

# NOTICE

## FOR CP/M USERS

### SPECIAL CONSIDERATIONS FOR 20 MEGABYTE DRIVES

The programs and document files listed in our CP/M utilities manual are for the CORVUS 10 megabyte drive. In most cases, there were only minor changes made in these files for our 20 megabyte drive. However, a significant change is that the defaults setup in our CP/M BIOS linkage programs (BIOSC.ASM and CLINK2.ASM) divide the 20 megabyte drive up into three 6.4 megabyte volumes instead of two 4.8 megabyte volumes as used on the 10 megabyte drive. Thus, the configuration and directory initialization procedure in the diskette file CORVUS.DOC is slightly different than shown in the manual. Please read the document files on the diskettes shipped with your system before you start the configuration process.

CONGRATULATIONS!

Your ownership of this CORVUS HARD DISK SYSTEM makes you a member of a very special group.

This group of CORVUS users knows the speed, dependability and versatility that our HARD DISK SYSTEM provides for microcomputers.

Because we do not wish to delay your drive shipment, we have included a DRIVE MANUAL that will soon be superceded by a new edition.

Please return your warranty card to CORVUS SYSTEMS. This will insure your receipt of the new manual as soon as it is ready.

Once again . . . Congratulations  
CORVUS SYSTEMS, INC.

N O T I C E

INCLUDED IN YOUR SHIPMENT IS A SMALL ACCESSORY BOX CONTAINING SOFTWARE, MANUAL, POWER CORD, ETC.

UPS OFTEN DELIVERS ONE BOX OF A TWO OR THREE BOX SHIPMENT. WHEN THIS DOES OCCUR, PLEASE BE PATIENT AND WAIT ONE OR TWO DAYS TO ALLOW UPS TO DELIVER YOUR MISSING BOX.

IF AFTER THE ALLOTTED TIME HAS EXPIRED AND THE 'MISSING' BOX STILL HAS NOT BEEN DELIVERED, PLEASE NOTIFY OUR SERVICE DEPARTMENT IMMEDIATELY.

CORVUS SYSTEMS, INC.  
2029 O'TOOLE AVENUE  
SAN JOSE, Ca. 95131

Hours: 8:00 a.m. to 5:00 p.m. Monday through Friday  
Telephone: 946-7700, Service Dept. Ext. 362

# NOTICE

THIS UNIT IS EQUIPPED WITH AN ~~ELECTRO-MECHANICAL~~ CARRIAGE LOCK. WHEN POWER IS TURNED OFF, THE HEADS AUTOMATICALLY RETRACT AND LOCK. WHEN POWER IS TURNED ON, THE HEADS UNLOCK.

## WARNING

DO NOT REMOVE THE DRIVE CABINET TOP.

DO NOT ATTEMPT TO MANUALLY UNLOCK THE HEADS.

DO NOT BREAK OR REMOVE EITHER OF THE WARRANTY VOID SEALS.

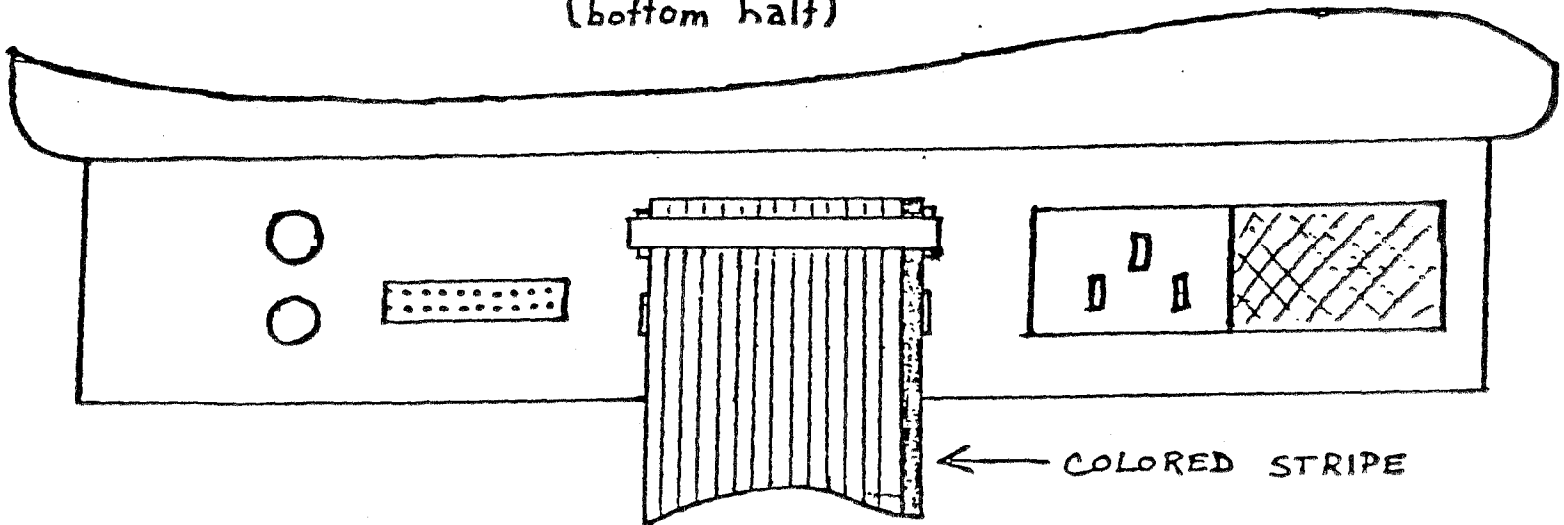
# WARNING

YOU HAVE RECEIVED A FLAT CABLE WITH YOUR DRIVE.  
THIS FLAT CABLE IS CONNECTED TO THE CORVUS  
INTERFACE CARD.

TO PREVENT THE DESTRUCTION OF THE HARDWARE IN  
YOUR FINE NEW DRIVE, YOU MUST CONNECT THE  
INTERFACE FLAT CABLE IN THE FOLLOWING MANNER.

WHEN FACING THE DRIVE CABINET BACK PANEL, THE  
COLORED STRIPE ON THE CABLE MUST BE TO YOUR  
RIGHT. THE CABLE MUST LEAD DOWN AND AWAY FROM  
THE CONNECTOR AS DEPICTED IN THE DIAGRAM BELOW.

DRIVE CABINET BACK PANEL  
(bottom half)



# NOTICE

You have received the new revision of the CORVUS Controller with a CORVUS Drive, a hardware update of your CONSTELLATION and/or interface card may be necessary.

The CORVUS Drives, CONSTELLATION, and interface cards that have the new revisions are labeled with a black sticker that has the white letters REV B printed on it. CONSTELLATIONS, interface cards, and drives not labeled with the REV B sticker are referred to as REV A.

REV B DRIVES USE ONLY REV B CONSTELLATIONS AND INTERFACE CARDS. HOWEVER, REV A DRIVES CAN USE BOTH REV A AND REV B CONSTELLATIONS AND INTERFACE CARDS.

Revision A CONSTELLATIONS and interface cards may be updated by converting them to REV B. If you need to update your CONSTELLATION and/or interface card, contact CORVUS SYSTEMS, INC.

## WARNING

DO NOT USE REV A CONSTELLATIONS OR INTERFACE CARDS WITH REV B DRIVES.

## CORVUS DRIVE FRONT PANEL

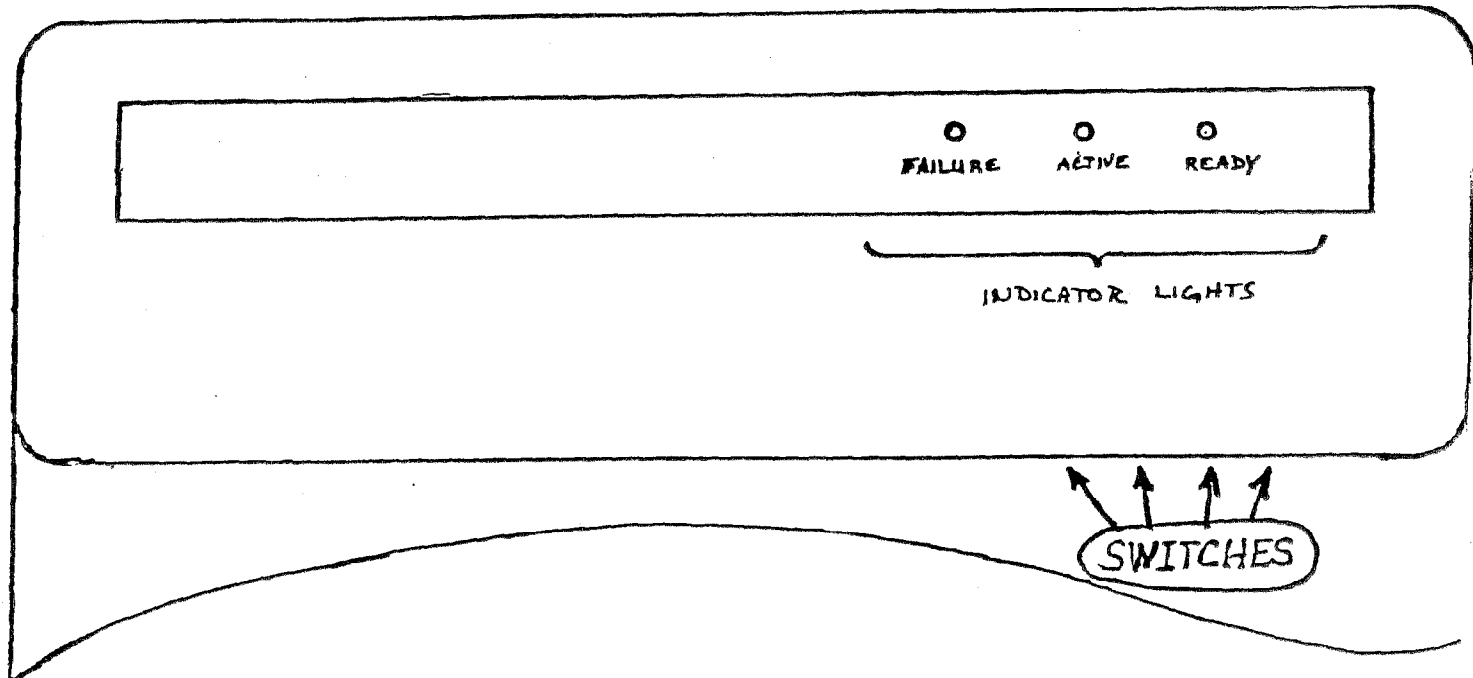
NOTE: READ THE FOLLOWING CAREFULLY

1. There are three red indicator lights on the upper right hand corner of the front panel.

The light to left, labeled FAILURE, indicates an error in operation such as--read error, write error, hard error, soft error, or you may have given a command that cannot be carried out.

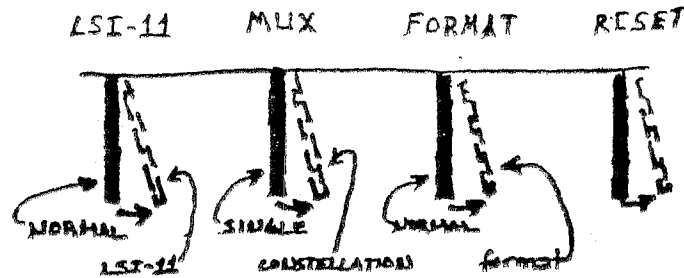
The center light, labeled ACTIVE, indicates the drive is busy. If your FORMAT switch is set to normal, the ACTIVE light will flicker and then go off when you power on or reset.

The light to the right, labeled READY, indicates the drive is ready to be used. When you power on, all three lights come on. Then the FAILURE and ACTIVE lights go off and the READY light stays on. When your drive is ready, only the READY light stays on. The READY light is dimmer when the MUX switch is set to Constellation.



FRONT PANEL (TOP)

# SWITCHES



2. Approximately two inches below the indicator lights, the front panel protrudes slightly. Under the lip of the protrusion and directly beneath the lights are four switches labeled from left to right: LSI-11, MUX, FORMAT, RESET. (see diagram)

The LSI-11 switch is put in the LSI-11 position if an LSI-11 is attached to the drive. Otherwise, it remains in the NORMAL position.

The MUX switch is set to Constellation only when a Constellation is attached to the system. Otherwise, it remains at the single setting.

The FORMAT switch is put in the FORMAT position only when formatting the drive. Otherwise, it is left at the NORMAL setting.

The RESET switch is used to reset the drive.

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## CORVUS DRIVE BACKPANEL

NOTE: READ THE FOLLOWING CAREFULLY

1. There are two video connectors on the bottom left side of the back panel. They are used if you have a Mirror.

The top connector is labeled VIDEO IN. It connects to the VIDEO OUT from the video cassette. The lower connector is labeled VIDEO OUT. It connects to the VIDEO IN from the video cassette.



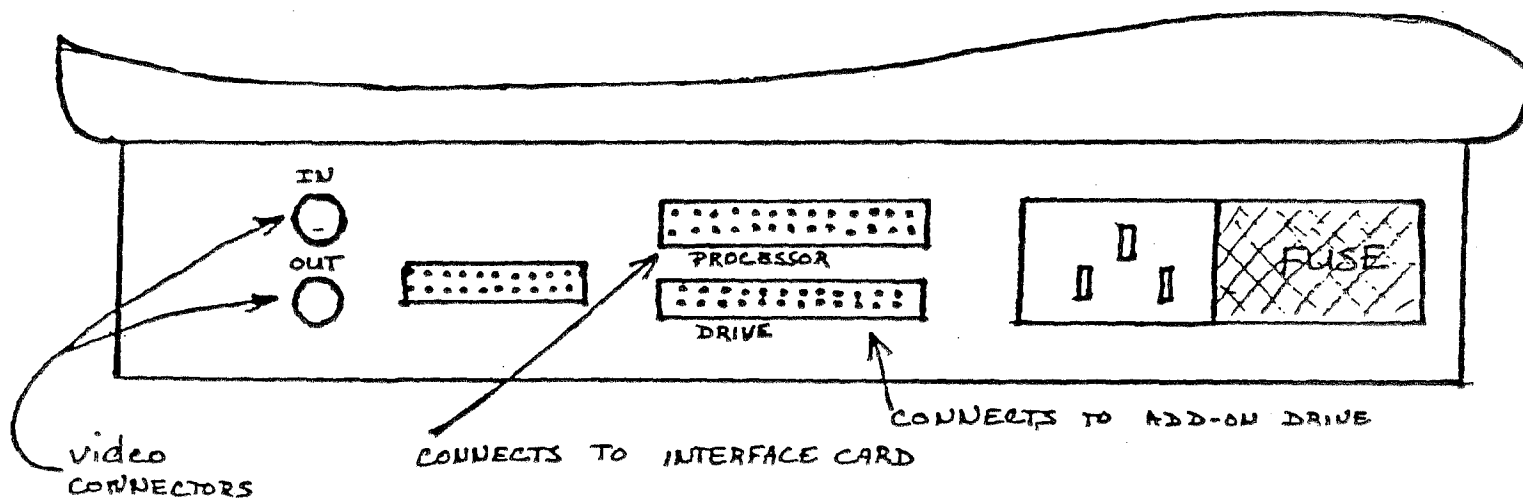
2. There are three flat cable connectors near the bottom center of the backpanel. You may use the two to the right. The top one, labeled processor, connects to the flat cable leading to your interface card. The lower one, labeled Drive, connects to the flat cable leading to an add-on drive (if you have one).
3. To the very right, there is the AC cord connector and fuse. You have a voltage option of 120v or 220v.

To change voltage, you must change to the proper fuse and flip the small circuit board as follows (see diagram also).

Open cover door and rotate fuse pull to left.

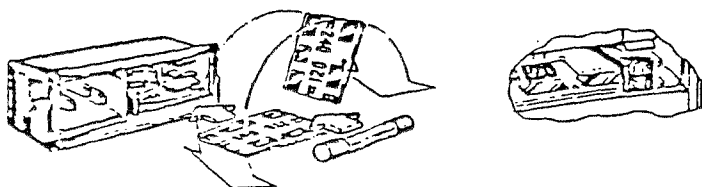
Select operating voltage by orienting PC Board to position desired voltage on top left side. Push board firmly into module slot.

Rotate fuse-pull back into normal position and re-insert fuse into holders, using caution to select correct fuse value.



## REAR PANEL (bottom)

### VOLTAGE SELECTION



NOTE: BEFORE OPERATING THE DRIVE, YOU MUST DISENGAGE THE CARRIAGE LOCK. TO DISENGAGE THE CARRIAGE LOCK:

1. MAKE SURE POWER IS OFF
2. REMOVE THE EIGHT (8) SCREWS HOLDING THE DRIVE BOX TOP ON. REMOVE THE TOP.
3. INSERT A SCREW DRIVER INTO THE CARRIAGE LOCK HOLE AND TURN THE CARRIAGE LOCK SCREW CLOCKWISE APPROXIMATELY 19.5 TURNS OR UNTIL YOU FEEL RESISTANCE. IF THE SCREW DOES NOT EASILY TURN, STOP. IT MAY ALREADY BE DISENGAGED.
4. REPLACE THE DRIVE BOX COVER.

All connections within the drive have been made already.

## 1. INSTALLATION

### A. Unpacking

Your CORVUS 11S System includes the following:

1. The disk drive
2. The power supply
3. The CORVUS Personality Card
4. A DC power supply cable
5. An AC power supply cord
6. The CORVUS 11S
7. The CORVUS 11S disk handling and carriage lock instructions
8. CORVUS 11S Operating Instructions

NOTE: Please be sure to read the enclosed disk handling and carriage lock instructions before proceeding.

### B. Cabling Instructions

You will find a flat cable exiting from the back of the CORVUS Disk Drive. This cable must be connected to the CORVUS Personality Card before the card is plugged into the S-100 Computer System.

The connector at the end of the cable should be attached to the set of pins on the CORVUS Personality Card. When the cable is connected correctly, the red stripe on the cable should be on the LEFT, and the cable should exit upwards away from its connector away from the Personality Card. Be sure that all the pins on the Personality Card's connector go into the matching holes on the cable's connector.

### C. Installing the CORVUS Personality Card

1. TURN OFF THE POWER SWITCH AT THE BACK OF THE S-100 COMPUTER SYSTEM BEFORE PLUGGING IN THE CARD.
2. Remove the cover from the computer.
3. The CORVUS Personality Card may be plugged into any slot in the computer.
4. Insert the PCB edge connector into the chosen slot in the computer.
5. Replace the cover.

### D. Connecting the Power Supply

The power supply must be connected to the disk via the DC power supply cable and to an AC outlet via the AC power supply cord.

The large square connector on the DC cable should be plugged into the power supply. You will notice that the connector has three squared

prongs which prohibit improperly attaching it to the power supply. When lined up properly, the connector should snap securely into the power supply.

The connector at the other end of the DC cable should be attached to the ten large pins at the upper right side of the rear of the disk drive. There should be a small red connector already attached to the two rightmost pins -- the DC connector should be on the ten leftmost pins. The cable should exit away from its connector on the side of the connector that is away from the disk drive.

The AC cord should be plugged into the power supply and into an AC outlet.

## II. INTRODUCTION TO THE CORVUS 11S

The CORVUS 11S is an intelligent peripheral that adds cost effective mass storage to the S-100 Computer System's Operating CP/M, while maintaining compatibility with existing hardware and software. The system package consists of the IMI 7710 "Winchester" disk drive with CORVUS Intelligent Controller, a complete Power Supply, and an Intelligent Module for the S-100, consisting of an interface card and its associated software.

## III. DESCRIPTION OF THE CORVUS 11S

### A. Ultra Compact 10 Megabyte Disk Drive

The disk drive is a technology leader that provides eleven million bytes of unformatted magnetic storage in less than two-thirds of a cubic foot of space. The unit features a closed loop servo. This assures accurate and rapid read/write head positioning independent of temperature and other environmental factors. There are three data surfaces and one servo on two eight inch platters.

The drive electronics are contained in three 7.5 inch by 10.5 inch printed circuit boards which are enclosed within the drive housing. This housing also contains a fourth PC card of the same dimensions which is the CORVUS Intelligent Disk Controller.

### B. CORVUS Intelligent Controller

This controller is based on the Z-80 processor with 16K of Random Access Memory. Firmware for this controller provides such features as:

- \* Sector Buffering
- \* Read after Write
- \* Error recovery with automatic retries
- \* Transparent formatting with CRC error detection
- \* High speed data transfer utilizing DMA

## Limited Warranty

Implied warranties limited to duration of express warranty (some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you).

To the original Purchaser only, CORVUS SYSTEMS, INC. warrants each of its products, and all components therein contained, to be free from defects in materials and/or workmanship for a period of six (6) months from the date of purchase. In the event of malfunction, or other indication of failure attributable directly to faulty workmanship and/or material, then, upon return of the product to CORVUS SYSTEMS, INC. at 2029 O'Toole Avenue, San Jose, California 95131 (postage paid) "Attention Warranty Department," CORVUS SYSTEMS, INC. will, at its option, repair or replace said product to proper operating condition. All such repairs or replacements shall be rendered by CORVUS SYSTEMS, INC. without charge for parts or labor when the product is returned within six (6) months of the date of purchase.

The responsibility for the failure of any CORVUS computer product, or component thereof, which at the discretion of CORVUS SYSTEMS, INC., shall have resulted from accident, abuse, or misapplication of the product, shall be assumed by the customer, and CORVUS SYSTEMS, INC. shall assume no liability as a consequence of such events under the terms of this warranty. Further, the limited warranty provided with the CORVUS SYSTEMS computer product also shall be void if the product is used with a non-CORVUS SYSTEMS authorized product or if customer causes or permits the CORVUS SYSTEMS product to be repaired or modified by anyone other than a CORVUS SYSTEMS authorized warranty service center.

CORVUS SYSTEMS shall not be liable under any warranty for any CORVUS 11 System which Purchaser claims to be defective where the factory-sealed enclosure on the disk drive unit has been opened, broken or damaged in any manner, or if there is any indication that someone has attempted to open the sealed enclosure.

Purchaser retains sole responsibility for all Software, Firmware, Information or Memory Data of Purchaser or its customers contained in, stored on, or integrated with any CORVUS System returned to CORVUS under this warranty.

CORVUS will not be liable with respect to any CORVUS 11 System not returned in its original shipping material or a functionally equivalent container or any CORVUS 11 System

which was not prepared for shipment in strict accordance with instructions set forth in the CORVUS 11 User Guide.

While every effort on the part of CORVUS SYSTEMS, INC. has been made to provide clear and accurate technical information on the application of its products, CORVUS SYSTEMS, INC. assumes no liability in any events which may arise from the use of said technical information.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

**This warranty in lieu of all other express warranties which now or hereafter might otherwise arise with respect to this product. Any and all implied warranties, including the warranties of merchantability and fitness for particular purpose, shall have no greater duration than the duration period for the express written warranty applicable to this product, as shown above, and shall terminate automatically at the expiration of such duration period. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. No action shall be brought for breach of any implied or express warranty after six (6) months subsequent to the expiration of the duration period of the express written warranty.**

**Incidental and consequential damages caused by malfunction, defect or otherwise, and with respect to breach of any express or implied warranty, are not the responsibility of CORVUS SYSTEMS, INC. and, to the extent permitted by law, are hereby excluded both for property damage and, to the extent not unconscionable, for personal injury damage. Some states do not allow the exclusion or limitation of Incidental or Consequential damages, so the above limitation or exclusion may not apply to you.**

*Corvus Systems Inc.*

2029 O'Toole Avenue  
San Jose, CA 95131  
408/946-7700

## Warranty Registration Card

Serial Number \_\_\_\_\_

Model Number \_\_\_\_\_

Purchase Date \_\_\_\_\_

Purchased From \_\_\_\_\_

(Name of Store)

\_\_\_\_\_  
(Address)

Application or Use \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone Number \_\_\_\_\_

Comments \_\_\_\_\_

*Corvus Systems Inc.*

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