the Stop button to stop the trace.
7. Save the trace to a file.

To view an old API trace

1. From the Tools menu, choose Status to open the Status window.
2. If the API Trace page is not displayed, choose the API Trace tab.
3. From the File menu, choose Open to display the File Open dialog box.
4. Select the trace file you want to open and choose OK.
5. To view more information about a specific call, choose the call to display the Parameter Details pane.

To add to an API Trace

1. From the Tools menu, choose Status to open the Status window.
2. If the API Trace page is not displayed, choose the API Trace tab.
3. From the File menu, choose Open to display the File Open dialog box.
4. Select the trace file to which you want to add information and choose OK.
5. Choose the Record button to start tracing. The new information is added to the end of the trace.
6. To view more information about a specific call, choose the call to display the Parameter Details pane.
7. Choose the Stop button to stop tracing.
8. Save the new trace under its existing name or give it a new name.

Tracing your Workstation's Communications

Communication traces contain all the communications traffic associated with a particular session. Unlike the other types of information, your communications traces are not displayed in the Status window. The information is sent directly to a trace file. Each trace creates a separate temporary file which can be saved after the trace is stopped. The Status window displays all the sessions that can be traced, indicating which are running traces and which are not.

Similar to API traces, you can start and stop a trace until you capture all the communications traffic you need.

The Communications page provides:

- A Running icon to indicate if the trace is recording or stopped.
- The name of the session being traced.
- The machine on which the session is running.
- The type of connection the session is using.
- The number of events in the trace.
- The size of the trace (in bytes).
- The name of the files used to save the trace, and the temporary file used to build the trace.

To record a new Communications trace

1. From the Tools menu, choose Status to open the Status window.
2. If the Communications page is not displayed, choose the Communications tab.
3. Choose the session you want to trace using the Open button (you can also use the Open command from the File menu). The session is added to the Communications trace and the Running icon stops.
4. Choose the Record button to start the trace.
5. Choose the Stop button to stop the trace.
6. Save the trace to a file.

To add to a Communications trace

1. From the Tools menu, choose Status to open the Status window.
2. If the Communications page is not displayed, choose the Communications tab.
3. Select the session to which you want to add information.
4. Choose the Record button to start the trace. The new information is added to the end of the trace file.
5. Choose the Stop button to stop the trace.
6. Save the trace to a file using its existing name, or use a new name if you want to keep the old trace as well.

Response Time Monitoring

The Response Time Monitor (RTM) measures how long it takes the host to respond after you issue a command from a display session, such as pressing a PF key or the ENTER key. RTM then keeps a running count of the various response times, storing the count in bins. The Response Time Monitor is one of the functions of NetView, IBM's network monitoring and control software.

EXTRA! provides remote RTM support which allows the host to monitor workstation RTM measurements. Remote RTM support is available for the 3270 connectivities listed below.

- 802.2 Direct Connect
- Cisco NCIA
- DFT/Coax Direct Connect
- SDLC Direct Connect
- Hayes Autosync Direct Connect

CHAPTER

*Using
APPN
Manager*



The APPN Node Manager provides a visual representation of the APPN node and its current status. Not only can you monitor the APPN node, you can save some of the information to your clipboard for future reference.

You can monitor the following types of information:

- Node
- DLC Connection
- Link
- Local LU
- Session
- Configuration

The Node Manager Window

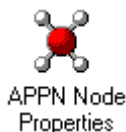
The Node Manager contains a toolbar with buttons you can use to select the type of APPN information you want to see, tabbed pages from which you can monitor specific information, and a status bar that relates to you the connection status of your APPN connections.

For example, when you choose the Node button, the Node and Node Statistics pages are available on your screen. You can then choose the Node Statistics tab to view function and timer details.

APPN Node Properties

You can monitor the status of the APPN node, and set node properties such as display options, the active configuration, node tracing, and auto shutdown delay using the APPN Node Properties dialog box. You access this dialog box by double-clicking the APPN Node Properties icon displayed in the Windows Control Panel.

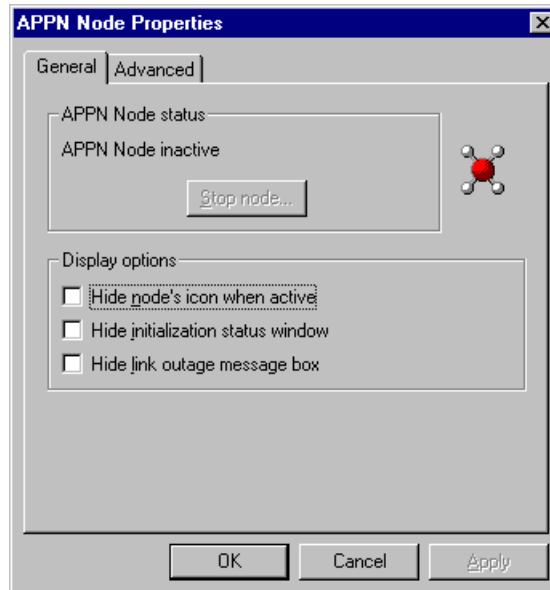
Once *EXTRA!* is installed, you'll see the APPN Node Properties icon in the Windows Control Panel.



To edit the properties of the APPN node

1. Double-click the APPN Node Properties icon in your Windows Control Panel.

The APPN Node Properties dialog box opens.

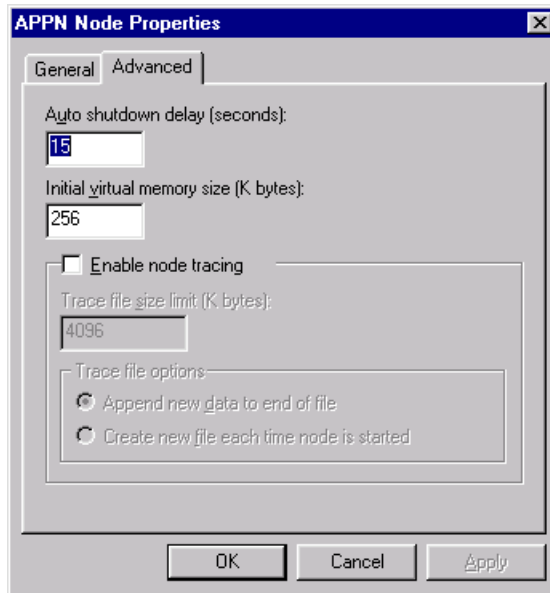


The APPN Node Properties - General Page

The General page displays the current status of the node, updated every ten seconds, in the APPN Node Status field. This page also has three different options from which you can choose to display the node's icon when active, the initialization status window, and the link outage message box.

2. Choose the Advanced tab to set advanced options for the APPN node.

The APPN Node Properties Advanced page is shown.



The APPN Node Properties - Advanced Page

From the Advanced page, you can change the current APPN configuration file. In the Active Configuration field, choose the Browse button to select a different configuration file.

If you want to change the size of the blocks of virtual memory allocated, type a number in the Initial Virtual Memory Size (K bytes) box.

If you want to activate node tracing, select the Enable Node Tracing option. After you have activated node tracing, enter the size limit of the trace file, and select either to append new data to the end of a file or to create a new file each time the node is started.

If you want to change the amount of time the APPN node will wait before it automatically shuts down, type a number in the Auto Shutdown Delay box. The default amount of time is 15 seconds.

3. When finished, choose the Apply or OK button.

Viewing Node Information

Choose the Node Pages button to get a general view of the current status of your APPN node. The information is divided between two pages: the Node page and the Node Statistics page.

The Node page displays the current configuration of the node control point and the status of the node's memory pool.

The Node Statistics page displays general information on the functions supported by the node, counters for the XID frames processed by the node, and a timer that indicates the total elapsed time from when the node was started.

The Node Page

This page displays the current configuration of the node control point and the status of the node's memory pool.

The information on this page is static—use the Refresh button to update the page.

To view node information

1. Start the APPN Node Manager.
2. For information on control point configuration and memory usage, choose Node Pages from the View menu, then choose Node.

–or–

For statistical information about the node, choose Node Pages from the View menu, then choose Node Statistics.

The following information is displayed:

- Functions supported by the node
 - Counters for XID frames processed by the node
 - Total elapsed time from when the node was started
3. Choose the To Copy button to save information for later reference. This copies the information on the Node Statistics page to your Clipboard.

The Node Statistics Page

This page displays general information on the functions supported by the node, counters for the XID frames processed by the node, and a timer that indicates the total elapsed time from when the node was started.

The information on this page is static—use the Refresh button to update the page.

Viewing DLC Information

Access information about all the external connections defined by your node by choosing the DLC Pages button. Not only can you see the statistics for these connections, buttons are provided for starting and stopping them as well.

The DLC page displays a list of all the defined connections. Each entry includes the type of connection (LAN, SDLC, or DFT), the logical port number for 802.2 and SDLC connections, and the current status of the connection.

The DLC Statistics page displays the current statistics for the connection selected on the DLC page. In addition to displaying information on the connection you selected, you can cycle through the rest of your connections using the Previous and Next buttons on this page.

The DLC Page

Displays a list of all the defined connections. Each entry includes the type of connection (LAN, SDLC, or DFT), the logical port number for 802.2 and SDLC connections, and the current status of the connection. This display is updated dynamically by the node.

In addition, Start and Stop buttons are included to activate and deactivate the connection.

To view DLC connection information

1. Start the APPN Node Manager.
2. To select a connection or to start and stop a connection, choose DLC Pages from the View menu, then choose DLC.

–or–

For statistical information about the DLC connection, choose DLC Pages from the View menu, then choose DLC Statistics.

The following information is displayed:

- BTU sizes
 - Link activation limits
 - XID information
3. To see information on a different connection, use the Previous and Next buttons to cycle through your connections.
 4. Choose the To Copy button to save the information. This copies the information on the DLC Statistics page to your Clipboard.

The DLC Statistics Page

This page displays the current statistics for the connection selected on the DLC page. In addition to displaying information on this connection, you can cycle through the rest of your connections using the Previous and Next buttons on this page.

The DLC Statistics page provides:

- BTU sizes
- Link activation limits
- XID information

The information on this page is static—use the Refresh button to update the page.

Viewing Link Information

Choose the Link Pages button to view information about the logical connection between your local node and the remote nodes. You can get information on both the links defined by your configuration, as well as any active dynamic links. Link information is divided into two pages: the Link page and the Link Statistics page.

The Link page displays a list of all the defined connections plus any active dynamic links (dynamic links are removed from the page when they become inactive).

The Link Statistics page displays the current statistics for the link selected on the Link page. In addition to displaying information on the link you selected, you can cycle through the rest of your connections using the Previous and Next buttons on this page.

The Link Page

This page displays a list of all defined Links and active dynamic links (dynamic links are removed from the page when they become inactive). The information on this page is updated dynamically by the node.

The Link page provides:

- The name of the link. This is the name specified in the configuration, or for dynamic links, the name is formatted as @I000000 for implicit links and @D000000 for virtual routing nodes.
- The associated Data Link Control.
- The number of sessions currently using the link (all LU types).
- The status of the link.
- The adjacent node control point.
- The adjacent node type.

The page also includes Start and Stop buttons for activating and deactivating links.

To view link information

1. Start the APPN Node Manager.
2. To select a link, or to start and stop a link, choose Link Pages from the View menu, then choose Link.

–or–

For statistical information about the link, choose Link Pages from the View menu, then choose Link Statistics.

The following information is displayed:

- The TG number
- Start and Stop times
- Active time
- The adjacent node ID
- XID bytes received and sent
- Data bytes received and sent
- Bad SNA frames received
- Session CH frames received and sent

3. To see information on a different link, use the Previous and Next buttons to cycle through your active sessions.
4. Choose the To Copy button to save the information. This copies the information displayed on the Link Statistics page to your Clipboard.

The Link Statistics Page

This page displays the current statistics for the link selected on the Link page. In addition to displaying information on this link, you can cycle through the rest of your links using the Previous and Next buttons on this page.

The information on this page is static—use the Refresh button to update the page.

Viewing Local LU Information

Choose the Local LU Pages button to access a listing of all the local LUs defined by your node. The information is divided between two pages: the LU 6.2 page and the LU 0 to 3 page.

The LU 6.2 page lists all the type 6.2 LUs defined by the local node. Each item in the list contains the LU name, LU alias, and the LU type (independent or dependent).

The LU 0 to 3 page lists all of the conventional (type 0, 1, 2, and 3) LUs defined by your node. Conventional LUs are typically defined to support 3270 display and printer sessions.

The LU 6.2 Page

This page lists all the type 6.2 LUs defined by the local node. Even if no LUs are defined, this list always includes the control point LU. The display includes the LU's alias and the LU type (independent or dependent).

The LU 6.2 page provides:

- The LU name. This is the network name used to reference the LU.
- The LU alias. This is the local name used to reference the LU. A partner LU or partner transaction program can use this name to reference the LU.
- The type of LU (independent or dependent).

The information on this page is updated dynamically by the node.

To view local LU information

1. Start the APPN Node Manager.
2. For a list of 6.2 LUs defined by your node, choose LLU Pages from the View menu, then choose Local LU.

–or–

For a list of all the conventional LUs defined by your node, choose LLU Pages from the View menu, then choose LU0 to 3.

The LU 0 to 3 Page

This page lists all of the conventional (type 0, 1, 2, and 3) LUs defined by your node. Conventional LUs are typically defined to support 3270 display and printer sessions.

The LU 0 to 3 page provides:

- The name of the LU.
- The name of its associated PU.
- The status of the LU (inactive, SSCP, or Bound).
- The type of LU (Any or Model 2-5).

Viewing Session Information

Choose the Sessions Pages button to access information on all active LU 6.2 sessions. The information is divided between two pages: the Session page and the Session Statistics page.

The Sessions page lists all the active LU 6.2 sessions.

The Session Statistics page displays the statistics for the session selected on the Sessions page.

The Sessions Page

This page lists all the active LU 6.2 sessions.

The Sessions page provides:

- The Session ID.
- The LU name or alias of the Local LU the session is using. (If you are using a CP-CP session, this will be the CP name.)
- The LU name or alias of the partner LU associated with this session.

- The Mode used by the session.

This information is updated automatically by the node.

To view session information

1. Start the APPN Node Manager.
2. To select a session, choose Sessions from the View menu, then choose Sessions.

–or–

For statistical information about the session, choose Sessions from the View menu, then choose Session Statistics.

The following information is displayed:

- FQPCID
 - Polarity
 - Contention
 - RU size sent and received
 - Maximum BTU sent and received
 - Maximum pacing sent and received
 - Data frames sent
 - Data bytes sent and received
 - The link station name
3. To see information on a different session, use the Previous and Next buttons to cycle through your active sessions.
 4. Choose the To Copy button to save the information. This copies the information on the Session Statistics page to your Clipboard.

The Session Statistics Page

This page displays the statistics for the session selected on the Sessions page. In addition to displaying information on this session, you can cycle through the rest of your sessions using the Previous and Next buttons on this page.

The information on this page is static—use the Refresh button to update the page.

Viewing Configuration Information

Choose the Configuration button to access information on the active configuration of the node. The Configuration page displays a copy of the configuration settings being used at this time.

The Configuration Page

This page displays a copy of the configuration settings being used at this time.

To view configuration information

1. Start the APPN Node Manager.
2. Choose Configuration from the View menu.
3. Refer to the Configuration page to view the active configuration. Use the horizontal and vertical scroll bars to maneuver through the file.

APPENDIX

Uninstalling EXTRA!



EXTRA! includes the Uninstall program, which removes the 32-bit EXTRA! components from your Windows NT, Windows 95, or Windows 98 PC. Specifically, Uninstall deletes the EXTRA! files, removes the program folder or group, and purges associated configuration information stored in the Windows registry.

Caution: If you want to reinstall the EXTRA! (32-bit) software, run Uninstall before Setup.

Be aware that Uninstall removes only those components which the EXTRA! Setup has installed to the EXTRA! folders, directories, or program groups. In the cases described below, Uninstall will not remove components; you must remove them manually.

- Uninstall will not remove EXTRA! icons, programs, or files moved from the folders or program groups to which they were initially installed by Setup.
- In Windows 95, Uninstall will not remove user-created shortcuts to EXTRA! components.
- If you add non-EXTRA! icons to the EXTRA! folder or program group, Uninstall will not remove these icons. Likewise, it will not remove files, folders, or shortcuts added to the EXTRA! folders created by Setup.

For additional information about Uninstall, refer to the ReadMe file, located in your EXTRA! folder or program group.

To uninstall from Windows NT 3.51

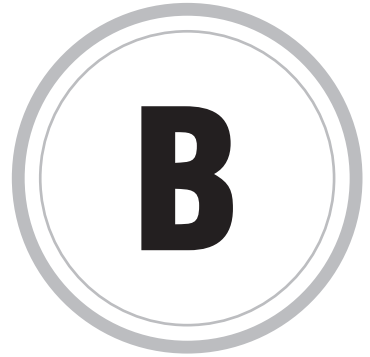
1. Exit from EXTRA!. All sessions must be closed before you uninstall.
2. From the EXTRA! program group, double-click the Uninstall icon.
3. When prompted to confirm file deletion, select Yes.
Uninstall displays its progress as it removes files.
4. When Uninstall is completed, choose OK.

To uninstall from Windows 95, Windows 98 and Windows NT 4.0

1. Exit from EXTRA!. All sessions must be closed before you uninstall.
2. From the Control Panel, double-click the Add/Remove Programs icon.
3. From the Install/Uninstall page, select EXTRA! (32 bit) from the list box, then click Add/Remove.
4. When prompted to confirm file deletion, select Yes.
Uninstall displays its progress as it removes files.
5. When Uninstall is completed, choose OK.

APPENDIX

Understanding Mainframe Messages



Whenever you connect to the mainframe, it sends messages to your PC to keep you posted on the status of your connection. In *EXTRA!*, these messages appear in the Operator Information Area (OIA), located at the bottom of the Display window.

Read this appendix to learn:

- How to read the fields that appear in the Operator Information Area of your display session.
- How to monitor your connection to the mainframe.
- How to identify and decipher mainframe messages.
- What action to take when the mainframe reports a problem.

Fields in the OIA

If you are using *EXTRA!* with an *EXTRA!* font, the characters displayed in the OIA field look like this (each field is explained in the table on the next page):





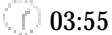



If you are using *EXTRA!* without an *EXTRA!* font, the characters displayed in the OIA fields look like this (each field is explained in the table on the next page):



Explanation of Fields

The table below identifies the field number, the name of the field, the symbols you might see in the field, and the page in this appendix where you can find a description of the field. The symbols that appear on your screen may be slightly different.

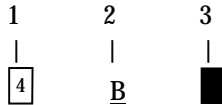
Field #	Field Name	Field Symbols	Page
1	Condition of Connection		B-4
2	Condition of Communication	X 	B-6
3	Communication Check Reminders Host Attribute Symbols Last Transaction Time Clock	  	B-16
4	Case Mode	Aa	B-26
5	Shifts and Modes	^	B-26
6	Session Short Name and Screen Profile	A	B-27
7	Session Long Name	Session1	B-27
8	Cursor Position	R 13 C 11	B-28
9	Printer Status		B-28
10	Time	10:13	B-29
11	Date	10/25/93	B-29

Field 1: Condition of Connection

Messages in this field tell you three things:

- The kind of control unit to which you are connected,
- The type of communications system or architecture your mainframe system is using, and,
- Whether or not you have successfully connected to the control program.

Field 1 is separated into three positions.





The table below describes all the messages that can be displayed in these three positions.

Condition of Connection Messages

Message	Meaning
4 or 4	This message appears in the first position and indicates that you are connected either to a 3274 or 3174 control unit.
6 or 6	This message appears in the first position and indicates that you are connected to a 3276 control unit.
S	This message appears in the first position and indicates that you are connected to a 3174 control unit.
N	This message appears in the first position and indicates that you have a connection to a 9370 or ES/9000 workstation controller card using non-SNA protocols.

Continued on next page.

Condition of Connection Messages (cont.)

Message	Meaning
A or <u>A</u>	<p>On-line A</p> <p>This message appears in the second position and indicates that you have a connection to a remote system that is using the BSC protocol, or you are connected to a locally-attached control unit using non-SNA protocols.</p>
B or <u>B</u>	<p>On-line B</p> <p>This message appears in the second position and indicates that you have a connection to a remote system that is using SDLC protocol, a connection to a locally-attached control unit using non-SNA protocols, or any system with SNA protocol running DLC.</p>
N	<p>In-Use Indicator (X.21 and X.25)</p> <p>This message appears in the second position and means that the control unit is connected to the mainframe through a network, and the control unit is in the data transfer state.</p>
® or 	<p>Control Program Owned</p> <p>This message appears in the third position and indicates that the control program, SSCP, has established contact with your PC.</p>
? or 	<p>Unowned</p> <p>This message appears in the third position and indicates that your PC is connected to the mainframe system, but is not connected to an application program or a control program. Contact your mainframe system administrator.</p>

Continued on next page.

Condition of Connection Messages (cont.)

Message	Meaning
■	<p>Application Owned This message appears in the third position and indicates that you are connected to a mainframe application program, such as CMS or TSO.</p>
TEST	<p>Test Mode This message appears in CUT mode only and means that your terminal is in Test mode. Test mode allows you to use test functions located in the control unit. These test functions make it possible for you to test your terminal to make sure it is functioning properly and diagnose any terminal problems encountered.</p>

Field 2: Condition of Communication

When there is a problem with your connection to the mainframe, a Communication Condition messages is displayed in Field 2. These messages include:

- Machine Check Messages
- Program Check Messages
- General Input Check Messages

The following tables list and explain the messages, suggesting what action you might take to resolve problems.

If you are unable to solve a Communication problem, contact your mainframe system administrator or call Attachmate Customer Support.

Machine Check Messages

Machine Check messages usually indicate a problem with the physical connection of your workstation to the control unit or gateway. Sometimes Machine Check messages are caused by something as simple as a loose cable or, if you are communicating by modem, dialing a wrong number.






The table on the following page lists the more common Machine Check messages.

Machine Check Messages

Message	Meaning	Action
X ☒ 204	You have a parity error, which means you have lost information while communicating with the mainframe.	Turn your PC off, check your coax connections to make sure you are connected properly, then turn your PC on and try to connect to the mainframe again.
X ☒ 207	A timeout error has occurred, which means you have lost information while communicating with the mainframe.	Follow the same corrective procedure for an X Ø 204 error.
X ☒ 208 X ☒ 209 X ☒ 211 --	You have a command failure between your workstation and the control unit. Usually, this condition is caused by a connection problem with your coax cables, which connect you to the control unit.	Turn your PC off, check your coax connections to make sure you are connected properly, then turn your PC on and try to connect to the mainframe again.



Continued on next page.

Machine Check Messages (cont.)

Message	Meaning	Action
X  240-243 X  292-299	You have a device failure, with device referring to hardware items such as the coax cabling, the connecting pieces on the cabling, the control unit, or maybe even your workstation. Often the problem is simply a chance error; it might not happen again.	Turn your PC off and check your coax connections to make sure you are connected properly, then turn your PC on and try to connect to the mainframe again.
X  310-399	The control unit that your coax is connected to has failed.	Refer to your control unit manufacturer's documentation for information on how to correct the problem.
X  620	You have a device failure.	To clear this condition, press RESET, then try your request again.
X  630-640	These messages indicate that the 3274 control unit is failing.	To clear this condition, press RESET, then try your request again.

Continued on next page.

Machine Check Messages (cont.)

Message	Meaning	Action
X  650-699	You have a device failure.	To clear this condition, press RESET, then try your request again.
X  999	You have a NetBIOS name conflict, or there is a hardware error somewhere along the network that connects you to the mainframe.	Check the cables and connections to make sure they are correct. Another possible solution may be to change your workstation's station name. To clear this condition, press RESET, then try your request again.

Program Check Messages

Program Check messages are divided into configuration messages and general input messages.

Configuration Messages

This type of Program Check message varies depending on the type of problem you have. If your workstation is running a terminal in CUT mode, the three-digit messages range between 400 and 499. If you are in DFT mode, the messages range between 700 and 799. Other *EXTRA!* display session messages range between 900 and 999.

The most common configuration messages occur when there are configuration mismatches in the mainframe, front-end processor, controller, or workstation. You can correct some of these errors with workstation configuration changes.

The following table lists the most common Program Check messages that you can correct from your workstation.

Configuration Messages

Message	Meaning	Action
X PROG 700	<p>SNA Protocol violation This message is generated when the SNA server detects an error with information sent to or received from the mainframe.</p>	<p>Check the <i>EXTRA!</i> Xlog for more details, then contact your system administrator to run a trace on your system.</p>
X PROG 714	<p>Bind Rejected This message is generated when the mainframe rejects a bind.</p>	<p>Check LU configuration at the mainframe. You may be trying to connect a display session to a printer LU at the mainframe.</p>
X PROG 723	<p>Invalid LU Type This message is generated when the workstation receives an incorrect SNA bind command. It can mean a display session received a printer bind command, a printer session receives a terminal bind command, or the mainframe thinks the printer session is an LU1 (SCS) printer and the workstation is configured as an LU3.</p>	<p>Reconfigure <i>EXTRA!</i> so your session and its mainframe LU are the same type (for example, match your display sessions with mainframe LUs configured for terminal connections).</p>

Continued on next page.

Configuration Messages (cont.)

Message	Meaning	Action
X PROG 724	<p>Invalid Screen Size This code is generated when the workstation receives an SNA bind command for a terminal model size larger than that defined for the session. For example, the mainframe may be configured for a model 3 terminal but your workstation may be emulating a model 2.</p>	<p>Reconfigure <i>EXTRA!</i> for a larger terminal model size.</p>
X PROG 755	<p>Invalid Order Received Usually this code occurs when the mainframe sends undisplayed EBCDIC characters, and the workstation is configured to generate an error code rather than displaying a hyphen (-) as a substitute character.</p>	<p>Contact your system administrator and report you are receiving invalid characters from the mainframe.</p>
X PROG 756	<p>Invalid Structured Field This message can occur, for example, when the mainframe thinks the terminal has graphics capabilities, and the workstation session is not configured for graphics.</p>	<p>Reconfigure <i>EXTRA!</i>, adding the capabilities you need.</p>

General Input Messages

While many Program Checks are caused by configuration errors, general input messages fall into two categories:

- Problems undetected by the communications protocol layer. For example, if a session power-off is not detected by the mainframe you will frequently see these messages:

X PROG 713 (Session Already Connected)

X PROG 711 (Session Limit Exceeded)

X PROG 714 (No LU or LU Session)




- Programming errors in the mainframe.

These remaining errors are less likely to occur than those caused by configuration errors, and they cannot be fixed at the workstation. The best thing you can do is report the problem to your mainframe system administrator.

If you are the mainframe system administrator, consult the documentation for your IBM 3174 or 3274 control unit, which contains a bibliography of documentation for control units.


General Input messages give you information on the general condition of your mainframe connection. The following table explains some of the more common general input messages.

General Input Messages

Message	Meaning	Action
X ⌚	Busy with Request This message is called the "X clock." It means the mainframe is busy processing your input.	Please wait.
X  NUM	Numeric This message appears when the Numeric Lock feature is on. You tried to make a non-numeric entry at a location on the screen where only numeric information is allowed.	To clear this condition and try again, press RESET.
X 	Go Elsewhere You tried to enter information in a protected field, a field in which you are not permitted to place data.	To clear this condition, press RESET.
X 	More Than You tried to put too much data in the field.	To clear this condition and try again, press RESET.


Continued on next page.

General Input Check Messages (cont.)

Message	Meaning	Action
X-f	<p>Minus Function You requested a function that is currently unavailable.</p>	<p>To clear this condition, press RESET.</p>
X  #	<p>What Number? This symbol appears in a coax-connected session when you enter a number that the system does not recognize. You may have requested a printer ID number that is not in the system, or you may have tried to use numbers to request a printer that has a non-numeric ID. Or you may have made your entry while your terminal is in Test mode.</p>	<p>To clear this condition and try again, press RESET.</p>
X SYSTEM	<p>System Lock The mainframe has locked your keyboard after receiving your last request. Look for an accompanying message. This condition may be more prevalent in a non-SNA environment.</p>	<p>Wait until the host computer completes your request and clears the OIA.</p> <p>To restore the keyboard, press RESET.</p>

Continued on next page.

General Input Check Messages (cont.)

Message	Meaning	Action
X-s	<p>Minus Symbol The symbol or character that you tried to enter is not available.</p>	<p>To clear this condition, press RESET.</p>
X  X	<p>Operator Unauthorized You requested a printer you are not authorized to request. This condition could be caused by:</p> <ul style="list-style-type: none"> • Pressing the PRINT key when Field 9 of the OIA is empty. • Pressing the IDENT key when Field 9 of the OIA is empty. • Requesting a printer that is recognized by your system, but is incompatible with your display. • Pressing the PRINT key, but there is not enough memory in the print buffer to accommodate all the information that's on the screen. 	<p>To clear this condition, press RESET.</p>

Field 3: Communication Check Reminders

Field 3 can display Host Attribute symbols, the Last Transaction Time (LTT), or Communication Check Reminders.




Host Attribute Symbols

The table below lists the Host Attribute symbols that can be displayed in the OIA. (For information on turning these symbols on or off, as well as setting these attributes, see your *EXTRA! User's Guide*.) These symbols are only displayed if you are using an EXTRA! font.

Symbol	Meaning
a	<i>Transparency On:</i> This symbol indicates that you want the graphic level of your cell to be transparent.
a	<i>Transparency Off:</i> This symbol indicates that you want to display the graphic level of your cell.
a	<i>Reverse Video:</i> This symbol indicates that you want to create text with reverse video.
⌘	<i>Blinking:</i> This symbol indicates that you want to create blinking text.
<u>a</u>	<i>Underline:</i> This symbol indicates that you want to underline text.
SØ	<i>Base Character Set:</i> This symbol indicates that you are using the mainframe's base character set.
SA	<i>SA Program Symbol Set:</i> This symbol indicates that you are using Program Symbol Set A. Symbol Set A is defined by the mainframe.
SB	<i>SB Program Symbol Set:</i> This symbol indicates that you are using Program Symbol Set B. Symbol Set B is defined by the mainframe.


Continued on next page.

Host Attribute Symbols (cont.)

Symbol	Meaning
	<i>Color Symbol:</i> This symbol indicates which color you are using.
	<i>User Selected Symbol:</i> This symbol indicates that the attribute symbol to its left is defined by the application, not the mainframe. It is displayed whenever the mainframe's attribute definition is not being used.
	<i>Mainframe Default Symbol:</i> This symbol indicates that the attribute symbol to its left is defined by the mainframe, not the application. It is displayed whenever the mainframe's attribute definition is being used.

Last Transaction Time

When you are monitoring your communications, the Last Transaction Time is displayed in Field 3. The time displayed can be in minutes and seconds, or seconds and tenths of a second. (The clock to the left of the time is only displayed if you are using an EXTRA! font.) Both formats are shown below.

 03:55 (minutes/seconds)

–or–

 :03:5 (seconds/tenths of seconds)

Communications Check Reminders

Communication Check Reminders appear in your OIA when the system detects a break in the proper flow of communication between your PC and the mainframe. These messages automatically overwrite any Host Attribute symbols or transaction times if they are being displayed.

Often the cause of such a break is as simple as a loose cable or modem connection. At other times, the control unit or gateway doesn't recognize your PC because the address or some other element of your configuration isn't quite right.

The presence of a Communication Check Reminder more than likely suggests that a hardware problem exists, probably at the control unit, gateway, or mainframe. A Communication Check Reminder will not clear when you press Reset; it will remain until the hardware problem is resolved.

Communication Check Reminder messages consist of a ⚡ symbol (called a lightning bolt) followed by a three-digit code.

The following tables list the more common Communication Check Reminders, their probable causes, and some suggestions for resolving them. If the problem persists, contact your system administrator.

Communication Check Reminder Messages

Message	Meaning	Action
⚡ 497	The link service process quit unexpectedly.	Contact your system administrator.
⚡ 501	The Data Set Ready (DSR) was dropped, indicating a broken or lost connection.	Redial the connection.
⚡ 502	The Clear to Send (CTS) connection is not present, which may indicate a broken modem or cable.	Check the modem and cable for possible damage and try again.
⚡ 504	You probably lost the Carrier Detect connection, causing you to lose the phone call.	Redial. If this condition persists, reconfigure <i>EXTRA!</i> to make sure the Physical Unit Address (PUADD) and NRZI fields for the modem are set correctly.

Continued on next page.

Communication Check Reminder Messages (cont.)

Message	Meaning	Action
<p>↖ 505</p>	<p>It is normal to receive this message when your workstation is making a connection with the mainframe; it indicates that the mainframe does not acknowledge your unit. This message remains on the screen until the connection is finally made.</p>	<p>If the message does not clear away by itself, try connecting again. If you still get this error, you may have a configuration mismatch. Make sure your PUID corresponds to the mainframe definitions of your unit.</p>
<p>↖ 510</p>	<p>The physical unit (PU) is not active. If you are connected to a gateway, it could be that the gateway's communication to the mainframe may be cut off. This is especially likely in cases where you have successfully connected before. Another possible cause for this condition is that the physical unit ID (PUID) may already be in use, incorrectly specified, or the physical unit address (PUADD) may be incorrectly specified. In a DLC environment, it is likely the host address has not been specified.</p>	<p>First, make sure that the mainframe gateway is still operational. Second, check the PUADD and the host address in your configuration.</p>

Continued on next page.

Communication Check Reminder Messages (cont.)

Message	Meaning	Action
↘ 511	This message might appear if you are on a phone line that has interference.	Try redialing.
↘ 518	The SNA segment was received in an unacceptable sequence.	Try the operation again.
↘ 519	Your message extended beyond the allowable length.	Try the operation again.
↘ 520	This message indicates that <i>EXTRA!</i> received a retry command from the mainframe before anything was sent, which means that you have an error on the link level of your communications.	Check your communications link. The host may have received some line noise and interpreted it as data coming from your workstation.
↘ 521	This message is called Idle Time-out. There has been no activity on the communications line for the past 25 seconds. This most likely indicates that the modem connection is down.	Try the operation again.
↘ 525	This message indicates a problem with your mainframe connection.	Check all the cabling between your workstation and the mainframe.

Continued on next page.

Communication Check Reminder Messages (cont.)

Message	Meaning	Action
<p>↘ 528</p>	<p>A number of issues can cause this condition. The control unit might be incorrectly defined to the mainframe, or there is an intermittent error at your workstation or the mainframe. It's also possible that the physical unit (PU) is down or that the mainframe is down.</p>	<p>First, make sure that the mainframe gateway is still operational. Second, check your configuration.</p>
<p>↘ 529</p>	<p>The control unit has lost its connection with the mainframe. The cause is probably the modem or cable. With a DLC 802.2 connection, it might be that the LAN is down or there could be a problem with the network adapter.</p>	<p>First, make sure that the network is still operational. Second, check your modem, cable and network adapter connections.</p>
<p>↘ 530</p>	<p>The control unit has timed out under a Write command and has shut itself down. The cause is probably a modem or cable.</p>	<p>Contact your system administrator.</p>

Continued on next page.

Communication Check Reminder Messages (cont.)

Message	Meaning	Action
↘ 539	This message indicates a loss of the virtual circuit on your X.25 link.	Check the cabling on your X.25 link and test your X.25 network software.
↘ 580	This message confirms that your workstation closed the secondary virtual circuit on your X.25 network.	Contact your system administrator to check the X.25 network software and the SNA server configuration.
↘ 581	This message confirms that your workstation reset the primary virtual circuit on your X.25 network.	Contact your system administrator to check the X.25 network software and the SNA server configuration.
↘ 582	This message indicates that the mainframe failed to connect to your workstation through a secondary virtual circuit.	Contact your system administrator to check the X.25 network software and the SNA server configuration.
↘ 586	The name of this message is "received data failure." You might have a problem with your network adapter.	Check your network adapter and refer to your adapter's documentation for instructions.
↘ 587	The name of this message is "fatal DLC error detected." You have a communication problem originating from your network adapter.	Check your network adapter and refer to your adapter's documentation for instructions.

Continued on next page.

Communication Check Reminder Messages (cont.)

Message	Meaning	Action
<p>↘ 588</p>	<p>The name of this message is “unable to initialize token-ring adapter.” This indicates that your adapter initialization failed.</p> <p>The communications software is unable to start using the LAN adapter.</p>	<p>This may occur if the configured adapter number does not exist. Check with your system administrator to determine the correct adapter number.</p>
<p>↘ 589</p>	<p>The name of this message is “unable to open Service Access Point (SAP).” Your SAP parameters may be incorrect or missing from your CONFIG.SYS file.</p> <p>The configured Service Access Point could not be opened.</p>	<p>Check with your system administrator to determine the correct SAP number.</p>
<p>↘ 590</p>	<p>If you are in CUT mode, this message means that your connection with the control unit has been dropped.</p> <p>(continued on next page)</p>	<p>Check your coax cable to make sure it is attached properly to your workstation and to the control unit or gateway.</p>

Continued on next page.

Communication Check Reminder Messages (cont.)

Message	Meaning	Action
<p>→ 590 (cont.)</p>	<p>If you have a token-ring connection, this message means: the token-ring adapter driver is unavailable.</p>	<p>Contact your system administrator.</p>
<p>→ 591</p>	<p>Open Link Station or Link Receive failed.</p> <p>The resources configured for the token-ring software may not be sufficient to support an additional Link Station.</p>	<p>Contact your system administrator.</p>
<p>→ 592</p>	<p>Transmit failed on Text or XID.</p>	<p>The configured host address may be invalid. Contact your system administrator.</p>
<p>→ 593</p>	<p>Link Station connect failed as primary side.</p> <p>The workstation could not initiate a connection to the host.</p>	<p>Contact your system administrator to check the TIC configuration on the host.</p>
<p>→ 594</p>	<p>Link Station connect failed as secondary side.</p> <p>The workstation could not accept a connection initiation from the host.</p>	<p>Contact your system administrator to check the TIC configuration on the host.</p>

Continued on next page.

Communication Check Reminder Messages (cont.)

Message	Meaning	Action
<p>↘ 597</p>	<p>The gateway (SNA Server) has stopped communicating with your terminal, indicating the gateway (server) is probably down.</p>	<p>Wait and then try the operation again.</p>
<p>↘ 598</p>	<p>The gateway (SNA server) has not responded to your terminal. You may have an incorrect network station name, host resource name, or an associated workstation to gateway (server) identification problem. Or it could be that the gateway's communication to the mainframe has been cut off. This is especially true in cases where you have successfully connected before.</p>	<p>First, make sure that the gateway (server) is still operational. Second, check your configuration.</p>

Continued on next page.

Communication Check Reminder Messages (cont.)

Message	Meaning	Action
↘ 599	The gateway (SNA server) has not responded to your terminal. You may have an incorrect network station name, host resource name, or an associated workstation (server) identification problem. Or it could be that the gateway's communication to the mainframe has been cut off. This is especially true in cases where you have successfully connected before.	First, make sure that the gateway (server) is still operational. Second, check your configuration.

Field 4: Case Mode

This field tells you whether the display is in uppercase or lowercase mode. If it is in uppercase mode, the symbol will be AA and all the text on the display will appear in uppercase. If it is in lowercase mode, the symbol will be Aa and all the text on the display will be displayed in both uppercase and lowercase.

Field 5: Shifts and Modes Messages

When you use the mainframe, you can place your keyboard into different modes so that you can carry out certain keyboard tasks. For instance, you may need to do a lot of numeric input, so you might want to lock your keyboard into the numeric mode. The numeric mode, in effect, turns the right side of your 101-key keyboard into a 10-key keypad.

The following table lists and describes the different shifts and modes messages displayed by the OIA.

Shift and Mode Messages

Message	Meaning
^	Insert The keyboard is in the insert mode, which means that, as you type characters at the cursor location, characters to the right of the cursor will move to make room for the inserted characters. To turn off Insert mode, press the Reset key. (Refer to your particular keyboard mapping for the location of the Insert and Reset keys).
APL	APL Mode The keyboard is in APL mode, allowing you to write and modify programs using APL characters. (APL stands for A Programming Language).
NUM	Numeric Mode The message indicates that your cursor is positioned in a field with the numeric attribute set. This turns the right side of your 101-key keyboard into a 10-key keypad.

Field 6: Session Short Name

The symbol in this field tells you which letter is assigned to the session you currently have open. Session short names are assigned to sessions during configuration. For example, the session short name might be A.

Field 7: Session Long Name

The name in this field is the session long name assigned to the display session you currently have open. Session long names are assigned to sessions during configuration. For example, the session long name might be **Session1**.

Field 8: Cursor Position

The Cursor Position tells you where the cursor is currently located on your screen. The "R" represents the row number. Rows run horizontally on your screen, and your screen can have up to 43 rows, depending on which screen model you are using. For example, a model 2 screen mode displays 24 rows. A line of text on your screen is one row.

The "C" represents the column number. Columns run vertically on your screen, and your screen can have up to 132 columns, depending on which screen model you are using. For example, a model 2 screen mode displays 80 columns.

Field 9: Printer Status

Messages in the Printer Status field only appear if you have a coax connection type. These messages tell you a number of things about the current status of the printer, such as which printer you are connected to and if the printer is printing your print job.

Keep in mind that these messages refer to the print command you execute from the keyboard, which prints out what is currently on your mainframe screen, not printer emulation.

Printer Status Messages

Message	Meaning
□□ nn or o-o nn	Printer Assignment You are able to print from your display to the printer whose printer address number is nn.
□□ ?? or o-o??	Unidentified Printer The printer IDENT (identification) has changed. Press the IDENT key to display the new printer assignment.
□■ nn or o-æ nn	Printer Printing The printer identified by nn is printing your print job.

Continued on next page.

Printer Status Messages (cont.)

Message	Meaning
<p>□□ nn or o-o nn</p>	<p>Printer Failure This message looks just like the Printer Assignment message. If your printer successfully prints a job, you would see a Printer Printing message. If this message appears after you sent a job, it indicates that there is a printer failure. You can clear this condition in one of three ways:</p> <ul style="list-style-type: none"> • Check the printer and bring it back online. • If the print job was sent by pressing the Print key, press the DEVCNCL key. • If the print job was sent by using a mainframe program's print command, press the Field Mark key.

Fields 10 and 11: Time and Date

The final two fields in the OIA display the time and date according to the system clock on your PC.



3270: A protocol used by an IBM mainframe to communicate with other devices, including PCs. An *EXTRA!* session with a mainframe is sometimes referred to as a 3270 session.

7-Bit and 8-Bit codes: Coding formats for characters. Seven-bit (7-bit) coding uses 7 bits to send each character to the host system, 8-bit coding uses 8 bits. The ASCII character set uses 7-bit coding; the DEC Multinational and ISO character sets use 8-bit coding.

ANSI Character Types: The American National Standards Institute graphic (alphanumeric), and control character type definitions. You can display graphic characters on the screen. These include letters, numbers, punctuation marks, and any other displayable character.

Usually, you do not display control characters. You use them to make the host perform specific functions in data communication and text processing. Control characters include carriage return (CR), form feed (FF), and escape (ESC).

APL (A Programming Language): A general purpose language for diverse applications, and best known for its use of non-ASCII symbols, including a few Greek letters.

ASCII: American Standard Code for Information Interchange. ASCII is an 8-bit code developed by the American National Standards Institute for the exchange of information between communications devices, and their associated equipment. The ASCII character set contains both control and graphics characters.

Active page: The page that receives data from the host system; the host selects the active page. The text cursor appears on the active page only. Whether the active page is the current (displayed) page depends on the page you select to display, and whether you enabled page coupling.

Active position: The location, indicated by the cursor, where the next typed character will appear.

Alias Response: A sequence the terminal uses to identify itself to the host as some other type of terminal. You can configure these responses. Each response corresponds to a certain operating level.

Attribute: A characteristic of a unit of data such as length, value, or method of representation. An attribute can also be a characteristic of a session, such as the font and colors configured for a session.

Auto Print: The mode, controlled by the host, in which data appears on the screen and the printer.

Autosize Font: A font option that sizes the display font automatically to best fit the current size of the display session window.

Autosize Window: A font option that sizes the display window automatically to best fit the current size of the display session font.

Backing Store: A feature that provides two methods of storing graphics images: Bitmap, and Display List.

Bitmap: An array of pixels representing an object.

Bookmark: A host screen page of special interest that you marked during recording or afterward. A bookmark can be used to “navigate” directly to a recorded page.

Buffer: A temporary storage area in memory used to hold information.

CSI code: Control Sequence Introducer code. The control function used to start most ANSI commands. You can transmit CSI as the two 7-bit characters ESC [or the single 8-bit character CSI (9B hex).

Character Set: A group of graphic and control characters stored as a unit in the terminal. You can display graphic characters on the screen. You use control characters to perform special functions.

Code Page: A Character Translation table that sets up the keyboard and display characters for various foreign languages. Code Pages are defined for both the PC and Host.

Columns: A vertical row of character positions on the screen. You can display lines containing 80 or 132 columns.

Communications Adapter: A device and associated software that provide the actual connection between a PC and a host computer. There are several types of communications adapters that support different types of connections. For example, you can connect a PC to a host with a direct cable link, through a LAN (local area network), or through a modem.

Control codes: Specific terminal commands or formatting instructions such as LF (line feed) or CR (carriage return); usually preceded by a caret (^).

Current page: The displayed page.

Cursor: The indicator of the active position on the screen. The text cursor usually appears as a blinking underline or block; the mouse cursor as an I-bar symbol.

DA Reports: Reports to send in response to a host request. Device attribute (DA) reports inform the host about particular attribute configurations and the current terminal state. Most are transparent to you, but you can configure the Primary DA and Secondary DA reports. Otherwise, these assume defaults based on the selected terminal type.

Data bits: Number of bits, 7 or 8, in each data packet sent between two computers.

Desktop Layout: An arrangement of *EXTRA!* windows that you define. When loaded, the layout opens and positions the windows as defined. Desktop layouts are especially useful for quickly starting multiple sessions.

Device Attributes: Characteristics, stored as control sequences, that describe the terminal and its configuration. When the host requests it, the terminal sends a device attribute (DA) response. This response identifies the particular type of terminal.

Display List: A set of instructions for drawing an object (image).

Display Session: The equivalent of a host terminal session, using a window called the display session. This window allows you to transfer information between your PC and mainframe environments, or between two or more mainframe sessions.

Download: To transfer a file from a host system to a personal computer.

Dynamically Redefinable Character Set (DRCS): A character set that an application loads from the host. You can design your own set. Also called "Downloadable," or "Soft Character" Set.

EAB (Extended Attribute Byte): Allows a workstation to support 3270 Extended Attributes for display: highlighting, reverse image, blinking, and 7 colors.

Echo: Display data sent to the host system on the screen as you type. If the host does not send back characters it receives, you can select Local Echo in the Settings - Display, General tab.

EXTRA! Basic Macro: A sequence of commands saved in a file, with an extension of .EBM. The commands consist of statements and functions of the *EXTRA!* Basic language, included with *EXTRA!*.

Firewall: A security gateway that limits access to an internal network by the rest of the Internet.

Flow control: Processes that regulate the rate at which data is transferred from one device to another. This compensates for the differences in input and output data flow.

Font: A set of characters with the same typeface, style, stroke weight, and size.

FTP: File Transfer Protocol. A high level protocol used for transferring files between machines. FTP is usually implemented in application programs and makes use of the lower level Telnet and TCP protocols.

Function keys: A row or rows of keys that perform special local functions, such as displaying Help.

GDI Mode: An *EXTRA!* print processing option, it intercepts SCS and PCL5 commands within the host print datastream (either embedded in text, or within LU1 SCS transparency blocks) and emulates them through the Windows GDI. See also Windows GDI.

Graphic Escape (GE): An IBM-defined two-byte print order for LU1 sessions. *EXTRA!* does not support graphic escape pages. The GE code is discarded in *EXTRA!*.

Graphic table: The terminal's two part in-use table. The left half contains the GL codes for use in 7-bit and 8-bit environments. The right half contains the GR codes for use in 8-bit environments only.

Graphics cursor: A specialized cursor that manipulates host graphics and responds to commands from host graphics applications.

Graphics layer: The part of a graphics terminal that contains graphic elements such as lines, ellipses, and graphic alphanumeric characters. Compare with *Text Layer*.

Handles: Small black squares that appear on the corners of a selected QuickPad or selected QuickPad objects. By dragging an object's handles, you can resize the object.

Hex Passthrough: Method for embedding "transparency" data within a text stream. It uses a one or two-character "trigger" character which switches *EXTRA!*'s processing of the datastream from normal text to hexadecimal conversion. Hex passthrough blocks may be embedded in LU1 and LU3 print streams.

History Buffer: A temporary storage area where you can keep data no longer displayed in the emulation window. You can view, copy, and paste this data.

History File: A file in which you store information from the History Buffer.

Host: The computer to which your PC connects. Through *EXTRA!*, you can run host applications, transfer files, and integrate host data into Windows applications.

Hosts File: A list of available Host names and their associated IP addresses to which you can connect. In Windows 95, the Hosts file is located in the Windows directory. In Windows NT, the Hosts file is located in the DRIVERS\ETC subdirectory of the Windows NT system directory. See also Region HotSpots and Text HotSpots.

HotSpots: HotSpots are defined areas of the display window that have an action attached to them. This action can be to run a mainframe Program Function, macro, application and so on. *EXTRA!* executes it if you click on the HotSpot with the mouse. You can create your own HotSpots and include them in your display sessions.

IP Address: A unique 32-bit number defining each machine connected to the Internet (for example, 100.201.160.3). The IP address is used in all communications with a TCP/IP host. It uniquely identifies the network and the specific host address on that network. The number of address bits that define the network and the number that define the host vary according to the class of the address.

ISO Latin-1 Supplemental Set: An 8-bit character set including letters with accents and diacritical marks, and special symbols. For most purposes, this set is an extension of the DEC Multinational character set.

Keyboard Map: A keyboard map is a file (with the .EKM extension) that defines the function that each key on a PC keyboard performs to communicate with a host.

LU1 Printer Resource: An LU1 printer supports complex format commands such as tabs, margins, underlining, bold, italics, and so forth. Compared to other types of mainframe printers, it supports more formatting commands and takes less processing time to print a job.

LU3 Printer Resource: An LU3 printer supports basic formatting commands. These include page and job formatting options such as form feed recognition and line feed insertion into a print job.

Line attributes: Characteristics (formats) you apply to a line to change the way it appears on the screen.

Loadable Symbols: A set of symbols in which each character is treated as a small picture and can be used as a marker, pattern, or text on the graphics layer. Also called "graphic symbol sets."

Local Edit: An editing mode in which the text you type is stored in page memory. You can edit this text locally, and then send a block of edited text to the host.

Local mode: An operating state in which keystrokes are displayed on the screen, but not sent to the host.

Local Printer: A printer that is connected directly to your PC, or connected to a PC on your network.

Macro: A sequence of commands and keystrokes saved in a file. When you run a macro, its contents are automatically sent to the mainframe.

MVS/CICS or VSE/CICS: MVS/CICS stands for Multiple Virtual Storage/Customer Information Control System, and VSE/CICS stands for Virtual Storage Extended/Customer Information Control System. Under these operating systems, *EXTRA!* supports file transfers using IBM's DISOSS (Distributed Office Support System) (MVS: #5665-290; VSE: #5666-270). MVS/CICS can also use IBM's IND\$FILE program (#5665-311) for file transfer.

MVS/TSO: MVS/TSO stands for Multiple Virtual Storage/Time Sharing Option. TSO is an interactive mainframe application that resides under the MVS operating system. This system works with IBM's TSO IND\$FILE program (#5665-311) to transfer files.

National Replacement Character Set: A class of 7-bit character sets created for different languages and dialects.

PCL5: Hewlett-Packard's printer control language, used in their popular LaserJet and InkJet printers. *EXTRA!* emulates PCL5 in printer types LU1 and LU3.

PS/CICS: *EXTRA!* utilizes a separate transfer facility called DISOSS for OV/MVS (PS/CICS) mainframe systems. This file transfer method is initiated and controlled by the mainframe, and works differently from IND\$FILE transfers. This method is also referred to as a "Host-Initiated" transfer.

Page Coordinate System: Points on the printed page, identified by a pair of coordinates. PCL and SCS use differing page coordinate systems, and this must be taken into account when using GDI Mode. See also GDI Mode.

Parity: An error-detection method that checks the validity of a transmitted character; both systems must use the same type of parity.

PF keys (Program Function keys): Functions that invoke mainframe commands, such as Exit. Displayed on most mainframe screens, program functions are invoked by pressing corresponding keys on an IBM terminal keyboard. Because a PC keyboard does not include Program Function keys, *EXTRA!* assigns the functions to PC keys. You can also use *EXTRA!*'s HotSpots features to execute Program Functions.

Ping: Packet InterNet Groper. Refers to the program used on the Internet to test the availability of a host by sending an echo request and waiting for a reply.

Pixel: Pixel, or pel (picture element) refers to the smallest displayable unit on a video screen. The resolution of a video screen is measured in pixels. For example, a standard VGA screen is 640 pixels wide by 480 pixels high. Pixels are used as a measure of font width.

Point size (fonts): A unit of measurement, equal to 1/72 of an inch, that is used to specify the size (in height) of fonts. For example: a 36 point font is (nominally) 1/2 inch in height.

Print buffer: Temporary storage area for information sent to a printer.

Printer controller mode: Mode in which data is sent directly from the host to a printer, without being displayed on the screen.

Printer Session: The window where printer emulation takes place. This window provides options for controlling the print data sent from the host to the PC printer.

Profile: A session document that you use when you open an existing session. The session profile contains relevant information about the session: connection type, layout, colors, file transfer methods, attached toolbars or QuickPads, and so on.

Proportional Fonts: A font in which different characters have varying widths. All magazines and newspapers are printed in proportional characters, which make reading easier. By contrast, in a monospaced font, such as one on an old typewriter, all characters have the same widths.

Protected Field: On a display screen, a display field in which a user cannot enter, modify, or erase data.

Protocol: A set of rules and procedures for communication between devices. For example, Kermit is a file transfer protocol, and XON/XOFF is a flow control protocol for serial communications.

Proxy: A server that works in conjunction with a firewall (often as part of the same system) to provide network security. A proxy acts as an intermediary to limit access between clients in an internal network and outside servers.

QuickPad: A QuickPad is a small window that you can load during a session that contains text, buttons, bitmaps, icons, and other graphic elements, each of which initiates an action when clicked. QuickPads can be any shape or size, and as simple or as complex as you want.

Raw Output Mode: An *EXTRA!* print processing option, it translates the print datastream from EBCDIC to ASCII, strips SCS formatting controls from the datastream, and copies the resulting ASCII datastream directly to a printer or a disk file. The Windows GDI is bypassed entirely. See also Windows GDI.

Region HotSpots: Region HotSpots are defined areas of the display window that have an action attached to them. This action can be to run a mainframe Program Function, macro, application and so on. *EXTRA!* executes it if you click on the region HotSpot with the mouse. You can create your own region HotSpots and include them in your display sessions. See also HotSpots and Text HotSpots.

ReGIS: DIGITAL's Remote Graphics Instruction Set. A set of commands that describes a graphics image using geometric shapes (lines, curves, and circles), and actions (fills and patterns).

Resolution: Number of dots that make up an image on a screen or printer. The more dots, the higher the resolution, and the finer and smoother images appear when displayed at a given size.

SCS: IBM's SNA control set, used in LU1 printing.

Scheme: A collection of settings used to customize the way you use *EXTRA!*. In a scheme, you can save specific features of a session such as file transfers, HotSpots, colors, and so on.

Scrolling region: The area on the current page between the top, bottom, left, and right page margins. The default scrolling region is the complete page.

Session: A conversation between the host and PC. Each session runs in its own window, providing "point-and-click" commands and graphical tools to simplify host access.

A display session allows you to access host applications, and transfer files. IBM hosts require a separate printer session to set up and control printing.

Serial port: Port used for devices that accept information one bit at a time; uses a single line to transfer data.

Sixel: A unit of graphics data transmitted as a character. One sixel represents six vertical pixels of an image.

SOCKS: A proxy protocol that can be used to establish a controlled data channel between two computers across a firewall. *EXTRA!* supports SOCKS version 4.0 proxies using either a Telnet or an FTP connection.

Spooler: System program that automatically runs when you choose a print command. A spooler lets you print a series of documents or files in the background while you continue working in the application.

Stop bit: Timing unit between transmitted characters.

Supplemental Character Set: The 8-bit character set the terminal normally uses, usually the DEC Multinational or ISO Latin-1 character set.

TCP/IP: Transmission Control Protocol/Internet Protocol. TCP is the Internet standard transport level protocol. It provides full duplex reliable stream service, which application level protocols such as Telnet and FTP rely on.

Tektronix, 4014: A vector graphics terminal that uses direct-view storage tube technology.

Telnet: Protocol for terminal access to hosts using TCP/IP.

Terminator: Control character(s) that signal the end of a line, document, and so on.

Text HotSpots: Text HotSpots are defined words that have an action attached to them. This action can be to run a mainframe Program Function, macro, application and so on. *EXTRA!* executes it if you click on the text HotSpot with the mouse. You can create your own text HotSpots and include them in your display sessions. See also HotSpots and Region HotSpots.

Text layer: A part of the graphics terminal that contains the host graphic application's user interface, such as menus and commands. Compare with *Graphics layer*.

Toggle command: A menu command that alternately activates and de-activates a command option. When activated, a check mark appears in front of the command name.

Tool Tip: A brief reminder that pops-up when you hold the mouse pointer over a toolbar button for a few seconds.

Transparent mode: A special operating mode in which you can display control code characters. In this mode, control functions are not performed, only the characters are displayed.

Trigger Signature: One- or two-characters in length, this character switches *EXTRA!*'s processing of the print datastream from normal text to hexadecimal conversion.

Unprotected Field: On a display screen, a display field in which a user can enter, modify, or erase data.

Upload: To transfer a file from a personal computer to a host.

VM/CMS: VM/CMS stands for Virtual Machine/Conversational Monitor System. CMS is an interactive mainframe application that resides under the VM operating system. This system works with IBM's CMS IND\$FILE program (#5664-281) to transfer files.

VSE/CICS or MVS/CICS: MVS/CICS stands for Multiple Virtual Storage/Customer Information Control System, and VSE/CICS stands for Virtual Storage Extended/Customer Information Control System. Under these operating systems, *EXTRA!* supports file transfers using IBM's DISOSS (Distributed Office Support System) (MVS: #5665-290; VSE: #5666-270). MVS/CICS can also use IBM's IND\$FILE program (#5665-311) for file transfer.

Vector Graphics: Form of graphics where the image is created using graphic elements such as ellipses and lines, for example (called primitives) that describe shapes and their positions on the screen. Also known as All Points Addressable Graphics since each point on the screen is accessible by the host graphics package.

Windows Graphics Device Interface (GDI): The Windows graphics language used to provide output to the screen and printer. Applications call the GDI functions in Windows to display and print. GDI in turn calls the screen and printer drivers to produce the final output.

Xon/Xoff: Standard ASCII control characters used to tell an intelligent device to stop and resume transmission of data.

Zoom: Increase or decrease the magnification of an object (image).



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