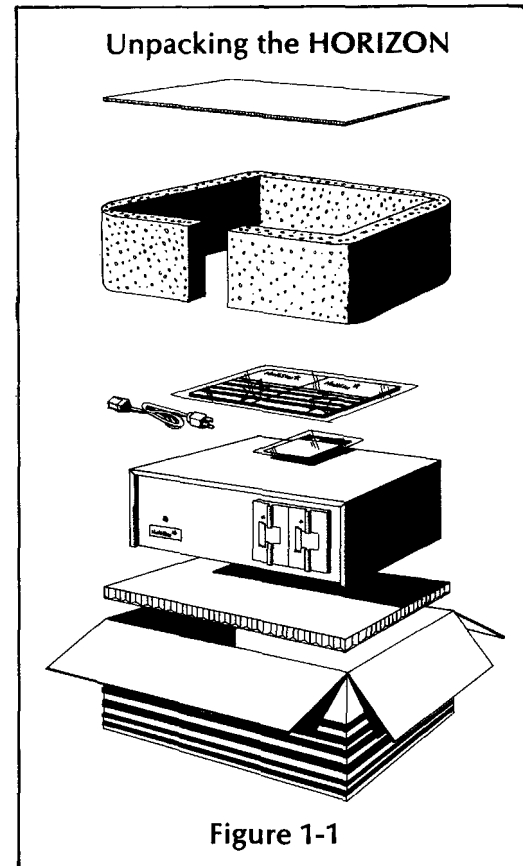


UNPACKING

1

Lift the HORIZON and the foam packing material out of the shipping container.



Remove the packing material. Place the HORIZON on a flat surface capable of supporting a weight of about 50 pounds.

In addition to the packing materials and this User Guide, the container should include:

- HORIZON Computer
- A.C. Power Cord
- Documentation and Diskette Package

Verify that the contents of the container match this list.

Should you find that anything is missing from the container, or should there appear to be damage due to shipping, please notify your dealer immediately.

NOTE

Keep the shipping container and packing material. If you need to return your HORIZON to the factory, the computer must arrive undamaged to qualify for warranty service. Repacking the computer in the original container provides the best protection for it.

INSTALLATION

2

2.1 INTRODUCTION

The HORIZON is a versatile computer that can form the nucleus of either a single-user or a multi-user configuration.

If you wish to create a single-user system, you will probably want to connect the HORIZON to a terminal and a printer. These connections are very simple, and the instructions are given below.

To incorporate one or more 18Mb hard disks into your computer system, follow the directions in the North Star HD-18 User/Technical Manual.

To create a HORIZON-based computer system that can serve up to five users, follow the directions in the North Star TSS-A or TSS-C Multi-User System Operation Manual.

2.2 SELECTING A SITE

You can place the HORIZON in almost any convenient location, although the computer should not be exposed to extremes of temperature or humidity. Dust and dirt can also be harmful to the HORIZON. In general, an environment that is comfortable for the operator is also suitable for the computer.

2.3 CONNECTING A TERMINAL TO THE HORIZON

CAUTION

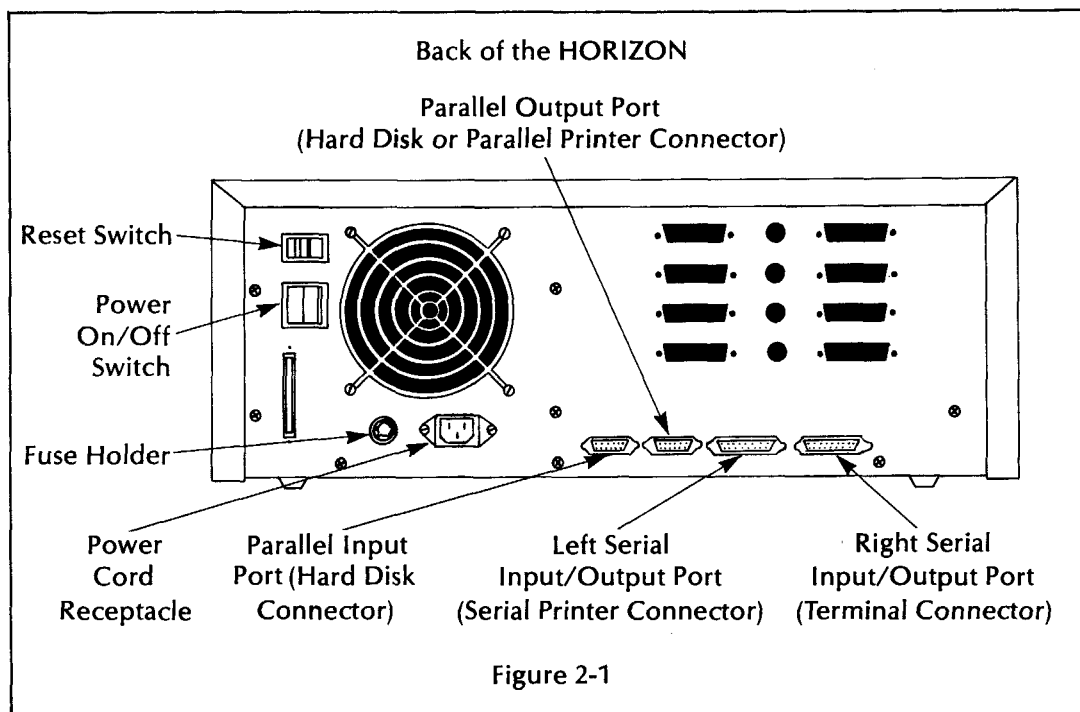
The terminal you select must have an RS-232-C serial interface. Read the instruction manual provided by the manufacturer to be sure that the terminal is appropriate and that you observe all necessary precautions in handling it.

Follow the steps specified by the manufacturer to set these stand operating parameters:

9600 Baud
Full Duplex
No Parity

If the terminal cannot be set for 9600 baud, consult the HORIZON Computer System Manual for instructions.

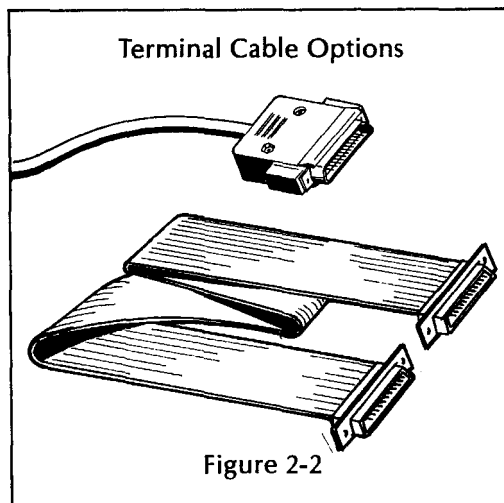
Position the HORIZON so the back is facing you. The controls and connectors on the back of the computer are labelled in Figure 2-1.



Connect the HORIZON and the terminal before you attach the power cord to the computer.

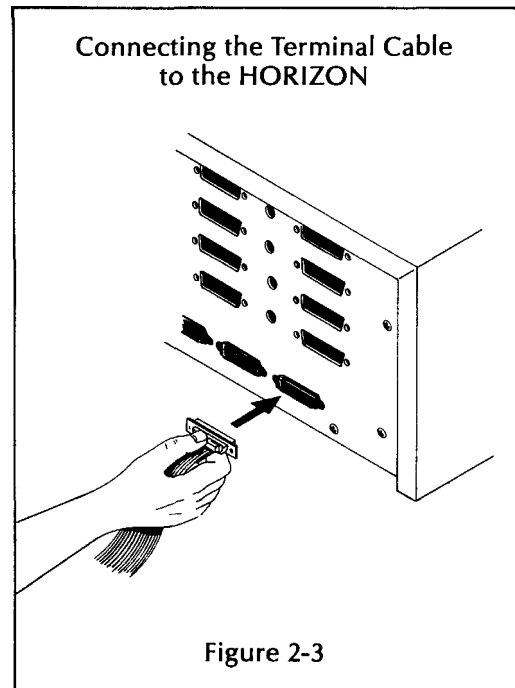
Make sure that the power to the terminal is turned off and the power cord is unplugged from the wall socket.

The terminal is connected to the HORIZON by an RS-232 cord or cable. The cord or cable must end in a "D" shaped connector, as shown in Figure 2-2.





Press a cable connector carefully over the right serial port connector on the HORIZON back panel (Fig. 2-3). These connectors only match one way, so make sure they are properly aligned.



Use the same procedure to connect the other end of this cable to the MAIN or TERMINAL port on the back of the terminal. Consult the manual for the terminal for the location of the appropriate port.

2.4 CONNECTING A PRINTER TO THE HORIZON

A printer with either an RS-232 serial interface or a parallel interface can be connected to the HORIZON. A serial printer can be placed fifty or more feet away from the computer, while the cable to a parallel printer can be no more than ten feet long.

Before connecting the printer and the HORIZON, read the instruction manual provided with the printer. Follow the steps specified by the manufacturer to set these standard operating parameters:

1200 Baud
Full Duplex
No Parity

If the printer you are using cannot operate at 1200 baud, consult the HORIZON Computer System Manual for instructions.

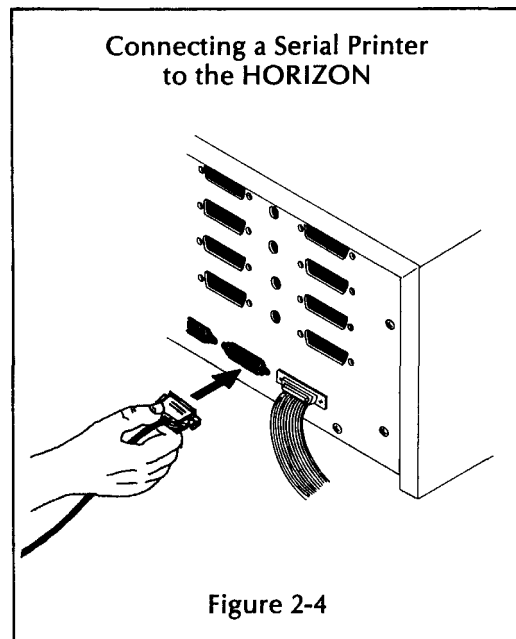
Connect the computer and the printer before attaching the power cord to the computer.

Make sure that the power to the printer is turned off and the power cord is unplugged from the wall socket.

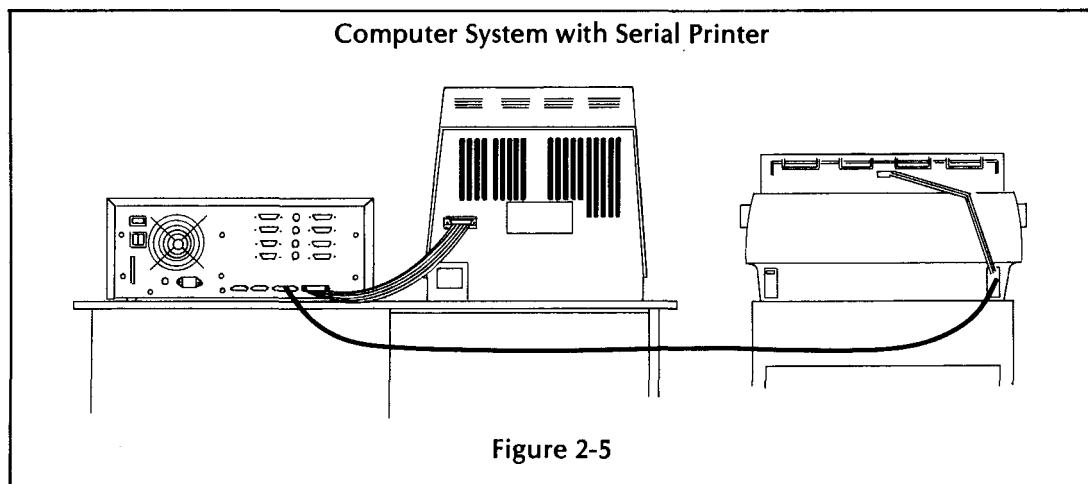
2.4.1 Serial Printer

A serial printer can be connected to the HORIZON by either a flat ribbon cable or a round cord. The printer cord or cable must end in the same kind of "D" connector shown in Figure 2-2, above.

Take the free end of the printer cable and press the "D" shaped connector carefully over the left serial port of the HORIZON back panel shown in Figure 2-4. These connectors only match one way, so make sure they are properly aligned.



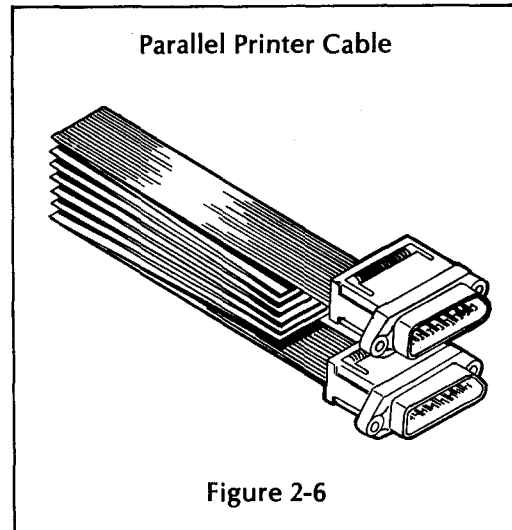
The HORIZON, terminal, and printer will now be connected as shown in Figure 2-5.



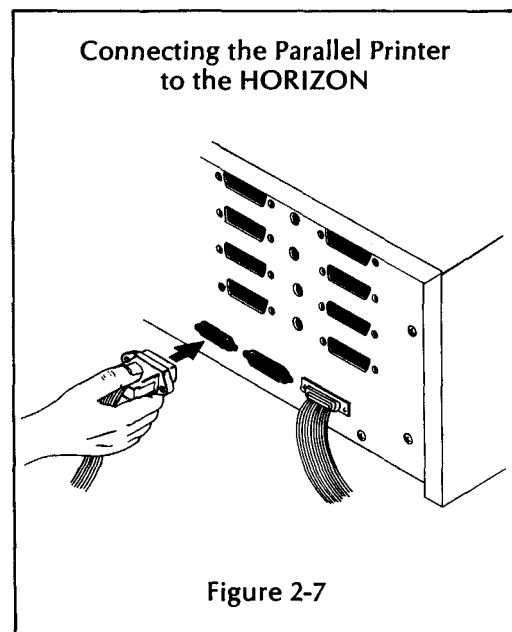


2.4.2 Parallel Printer

To connect a parallel printer to the HORIZON requires the DB-232 cable shown in Figure 2-6. If the appropriate cable is not available, consult your authorized North Star Dealer for assistance.



Press one end of the printer cable carefully over the parallel output connector on the back of the HORIZON (Fig. 2-7). These connectors only match one way, so make sure they are properly aligned.



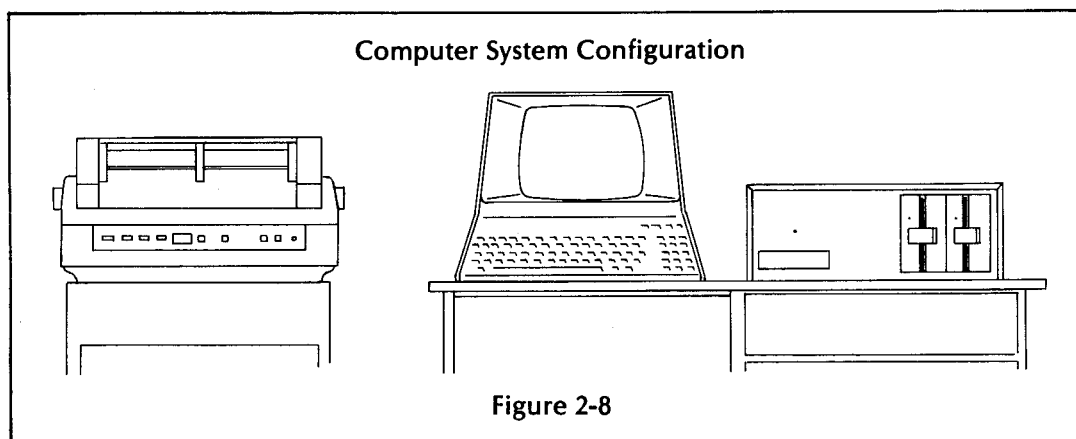
Use the same procedure to connect the other end of this cable to the appropriate connector on the printer. Consult the manual for the printer for the location of this connector.

2.5 SITUATING THE SYSTEM

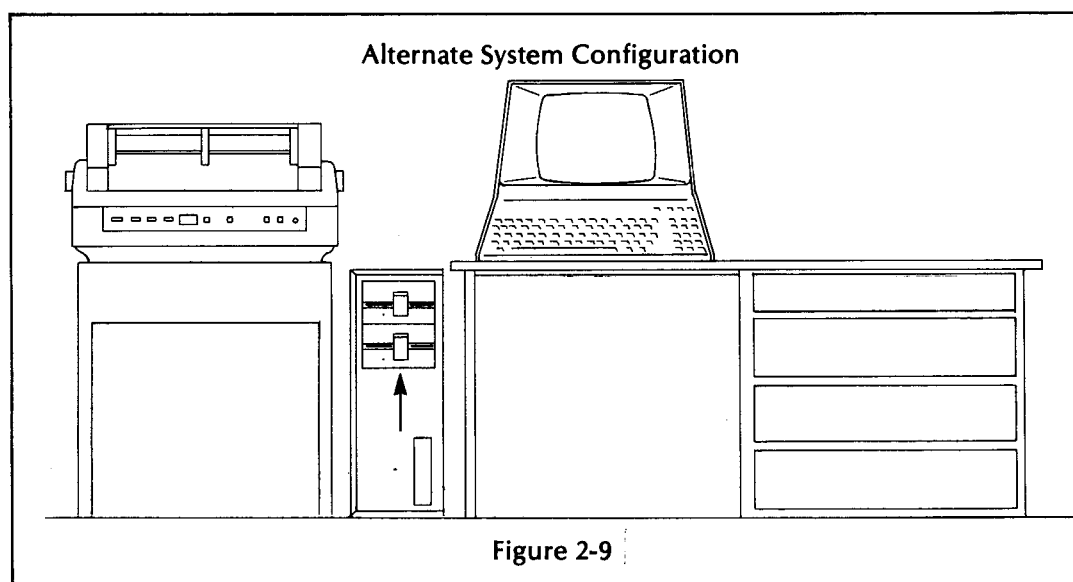
After making the necessary connections, turn the HORIZON, the terminal and the printer around so that the front of the components face you. Position the equipment so that you can use it conveniently.

It is important to rest the HORIZON and the printer on different surfaces, so that printer vibration does not affect the computer.

Situate the computer so you have easy access to the floppy disk drive(s) on the front of the HORIZON, and can reach the power switch and reset switch on the back of the computer. The HORIZON can be placed horizontally, as shown in Figure 2-8.



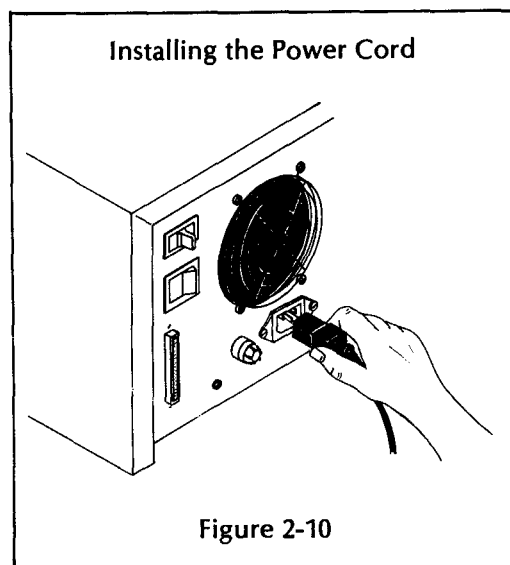
The computer can also be placed on end, as shown in Figure 2-9. If you choose this arrangement, note that the disk drive(s) **MUST** be positioned at the top of the unit, as indicated.





2.6 POWERING UP THE COMPUTER SYSTEM

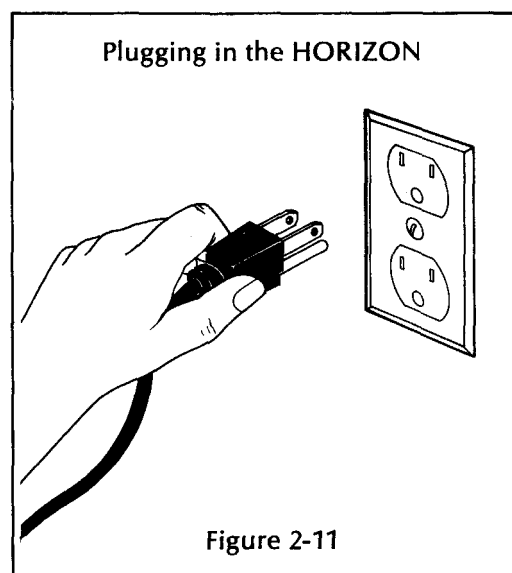
Take the socket end of the power cord supplied with the HORIZON. Press the socket firmly over the three-prong receptacle on the computer's back panel (Fig. 2-10).



CAUTION

The HORIZON operates on the standard electrical power supplied to offices, schools and homes. The computer **MUST BE ELECTRICALLY GROUNDED**, however.

All HORIZON system components must be powered from grounded (3-wire) A.C. outlets on the same circuit. Do not use any plug adapters that eliminate the ground line.

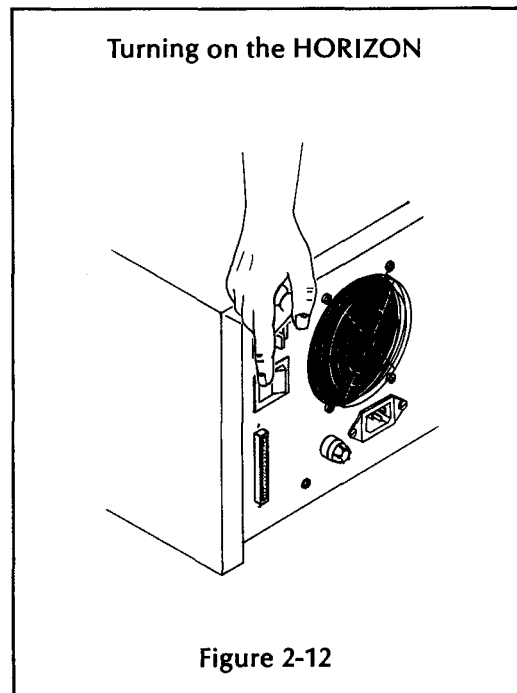


The computer, terminal, printer, and any other peripheral devices you use **MUST** be plugged into the same circuit or circuit breaker.

Other electrical equipment (such as copying machines, fluorescent lights or typewriters) should **NOT** be plugged into the same circuit. The electrical noise generated by such equipment can interfere with the proper operation of the computer system.

While a power strip is often convenient when several pieces of equipment are operating as a system, take care not to overload the circuit. Do not use extension cords to power the system.

Turn on the power to the computer. The **HORIZON** on/off switch is located next to the fan on the back panel. To turn the power on, press the outer edge of the switch in toward the computer (Fig. 2-12).

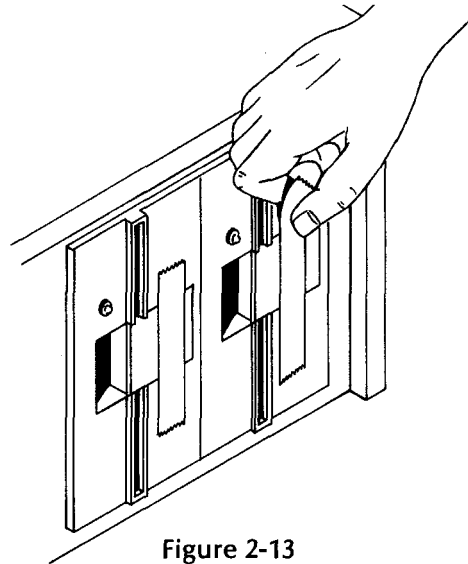


When you turn the power on, the fan begins to whir and the red indicator light over the NorthStar logo on the front panel is illuminated.



The floppy disk drive(s) on the HORIZON are taped closed for shipment. Remove the tape from the floppy disk drive(s). The HORIZON may contain just one floppy disk drive, or it may have two floppy disk drives, as shown in Figure 2-13.

Untaping the Floppy Disk Drives



Another HORIZON configuration includes one floppy disk drive and one Winchester hard disk drive, as shown in Figure 2-14.

HORIZON with Winchester Hard Disk

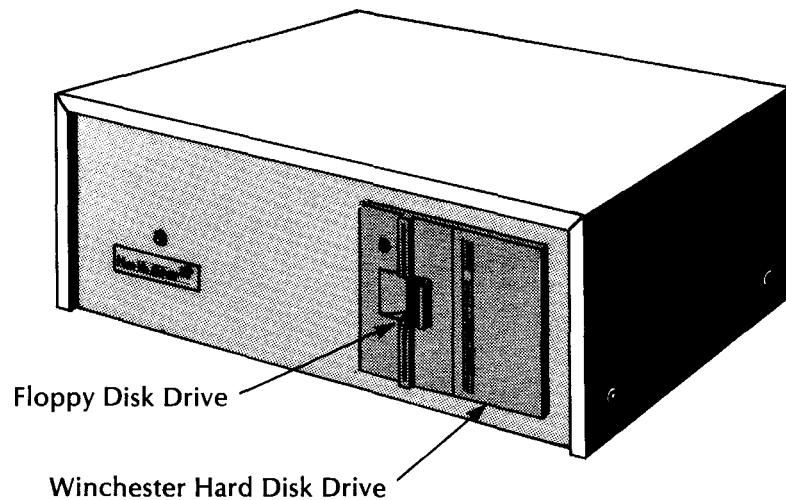
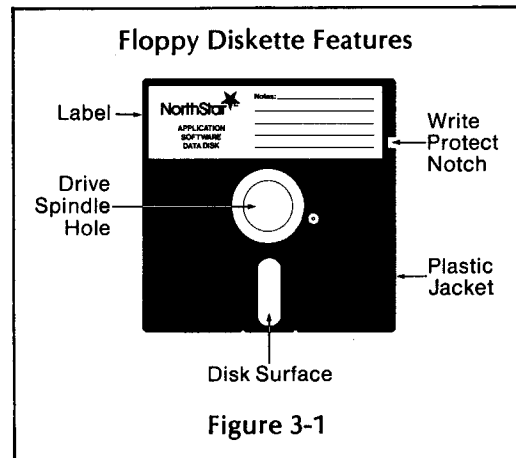


Figure 2-14

3.1 HANDLING FLOPPY DISKETTES

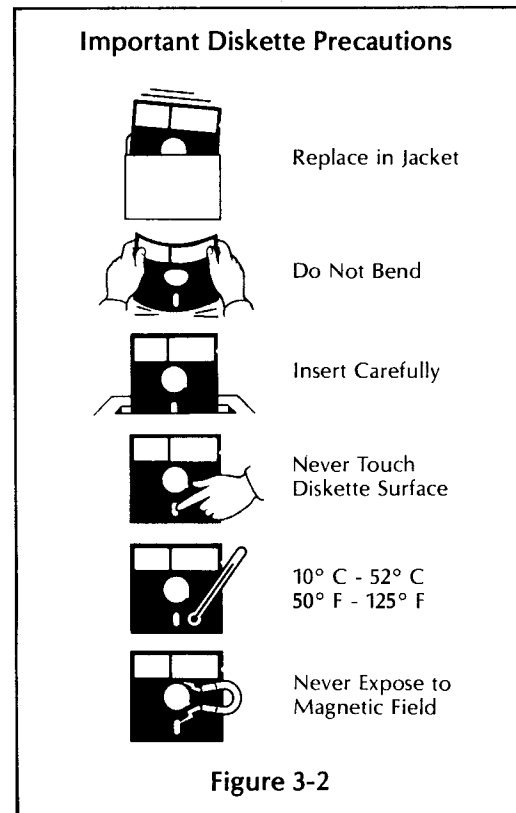
A floppy diskette consists of a very thin layer of magnetically treated mylar that is permanently encased in a plastic jacket.



CAUTION

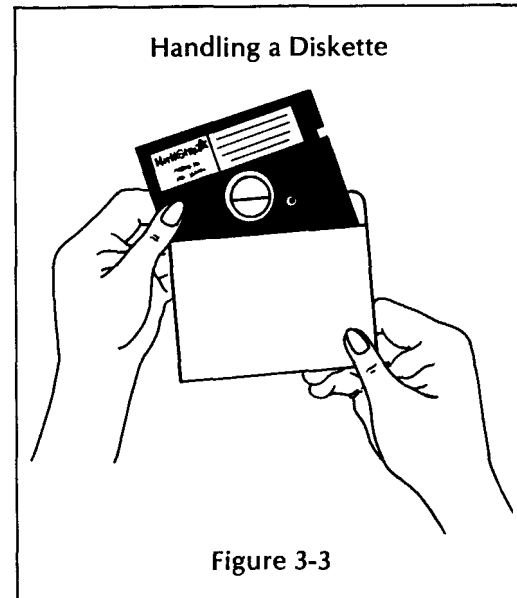
Do not touch the mylar surface, as this may damage the diskette.

Fingerprints, scratches, or spills can destroy information stored on the diskette. If ashes or particles land on a diskette they can interfere with the storage and retrieval of information. Likewise, if the diskette is exposed to a magnetic field, its contents can be lost. A magnetic field can be generated by an electric typewriter or a magnetic paper clip holder, for example. Figure 3-2 provides information on how to handle your diskettes.





Take the system diskette you want to use and remove it from the protective envelope. Be sure to hold the diskette by the label or some portion of the plastic jacket, as shown in Figure 3-3.

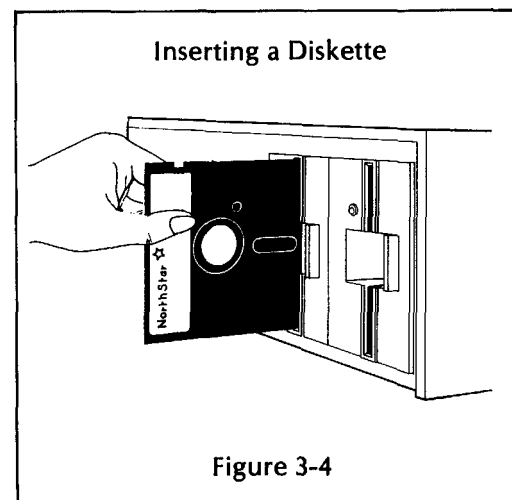


3.2 INSERTING A DISKETTE IN THE HORIZON

You can insert a diskette in the HORIZON with the computer turned on or off. For simplicity, the following discussion assumes that the power is turned on in both the HORIZON and the terminal.

Open the floppy disk drive that is closer to the center of the HORIZON by pulling the latch toward you. The system diskette (such as the HORIZON-Diskette provided with the computer) is always loaded into this floppy drive, which is either designated as drive #1, or drive A, depending on the program you are using.

Slide the system diskette into the drive opening. The diskette should be positioned as shown in Figure 3-4, with the small rectangular notch on top and the label facing toward you.





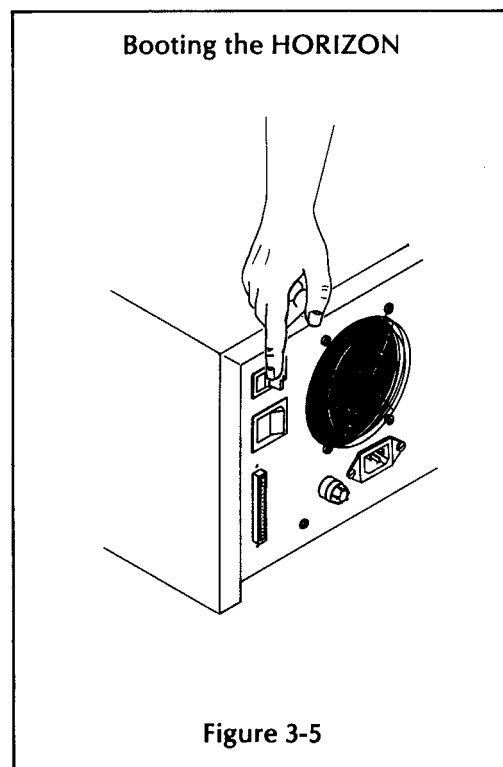
Push the diskette in gently. If you encounter more than slight resistance, pull the diskette out carefully and start again. The diskette is flexible and you may damage it if you force it into the floppy disk drive.

Push the diskette into the drive until you hear a click and feel the diskette hit the back of the slot. This indicates that the diskette is properly positioned in the disk drive.

With the diskette fully inserted, close the disk drive latch.

3.4 'BOOTING' THE HORIZON

Press and release the reset switch on the back panel of the HORIZON (Fig 3-5). This is called "booting" the computer, and it starts the process of transferring the program from the diskette into the internal memory.



When the reset switch is activated, the red indicator light on the floppy disk drive comes on, the disk drive motor begins to whirl, and the program prompt appears on the terminal screen.

You are now ready to begin work with your HORIZON.



3.4 USING YOUR HORIZON

If your HORIZON has two floppy disk drives, the drive toward the center of the computer (#1) is used for system diskettes, and the drive toward the outer edge (#2) is used for data diskettes. Use the same procedure described in Section 3.2 to insert a data diskette in drive #2.

If your HORIZON contains a Winchester hard disk drive as well as a floppy disk drive, the hard disk is permanently installed in the computer. You do not interact directly with the hard disk, as you do with the floppy diskettes.

The hard disk is used for storing programs and data. The floppy diskettes enable you to load new programs onto the hard disk, and to transfer programs and data between computers. The floppy diskettes also serve as a backup medium for the hard disk.

Perhaps the single most important part of working with a computer is learning to make regular backup copies of all your programs and data. Systematic backup is crucial to guard against information loss due to operator error, equipment malfunction, or other causes. The manuals for the programs you use will explain exactly how to back up your diskettes or hard disk.

3.5 ENDING A WORK SESSION

The manual for the program you are running will explain how to exit from that program.

CAUTION

Always wait until the red indicator light on the floppy disk drive has gone out before removing a diskette from the drive. You may damage the diskette if you attempt to remove it while the drive is still operating.

Lift the latch on the floppy disk drive and carefully remove the diskette. Replace the diskette in its protective envelope and store it upright, in an appropriate container.

At the end of the day, turn off the power to the HORIZON.

TROUBLESHOOTING

4

The following table will help you to diagnose and remedy problems you may encounter as you work with the HORIZON.

COMPUTER DOES NOT GO ON WHEN POWER IS TURNED ON.

1

1.1 Fan off and red indicator light over logo off.

Power cord is not plugged into wall outlet. Plug in cord.

Power cord is not firmly connected to computer. Plug in cord.

Wall outlet is not providing power. Check outlet with another device; call electrician for service if necessary.

AC line fuse is blown. Turn power off, unplug cord, change fuse (next to power cord receptacle).

If second fuse also blows, contact your authorized North Star dealer for service.

COMPUTER GOES ON, BUT PROGRAM DOES NOT LOAD SUCCESSFULLY

2

2.1 Drive indicator light goes on; motor is audible.

Press and release the reset switch again.

Diskette inserted improperly. Remove diskette and reinsert it, then press and release reset switch.

Cable connections from HORIZON to terminal are improper or insecure. Check connections.

Data diskette inserted instead of system diskette. Replace diskette.

System diskette damaged. Replace with another copy of diskette.

If the printer and the terminal use the same cables, exchange to see if one cable is defective.

continued



PROGRAM LOADS AND RUNS, THEN FAILS.

3**3.1 Terminal screen displays orderly error message.**

Consult program manual for explanation of message and procedure for clearing it.

3.2 Screen displays garbled message or random pattern.

Press and release reset switch. Repeat program loading procedure.

Activate reset switch. Remove diskettes. Turn power off, then on. Repeat loading procedure.

Consult manual for terminal.

Call for service.