Disk System
Installation Guide

TRS-80 II

DISCLAIMER OF ALL WARRANTIES & LIABILITIES

NOTICE

FCC WARNING

CORVUS SYSTEMS

DISK SYSTEM
INSTALLATION GUIDE
TRS-80® MODEL II COMPUTERS

TABLE OF CONTENTS

CP/M is a registered trademark of Digital Research Corp.

SCOPE

This guide is designed to take you step by step through the procedures to install and initialize your Corvus disk system for TRS-80 Model II computers.

This guide details only the installation and initialization procedures. It does not contain explicit explanations or descriptions of the Corvus disk system and software. Further information concerning your Corvus disk system and associated software can be found in the CORVUS SYSTEMS USER GUIDE FOR CP/M COMPUTERS.

CONVENTIONS

The word **"Type"** is used throughout this guide to mean that two or more characters are to be entered at the computer keyboard. The form of a **"Type"** statement is as follows:

Type RUN SYSGEN [ENTER]

Keytop symbols such as [SPACE] within or at the end of a statement to be typed represent a single typewriter key to be pressed. When a keytop symbol is used, press the key to which it refers.

The word **"Press"** is used throughout this guide to mean that a single letter, number, or symbol is to be entered at the computer keyboard. Examples:

Press Y
Press [ENTER]

HARDWARE SETUP | 1

To use your Corvus disk system with a TRS-80 Model II
computer, the following minimum hardware and software
is required:

☐ TRS-80 Model II computer with 64K RAM
☐ One 8" floppy diskette drive
☐ Corvus Hard Disk System for TRS-80 Model II computer
  with CORVUS T2-H UTILITIES diskettes
☐ CP/M Version 2.2 diskette

*TRS-80 Model II Computer System
with Corvus Disk System*
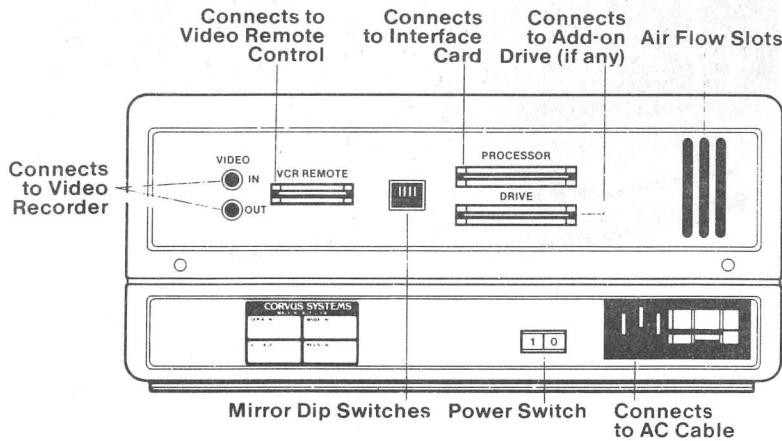
1. Power off all equipment.
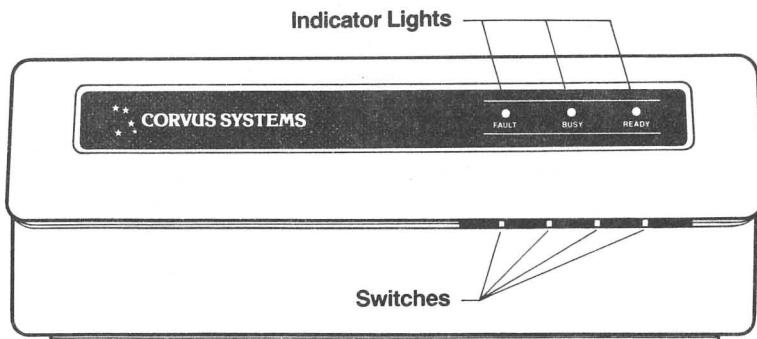
2. Place the disk unit on a flat surface, on its base. Be sure the disk drive has adequate ventilation. Also, protect the disk from strong electronic fields by not placing power cords or other electro-magentic field generating equipment on top of the drive container.

Since the Corvus disk system is a precision instrument, it must be handled carefully. The disk drive must not be operated when the unit is upside down or at an incline.

To ensure cool running equipment, the air flow slots located at the rear of the drive container should not be blocked. Also, avoid putting the unit in a sealed container (such as in a box or drawer).
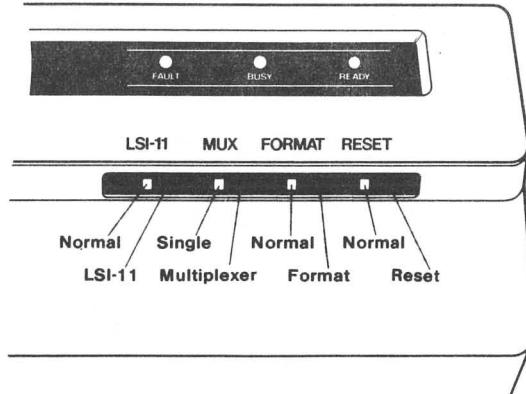
Drive Cabinet Back Panel

6

Indicator Lights

CORVUS SYSTEMS

FAULT   BUSY   READY

Switches

Drive Cabinet Front Panel

3. Flip all of the red drive controller switches to the left, which is the normal position for each of them.
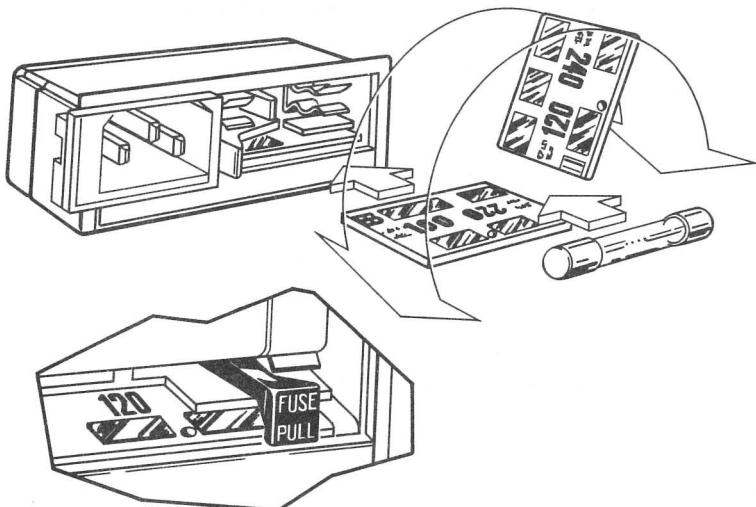
Approximately two inches (5 cm) below the indicator lights, the front panel protrudes slightly. The four switches are located directly beneath the lights, and up under the lip of the protrusion.

FAULT   BUSY   READY

LSI-11   MUX   FORMAT   RESET

Normal   Single   Normal   Normal
LSI-11   Multiplexer   Format   Reset

Switches and Lights

4. Verify that the voltage setting for the drive matches the local voltage (100v, 120v, 220v, or 240v). The drive works with 50 or 60 Hertz power in any of the voltage settings. The voltage setting, fuse, and local voltage must match. Any type of mismatch here causes damage to the drive hardware.

7

The AC power cord connector and fuse are found at the bottom right of the back panel on all drive models.
To change the voltage selection, flip the small circuit board and install the proper fuse as follows:

Voltage Selection and Fuses
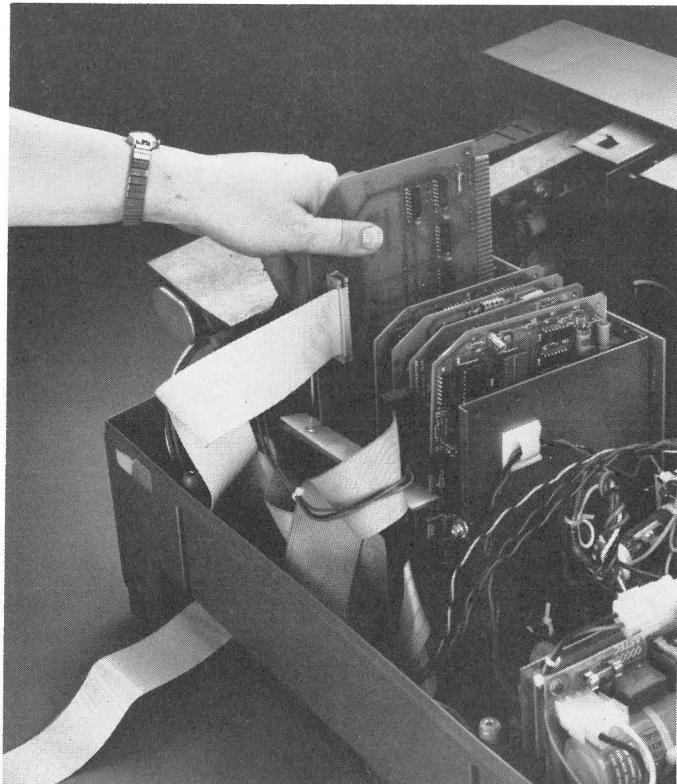
☐ Slide open the clear plastic cover door, pull the fuse-pull lever to the left, and remove the fuse.

☐ Use long-nose pliers to carefully pull the voltage circuit board out of the fuse housing. To select the proper operating voltage, position the circuit board so that the desired voltage displays on the top left side of the board. Push the board firmly into the slot.

☐ Do not re-insert the fuse you removed if you have chosen a different voltage setting from the one you received with the drive. Select the correct slow blow fuse using the following table:

Disk Drives:
100 or 120 volt 2.0 amp
220 or 240 volt 1.0 amp

☐ To return the fuse to its receptacle, push the fuse-pull lever to the right and insert a fuse into the holder. Slide the clear plastic cover door to the right to expose the AC power cord connector.

5. Connect the 34 pin flat cable to the disk drive port labelled PROCESSOR on the rear bezel. The cable must exit downward, with the red stripe on the right, as you look directly at the rear of the drive. (Note that this cable must not be coiled because coiling increases signal distortion.)

6. Remove the screws securing the top of your TRS-80 Model II computer and remove the cover.

7. Remove the expansion plug cover from the lower rear area of your Model II and replace the cover plate with the one supplied with your Corvus interface card. You will notice a notch at the bottom of the cover plate to allow for the exit of the Corvus flat cable. Secure the cover plate to the Model II after you have routed the flat cable through the expansion port area.

*View of TRS-80 Model II Computer Showing
Corvus Interface Card with Cable on Left
Side of Card Cage.*

9

8. Insert the Corvus interface card into any available peripheral slot in the TRS-80 Model II card cage. Component side of the card should face same direction as the other cards.

9. Connect the free end of the flat cable to the interface card. The stripe should be on the bottom when the card is in the card cage.

10. Carefully slide the top of the computer back on and replace the screws.

11. Turn on the computer.

12. Connect the AC power cord to the disk unit and to a power receptacle. Turn on the drive.

After approximately 40 seconds, the READY light should be on, the BUSY and FAULT lights should be off, indicating that the disk system is ready.

The power switch is located in the lower right hand corner of the back panel.

If the disk system does not become ready after one minute, then flip the RESET switch, which is the rightmost switch on the front of the drive cabinet.

13. If the drive is not ready after you have flipped the RESET switch, see the "Troubleshooting" section of the CORVUS SYSTEMS' USER GUIDE FOR CP/M COMPUTERS.

INITIALIZATION FOR CP/M | 2

This procedure will create CP/M areas on the Corvus drive. The floppy drives use volume A: and B:, volumes from C: on are on the hard drive.

After initialization is completed it will be necessary to run the CLINK program on each computer each time it is turned on. The CLINK program you run depends upon the model drive being used.

For the Model 6 run CLINK2FV
For the Model 11 run CLINK2TN
For the Model 20 run CLINK2TW

Before initializing your Corvus disk, copies of the Corvus TRS-80 Model II Utility diskettes should be made, using the PIP command.

1. Place the CP/M Ver 2.2 diskette in the diskette drive.

2. Turn on your computer.

The screen displays:

```
CP/M for TRS-80 Model II
64K Version 2.2


A>__
```

3. On TRS-80 Model II computers with a single floppy diskette drive, you will have to let the computer know that the CORVUS T2-H UTILITIES diskettes are single-sided, single-density format. This is done in a number of different ways depending on the CP/M software used. See the specific instructions for the CP/M system for your computer. For example, with the Lifeboat version of CP/M, you will need to run a program called ONEDRIVE. First,

11

type DIR [ENTER] to display the directory and make sure that you have this program. Next, **type** ONEDRIVE [ENTER] .

The screen displays:

```
CP/M now set for a single physical drive
Logical drives A, B, C or D may be used.
CP/M will prompt you to insert proper diskette


A>__
```

4. Make a copy of your CP/M boot diskette. Use the copy of the CP/M boot diskette, and store the original master in a safe place.

5. We need to make a 63K version of CP/M. This is usually done with a combination of the programs MOVCPM.COM and SYSGEN.COM. However, some companies may supply a special utility that combines these functions. For example, Pickles and Trout provide a utility, RESIZER.COM, that performs this dual function. Consult your CP/M manuals if necessary. The example here assumes that MOVCPM.COM and SYSGEN.COM are available.

Type MOVCPM 63 * [RETURN] .

The screen displays:

```
Constructing 63K System
New system in memory at 900H (Sysgen image)
Is ready for "SYSGEN" or "SAVE 45 CPM63.COM"


A>__
```

6. **Type** SYSGEN [RETURN] .

The screen displays:

```
SYSGEN VER 2.0
SOURCE DRIVE NAME
(OR RETURN TO SKIP):
```

12

7. **Press** RETURN .

The screen displays:

DESTINATION DRIVE NAME
(OR RETURN TO REBOOT):

8. **Press** A.

The screen displays:

DESTINATION ON A, THEN TYPE RETURN

9. **Press** RETURN .

The screen displays:

FUNCTION COMPLETE
DESTINATION DRIVE NAME
(OR RETURN TO REBOOT):

10. Depress the RESET switch on the front of the TRS-80 Model II to reboot your computer system.

The screen displays:

CPM for TRS-80 Model II
63K Version 2.2

A>__

The 63K system will have booted.

11. **Type** B ENTER

The screen displays:

Mount B: on drive, then <CR>

12. Insert the diskette labeled CORVUS T2-H UTILITIES VOL. 1 OF 4 into floppy drive and close the door.

13. **Press** ENTER

The screen displays:

B>__

14. Type PUTGET [ENTER]

The screen displays:

--- CORVUS PUT/GET ROUTINE ---
(VERSION 1.4S/TT)

PUT, GET, OR FILL (P/G/F)

15. Press F

The screen displays:

DRIVE#(1-4)? __

16. Press 1

The screen displays:

HEX BYTE TO FILL DISC WITH? __

17. Type E5 [ENTER]

The screen displays:

STARTING DISC ADDRESS? __

18. Type 2320 [ENTER]

The screen displays:

NUMBER OF SECTORS? __

19. Type 64 [ENTER]

The screen displays:

PUT, GET, OR FILL (P/G/F)

20. Press F

The screen displays:

DRIVE#(1-4)? __

21. Press 1

The screen displays:

HEX BYTE TO FILL DISC WITH? __

22. Type E5 [ENTER]

The screen displays:

STARTING DISC ADDRESS? _

23. The starting address of the directory for drive D: varies with the model of the Corvus hard disk.

For a Model 6   **Type** 24272 [ENTER]
For a Model 11   **Type** 48592 [ENTER]
For a Model 20   **Type** 49380 [ENTER]

The screen displays:

NUMBER OF SECTORS? _

24. Type 64 [ENTER]

The screen displays:

PUT, GET, OR FILL (P/G/F)

25. If a Model 6 or Model 11 drive is being initialized skip to Step 30. If a Model 20 drive is being initialized, drive E: must be initialized.

Press F

The screen displays:

DRIVE#(1-4)? _

26. Press 1

The screen displays:

HEX BYTE TO FILL DISC WITH? _

27. Type E5 [ENTER]

The screen displays:

STARTING DISC ADDRESS? _

28. Type 96440 [ENTER]

The screen displays:

NUMBER OF SECTORS? _

15

29. Type 64 [ENTER]

The screen displays:

PUT, GET, OR FILL (P/G/F)

30. Exit the PUTGET program by holding down the <CTRL> key and **pressing** C.

The screen displays:

B>__

31. The disk is now initialized. The Corvus link may now be installed. The link is installed by running a program. The name of the program depends on the model drive being linked.

For the Model   6 **type** CLINK7FV [ENTER]
For the Model 11 **type** CLINK7TN [ENTER]
For the Model 20 **type** CLINK7TW [ENTER]

The screen displays:

--- CORVUS LINK INSTALLED ---

B>__

The software setup has now been completed. The Corvus hard disk is now initialized for use with a TRS-80 Model II computer and the Corvus link has been installed.

Testing the Drive

The procedure described below is a simple test of the Corvus drive. Note that all standard CP/M commands can be used with the Corvus drive.

1. Type A:PIP C:=B:*.DOC [ENTER]

The screen displays:

COPYING—
INDEX.DOC
CERROR.DOC
CDIAGNOS.DOC

B>__

2. **Type** C: [ENTER]

The screen displays:

C> _

3. **Type** DIR [ENTER]

The screen displays:

C:INDEX DOC: CERROR DOC: CDIAGNOS DOC
C> _

4. **Type** ERA *.* [ENTER]

The screen displays:

ALL (Y/N)?_

5. **Type** Y [ENTER]

The screen displays:

C> _

The drive is now ready to use. The hardware has been set up and the drive initialized. The Corvus link has been installed. The hardware and software has been quickly tested by transfer of files from a floppy to the Corvus hard disk. Files may now be copied to the hard disk from floppies using the PIP program.

Remember that the appropriate CLINK2 program must be run each time each computer is powered on.