



# TrueView Collage 740 Manager User Guide

---

Software Release 1.1

---

## U.S. department of defense & U.S. civilian agencies

If you are a unit of the US Department of Defense, you acknowledge that the Software is provided as “commercial computer software” under the terms and conditions of this Agreement, as the Madge standard Software license agreement, in accordance with clause 252.211 of the US Federal Acquisition Regulations and its successors. If you are a US civilian agency, you acknowledge that the Software is “restricted computer software”, is licensed only with “restricted rights” and use, reproduction or disclosure is subject to restrictions set forth in subparagraphs (a) through (d) of clause 52.227-19 of the US Federal Acquisition Regulations and its successors, and for purposes of subparagraph (d) thereof, you further acknowledge that the Software is unpublished and all rights are reserved under the copyright laws of the United States.

## Acknowledgments

Madge, the Madge Logo, Cellrunner, Collage, and TrueView, are trademarks, and in some jurisdictions may be registered trademarks, of Madge Networks or its affiliated companies.

Other trademarks appearing in this document are the property of their respective owners.

Release date: September 1996

Copyright © 1996 Madge Networks. All Rights Reserved.

No part of this publication may be reproduced, stored or transmitted in any form, without express written approval from Madge Networks Limited.

---

# TrueView Collage 740 Manager user guide

Neither Madge Networks Limited or its affiliated companies (together collectively "Madge") make any warranties as to the information in this user guide. Under no circumstances shall Madge be liable for costs of procurement of substitute products or services, lost profits, lost savings, loss of information or data or any other special, indirect, consequential or incidental damages, arising in any way out of the use of its products, whether or not used in accordance with the user guide.

## Before you start

### **About this guide**

This manual describes how to use TrueView Collage 740 Manager to manage the Collage 740 Backbone ATM Switch.

For information about installing the Collage 740, refer to the *Collage 740 Installation Guide* (part number: 100-238). For information about installing option cards in the Collage 740, refer to the *Collage 740 Option Cards Installation Guide* (part number: 100-244).

### **Audience**

This guide is for network administrators. It assumes you are familiar with:

- Local Area Network (LAN) concepts and technical terminology.
- Asynchronous Transfer Mode (ATM) networking concepts and technical terminology.



---

# Contents

Chapter 1	Introduction .....	1
	About TrueView Collage 740 Manager .....	1
	System requirements .....	1
	Features supported by Collage 740 software release 1.1 .....	2
	About the TrueView network management platform .....	3
	Using TrueView .....	3
Chapter 2	Getting started .....	5
	Configuring the Collage 740 Manager settings .....	5
	Configuring Collage 740 Manager options .....	6
	Displaying Collage 740 icons .....	6
	Labelling Collage 740 icons .....	7
	Configuring the SNMP interface .....	8
	Adding a Collage 740 to the Collage 740 Manager database .....	10
	Managing a Collage 740 .....	11
	Information hot spots .....	13
	Linking to a Collage 740 .....	14
	Using the Collage 740 Manager Table .....	15
	Viewing information in the Collage 740 Manager Table .....	15
	Managing Collage 740s in the Collage 740 Manager table .....	18
	Configuring columns in the Collage 740 Manager table .....	18
	Deleting a Collage 740 from the Collage 740 Manager database .....	19

---

Chapter 3	Using TrueView Collage 740 Manager .....	21
	Managing the Collage 740 .....	21
	Toolbar buttons .....	22
	Configuring information about a Collage 740 .....	25
	Buttons in the Information dialog box .....	27
	Viewing the Manager status .....	28
	Viewing the device status .....	29
	Setting passwords .....	30
	Configuring the ATM address prefix for the Collage 740 .....	31
	Configuring communications information .....	32
	Viewing version information .....	33
	Configuring security information .....	34
	Viewing current user information .....	37
	Configuring IP services .....	38
	Viewing physical data .....	41
	Configuring the ATM Routing Table .....	42
	Viewing the routes in the ATM routing table .....	43
	Adding routes to the ATM Routing Table .....	45
	Viewing switch connections .....	46
	Viewing switch fabric statistics .....	48
	Monitoring traffic statistics .....	49
	Displaying the legend .....	50
	Rescaling the axes .....	50
	Configuring the traffic statistics options .....	51

---

Chapter 4	Managing modules and option cards .....	53
	Configuring new or replaced option cards .....	53
	Setting packet discard thresholds for option cards .....	56
	Managing ports on an option card .....	58
	Configuring the signalling protocol for a port .....	61
	Viewing ILMI information for a port .....	63
	Viewing the number of connections for a port .....	64
	Viewing cell statistics for a port .....	66
	Viewing Switch Fabric card information .....	67
	Managing the Processor Module .....	68
	Viewing Processor Module information .....	68
	Viewing the number of connections to and from the Processor Module .....	71
	Viewing Processor Module AAL5 packet statistics .....	73
	Viewing status information about an attached Backup PSU .....	74

---

Chapter 5	Managing LANE services .....	75
	LAN Emulation overview .....	75
	Configuring the LECS .....	76
	Viewing the status of the local LECS .....	76
	Setting the LECS location .....	77
	Managing registered ELANs .....	78
	Adding an ELAN .....	78
	Editing an existing ELAN .....	81
	Deleting an ELAN .....	82
	Setting the default ELAN names .....	83
	Configuring the local LES .....	84
	Viewing the information about a LES .....	84
	Creating a new LES .....	85
	Viewing information about a LES .....	87
	Editing a LES .....	88
	Viewing LEC information for a selected ELAN .....	89
	Deleting a LES .....	90
	Managing the management LEC .....	91
	Setting up the management LEC .....	91
	Restarting the management LEC .....	92
	Viewing the management LEC statuses .....	95
	Viewing the ATM addresses known to the management LEC .....	96
	Viewing management LEC statistics .....	97



---

Chapter 6	Maintaining the Collage 740 .....	101
	Downloading microcode .....	101
	Rebooting the Collage 740 .....	103
	Identifying indicators on a Collage 740 .....	104
	Erasing the flash memory .....	105
	Setting a default main image .....	106
	Setting a default boot loader image .....	107
Appendix A	Technical support services .....	109
Appendix B	Index .....	119



## Introduction

---

This chapter describes TrueView Collage 740 Manager and the TrueView network management platform.

### About TrueView Collage 740 Manager

TrueView Collage 740 Manager is a network management application that enables you to manage the Collage 740 Backbone ATM Switch (Collage 740) using the Simple Network Management Protocol (SNMP).

Collage 740 Manager is one of a suite of Madge network management applications that perform management functions appropriate to the Collage 740. Collage 740 Manager is available for a range of network management platforms. For more information on the range of network management platforms, contact your Madge vendor.

#### **System requirements**

To run TrueView Collage 740 Manager under the TrueView network management platform, install TrueView version 4.0 or later. For information about installing the Collage 740 Manager, refer to the *TrueView Applications Installation and User Guide* (part number: 100-160).

### **Features supported by Collage 740 software release 1.1**

TrueView Collage 740 Manager enables you to:

- Manage the Collage 740
- Manage the option cards installed in the Collage 740
- View physical information
- Monitor traffic on the option cards
- Manage LAN emulation software components for the Collage 740
- Reset the Collage 740
- Erase the current database configuration and flash memory banks
- Download microcode to the Collage 740

---

## About the TrueView network management platform

TrueView is a network management platform that supports a range of management applications provided by Madge Networks.

TrueView enables you to simplify network management by arranging the devices that are discovered on the network into group folders of your choice. You can use TrueView to configure the network management station, launch management applications for discovered devices, and use a range of network management tools such as Ping, BOOTP, and Download Monitor.

### Using TrueView

The management features provided by TrueView depend upon the management applications that you have installed. To manage a particular type of device on the network, install the management application associated with that device. For example, if you have installed TrueView Collage 740 Manager, you can configure timed downloads to Collage 740s on the network.

To configure events and manage alerts on the network, use TrueView Alert Manager, which is supplied with TrueView. TrueView Alert Manager enables you to configure events supported by the management applications that are installed. For example, if TrueView Collage 740 Manager is installed, you can configure alerts for events associated with Collage 740s.



# Getting started

---

This chapter describes how to get started with TrueView Collage 740 Manager.

## Configuring the Collage 740 Manager settings

Before running Collage 740 Manager, you can:

- Specify whether or not Collage 740 Manager runs when you start the network management platform.
- Delete the information in the Collage 740 Manager database.

To configure the Collage 740 Manager settings:

- 1 In Program Manager, double-click on the Setup icon in the TrueView program group. The TrueView Install dialog box is displayed.
- 2 In the Select Module to Configure dialog box, do one of the following:
  - Double-click on the Collage 740 Manager for TV entry.
  - Click on the Collage 740 Manager for TV entry and then click on the Configure button. The Collage 740 Settings dialog box is displayed.
- 3 Configure the settings for Collage 740 Manager.
- 4 Click on the OK button.

## Configuring Collage 740 Manager options

You can configure options that change the way Collage 740 Manager displays the switches.

You can determine the following options for a Collage 740:

- Whether icons are displayed by the network management platform
- What labels are assigned with the icons.
- The SNMP interface.

### **Displaying Collage 740 icons**

You can specify whether Collage 740 icons are displayed on the network management platform.

To show Collage 740 icons that have been added:

- 1 Click on the Options command on the Collage 740 menu.  
The Collage 740 Manager Options dialog box is displayed.
- 2 Click on the Show Icons check box.
- 3 Click on the OK button.



---

## Labelling Collage 740 icons

You can specify whether Collage 740 icons are labelled with the name or address of the switch in the Collage 740 Options dialog box.

To specify how the Collage 740 icons are labelled:

- 1 Click on the Options command on the Collage 740 menu.  
The Collage 740 Manager Options dialog box is displayed.
- 2 Select the object label that you wish to use (see Table 2.1).
- 3 Click on the OK button.

*Table 2.1 Object labels for Collage 740 icons*

Object label	Description
Device name	Labels the Collage 740 icon with the descriptive name of the switch. For information about assigning a name to a Collage 740, see Chapter 3 “Using TrueView Collage 740 Manager”.
Base address	Labels the Collage 740 icon with the permanent hardware address of the switch.
Communications address	Labels the Collage 740 icon with the IP address that is used to communicate with the switch.

---

**Configuring the SNMP interface**

You can configure the SNMP interface for the Collage 740 in the Collage 740 Options dialog box.

To configure the SNMP interface:

- 1 Click on the Options command on the Collage 740 menu.  
The Collage 740 Manager Options dialog box is displayed.
- 2 Configure the SNMP parameters as required (see Table 2.2).
- 3 Click on the OK button.

*Table 2.2 SNMP parameters in the Collage 740 Options dialog box*

Field	Description
Timeout	The number of seconds that Collage 740 Manager waits for a request to be executed.
Retries	The number of times that Collage 740 Manager retries a request that times out.
Poll time	The frequency with which Collage 740 Manager sends background SNMP requests to find out the name and status of ports. This information enables Collage 740 Manager to display accurate information in the icons that represent Collage 740s.

*Table 2.2 SNMP parameters in the Collage 740 Options dialog box*

Field	Description
Default password	The default password that Collage 740 Manager uses when a Collage 740 is added to the database. If the default password matches the password that you set for the switch, Collage 740 Manager stores the password for the switch and you do not need to enter the password to link to the switch in future.

## Adding a Collage 740 to the Collage 740 Manager database

TrueView Collage 740 Manager maintains a database of Collage 740s that are on the network.

To add a Collage 740 to the database, do one of the following:

Either

- 1 Select the Table command from the Collage 740 menu.  
The Collage 740 Table dialog box is displayed.
- 2 Click on the New button in the dialog box.

Or

- 1 Select the New command from the Collage 740 menu.  
The Collage 740 IP Address dialog box is displayed.
- 2 Enter the IP address of the switch you wish to manage.
- 3 Click on OK to confirm.  
An entry for the Collage 740 is displayed in the table and a Collage 740 icon is displayed in the Discovery folder.



**Note:** On an IP network, use the serial interface initially to specify the IP address of each Collage 740. For more information about attaching to the serial interface, refer to the *Collage 740 Backbone ATM Switch Installation Guide* (part number: 100-238). Once defined, the IP address can be changed by using TrueView.

---

---

## Managing a Collage 740

To manage a Collage 740:

- 1 Select the icon for the Collage 740 that you wish to manage.  
The selected Collage 740 icon is highlighted.

*Figure 2.1 An example Collage 740 icon*



**Note:** The appearance of the icon may vary under different network management platforms. The color of the icon shows the status of the Collage 740. For information about the different icon statuses, refer to the *TrueView Applications Installation and User Guide* (part number: 100-160).

---

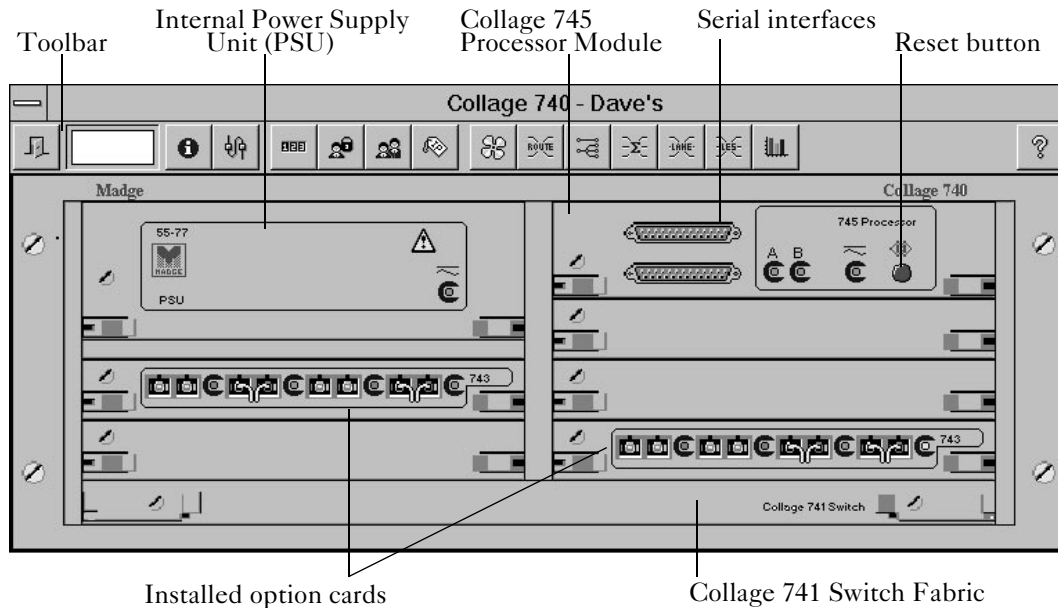
- 2 Double-click on the icon.  
The Collage 740 dialog box is displayed.



**Note:** Collage 740s are not automatically discovered; you must manually maintain a Collage 740. For more information about adding Collage 740s, see “Adding a Collage 740 to the Collage 740 Manager database” earlier in this chapter.

---

Figure 2.2 The Collage 740 dialog box



The Collage 740 dialog box represents the option cards and LEDs as they appear on the actual Collage 740. When a cable is connected to a port on an option card, the cable is displayed.

The Collage 740 dialog box also displays a set of icons on a toolbar above the Collage 740 picture, which enable you to view information about and configure parameters for the Collage 740. For more information about the toolbar icons, see the section “Toolbar buttons” in Chapter 3 “Using TrueView Collage 740 Manager”.

---

## Information hot spots

If you move the mouse pointer across the picture of the Collage 740, you will see that in certain areas of the picture the pointer changes to one of the following:

- A menu cursor:



- An information cursor:



These areas on the picture of the Collage 740 are known as "hot spots".

- If you click on a menu cursor with the right mouse button, a menu appears that displays various management commands. To select a management command, click on the command. When a menu cursor appears over a port on an Option Card, the port number will be displayed within the menu cursor.
- If you click on an information cursor, information about the hot spot is displayed.

## Linking to a Collage 740

To configure parameters and manage the Collage 740, you must link Collage 740 Manager to the switch by entering a password in the Link dialog box. The default password is PUBLIC. For information about managing the Collage 740 or about changing the password, see “Setting passwords” in Chapter 3 “Using TrueView Collage 740 Manager”.

To link to a Collage 740:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Information button on the toolbar.  
The Information dialog box is displayed.
- 3 Click on the Link button.  
The Link to: dialog box is displayed.
- 4 Select the Link field, so that it is enabled.
- 5 In the Use Password field, enter the password
- 6 Click on the OK button.

If the password is correct, you are returned to the Collage 740 dialog box where you can manage the switch. You do not need to enter the password again unless either the Collage 740 is deleted then restored to the database, or another user changes the password.



---

## Using the Collage 740 Manager Table

The Collage 740 Manager Table provides information about all the Collage 740s in the Collage 740 database. To find out about the information provided for a Collage 740, see the section “Viewing information in the Collage 740 Manager Table” later in this chapter.

In the Collage 740 Manager Table, you can:

- Sort the table by the entries in any column.
- Specify the columns that are included.
- Change the order of the columns.
- Save the information to an ASCII text, Lotus 1-2-3, or dBase file.
- Print the information.
- Access the Option dialog box. See the section “Configuring Collage 740 Manager options” earlier in this chapter.

For information about configuring, saving, and printing table entries in the Collage 740 Manager Table, refer to the *TrueView Applications Installation and User Guide* (part number: 100-160).

### Viewing information in the Collage 740 Manager Table

The Collage 740 Manager Table displays a row or table entry for each Collage 740 in the Collage 740 Manager database.

To view information in the Collage 740 Manager Table:

- 1 Select Table from the Collage 740 menu.  
The Collage 740 Manager Table dialog box is displayed (see Table 2.3).
- 2 Click on the OK button.

---

For each Collage 740, Collage 740 Manager displays columns that contain information about the switch.

*Table 2.3 Columns in the Collage 740 Manager table*

Column	Description
Comms Address	The address of the Collage 740 that Collage 740 Manager is currently communicating with.
Name	The descriptive name for the Collage 740.
Location	The location of the Collage 740.
Contact	The name of the person to contact if the Collage 740 does not function properly.
Base Address	The permanent hardware address of the Collage 740.
IP Address	The IP address of the Collage 740.
Device Type	The type of Collage 740.
Management Status	The current status of the Collage 740 Manager. For more information about management statuses, see the section “Viewing the Manager status” in Chapter 3 “Using TrueView Collage 740 Manager”.

*Table 2.3 Columns in the Collage 740 Manager table*

Column	Description
Device Status	The current status of the Collage 740. For more information about device statuses, see the section “Viewing the device status” in Chapter 3 “Using TrueView Collage 740 Manager”.

### **Managing Collage 740s in the Collage 740 Manager table**

You can use the Collage 740 Manager Table to select a Collage 740 to manage.

To select a Collage 740 to manage:

- 1 Select the table entry for the Collage 740 that you want to manage.  
The table entry you select is highlighted.
- 2 Double-click on the highlighted table entry.  
The Collage 740 dialog box is displayed.

### **Configuring columns in the Collage 740 Manager table**

You can configure the columns that are included in the Collage 740 Manager Table, change the order of the columns, and sort the table by the entries in any column. For information about configuring the Collage 740 Manager Table, refer to the *TrueView Applications Installation and User Guide* (part number: 100-160).

---

## Deleting a Collage 740 from the Collage 740 Manager database

You can delete a Collage 740 from the database, for example, because it is no longer on the network or because you are no longer managing it.

To delete a Collage 740 from the Collage 740 Manager database, do the following:

- 1 Select the Collage 740 you wish to remove.  
The selected Collage 740 is highlighted.
- 2 Select Delete from the Collage 740 menu.  
The selected Collage 740 is removed.



## Using TrueView Collage 740 Manager

---

This chapter describes how to use TrueView Collage 740 Manager to manage Collage 740s.

### Managing the Collage 740

The management features that you can use depend on whether or not you have established a management link to the Collage 740 that you are managing. If you do not establish a link to the Collage 740, you can still view information about the switch. However, you cannot change information, enable or disable ports, implement security features, or download code.

TrueView Collage 740 Manager enables you to configure information about the Collage 740, the installed option cards, the ports on the option cards, and LANE services in the Collage 740.

You can view information about the Collage 740, such as the fan speeds, the temperature, the internal PSU, the Processor Module, traffic on the ports, and the external Backup PSU, if one is attached.

When you select a Collage 740 to manage, Collage 740 Manager polls the switch for information and updates the dialog boxes at regular intervals.



**Note:** To configure any parameters for the Collage 740, you must have write access to the switch. To gain write access to the Collage 740, follow the instructions in the section “Linking to a Collage 740” in Chapter 2 “Getting started”. If you do not have write access to the Collage 740 and you try to configure parameters, the error message “Not currently linked to the Collage 740” is displayed.

---

## Toolbar buttons

The Collage 740 dialog box also displays a toolbar that displays buttons that provide short-cuts to dialog boxes. If you point to a button on the toolbar, a toolbar tip is displayed. The toolbar tip describes what type of dialog box is displayed when you click on the toolbar button.

*Table 3.1 Toolbar buttons on the Collage 740 dialog box*
















Toolbar Buttons	Description
	Closes the Collage 740 dialog box.
	The color of the status box indicates the current status of the Collage 740. For a description of what the colors mean, refer to the <i>TrueView Applications Installation and User Guide</i> (part number: 100-160).
	Opens the Information dialog box. For information about the dialog box, see the section “Configuring information about a Collage 740” later in this chapter.
	Opens the Communication Information dialog box. For information about the dialog box, see the section “Configuring communications information” later in this chapter.
	Opens the Version Information dialog box. For information about the dialog box, see the section “Viewing version information” later in this chapter.



Table 3.1 *Toolbar buttons on the Collage 740 dialog box*

Toolbar Buttons	Description
	<p>Opens the SNMP Authorization dialog box. For information about the dialog box, see the section “Configuring security information” later in this chapter.</p>
	<p>Opens the Current User dialog box. For information about the dialog box, see the section “Viewing current user information” later in this chapter.</p>
	<p>Opens the IP Services dialog box. For information about the dialog box, see the section “Configuring IP services” later in this chapter.</p>
	<p>Opens the Physical Data dialog box. For information about the dialog box, see the section “Viewing physical data” later in this chapter.</p>
	<p>Opens the ATM Routing Table dialog box. For information about the dialog box, see the section “Configuring the ATM Routing Table” later in this chapter.</p>
	<p>Opens the Switch Connections dialog box. For information about the dialog box, see the section “Viewing switch connections” later in this chapter.</p>

*Table 3.1 Toolbar buttons on the Collage 740 dialog box*

Toolbar Buttons	Description
	Opens the Switch Statistics dialog box. For information about the dialog box, see the section “Viewing switch fabric statistics” later in this chapter.
	Opens the Cross-Connect Traffic Statistics dialog box. For information about the dialog box, see the section “Monitoring traffic statistics” later in this chapter.
	Opens the LAN Emulation dialog box. For information about the dialog box, see Chapter 5 “Managing LANE services”.
	Opens the LAN Emulation Servers dialog box. For information about the dialog box, see Chapter 5 “Managing LANE services”.

## Configuring information about a Collage 740

You can view or configure information about a Collage 740 by using the Information dialog box. You can also access other management features from this dialog box.

To view or configure information about a Collage 740:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Information button on the toolbar.  
The Information dialog box is displayed (see Table 3.2).

*Table 3.2 Information displayed in the Information dialog box*

Field	Description
Name	A descriptive name that has been assigned to the Collage 740. You can assign a name of 1 through 32 alphanumeric characters, including spaces.
Location	The location of the Collage 740. You can assign a location of 1 through 32 alphanumeric characters, including spaces.
Contact	The name of the person to contact if the Collage 740 does not function properly. You can assign a contact of 1 through 32 alphanumeric characters, including spaces.
Up time	The length of time that the Collage 740 has been running since the last reset.

*Table 3.2 Information displayed in the Information dialog box*

Field	Description
Base address	The permanent hardware address of the Collage 740.
IP address	The IP address of the Collage 740.
Current ATM prefix	The current ATM prefix of the Collage 740.
Manager status	The current status of the Collage 740 Manager. For more information about the different Collage 740 Manager statuses that are displayed, see the section “Viewing the Manager status” later in this chapter.
Device status	The current Collage 740 status. For more information about the different device statuses that are displayed, see the section “Viewing the device status” later in this chapter.
Buttons in the dialog box	For more information about the buttons displayed in the Information dialog box, see the section “Buttons in the Information dialog box” later in this chapter.

**Buttons in the Information dialog box**

You can use buttons in the Information dialog box to link into other dialog boxes and access further information. Note that you must be linked to the Collage 740 before you can access all the dialog boxes, otherwise the Link dialog box is displayed.

*Table 3.3 Buttons in the Information dialog box*

Button	Description
Link	Opens the Link dialog box, which enables you to link to, or unlink from, the Collage 740. For information about the dialog box, see the section “Linking to a Collage 740” in Chapter 2 “Getting started”.
Password	Opens the Password dialog box, which enables you to set or change the password for the Collage 740. For information about the dialog box, see the section “Setting passwords” later in this chapter.
Comms	Opens the Comms Information dialog box. For information about the dialog box, see the section “Configuring communications information” later in this chapter.
Prefixes	Opens the Set Collage 740 ATM Address Prefix dialog box, which enables you to configure the ATM address prefix for the Collage 740. For information about the dialog box, see the section “Configuring the ATM address prefix for the Collage 740” later in this chapter.

---

**Viewing the Manager status**

You can view the current status of the Collage 740 Manager in the Collage 740 Information dialog box.

*Table 3.4 Manager status messages in the Collage 740 Information dialog box*

Message	Description
Normal	The Collage 740 Manager is operating normally.
Device not found on the network	The Collage 740 Manager cannot find the switch on the network. The condition occurs when you add a switch that cannot be found, or when you start Collage 740 Manager and a Collage 740 in the database cannot be found.
Device lost from the network	The Collage 740 Manager cannot find a Collage 740 that was previously found on the network.
Not linked	The Collage 740 Manager is not linked to the Collage 740.
Incorrect password	The password for the Collage 740 is incorrect. This may indicate that another management station has changed the password for the Collage 740.
Unknown	The status of the Collage 740 Manager is unknown.

**Viewing the device status**

You can view the current Collage 740 status in the Collage 740 Information dialog box.

*Table 3.5 Device status messages in the Collage 740 Information dialog box*

Message	Description
Unknown	The Collage 740 Manager cannot determine the status of the switch.
Normal	The Collage 740 is operating normally.
Rebooting	The Collage 740 is rebooting.
Downloading	The Collage 740 is downloading microcode.
Identifying	The Collage 740 is identifying itself by flashing its CPU LEDs.

## Setting passwords

When you establish a link to a Collage 740, you can set the password for that switch. If you change the password, other management stations that previously had a link to the Collage 740 will no longer be able to manage the switch. The default link password is PUBLIC.



**Note:** Before you can set a new password for a Collage 740, you must be already linked to the switch.

---

To set a new password:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Information button on the toolbar.  
The Information dialog box is displayed.
- 3 Click on the Password button.  
The Set Password dialog box is displayed.
- 4 Enter a new password in the Set Password field.  
The characters you enter are shown as asterisk characters for security.
- 5 Confirm the new password in the Confirm password field.
- 6 Click on the OK button.  
Collage 740 Manager changes the password for the selected Collage 740.



---

## Configuring the ATM address prefix for the Collage 740

Every Collage 740 has a factory preset ATM address prefix. This is known as the default prefix address. This is used to uniquely address the Collage 740 in the network.

You can edit the current ATM address prefix that the Collage 740 is using by assigning your own prefix or you can reset the current ATM address prefix to the factory default. If you assign your own prefix, it overrides the factory prefix. Therefore, you can assign similar address prefixes to a group of switches in a network for routing purposes.



**Note:** If you change the ATM address prefix for a Collage 740 then you must update the routing tables in any attached switches. You will also need to change the addresses of any manually configured LESEs on the switch.

---

To configure the ATM address prefix for the Collage 740:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Information button on the toolbar.  
The Information dialog box is displayed.
- 3 Click on the Prefixes button.  
The Set ATM Address Prefix dialog box is displayed.  
You can either set the address prefix to its default or edit the current address prefix.
- 4 Click on the OK button.



**Note:** Collage 740 Manager will only update the current ATM address prefix for the Collage 740 when it is next rebooted.

---

## Configuring communications information

The IP address entered in the Communication Information dialog box is the address that the Collage 740 Manager will use to find a switch.

If you change the IP address, Collage 740 Manager searches elsewhere on the network for the switch. To change the IP address for a Collage 740, use the IP Services dialog box. For more information about changing the IP address, see “Configuring IP services” later in this chapter.

To configure the IP communications address for a Collage 740:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Either click on the Communications information button on the toolbar, or click on the Comms button in the Information dialog box.  
The Collage 740 dialog box is displayed.  
This will display the current IP address of the switch that Collage 740 Manager is currently communicating with.
- 3 Enter the IP address.
- 4 Click on the OK button.

---

## Viewing version information

You can view version numbers for software and microcode images that are stored in the flash memory banks and the boot ROM of the Collage 740. You can also view information about the Collage 740 hardware components.

To view hardware and software version information for a Collage 740:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Version button on the toolbar.  
The Version Information dialog box is displayed.



**Note:** The default main image is displayed with the symbol "D" in brackets beside it and the default boot image is displayed with a text string "default loader". A default image file is an image file that the Collage 740 will use when it boots up.

---

## Configuring security information

An authorized manager is any network management station that can access the Collage 740, that is, send SNMP requests to it and receive SNMP traps from it. The Collage 740 maintains a cache of addresses of all managers that are currently communicating with it.

A trap is an SNMP frame that the Collage 740 sends to a network management station to inform it about an event that has occurred.

To configure the security information on a Collage 740:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Security button on the toolbar.  
The SNMP Authorization dialog box is displayed (see Table 3.6).
- 3 Add authorized managers and trap destinations to the lists.  
The address for an authorized manager or a trap destination must be in IP format.  
You can copy the addresses between the lists using the Copy button.
- 4 Click on the OK button.

Table 3.6 describes the information that is displayed in the SNMP Authorization dialog box.

*Table 3.6 Information displayed in the SNMP Authorization dialog box*

Fields	Description
Authorized Managers	<p>To enable the authorized managers, click on the Enable authorized managers check box so that a cross appears in the box. If the check box is enabled, only managers whose addresses are displayed in the Authorized Managers list can access the Collage 740. If the check box is disabled, any manager can access the Collage 740.</p> <p>By default, the check box is disabled. Note that, if the check box is enabled, the address of the computer on which you are running TrueView Collage 740 Manager must be included in the list of authorized managers. If it is not, a warning message is displayed.</p>
Trap Destinations	<p>To enable the trap destinations, click on the Enable trap destinations check box so that a cross appears in the box. If the check box is enabled, the Collage 740 sends SNMP traps only to the managers whose addresses are displayed in the Trap Destinations list.</p> <p>If the check box is disabled, the Collage 740 sends SNMP traps to all managers that have communicated with it within the last hour. If several managers have sent SNMP requests over this period, only the most recent 16 are notified. By default, the check box is disabled.</p>

*Table 3.6 Information displayed in the SNMP Authorization dialog box*

Fields	Description
Default Gateway	The address of the gateway that the Collage 740 uses. The Collage 740 requires this information so that it can send SNMP traps successfully to managers on other IP networks. To specify the default gateway, enter the IP address of the gateway.

---

## Viewing current user information

You can view a list of all current users that are accessing a Collage 740 in the Users dialog box.

To view the addresses of all users on a Collage 740:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Users button on the toolbar.  
The Users dialog box is displayed.

A list of all current users logged onto a Collage 740 is displayed. You can also view when the user last accessed the switch. At the bottom of the Users dialog box, the Timeout (secs) field is displayed. This is the maximum time, in seconds, that the Collage 740 stores user information before the information is discarded.

- 3 Click on the OK button.

## Configuring IP services

A Collage 740 must be assigned an IP address to be managed remotely by TrueView. You must decide whether the Collage 740 will use the BOOT Protocol (BOOTP) to acquire its IP address or whether the address must be set manually.

If you plan to use BOOTP, make sure the BOOTP server is on the same Emulated LAN (ELAN) as the Collage 740 management LEC, or that there is a route from the BOOTP server to the ELAN. You must also set the IP address of the Collage 740 to 0.0.0.0. (this is the default IP address, for a new Collage 740). The Collage 740 will then attempt to learn its IP address using BOOTP.

You can configure the IP address, subnet mask, and IP gateway in the IP Services dialog box.

To configure IP services:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the IP button on the toolbar.  
The IP Services dialog box is displayed (see Table 3.7).
- 3 Configure the IP address.
- 4 Click on the OK button.



Table 3.7 describes the information that is displayed in the IP Services dialog box.

*Table 3.7 Information displayed in the IP Services dialog box*

Field	Description
Address	<p>The current IP address of the Collage 740.</p> <p>To specify an address in the Configured column, enter the IP address in the form 000.000.000.000. For example, 194.32.220.47 is a valid IP address.</p> <p>To unassign the IP address, enter 0.0.0.0. If you do not configure the IP address, the Collage 740 attempts to find the IP address using BOOTP, if it is enabled.</p>
Subnet mask	<p>The current IP subnet mask that applies to the IP address.</p> <p>To specify the subnet mask address, in the Configured column enter the IP subnet mask in the form 000.000.000.000. For example, 255.255.255.0 is a typical subnet mask address.</p> <p>To unassign the IP subnet mask address, enter 0.0.0.0.</p>
Gateway	<p>The current address of the IP gateway that forwards frames onto other networks.</p> <p>To specify a gateway, in the Configured column enter the IP gateway in the form 000.000.000.000.</p> <p>To unassign the gateway enter 0.0.0.0.</p>
Discovery method	<p>The method that the Collage 740 has used to discover its IP address, such as BOOTP.</p>

*Table 3.7 Information displayed in the IP Services dialog box*

Field	Description
BOOTP enabled	Whether or not the Collage 740 will use BOOTP to discover its IP address at startup. The Collage 740 uses BOOTP only if the IP address is not configured. To enable BOOTP, click on the check box so that a cross appears in the box. By default, BOOTP is enabled.
RARP enabled	By default, RARP is not supported.

---

## Viewing physical data

You can view the internal physical data for a Collage 740.

To view the physical data for a Collage 740:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
  - 2 Click on the Physical Data button on the toolbar.  
The Physical Data dialog box displays information about the following:
    - The internal temperature of the switch.
    - The speed of the two cooling fans, on tachometers.
    - The amount of RAM that the switch uses, as a percentage. To view the actual size of RAM memory in bytes, click on the Counters button.
    - The amount of FLASH that the switch uses, as a percentage. To view the actual size of FLASH memory in bytes, click on the Counters button.
    - The amount of EEPROM that the switch uses, as a percentage. To view the actual size of EEPROM memory in bytes, click on the Counters button.
- To view the size of the Segmentation And Reassembly (SAR) memory buffer in bytes, click on the Counters button.

## Configuring the ATM Routing Table

You can configure routes in the ATM Routing Table of a Collage 740. The ATM Routing Table is used to route calls through the switch. A call is routed out to a port by matching its “called party address” with routing entries in this table.

For information about setting up routing entries to route calls through a network of Collage 740s, refer to the “ATM Concepts” chapter in the *Collage 740 Backbone User Guide* (part number: 100-239).

The ATM Routing Table provides information about all routes in the Collage 740 database. To find out about the information displayed in each column of the ATM Routing Table, see the section “Viewing the routes in the ATM routing table” later in this chapter.

In the ATM Routing Table, you can:

- Add, edit, and delete routes from the table
- Show the port associated with an ATM address
- Show the origin of the routing entry
- Update the routing table
- Specify the columns that are included
- Change the order of the columns
- Sort the table by the entries in any column
- Save the information to an ASCII text, Lotus 1-2-3, or dBase file
- Print the information.

For information about configuring, saving, and printing the routes in the ATM Routing Table, refer to the *TrueView Applications Installation and User Guide* (part number: 100-160).



**Note:** Any routing entries on slot 0, port 1 are internal routes to the Processor Module port.

---

### Viewing the routes in the ATM routing table

The ATM Routing Table displays a row, or table entry, for each route held by the Collage 740.

To view routes in the ATM Routing Table:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Routing Table button on the toolbar.  
The ATM Routing Table dialog box is displayed (see Table 3.8).
- 3 Click on the OK button.

*Table 3.8 Information displayed in the ATM Routing Table dialog box*

Field	Description
Slot	The slot number where the option card is installed.
Port	The port number on the option card.
Virtual Port	The virtual port number.
Address Prefix	The ATM address prefix used to route a connection to the given port.
Length	The length of the ATM address prefix. Only the most significant <length> bits of the prefix are used for routing.

Table 3.8 Information displayed in the ATM Routing Table dialog box

Field	Description
Origin	<p>Where the routing entry originated.</p> <p>Non volatile - The routing entry has been manually entered.</p> <p>ILMI - The routing entry has been learnt using ILMI. Such routing entries are added by the switch for ATM devices that are attached to it and using ILMI.</p> <p>LANE - The routing entry has been automatically added by LANE services.</p> <p>Dynamic - The routing entry has been dynamically added by Madge's proprietary dynamic routing method. Such routing entries are added by the switch for other Collage 740s that are attached to it. For more information about dynamic routing, refer to the <i>Collage 740 Backbone ATM Switch User Guide</i> (part number: 100-239)</p>
Status	<p>The status of the routing entry.</p> <p>Valid The route is functional.</p> <p>Invalid The route is non-functional. This could be because the port is down or disabled.</p>

### Adding routes to the ATM Routing Table

To add a route to the ATM Routing Table:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Routing Table button on the toolbar.  
The ATM Routing Table dialog box is displayed.
- 3 Click on the Add button.  
The Add ATM Route dialog box is displayed (see Table 3.9).
- 4 Click on the OK button.

*Table 3.9 Information displayed in the Add ATM Route dialog box*

Field	Description
Prefix	The ATM address prefix for the the routing entry.
Length	The length of the ATM address prefix. Either enter a length or click on the check box to calculate the length automatically.
Slot	The slot number for the installed option card through which the call will be routed out. Enter a valid slot number in the range 1 to 5.
Port	The port number of the installed option card through which the call will be routed out. Enter a valid port number in the range 1 to 4.
Vport	The virtual port number, through which the call will be routed. Enter a valid virtual port number in the range 0 to 7.

## Viewing switch connections

You can view a statistical breakdown of all connections that are currently set up on a Collage 740. The maximum number of connections that can be supported on the switch are also displayed. The number will change according to the amount of RAM you have available in a Collage 740.

By default, a Collage 740 has 8Mbytes of RAM memory. You can increase this amount to 40Mbytes by adding two 16Mbytes SIMM chips. For more information about adding SIMM chips to a Collage 740, refer to the *Collage 740 Backbone ATM Switch Installation Guide* (part number: 100-238).

To view switch connections:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Switch Connections button on the toolbar.  
The Switch Connections dialog box is displayed (see Table 3.10).
- 3 Click on the OK button.

*Table 3.10 Information displayed in the Switch Connections dialog box*

Field	Description
Point-to-point	
Transitting	The total number of point-to-point connections that do not terminate at the Processor Module.
Terminating	The total number of point-to-point connections that terminate at the Processor Module.



*Table 3.10 Information displayed in the Switch Connections dialog box*

Field	Description
Point-to-multipoint	
Total	The total number of in-coming and out-going point-to-multipoint connections on the switch.
Total connections	The total number of connections that are switched through the switch.
Max supported	The maximum number of connections that this switch can support. This number varies with the amount of RAM memory currently available for connection management in the Collage 740.

## Viewing switch fabric statistics

You can view the total ATM cell traffic that is routed in and out of the switch fabric. The switch fabric statistics also display the number of errored ATM traffic cells and unknown protocols cells that have been received into the switch fabric.

To view switch fabric statistics:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Switch Statistics button on the toolbar.  
The Switch Statistics dialog box is displayed.
- 3 Click on the OK button.

---

## Monitoring traffic statistics

TrueView Collage 740 Manager enables you to monitor the traffic between ports on installed option cards and traffic on the Processor Module.

You can use the following graph styles to view the traffic statistics:

- 3D graph
- 2D matrix
- Circle.

To view the traffic statistics for Collage 740 ports:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Port Performance Graph button on the toolbar.  
The Cross-Connect Traffic Statistics dialog box is displayed.

To make it easier to identify the amount of traffic between ports, you can display the legend that lists the color associated with each value range. For information about displaying the legend, see the section “Displaying the legend” later in this chapter.

By default, the 3D graph style is used to display the traffic statistics. For information about changing the graph style, see the section “Configuring the traffic statistics options” later in this chapter.



**Note:** When you right-click on a port number on the TO and FROM axes in a graph style, the port displays a red cross. This indicates that you no longer want to display traffic to or from that port. If you right-click within the 2D matrix graph style, you will stop viewing traffic between two ports. For example, right clicking on matrix box 2, 3 will stop traffic being displayed between these two ports.

---

## Displaying the legend

To display the legend:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Port Performance Graph button on the toolbar.  
The Cross-Connect Traffic Statistics dialog box is displayed.
- 3 Right-click on any part of the dialog box.  
A pop-up menu is displayed.
- 4 Click on the Legend command.  
The legend is displayed.



**Note:** The traffic statistics are displayed in real-time. Therefore the ranges used in the legend are automatically rescaled to cope with the increasing or decreasing amount of traffic being monitored.

---

## Rescaling the axes

To rescale the axes on the graph:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Port Performance Graph button on the toolbar.  
The Cross-Connect Traffic Statistics dialog box is displayed.
- 3 Right-click on any part of the dialog box.  
A pop-up menu is displayed.
- 4 Click on the Rescale Axis command.  
The axes on the graph are rescaled.



**Note:** If traffic suddenly increases, the axes on the graph will rescale upwards, regardless of any automatic settings.

---

### Configuring the traffic statistics options

You can configure the style of the graph that the Collage 740 Manager uses to display the traffic statistics for the installed option cards in the Collage 740.



**Note:** The thickness of the colored lines on the circle graph style is directly associated with the amount of traffic between ports.

---

To configure a graph:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the Port Performance Graph button on the toolbar.  
The Cross-Connect Traffic Statistics dialog box is displayed.
- 3 Right-click on any part of the dialog box.  
A pop-up menu is displayed.
- 4 Click on the Options command.  
The Options dialog box is displayed (see Table 3.11).
- 5 Specify the type of information you want to display.
- 6 Click on the OK button.

---

Table 3.11 describes the fields in the Options dialog box.

*Table 3.11 Information displayed in the Options dialog box*

Field	Description
Graph Style	The following graph styles can be selected to display the traffic statistics: 3D Bars, 2D Matrix, and Circle.
Auto rescale	Automatically downscales the legend and the graph axes.
Updates before rescale	The number of screen updates between downscaling, when “Auto rescale” is selected. If there is a sudden increase in traffic, the graph axes will always be scaled up.
Hide Info Bar	Hides the information bar that appears at the bottom of the graph. Otherwise, when the mouse cursor is held over a number on an axis, the slot and port number is displayed in the information bar.

# Managing modules and option cards

---

This chapter describes how to use TrueView Collage 740 Manager to manage individual ports on option cards and modules installed in a Collage 740.

## Configuring new or replaced option cards

Once you have installed a new option card, or replaced an option card through on-line insertion and removal (also known as "hot swapping"), the card and ports are automatically enabled by the Collage 740.



---

**Note:** Before removing an option card from the Collage 740, you must ensure that all virtual connections through the card have been disconnected and change the required state to "Down" to shut down the option card.

If any connections remain when the option card is shut down, they will be forced to break.

---

To configure an option card in a Collage 740:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor at the side of the option card slot.
- 3 When the cursor changes to an information cursor, click.

The Slot Information dialog box for the selected option card slot is displayed (see Table 4.1).

*Table 4.1 Information in the Slot Information dialog box for a selected option card slot*

Field	Description
Card Description	
Description	The type of option card that is registered in the slot. The slot will be indicated as empty or it will display the type of the card that is installed. If a card is installed then the following information is also displayed: the number of ports on the card, the speed of each port, and the type of port connectors.
Hardware version	The current version of the hardware for the card.
Software version	The current version of the software that the card uses. If the card is not running any software, 0.0.0 is displayed.
Card Status	
Current Status	The current status of the card.
Required State	The required state of the card. To disable a card, click on Down. This will shut down the option card, causing any connections through the card that have not already been disconnected to be severed. You must shut down an option card before it can be removed from the switch. To enable the card, click on Up. This will restart the card should it be shut down by mistake.



*Table 4.1 Information in the Slot Information dialog box for a selected option card slot*

Field	Description
ATM 155 Information	For more information about the packet discard fields, see the section “Setting packet discard thresholds for option cards” later in this chapter.

## Setting packet discard thresholds for option cards

There are two packet discard thresholds for each option card, called Early Packet Discard (EPD), and Partial Packet Discard (PPD). By default, both thresholds have a default set limit (see Table 4.2) and are enabled.

The Collage 740 uses EPD to discard entire AAL5 frames for ABR and UBR traffic (rather than random cells from different frames), when it determines that it is about to become congested. The Collage 740 still passes through the last cell of each AAL5 frame so that end-stations are aware of the discard that has taken place. You can configure a threshold at which the EPD will be invoked. The threshold is a percentage of the overall shared buffer space.

PPD works similarly to EPD, but it is generally invoked at higher levels of congestion. The difference is that, while with EPD the Collage 740 can wait for the start of a suitable frame, PPD is involved when congestion is too serious to wait that long. Therefore, packet discarding will start in the middle of the frame.

The default for PPD is higher than the default for EPD. Under normal circumstances, EPD would deal with the congestion before the buffer capacity is reached, and PPD should never be invoked.



**Note:** Under normal circumstances, the default packet discard thresholds should not be changed. Before attempting to change the thresholds contact Madge Technical Support.

---

To configure the packet discard thresholds for an option card in a Collage 740:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor at the side of the option card slot, until the cursor changes to an information cursor.
- 3 Click when the cursor changes to an information cursor.  
The Slot Information dialog box for the selected option card slot is displayed (see Table 4.2).
- 4 Edit the packet discard thresholds has required.
- 5 Click on the OK button.

*Table 4.2 Packet discard threshold information for an option card*

Field	Description
ATM 155 Information	
Early packet discard threshold	The current EPD threshold.
Partial packet discard threshold	The current PPD threshold.

## Managing ports on an option card

When you are linked to a Collage 740, you can manage the individual ports on option cards that are installed in the switch.

For each port on the option card, you can do the following:

- Assign a name to the port
- Configure the physical port setup
- Configure the root virtual port setup
- Configure the signalling protocol, ILMI state, and link termination type
- View the number of transmitting and terminating connections for a port
- View ATM cell statistics for a port

To configure a port on an option card:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on a port and right-click.  
A menu cursor is displayed.
- 3 Click on the Port Setup command on the displayed menu.  
The Setup dialog box for the selected port is displayed (see Table 4.3).
- 4 Configure the signalling information.
- 5 Click on the OK button.

Table 4.3 describes the fields in the Setup dialog box for the selected port.

*Table 4.3 Information in the Setup dialog box for a selected port*

Field	Description
Information	
Port name	A descriptive name for the selected ATM port. You can assign a name of 1 through 32 alphanumeric characters, including spaces.
State unchanged for	The period of time the port has been in its current state. This is displayed in days, hours, and minutes.
Physical Port	
Port State	The state of the physical port.
Required state	The required state of the physical port. To enable a port, click on Up. To disable a port, click on Down. By default, a port is enabled (up). If the Collage 740 is reset, disabled ports will remain disabled, but the port configuration data is maintained in non-volatile memory and is not lost. Disabling a port terminates all user data connections on the port.
Physical type	The physical type for the virtual port. This can be set to either SONET (Synchronous Optic NETwork) or SDH (Synchronous Digital Hierarchy).

Table 4.3 Information in the Setup dialog box for a selected port

Field	Description
Speed	The speed of the port in Mbps.
Media	The physical media of the port.
Number of VPorts	The number of virtual ports that are associated with the physical port.
Root Virtual Port	
Virtual Port state	The state of the root virtual port.
Required state	The required state of the root virtual port. To enable the virtual port, click on Up. To disable the virtual port, click on Down. By default, the root virtual port is enabled (up).
Signalling state	The state of the signalling protocol.
Signalling type	The type of signalling used by the root virtual port.
ILMI state	The current state of ILMI on the root virtual port.
Termination type	The current UNI (User Network Interface) termination on the root virtual port. This can be either on the user side or the network side.
Interface Address	The ATM address of this interface. If you click on the interface address, the ATM Address dialog box is displayed. For more information about this dialog box, refer to the <i>TrueView Applications and Installation User Guide</i> (part number: 100-160).

## Configuring the signalling protocol for a port

For each port on an option card you can configure the following:

- The type of signalling protocol
- The state of the ILMI
- The link termination type.

To configure the signalling protocol for a port:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on a port and right-click.  
A menu cursor is displayed.
- 3 Click on the Signalling command on the displayed menu.  
The Signalling dialog box for the selected port is displayed (see Table 4.4).
- 4 Configure the signalling information.
- 5 Click on the OK button.

Table 4.4 describes the fields in the Signalling dialog box for the selected port.

*Table 4.4 Information in the Signalling dialog box for a selected port*

Field	Description
Signalling Protocol	
Current protocol	The current signalling protocol on the port.

*Table 4.4 Information in the Signalling dialog box for a selected port*

Field	Description
Configured protocol	The required signalling protocol to be used on the port. This can be set to either a specific signalling protocol or automatic. Automatic will enable the Collage 740 to select the most suitable signalling protocol on the port with which to communicate with the attached device.
ILMI	
Current state	The current state of the ILMI on the port.
Configured state	The required state of the ILMI on the port. To enable the ILMI, click on Up. To disable the ILMI, click on Down. By default, the ILMI is enabled on all ports.
Link Termination	
Current type	The current link termination type on the port.
Configured type	The required link termination type for the port. This can be set to either a specific termination type or automatic. Automatic will enable the Collage 740 to select the appropriate link termination on the port.



---

### Viewing ILMI information for a port

If the ILMI is enabled on the port and on the attached device, you can view the following information about the attached device:

- The name of the attached device, if one has been assigned
- The IP address of the attached device
- The signalling protocol supported on the attached device
- The ATM address of the attached device.

To view ILMI information for a port:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on a port and right-click.  
A menu cursor is displayed.
- 3 Click on the ILMI Info command on the displayed menu.  
The ILMI Information dialog box for the selected port is displayed.

---

**Viewing the number of connections for a port**

You can view a breakdown of all connection types for a port. The number of connections are updated in real time and all connection calls are split into the following types:

- Switched Virtual Circuit (SVC)
- Permanent Virtual Circuit (PVC)

To view all connections for a port:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on a port and right-click.  
A menu cursor is displayed.
- 3 Click on the Connections command on the displayed menu.  
The Connections dialog box for the selected port is displayed (see Table 4.5).

*Table 4.5 Information in the Connections dialog box for a selected port*

Field	Description
Point-to-point	PVC connections cannot be split. Therefore, only a total value is displayed in the Total column.
Calling in	The total number of point-to-point SVC connections where the port is the called party.
Calling out	The total number of point-to-point SVC connections where the port is the calling party.

*Table 4.5 Information in the Connections dialog box for a selected port*

Field	Description
Total	The total number of point-to-point SVC and PVC connections on the port.
Point-to-multipoint	
Root	The total number of point-to-multipoint SVC and PVC connections where the port is the calling party.
Leaf	The total number of point-to-multipoint SVC and PVC connections where the port is the called party.
Total	The total number of point-to-multipoint SVC and PVC connections on the port.

### **Viewing cell statistics for a port**

You can view the cell statistics for a port. The cell statistics are split into cells that have entered and left the port. The cell statistics are updated in real time.

To view cell statistics for a port:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on a port and right-click.  
A menu cursor is displayed.
- 3 Click on the Statistics command on the displayed menu.  
The Statistics dialog box for the selected port is displayed.

## Viewing Switch Fabric card information

You can view the number of cell discards that have occurred for each service category supported by the Switch Fabric card in the Collage 740.

Software release version 1.1 supports the following service categories:

- Constant Bit Rate (CBR) traffic, such as uncompressed voice or video
- Variable Bit Rate (VBR) traffic, such as compressed voice or video
- Unspecified Bit Rate (UBR) traffic, such as broadcasts.

To view the cell discards for each service category:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Switch Fabric card in slot 6.
- 3 When the cursor changes to an information cursor, click on the slot.  
The Slot Information dialog box for slot 6 is displayed (see Table 4.6).

*Table 4.6 Information displayed in the Slot Information dialog box for the Switch Fabric card*

Field	Description
Description	The type of card registered in the slot.
Hardware version	The hardware version of the Switch Fabric card.
Software version	The software version that the Switch Fabric card is using.
Current status	The current status of the Switch Fabric card.
Switch Fabric Information	The number of cell discards for each service category.

## Managing the Processor Module

This section describes how to manage the Processor Module in a Collage 740.

### Viewing Processor Module information

You can view how much the Processor Module is currently utilized, as a percentage. Also displayed is the event level and description for the last software event that caused a SNMP trap to be sent out by the Collage 740 to a Network Management Station (NMS).

Software events in a switch are assigned event levels from 1 to 16. Events with an event level of 1 are software events that are low priority, events with an error code of 8 are LANE services software events, and events with levels of 16 are software events that are of the highest priority and are fatal to the switch.



**Note:** You can define the software event priority level that a Collage 740 will use to send SNMP traps out to a NMS. For information on how to define the event priority level, refer to the *Collage 740 Backbone ATM Switch User Guide* (part number: 100-239). Once the event priority level is set for the SNMP traps, the switch will only send out traps that are of the same priority level or higher.

---



**Note:** You can limit the number of traps that are displayed by setting the logs in Alert Manager. For more information about Alert Manager, refer to the *TrueView Applications Installation and User Guide* (part number: 100-160).

---

To view information about the Processor Module:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Processor Module.
- 3 When the cursor changes to a menu cursor, click.  
A drop-down menu is displayed.
- 4 Select CPU Info from the menu.  
The CPU Info dialog box is displayed (see Table 4.7).

Table 4.7 describes the fields in the CPU Info dialog box.

*Table 4.7 Information in the CPU Info dialog box*

Field	Description
CPU	
Current status	The current status of the Processor Module.
Hardware version	The hardware version of the Processor Module.
Software version	The version of the main software image in the Processor Module.
Utilization	Utilization of the CPU as a percentage of busy time over idle time.

*Table 4.7 Information in the CPU Info dialog box*

Field	Description
Latest Software Event	
Level	The error code of the last software event that caused a SNMP trap to be sent. Software events are assigned error codes from 1 to 16.
Description	An error description for the last software event that caused a SNMP trap to be sent.



---

### Viewing the number of connections to and from the Processor Module

You can view the number of connections to and from the Processor Module. Types of connections that the Processor Module will be handling include the management connection requests, control connections, and LANE connectivity. The connection statistics are updated in real time.

The Processor Module connections are split into the following types:

- Switched Virtual Circuit (SVC)
- Permanent Virtual Circuit (PVC)

To view the number of connections to and from the Processor Module:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Processor Module.
- 3 When the cursor changes to a menu cursor, click.  
A drop-down menu is displayed.
- 4 Select the CPU Connections command from the menu.  
The CPU Port Connections dialog box is displayed (see Table 4.8).

---

Table 4.8 describes the fields in the CPU Port Connections dialog box.

*Table 4.8 Information in the CPU Port Connections dialog box*

Field	Description
Point-to-point	PVC connections cannot be split. Therefore, only a total value is displayed in the Total column.
Into network	The total number of point-to-point SVC connections into the network, where the Processor Module is the calling party.
From network	The total number of point-to-point SVC connections from the network, where the Processor Module is the called party.
Total	The total number of point-to-point SVC and PVC connections.
Point-to-multipoint	
Root	The total number of point-to-multipoint SVC and PVC connections where the Processor Module is the calling party.
Leaf	The total number of point-to-multipoint SVC and PVC connections where the Processor Module is the called party.
Total	The total number of in-coming and out-going SVC and PVC connections to the Processor Module.

## Viewing Processor Module AAL5 packet statistics

You can view the AAL5 packet statistics for the Processor Module. The statistics are updated in real time, and are split into packets that have entered and left the Processor Module.

To view CPU port statistics for the Processor Module:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Processor Module.
- 3 When the cursor changes to a menu cursor, click.  
A drop-down menu is displayed.
- 4 Select the CPU Statistics command from the menu.  
The CPU Port Statistics dialog box is displayed (see Table 4.9).

*Table 4.9 Information in the CPU Port Statistics dialog box*

Field	Description
Bytes	The total number of cell bytes that have entered or left the Processor Module.
Packets	The total number of AAL5 packets that have entered or left the Processor Module.
Errors	The total number of AAL5 packets with errors that have entered or left the Processor Module.
Discards	The total number of AAL5 packets discarded at the Processor Module interface due to buffer overflow.

---

## Viewing status information about an attached Backup PSU

You can view the status of the internal PSU in the Collage 740 and the status of the Backup PSU, if one is attached.

To view status information about attached PSUs:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the internal PSU.
- 3 When the cursor changes to an information cursor, click.  
The Power Supply Data dialog box is displayed (see Table 4.10).

*Table 4.10 Information in the Power Supply Data dialog box*

Field	Description
Status	The status of the internal PSU and the status of the Backup PSU, if one is attached.
Attachment	The PSU module in the Backup PSU unit that the Collage 740 is attached to. This can be either the left or the right PSU module. For more information about the Backup PSU unit, refer to the <i>Backup PSU Installation Guide</i> (part number: 100-240).
Fans	The speed of the fans in the Backup PSU.

# Managing LANE services

---

This section describes how to manage LANE services that are provided through the Collage 740.

## LAN Emulation overview

For an overview of the components of LANE and how these components are utilized on an Emulated LAN (ELAN) on a Collage 740, refer to the *Collage 740 Backbone ATM Switch User Guide* (part number: 100-239). Also detailed in the above user guide is a section on how to set up LANE on different network environments using a number of different Madge devices connected to a Collage 740.

The current software release (version 1.1) of Collage 740 Manager, will enable you to configure the following LANE software components:

- Internal LECS
- Internal LES
- Management LEC



**Note:** The functions that are available using the current software release (version 1.1) of TrueView Collage 740 Manager are currently limited. For the full range of LANE services available in the Collage 740, refer to the *Collage 740 LAN Emulation Services User Guide* (part number: 100-289).

---

## Configuring the LECS

Any ATM network using LANE must have one (and only one) LECS, that acts as a central coordinator, making sure that all LAN Emulation Clients (LECs) join the correct ELANs.

This section describes how to configure the LECS in the Collage 740.

You can view the following information about the local LECS:

- The operational state of the LECS
- The length of time that the LECS status has not changed shown in days, hours, and minutes
- The full LECS ATM address. By clicking on the address, you can view the breakdown of the LECS ATM Address.
- The number of configuration requests granted
- A list of all ELANs registered with the LECS. For more information about the registered ELANs, see “Managing registered ELANs” later in this chapter.

You can also:

- Set the LECS location within the network. For more information about setting the LECS location, see “Setting the LECS location” later in this chapter.
- Add new ELANs to the LECS database
- Edit or delete ELANs that are already registered with the LECS
- Set the default ELAN names that are used by the local LECS.

### Viewing the status of the local LECS

To view the status of the local LECS:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LANE button on the toolbar.  
The LAN Emulation Information dialog box is displayed.

---

## Setting the LECS location

You can specify the location of the LECS has to where the Collage 740 will look for the LECS. The LECS can be at one of the following locations:

- Its own local internal LECS at the WKA (Well-Known Address)
- Its own local internal LECS at a specific address.
- A remote LECS at the WKA.
- A remote LECS at a specific ATM address on the network.

By default, a Collage 740 ignores its own local LECS and seeks a remote LECS at the WKA. The ATM Forum defines this address as 47.00.79.00.00.00.00.00.00.00.00.00.00.00.A0.3E.00.00.01.

To set the LECS location:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LANE button on the toolbar.  
The LAN Emulation Information dialog box is displayed.
- 3 Select the location of the LECS.  
If you select a remote LECS at a specific address then you must enter its full ATM address.
- 4 Click on the OK button.

## Managing registered ELANs

When a LEC contacts the LECS it usually specifies the ELAN name or the ELAN type that it wants to join. The LECS in a Collage 740 will enable you to define up to 64 different ELAN names. You can also define default ELANs that the LEC should join if it only specifies the ELAN type.

The following default ELAN types can be specified in the LECS. The default settings in a Collage 740 are also provided:

- Token Ring ELAN - For this ELAN type, the default ELAN name is “Collage740ElanTrn”.
- Ethernet type ELAN - For this ELAN type, the default ELAN name is “Collage740ElanEth”.

### **Adding an ELAN**

You can define up to 64 ELANs that will be known to the LECS on a Collage 740.

To add a registered ELAN:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LANE button on the toolbar.  
The LAN Emulation Information dialog box is displayed.
- 3 Click on the Add button.  
The New Emulated LAN dialog box is displayed (see Table 5.1).



The table below describes fields displayed in New Emulated LAN dialog box.

*Table 5.1 Information in the New Emulated LAN dialog box*

Field	Description
ELAN	
Name	The ELAN name.
Type	The ELAN type. This can be either an ethernet ELAN type or a token-ring ELAN type. If you are adding a token-ring ELAN then you must enter a ring number.
LEC Security	Whether this is an open ELAN or a closed ELAN. If the ELAN is open then any LEC can join the ELAN. If the ELAN is closed then only LECs that are mapped to the ELAN can access the LEC. For information about setting up and managing ELAN Clients, refer to the <i>Collage 740 LAN Emulation Services User Guide</i> (part number: 100-289).
Maximum frame size	The maximum frame size that the ELAN can support.

*Table 5.1 Information in the New Emulated LAN dialog box*

Field	Description
LES Location	
Discovery method	<p>The discovery method that will be used to find the LES location. This can be either manual or Madge auto LES discovery.</p> <p>If you are using a Madge LES that supports the proprietary Madge automatic LES discovery method then select “Madge auto LES discovery”. Otherwise, select “manual”. You must manually enter the full ATM address of the LES that the ELAN is to register with.</p> <p>By clicking on the Edit button, you can edit the ELAN LES address. For more information about the dialog box that is displayed, refer to the <i>TrueView Applications Installation and User Guide</i> (part number: 100-160).</p>

---

**Editing an existing ELAN**

To edit an existing registered ELAN:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LANE button on the toolbar.  
The LAN Emulation Information dialog box is displayed, with all the registered ELANs that are known to the LECS.
- 3 Select an ELAN from the list displayed.
- 4 Click on the Edit button.  
The Edit Emulated LAN Information dialog box is displayed. For information about the fields displayed in this dialog box, see Table 5.1.
- 5 Edit the selected ELAN.
- 6 Click on the OK button.

## Deleting an ELAN

When you delete an ELAN that is currently being used, no new LECs wishing to join the ELAN will be able to find it.

However, current LECs using this ELAN will not be affected until they lose connection to the LES and try to re-connect.

You must be aware of the following changes that will be required when you delete an ELAN:

- Any LECs that specified the deleted ELAN, they must now be configured to use a new ELAN.
- If the deleted ELAN was a default ELAN then you should define a new default ELAN to replace the deleted ELAN.
- Any LES or LESes that hosted the deleted ELAN should be deleted, wherever the LES may be located in the network.

To delete a registered ELAN that is known to the LECS:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LANE button on the toolbar.  
The LAN Emulation Information dialog box is displayed, with all the registered ELANs that are known to the LECS.
- 3 Select an ELAN from the list displayed.
- 4 Click on the Delete button.  
A warning is displayed for confirmation on deleting the selected ELAN.
- 5 Click on the OK button.

### Setting the default ELAN names

To set the default ELAN names that are used by the local LECS:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LANE button on the toolbar.  
The LAN Emulation Information dialog box is displayed.
- 3 Click on the Default ELANs button.  
The Set Default ELANs dialog box is displayed (see Table 5.2.)
- 4 Select the name of the ELAN that you want the local LECS to use from the list displayed (see Table 5.3).
- 5 Click on the OK button.

*Table 5.2 Fields in the Registered Emulated LANs dialog box*

Field	Description
Default token ring ELAN	The name of the default token ring ELAN that the local LECS uses.
Default Ethernet ELAN	The name of the default Ethernet ELAN that the local LECS uses.
Default unspecified type ELAN	The name of the default unspecified type ELAN that the local LECS uses.

## Configuring the local LES

This section describes how to configure the LESes known to the LECS in the Collage 740. A Collage 740 can provide up to 16 combined LES/BUSEs, which can operate either in token-ring or ethernet mode.

### Viewing the information about a LES

You can view the following information about each LES selected from the list displayed in the Local LES Information dialog box:

- The operational state of the selected LES.
- The length of time that the selected LES status has not changed shown in days, hours, and minutes.
- The full LES and BUS ATM address for the selected LES. By clicking on the address, you can view the breakdown of the LES ATM Address.
- The number of LE\_ARP requests that the LES has accepted, from LECs that are registered with it.
- The number of LE\_ARP requests that the LES has forwarded, to any other LECs that are registered with it. This enables the other LECs on the ELAN to respond directly, if they own the requested address.
- A list of all LECs that are registered with a selected LES. For more information about the dialog box displayed, see “Viewing LEC information for a selected ELAN” later in this chapter.
- You can add, delete, or edit a selected LES. For more information about the dialog box displayed, see “Creating a new LES” earlier in this chapter.

---

To view information about a LES:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LES button on the toolbar.  
The Local LES Information dialog box is displayed.
- 3 Select the LES from the list displayed.

### Creating a new LES

When creating a new LES you should note the following:

- If the LECS is hosted in a Collage 740 that is currently running microcode version 1.1 then the LECS registration should be set to “Madge LECS, redundant LES support”. This will use the proprietary Madge automatic LES address determination method to locate the LES to host the ELAN. Software version 1.1 will also support redundant LESes. For more information about the proprietary method and support for redundant LESes, see “Configuring the LECS” earlier in this chapter.
- If the LECS is hosted in a Collage 740 that is currently running microcode version 1.0 then the LECS registration should be set to “Madge LECS, no redundant LES support”. This will use the proprietary Madge automatic LES address determination method to locate the LES to host the ELAN. However, it does not support redundant LESes.
- If the LECS is hosted in a non-Madge device, the LECS registration should be set to “any LECS”. If the LECS registration is set to “any LECS” and you move the LES then you will need to manually re-configure the LECS to find the LES.



**Note:** You will need to enter the ELAN that the new LES will host. The ELAN name should be unique within the ATM network and is case-sensitive.

---

To add a LES:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LES button on the toolbar.  
The Local LES Information dialog box is displayed.
- 3 Select a LES from the list displayed.
- 4 Click on the Add button.  
The New Local LES dialog box is displayed (see Table 5.3).

*Table 5.3 Information in the New Local LES dialog box*

Field	Description
ELAN name	The name of the ELAN that the new LES will host. The ELAN name should be unique within the ATM network. Note that this field is case-sensitive.
ELAN type	The type of ELAN that the LES will be hosting.
Max frame size	The maximum frame size that ELAN can handle.
LECS registration	The mode of LECS registration that the LES supports. Refer to the above text for more information about LECS registration.
Required state	The required state of the LES, either enabled or disabled.



---

## Viewing information about a LES

You can view the following information about each LES selected from the list displayed in the Local LES Information dialog box:

- The operational state of the selected LES
- The length of time that the selected LES status has not changed shown in days, hours, and minutes
- The full LES and BUS ATM address for the selected LES. By clicking on the address, you can view a breakdown of the LES ATM Address.
- The number of LE\_ARP requests that the LES has accepted from registered LECs
- The number of LE\_ARP requests that the LES has forwarded to any other registered LECs. This enables the other LECs on the ELAN to respond directly, if they own the requested address.
- A list of all LECs that are registered with a selected LES. For more information about the dialog box displayed, see “Viewing LEC information for a selected ELAN” later in this chapter.
- You can add, delete, or edit a selected LES. For more information about the dialog box that is displayed, see “Creating a new LES” earlier in this chapter.

To view information about a LES:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LES button on the toolbar.  
The Local LES Information dialog box is displayed.
- 3 Select the LES from the list displayed.

## Editing a LES

See Table 5.3 for fields displayed in the Edit Local LES dialog box.



**Note:** If you change the ELAN name and ELAN type that the LES will host, all LECs on the ELAN are affected.

---

To edit a LES that is known to the LECS:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LES button on the toolbar.  
The Local LES Information dialog box is displayed.
- 3 Select a LES from the list displayed.
- 4 Click on the Edit button.  
The Edit Local LES dialog box is displayed.
- 5 Configure the LES.
- 6 Click on the OK button.

---

**Viewing LEC information for a selected ELAN**

You can view the following information about each LEC from the list displayed for a specific ELAN in the LAN Emulation Client dialog box:

- The operational state of the selected LEC
- The length of time that the selected LEC status has not changed shown in days, hours, and minutes
- The identity code that uniquely identifies the LEC on the ELAN
- The full LEC ATM address for the selected LEC. By clicking on the address, you can view a breakdown of the LEC ATM Address.
- Any proxy LECs

To view a list of all the LECs that are hosted on a specific ELAN:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LES button on the toolbar.  
The Local LES Information dialog box is displayed.
- 3 Select a LES from the list displayed.
- 4 Click on the LEC Info button.  
The LAN Emulation Clients dialog box is displayed .

## Deleting a LES



---

**Note:** When you delete a LES, all attached LECs are forced off the hosted ELAN.

---

To delete a LES that is known to the LECS:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Click on the LES button on the toolbar.  
The Local LES Information dialog box is displayed.
- 3 Select a LES from the list displayed.
- 4 Click on the Delete button.  
A warning is displayed for confirmation on deleting the selected LES.
- 5 Click on the OK button.

---

## Managing the management LEC

The Collage 740 has a single management LEC that allows management using SNMP and Telnet. The management LEC has a 6-byte MAC address, which is either the Collage 740's own Burnt-In Address (BIA) or the Locally Administered Address (LAA). The management LEC will register this address with the LAN Emulation Server (LES) that is hosting the ELAN.

The Collage 740 management LEC can be assigned to register with a token-ring or an ethernet ELAN. By default, it is assigned to register with a token-ring ELAN.

### Setting up the management LEC

You can configure certain parameters for the management LEC. Once you re-configure a management LEC, a warning message is displayed. You must restart the re-configured LEC for the changes to take effect. When the management LEC restarts, you will lose all current management connections to the Collage 740. However, if you have configured your network appropriately, these connections will re-establish themselves. To configure the management LEC:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Processor Module.
- 3 When the cursor changes to a menu cursor, right-click.  
A drop-down menu is displayed.
- 4 Select the Mgmt LEC Configuration command from the menu.  
The Management LEC Setup dialog box is displayed (see Table 5.4).
- 5 Configure the management LEC.
- 6 Click on the OK button.  
If you have re-configured the management LEC, a warning message is displayed. To restart the management LEC, click on the OK button.

### **Restarting the management LEC**

When you restart the management LEC, you will lose all current management connections to the Collage 740. However, if you have configured your network appropriately, these connections will re-establish themselves.

To restart the management LEC:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Processor Module.
- 3 When the cursor changes to a menu cursor, right-click.  
A drop-down menu is displayed.
- 4 Select the Mgmt LEC Restart command from the menu.  
A warning message is displayed.
- 5 To restart the LEC, click on the OK button.

Table 5.4 describes the fields in the Management LEC Setup dialog box.

*Table 5.4 Information in the Management LEC Setup dialog box*

Field	Description
ELAN information	
Configured name	The name of the ELAN that the management LEC expects to join when it next leaves and re-enters the network. This information is sent to the LECS, which uses it to determine the ELAN that the management LEC should join. If you do not specify an ELAN name, the management LEC will join the default ELAN of the type that you specify.
Configured type	The type of LAN that is emulated. You can specify the ELAN type to be either token-ring or ethernet.
Current name	The name of the current ELAN that the management LEC has joined.
Current type	The type of LAN that is currently being emulated.
Segment number	The segment number of a token-ring ELAN to which the management LEC is connected.
LEC ID	The identity code that uniquely identifies the management LEC on the ELAN.
Max frame size	The maximum frame size that the ELAN supports.

*Table 5.4 Information in the Management LEC Setup dialog box*

Field	Description
MAC addresses	
Current address	The MAC address that the management LEC is using.
Burnt-in address	The permanent hardware address of the management LEC.
LAA	The Locally Administered Address (LAA) of the management LEC. To specify a LAA for token-ring, enter a twelve-digit hexadecimal address that is in the range 400 000 000 000 through 7FF FFF FFF FFF. To specify a LAA for ethernet, the first byte must be *2, *6, *A, or *E, where * is a hexadecimal digit. To restore the burnt-in address, click on the Clear button.
Config server discovery	The means by which the management LEC discovered the LECS on the network.
LEC status	The current status of the management LEC. For a list of the different statuses that can be displayed, see the section “Viewing the management LEC statuses” later in this chapter.
Addresses Button	The management LEC ATM Addresses dialog box. For more information about this dialog box, see the section “Viewing the ATM addresses known to the management LEC” later in this chapter.



**Viewing the management LEC statuses***Table 5.5 Statuses for the Management LEC*

Status	Description
Initial state	The management LEC is not currently connected to a LECS.
LECS connect phase	The management LEC is trying to set up an SVC to a LECS.
Configuration phase	The management LEC has sent a configuration request to the LECS and is waiting for a response.
Join phase	The management LEC is joining the ELAN.
Initial registration	The management LEC is registering its LAN address and ATM address with the LES.
Connecting to the BUS	The management LEC is connecting to a BUS.
Operational	The management LEC is fully active.

### Viewing the ATM addresses known to the management LEC

You can view the primary ATM address, the LECS ATM address, and the LES ATM address. The components of these addresses are also explained.

To view the ATM addresses known to the management LEC:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Processor Module.
- 3 When the cursor changes to a menu cursor, right-click.  
A drop-down menu is displayed.
- 4 Select the Mgmt LEC Configuration command from the menu.  
The Management LEC Setup dialog box is displayed.
- 5 Click on the Addresses button in the dialog box.  
The LEC ATM Addresses dialog box is displayed (see Table 5.6).

For a breakdown of the address components, click on the address.

*Table 5.6 Information in the LEC ATM Addresses dialog box*

Field	Description
Primary ATM Address	The current ATM address of the management LEC.
LECS ATM Address	The ATM address of the LECS that the management LEC is connected to.
LES ATM Address	The ATM address of the LES that the management LEC is connected to.

---

## Viewing management LEC statistics

You can view the amount of traffic that the management LEC on the Collage 740 receives and transmits for:

- Unicast frames
- Multicast frames
- Broadcast frames
- Address Resolution Protocol (ARP) requests and responses
- Control frames

You can also view the total number of bytes that the management LEC receives and transmits, the number of frames that the management LEC discards and for what reasons, and the number of Signalled Virtual Connections (SVCs) that have failed to be set up.

To view management LEC statistics:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Processor Module.
- 3 When the cursor changes to a menu cursor, right-click.  
A drop-down menu is displayed.
- 4 Select the Mgmt LEC Statistics command from the menu.  
The Management LEC Statistics dialog box is displayed (see Table 5.7).

---

Table 5.7 describes the fields in the Management LEC Statistics dialog box.

*Table 5.7 Information in the Management LEC Statistics dialog box*

Field	Description
Byte Counters	
Total bytes	The total number of bytes that the management LEC has received (In) and transmitted (Out).
Frame Counters	
Unicast frames	The total number of frames that the management LEC has received (In) and transmitted (Out), which are destined for a single device on the network.
Multicast frames	The total number of frames that the management LEC has received (In) and transmitted (Out), which are destined for multiple devices on the network.
Broadcast frames	The total number of frames that the management LEC has received (In) and transmitted (Out), which are destined for all devices on the network.
Discards	
Errors	The number of frames that the management LEC has discarded because they contained errors.

Table 5.7 Information in the Management LEC Statistics dialog box

Field	Description
Discards	The number of frames that the management LEC has discarded because of insufficient buffer space.
Unknown protocol	The number of frames that the management LEC has discarded because it did not recognise the protocol.
LAN Emulation Counters	
LE_ARP requests	<p>The number of responses to LAN Emulation Address Resolution Protocol (LE_ARP) requests that the LES has forwarded to this management LEC (In), because the LES did not know the ATM address. If the management LEC owns the address, it will respond directly to the LEC that sent the request.</p> <p>The number of LE_ARP requests that the management LEC has sent to the LES (Out), because it needs an ATM address. If the LES knows the ATM address, it sends it to the management LEC. If it does not know the ATM address, the LES forwards the address request to any LECs that are registered with it, so that they can respond directly if they own the address.</p>
LE_ARP responses	The number of responses to LAN Emulation Address Resolution Protocol (LE_ARP) requests that the management LEC has received (In) and the number of LE_ARP requests that it has responded to (Out).

*Table 5.7 Information in the Management LEC Statistics dialog box*

Field	Description
Control frames	The number of LANE control frames that the management LEC has received (In) and transmitted (Out).
SVC failures	The number of SVCs that have failed to be set up.

## Maintaining the Collage 740

---

This chapter describes how to maintain the Collage 740. To perform any maintenance on a Collage 740, you must have write access to it. For more information about establishing a link to a device, see the section “Linking to a Collage 740” in Chapter 2 “Getting started”.

### Downloading microcode

You can download a microcode file from the management station to a Collage 740. Before starting the download, you must establish a link to the device.

To download over TFTP, the remote file server must be part of, or accessible from, the ELAN to which the MLEC in the Collage 740 belongs. To verify this, try to PING the Collage 740 from the file server or vice versa. For more information about PING, refer to the *TrueView Applications Installation and User Guide* (part number: 100-160).



**Note:** While you download microcode, users connected to the device cannot gain access to the network. Downloading microcode may take several minutes to complete.

---

You can download to a device in the Collage 740 dialog box, in the TrueView window, or in the Collage 740 Manager Table. In each case, the Download dialog box displays the progress of the download. To cancel downloading, click on the Cancel button. Collage 740 Manager completes the current download but does not download the microcode to any other selected devices.

To download microcode to a device:

Either:

- 1 Select the Collage 740 you want to manage. The Collage 740 dialog box is displayed. Place the cursor on the Reset button on the Processor Module.  
When the cursor changes to a menu cursor, right-click. A drop-down menu is displayed.  
Click on the Download command on the displayed menu.

Or:

- 1 Click on one or more icons for devices to which you want to download microcode. The icons you select are highlighted.  
Click on the Download command on the Collage 740 menu.
- 2 A warning dialog box is displayed.
- 3 Click on the OK button to proceed.  
The Download dialog box is displayed.
- 4 Select the file to be downloaded and the destination that it is to be downloaded to.  
For more information about server and filename aliases, refer to the *TrueView Applications Installation and User Guide* (part number: 100-160).
- 5 Click on the OK button.



**Note:** If you run Collage 740 Manager with the TrueView network management platform, you can configure timed downloads and use the download monitor to manage downloading. For information about the download tools provided by TrueView, refer to the *TrueView Applications Installation and User Guide* (part number: 100-160).

---



---

## Rebooting the Collage 740



---

**Note:** While the Collage 740 is rebooting, users currently connected to the device cannot access the network.

---

To reboot the Collage 740:

- 1 Select the Collage 740 that you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Reset button on the Processor Module.
- 3 When the cursor changes to a menu cursor, right-click.  
A drop-down menu is displayed.
- 4 Click on the Reboot command on the displayed menu.  
A warning is displayed.
- 5 Click on the OK button.

### **Identifying indicators on a Collage 740**

You can identify a Collage 740 in a stack by flashing the LED indicators on the Processor Module of the device.

To flash the LED indicators on a Collage 740:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Reset button on the Processor Module.
- 3 When the cursor changes to a menu cursor, right-click.  
A drop-down menu is displayed.
- 4 Click on the Identify command on the displayed menu.  
A warning is displayed.
- 5 Click on the OK button.  
The LED indicators on the Processor Module of the selected device will flash an identification pattern for several seconds.

**Erasing the flash memory**

You can erase a selected flash file from the flash memory banks in a Collage 740.

To erase a file in the flash memory bank:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Reset button on the Processor Module.
- 3 When the cursor changes to a menu cursor, right-click.  
A drop-down menu is displayed.
- 4 Click on the Erase Flash command on the displayed menu.  
A warning is displayed.
- 5 Click on the OK button.  
The Erase Flash File dialog box is displayed.
- 6 Select the file you wish to delete from the list displayed (see Table 6.1).
- 7 Click on the OK button.

*Table 6.1 Information in the Erase Flash File dialog box*

Field	Description
Erase Flash File Window	The name, type of file, and the version number of all the files in the flash memory of the selected device. The current default boot image is displayed with the symbol "D" in brackets beside it.
Description	The name of the image.
Location	The location of the image.

## Setting a default main image

You can select the main image that the Collage 740 will use when it next reboots.

To set a default main image:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Reset button on the Processor Module.
- 3 When the cursor changes to a menu cursor, right-click.  
A drop-down menu is displayed.
- 4 Click on the Default main image command on the displayed menu.
- 5 A warning is displayed.
- 6 Click on the OK button.  
The Set Default Main Image dialog box is displayed.
- 7 Select the file you wish to set as the default main image from the list displayed (see Table 6.2).
- 8 Click on the OK button.  
When the Collage 740 is rebooted, the selected file will be the default main image.

*Table 6.2 Information in the Set Default Main Image dialog box*

Field	Description
Set Default Main Image Window	The name, type of file, and the version number of all the files in the flash memory of the selected device. The current default main image is displayed with the symbol "D" in brackets beside it.
Description	The name of the image.
Location	The location of the image.

## Setting a default boot loader image

You can select the boot loader image that the Collage 740 will use when it next reboots.

To set a default boot image:

- 1 Select the Collage 740 you want to manage.  
The Collage 740 dialog box is displayed.
- 2 Place the cursor on the Reset button on the Processor Module.
- 3 When the cursor changes to a menu cursor, right-click.  
A drop-down menu is displayed.
- 4 Click on the Default boot loader command on the displayed menu.  
A warning is displayed.
- 5 Click on the OK button.  
The Set Default Boot Loader Image dialog box is displayed.
- 6 Select the file you wish to set as the default boot loader image from the list displayed (see Table 6.3).
- 7 Click on the OK button.  
When the Collage 740 is rebooted, the selected file will be the default boot image.

*Table 6.3 Information in the Set Default Boot Loader Image dialog box*

Field	Description
Set Default Boot Loader Image Window	The name, type of file, and the version number of all the files in the flash memory of the selected device. The current default boot loader image has the words "Default Loader" before it.
Description	The name of the image.
Location	The location of the image.



## Technical support services

---

This appendix provides information about the Madge Networks' technical support services. The addresses, telephone numbers, and fax numbers for each region are printed on the back cover of this manual.

When you contact Madge Networks, we record all details of the problem, including full details about you and your company, which remain strictly confidential. Our technical-support engineers work to resolve your networking problems and ensure that you have configured our products in the way that is most suited to your needs.

This appendix contains the following information about technical support services:

- Contacting technical support services, on page 110  
This section describes the types of support that are available, and provides technical support numbers and toll-free regional support numbers.
- Using technical support services, on page 113  
This section explains how to use the technical support services provided on CompuServe, the Bulletin Board System (BBS), the Worldwide Web (WWW) page, the FaxBack service, and the NIFTY-Serve service.

## Contacting technical support services

Technical support is available to all Madge customers. To obtain support for Madge products, refer to the following table for the method that most suits your needs. Technical support numbers are provided on page 111, and regional support numbers are provided on page 112.

Requirement	Support services
Initial troubleshooting	Ensure that the product has been installed and configured according to the instructions in the documentation supplied with your Madge product.
Late-breaking product information	Use the following services: <ul style="list-style-type: none"> <li>• Bulletin Board System (BBS)</li> <li>• Worldwide Web (WWW) page</li> </ul>
Upgrading Madge products	Use the following services: <ul style="list-style-type: none"> <li>• Bulletin Board System (BBS)</li> <li>• PC Vendor G Forum on CompuServe</li> <li>• Madge Networks' FTP server</li> <li>• Contact your local Madge office or representative</li> </ul>
Support queries	Use the following services: <ul style="list-style-type: none"> <li>• PC Vendor G Forum on CompuServe</li> <li>• In Japan, the Madge Networks section on NIFTY-Serve</li> <li>• Send e-mail to Madge Networks' Technical Support Services</li> <li>• Telephone Madge Networks' Technical Support Services, or speak to a Madge field-support engineer</li> </ul>



### Technical support numbers

Madge Networks provides voice, fax, and email support services as shown in this section. Local technical-support phone numbers, that are toll-free, are provided on page 112.

Region	Service	Number
Europe, Middle East, Africa	Support	+44 1628 858008
	Support Fax	+44 1628 858977
	BBS	+44 1628 858700
	Email	eurtech @ madge.com
Americas	BBS	+1 408 955 0262
	Support	800 876 2343
	Email	us-suprt @ madge.com
Asia, Australia, New Zealand	BBS	+852 2593 9829
	Support	+852 2593 9839
	Email	support @ madge.com
Japan	Support	+81 3 5232 3281
	Email	support @ madge.com

### Regional telephone numbers

Madge Networks provides local technical-support phone numbers that are toll-free, and are listed in the table below. You cannot use toll-free numbers from outside of the country with which they are associated.

\* Indicates local telephone numbers where the calls are charged at the normal rate.

Country	Number	Country	Number
Americas	800 876 2343	Netherlands	06022 7120
Australia	02 9936 1739 *	Norway	800 11759
Austria	0660 8366	Portugal	0505 44 4602
Belgium	0800 10485	Singapore	800 852 3151
Denmark	800 17649	South Africa	0800 991013
Finland	0800 118 074	Spain	900 974412
France	05 90 82 50	Sweden	020 793127
Germany	0130 868828	Switzerland ( <i>French</i> )	155 6432
Hong Kong	2593 9839 *	Switzerland ( <i>German</i> )	155 1057
Israel	177 440 2530	Thailand	2231 8191 *
Italy	1678 72092	United Kingdom	Lo-call: 0345 125539
Malaysia	800 4137		

---

## Using technical support services

This section contains information about:

- Using CompuServe, on page 113
- Using the Bulletin Board System (BBS), on page 115
- Using the Worldwide Web (WWW) page, on page 116
- Using Madge FaxBack, on page 117
- Using NIFTY-Serve, on page 117

### Using CompuServe

If you are a CompuServe member, access the Madge Networks Section by typing GO MADGE at the ! prompt or, load a Windows application such as WinCIM, and type MADGE in the Go option from the Services menu.

Madge Networks' service on CompuServe provided the following facilities:

- Message section
- Library
- Conference area
- Latest software releases

For customers who have not experienced the benefits that access to CompuServe can bring, Madge Networks offers a free introductory membership. This includes a user-ID and password, one month's access to all of CompuServe's Basic services, and an introductory US\$15 usage credit that enables you to access the Madge Networks Section of the PC Vendor G Forum and CompuServe's other Extended and Premium services. You also get complimentary subscription to the monthly CompuServe magazine.

To obtain your free introductory membership, call:

Area	Number
UK	0800 289378
Germany	0130 3732
Rest of Europe	+44 272 255111
Americas	800 524 3388
Rest of the world	+1 614 457 0802

## Using the Bulletin Board System (BBS)

Madge Networks maintains a free 24-hour Bulletin Board System (BBS) that provides the latest software and technical-support information.

You need a modem to access the BBS. We recommend you use an ANSI (VT100) terminal emulator (for example, ProComm) with your serial port set to: 8-bit data, NO parity check, and ONE stop bit. This is because it is likely that any other setup will cause transmission errors. The BBS supports modem speeds of up to 14 400 baud (with MNP5). Download protocols supported are X Modem, Y Modem, and Z Modem.

Because the BBS is an open system, anyone can log in. The first time that you log in, the system prompts you for your name and for a password. It also asks you to complete a brief questionnaire. Please take the time to complete the questionnaire. The system displays Madge's license agreement and asks you to acknowledge it.

When you log in on subsequent occasions, make sure you enter the same name and password that you entered when you first logged in. The system tells you the last time that you logged in, asks whether you want to read the bulletins, and tells you whether there are any new mail messages for you. To find out more about the Madge BBS service call:

Area	Number
Germany	0180 535 7273
Rest of Europe	+44 1628 858008
Americas	+1 408 955 0262
Asia	+ 852 2593 9829

### **Using the Worldwide Web (WWW) page**

The Madge Networks home page provides information under a variety of categories, including:

- About the company
- Latest news
- Products
- Services
- ATM news digest

To access any Internet site use, either a web browser or FTP software.

If you use a web browser, you can access the full home page service. If you do not have a web browser, you can still download new or updated software using FTP software. If you use a web browser, enter the URL <http://www.madge.com>.

If you use FTP software:

- 1 Connect to <ftp.madge.com>.

The system prompts you for your login name.

- 2 Type ANONYMOUS

The system prompts you for your password.

- 3 Type your full email address.

Once this is complete, you can issue file transfer commands.

### **Using Madge FaxBack**

The Madge FaxBack Product Information Service (based in the United States) is an international service for all Madge customers.

Phone +1 408 383 1002, to request technical-support documents, marketing documents, and information about seminars and events organized by Madge Networks.

### **Using NIFTY-Serve**

This is an equivalent service to CompuServe but is only available in Japan.

Log into NIFTY-Serve and, at the > prompt, type GO FLANVA.





## Index

---

### A

Add ATM Routing table dialog box 45

Adding

    devices 10

    registered ELAN 78

    routes 45

Addresses

    management LEC 96

Alert Manager

    about 3

ATM Routing table dialog box 43

authorized managers 35

### B

Backup PSU 74

BOOTP 39

Burnt-In Address (BIA) 91

### C

Changing

    LECS location 77

Collage 740

    icons 11

    IP address 39

    linking to 14

    toolbar buttons 22

    viewing

        device statuses 29

        management statuses 28

Collage 740 Manager

    about 1

    configuration 5

    options 6

    settings 5

Collage 740 Manager Table

    about 15

    columns 15

- Configuring
  - Collage 740 information 25
  - Collage 740 Manager 5 management LEC 91
  - SNMP interface 8
  - traffic statistics 51
- Configuring parameters 21
- Configuring the LES 84
- Connections
  - numbers 64
  - types 64
- Creating
  - new LES 85

## **D**

- Database
  - adding devices 10
  - deleting devices 19
- Default
  - password 9, 14, 30
- Default ELANs 78
- Deleting
  - LES 90
  - registered ELAN 82
- Deleting devices 19
- Dialog box
  - Collage 740 12

- Downloading
  - microcode 101

## **E**

- Editing
  - LES 88
  - registered ELAN 81
- ELAN
  - add 78
  - defaults 78
  - delete 82
  - discovery method 80
- Establishing links to devices 14

## **F**

- Features supported 2

## **G**

- Getting started 5
- Graph
  - configuring options 51
  - legend 50
  - rescale axes 50
  - right-clicking 49
  - styles 49

---

**H**

hardware information 33

Hot spots 13

**I**

Icons

- base address 7

- communications address 7

- device name 7

- displaying 6

- labelling 7

ILMI information 63

Information cursor 13

IP address

- discovery 39

IP gateway 39

IP services

- address 39

- BOOTP 40

- configuring 38

- discovery method 39

- gateway 39

- RARP 40

- subnet mask 39

IP Services dialog box 38

**L**

LAN Emulation

- overview 75

LAN services 75

LEC 97

- addresses 96

- configuring 91

- restart 92

- statistics 97

- status 95

LECS

- locations 77

- status 76

LES

- create 85

- delete 90

- edit 88

Link to a Collage 740 14

Linking to devices 14, 21

Locally Administered Address (LAA) 91

## **M**

- Managing
  - registered ELANs 78
- Menu cursor 13
- Menus 13
- Microcode
  - downloading 101
- Monitoring
  - traffic statistics 49

## **P**

- Password
  - default 9, 14, 30
  - linking to devices 14
  - setting 30
- Physical data
  - viewing 41
- port
  - management 58
- port name 59

## **R**

- Rescaling
  - graph axes 50
- Restarting
  - management LEC 92
- Right-clicking
  - graph axes 49

## **S**

- SNMP 8
  - default password 9
  - poll time 8
  - retries 8
  - timeout 8
- statistics
  - management LEC 97
- Status
  - LECS 76
  - management LEC 95
- subnet mask 39
- Switch Connections dialog box 46
- Switch Statistics dialog box 48
- System requirements 1

**T**

## Table

## columns

- base address 16
- comms address 16
- contact 16
- device status 17
- device type 16
- IP address 16
- location 16
- management status 16
- name 16

## Toolbar buttons

- Collage 740 22
- dialog box
  - communication information 22
  - cross-connect traffic statistics 24
  - information 22
  - IP address 23
  - LAN Emulation 24
  - LAN Emulation Servers 24
  - physical data 23
  - routing table 23
  - SNMP Authorization 23
  - switch connections 23
  - switch statistics 24
  - version 22
- exit 22
- status box 22
- Traffic statistics
  - monitored 49
- trap destinations 35
- TrueView
  - about 3

**U**

## User information 37

## **V**

Version information 33

### Viewing

addresses

    management LEC 96

device statuses 29

graph legend 50

graph styles 49

information about a LES 85, 87

LECS status 76

management statuses 28

physical data 41

statistics 97

status

    management LEC 95