EMC Disk Option
User Guide

EMC 10/4
EMC 10/4T

EMC 1
Advantage 18
EMC 10
EMC 10T

- Covers both Single and Multi-Head Melco Peripherals
- 3-1/2 " Disk Drive
- 1.44 Mb Disk Format

Melco
Embroidery Systems

A Saurer Group Company

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1. Introduction and Installation

GENERAL

The Melco EMC Disk Drive Option replaces the need for the EDS System Controller in operating embroidery peripherals, thus converting an individual embroidery peripheral into a standalone embroidery device. These two components (the EMC Disk Drive Option and the specific embroidery peripheral) work together as a system to produce the same high quality embroidered goods that otherwise required the EDS System Controller. The option attaches directly to the embroidery peripheral for compactness and convenience. The EMC Disk Drive Option will attach to the EMC 1, EMC 10, EMC 10T, and the Advantage 18 single head peripherals; and the EMC 10/4 and EMC 10/4T four head peripherals. This option gives the Melco embroidery peripheral product line additional functional versatility.

SCOPE OF THIS MANUAL

This user guide describes how to install and operate the EMC Disk Drive Option. The manual is divided into two sections.

Section One contains introductory information on how the EMC Disk Drive Option fits into the Melco EDS Embroidery System. This section also provides information for installing the option.

Section Two guides the user through the operational functions of the option, and then explains the added keyboard commands for operating the embroidery peripheral.

SYSTEM OVERVIEW

Basic Description

An EMC Disk Drive controlled embroidery peripheral is a standalone, read only disk system that will allow the user to embroider designs that are in the following formats: DOS 1.44MB, DOS 720K, Melco Expanded, Tajima, Barudan FMC, Barudan FDR, and ZSK, underlined only. This option does not support condensed format designs.

The operating program is loaded from a 3 1/2 inch "boot" disk when the peripheral is powered up. Once loaded, the operating program disk is removed and the disk drive is used for loading designs into the peripheral

design buffer. The designs are loaded into the peripheral by the disk drive rather than sent through an EDS System network. An embroidery peripheral with the EMC Disk Drive Option is, however, also capable of being connected to an EDS System network. When connected to the network, the embroidery peripheral will boot from the network, and designs can be loaded from both the network and the disk drive.

The EMC Disk Drive controlled embroidery peripheral is capable of storing up to 16 designs consisting of a total of about 900,000 stitches in its memory. Once the designs are in the peripheral's design buffer the operator may perform all the various functions as usual, such as selecting the sequence for embroidering the designs and selecting the hoop limits. If power fails for any reason, the EMC Disk Drive operated embroidery peripheral also has a power fail recovery system.

All of the embroidery peripheral features are described in full detail in the Operation Manuals associated with the particular embroidery peripheral that is being used. For information on that unit please refer to the appropriate manual.

Physical Arrangement

The EMC Disk Drive Option attaches to the single head peripheral at the Controller Section Cover on the left side of the unit as shown in Figure 1. On the four head peripheral the option mounts into the Keyboard Cover at the far right side as shown in Figure 2.

Inside the respective sections the cables run from the option to the various locations for getting power to the disk drive and reading data from the disk drive to the CPU.
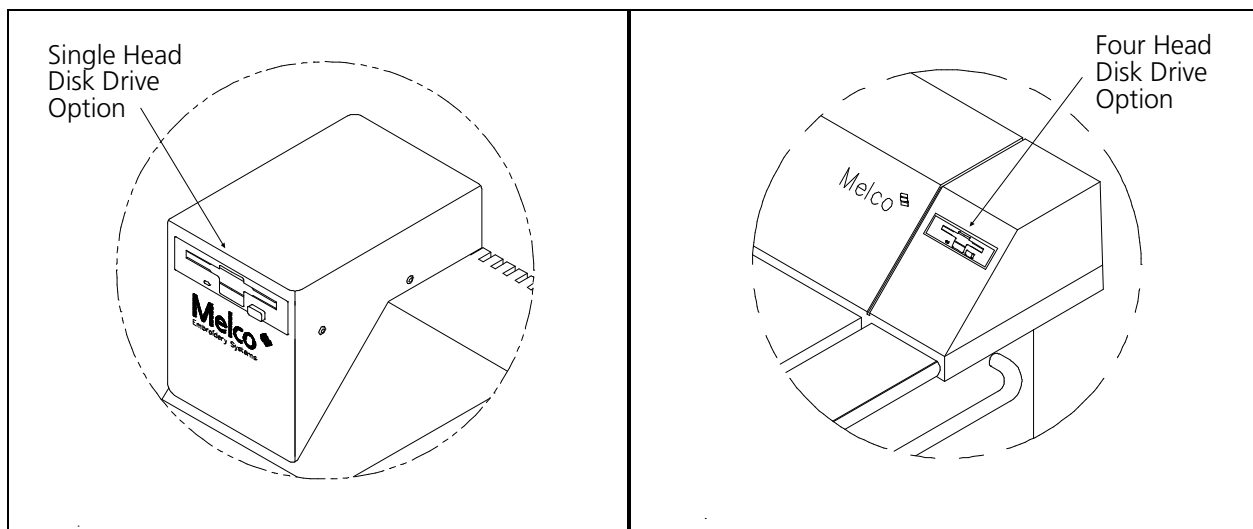
Figure 1   **Figure 2**

SYSTEM INSTALLATION

The information in this section is written for installing the EMC Disk Drive Option. The option installs onto a single head peripheral different from a 4 head peripheral, therefore, there are separate installation procedures included in this section.

Power Requirements

When installing the EMC Disk Drive Option, you need not be concerned with any additional power needs beyond the requirements of the peripheral itself.

Unpacking The Option

When unpacking your EMC Disk Drive Option be careful if opening the box with a knife not to damage the contents inside. Please inspect the parts for any damage that may have been apparent from the condition of the shipping box or to the option housing itself. Contact the shipper to report any damage.

Installing The Disk Drive On Single Head Peripherals

1. Turn off the embroidery peripheral and disconnect the power cord from the power source.

2. Remove the existing Controller Cover on the left side.

3. Locate the New Controller Cover with the EMC Disk Drive and position it at the embroidery peripheral directly above the Controller Section.
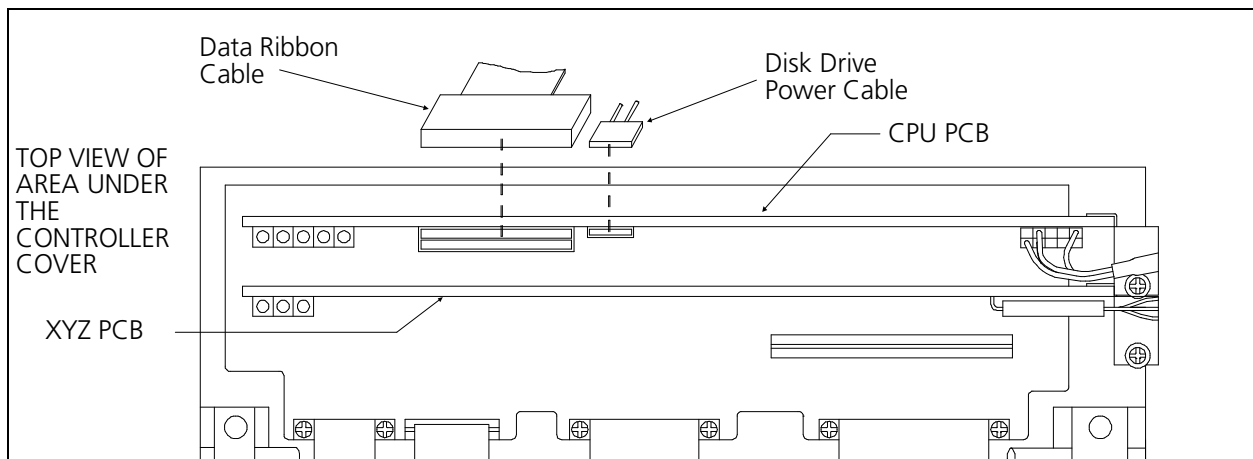
Figure 3 Single Head Controller Section

4. While holding the cover and drive assembly with one hand, plug the data ribbon cable into its mating connector on the top of the CPU PCB (see Figure 3). Also, plug the disk drive power cable into its mating connector on the top of the CPU PCB next to the data cable connector.

5. Using care not to pinch any cable wires, install the new Controller Cover with EMC Disk Drive. Guide the disk drive data and power cables up into the cover as the cover is lowered to the chassis.

6. Re-install the power cord from the embroidery peripheral to the power source.

The next portion of this chapter applies to the 4-Head Embroidery Peripheral Installation.

Installing The Disk Drive On A Four Head Peripheral

1. Turn off the embroidery peripheral and disconnect the power cord from the power source.

2. Move to the rear of the Machine and remove the screws from each of the 5 rear covers (11 screws total). Remove all the covers in the order below:

   a) First remove the cover which is located second from the right end of the machine, as viewed from the rear of the machine.

    b) Next, remove the cover which is on the far right end, again viewed from the rear of the machine.

    c) Continue to remove the remaining covers in sequence.

3. Locate the "new" cover that came with the Disk Option kit. This cover will have the disk drive installed. (see Figure 4)

4. Remove the 6 screws and cover to the Electronics Box located between the right 2 heads (from the rear). (see Figure 5)

Disk Drive
Installed
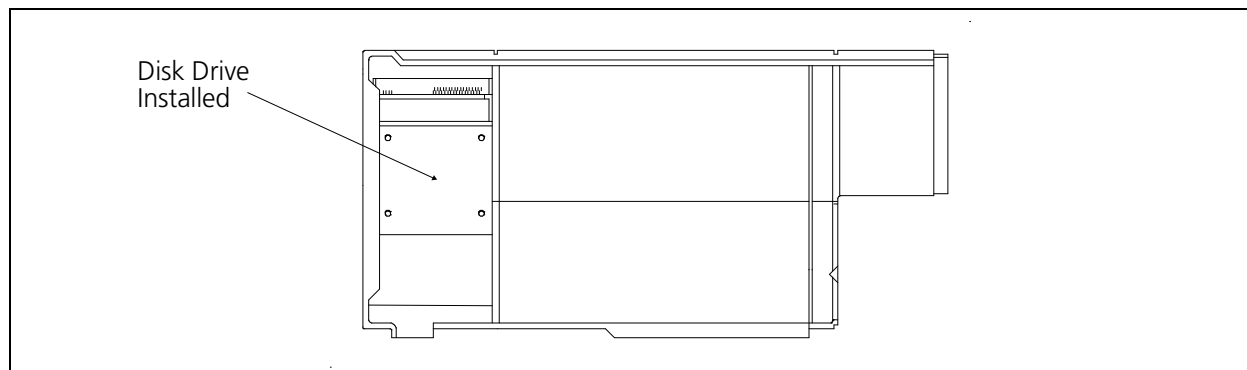
Figure 4 New 4-Head Cover

5. Route the end of the Disk Drive Data cable containing the keyed connector into the Electronic Box through the opening in the front of the Electronics Box. (See Figure 6)

6. Direct the cable to the top of the CPU and connect it to the proper connector as shown in Figure 6.

7. Next, route the locking end of the Disk Drive Power cable into the Electronics Box through the same opening as you did the data cable.
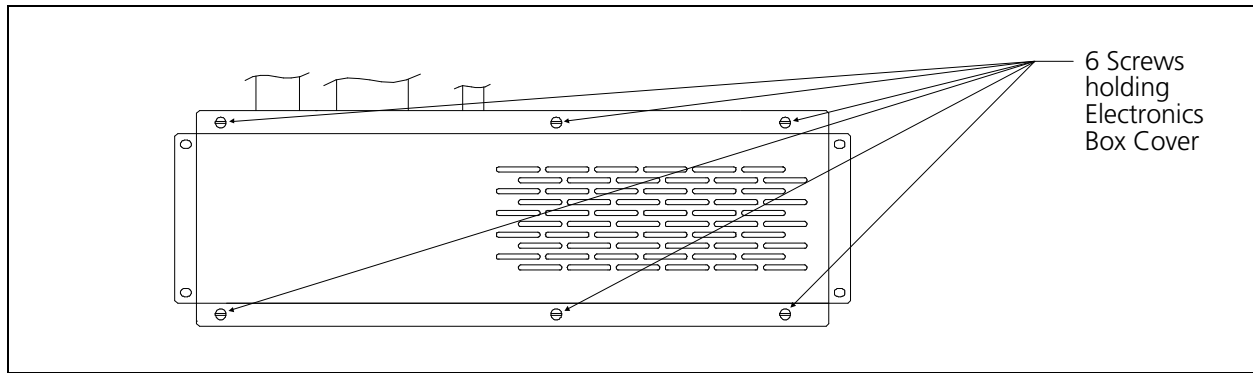
Figure 5 Removing Electronics Box Cover
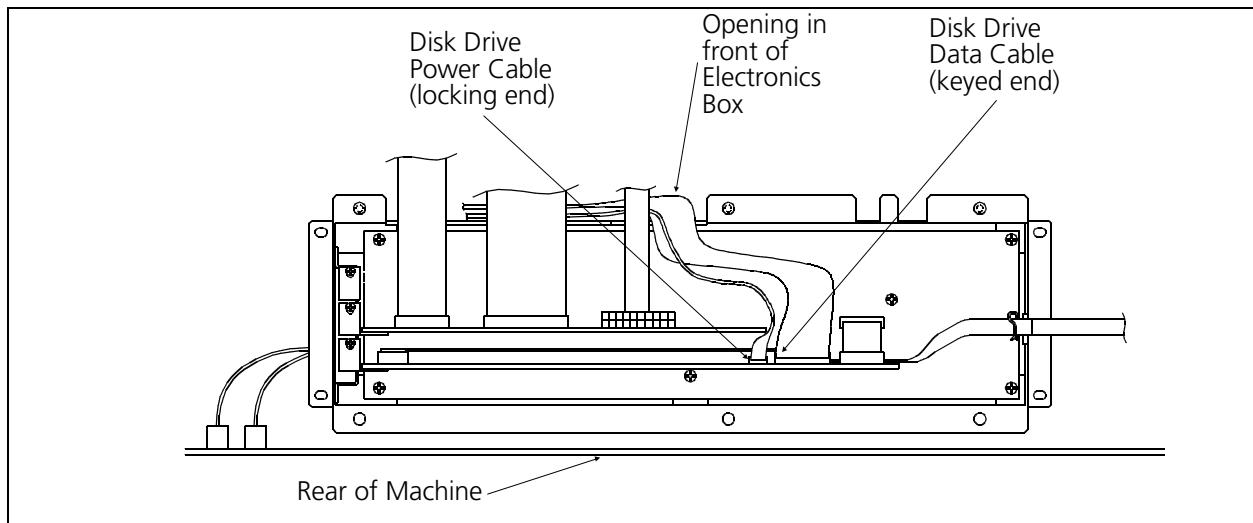
Figure 6 Electronics Box w/Disk Drive Cables Installed

8. Also, as shown in Figure 6, install this cable to the proper connector at the top of the CPU.

9. Re-install the Electronic Box Cover and secure it with the 6 screws.

10. Now route the 2 Disk Drive cables along the rear cover mounting channel between the motors and the channel toward the other end of the machine.

11. Locate the New Cover with the EMC Disk Drive and position it upside down at the end of the embroidery peripheral in the area where the cover is to be installed.

12. While holding the cover and drive assembly steady with one hand, plug the data ribbon cable into its mating connector at the rear of the disk drive as shown in Figure 7. Also, plug the disk drive power cable into its mating connector at the rear of the disk drive next to the data cable connector. When installed properly, the red wires (pins 1) of each cable will be adjacent to each other.

13. Install the New cover containing the EMC Disk Drive. Guide the disk drive data and power cables out of the way of the cover and any moving carriage parts as the cover is lowered to the chassis.

14. Re-install the remaining rear covers.

15. Re-install the power cord from the embroidery peripheral to the power source.
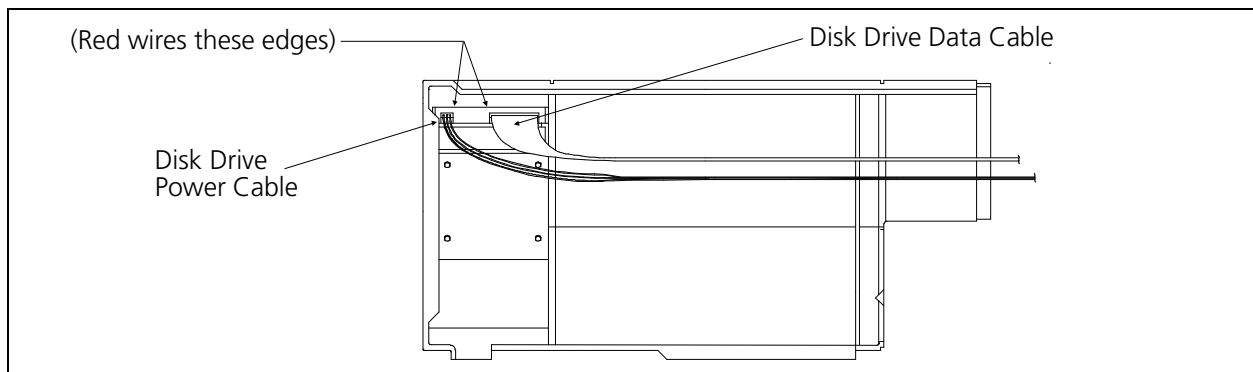
Figure 7 New Cover w/Disk Drive Option Installed

Install .RSA Files Into EDS System Controller

If your embroidery peripheral is part of an EDS System, and you intend to "boot" the peripheral by the network, you will need to "install" the proper operating program (.RSA files) into the EDS System Controller. To install the .RSA files, put the "boot" disk into the EDS Controller disk drive then

type: **a:install**   (or b:install if the disk drive is the "B" drive)

and press the [Enter] key. The operating program or .RSA file for each of the embroidery peripherals that supports the disk drive option will automatically load into the EDS Controller.

Configuring The EMC Disk Drive Controlled Unit

When an EMC Disk Drive Option is installed on an embroidery peripheral, no configuration changes are required. Follow the instructions given in the specific Operation Manuals that apply to your embroidery peripheral.

Keep in mind that, if you are operating from an EDS network as well as using the disk drive, you must install the correct .RSA files as previously indicated and follow the rules of the network when assigning "Unit Numbers" to peripheral devices. Specifically, after setting the Peripheral Program, the Unit Number must be set different for each peripheral attached to a single EDS System Controller.

If no network is attached to the EMC Disk Drive controlled embroidery peripheral, it truly is a "standalone" embroidery machine; and you can set the Unit Number to any number between 1 and 16.

> **WARNING! To prevent possible damage to diskettes, do not set them on the area just in front of the disk drive and behind the Beam Assembly. The Beam moves very quickly to the left rear corner during the SET HOME function, and may strike any material that is located in its path.**

2. Operation

Your EMC Disk Drive controlled embroidery peripheral provides you with features that will enhance your overall embroidery capabilities. The information given in this User Guide pertains only to the EMC Disk Drive Option and the additional enhancements that the option provides to the embroidery peripheral operation.

If you are upgrading an existing embroidery peripheral on an EDS system, you should already know how to operate the embroidery peripheral from reading the Operation Manual that accompanied that unit when you purchased it.

If this is your first embroidery system, you must refer to your embroidery peripheral Operation Manual to understand the operation of that particular unit, in addition to reading and understanding the features in this User Guide.

BOOTING THE PERIPHERAL

You may "boot" (or download the operating program needed to bring the embroidery peripheral to operation) by one of two methods. If the embroidery peripheral is properly "configured" and attached to an EDS System containing the .RSA file that supports the disk drive option, you will "boot" from the network when the embroidery peripheral is turned on.

If the embroidery peripheral is not connected to an EDS System, or if the system is not turned on and operating in EDS, the embroidery peripheral will attempt to "boot" from the disk drive. If a "boot disk" is installed in the disk drive, the embroidery peripheral will "down load" its operating program and become a standalone, operational embroidery peripheral.

If a "boot disk" is not located in the disk drive, the message: INSERT BOOT DISK will show on the display. Insert the "boot disk" and press **and hold** the [Enter] key for a moment. The embroidery peripheral will "down load" its operating program.

New Menus

With the installation of the EMC Disk Drive Option, two Menus are added to the embroidery peripheral that you may not be familiar with. These Menus are: the FORMAT MENU and the DIRECTORY MENU. The Menus are only present in the embroidery peripheral list of Menus if the Disk Drive is installed.

LOADING A DESIGN

Through The Network

After the embroidery peripheral is booted, or "downloaded," either by the EDS System network or by the EMC Disk Drive option, you can load designs into the embroidery peripheral buffer. If you are loading designs through the network, please refer to the EDS System Operation Manual for a detailed explanation of sending designs from the computer to the peripheral.

By Disk

If you desire to load a design from the disk drive, refer to the procedure that follows:

Once the embroidery peripheral is properly booted, either by the EDS System network or the disk drive "boot disk," you can begin the process of loading designs.

DIRECTORY MENU

1. Press the [Menu] key on the embroidery peripheral to enter into the menu list of the peripheral. The first Menu that appears is the DIRECTORY MENU. If you know that the design format setting at the FORMAT MENU is correct , then proceed to the next step. If you need to set the format, refer to the "Format Menu" section before you go to the next step.

2. Ensure that the diskette containing the design you wish to load is inserted in the disk drive, then press the [Enter] key on the embroidery peripheral.

    The disk drive light will come on for the time it takes to read the directory of the diskette. When the directory is read, the name of the first design in the directory will show on the embroidery peripheral display.

3. If the design name showing on the display is the one you wish to load, simply press the [Enter] key again to load that design. If the design name showing on the display is not the design you wish to load, press the [Up Arrow] and/or [Down Arrow] keys until the desired design name is showing on the display, then press the [Enter] key.

    When the [Enter] key is pressed, the disk drive light will come on as the design is loaded into the embroidery peripheral design buffer. While the design is being loaded, the display will show the name of the design and that it is "loading." When loading is complete, the display will go to the DESIGN MENU. Information for operating the embroidery peripheral Design Menu is found in the specific embroidery peripheral Operation Manual.

SELECTING THE FORMAT

There are six formats of embroidery designs that can be loaded into the embroidery peripheral by the EMC Disk Drive option. These formats are: DOS, MELCO, TAJIMA, BARUDAN FMC, BARUDAN FDR, and ZSK.

FORMAT MENU

If you are ready to load a design, but need to change the format selection, you will need to enter into the FORMAT MENU of the embroidery peripheral list of menus. To do this, follow these simple steps:

1. Once the embroidery peripheral is down-loaded, press the [Menu] key on the embroidery peripheral to enter into the list of menus.

2. The Menu that will first appear is the DIRECTORY MENU. To change to the FORMAT MENU, press and hold the [Alt] key while you then press the [Menu] key. The FORMAT MENU will now show on the display.

3. Press the [Enter] key and the currently selected format will then show on the display. To change the selected format, press the [Up Arrow] and/or [Down Arrow] keys until the correct format is showing in the display.

4. When the desired format is showing in the display, press the [Enter] key to choose that format.

5. Press the [Enter] key again, and the embroidery peripheral list of menus will go back to the DIRECTORY MENU.

> **WARNING! To prevent possible damage to diskettes, do not set them on the area just in front of the disk drive and behind the Beam Assembly. The Beam moves very quickly to the left rear corner during the SET HOME function, and may strike any material that is located in its path.**

OTHER EMBROIDERY PERIPHERAL MENUS

The information in this manual is limited to only that which is particular to the EMC Disk Drive Option. If you require an overview of the other Menus that appear when using the MENU key on the embroidery peripheral, you must turn to the specific Operation Manual for that particular embroidery peripheral.

ERROR MESSAGES

DESIGN NOT FOUND

Trying to do power fail recovery from disk but unable to find correct design on current diskette.

DUPLICATE DESIGN

The operator tried to load a design into the peripheral design buffer that is already loaded or has the same name.

DIRECTORY FULL

The operator tried to load another design into the peripheral design buffer after already having 16 loaded. The buffer only allows a maximum of 16 designs, regardless of there size.

DISK DIR ERROR

Disk error detected when trying to perform a disk directory, either the wrong format is selected, there is a defective disk drive, or a bad diskette.

DISK LOAD ERROR

Disk error detected when trying to load a disk design. Either a defective disk drive or a bad diskette.

NO DESIGNS FOUND

Trying to read a directory of a blank diskette that is, however, formatted in the selected format.

NO FORMAT SELECT

Default format is DOS, somehow the format selected was set to "zero." This message may indicate a memory problem.

NO FREE MEMORY

Not enough room in the design buffer to accept any more designs. The buffer allows for only 16 designs, but also has a total limit of 825,000 bytes of information, regardless of the number of designs.

BOOT READ ERROR

Unable to read the boot disk. Usually indicates a defective disk drive or diskette.

NOT BOOT DISK

Indication that a non-boot disk is installed in the disk drive. Install the boot disk and press the [Enter] key to continue.