

★ ★ CORVUS SYSTEMS
★ ★

System Generation Guide

MSDOS 2.0



LIMITED WARRANTY

CORVUS SYSTEMS, Inc. warrants all its hardware and software for a period of 180 days from the date of purchase from any authorized Corvus Systems dealer. Should the product fail to be in good working order at any time during this period, Corvus Systems will, at its option, repair or replace this product at no additional charge except as set forth below. Repairs will be performed and non-functioning parts replaced either with new or reconditioned parts to make the product function according to the company standards and specifications. All replaced parts become the property of Corvus Systems, Inc. This limited warranty does not include service to repair damage to the product resulting from accident, disaster, misuse, abuse or modifications that are unapproved by Corvus Systems.

Limited Warranty service may be obtained by delivering the product during the 180 day warranty period to Corvus Systems with proof of purchase date. YOU MUST CONTACT CORVUS CUSTOMER SERVICE TO OBTAIN A "RETURN MERCHANDISE AUTHORIZATION" PRIOR TO RETURNING THE PRODUCT. THE RMA (RETURN MERCHANDISE AUTHORIZATION) NUMBER ISSUED BY CORVUS CUSTOMER SERVICE MUST APPEAR ON THE EXTERIOR OF THE SHIPPING CONTAINER. ONLY ORIGINAL OR EQUIVALENT SHIPPING MATERIALS MUST BE USED. If this product is delivered by mail, you agree to insure the product or assume the risk of loss or damage in transit, to prepay shipping charges to the warranty service location and to use the original shipping container. Contact Corvus Systems or write to the Corvus Systems Service Center, 2029 O'Toole Ave., San Jose, CA 95131 prior to shipping equipment.

ALL EXPRESS AND IMPLIED WARRANTIES FOR THIS PRODUCT, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO A PERIOD OF 180 DAYS FROM DATE OF PURCHASE, AND NO WARRANTIES, WHETHER EXPRESS OR IMPLIED WILL APPLY AFTER THIS PERIOD. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

IF THIS PRODUCT IS NOT IN GOOD WORKING ORDER AS WARRANTED ABOVE, YOUR SOLE REMEDY SHALL BE REPAIR OR REPLACEMENT AS PROVIDED ABOVE. IN NO EVENT WILL CORVUS SYSTEMS BE LIABLE TO YOU FOR ANY DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF OR INABILITY TO USE SUCH PRODUCT, EVEN IF CORVUS SYSTEMS OR AN AUTHORIZED CORVUS SYSTEMS DEALER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, OR FOR ANY CLAIM BY ANY OTHER PARTY.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR CONSUMER PRODUCTS, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

System Generation Guide

MSDOS 2.0

Part Number: 7100-04942

Document Number: MS2/10-11/1.1

Release Date: August 1983

Revision: A

MSDOS™ is a trademark of Microsoft Corp.

FCC WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. As temporarily permitted by regulation it has not been tested for compliance with the limits for Class A computing devices pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

NOTICE

Corvus Systems, Inc. reserves the right to make changes in the product described in this manual at any time without notice. Revised manuals will be published as needed and may be purchased from authorized Corvus Systems dealers.

This manual is copyrighted. All rights are reserved. This document may not in whole or in part be copied, photocopied, reproduced, translated, or reduced to any electronic medium or machine readable form without prior consent, in writing, from:

Corvus Systems, Inc.
2029 O'Toole Avenue
San Jose, CA 95131
Telephone: (408) 946-7700
TELEX: 278976

Copyright© 1983 by Corvus Systems, Inc.

The Corvus Concept,™ Transporter,™ Corvus OMNINET,™ Corvus LogiCalc,™ Time Travel Editing,™ EdWord,™ Constellation,™ Corvus,™ Corvus Systems,™ Personal Workstation,™ Tap Box,™ Passive Tap Box,™ and OMNINET Unit™ are trademarks of Corvus Systems, Inc.

MIRROR® is a registered trademark of Corvus Systems, Inc. U.S. Patent 4,380,047.

Table of Contents

Getting Started	1
How This Guide is Organized	1
Usage	2
Software Required	4
Chapter 1: Generating New Systems	5
Generating a New System	5
Generating a Main System	7
Adding an Add-On Disk System	15
Chapter 2: Adding MSDOS 2.0	19
Space for Constellation II	19
Space for MSDOS 2.0	25
Creating System Volumes	34
Adding System Volumes to Apple II	37
Adding MSDOS 2.0 System Volumes to Constellation II	42
Initializing Your System Volumes	44
Chapter 3: Upgrading IBM to Constellation II	49
Locating Volumes	50
Creating a Free Area	56
Creating the System Volumes	57
Updating the Volume Table	68
Granting Access for File Transfer	76
Chapter 4: Copying Files	81
Making a Boot Diskette	81
Signing On	82
Copying Files	83
Appendix A: Changing the Standard Configuration	85
Appendix B: Mixing Constellation I and II	89
Appendix C: Adding to a Model 20 Drive	95
Appendix D: Names and Passwords	103

Apple® is a registered trademark of Apple Computer Inc.

Getting Started

This guide shows how to prepare your Corvus mass storage system for use with the MSDOS 2.0 operating system and Corvus Constellation II software. First you will learn how to generate your Constellation II system, then how to copy files to the disk system.

You may want to use your system with a single computer and flat cable or a Corvus multiplexer. If so, before you begin this guide you should finish the Interface Card Installation Guide.

If your system will be part of an OMNINET network, you should finish the OMNINET Network Station Installation Guide before you begin this guide.

How This Guide is Organized

This guide tells you how to prepare your Constellation II system in one of several ways. You will choose one of three chapters to prepare your system, then turn to the last chapter to copy files that will increase your system's capabilities.

How you prepare your system depends on your equipment setup, described in the chapter summaries below. Turn to the chapter that describes your setup for instructions on generating Constellation II.

Go to **Chapter 1, "Generating New Systems,"** if you are preparing a new main system that has never been initialized or if you are daisy-chaining more disks to your current disk system.

Go to **Chapter 2**, “Adding MSDOS 2.0,” if you already have generated your system and want to add MSDOS 2.0. However, if you are adding MSDOS 2.0 to an existing MSDOS 1.1 Constellation II system, skip to Chapter 4, “Copying Files.”

Go to **Chapter 3**, “Upgrading IBM to Constellation II,” if you now have an IBM disk system that isn’t using Constellation II software.

All users will turn to **Chapter 4**, “Copying Files.” This chapter shows how to transfer utilities from the Corvus MSDOS 2.0 utility diskette to disk volumes. Then all users on the network will be able to share a printer or activate their own volumes.

Usage

Throughout this guide, **type** means you should enter two or more characters or keyboard symbols on the computer keyboard. You should type all words, symbols, spaces and punctuation to the right of the word **type** exactly as shown. Do not add or leave out punctuation marks at the end of the statement.

Examples:

Type A:PIP C:=B: *.DOC

Type RUN BSYSGEN

IBM® is a registered trademark of International Business Machines Corp.

Don't type the spaces between type and the first character to its right. When a keytop symbol appears, press the key it refers to. Don't type out each letter of the word in the keytop symbol.

The word **press** throughout this guide means you should enter a single character or symbol on the computer keyboard.

Examples:

Press Y

Press RETURN

Where you see **x.xx** on the screen display, these variables stand for software revision numbers.

To **boot** means to load the operating system into your computer.

To **zero** means to set at the zero point.

This guide uses **initialize** and **generate** interchangeably to mean to prepare a mass storage system for use with an operating system.

Software Required

You will need the following software to initialize your disk system:

- Corvus Utilities (four diskettes):
 - CORMS21
 - CORMS22
 - CORMS23
 - CORMS24
- MSDOS 2.0 (one diskette)

Chapter 1: Generating New Systems

This chapter shows how to generate a main mass storage system or an add-on disk system for use with the MSDOS 2.0 operating system.

Generating a New System

1. Turn on your Corvus equipment.

If you have a disk server, turn it on.

If your disk system is part of a multiplexer network, turn on each multiplexer.

2. Put the CORMS21 diskette into your computer's diskette drive.

If your computer has two diskette drives, put the diskette into drive A.

3. Turn on your computer.

After about a minute, the screen displays:

Enter SYSGEN Password:

4. Enter the system generation password.

Type HAI

The password HAI (Japanese for “yes”) won’t show up on the screen. The screen displays the main menu of the system generation program:

```
System Generation [x.xx]: MSDOS 1.1/2.0
Main Menu
(c) Copyright 1982, 1983 Corvus Systems, Inc.
```

```
-----
I  — Initialize a New Drive
M  — Modify an Existing Drive
D  — Display Drives On-line
```

```
H  — Help
E  — Exit
```

```
-----
Please select an option:
```

5. Select the option to initialize a new drive.

Press I

If you are not using an OMNINET network, skip to the last two paragraphs of this section. If you are using OMNINET, the screen displays:

```
System Generation [x.xx]: MSDOS 1.1/2.0
Initialize a New Drive
```

```
-----
Please select drive to be initialized.
```

```
Server number: [0]
```

6. Select the drive to initialize.

Enter the OMNINET address of your mass storage system. The OMNINET address of some systems will be determined by the attached disk server. After entering the system's OMNINET address,

Press

The screen displays:

Drive number: [1]

If you want to initialize a main disk system for MSDOS 2.0, go to the next section, "Generating a Main System."

If you are adding on a disk and want to initialize it for MSDOS 2.0, go to the section, "Adding an Add-On Disk System."

Generating a Main System

1. Select your drive.

Press

The screen displays:

Selected drive is server X, drive 1.

Enter disk server name: [SERVER 0]

2. Name your disk server.

Choose a name of up to 10 characters, either letters or numbers, with the first character a letter. Choose a name even if you are not using a disk server. Write this name in Appendix D.

Type in the name and press **RETURN** .

The screen displays:

Enter disk server password: [SERVER 0]

3. Create a disk server password.

Choose a password of up to eight characters, either letters or numbers, with the first character a letter. Write this password in Appendix D.

Type in the password and press **RETURN** .

The screen displays:

Enter drive name: [DRIVE1]

4. Name your drive.

Choose a name of up to 10 characters, either letters or characters, with the first character a letter. Write the name in Appendix D.

Type in the name and press .

The screen displays:

Enter drive password: [DRIVE1]

5. Create a drive password.

Choose a password of up to eight characters, either letters or numbers, with the first character a letter. Write the password in Appendix D.

Type in the password and press .

The screen displays:

Do you want to use the
standard configuration [Y/N] ? [Y]

6. Choose your system configuration.

The standard configuration allows up to 512 users, 512 volumes, three computer types, four OMNINET servers, and with the maximum number of users, an average of six volumes per user. This meets the needs of most customers.

If this doesn't meet needs, type N and go to the section in Appendix A, "Changing the Location of System Volumes."

If you plan to add Apple II computers to the system later, don't use the standard configuration. Type N , and go to the section in Appendix A, "Changing the Location of System Volumes."

If you do not plan to add Apple II computers to the system later, and the standard configuration meets your needs, press .

The screen displays:

Blocks 9 through 2546 will be overwritten.

OK to initialize the new drive [Y/N] ? __

7. Initialize your drive.

Type Y

The screen displays:

Initializing CORVUS volume...

```
[  0] .....  
[ 40] .....  
[ 80] .....  
[120] .....
```

146 system table blocks initialized.

CORVUS volume initialized.

The screen then displays:

Opening file BOOT.XXXPC...
11 boot blocks written to CORVUS volume.
.....
XXXSYS volume initialized.
XXXBOOT volume initialized.
XXXBACK volume initialized.
XXXMS volume initialized.
.....

where XXX depends on your computer type: IBM for the IBM Personal Computer, DRB for the DEC Rainbow 100 or ZS1 for the Zenith Z-100. The screen then displays:

Please insert the DOS diskette in drive A.
Press <space> after inserting the diskette. __

IBM Personal Computer™ or PC is a trademark of International Business Machines Corp.
DEC® is a registered trademark of Digital Equipment Corp.
Rainbow 100™ is a trademark of Digital Equipment Corp.
Zenith® is a registered trademark of Zenith Data Systems.
Zenith Z-100™ is a trademark of Zenith Data Systems.

8. Put the MSDOS 2.0 diskette into the diskette drive.

Insert the diskette supplied by your computer manufacturer. If your computer has two diskette drives, put the diskette that IBM supplied into drive A.

Press **SPACE**

The screen displays:

DOS 2.0 installed

If you have a DOS 1.1 diskette,
please insert it and press <space>.

If you do not have a DOS 1.1 diskette,
press <esc>.

Press **ESC**

The screen displays:

Please insert the CORMS21 diskette in drive A.
Press <space> after inserting the diskette.

9. Put the CORMS21 diskette into the diskette drive.

If your computer has two diskette drives, put the diskette into drive A.

Press

The screen displays:

```
Loading program UPDATE ...  
Initializing ...
```

The screen then displays:

```
Copying contents of floppy .....  
Please insert the CORMS22: diskette in drive A.  
Press <space> after inserting the diskette. _
```

10. Put the CORMS22 diskette into the diskette drive.

If your computer has two diskette drives, put the diskette into drive A.

Press

The screen displays:

```
Copying contents of CORMS22: .....  
Please insert the CORMS23: diskette in drive A.  
Press <space> after inserting the diskette. _
```

11. Put the CORMS23 diskette into the diskette drive.

If your computer has two diskette drives, put the diskette into drive A.

Press SPACE

The screen displays:

Copying contents of CORMS23:

Update complete.
Please Reboot.

You now have initialized your main disk system. Go to Chapter 4, "Copying Files."

Adding an Add-On Disk System

Use this section if you want to generate a system on a disk system daisy-chained to another disk system.

If you are adding a disk system to a chain of drives that includes a Model 20 disk system, you must check the virtual drive offset table. Refer to Appendix C, "Adding to a Model 20 Drive."

1. Enter the number in the chain of the new disk system.

Remember that the primary disk system counts as a disk system in the chain. Type in the number of the new disk system and press **[RETURN]** .

The screen display is similar to:

Selected drive is server X, drive X.

Disk server name: SERVER0
Disk server password: SERVER0
Enter drive name: [DRIVE2]

2. Name the drive.

Choose a name of up to 10 characters, either letters or numbers, with the first character a letter. Write this name in Appendix D.

Type in the name and press **[RETURN]** .

The screen displays:

Enter drive password: [DRIVE2]

3. Create a drive password.

Choose a password of up to eight characters, either letters or numbers, with the first character a letter. Write the password in Appendix D.

Type in the password and press .

The screen displays:

Do you want to use the
standard configuration [Y/N]? [Y]

4. Choose your disk system configuration.

The standard configuration allows up to 512 users, 512 volumes, three computer types, four OMNINET servers, and with the maximum number of users, an average of six volumes per user. This meets the needs of most customers.

If this doesn't meet your needs, type N and go to the section in Appendix A, "Changing the Location of the System Volumes."

If you plan to add Apple II computers to the disk system later, don't use the standard configuration. Type N and go to the section in Appendix A, "Changing the Location of the System Volumes."

If you don't plan to add Apple II computers to the disk system later and the standard configuration meets your needs, press .

The screen displays:

Blocks 9 through 208 will be overwritten.

OK to initialize the new drive (Y/N) ? __

5. Initialize the new drive.

Type Y

The screen displays:

Initializing CORVUS volume...

```
[  0] .....  
[ 40] .....  
[ 80] .....  
[120] .....
```

146 system table blocks initialized.

CORVUS volume initialized.

The screen then displays:

..

Add-on drive initialized.

Please insert the CORMS21 diskette in drive A.
Press <space> after inserting the diskette. ___

Press

The screen displays the system generation program main menu.

You now have initialized your add-on disk system. Go to the System Manager's Guide.

Chapter 2: Adding MSDOS 2.0

This chapter explains how to modify your main system to include MSDOS 2.0. Follow the steps below to add MSDOS 2.0 to the Constellation I Apple II disk system or to the Constellation II system.

If you are adding MSDOS 2.0 onto an existing MSDOS 1.1 Constellation II system, skip to Chapter 4, "Copying Files."

This chapter will explain how to find a free area for the MSDOS 2.0 system volumes on either system. Steps will show you how to create the system volumes on your system.

This chapter assumes you have initialized your system. You should be able to use Constellation I software with an Apple II computer under Apple Pascal, or use another operating system or computer type with Constellation II software.

If you have Constellation I software and an Apple II computer, go to the section below, "Space for Constellation II."

If you have Constellation II software and another type computer, skip to the section, "Space for MSDOS 2.0."

Space for Constellation II

This section tells you how to modify your existing disk system to include Constellation II software and MSDOS 2.0. It is assumed you have initialized your disk system with an Apple II computer under Apple Pascal and Constellation I software.

You must have a free area on the disk system if you want to add Constellation II and MSDOS 2.0 system volumes.

1. Turn on your Corvus disk system.

If you have a disk server, turn it on.

If your disk system is part of a multiplexer network, turn on each multiplexer.

2. At an Apple II, log on as the system manager.

Type SMGR

The screen displays the Pascal command line and the Pascal welcome:

```
COMMAND: E[EDIT, R[UN, F[ILE, C[OMP, LIN...
```

```
WELCOME SYS, TO APPLE II PASCAL 1.1  
BASED ON UCSD PASCAL II.1  
CURRENT DATE IS 14-AUG-80
```

```
(C) APPLE COMPUTER INC. 1979, 1980  
(C) U.C. REGENTS 1979
```

3. Execute the file.

Press X

The screen displays:

EXECUTE WHAT FILE? __

4. Select the program.

Type VMGR

The screen displays the volume manager command line:

SYSTEM MANAGER: Q L{ST N{EW R{MVE W{PROT...

5. Select list.

Press L

The screen display is similar to:

CORVUS VOLUME DIRECTORY				
WP	NAME	LENGTH	ADDR	DRV
*	SYS	1024	8	1
*	PRIVATE	1024	1032	1
	JOHN	2048	2056	1
	<UNUSED>	1536	4104	1
*	STEVE	1024	5640	1
	<UNUSED>	4556	6664	1

6. Choose your volume configuration.

You can vary the size of Constellation II system volumes according to your needs. The standard configuration of volumes allows up to 512 users, 512 volumes, three Constellation II computer types, four OMNINET servers, and, with the maximum number of users, an average of six volumes per user. This meets the needs of most customers.

If the standard configuration meets your needs, the Constellation II system volumes will require 2544 blocks.

If the standard configuration doesn't meet your needs, go to the section in Appendix A, "Changing the Size of the CORVUS Volume." When you have determined the desired size of the CORVUS volume, add 2338 to that number. Now round this number up to the nearest multiple of eight. This is the necessary size of the Constellation II system volumes.

If the largest free area on your disk system is larger than the system volumes, write down the address of this unused space. If your disk systems are chained together, the unused space must be on the first disk system in the chain.

If the largest free area on your disk system is smaller than the system volumes, you must create a larger area by moving or deleting existing volumes. See your Corvus Network Software guide. Once you have freed a large enough area, write down the address of this unused space.

7. Create an Apple II volume for the Constellation II system volumes.

Press N

The screen displays:

NEW VOLUME: ENTER VOLUME NAME:

8. Enter the volume name.

Type CORVUS

The screen displays:

ENTER LENGTH (BLOCKS): [1024]

9. Enter the desired length of the system volumes.

Type in the desired size and press **RETURN** .

The screen display is similar to:

```
ENTER CORVUS DRIVE # (1..1): [1]
```

10. Enter the number of the Corvus drive.

If you have disk systems chained together, the unused space must be on the first disk system in the chain.

Type the drive number and press **RETURN** .

The screen display is similar to:

```
ENTER ADDRESS (BLOCKS): [1032]
```

11. Enter the address for the Constellation II system volumes.

Type in the address for the volumes and press **RETURN** .

The cursor returns to the system manager command line.

12. Exit VMGR.

Press Q

The screen displays the Pascal command line.

13. Turn off your Apple II computer.

You have added the volume.

Skip to "Adding MSDOS 2.0 System Volumes to Constellation II."

Space for MSDOS 2.0

You must have an area on the mass storage system for MSDOS 2.0 system volumes, if you want to mix MSDOS 2.0 on a Corvus system with Constellation II software. Follow the steps below to find a free area.

1. Turn on your Corvus disk system.

If you have a disk server, turn it on.

If your disk system is part of a multiplexer network, turn on each multiplexer.

2. Log on as system manager.

Sign on at a computer that already works with the system.

If the Corvus management utility doesn't display automatically, select the Constellation II utility. The screen displays the Corvus management utility main menu:

```
CORVUS MANAGEMENT UTILITY DS
Version [x.xx]                Drive
-----
D - Drive Management
B - Back Utilities
M - Maintenance Utilities
I - Initialize Drive

L - List Drives
H - Help
E - Exit
-----
Please select an option:
```

3. Select the drive management option.

Press D

The screen displays the drive management main menu:

CORVUS UTILITY [x.xx]	DS
Drive management	Drive

U — User/Device Manager
V — Volume Manager
A — Access Manager

B — Boot Manager

S — Select Drive
L — List Drives
H — Help
E — Exit

Please select an option: __

4. Select the volume manager option.

Press V

The screen requests the names and passwords of the server and drive. You must modify each main system to include MSDOS 2.0.

Select one of your main systems. For the system, type in the names you wrote in the back of the Disk System Initialization or System Generation Guide for the system.

If you can't find your names, press the **ESC** key. This returns you to the drive management menu. Contact a Corvus Service representative for assistance.

Once you enter the correct names and passwords, the screen displays the volume manager main menu:

Volume Manager [x.xx]	DS SERVER
Main menu	Drive DRIVE1

A -- Add a volume
R -- Remove a volume
C -- Change volume attributes
L -- List volumes
F -- Free space list

H -- Help
E -- Exit

Please select an option: __

5. Select the list volumes option.

Press L

The screen display is similar to:

Volume Manager [x.xx]	DS SERVER			
List Volumes	Drive DRIVE1			

Volume	Address	Length	RW	Type
1. CORVUS	9	200	x	UCSD/Pascal
2. CCSYS	209	2048	x	CCOS
3. CCUTIL	2257	2048	x	CCOS
<unused>	4305	1024		
4. STEVE	5329	1024	x	UCSD/Pascal
<unused>	6353	4867		

Press <space> to continue __

6. Check the names of your system volumes.

The Constellation II and MSDOS 2.0 system volumes have preassigned names. These names depend on the type of computer you are using.

Existing volumes cannot have the same names as the Constellation II or MSDOS 2.0 system volumes.

If any of the existing volumes are called XXXBOOT, XXXBACK, XXXMS or XXXSYS, press **[ESC]** . Here XXX depends on your computer type: IBM for IBM Personal Computer, DRB for DEC Rainbow 100 and ZS1 for Zenith Z-100. Then select the change volume attributes option of the volume manager to change the names of the existing volumes.

If none of the existing volumes have the same name as any of the system volumes, press **[SPACE]** .

The screen displays:

Volume Manager [x.xx] List Volumes	DS SERVER Drive DRIVE1	

Volume	Address Length	RW Type
Total free blocks on drive:		5891
Total free areas on drive:		2
Largest free space (blocks):		4867
Total volumes on drive:		4
Total blocks allocated on drive:		5320
Largest volume size (blocks):		2048

Press <space> to continue, or press F to list to a file. __		

7. Find free space on the mass storage device.

The system volumes require 2338 blocks.

If the largest free space on the system is 2338 blocks or greater, write down the address of this unused area.

If the largest free area on the system is less than 2338 blocks, you will have to create an area by moving or deleting existing volumes. (See your System Manager's Guide.)

Once you have freed an area of at least 2338 blocks, write down the address of this free area.

You will need the address in step 4 of this chapter's subsection, "Adding MSDOS 2.0 System Volumes to Constellation II."

8. Continue the program.

Press `SPACE`

The screen displays the volume manager main menu.

9. Enter the user manager program.

Press E

You return to the drive management main menu.

Press U

The screen displays the user manager main menu:

```
User Manager [x.xx]                DS SERVER
Main menu                          Drive DRIVE1
(c) Copyright 1982, 1983 Corvus Systems, Inc.
-----
A -- Add a user/device
R -- Remove a user/device
C -- Change user attributes
L -- List users/devices

H -- Help
E -- Exit
-----
Please select an option: ___
```

10. Select the list users/devices option.

Press L

The screen display is similar to:

User Manager [x.xx] List users/devices		DS SERVER Drive DRIVE1	

User name	Password	Home DS	Boot type
1. SMGR	HAI	SERVER	UCSD/Pascal
2. STEVE	SMITH	SERVER	UCSD/Pascal
2 users listed.			
Press <space> to continue _			

11. Check the system user names.

The system generation program will create four users: XXXGR, XXXBACKUP, XXXUSER and TEMP, where XXX depends on your computer type. The prefix is IBM for the IBM PC, DRB for the DEC Rainbow 100 and ZS1 for the Zenith Z-100.

If any of these user names already exist, create new user accounts with identical attributes and remove the user names that the system generation program will create.

If none of the existing user names match any of the names that the system generation program will create, press **[ESC]** .

The screen displays the user manager main menu.

12. Exit the user manager menu.

Press E

Depending on your computer, the screen either exits the Corvus management utility or displays the Corvus management utility main menu.

13. Turn off the computer.

Go on to the next section.

Creating System Volumes

1. Turn on your Corvus mass storage systems.

If you have a disk server, turn it on.

If your disk system is part of a multiplexer network, turn on each multiplexer.

2. Put the CORMS21 diskette into the diskette drive.

If your computer has two diskette drives, put the diskette into drive A.

3. Turn on your computer.

After about one minute, the screen displays:

Enter SYSGEN Password: ____

4. Enter your password.

Type HAI

The password won't show up on the screen. The screen displays the main menu for the system generation program:

System Generation [x.xx]: MSDOS 1.1/2.0
Main Menu
(c) Copyright 1982, 1983 Corvus Systems, Inc.

I — Initialize a New Drive
M — Modify an Existing Drive
D — Display Drives On-line

H — Help
E — Exit

Please select an option: ____

5. Select the option to modify an existing drive.

Press M

The screen displays:

System Generation [x.xx]: MSDOS 1.1/2.0
Modify an Existing Drive

M — Mix XXX with Other Computers
using Constellation II

A — Add XXX to Apple II using
Constellation I

U — Upgrade Existing XXX Drive to
Constellation II

I — Install a New Copy of an
Operating System

E — Exit

Please select an option: __

Here XXX depends on your computer type:
IBM for IBM PC, DRB for DEC Rainbow 100
and ZS1 for Zenith Z-100.

If you are adding Constellation II and
MSDOS 2.0 to an existing Apple II
Constellation I system, go to the next section,
“Adding System Volumes to Apple II.”

If you are adding MSDOS 2.0 to an existing
Constellation II system, skip to the section,
“Adding MSDOS 2.0 System Volumes to
Constellation II.”

Adding System Volumes to Apple II

1. Select the option to add volumes to Apple II using Constellation I.

Press A

If you're not using an OMNINET network,
skip to step 3 to name your drive.

If you are using OMNINET, the screen displays:

```
System Generation [x.xx] MSDOS 1.1/2.0  
Add to Constellation I
```

```
-----  
Please select drive to be modified.
```

```
Server number: [0]
```

2. Select the server to modify.

Press

The screen displays:

Drive number: [1]

3. Select the drive number.

Press

The screen displays:

Selected drive is server 0, drive 1.

Enter disk server name: [SERVER0]

4. Name the disk server.

Choose a name of up to 10 characters, either letters or numbers, with the first character a letter. Choose a name even if you are not using a disk server. Write this name in Appendix D.

Type in the disk server name and press .

The screen displays:

Enter disk server password: [SERVER0]

5. Choose a disk server password.

Choose a password of up to eight characters, either letters or numbers, with the first character a letter. Write this password in Appendix D.

Type the password and press **RETURN** .

The screen displays:

Enter drive name: [DRIVE1]

6. Name the drive.

Choose a name of up to 10 characters, either letters or numbers, with the first character a letter. Write the drive name in Appendix D.

Type in the name and press **RETURN** .

The screen displays:

Enter drive password: [DRIVE1]

7. Choose a drive password.

Choose a password of up to eight characters, either letters or numbers, with the first character a letter. Write the password in Appendix D.

Type in the password and press **RETURN** .

The screen displays:

Please enter starting disk
address of system volumes:

8. Choose your system volume address.

Type the address of the volume you created with the Apple II and press **RETURN** .

The screen displays:

Please enter size
of CORVUS volume: [200]

9. Set your volume size.

If you chose not to create the standard size system volumes when you created the free space for these volumes, type your size for the CORVUS volume and press .

If you accepted the standard configuration and created a volume of 2544 blocks with the Apple II, press .

The screen display is similar to:

Blocks 1032 through 3569 will be overwritten.

OK to modify the drive (Y/N) ?

10. Choose to modify your drive.

Type Y

The screen displays:

Initializing CORVUS volume ...

```
[  0] .....  
[ 40] .....  
[ 80] .....  
[120] .....
```

146 system table blocks initialized.

CORVUS volume initialized.

Go to the section "Initializing Your System Volumes."

Adding MSDOS 2.0 System Volumes to Constellation II

1. Select the option to mix volumes with other computers using Constellation II.

Press M

If you're not using an OMNINET network,
skip to step 3.

If you are using OMNINET, the screen displays:

```
System Generation [x.xx] MSDOS 1.1/2.0  
Mix with Constellation II
```

Please select drive to be modified.

Server number: [0]

2. Select the drive to modify.

Enter the OMNINET address of your mass
storage system. The address of the attached
disk server will determine the OMNINET
address of some systems. After entering the
disk server's OMNINET address, press

RETURN .

The screen displays:

```
Drive number: [1]
```

3. Select the drive number.

Press

The screen displays:

Selected drive is server X, drive 1.

Please enter starting disk
address of system volumes:

4. Select the system volume address.

Type the address you wrote down in step 7 of the "Space for MSDOS 2.0," then press

.

The screen display is similar to:

Blocks 6353 through 8690 will be overwritten.

OK to modify the drive (Y/N) ? __

5. Choose to modify the drive.

Type Y

Go to the next section, "Initializing Your System Volumes."

Initializing Your System Volumes

The computer continues to generate the system.

The screen displays:

```
Opening file BOOT.XXXPC . . .
11 boot blocks written to CDRVUS volume.
.....
```

```
XXXSYS volume initialized.
XXXBOOT volume initialized
XXXBACK volume initialized.
XXXMS volume initialized.
.....
```

Here XXX depends on your computer type:
IBM for the IBM PC, DRB for DEC Rainbow
100 and ZS1 for Zenith Z-100

The screen then displays:

```
Please insert the DOS diskette in drive A.
Press <space> after inserting the diskette. _
```

1. Put the MSDOS 2.0 diskette into your diskette drive.

Insert the diskette supplied by your computer manufacturer. If your computer has two diskette drives, put the diskette that IBM supplied into drive A.

Press **SPACE**

The screen displays:

DOS 2.0 installed.

If you have a DOS 1.1 diskette,
please insert it and press <space>.

If you do not have a DOS 1.1 diskette,
press <esc>.

2. Continue generating the MSDOS 2.0 system.

Press **ESC**

The screen displays:

Please insert the CORMS21 diskette in drive A.
Press <space> after inserting the diskette. __

3. Put the CORMS21 diskette into the diskette drive.

If your computer has two diskette drives, put the diskette into drive A.

Press **SPACE**

The screen displays:

```
Loading program UPDATE ...
Initializing ...
```

The screen then displays:

```
Copying contents of floppy .....
Please insert the CORMS22: diskette in drive A.
Press <space> after inserting the diskette. _
```

4. Put the CORMS22 diskette into the diskette drive.

If your computer has two diskette drives, put the diskette into drive A.

Press **SPACE**

The screen displays:

```
Copying contents of CORMS22: .....
Please insert the CORMS23: diskette in drive A.
Press <space> after inserting the diskette. _
```

5. Put the CORMS23 diskette into the diskette drive.

If your computer has two diskette drives, put the diskette into drive A.

Press

The screen displays:

Copying contents of CORMS23:

Update complete.
Please Reboot. ___

Where to go from here:

- If you are using an OMNINET network with several main systems, repeat this chapter for each primary system on your network.
- If you have added MSDOS 2.0 to all of your main systems, go to Chapter 4, "Copying Files."

Chapter 3: Upgrading IBM to Constellation II

This chapter explains how to upgrade an existing IBM disk system to Constellation II software. To protect your system, you should back it up before following the steps below.

Upgrading your disk system consists of five separate tasks.

First you locate all of the volumes on the Corvus disk system. Then you create a free area for the Constellation II system volumes.

Once you've made a free area, you can create the IBM system volumes. You then update the Constellation II volume table so it will acknowledge the existing IBM volumes.

Your last task is to grant a user access to a volume so that the MSDOS 2.0 utility files can be transferred to the disk system.

Locating Volumes

You must know the location of all volumes on the Corvus disk system to upgrade an existing IBM disk system to Constellation II software. Follow the steps below to determine the location of the volumes.

1. Turn on your Corvus disk system.

If you have a disk server, turn it on.

If your disk system is part of a multiplexer network, turn on each multiplexer.

2. Insert the boot diskette.

Put the diskette that you use to boot the IBM Personal Computer to the Corvus disk system in the IBM diskette drive.

If your computer has two diskette drives, put the diskette in drive A.

3. Turn on your IBM computer.

The screen displays:

```
Current date is Tue 1-01-1980
Enter new date: __
```

Press

The screen displays:

```
Current time is 0:01:31.12
Enter new time: __
```

Press

The screen displays:

```
The IBM Personal Computer DOS
Version 1.10 (C) Copyright IBM Corp 1981, 1982
```

```
A> __
```

4. Transfer the EDLIN.COM file.

Put the IBM DOS 1.1 diskette supplied by IBM in the IBM diskette drive.

If your computer has two diskette drives, put the diskette in drive A.

Type COPY A:EDLIN.COM C:

The screen displays:

```
A> _                               1 File (s) copied
```

Put the diskette that you used to boot the IBM Personal Computer to the Corvus disk system back into the IBM diskette drive.

If your computer has two diskette drives, put the diskette in drive A.

5. Identify the initialization file.

When you initialized your disk system with the IBM Personal Computer, you used the install program to put a Corvus file into the IBM operating system. The Corvus install program used the file to find and zero all volume directories.

Use the table below to identify the file that you used to initialize your disk system. The particular file depends on the size of your disk system and the number of volumes on it. If you modified a file, remember the name of the modified file.

	Model 6	Model 11	Model 20
2 or 3 Volumes	CORV6.DSK	CORV10.DSK	CORV20.DSK
7 Volumes	CORV6X.DSK	CORV10X.DSK	CORV20X.DSK

If you later installed a Corvus file that considered a Corvus volume to be drive A (e.g., CORV6A.DSK), it is not the file you are looking for. The file you want is the one used to zero the directories on the Corvus disk system (e.g., CORV6.DSK).

6. Enter the editing program.

Type C:EDLIN A:

7. Open the file identified in step 5.

Type the name of the file you identified in step 5.

Press **RETURN**

If the diskette that you use to boot the IBM PC to the Corvus disk system is write-protected, the screen displays:

```
Write protect error writing drive A.  
Abort, Retry, Ignore? __
```

Press I

The screen displays:

```
End of input file  
* __
```

Type L **RETURN**

The screen display is similar to:

7: COMMENT							number of		
8: COMMENT	volume					cistr	reservd	dir	
9: COMMENT	name	unit	acc	drv	address	length	size	sectors	ent
10:									
11: PIPES					164	400			
12: VOLUME	floppy	A							
13: VOLUME	floppy	B							
14: VOLUME	vol1	C	write	1	564	1522	16	4	256
15: VOLUME	vol2	D	write	1	2086	1522	16	4	256
16: VOLUME	vol3	E	write	1	3608	1522	16	4	256
17: VOLUME	vol4	F	write	1	5130	1522	16	4	256
18: VOLUME	vol5	G	write	1	6652	1522	16	4	256
19: VOLUME	vol6	H	write	1	8174	1522	16	4	256
20: VOLUME	vol7	I	write	1	9696	1522	16	4	256

8. Create a list of volume names, addresses and lengths.

In the display above, the Corvus disk system volumes have names starting with "vol." Write down each Corvus volume name, its address and its length. Be accurate. Create a list like the one below:

CORVUS VOLUME DIRECTORY		
Volume Name	Address	Length
vol1	564	1522
vol2	2086	1522
vol3	3608	1522
vol4	5130	1522
vol5	6652	1522
vol6	8174	1522
vol7	9696	1522

If the cluster size, reserved sectors and directory entries do not equal 16, 4 and 256 respectively, also write down their values. If the number of reserved sectors on a volume is less than 4, you won't be able to upgrade that volume to Constellation II.

9. Exit the editing program.

Type Q

The screen displays:

Abort edit (Y/N) ? _

Press Y

The screen displays:

A> _

Creating a Free Area

You must free an area on the disk system for Constellation II system volumes if you want to upgrade your existing IBM disk system to Constellation II software. Follow the steps below to create a free area.

1. Determine the desired size of the Constellation II system volumes.

You can vary the size of the Constellation II system volumes according to your needs. The standard configuration allows up to 512 users, 512 volumes, three Constellation II computer types, four OMNINET servers, and, with the maximum number of users, an average of six volumes accessible by each user.

If the standard configuration meets your needs, the system volumes will require 1514 blocks.

If the standard configuration doesn't meet your needs, go to the section in Appendix A "Changing the Size of the CORVUS Volume." When you have determined the desired size of the CORVUS volume, add 1314 to that number to calculate the size of the system volumes.

2. Choose a volume where you can place the system volumes.

Consult the Corvus volume directory you made in the previous section. Choose a volume large enough to hold the system volumes. Note your choice in the list of volumes you made.

3. Clear the chosen volume.

During the upgrade to Constellation II, the Constellation II system volumes will overwrite the contents of the chosen volume. Therefore, transfer all information in the volume to other Corvus volumes or diskettes.

Creating the System Volumes

1. Put the CORMS21 diskette in the diskette drive.

If your computer has two diskette drives, put the diskette in drive A.

2. Reboot your IBM computer.

Press **CTRL** and **ALT** with one hand and press **DEL** with the other hand.

After about a minute, the screen displays:

Enter SYSGEN Password: ___

Type HAI **RETURN**

The screen displays the system generation program main menu:

System Generation [x.xx]: MSDOS 1.1/2.0
Main Menu
(c) Copyright 1982, 1983 Corvus Systems, Inc.

I — Initialize a New Drive
M — Modify an Existing Drive
D — Display Drives On-line

H — Help
E — Exit

Please select an option: ___

3. Select the drive modification option.

Press M

The screen displays:

System Generation [x.xx]: MSDOS 1.1/2.0
Modify an Existing Drive

M — Mix IBM with Other Computers
using Constellation II

A — Add IBM to Apple II using
Constellation I

U — Upgrade Existing IBM Drive to
Constellation II

I — Install a New Copy of an
Operating System

E — Exit

Please select an option: __

4. Select the option to upgrade existing drive.

Press U

If you are not using an OMNINET network, skip to step 5.

If you are using OMNINET, the screen displays:

System Generation [x.xx] MSDOS 1.1/2.0

Add to Constellation

Please select drive to be modified.

Server number: [0]

Press

5. Enter the drive information.

The screen displays:

Drive number: [1]

Press

The screen displays:

Selected drive is server 0, drive 1.

Enter disk server name: [SERVER]

6. Enter the disk server name.

Choose a name of up to 10 characters, either letters or numbers, but the first must be a letter. Choose a name even if you are not using a disk server. Write this name in the space provided in Appendix D.

Type in this name and press **RETURN** .

The screen displays:

Enter disk server password: [SERVER]

7. Enter the disk server password.

Choose a password of up to eight characters, either letters or numbers, but the first must be a letter. Write this password in Appendix D.

Type in the password and press **RETURN** .

The screen displays:

Enter drive name: [DRIVE1]

8. Enter the drive name.

Choose a name of up to 10 characters, either letters or numbers, but the first must be a letter. Write the name in Appendix D.

Type in the name and press **RETURN** .

The screen displays:

Enter drive password: [DRIVE1]

9. Enter the drive password.

Choose a password of up to eight characters, either letters or numbers, but the first must be a letter. Write the password in Appendix D.

Type in the password and press **RETURN** .

The screen displays:

Please enter starting disk
address of system volumes:

10. Enter the starting disk address.

Type the address of the volume which you freed for the IBM system volumes and press

.

The screen displays:

Please enter size
of CORVUS volume: [200]

11. Enter the size of the Corvus system volume.

One of the system volumes is named "CORVUS."

If the standard configuration didn't meet your needs when you created the free area, you went to Appendix A and determined a size for the CORVUS volume.

Type in this size, and press .
(Remember that the free area must be larger than the size of the CORVUS volume plus 1314).

If you accepted the standard configuration and have a free area of at least 1514 blocks,

Press .

The screen display is similar to:

Blocks 9696 through 11209 will be overwritten.

OK to modify the drive [Y/N] ? _

Type Y RETURN

The screen displays:

Initializing CORVUS volume ...

```
[  0].....  
[ 40].....  
[ 80].....  
[120].....
```

146 system table blocks initialized.

CORVUS volume initialized.

The screen then displays:

Opening file BOOT.IBMPC ...
11 boot blocks written to CORVUS volume.
.....

IBMSYS volume initialized.
IBMBOOT volume initialized.
IBMBACK volume initialized.
.....

The screen then displays:

Please insert the DOS diskette in drive A.
Press <space> after inserting the diskette. ____

12. Insert the IBM DOS 2.0 diskette.

Put the IBM DOS 2.0 diskette supplied by IBM into the IBM diskette drive.

If your computer has two diskette drives, put the diskette in drive A.

Press **[SPACE]**

The screen displays:

DOS 2.0 installed.

If you have a DOS 1.1 diskette,
please insert it and press <space>.

If you do not have a DOS 1.1 diskette,
press <ESC>.

Press **[ESC]**

The screen displays:

Please insert the CORMS21 diskette in drive A.
Press <space> after inserting the diskette. __

13. Insert the CORMS21 diskette.

Put the CORMS21 diskette in the IBM diskette drive.

If your computer has two diskette drives, put the diskette in drive A.

Press

The screen displays:

```
Loading program UPDATE...
Initializing...
```

The screen then displays:

```
Copying contents of floppy.....
Please insert the CORMS22: diskette in drive A.
Press <space> after inserting the diskette. _
```

14. Insert the CORMS22 diskette.

Put the CORMS22 diskette in the IBM diskette drive.

If your computer has two diskette drives, put the diskette in drive A.

Press

The screen displays:

```
Copying contents of CORMS22:.....
Please insert the CORMS23: diskette in drive A.
Press <space> after inserting the diskette. _
```

15. Insert the CORMS23 diskette.

Put the CORMS23 diskette in the IBM diskette drive.

If your computer has two diskette drives, put the diskette in drive A.

Press **SPACE**

The screen displays:

Copying contents of CORMS23:

Update complete.
Please Reboot. __

16. Reboot your computer.

Press **CTRL** and **ALT** with one hand and press **DEL** with the other hand.

The screen displays:

Boot from CORVUS or FLOPPY (C/F) ? __

Press C

The screen displays the Constellation II log-on message.

Updating the Volume Table

Although the system volumes have been created, the Constellation II tables don't acknowledge the drive's other volumes. To use the existing volumes, you must update the volume table without zeroing the volume directories. This section tells you how to do this.

1. Sign on to the system.

From the Constellation II log on message,

Type IBMGR

The screen displays:

Please enter your password:

Type HAI

After about a minute, the screen displays the Corvus management utility main menu:

CORVUS MANAGEMENT UTILITY DS
Version [x.xx] Drive
(c) Copyright 1982, 1983 Corvus Systems, Inc.

D — Drive Management
B — Backup Utilities
M — Maintenance Utilities
I — Initialize Drive
C — Configure system

L — List Drives
H — Help

Please select an option:

2. Select the drive management option.

Press D

The screen displays the drive management main menu:

```
CORVUS UTILITY [x.xx]                DS
Drive Management                      Drive
(c) Copyright 1982, 1983 Corvus Systems, Inc.
-----
U — User/Device Manager
V — Volume Manager
A — Access Manager

B — Boot Manager

S — Select Drive
L — List Drives
E — Exit
-----
Please select an option: ____
```

3. Select the volume manager option.

Press V

The screen displays:

```
CORVUS UTILITY [x.xx]                DS
Select Drive                          Drive
-----
Enter drive information:

      Server name: SERVER
      Drive name:  DRIVE1
      Drive password:
```

Type the password to the disk system.

You chose the password when modifying the disk system. Press .

The screen displays the volume manager main menu:

```
Volume Manager [x.xx]                DS SERVER
Main Menu                            Drive DRIVE1
(c) Copyright 1982, 1983 Corvus Systems, Inc.
-----
A — Add a volume
R — Remove a volume
C — Change volume attributes
L — List volumes
X — Extended list
F — Free space list

H — Help
E — Exit
-----
Please select an option: __
```

4. Select the option to add a volume.

Press A

The screen displays:

Volume Manager [x.xx]	DS SERVER
Add a Volume	Drive DRIVE1

Enter attributes of new volume:

Name:

5. Enter the name, size, address and type of volume.

Choose a volume name of up to 10 characters, either letters or numbers, but the first must be a letter. Name one of the volumes on the drive IBMMS.

Type in a name for the volume and press **RETURN** .

The screen displays:

Size (blocks) :

Look at the Corvus volume directory created in the section "Locating Volumes."

Choose a volume to match the Constellation II volume name. Write down the length of that volume.

Type the length of the volume and press .

The screen displays:

Location: [9]

Look at the Corvus volume directory again and find the volume's address.

Type the address and press .

The screen displays:

Volume type: [MSDOS]

Press

The next question that the screen displays is very important:

Do you want to initialize the volume (Y/N) ? [Y]

6. Do not initialize the volume.

Type N

The screen displays:

Do you want to write the volume header [Y/N] ? [Y]

7. Write the Constellation II volume header.

Press

The screen displays:

Enter MSDOS attributes:
Cluster size (blocks): [4]

8. Enter the cluster size for the volume.

Type the cluster size for the volume.

Unless you noted otherwise in your Corvus volume directory,

Type 16

The screen displays:

Reserved sectors: [0]

9. Check the number of reserved sectors.

The Constellation II volume header resides in the existing volume's four reserved sectors. If your Corvus volume directory notes that the number of reserved sectors of the volume is greater than four, subtract four from the larger number and enter the result as the number of reserved sectors.

If you did not note a change in the number of reserved sectors in your Corvus volume directory,

Press

The screen displays:

Directory entries: [256]

10. Enter the number of directory entries.

Type the number of directory entries for the volume. Unless you noted otherwise in your Corvus volume directory,

Press

The screen displays:

OK to add volume (Y/N) ? [Y]

11. Confirm the volume's addition.

Press

The next question the screen displays is very important:

Header written.
Do you want to zero the directory (Y/N) ? [N]

12. Do not zero the volume's directory.

Type N

The screen displays:

Volume added.
Access added for user 1.

Press <space> to continue, or
press A to add another volume.

13. Enter more volumes or exit to the drive management main menu.

If you have more Corvus volumes to list in the Constellation II volume table, return to step 4 of this section. Remember to call one of the volumes IBMMS.

If all volumes are now in the Constellation II volume table,

Press

The screen displays the volume manager main menu.

14. Exit the volume manager.

Press E

The screen displays the drive management main menu.

Granting Access for File Transfer

After completing this section, you will transfer files to the Corvus disk system. Before you can transfer those files, you must grant a user access to the volume that will hold the files. This section tells you how to do this.

1. Enter the access manager program.

From the drive management main menu,

Press A

The screen displays:

Access Manager [x.xx]	User
Next user	DS SERVER
	Drive DRIVE1

Enter user name: __

Type IBMUSER

The screen displays the access manager main menu:

Access Manager [x.xx]	User IBMUSER
Main menu	DS SERVER
	Drive DRIVE1

(c) Copyright 1982, 1983 Corvus Systems, Inc.

G — Grant volume access
R — Remove volume access
C — Change volume access

L — List volumes accessible

N — Next user
H — Help
E — Exit

Please select an option: __

2. Choose the grant volume access option.

Press G

The screen displays:

Access manager [x.xx] Grant Volume Access	User IBMUSER DS SERVER Drive DRIVE1
--	---

Please enter:

Volume name: __

3. Enter the volume name, access and mount status and unit.

Type IBMMS

The screen displays:

Access (RO/RW): [RO]

Type RW

The screen displays:

Mount Status (M/U) : [MOUNTED]

Press

The screen displays:

Mount unit: [B]
Select from: A thru J, 1 thru 10, *

Type 1

The screen displays:

OK to grant volume access (Y/N) ? [Y]

4. Grant volume access.

Press

The screen displays:

Access granted.

Press <space> to continue, or
press G to grant another volume. __

5. Exit the access manager and return to the management utility main menu.

Press **SPACE**

The screen displays the access manager main menu.

Press **E**

The screen displays the drive management main menu.

Press **E**

The screen displays the Corvus management utility main menu.

You now have upgraded your existing IBM disk system to Constellation II.

You are ready to transfer utility files to the disk system. Go to Chapter 4, "Copying Files."

Chapter 4: Copying Files

This chapter shows how to copy MSDOS 2.0 files that Corvus has supplied. You will copy the utility files to disk volumes. Once the files are on disk volumes, all system users will be able to share a printer or activate their own volumes.

Before you can copy the utility files, you first must make a Corvus MSDOS 2.0 boot diskette. Follow the steps below to make a boot diskette, sign on to your system, then copy files.

Making a Boot Diskette

You will find instructions for formatting, disk copy, file copy and drive addition in your MSDOS 2.0 manual.

- 1.** Insert the MSDOS 2.0 boot diskette and reboot your computer.
- 2.** Format a diskette.
- 3.** Copy the MSDOS 2.0 system diskette to the new system diskette.
- 4.** Copy files `CORDRV.BIN` and `CONFIG.SYS` to the copy of the MSDOS 2.0 diskette.

If the system diskette already contains the `CONFIG.SYS` file, add the driver `CORDRV.BIN` to the existing `CONFIG.SYS` file.

Signing On

1. Place the Corvus MSDOS 2.0 boot diskette in diskette drive A.
2. Reboot your computer.

The screen displays the Constellation II sign-on message:

```
  * *  
   * * CORVUS SYSTEMS  
  * *  
    CONSTELLATION II  
      V x.x
```

PLEASE ENTER YOUR NAME:

3. Sign on as XXXUSER.

XXX depends on your type computer: IBM for IBM PC, DRB for DEC Rainbow 100 and ZS1 for Zenith Z-100.

4. Enter the current date and time.

The screen displays:

A> _

Copying Files

1. Put the CORMS24 diskette in the diskette drive.

If your computer has two diskette drives, put the diskette in drive A.

2. Copy the file.

Type COPY A:*. * C:

The screen displays:

```
MNTMGR2  EXE
SPOOL    EXE
DESPPOOL EXE
CONFIG.  BAS
CORDRV.  BIN
          5 file (s) copied
```

A> _

You have copied the Corvus MSDOS 2.0 utility files to the XXXMS volume on the Corvus mass storage system.

Go to the System Manager's Guide.

Appendix A: Changing the Standard Configuration

This guide shows you how to determine a configuration for your system volumes when you must change the standard configuration.

If you are adding MSDOS 2.0 to Constellation I Apple II, go to this appendix's section, "Changing the Location of System Volumes." If you are upgrading MSDOS 2.0 on a computer with Constellation II software, go to the section "Changing the Size of the CORVUS Volume."

Changing the Location of System Volumes

These steps tell you how to change the location of the system volumes.

The screen is displaying:

Do you want to change the location
of the system volumes (Y/N) ?

1. Choose whether to change the location of your system volumes.

If you don't plan to add Apple II computers to the disk system later, type N . Go to the next section in this appendix, "Changing the Size of the CORVUS Volume."

If you plan to add Apple II computers to the disk system later, type Y .

The screen displays:

Please enter starting disk
address of system volumes: ___

2. Enter the starting address of your system volumes.

If you are generating a new main system, type 1032 .

If you are initializing an add-on disk system, type 144 .

3. Go to Appendix B, "Mixing Constellation I and II."

Changing the Size of the CORVUS Volume

The screen is displaying:

Do you want to change
the size of the CORVUS volume (Y/N) ?

1. Decide whether to change the size of the CORVUS volume.

The size of the CORVUS volume determines how many users, volumes, computer types, and OMNINET servers you can have on your system. The size of the CORVUS volume also determines how many user/volume access associations can be made. The standard size CORVUS volume permits 512 users, 512 volumes, three computer types, four OMNINET servers and 3072 user/volume access associations.

If you are satisfied with the qualities of the standard size CORVUS volume, type N . Now return to the next step in the generation procedure you were using.

If you want to change the size of the CORVUS volume, type Y .

The screen displays:

Please enter size
of CORVUS volume: [200]

2. Choose a size for the CORVUS volume.

Use the table below.

Block Size of CORVUS Volume	Maximum Allowable Values			
	Users	Volumes	Boot Blocks *	Access Blocks *
100-199	128	128	34-83	34-83
200-600	512	512	48-100	48-100

*The exact number varies with the size of the CORVUS volume.

Computers and OMNINET servers use boot blocks for system startup. Each computer type needs an average of 12 boot blocks. Each OMNINET server needs an average of 6 boot blocks.

Access blocks build tables associating users with volumes. Each access block has space for 64 user/volume associations. Typically, 200 users with access to an average of 10 volumes each would require 32 access blocks [$(200 \times 10) / 64$] .

3. Enter the desired size of the CORVUS volume.

Type the desired size of the CORVUS volume and press .

4. Return to the generation procedure you were using.

Appendix B: Mixing Constellation I and II

Corvus Systems supports the Apple II computer with Constellation I software and supports computers that run under the MSDOS 2.0 operating system with Constellation II software. This appendix tells you how to manage a mix of these systems.

To mix Constellation I and II software, you must consider your disk system layout and volume tables. If you are mixing the two systems or plan to add Apple II computers later, you must reserve specific space on your disk system. You also must make your volume tables agree; otherwise, you could assign two volumes to the same disk space.

Disk System Layout

Your disk system layout will affect whether you can mix Constellation I and II software.

You must leave space on your disk system to mix Constellation I and II software. All disk systems require a volume table and system volumes. But Constellation I mandates specific locations for the table and volumes.

Constellation II is flexible; its tables and system volumes can reside anywhere on the disk system. But the Apple II computer and Constellation I software require specific space for the volume table and system volumes. You must reserve space for Apple II computers now if you plan to add them later.

The Constellation I volume table uses the first eight blocks of the disk system. The Apple II Pascal system files use blocks 8 through 1031 for the SYS volume. The 1024-block SYS volume cannot be moved.

Each add-on disk system also uses the first eight blocks for the volume table. However, the add-on disk's system volume isn't used for booting and must contain only the disk system's SYSTEM.CONSTUSR file. The add-on system volume, for example, SYS2, is 136 blocks.

The Constellation I tables can address only 32767 blocks (16 megabytes) on a drive. The Corvus Model 20 disk system is divided logically so that no one drive exceeds 16 megabytes. The virtual drive/track offset table allows the Apple II to address more than 16 megabytes on the Model 20 by making the drive appear to be two virtual drives.

Because the Model 20 appears as two drives, the second drive must be treated as an add-on disk system. That is, you must reserve the first eight blocks of the second logical drive for the Constellation I volume table and the next 136 blocks for the SYS2 volume.

Corvus Systems produces two versions of the Model 20 disk system. The older, 8-inch Model 20 requires blocks 18940 to 19084 for the second drive's Constellation I volume table and the SYS2 volume. The newer 5¼-inch Model 20 requires blocks 17920 to 18064 for this table and volume.

Constellation II is more flexible than Constellation I. The volume and user tables are in the CORVUS volume, and CORVUS can reside anywhere on the disk system. Block 8 of the drive points to the CORVUS volume. If you can load your operating system from the Corvus disk, when you enter your user name, the program finds the volume containing the warm boot code and loads the appropriate file.

The Constellation II tables can address an entire Model 20 disk system. So you don't have to divide the Model 20 disk system logically into two drives for Constellation II systems. But if you mix Constellation I and II, you must set the Model 20's VDO table for two drives to accommodate the Apple II.

The Apple II considers the Model 20 disk system to be two logical drives, while the IBM PC considers the disk system to be one drive. You must translate a logical address on Apple's second virtual drive to a physical address on the IBM's single drive. To do so, add 17920 to the logical address. If you are using an older 8-inch Model 20, add 18940 to the logical address.

Making Volume Tables Agree

When mixing Constellation I and II, your volume tables must agree or they will write over each other. The volume tables for Constellation I and II are independent. Disk space allocated by one system isn't recognized by the other system. So two volume tables could occupy the same disk space.

If you want to add Apple II computers later, reserve space now for the volume table, as explained above in "Disk System Layout." Reserving space prevents you from placing a Constellation II volume where the Apple system could write over it when creating its system volume.

To avoid overwriting, use the Constellation II volume manager. The utility lets you add a volume to the volume table without writing to the volume itself. When you add the volume, don't initialize it, write its header or zero its directory.

Always create the volume for Apple II/Constellation I first.

If the Apple II computer will use the volume, use the Constellation II volume manager. Add the volume to the Constellation II table without initializing it, writing its header or zeroing its directory.

If a computer will use the volume with the MSDOS 2.0 operating system, create it according to the System Manager's Guide.

Whenever you add volumes, update both Constellation I and II tables. Update Constellation I first, because Constellation I always formats the volume.

Be careful when allocating space with the Apple II Volume Manager (VMGR). The Constellation I volume manager formats a volume on entering it. So if you placed Constellation II volumes in the Constellation I table space, you would wipe out any Constellation II volumes. As a precaution, you should map the location of Constellation II volumes. Whenever managing from Constellation I, check the map before creating new volumes.

Appendix C: Adding to a Model 20 Disk

You must check the virtual drive offset table when you add a disk system to a chain of drives that includes a Model 20 disk system.

You can set the configurations of the Model 20 so it appears as two logical disk systems. You would do this if you later planned to add Apple II computers to your disk system. Otherwise, your Model 20 drive should be set to appear as one drive.

Follow the steps below to reset the disk system's configurations to one drive.

1. Turn on your Corvus disk systems.

If you have a disk server, turn it on.

If your disk systems are part of a multiplexer network, turn on each multiplexer.

2. Put the CORMS22 diskette into the diskette drive.

If your computer has two diskette drives, put the diskette into drive A.

3. Turn on your computer.

After about a minute, the screen displays the diagnostic main menu:

```
CORVUS DIAGNOSTIC UTILITIES
Version [x.xx]
(c) Copyright 1982, 1983 Corvus Systems, Inc.
```

```
-----
D — Disk Diagnostic
O — Omninet Test
-----
```

```
Please select an option: __
```

4. Select the disk diagnostic option.

Press D

If you are not using an OMNINET network, skip to step 7.

If you are using OMNINET, the screen displays:

```
DDIAG [x.xx]: Disk Diagnostic
(c) Copyright 1982, 1983 Corvus Systems, Inc.
```

```
Slot 1: an OMNINET interface
```

```
Select slot number [1]: [0]
```

5. Select the disk slot number.

Type 1

The screen displays:

```
Select server number [0..63]: [0]
```

6. Select your disk server number.

Press

The screen displays the disk diagnostic main menu:

DDIAG [x.xx]: Disk Diagnostic
[c] Copyright 1982, 1983 Corvus Systems, Inc.

V — Version check
P — Display/modify drive parameters
X — Perform servo exercise
C — Perform CRC scan for bad tracks

S — Set diag data block file name
U — Update firmware on disk
F — Perform platter format

O — Park heads of disk
M — Manual mode

E — Exit

Current slot is 1; server is 0

Select disk diagnostic option: __

7. Select the option to display/modify drive parameters.

Press P

The screen displays:

Parameters of which drive [1]

8. Enter the number in the chain of the Model 20 disk.

Type the number and press **RETURN** .

The screen display of the disk's parameter map is similar to:

Disk Map for Drive 1

No tracks are spared

Interleave spec: 9

Virtual Drive / Track Offset

1	0
2	911

Press <space> to continue __

9. Continue the program.

If the screen shows only one virtual drive, press `[SPACE]`. Press E to exit the program and return to the section of Chapter 1, "Adding an Add-On Disk System."

If two virtual drives are shown in the map, press `[SPACE]`. The screen displays the parameter options:

```
-----
L  -- Display parameters
S  -- Save changes

T  -- Set spare tracks
S  -- Set interleaving
V  -- Set Virtual drive offset table

E  -- Exit
-----
Select PARAMETER option: __
```

10. Select the option to set the virtual drive offset table.

Press V

The screen displays:

```
Enter -1 to terminate entry:
Track offset for virtual drive 1: [0]
```

11. Set the track offset for virtual drive 1.

Press **RETURN**

The screen displays:

Track offset for virtual drive 2: [911]

12. Set the track offset for virtual drive 2.

Type -1 **RETURN**

The screen displays:

Virtual Drive /	Track Offset
1	0

Press <space> to continue ___

Press **SPACE**

The screen displays the parameter options.

13. Select the option to set the diagnostic data block file name.

Press S

The screen displays the disk map and states:

You are about to destroy data on the disk. Continue? [Y/N]

14. Continue the program.

Press Y

The screen displays:

Parameters updated.

Press <space> to continue __

Press

The screen displays the disk diagnostic main menu.

15. Exit to the diagnostic main menu.

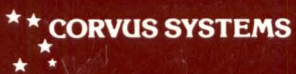
Press E

The screen displays the diagnostic main menu.

16. Return to Chapter 1 and the section "Adding an Add-On Disk System."

Appendix D: Names and Passwords

Disk Server Name: _____
Disk Server Password: _____
Drive Name: _____
Drive Password: _____



CORVUS SYSTEMS

2029 O'TOOLE AVENUE/SAN JOSE, CALIFORNIA 95131