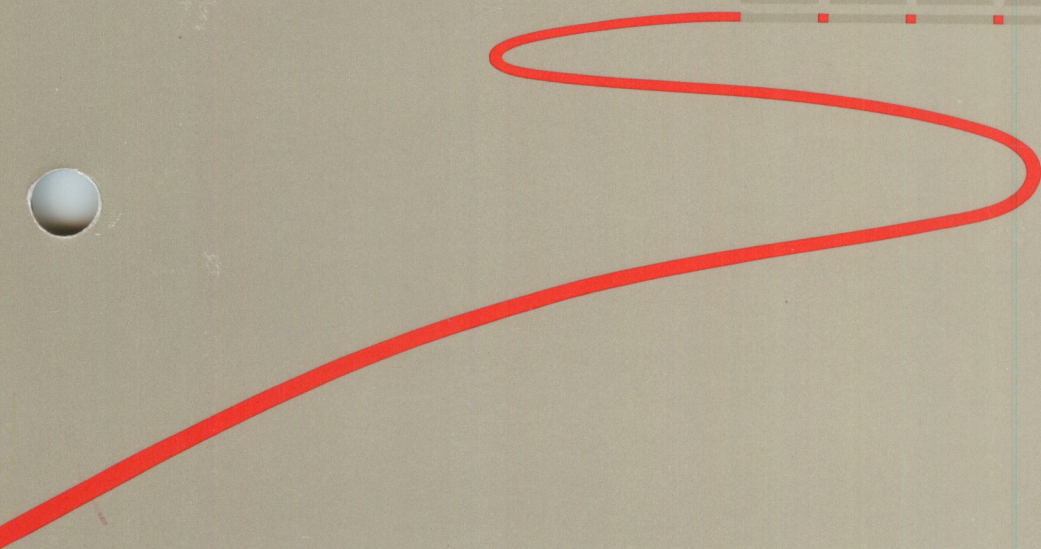
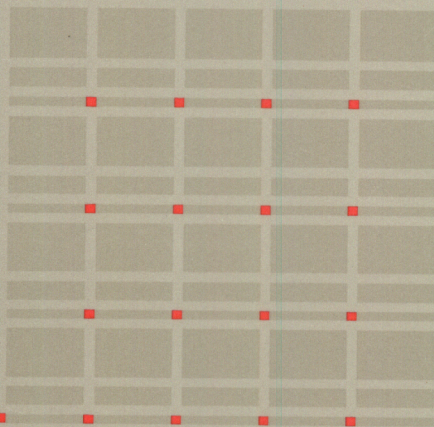


Constellation II Generation Guide

Apple II



CORVUS

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Constellation II Generation Guide

Apple II

Part Number: 7100-06111-02

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GETTING STARTED

This guide shows how to prepare a Corvus mass storage system to use Constellation II software with the Apple® II computer. The guide addresses generating new systems, adding to an existing Constellation II system and converting an existing Apple II Constellation I system.

First finish the *Apple II Omninet Network Station Installation Guide* then turn to this guide.

HOW THIS GUIDE IS ORGANIZED

This guide shows how to prepare the Constellation II system three ways. The chapter summaries below describe the three different methods of system generation. Choose only one of the three chapters to prepare the system.

For instructions on generating the mass storage system, turn to the chapter matching your setup.

Go to Chapter 1, “Generating New Systems,” to generate a new primary mass storage system that has never been initialized.

Go to Chapter 2, “Adding to Constellation II,” to add the Apple II and Constellation II software to a mass storage system already using Constellation II software and a different computer type.

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Go to Chapter 3, "Converting Apple II Constellation I," to upgrade an existing Apple II Constellation I system to Constellation II software. Existing users and volumes can be transferred to Constellation II.

When finished generating Constellation II, go to the system generation guide for the particular Apple operating system desired: Apple Pascal, Apple DOS 3.3, Apple CP/M[®] or Apple ProDOS.

If adding an additional operating system to an Apple II Constellation II system, go directly to the system generation guide for the additional operating system. Do not repeat any steps in this guide.

USAGE

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

Examples:

Type COPY B:*.DOC

Type DIR C:

Throughout this guide, **press** means to enter a single character or symbol on the computer keyboard. When a keytop symbol appears, press the key to which it refers. Don't type out each letter of the word in the keytop symbol.

Examples:

Press Y

Press RETURN

When the commands **type** or **press** appears in a sentence or paragraph, enter the information indicated.

Example:

Type your user name and password and **press** RETURN .

The variables **x.xx** in the screen display stand for software revision numbers.

HARDWARE AND SOFTWARE REQUIRED

To use Constellation II on an Apple II, the system manager must have an Apple IIe with 128 kilobytes of memory, including an extended 80-column card, and two Apple Disk II disk drives or equivalent.

Network users can use Apple II computers, but the computer must have at least 48 kilobytes of installed memory for Apple DOS 3.3. All other operating systems also require the Apple Language System or equivalent.

Generating Apple II Constellation II requires the following software:

- Corvus utilities (four diskettes)
 - A2C2.1
 - A2C2.2
 - A2C2.3
 - A2C2.4

The diskettes may be shipped with two titles on one diskette. The second title is located on the second side of the diskette. In other words, A2C2.1 and A2C2.4 may be on opposite sides of one diskette. To use the other side, simply insert the diskette into the drive with the desired label facing up.

This chapter shows how to generate a new mass storage system for use with the Apple II computer and Constellation II software. The system will be part of an Omninet™ local area network with one or more Apple II computers.

First copy the Corvus diskettes to protect the information. Next update the firmware on the mass storage system. Finally, generate the new mass storage system using the copies.

COPYING DISKETTES

Copying diskettes requires four formatted diskettes. Have enough diskettes before beginning.

1. Insert the floppy boot processing diskette.

Insert the A2C2.1 diskette in the boot drive, slot 6, drive 1.

2. Turn on the Apple IIe.

3. **Boot the computer.**

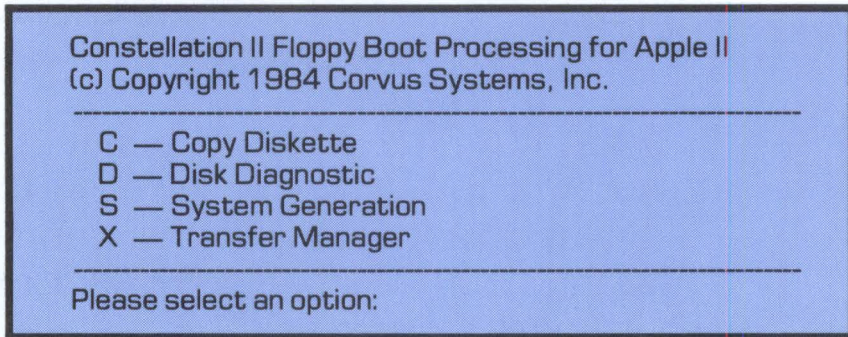
Hold down **CTRL** and **press RESET**

The screen displays the operating system prompt.

Type PR#6

Press RETURN

The screen displays the floppy boot processing main menu:



4. **Copy the Corvus diskettes.**

Make copies of the Corvus diskettes: A2C2.1, A2C2.2, A2C2.3 and A2C2.4. Use the copies to generate the system. Store the originals in a safe place. If any problems arise, the source diskettes will be available.

Press C

The screen displays:

Please insert the source diskette in slot 6, drive 1
Press <space> after inserting the diskette.

A2C2.1 should already be in slot 6, drive 1.

Press **SPACE** .

The screen displays:

Please insert the destination diskette in slot 6, drive 2
Press <space> after inserting the diskette.

Insert a formatted diskette in slot 6, drive 2 and **press SPACE** . After a minute, the screen displays:

Copy another diskette? [Y/N]:

Press Y

The program prompts for another source and destination diskette. Repeat the process until all Corvus diskettes have been copied. After copying the last diskette, the screen displays:

Copy another diskette? [Y/N]:

Press N

The screen displays the floppy boot processing main menu.

UPDATING FIRMWARE

Before the Apple II can communicate with the mass storage system, a new firmware file should be copied from a diskette to the drive. The firmware acts as an interpreter for drive commands.

Copying new firmware onto the drive is known as updating the firmware. To update the firmware, use the disk diagnostic program. First turn on the Corvus equipment, then follow the steps below.

The screen should be displaying:

```
Constellation II Floppy Boot Processing for Apple II  
(c) Copyright 1984 Corvus Systems, Inc.
```

```
-----  
C — Copy Diskette  
D — Disk Diagnostic  
S — System Generation  
X — Transfer Manager  
-----
```

```
Please select an option:
```

1. Select the disk diagnostic program.

Press D

The screen displays:

Insert the A2C2.3 diskette in the second floppy drive.
Press < space > after inserting the diskette.

Insert the A2C2.3 diskette in the second drive and **press** **SPACE** .

The screen display is similar to:

```
Disk Diagnostic [x.xx]                Slot: 7  
(c) Copyright 1984 Corvus Systems, Inc Srvr: 0  
-----  
Slot 1: . . . .  
Slot 2: . . . .  
Slot 3: . . . .  
Slot 4: . . . .  
Slot 5: . . . .  
Slot 6: . . . .  
Slot 7: Omninet interface  
-----  
Select slot number: [7]
```

2. Select the slot number.

Press the slot number of the Omninet interface.

Press **RETURN**

The screen display is similar to:

Enter the server number: [0]

3. Select the server number.

Enter the Omninet address of the mass storage system. This address was determined in the section "Setting the Omninet Address" of the *OmniDrive Setup Instructions* or in the *Disk Server Installation Guide*. After entering the address,

Press **RETURN**

The screen display is similar to:

```
Selected drive is DRIVE1           on server SERVER0
Continue? [Y/N]:
```

Press **Y**

The screen displays:

```
Disk Diagnostic [x.xx]
(c) Copyright 1984, Corvus Systems, Inc.
                                OmniDrive   Slot: 7 Srvr: 0
-----
C — Check for Bad Tracks
N — Set Diag Data File Name
P — Park Heads for Shipment
V — Version Check
X — Exercise Heads

F — Format Corvus Drive
M — Modify Parameters
U — Update Firmware on Drive

A — Advanced Options

S — Select Drive
E — Exit
-----
Please select an option:
```

4. Select update firmware.

Press **U**

The screen display is similar to:

```
Disk Diagnostic [x.xx]          Slot: 7
Update Firmware                Srvr: 0
-----
The selected option may destroy data on the drive.
Ensure the correct drive is selected.

Selected drive is slot 7, server 0.

Continue? [Y/N]
```

After ensuring that the slot and server are correct,

Press **Y**

The screen display is similar to:

```
Change drive tables? [Y/N]: [N]
```

Press **RETURN**

The screen display is similar to:

```
Enter firmware file name: [ODRV.FIRMWARE]
```


5. Enter the firmware file name.

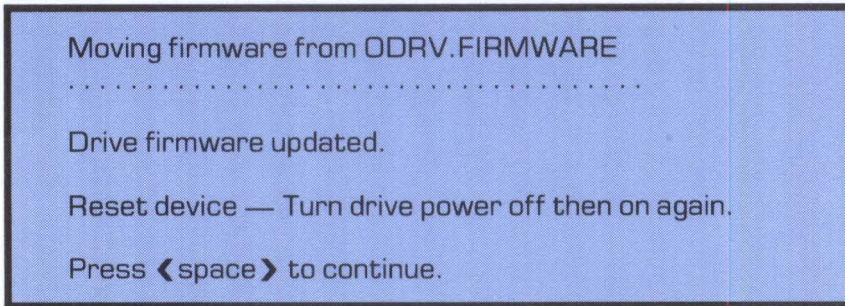
Accept the suggested file name.

Press **RETURN**

The screen displays the version message.
Accept the suggested version and

Press **RETURN**

The screen display is similar to:



Press **SPACE**

The screen displays the disk diagnostic program main menu.

Turn off the OmniDrive, then turn it on again.

6. Exit the disk diagnostic program.

Press **E**

The screen displays the floppy boot processing main menu.

GENERATING A NEW SYSTEM

Once the firmware has been updated, run the system generation program to put the Constellation II utilities on the mass storage system.

1. **Run the system generation program.**

Press S

The screen displays:

Insert the A2C2.2 diskette in the second floppy drive.
Press **<space>** after inserting the diskette.

Insert the A2C2.2 diskette and **press** **SPACE** .

The screen displays:

Enter SYSGEN Password:

2. Enter the password.

Type **HAI**

Press **RETURN**

The password doesn't appear on the screen. The screen displays the main menu of the system generation program:

```
System Generation [x.xx]
Main Menu
(c) Copyright 1982, 1983, 1984 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 option to initialize a new drive.

Press **I**

The screen displays:

```
Please select drive to be initialized.

Server number: [0]
```

4. Select the server number.

Enter the Omninet address of the mass storage system.

Type the Omninet address.

Press

The screen displays:

A screenshot of a screen with a blue background and a black border. The text "Drive number: [1]" is centered on the screen.

5. Select the drive.

Press

The screen display is similar to:

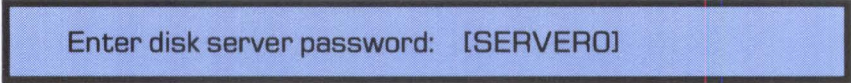
A screenshot of a screen with a blue background and a black border. The text "Selected drive is slot 7, server 0, drive 1." is centered on the screen. Below it, the text "Enter disk server name: [SERVER0]" is centered.

6. Name the disk server.

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

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

The screen displays:



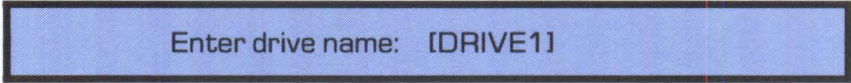
Enter disk server password: [SERVER0]

7. 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 A.

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

The screen displays:



Enter drive name: [DRIVE1]

8. Name the drive.

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

Type the name and press **RETURN** .

The screen displays:

A screenshot of a computer screen with a blue background and black text. The text reads "Enter drive password: [DRIVE1]".

9. 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 A.

Type the password and press **RETURN** .

The screen display is similar to:

A screenshot of a computer screen with a blue background and black text. The text reads "Total drive capacity is 21600 blocks. Do you want to use the standard configuration? [Y/N]: [Y]".

Press **RETURN**

The screen display is similar to:

A screenshot of a computer screen with a blue background and black text. The text reads "Blocks 9 through 2108 will be overwritten. OK to initialize the new drive? [Y/N]:".

10. Initialize the drive.

Press **Y**

Press **RETURN**

The screen displays:

```
Initializing CORVUS volume . . .  
[  0] .....  
.....  
[ 40] .....  
.....  
[ 80] .....  
.....  
[120] .....  
.....  
[160] .....  
.....  
  
196 system table blocks initialized.  
-----
```

The screen then displays:

```
Opening file BOOT.APPLE2  
21 boot blocks written to CORVUS volume.  
  
.....  
Volume A2SYS initialized.  
Volume A2BOOT initialized.  
Volume A2BACK initialized.  
.....  
-----
```


The screen then displays the names of the files copied to the system volumes. After a few minutes, the screen displays:

To complete the Constellation II system generation:

1. Turn off your computer.
2. Move the floppy controller card to slot 4.
3. Turn on your computer.
4. Log on as A2MGR with the password HAI.

11. Turn off the equipment.

Turn off the computer and the disk system. If using a disk server, turn it off, too.

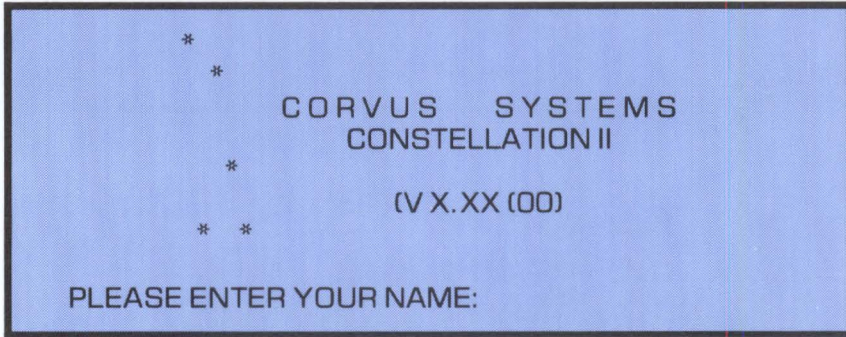
12. Move the floppy controller card.

Make sure the computer is turned off. Remove the card from slot 6 and plug it into slot 4. Remove the diskettes from the diskette drives.

13. Turn on the equipment.

If using a disk server, turn it on first. Turn on the disk system. After the READY light is lit, turn on the Apple IIe.

The screen displays:

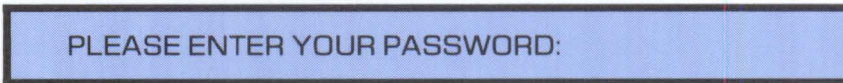


14. Log on as A2MGR.

Type **A2MGR**

Press **RETURN**

The screen displays:



Type **HAI**

Press **RETURN**

The screen displays:

```
UPDATE [x.xx] Corvus Utility Update Program
(c) Copyright 1983, 1984 Corvus Systems, Inc.
```

```
Please insert the A2C2.1 diskette in slot 4, drive 1
Press <space> after inserting the diskette.
```

15. Transfer the files to the mass storage system.

Generating the system requires transferring files from four diskettes: A2C2.1, A2C2.2, A2C2.3 and A2C2.4. The program prompts for each diskette by name. Insert each diskette in floppy drive 1, attached to the card now in slot 4. **Press** `SPACE` after inserting each diskette. When the program is finished with the last diskette, the screen displays:

```
Recovering unused space
Space recovered
```

```
Reboot required -- press <space>.
```


16. Reboot the computer.

Remove the last diskette and **press** `SPACE` .

After a minute, the screen displays the Constellation II log-on message.

The mass storage system now has Apple II Constellation II software and is ready to accept Apple operating system information. Go to the appropriate system generation guide for the desired operating system:

Apple II Pascal System Generation Guide

Apple II DOS System Generation Guide

Apple II CP/M System Generation Guide

Apple II ProDOS System Generation Guide

ADDING TO CONSTELLATION II

2

This chapter explains how to modify a mass storage system to include the Constellation II utilities for the Apple II. The mass storage system should already work with at least one computer type using Constellation II software.

This chapter is split into four major tasks. First find space on the mass storage system for the Apple II Constellation II system volumes. Then make copies of the Corvus diskettes.

Next update the firmware on the drive. Finally add Apple II Constellation II.

This chapter assumes the mass storage system is initialized and works with a computer that uses Constellation II software.

Complete the *Apple II Omninet Network Station Installation Guide* before following the steps in this chapter.

FINDING A FREE AREA

To add Constellation II system volumes for the Apple II, the mass storage system must have a free area.

Follow the steps below to find a free area.

1. Turn on the Corvus equipment.

2. Log on as system manager.

Log on at a computer on the network 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 — Backup Utilities
M — Maintenance Utilities

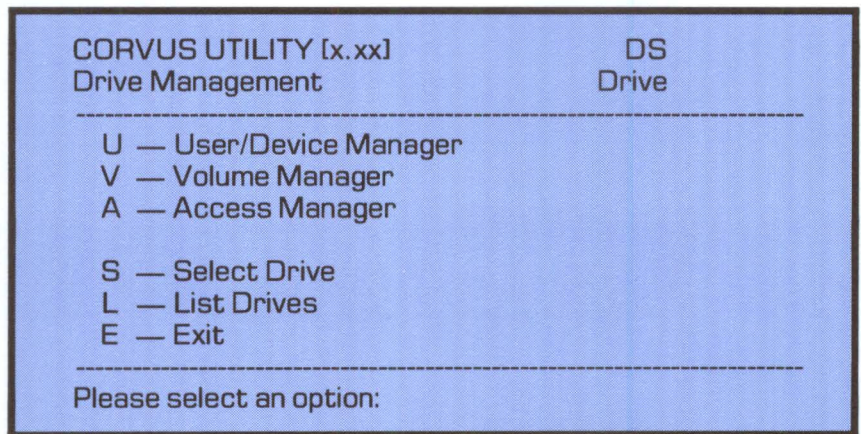
U — Utility Server Manager
X — Transfer Manager

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:



4. Select the volume manager.

Press V

The screen suggests valid server names and requests the names and passwords of the server and drive. Choose the server to modify.

Type the names entered when the system was generated.

Once the correct names and passwords are entered, 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
X — Extended list
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. VOL1       5329   1024   x  UCSD/Pascal
   <unused>    6353   4867

Press <space> to continue
```


6. Check the names of the system volumes.

The Constellation II system volumes for Apple II have preassigned names. Existing volumes cannot have the same names as the Constellation II system volumes.

If any of the existing volumes are called A2BOOT, A2BACK or A2SYS, **press** **ESC** . Then select the change volume attributes option of the volume manager to change the names of the existing volumes.

Otherwise, **press** **SPACE** .

The screen display is similar to:

Volume Manager [x.xx]	DS SERVER			
List Volumes	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 system.

The system volumes require 1800 blocks.

If the largest free space on the disk is 1800 blocks or greater, note the address of this unused area.

If the largest free area on the system is less than 1800 blocks, create an area of at least 1800 blocks by moving or deleting existing volumes. See the system manager's guide for the computer being used.

Once an area of at least 1800 blocks is freed, note the free area's address. Use the address in step 7 of this chapter's subsection "Adding Apple II Constellation II."

8. Exit the volume manager.

Press SPACE

The screen displays the volume manager main menu.

Press E

The screen displays the drive management main menu.

9. Enter the user manager.

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 and devices option.

Press **L**

The screen display is similar to:

```
User Manager [x.xx]           DS SERVER
List users/devices           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 user names.

The system generation program will create two users, A2MGR and A2BACKUP.

If either user already exists, create a new user account with a different name but identical attributes and remove the duplicate user.

If none of the existing users matches either name that the program will create, **press** **ESC** .

The screen displays the user manager main menu.

12. Exit the user manager.

Press E

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

13. Turn off the computer.

COPYING DISKETTES

Follow the steps below to add the Apple II Constellation II volumes to the existing mass storage system. The Apple IIe should already be connected to the existing network.

Copying diskettes requires four formatted diskettes. Have enough formatted diskettes before beginning.

1. Insert the floppy boot processing diskette.

Insert the A2C2.1 diskette in the boot drive, slot 6, drive 1.

2. Turn on the Apple IIe.

3. **Boot the computer.**

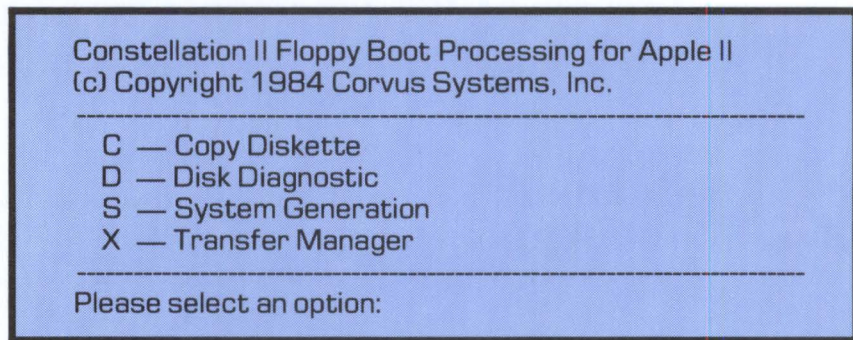
Hold down **CTRL** and **press RESET**

The screen displays the operating system prompt.

Type PR#6

Press RETURN

The screen displays the floppy boot processing main menu:



4. **Copy the Corvus diskettes.**

Make copies of the Corvus diskettes: A2C2.1, A2C2.2, A2C2.3 and A2C2.4. Use the copies to generate the system. Store the originals in a safe place. If any problems arise, the source diskettes will be available.

Press C

The screen displays:

Please insert the source diskette in slot 6, drive 1
Press < space > after inserting the diskette.

A2C2.1 should already be in slot 6, drive 1.

Press **SPACE**. The screen displays:

Please insert the destination diskette in slot 6, drive 2
Press < space > after inserting the diskette.

Insert a formatted diskette in slot 6, drive 2 and **press SPACE**. After a minute, the screen displays:

Copy another diskette? [Y/N]:

Press Y

The program prompts for another source and destination diskette. Repeat the process until all Corvus diskettes have been copied. After copying the last diskette, the screen displays:

Copy another diskette? [Y/N]:

Press N

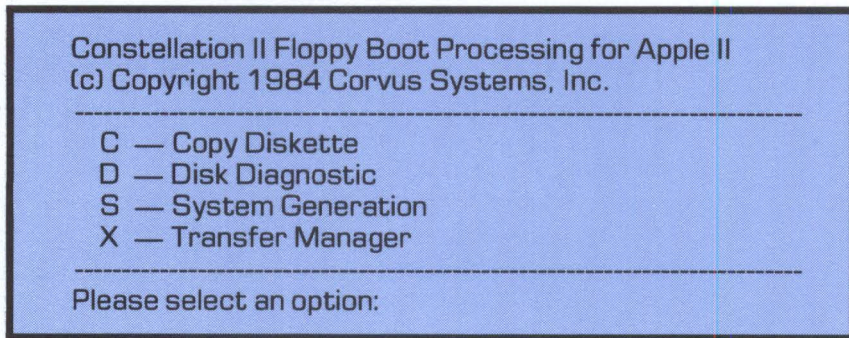
The screen displays the floppy boot processing main menu.

UPDATING FIRMWARE

Before the Apple II can communicate with the mass storage system, a new firmware file should be copied from a diskette to the drive. The firmware acts as an interpreter for drive commands.

Copying new firmware onto the drive is known as updating the firmware. To update the firmware, use the disk diagnostic program. Follow the steps below.

The screen should be displaying:



1. Select the disk diagnostic program.

Press **D**

The screen displays:

Insert the A2C2.3 diskette in the second floppy drive.
Press **<space>** after inserting the diskette.

Insert the A2C2.3 diskette in the second drive and press **SPACE** .

The screen display is similar to:

Disk Diagnostic [x.xx] Slot: 7
(c) Copyright 1984 Corvus Systems, Inc Srvr: 0

Slot 1:
Slot 2:
Slot 3:
Slot 4:
Slot 5:
Slot 6:
Slot 7: Omninet interface

Select slot number: [7]

2. Select the slot number.

Press the slot number of the Omninet interface.

Press **RETURN**

The screen display is similar to:



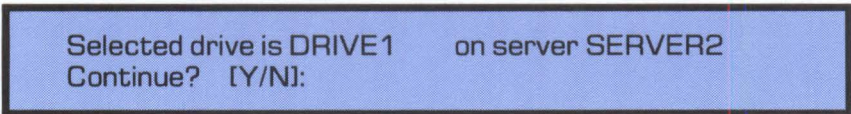
```
Enter the server number: [0]
```

3. Select the server number.

Enter the Omninet address of the mass storage system. This address was determined in the section “Setting the Omninet Address” of the *OmniDrive Setup Instructions* or in the *Disk Server Installation Guide*. After entering the address,

Press **RETURN**

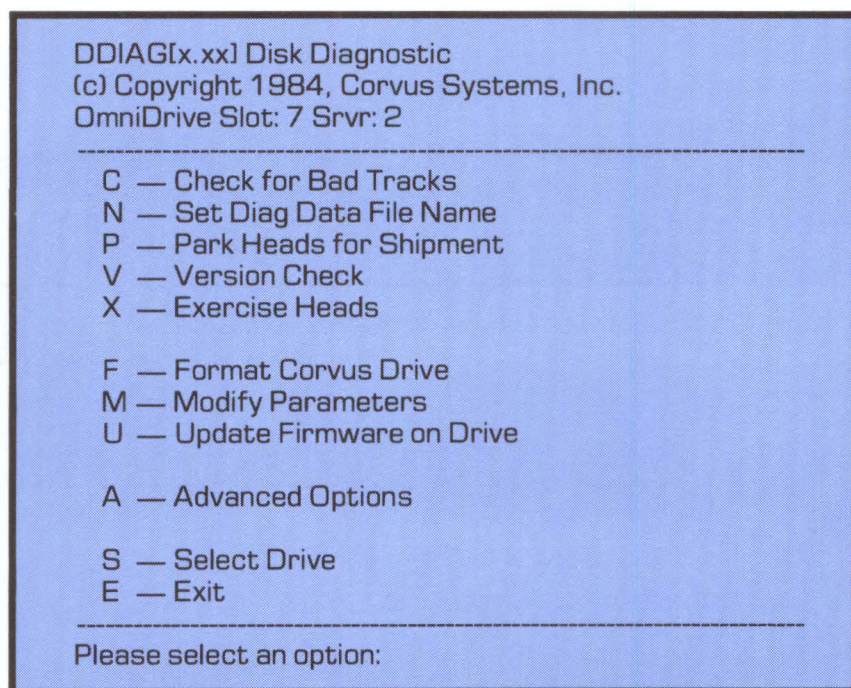
The screen display is similar to:



```
Selected drive is DRIVE1 on server SERVER2  
Continue? [Y/N]:
```


Press Y

The screen display is similar to:



4. Select update firmware.

Press **U**

The screen display is similar to:

Disk Diagnostic [x.xx] Update Firmware	Slot: 7 Srvr: 0

The selected option may destroy data on the drive. Ensure the correct drive is selected.	
Selected drive is slot 7, server 0.	
Continue? [Y/N]	

After ensuring that the slot and server are correct,

Press **Y**

The screen display is similar to:

Change drive tables? [Y/N]: [N]

Do not change the drive tables.

Press **RETURN**

The screen display is similar to:

Enter firmware file name: [ODRV.FIRMWARE]

5. Enter the firmware file name.

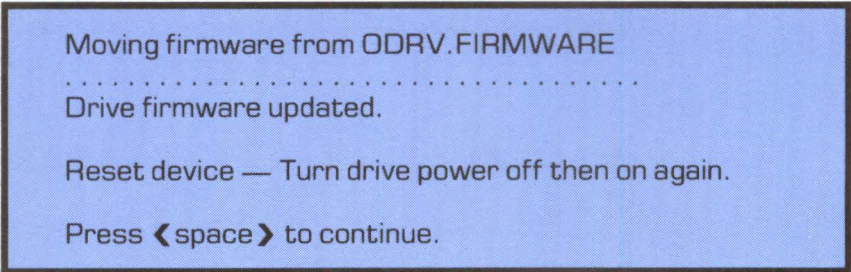
Accept the suggested file name.

Press **RETURN**

The screen displays the version message.
Accept the suggested version and

Press **RETURN**

The screen display is similar to:



Moving firmware from ODRV.FIRMWARE
.....
Drive firmware updated.

Reset device — Turn drive power off then on again.

Press <space> to continue.

Press **SPACE**

The screen displays the diagnostic program
main menu.

Turn off the OmniDrive, then turn it on again.

6. Exit the diagnostic program.

Press **E**

The screen displays the floppy boot
processing main menu.

ADDING APPLE II CONSTELLATION II

Once the firmware has been updated, run the system generation program to add the Apple II Constellation II utilities to the existing mass storage system.

1. Run the system generation program.

Press **S**

The screen displays:

Insert the A2C2.2 diskette in the second floppy drive.
Press **<space>** after inserting the diskette.

Insert the A2C2.2 diskette and **press** **SPACE** .

The screen displays:

Enter SYSGEN Password:

2. Enter the password.

Type **HAI**

Press **RETURN**

The password doesn't appear on the screen. The screen displays the main menu of the system generation program:

```
System Generation [x.xx]
Main menu
(c) Copyright 1982, 1983, 1984 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 option to modify an existing drive.

Press **M**

The screen displays:

```
System Generation [x.xx]
Modify an Existing Drive
-----
M  — Mix Apple II with Other Computers
      using Constellation II

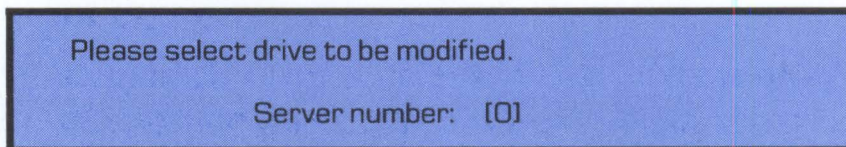
A  — Add Apple II Constellation II
      converting Constellation I

E  — Exit
-----
Please select an option:
```

4. Select mix Apple II with other computers.

Press **M**

The screen displays:

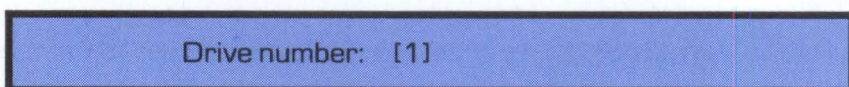


5. Select the server number.

Enter the Omninet address of the mass storage system to be modified. After entering the Omninet address,

Press **RETURN**

The screen displays:



After ensuring that the slot and server are correct,

Press Y

The screen display is similar to:

```
Change drive tables? [Y/N]: [N]
```

Do not change the drive tables.

Press RETURN

The screen display is similar to:

```
Enter firmware file name: [DSRV.FIRMWARE]
```

5. Enter the firmware file name.

Accept the suggested file name.

Press RETURN

The screen displays the version message. Accept the suggested version and

Press RETURN

The screen display is similar to:

```
Moving firmware from DSRV.FIRMWARE
.....
Drive firmware updated.

Reset device — Move rightmost drive switch
to right and release

Press <space> to continue.
```

Press Y

The screen display is similar to:

```
DDIAG[x.xx] Disk Diagnostic
(c) Copyright 1984, Corvus Systems, Inc.
Slot: 7 Srvr: 0

-----
C — Check for Bad Tracks
N — Set Diag Data File Name
P — Park Heads for Shipment
V — Version Check
X — Exercise Heads

F — Format Corvus Drive
M — Modify Parameters
U — Update Firmware on Drive

A — Advanced Options

S — Select Drive
E — Exit

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

4. Select update firmware.

Press U

The screen display is similar to:

```
Disk Diagnostic [x.xx]
Update Firmware
Slot: 7
Srvr: 0

-----
The selected option may destroy data on the drive.
Ensure the correct drive is selected.

Selected drive is slot 7, server 0.

Continue? [Y/N]
```


2. Select the slot number.

Press the slot number of the Omninet interface.

Press `RETURN`

The screen display is similar to:



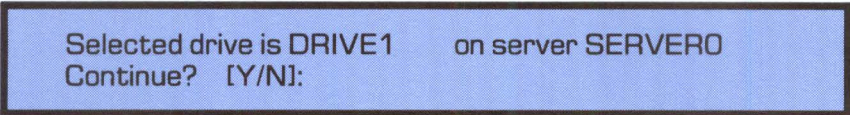
```
Enter the server number: [0]
```

3. Select the server number.

Enter the Omninet address of the mass storage system. This address was determined in the *Apple II Omninet Disk System Installation Guide*. It is probably 0. After entering the address,

Press `RETURN`

The screen display is similar to:



```
Selected drive is DRIVE1 on server SERVER0  
Continue? [Y/N]:
```


1. Select the disk diagnostic program.

Press **D**

The screen displays:

Insert the A2C2.3 diskette in the second floppy drive.
Press **<space>** after inserting the diskette.

Insert the A2C2.3 diskette in the second drive and **press** **SPACE** .

The screen display is similar to:

```
Disk Diagnostic [x.xx]          Slot: 7
(c) Copyright 1984 Corvus Systems, Inc  Srvr: 0
-----
Slot 1: . . . .
Slot 2: . . . .
Slot 3: . . . .
Slot 4: . . . .
Slot 5: . . . .
Slot 6: . . . .
Slot 7: Omninet interface
-----
Select slot number: [0]
```

Press Y

The program prompts for another source and destination diskette. Repeat the process until all Corvus diskettes have been copied. After copying the last diskette, the screen displays:

```
Copy another diskette? [Y/N]:
```

Press N

The screen displays the floppy boot processing main menu.

UPDATING FIRMWARE

Before Apple II Constellation II can be used, the firmware must be updated and any virtual drive track offset values must be determined. The firmware acts as an interpreter for drive commands. The virtual track offset is used to divide one disk system into two or more logical disks.

To update the firmware and check the virtual drive track offset, use the disk diagnostic program. Follow the steps below.

The screen should be displaying:

```
Constellation II Floppy Boot Processing for Apple II  
(c) Copyright 1984 Corvus Systems, Inc.
```

```
-----  
C — Copy Diskette  
D — Disk Diagnostic  
S — System Generation  
X — Transfer Manager  
-----
```

```
Please select an option:
```

4. Copy the Corvus diskettes.

Make copies of the Corvus diskettes: A2C2.1, A2C2.2, A2C2.3 and A2C2.4. Use the copies to generate the system. Store the originals in a safe place. If any problems arise, the source diskettes will be available.

Press C

The screen displays:

Please insert the source diskette in slot 6, drive 1
Press <space> after inserting the diskette.

A2C2.1 should already be in slot 6, drive 1.

Press . The screen displays:

Please insert the destination diskette in slot 6, drive 2
Press <space> after inserting the diskette.

Insert a formatted diskette in slot 6, drive 2 and **press** . After a minute, the screen displays:

Copy another diskette? [Y/N]:

2. Turn on the Apple IIe.

The screen displays the Constellation I log-on message. Do not log on.

3. Reboot the computer.

Hold down **CTRL** and **press RESET** twice.

The screen displays the operating system prompt.

Type PR#6

Press RETURN

The screen displays the floppy boot processing main menu:

Constellation II Floppy Boot Processing for Apple II
(c) Copyright 1984 Corvus Systems, Inc.

C — Copy Diskette
D — Disk Diagnostic
S — System Generation
X — Transfer Manager

Please select an option:

6. Exit the VMGR program.

7. Turn off the Apple IIe.

8. Move the interface cards.

Make sure the computer is turned off before moving any cards. Move the Transporter card to slot 7. Leave the tap cable attached to its connector. Move the floppy controller card to slot 6. Make sure two disk drives are connected to the card.

COPYING DISKETTES

The Apple IIe should be connected to the existing network, with the Transporter card in slot 7 and the floppy controller in slot 6. Copying diskettes requires four formatted diskettes. Have enough diskettes before beginning.

1. Insert the floppy boot processing diskette.

Insert the A2C2.1 diskette in the boot drive, slot 6, drive 1.

4. List the volumes and free space.

Press **L** to list the volumes and free space. The screen display is similar to:

CORVUS VOLUME DIRECTORY				
WP	NAME	LENGTH	ADDR	DRV
*	SYS	1024	8	1
	PRIVATE	1024	1032	1
	<UNUSED>	11156	2056	1
	DOS1	5728	13212	1
	SYS2	256	8	2
	<UNUSED>	12948	264	2
	DOS2	5278	13212	2

5. Find a free area for the system volumes.

The system volumes for Apple II Constellation II require 1900 blocks.

If the largest free space on the disk is 1900 blocks or greater, note the address of this unused area.

If the largest free area on the system is less than 1900 blocks, create an area of at least 1900 blocks by moving or deleting existing volumes. See the Corvus Network Software guide for instructions.

Once an area of at least 1900 blocks is freed, note the free area's address. Use the address in step 11 of this chapter's subsection "Converting to Apple II Constellation II."

FINDING A FREE AREA

1. Turn on the Apple IIe.

The Corvus Transporter™ interface card must be in slot 6 before turning on the computer.

After turning on the Apple IIe, the screen displays the Constellation I log-on message.

2. Log on as SMGR.

Type **SMGR**

Press **RETURN**

The screen displays the Pascal command line.

3. Execute the VMGR program.

Press **X**

When the screen displays “Execute what file,”

Type **VMGR**

Press **RETURN**

The screen displays the VMGR program command line:

```
VMGR: R(MVE L(IST W(PROT S(SUPERVISE U(USER V(MGR Q:
```

To convert such a mixed system, begin by making sure the Apple II Constellation I volumes have been recorded in the Constellation II tables. The system manager was directed to record the volumes to avoid overwriting. Instructions for mixing the two volume types were included in the Constellation II system manager's guide. If the Constellation I volumes are not yet in the Constellation II tables, follow the instructions to add them.

Once the Constellation II volume table shows all volumes on the disk system, follow the steps in Chapter 2, "Adding to Constellation II," to add Apple II Constellation II.

Apple DOS, Pascal and CP/M volumes from Constellation I will be readily accessible with Apple II Constellation II. First use the Constellation II user manager to add the Constellation I users to Constellation II. Then grant access to the volumes so that the users can use them. Instructions for adding users and granting access are in the system manager's guide for the appropriate Apple II operating system.

To convert a system with only Apple II Constellation I, use this chapter. The process is split into four major tasks. First find space on the existing system for Constellation II. Then make copies of the Corvus diskettes. Next update the firmware on the drive. Finally convert to Apple II Constellation II.

This chapter assumes the mass storage system is initialized and works with the Apple II and Constellation I. The Apple IIe should be connected to the existing network.

CONVERTING APPLE II CONSTELLATION I

3

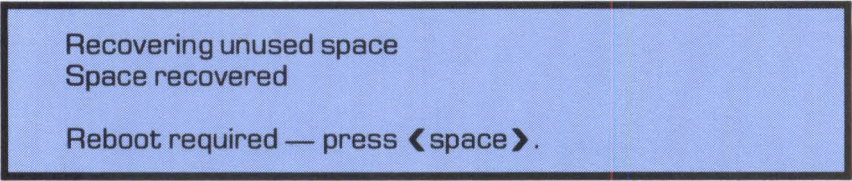
This chapter explains how to convert a mass storage system currently using Constellation I software for the Apple II computer to Constellation II software. The mass storage system should already work with the Apple II using Constellation I software. This procedure should only be used to convert a Pascal-DOS mixed system, a Pascal-only system, or a CP/M system. Do not follow the steps in this chapter to convert a DOS-only system.

To convert a DOS-only system, first copy all information to be kept to diskettes. After all information to be saved has been transferred to diskettes, the disk system must be generated following the steps in Chapter 1, "Generating New Systems." All of the old information on the disk will be lost, so be sure to copy everything that will be needed in the future. After the Constellation II software and Apple DOS have been added, transfer the old files from the diskettes into new volumes.

If Apple II Constellation I and another computer type with Constellation II have been mixed, a different procedure is required. Do not follow the steps in this chapter.

13. Transfer the files to the mass storage system.

Generating the system requires transferring files from four diskettes: A2C2.1, A2C2.2, A2C2.3 and A2C2.4. The program prompts for each diskette by name. Insert each diskette in floppy drive 1, attached to the card now in slot 4. Press **SPACE** after inserting each diskette. When the program is finished with the last diskette, the screen displays:



```
Recovering unused space
Space recovered

Reboot required — press <space>.
```

14. Reboot the computer.

Remove the last diskette and **press SPACE** .

After a minute, the screen displays the Constellation II log-on message.

The mass storage system now has Apple II Constellation II software and is ready to accept Apple operating system information. Go to the appropriate system generation guide for the desired operating system:

Apple II Pascal System Generation Guide
Apple II DOS System Generation Guide
Apple II CP/M System Generation Guide
Apple II ProDOS System Generation Guide

12. Log on as A2MGR

Type **A2MGR**

Press **RETURN**

The screen displays:

PLEASE ENTER YOUR PASSWORD:

Type **HAI**

Press **RETURN**

The screen displays:

UPDATE [x.xx] Corvus Utility Update Program
(c) Copyright 1983, 1984 Corvus Systems, Inc.

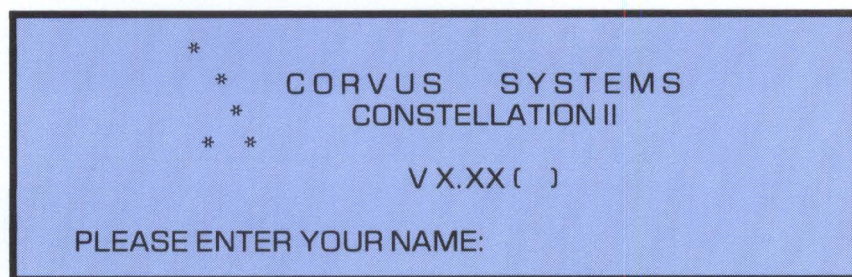
Please insert the A2C2.1 diskette in slot 4, drive 1
Press **<space>** after inserting the diskette.

10. Move the floppy controller card

Make sure the computer is turned off. Remove the card from slot 6 and plug it into slot 4. Remove the diskettes from the diskette drives.

11. Turn on the Apple IIe.

The screen displays:



8. Choose to modify the drive.

Press **Y**

Press **RETURN**

The screen displays:

```
Opening file BOOT.APPLE2
21 boot blocks written to CORVUS volume.
```

```
.....
Volume A2SYS initialized.
Volume A2BOOT initialized.
Volume A2BACK initialized.
```

```
.....
```

The screen then displays the names of the files copied to the system volumes. After a few minutes, the screen displays:

```
To complete the Constellation II system generation:
```

1. Turn off your computer.
2. Move the floppy controller card to slot 4.
3. Turn on your computer.
4. Log on as A2MGR with the password HAI.

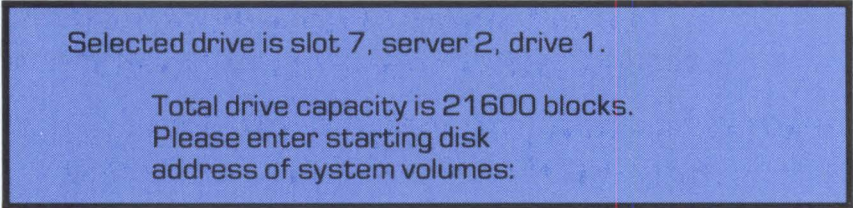
9. Turn off the Apple IIe.

6. Select the drive.

Press the correct number.

Press **RETURN**

The screen display is similar to:

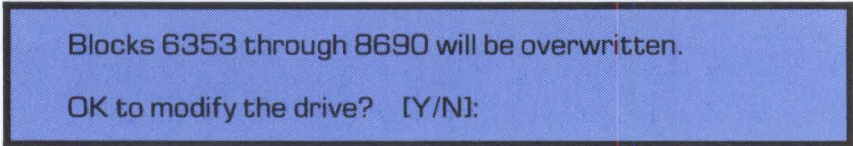


Selected drive is slot 7, server 2, drive 1.
Total drive capacity is 21600 blocks.
Please enter starting disk
address of system volumes:

7. Enter the starting disk address.

Type the address noted in step 7 of the subsection "Finding a Free Area" and press **RETURN** .

The screen display is similar to:



Blocks 6353 through 8690 will be overwritten.
OK to modify the drive? [Y/N]:

Press **SPACE**

The screen displays the diagnostic program main menu.

Flip the RESET switch on the disk drive before continuing.

6. **Select the modify parameters option.**

Press **M**

The screen displays:

```
Modify parameters on which drive? [1..11]: [1]
```

Press **RETURN**

The screen display is similar to:

```
Parameters for Drive 1

Interleave: 12

Virtual Drive:          1          2

Track offset:          0          911

No track(s) currently spared.

-----
I  — Modify Interleaving
V  — Modify Virtual Drive Offset Table

A  — Add Track to Spare Track Table
D  — Delete Track from Spare Track Table
C  — Clear Spare Track Table
E  — Exit to Main Level

-----
Select disk diagnostic option:
```

7. Note the track offset of any virtual drives.

The program to convert Constellation I requests the track offset for any virtual drives. Write down the track offset values, if any. Use the values in step 13 of this chapter's subsection "Converting to Apple II Constellation II."

8. Exit the diagnostic program.

Press E twice.

The screen displays the floppy boot main menu.

CONVERTING TO APPLE II CONSTELLATION II

Once the firmware has been updated and the track offset recorded, run the system generation program to convert the Constellation I software, volumes and users to Constellation II.

1. Run the system generation program.

Press **S**

The screen displays:

Insert the A2C2.2 diskette in the second floppy drive.
Press < space > after inserting the diskette.

Insert the A2C2.2 diskette and **press** **SPACE** .

The screen displays:

Enter SYSGEN Password:

2. Enter the password.

Type HAI

Press **RETURN**

The password doesn't appear on the screen. The screen displays the main menu of the system generation program:

```
System Generation [x.xx]
Main Menu
(c) Copyright 1982, 1983, 1984 Corvus Systems, Inc.
```

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

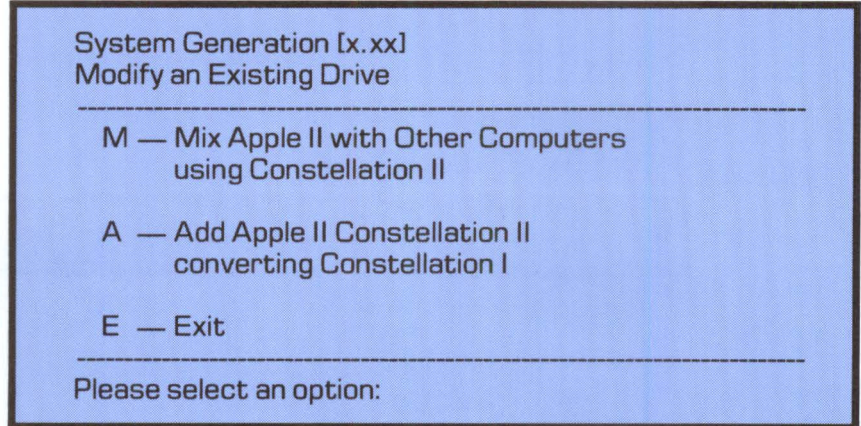
```
H  — Help
E  — Exit
```

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

3. **Select the option to modify an existing drive.**

Press M

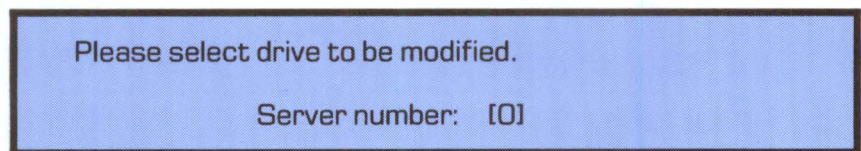
The screen displays:



4. **Select add Apple II Constellation II converting Constellation I.**

Press A

The screen displays:

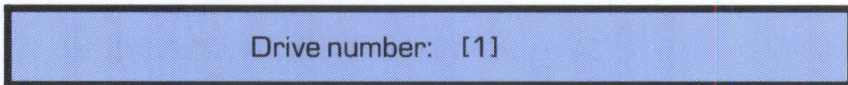


5. Select the server number.

Enter the Omninet address of the mass storage system to be modified. After entering the Omninet address,

Press **RETURN**

The screen displays:



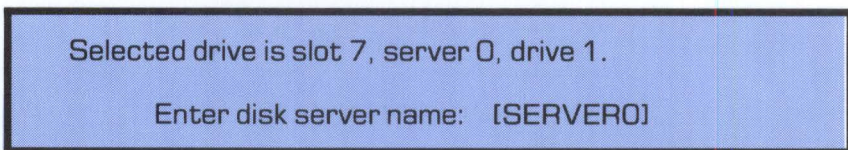
Drive number: [1]

6. Select the drive.

Press the correct number.

Press **RETURN**

The screen display is similar to:



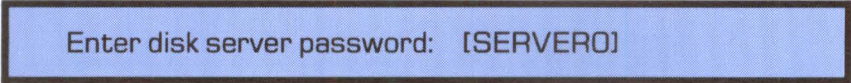
Selected drive is slot 7, server 0, drive 1.
Enter disk server name: [SERVER0]

7. Name the disk server.

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

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

The screen displays:



```
Enter disk server password: [SERVER0]
```

8. 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 A.

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

The screen displays:



```
Enter drive name: [DRIVE1]
```

9. Name the drive.

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

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

The screen displays:



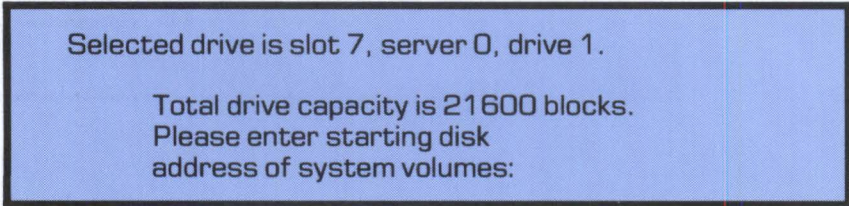
```
Enter drive password: [DRIVE1]
```

10. 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 A.

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

The screen display is similar to:



```
Selected drive is slot 7, server 0, drive 1.  
  
Total drive capacity is 21600 blocks.  
Please enter starting disk  
address of system volumes:
```

11. Enter the starting disk address.

Type the address noted in step 5 of the subsection "Finding a Free Area" and **press** **RETURN** .

The screen displays:

```
Please enter size  
of CORVUS volume: [300]
```

Press **RETURN**

The screen display is similar to:

```
Blocks 2000 through 3899 will be overwritten.  
OK to initialize the new drive? [Y/N]:
```


12. Initialize the drive.

Press **Y**

Press **RETURN**

The screen displays:

```
Initializing CORVUS volume . . .
[  0] .....
[ 40] .....
[ 80] .....
[120] .....
[160] .....

196 system table blocks initialized.
-----
```

The screen then displays:

```
Opening file BOOT.APPLE2
21 boot blocks written to CORVUS volume.

.....
Volume A2SYS initialized.
Volume A2BOOT initialized.
Volume A2BACK initialized.
.....
-----
```

The screen then displays the names of the files copied to the system volumes. After a few minutes, the screen displays:

```
Update tables with Constellation I info? [Y/N]:
```

13. Choose whether to keep the Constellation I tables.

The program allows retaining the existing volumes and users. All the volumes will be preserved, and all the user attributes will be the same.

Access to the volumes will have to be regranted once the system is generated, but the information in the volumes will be intact. DOS volumes will appear at different addresses, but Pascal and CP/M volumes will remain at the same location.

It is possible to keep any combination of Constellation I information: none, just volumes, just users or all.

Press Y to keep the Constellation I information.

The screen displays:

```
Add Constellation I volumes? [Y/N]:
```

To keep the volumes,

Press Y

The screen displays:

```
Any more virtual drives? [Y/N]:
```


If no track offset was noted in step 7 of this chapter's subsection "Updating Firmware," **press N** and go on to add Constellation I users below.

If any track offset values were recorded in step 7 of this chapter's subsection "Updating Firmware,"

Press Y

The screen displays:

Enter starting TRACK number of next virtual drive: [0]

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

The program asks for another virtual drive. Enter any more track offset values, then **press N** after the last entry.

The screen displays:

Add Constellation I users? [Y/N]:

To keep the users,

Press Y

The screen displays:

To complete the Constellation II system generation:

1. Turn off your computer.
2. Move the floppy controller card to slot 4.
3. Turn on your computer.
4. Log on as A2MGR with the password HAI.

14. Turn off the equipment.

Turn off the Apple IIe and the disk system, including the disk server.

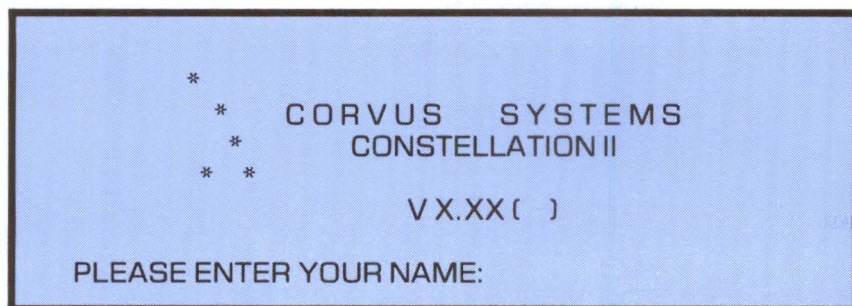
15. Move the floppy controller card.

Make sure the computer is turned off. Remove the card from slot 6 and plug it into slot 4. Remove the diskettes from the diskette drives.

16. Turn on the equipment.

Turn on the disk server, then turn on the disk system. After the READY light is lit, turn on the Apple IIe.

The screen displays:



17. Log on as A2MGR.

Type **A2MGR**

Press **RETURN**

The screen displays:

PLEASE ENTER YOUR PASSWORD:

Type **HAI**

Press **RETURN**

The screen displays:

UPDATE [x.xx] Corvus Utility Update Program
(c) Copyright 1983, 1984 Corvus Systems, Inc.

Please insert the A2C2.1 diskette in slot 4, drive 1
Press **<space>** after inserting the diskette.

18. Transfer the files to the mass storage system.

Generating the system requires transferring files from four diskettes: A2C2.1, A2C2.2, A2C2.3 and A2C2.4. The program prompts for each diskette by name. Insert each diskette in floppy drive 1, attached to the card now in slot 4. **Press** `SPACE` after inserting each diskette. When the program is finished with the last diskette, the screen displays:

```
Recovering unused space
Space recovered

Reboot required — press <space>.
```

19. Reboot the computer.

Remove the last diskette and **press** `SPACE` .

After a minute, the screen displays the Constellation II log-on message.

The mass storage system now has Apple II Constellation II software and is ready to accept Apple operating system information. Go to the appropriate system generation guide for the desired operating system:

Apple II Pascal System Generation Guide
Apple II DOS System Generation Guide
Apple II CP/M System Generation Guide
Apple II ProDOS System Generation Guide

NAMES AND PASSWORDS



Disk server name: _____
Disk server password: _____
Drive name: _____
Drive password: _____

