

1500 HD

User's Guide



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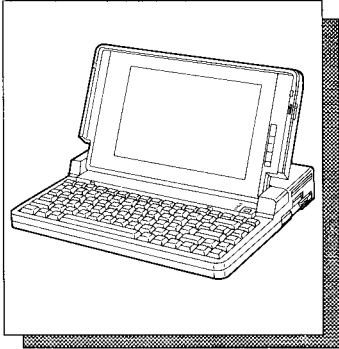
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BEFORE YOU BEGIN



PACKAGE CONTENTS

Your Tandy 1500 HD package includes:

- The computer and the AC adapter/charger
- The battery
- Two 1.44MB DeskMate/MS-DOS diskettes (GW-BASIC included)
- *MS-DOS Quick Reference*
- *DeskMate Getting Started*
- *Quick Start*
- Registration Card
- PC-Link Registration Card

ABOUT THIS BOOK

The sections called “Getting Started,” and “Getting More,” tell you about your computer and also tell you how to run programs.

The section called “Basic DeskMate Commands” gives you information about how to use many of the computer’s basic functions. The DeskMate graphics-oriented desktop screen is equipped with a command menu and program icons that are easy to use. There is also an on-line help tutorial to help you understand how to use DeskMate. To run most programs, see *DeskMate Getting Started* .

In the *DeskMate Getting Started* magazine, you will find short entertaining articles about DeskMate. With DeskMate, you can do almost everything you want to do with your computer. Have fun and explore!

Note: You must immediately install and charge the supplied battery pack, as described in “Setting Up Your Computer” before you can operate your computer from the battery pack. Failure to do this can greatly reduce the battery’s life and efficiency.

TEXT CONVENTIONS

This manual uses a simple method of notation to distinguish among text you type, keys you press, and what you see on the computer screen.

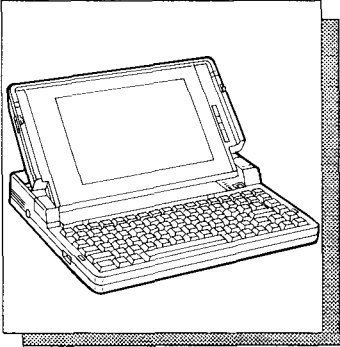
BACKSPACE Key names that appear in small, heavy, capital letters represent keys that you press.

CTRL+ C Two or more keys separated by a plus sign represent what we call a *key combination*. To use a key combination, press and hold down the first key. Then, press the other key(s).

`format` **ENTER** Characters that you type are displayed differently from the regular text in this manual. You must press **ENTER** after you type your text. With most programs, you can type in either uppercase or lowercase letters.

A:\ Characters that appear on the screen are also displayed differently from the regular text, like the example shown here.

INTRODUCTION



Your Tandy 1500 HD Laptop Computer is a versatile, simple-to-use computer. You can use it at home or take it with you to school, work, or as you travel, giving you instant access to useful information and productivity software. We have included everything you need to immediately begin using your computer.

STANDARD FEATURES

- IBM PC software compatibility
- Full portability
- MS-DOS version 3.3 operating system and DeskMate version 3.3
- A 2 1/2-inch 20 MB hard disk drive with MS-DOS and DeskMate installed
- A 3 1/2-inch, 1.44MB diskette drive
- LCD display with fluorescent backlight
- Full-feature, 84-key keyboard with full 101 key emulation
- Serial and parallel ports that let you use options such as a printer, mouse, fax, or modem

OPTIONAL FEATURES

You can add options to make your computer even more useful. For example, you can add a printer to print copies of the documents you create. You can connect a mouse or an external modem to your computer's serial port. You can also add an internal modem card (Cat. No. 25-3525) or 1 MB expansion RAM card (Cat. No. 25-3507) to your computer.

See "Getting More" in this manual for more information on adding options to your computer.

GETTING STARTED

“Getting Started” provides information to help you set up and begin using your computer.

Cautions:

- Be sure you install all optional devices before you turn on your computer.
- Keep a reasonable clearance space around the computer and any optional device(s) to prevent overheating.
- Avoid extreme temperature and humidity changes when using, storing, or transporting your computer.

POWER SOURCES

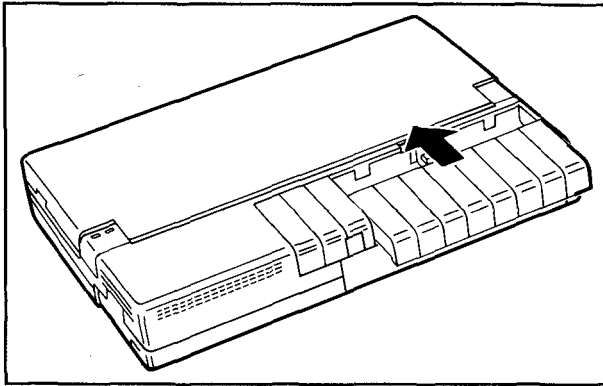
You can power your computer from the supplied AC adapter or from the rechargeable battery. However, the battery comes fully discharged, so you must use the AC adapter as described below until you have completely charged the battery.

Using the AC Adapter and Charging the Battery

The following procedure tells you how to install the battery and how to connect the AC adapter that powers the computer and charges the battery.

Cautions:

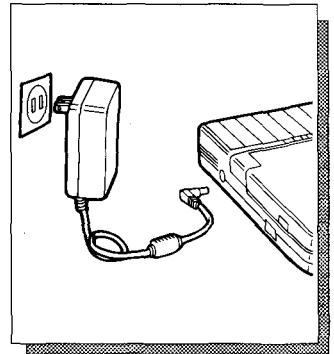
- Using an AC adapter other than the one supplied might harm the battery and the computer.
- Unplug the AC adapter when you disconnect it from the computer.



1. Place the computer on a flat, level surface.
2. Slide the battery into the battery compartment.
3. Insert the AC adapter's connector into the DC IN 9.5V jack. Then, plug the adapter into a standard AC outlet and let the battery fully charge before you use the computer on battery power.

Notes:

- The battery must charge for eight hours if you are using the computer while the battery is charging. If you are not using the computer, the battery charges in about four hours.
- Do not store the battery in high temperature locations for extended periods.
- For more information about care and use of the battery, see "Information About Rechargeable Batteries" in this manual.
- The adapter/charger does not charge the battery when the diskette drive turns on. Battery charging resumes when the diskette drive turns off.



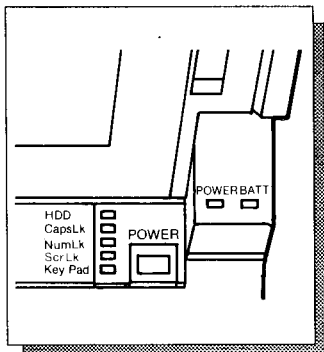
After a period of time, your computer's battery loses its ability to maintain a charge. This time period varies depending upon use, storage conditions, and several other complex factors. When this occurs, you must replace the battery. Replace the battery only with the same type of battery (Cat. No. 25-3526) available at your local Radio Shack

store. You should also charge your new battery before you use it.

Low-Battery Indications

The BATTERY indicator and the computer's beeper tell you the condition of the battery in the following four ways:

- Indicator does not light during normal status.
- Indicator lights green when battery is fully charged.
- Indicator lights orange during charging.
- Indicator lights red and a tone sounds once a minute when battery power drops below the power level needed for normal operation. When this happens, save all important information and turn off the computer or connect the AC adapter.



Note: The indicator might light red during disk operations. If the indicator turns off when the disk drive turns off, the battery still has plenty of power.

Caution: When the BATTERY indicator lights red and the tones begin sounding, you have five minutes to save your data to the hard disk or diskette.

Then, connect the AC adapter or another battery if you want to continue using the 1500 HD. Your computer loses all information not saved onto a disk when the power turns off. The adapter charges the battery in approximately 8 hours when you are using the computer, or in 4 hours if the computer is not being used.

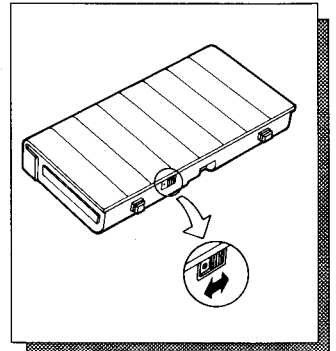
Information About Rechargeable Batteries

Your computer uses a nickel-cadmium rechargeable battery. The battery lasts longest if you occasionally—about once a month—operate the unit with battery power until the BATTERY indicator lights red, then immediately recharge the battery. Unlike lead-acid batteries used in your vehicle, nickel-cadmium batteries *forget* how much power they have if you always keep them fully charged.

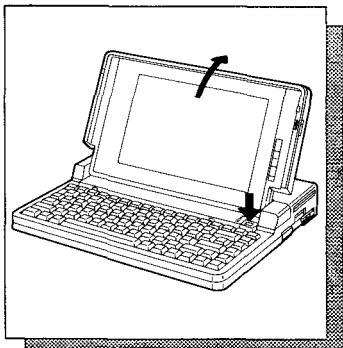
You can power the computer for up to 3 1/2 hours from a fully-charged battery. However, operating time will vary depending on the options installed, backlight brightness, and the amount of diskette and hard drive access. See “Changing Your Computer’s Functions” in this manual.

Hints:

- You can obtain another battery (Cat. no. 25-3526) from your local Radio Shack store so you can use your computer longer where AC power is not available.
- Use the battery’s charge indicator to remind yourself if you have charged the battery or not. Set the indicator so the red dot appears on batteries that need recharging.
- Do not incinerate.
- Do not directly connect the negative and positive terminals.

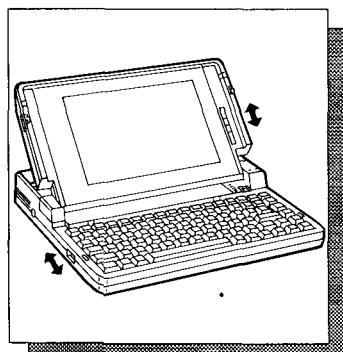
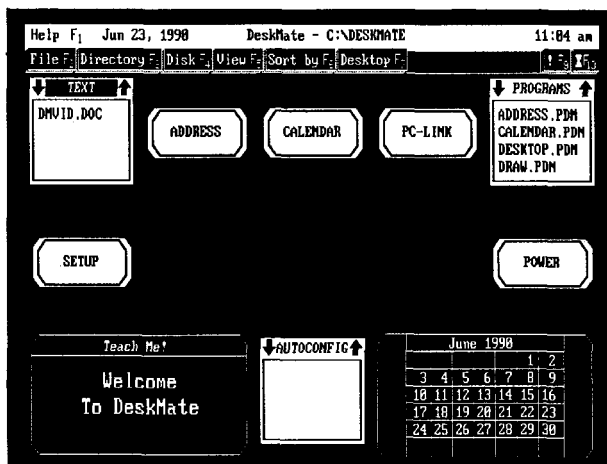


STARTING YOUR COMPUTER



1. To open the computer, slide the spring-loaded latch on each side of the cover toward the front of the computer and raise the display panel.
2. To turn on the computer, press the power switch. The power indicator lights when the power is on.

After a few seconds, the screen shows:



3. Tilt the screen to a comfortable viewing angle.
4. If necessary, adjust the contrast control and the backlight BRIGHTNESS switch.
5. Because DeskMate is loaded onto the hard drive, you can begin using the desktop screen after the computer is turned on. See the *DeskMate Getting Started* magazine.

OPERATING YOUR COMPUTER

You do not need to know every key's function to use your computer. In fact, many keys have different functions, depending on what program you run. In general, you use the keyboard like a standard typewriter's keyboard. You use the **ENTER** key on the computer like the return key on a typewriter. Press **BACKSPACE** to erase the previous character, or press **DELETE** to erase the current character. Then, type the correct character.

Your computer has some keys that are not on a standard typewriter. These extra keys have special purposes depending on which program you use. For more information about these extra keys, see "Using the Keyboard" in this manual.

You can use the DeskMate programs to easily learn your way around the keyboard. DeskMate can also show you how to store, copy, delete, move, and print documents that you create. You will enjoy exploring all the different ways that you can use your computer.

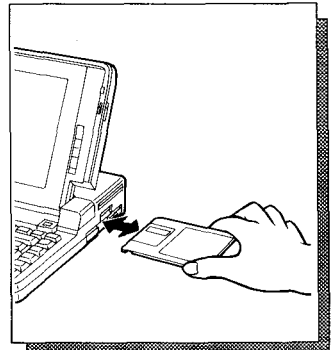
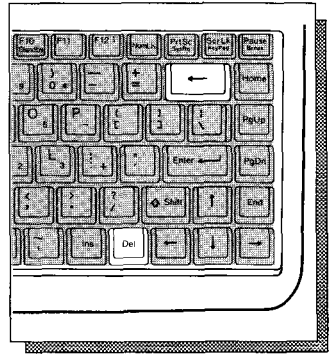
USING THE DISKETTE DRIVE

You might want to use data or programs on diskettes. If you want to use diskette data or programs, or save data or programs on diskettes, insert a diskette squarely into the drive slot as shown.

To remove the diskette from the drive, press the eject button until the diskette pops out.

Be sure to handle diskettes carefully. A scratch, small indentation, or dust can destroy data on a diskette. To protect your diskettes (and the information they contain) from damage, follow these guidelines.

- Never insert more than one diskette into a drive.
- Do not use damaged diskettes.



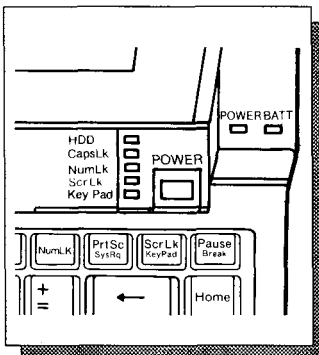
- Keep diskettes away from magnetic fields (such as transformers, AC motors, magnets, TVs, and radios).
- Make copies of important diskettes.
- Handle diskettes with the metal shutter closed. Never touch the surface of the diskette itself.
- Keep diskettes out of direct sunlight and away from excessive heat.
- Keep diskettes away from cigarette ashes, dust, and other small particles. In dusty areas, use filters to clean the air.

TURNING OFF YOUR COMPUTER

We recommend that you exit any program, return to the system prompt (`A>` or `C>`), and remove any diskette in the floppy drive before you turn off your computer. Then, press **POWER** to turn off your computer.

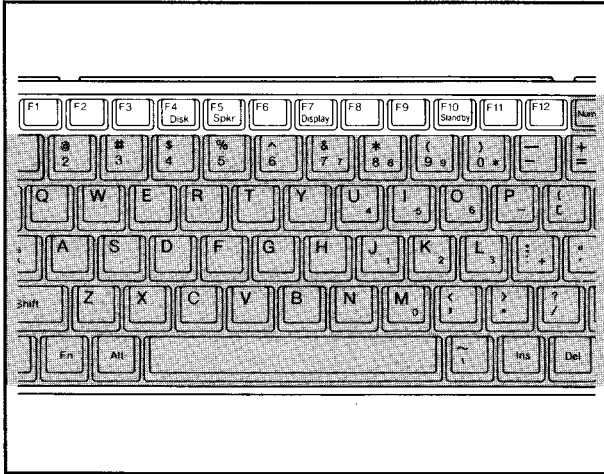
Cautions:

- You can exit some programs by pressing **BREAK** or **CTRL+C**. However, if you exit some programs in this way, you might lose information. We recommend you always follow the instructions in the software documentation for exiting a program.
- Do not turn off the computer while the HDD indicator or the floppy disk drive indicator is on. These indicators show that the computer is reading from or writing to the hard disk or diskette. Turning off the power at these times can cause a loss of the data.



USING THE KEYBOARD

Your computer's keyboard consists of four sections: the function keys, the typewriter keys, the numeric keypad area, and the arrow keys.

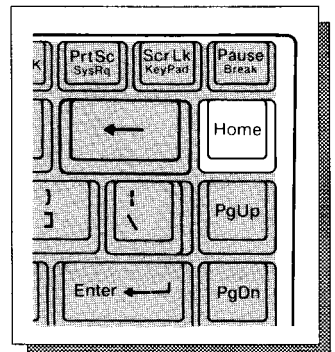


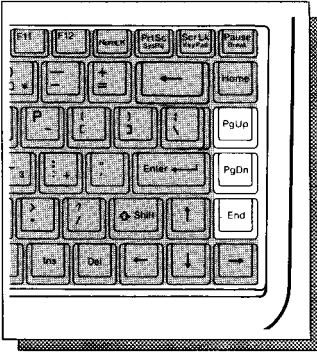
Function Keys—The way the function keys operate depends on the program that you run. Some of these keys perform special functions when the computer is not running DeskMate or another program. See “Changing Your Computer’s Functions” in this manual.

Typewriter Keys—The main part of the keyboard, below the function keys, looks like the keyboard of a standard typewriter. However, when you hold down a character or number key, the keystroke repeats automatically until you release the key. This section of the keyboard also contains some keys not found on a standard typewriter.

HOME

Executes a *home* function. The function depends on the program you are running. In some programs, **HOME** moves the cursor to the upper left corner of the screen.



**END**

Executes an *end* function. The function depends on the program you are running. In some programs, **END** moves the cursor to the right of the last character in the current line.

PGUP

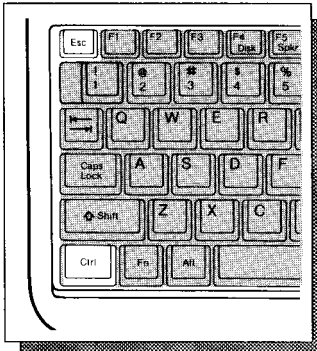
Executes a *page up* function. The function depends on the program you are running.

PGDN

Executes a *page down* function. The function depends on the program you are running.

ESC

The function of the **ESC** key depends on the program that you run.

**CTRL**

You use the **CTRL** key in combination with certain other keys to perform specific operations. The combinations available and their functions depend on the program that you run. To use a **CTRL** key combination, hold down the **CTRL** key, and press the other key. For example, **CTRL+C** performs a *break* or *program interrupt* in many programs. See "Reversing CTRL and CAPS LOCK Keys" in this manual.

Notes:

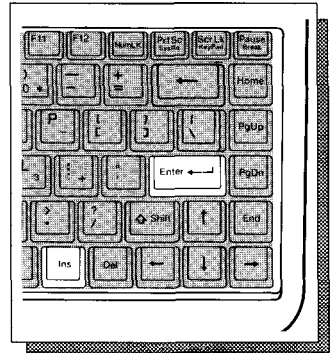
- Some software manuals refer to **CTRL** as **CNTRL**.
- In some programs, the right and left **CTRL** keys are not interchangeable

and might be used to perform a separate operation. Press **FN+ CTRL** to activate the right CTRL key function.

ENTER

The **ENTER** key enters typed commands and information into the computer. After you press **ENTER**, the program or operating system your computer is running processes the command you typed.

Note: Some software manuals might refer to **ENTER** as **RETURN**, **CR**, or **J**.



INS

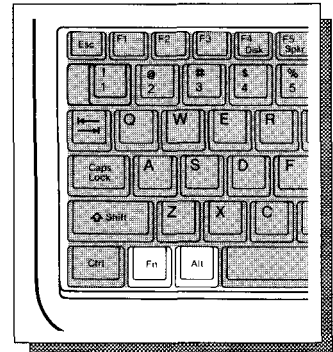
The function of the **INS** key depends on the program you run. In some programs, this key changes the typing mode from the normal overstrike (typeover) mode to the insertion mode so that you can insert information into a line of text. Pressing the key again returns the program to the overstrike mode.

FN

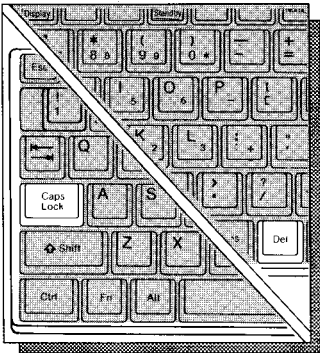
Use **FN** in combination with certain keys to control special hardware functions of the 1500HD.

ALT

Use the **ALT** key in combination with certain other keys to perform operations. The combinations available and their functions depend on the program that you run. To use an **ALT** key combination, hold down **ALT**, and press the other key.



Note: In some programs, the right and left **ALT** keys are not interchangeable and might be used to perform a separate operation. Press **FN+ALT** to activate the right ALT key function.

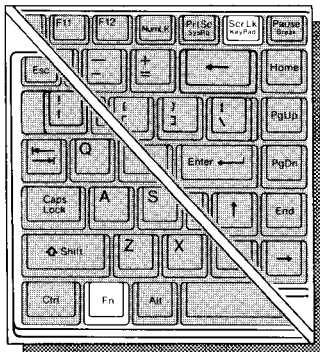


CAPS LOCK

Pressing the **CAPS LOCK** key causes the alphabet keys to produce only capital letters. (This function affects only the keys A-Z.) Press this key once to activate the mode. The **CAPS LOCK** indicator lights green. Press the key again to return to the normal typing mode. See "Reversing CTRL and CAPS LOCK Keys" in this manual.

DEL

The function of the **DEL** key depends on the program you run. In some programs, this key deletes the character at the current cursor position.



FN+KEYPAD

The **FN+KEYPAD** key combination activates the numeric keypad area. The **KEYPAD** indicator lights green when you press this button. The keypad area includes the numbers, operators (-, +, /, and *), and punctuation labeled in red on the keyboard. Press the combination again to return to the normal keyboard function. For information about the alternate cursor keys and other keypad functions, see "Numeric Keypad Area" in this manual.

SCRLK

The function of the **SCRLK** key depends on the program you run. The use is defined in your operating system or program manual. When you press this key, the **SCROLL LOCK** indicator lights green.

PRTSC

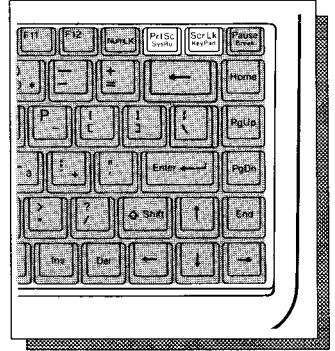
Sends everything displayed on the screen to the printer.

CTRL+ PRTSC
or **CTRL+ P**

Toggles the printer echo function on and off. When the printer echo is on, everything you type goes to the printer.

CTRL+ SCRLK

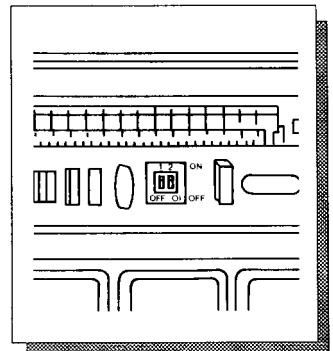
The function of this key combination depends on the program you run. In some programs, this combination stops the program from running.



Reversing CTRL and CAPS LOCK Keys

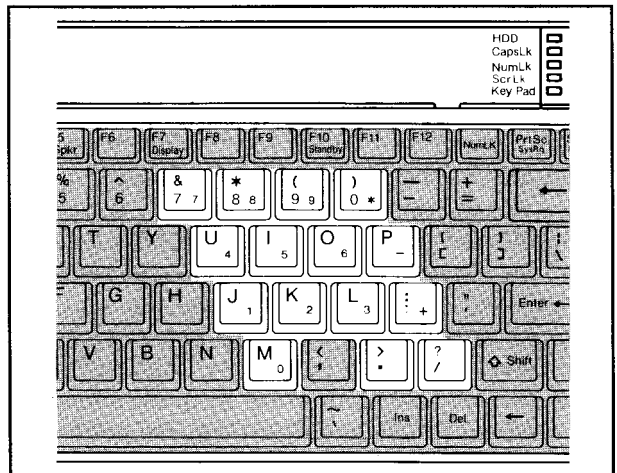
The 1500 HD's keyboard comes with the **CTRL** and **CAPS LOCK** keys in their standard positions. However, some people prefer to reverse the positions of their keys. To do this:

1. Exit any program you might be in and turn off your computer.
2. Locate the compartment cover near the top row of keys. Then, press the indentations and lift up on the front edge of the cover.
3. Set Selection 1 on top of the DIP switch (Selection 2 has no affect). Use a small pointed object, such as the writing tip of a pen, to set Selection 1 in one of the following ways:

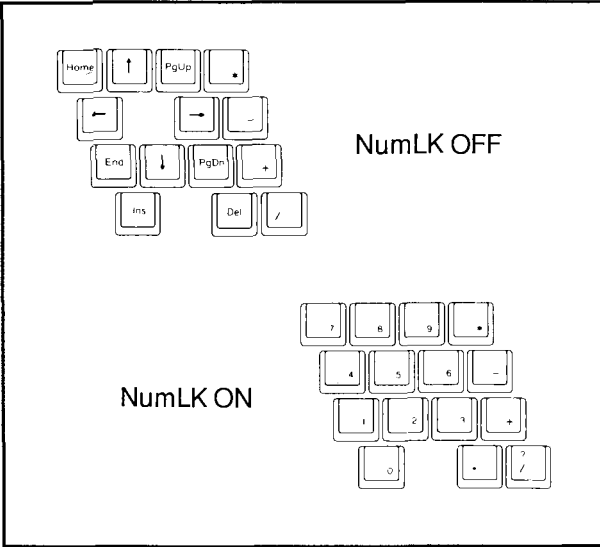


- ON to reverse the **CTRL** and **CAPS LOCK** keys.
 - OFF to restore the standard **CTRL** and **CAPS LOCK** keys.
4. Close the compartment.
 5. Remove the keytops by carefully prying up on the bottom edge of the keys. Then, exchange the keytops.
 6. Turn on your computer.

Numeric Keypad Area



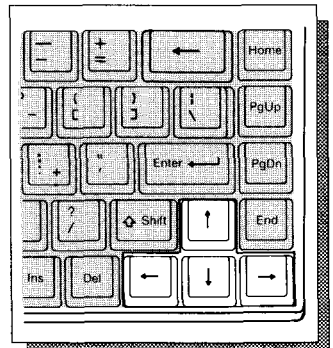
The keyboard's numeric keypad area is similar to a calculator keyboard. Press the **FN+KEYPAD** to use the keypad for extensive number entry. The **KEYPAD** indicator lights green. If the **NUMLOCK** indicator does not light, press **NUMLK**. The values of the keys on the numeric keypad are 0-9, decimal (.), plus (+), minus (-), multiplication (*), and division (/) as printed red on the keyboard. Press **FN+KEYPAD** again to return to the normal keyboard function.



If you turn off the NUMLK indicator while the keypad is active, the keypad area acts like a full 101-key keyboard keypad. While the NUMLK function is off, the numeric keypad area provides alternate cursor keys, HOME, END, PGUP, PGDN, INS, and DEL. Some programs require you to use the keypad area versions of these keys rather than the separately provided keys. See the diagram above for the alternate functions. Press **NUMLK** to switch between numeric key entry and the alternate functions.

Arrow (Cursor) Keys

The arrow keys at the lower right of the keyboard are cursor keys. Pressing an arrow key moves the cursor one position in the direction of the arrow. Holding down an arrow key repeats the action.



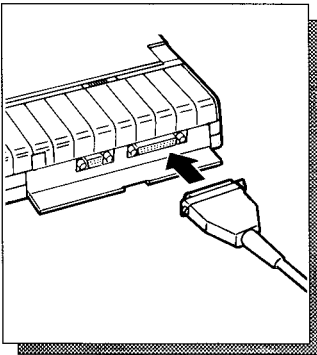
GETTING MORE

You can get even more from your computer by adding options such as a printer, mouse, fax, and modem. For example, you can add an optional printer to print copies of the documents that you create.

ADDING AND USING A PRINTER

You can connect a printer to your computer's parallel printer port.

1. Prepare the printer for parallel operation according to its owner's manual.
2. Turn off your computer.
3. Turn the computer so that you face the back panel.
4. In the lower right hand corner, pull down the hinged cover for the serial/parallel compartment.
5. Connect the printer cable's DB-25 connector to the large connector in the compartment.
6. Turn on the printer first. Then, turn on the computer.



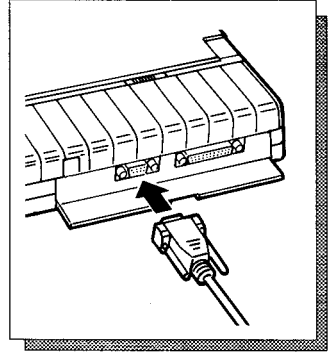
You can use the printer with most programs. Be sure the computer is set up to work with your printer. Check your program's documentation and your printer's owner's guide for information on setting up and using your printer.

Note: With some printers it may be necessary to turn the 1500 HD on prior to turning on the printer to have it initialize properly.

ADDING A MOUSE OR OTHER SERIAL DEVICE

You can connect a serial mouse, fax, external modem, or another serial device to your computer's built-in serial port.

1. Prepare the serial device according to its owner's manual.
2. Turn off your computer.
3. Turn around the computer so that you face the back panel.
4. Press down the latch for the serial/parallel compartment.
5. Connect your serial cable's DB-9 connector to the small connector in the compartment.

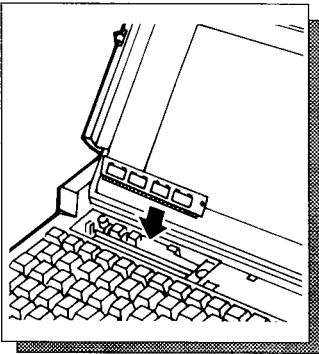


ADDING AN INTERNAL MODEM

You can install a 2400 Baud internal modem (Cat. No. 25-3525) in your computer. Refer to the modem's manual for installation instructions.

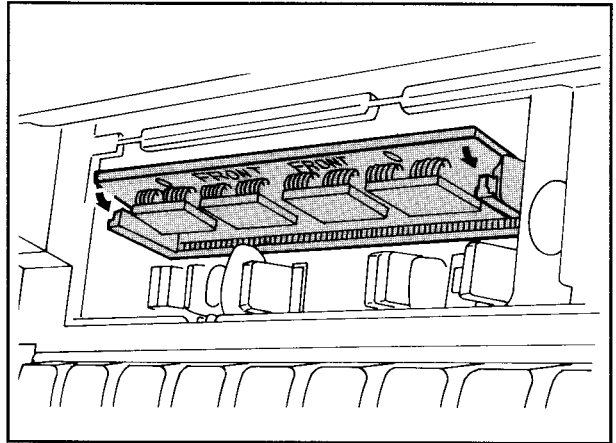
Caution: Before installing or removing a modem, turn off your computer and disconnect the AC adapter. Installing or removing a modem with the power turned on can damage the modem and your computer.

ADDING AN INTERNAL 1 MB EMS RAM CARD



The EMS RAM card (Cat. No. 25-3507) expands the computer memory by using a single inline memory module (SIMM). To install this card, use the following procedure:

1. Turn off your computer.
2. Find the compartment cover near the top row of keys. Then, press the indentations and lift up on the front edge of the cover.
3. Install the RAM card into the slot by tilting the board away from you as shown in the figure.



4. Tilt the board back towards you until it snaps into position.
5. Replace the cover.
6. Install the `temm1500.sys` file device driver. Use the MS-DOS Edlin command or some other text editor to place the following line in the `config.sys` file.

```
device=c:\dos\temm1500.sys
```

Cautions:

- Use only the specified EMS RAM card (cat. no. 25-3507) with your computer.
- Do not drop foreign materials such as a paper clip into the opening. A short circuit can seriously damage your computer.

CHANGING YOUR COMPUTER'S FUNCTIONS

INTRODUCTION

Your Tandy 1500 HD computer comes with two programs that let you control some of the computer's start-up parameters and let you set the computer to use less power when you use battery power. The programs are called *Setup* and *Power*.

Start-up parameters you can control include serial port assignment, DOS cursor type, the start-up program (MS-DOS or DeskMate), memory diagnostics on/off, and the internal speaker on/off.

The power management parameters let you set the hard drive, diskette drive, and display to automatically turn off after a selected number of minutes of inactivity. Of course, each of these devices turn on again whenever they are needed.

The Setup program lets you select start-up and power-management parameters, and store the parameters you select in memory. The computer uses these parameters each time you start it up, unless you change the parameters using Setup. Whenever you use the Setup program, you must turn off the computer or press **CTRL+ ALT+ DEL** to initialize the new parameters.

The Power program lets you temporarily change the power-management parameters without restarting the computer. However, changes you make using this program are not stored in memory, and when you restart the computer, it returns to the parameters you stored using the Setup program.

You can run Setup and Power from DeskMate or MS-DOS. In both cases, you select parameters from easy-to-use menus.

There is also a group of MS-DOS power-management *line commands* that let's you temporarily change the power-management parameters without running Setup or Power. You can use these commands in batch files. This could be convenient if you often switch from AC power to battery power. You can make one batch file to set power-management parameters for AC-power operation and another for battery-power operation. (For more information about batch files, see your *MS-DOS Quick Reference*, or buy an optional *MS-DOS Reference Guide*).

PARAMETER DEFAULTS AND DESCRIPTIONS

Now that you understand the basics of the Setup and Power programs, use the following information and procedures to set the 1500 HD to work the way you want it to.

The following chart lists the parameters that are set at the factory. You can return to these at any time by accessing the options menu in the Setup and Power programs.

After the chart are brief descriptions of each parameter.

Memory Diagnostics	No
Serial Port Assignment	Com1
Cursor Type	Line
Startup Program	DeskMate
Hard Disk Timeout	2 minutes
Display Timeout	8 minutes
Floppy Disk Standby	Enable
Low Power Beeper	Enable
Beeper	Enable

Memory Diagnostics—Selecting Yes tells your computer to test the memory on startup. Unless you suspect a problem with the memory, you probably will not use this parameter.

Serial Port Assignment—This parameter lets you select from a pair of internal ports. You can choose either the COM1 or COM2 serial port.

Cursor Type—Select a cursor type you prefer. You can choose a line or block style cursor.

Start-up Program—Choose the startup program. For example, you can begin using DeskMate when you turn on your computer, or switch to MS-DOS.

Hard Disk Timeout—Select the number of minutes of hard disk inactivity before the hard disk turns off. You can timeout the hard disk after 15 seconds or 30 seconds. Or you can set the timeout for 1, 2, 4, 8, or 16 minutes. Of course, the hard disk stays on if you choose Never Standby.

Display Timeout—Use these selections to set the number of minutes of keyboard inactivity before the display turns off. Your computer turns off the display after 1, 2, 4, 8, 16, 32, or 64 minutes. The display stays on if you select Never.

Floppy Disk Standby—Enabling this option tells your computer to turn off the floppy disk controller when the diskette is not being accessed. You can turn off the diskette drive to save battery power.

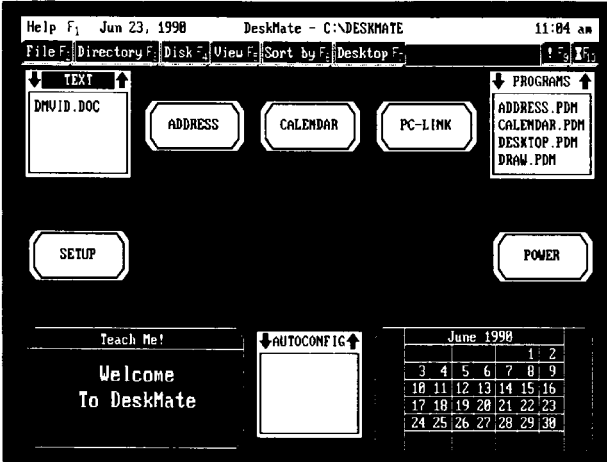
Low Power Beeper—Enabling this option tells your computer to sound a tone when the battery power is low. This helps to tell you about a low battery condition while you are using your computer.

Beeper—This option allows you to turn the computer's speaker on and off.

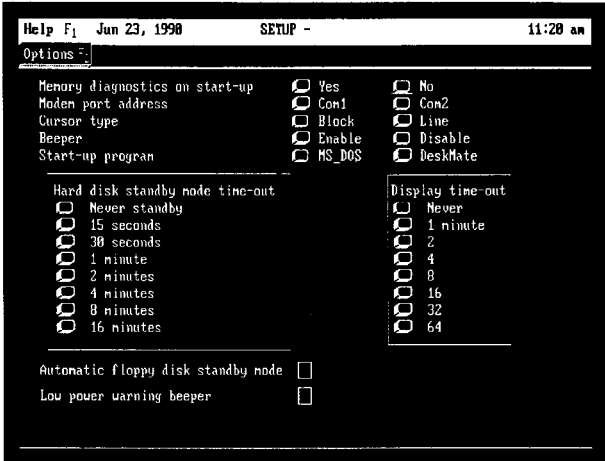
USING THE SETUP PROGRAM IN DESKMATE

To run the Setup program from DeskMate, do the following:

1. Use the arrow keys to select the Setup icon.



Press **ENTER**. The Setup program menu appears.



2. To change Setup program parameters, do the following:

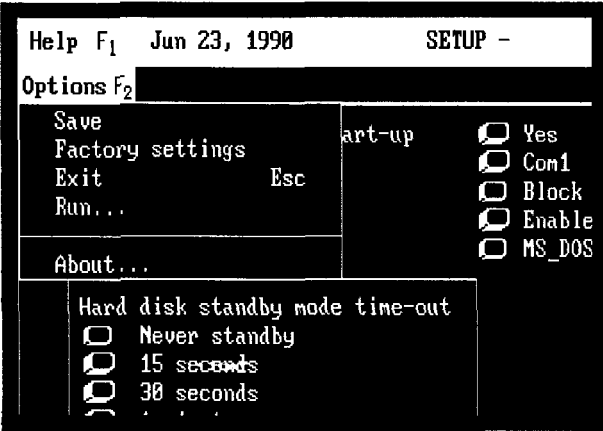
A. Use the arrow keys to select the parameter you want to change.

B. Use the spacebar to *press* a button.

Note: When you select Automatic Floppy Disk Standby and Low Power Beeper with the spacebar, **x** appears in the boxes.

3. After you have made the desired changes, press **F2**. The options menu appears.

Note: You must first exit DeskMate and then reboot your computer for any changes saved to EEPROM to take effect.

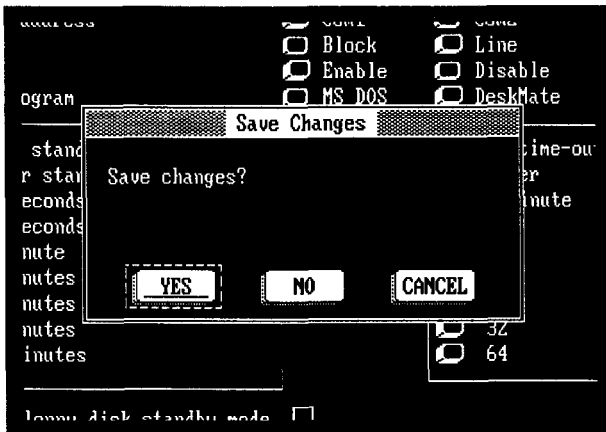


4. Use the arrow keys to select one of the following options:

Save—Press **ENTER** to save the changes. The options menu disappears.

Factory Settings—Press **ENTER** twice to restore the default settings.

Exit/Esc—Press **ENTER** to exit Setup if you made no changes. If you made changes to the parameters, the following dialog box appears.



Use the arrow keys to select the option you want to activate. The options help you confirm whether or not you want to save the changes before the desktop screen reappears. You might also void the exit command and return to the Setup screen.

Choose one of the following options for your changes in the Exit/Esc command:

Yes—Use this option to save the changes. The desktop screen appears after you press **ENTER**.

No—Use this option to not save your changes. The desktop screen appears after you press **ENTER** and the previous settings remain in effect.

Cancel—Use this option to return to the Setup screen. When you press **ENTER**, your changes are displayed but not saved. Go back to Step 5 for information on changing the parameters.

Rebooting Your Computer

Use the following steps to activate the Setup changes:

1. Exit from DeskMate so that the MS-DOS prompt appears.
2. Press **CTRL+ ALT+ DEL** to reset your computer, or turn off the power and restart.

Other Setup Options

The options menu in Setup has two other choices you can choose from. The selections are named Run and About. The Run option lets you directly exit Setup and begin running an MS-DOS or DeskMate program from DeskMate. When you exit the specified program, the desktop screen reappears.

You can also use the About option. When you choose this option, a dialog box appears with a list of supporting programs and copyright information.

USING THE POWER PROGRAM IN DESKMATE

You can change several of the computer's power-parameters by running the Power program from DeskMate. The Power program temporarily overrides the Setup program's power-management parameters.

The Power program lets you:

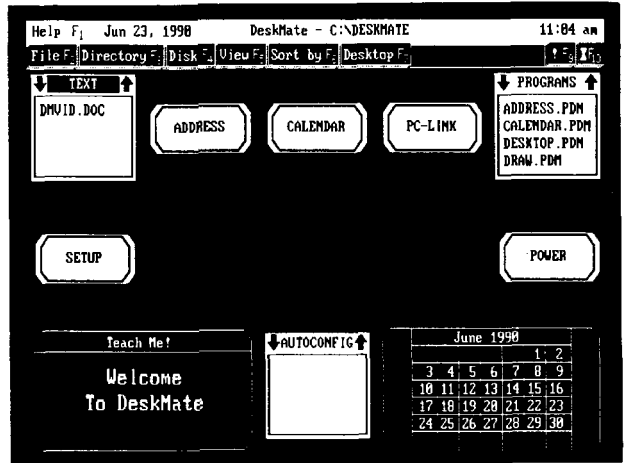
- Enable and disable Automatic Floppy Disk Standby
- Enable or disable the speaker
- Enable or disable the Low Power tone
- Set the Display Timeout
- Set the Hard Disk Timeout

Notes:

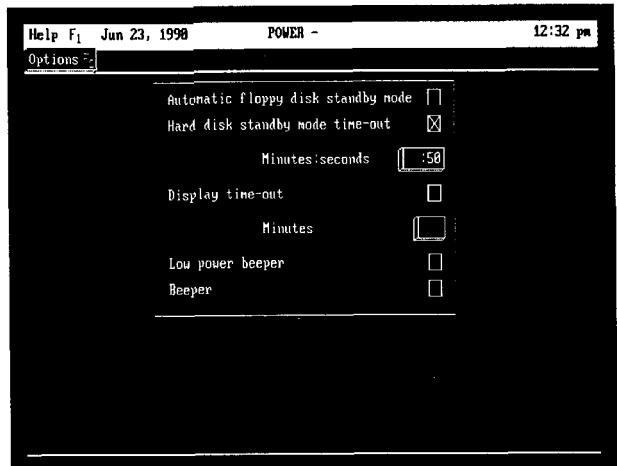
- The changes you make using the Power program are immediately active.
- The changes you make using the Power program are lost when you turn off your computer.
- When you turn on your computer again, it returns to the Setup parameters.

To run the Power program, follow these steps:

1. Use the arrow keys to select the Power icon.



Press **ENTER**. The Power program menu appears.



2. Use the arrow keys to select the parameter. Then, use the spacebar to *press* the desired button.

Notes:

- When you select Automatic Floppy Disk Standby, Hard Disk Timeout, Display Timeout, Low Power Tone, and the speaker, x appears in the boxes.
 - Type in the minutes and seconds to change the Display Timeout in the range 0–255 minutes.
3. When you have selected the desired parameters, press **F2**—the options menu appears. Use the arrow keys to select one of the following options:

Save—Press **ENTER** to immediately activate the parameters you selected.

Factory Settings—Press **ENTER** and respond to the *confirmation* dialog box.

Exit/Esc—Press **ENTER** to exit the Power program and return to the previous parameters. If you selected changes on the Power menu, an additional dialog box appears to give you one more chance to accept or reject the changes.

USING THE SETUP PROGRAM IN DOS

The Setup Program in DOS is for you to use when you are not using DeskMate. The DOS version lets you change identical startup and power-management parameters that you are used to using in DeskMate. The DOS program is *Setup_15*.

You use a different screen format in *Setup_15* when you change parameters. Changes you make to the parameters are done by using the arrow keys. You can use the commands at the bottom of the screen to easily select and change the parameters.

Startup Parameters

The Startup parameters allow you to select internal programs to automatically run when you turn on you computer.

The Startup parameters lets you:

- Turn on and off memory diagnostics
- Change the serial port assignment
- Select the initial start up program
- Select the cursor type
- Enable the speaker

Power Management Parameters

The power management section can save battery power by automatically turning off hardware, such as the disk drives and the display, when you are not using your computer.

The power management section lets you :

- Set the Hard Disk Timeout
- Enable and disable the Automatic Floppy Disk Standby mode
- Set the Display Timeout

- Enable or disable the Low Power audio signal

To run the Setup program in DOS, use the following steps:

1. Exit from DeskMate (or any other program).
2. If you are not in Drive C, type:

c: **ENTER**

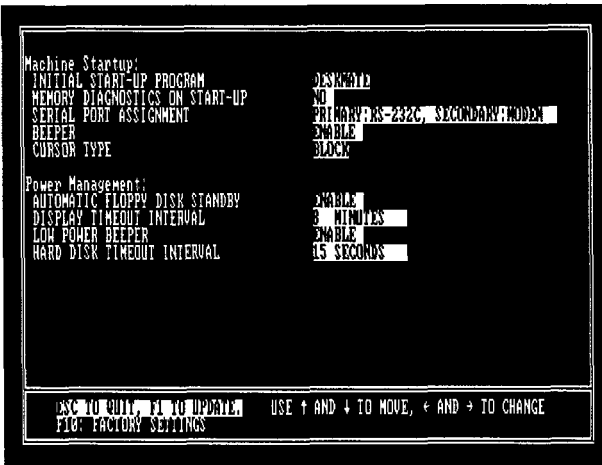
3. Select the DOS directory by typing:

cd dos **ENTER**

4. At the MS-DOS prompt, type:

setup_15 **ENTER**

The Setup program screen appears.



5. Use the up and down arrows to select the parameter you want and press the right and left arrow keys to choose the setting.
 6. Press F1 if you want to save your changes .
- If you do not want to save changes, press **ESC**.
 - If you want to restore all parameters to the factory settings, press **F10**.

Note: You must reset your computer by pressing **CTRL+ALT+DEL**, or by turning off the power and re-starting, for the changes to take effect.

USING THE POWER PROGRAM IN DOS

You can change several of the computer's parameters by using the Power program in DOS within the DOS directory. The DOS program is *Power15*.

To run the Power program, use the following steps:

1. Exit from DeskMate (or any other program).
2. If you are not in Drive C, type:

```
c: ENTER
```

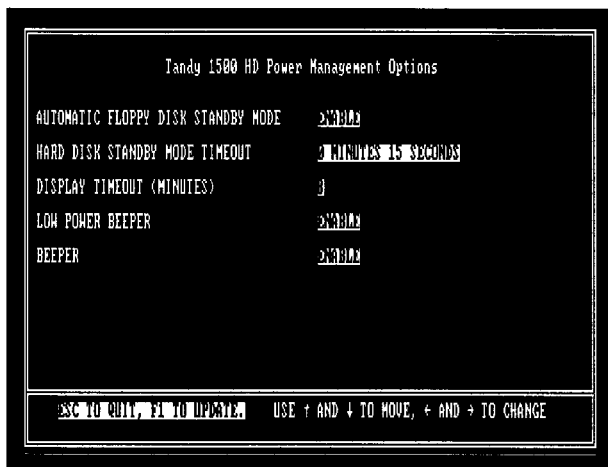
3. To change to the DOS directory, type:

```
cd dos ENTER
```

4. At the prompt, type:

```
power15 ENTER
```

The Power program screen appears.



Use the up and down arrows to select the parameter you want to change. Then, press the left and right arrows to select the setting for the parameter.

5. Press F1 to save your changes. If you do not want to save changes, press ESC.

USING POWER-MANAGEMENT LINE COMMANDS

You can also use command lines to set the options, without entering the menu mode. The command-line mode is useful if you want to include options in batch files.

Floppy Disk Standby command-lines:

power15 /fdstandby—displays the current status of the Automatic Floppy Disk Standby Mode

power15 /fdstandby:enable—enables the Automatic Floppy Disk Standby Mode and displays a status message

power15 /fdstandby:disable—disables the Automatic Floppy Disk Standby Mode and displays a status message

Beeper command-lines:

power15 /beeper—displays the speaker status

power15 /beeper:enable—enables the speaker

power15 /beeper:disable—disables the speaker

You can turn off the speaker so that no sounds come from the computer while the power is turned on.

Low Power Indicator command-lines:

power15 /lpbeep—displays the Low Power Beeper status

power15 /lpbeep:enable—enables the Low Power Beeper and displays a status message

power15 /lpbeep:disable—disables the Low Power Beeper and displays a status message

To receive a low battery tone, you can turn on the Low Power Indicator to tell you when the battery is low, in case you do not notice the battery indicator.

Display Timeout command-lines:

power15 /lcdtime—displays the Display Timeout value

power15 /lcdtime:xxx—sets the display to turn off after not using the keyboard for 1–255 minutes and displays a message indicating the new timeout value. Entering zero will not allow the display to turn off.

power15 /lcdtime:never—sets the display to remain on all the time.

If you need to leave your computer turned on and unattended, you can set the Display Timeout parameter to turn off the display after a specified time period. This option can help you save battery power.

Hard Disk Timeout command-lines:

power15 /hdstandby—displays the Hard Disk Standby Timeout value

power15 /hdstandby:mm:ss—This command sets the Hard Disk Standby Timeout value and displays a message indicating the new timeout value. *mm:ss* indicates the minutes and seconds format. Five second intervals in the range 00:15–18:20 must be used for *SS*.

power15 /hdstandby:never—This command will not allow the hard disk to enter the standby mode.

You can increase battery power savings by using the Hard Disk Timeout command to turn off the hard disk after a few minutes of inactivity.

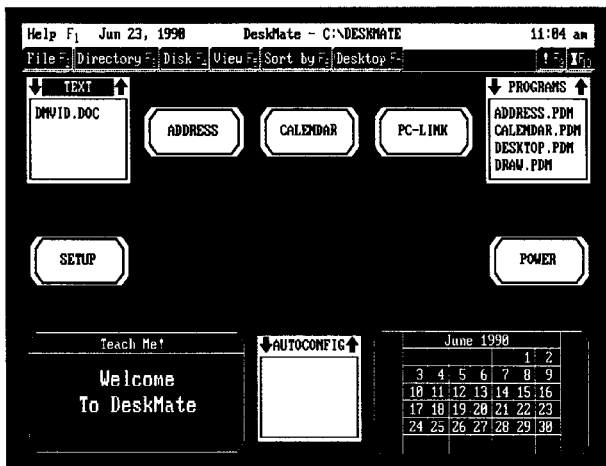
POWER MANAGEMENT KEY COMBINATIONS

There are also some key combinations, labeled in blue, that can help you to save power as you use your computer. These key combinations override the Setup program and Power program parameters.

- | | |
|--------------------------|---|
| FN+ F4 (Disk) | This key combination causes the hard disk controller to turn off until accessed. No special keystrokes or commands are needed to turn the disk controller on again. |
| FN+ F5 (Spkr) | This key combination enables and disables the speaker. |
| FN+ F7 (Display) | You can press this key combination to turn off the backlight and the LCD. Any normal keyboard entry you make will turn the backlight and the LCD back on. |
| FN+ F10 (Standby) | This key combination puts the computer in a standby mode. The hard disk, LCD, backlight, and floppy disk controller are turned off until a normal keyboard entry is made. |

BASIC DESKMATE COMMANDS

Your Tandy 1500 HD computer has DeskMate software installed that appears when your computer is turned on. DeskMate is a graphical interface that allows you to choose from a variety of programs with graphics-oriented screens.



The following section tells you how to do things simply in DeskMate that you used to have to do from the MS-DOS prompt. For more information about DeskMate, refer to the *DeskMate Getting Started* magazine that comes with your computer.

GETTING AROUND IN DESKMATE

You can easily move around DeskMate's desktop screen by using the arrow keys, or the tab key. These keys allow you to select an application box in the current drive that contains a program and a list of any created files for that program.

After choosing an application box, you can also use the arrow keys to select the file you want to

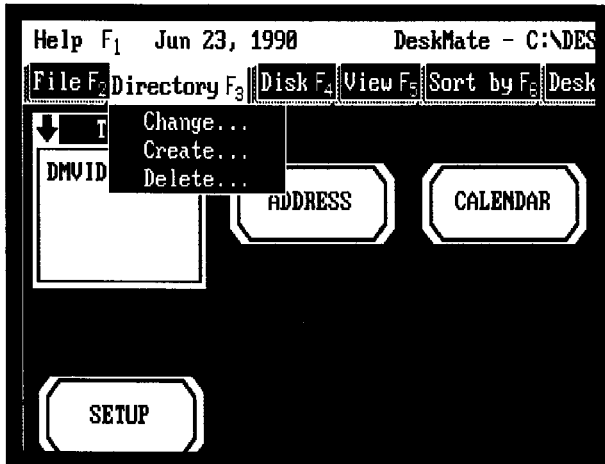
open. Both the program box title and the file name are highlighted with the cursor.

CHANGING THE CURRENT DRIVE

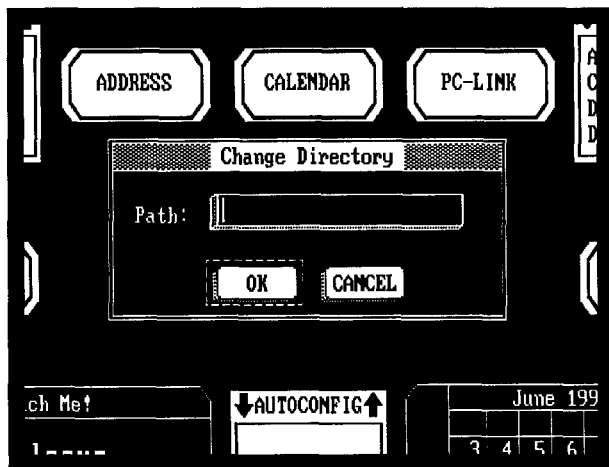
The current drive is the one that the desktop screen and your programs normally read from and write to. You can access information on a drive other than the current one by entering a drive reference with a DeskMate command. DeskMate regards the drive from which the system is started up as the current drive.

To change the current drive to another drive, follow these steps:

1. Press **F3** to select the Directory menu. The following dialog box appears.



- Use the arrow keys to select Change. Then, press **ENTER**. The following dialog box appears.



- Type the drive and directory you want.
- Use the arrow keys to select **OK**. Then, press **ENTER**.

The desktop screen displays the new current drive and directory.

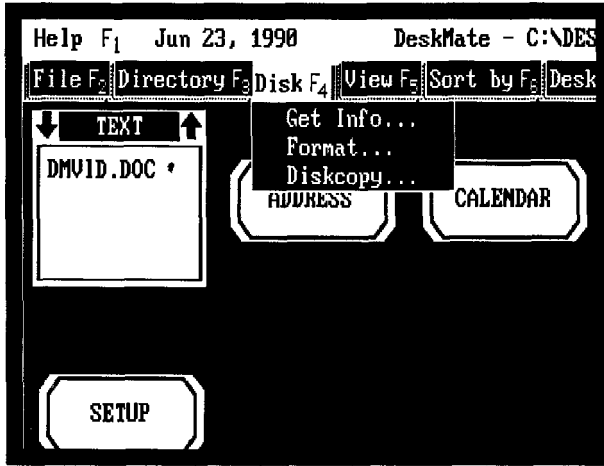
Note: To access a disk in a drive other than the current one, you must first change to the drive that has the disk you want to access.

Caution: The FDD indicator lights whenever the drive is reading from or writing to a diskette. Do not remove the diskette when the FDD indication is on. The data on the diskette can be lost or distorted.

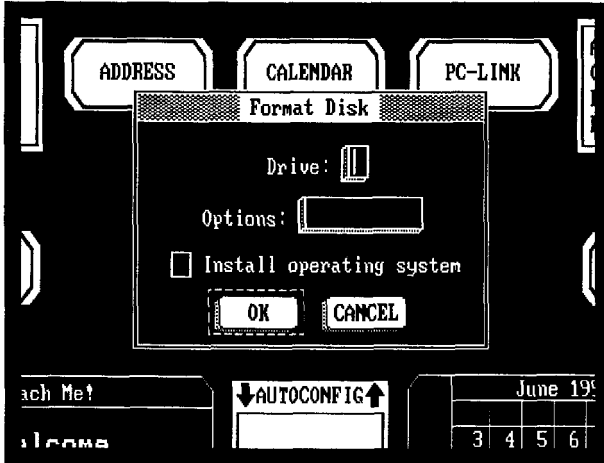
FORMATTING A DISKETTE

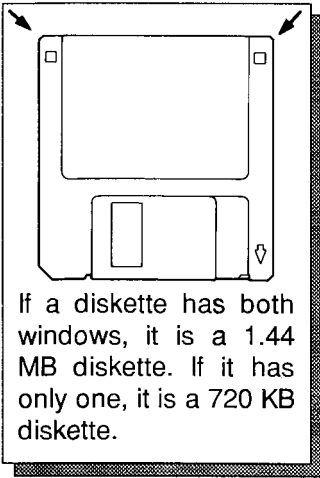
Before you can store information on a diskette, you must format the diskette. To format a diskette from DeskMate, do the following:

1. Press F4 to select the Disk menu. The following dialog box appears.



2. Select Format and press ENTER. The following dialog box appears.





3. Enter **A** in the drive box.
4. If you are formatting a 720K diskette, use the arrow keys to position the cursor in the Options box and type:

```
/n:9/t:80
```

If you are formatting a 1.44M diskette, proceed to the next step.

5. Use the arrow keys to select OK and press **ENTER**.

Your system displays:

```
INSERT NEW DISKETTE FOR DRIVE A :  
AND STRIKE ENTER WHEN READY
```

6. Insert the diskette you wish to format. Then, press any key to continue.

Caution: if you format a disk with information stored on it, your computer erases all the information.

When your systems finishes formatting the diskette, it displays:

```
format another (Y/N) ?
```

7. To do so, press Y, and repeat Step 4 . Otherwise, press N.
8. Remove the formatted diskette from the disk drive.
9. Store formatted diskettes in a safe place until you need them.

COPYING FILES

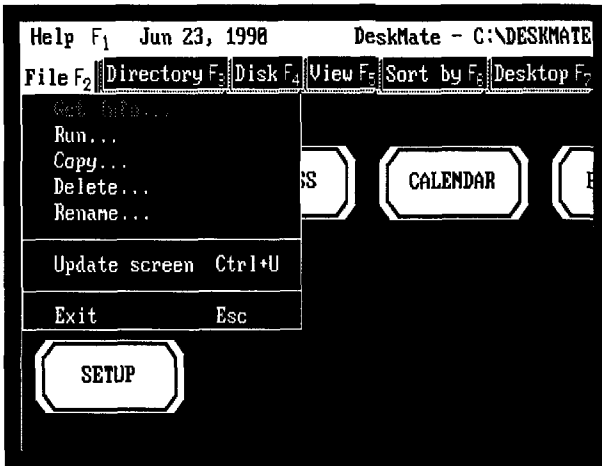
You can copy programs or data files using DeskMate. To copy files in DeskMate, you must be in the drive that holds the file you are wanting to copy. The current drive is shown above the menu.

For example, if your current drive is the floppy disk drive, the system would display:

DeskMate - A:\

If the file to be copied is in a separate drive, you should first change the current drive and directory by following "Changing the Current Drive" in this manual. This allows you to access the file you want to copy. To copy a file, follow these steps:

1. Use the arrow keys to select the file you wish to copy. The file will be displayed in an application box.
2. Select the File menu. The following dialog box appears.



3. Select the Copy To box and type the drive and directory where you want to copy your file to.
4. Select OK, then press ENTER.

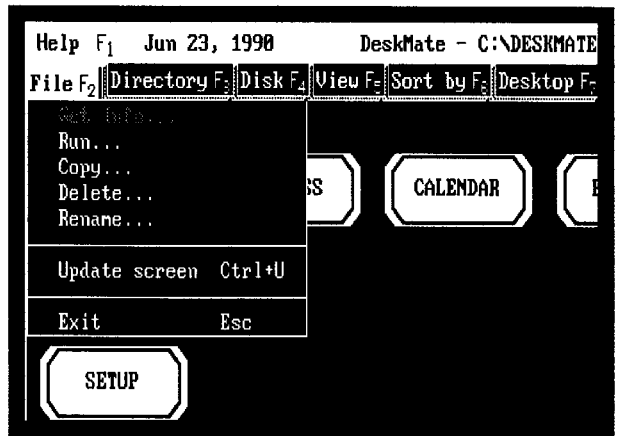
DeskMate will copy your file to the drive you specified. After the file has been copied, the desktop screen appears.

RENAMING FILES

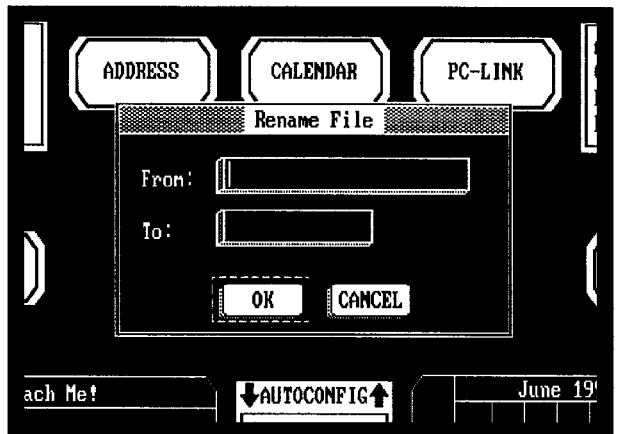
DeskMate also lets you change the names of files. You can use Rename to give your old file a new name.

To rename a file, follow these steps:

1. Select the file you want to rename. The file is displayed in an application box.
2. Select the File menu. The following dialog box appears.



3. Select Rename and press **ENTER**. The following dialog box appears.



4. Type the new file name and extension in the To box and use the arrow keys to select OK. Then, press **ENTER**.

DeskMate renames your file and the desktop screen appears.

COPYING DISKETTES

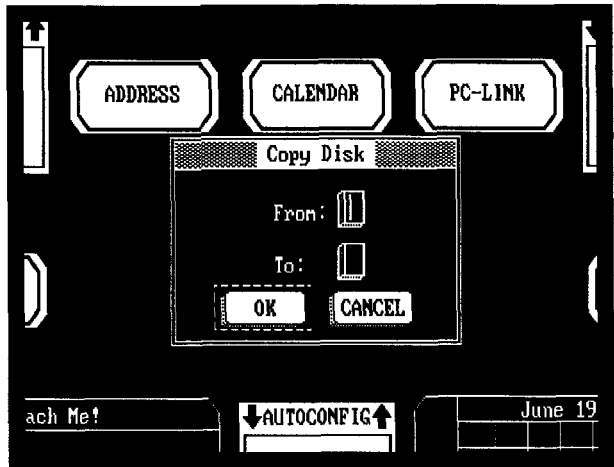
Exposing a diskette to magnetic fields or improperly using or handling a diskette can destroy the information on the diskette. In DeskMate, use the following procedure to make several copies of important diskettes. If anything happens to a copy, immediately make another.

Some programs you purchase might be copy-protected. You cannot make copies of these program disks. Check the program manual for information on protecting the data on copy-protected disks.

Notes:

- The diskette that you copy is called the source diskette. The new diskette is called the target diskette.
- You must use the same type of diskette for the source and target diskettes. If the source diskette is a 720K double-density type, the target diskette must also be a 720K double-density type.

1. Press **F4** to select the Disk menu.
2. Select Diskcopy and press **ENTER**. The following dialog box appears.



3. Enter **A** in the From and To drive boxes.
4. Select **OK** and press **ENTER**. MS-DOS DISKCOPY is now copying your diskettes.

The screen displays:

```
Insert SOURCE diskette in drive A:
Press any key when ready ...
```

5. Place the diskette you want to copy in the drive. Then, press a key. The screen displays:

```
Copying 80 tracks
18 Sectors/Track, 2 Side(s)
```

This message can differ according to the diskette you are copying. After a few moments, the screen displays:

```
Insert TARGET diskette in drive A:
Press any key when ready ...
```

6. Remove the source diskette and insert the target diskette into the drive, and press any key.

Be sure the target diskette is not write-protected (window should be closed).

Diskcopy formats the target diskette (if not already formatted) and copies the information taken from the source diskette to the target diskette. In some instances, MS-DOS might ask you to swap the source and target diskettes one or more times. When the Diskcopy procedure is complete, this message appears:

Copy another diskette (Y/N)?

7. To create more copies, press Y **ENTER**, and follow the prompts again.

After you finish making copies, press N at the Copy another diskette? prompt. You now automatically return to DeskMate.

Use one set of the copies for daily use. Store the original diskettes and all additional copies in a safe place until you need them.

RUNNING NON-DESKMATE PROGRAMS FROM DESKMATE

Programs perform specific tasks such as word processing, spreadsheet analysis, and creating graphics. You can use the following procedure to add non-DeskMate programs to the DeskMate desktop so that you can run the programs by simply selecting a DeskMate icon.

When the desktop appears, you can run non-DeskMate programs by following these steps:

1. Press **F7** to select the desktop menu.

2. Select Create, and press **ENTER**. The following dialog box appears.

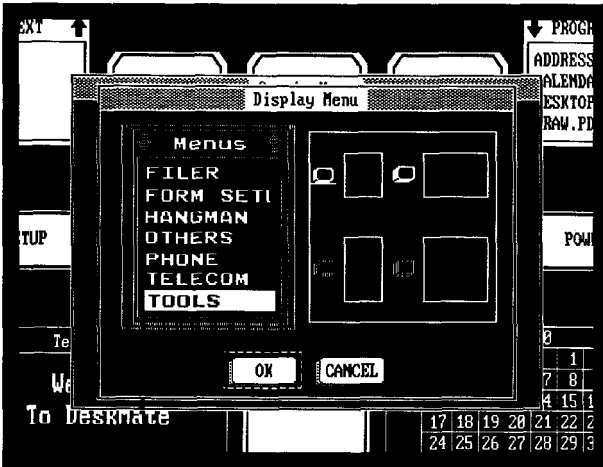


3. In the Menu title type the title that you want to appear on the desktop, using ten or fewer characters.
4. In the program name prompt, type the prompt and command you normally use to run the program from MS-DOS.
5. In the Data File Extension prompt, type the extension the program normally assigns to files.

Note: If your program does not create files, leave this prompt blank.
6. In the Start-up directory box, type the prompt and path for the directory you want to use when you run this program.

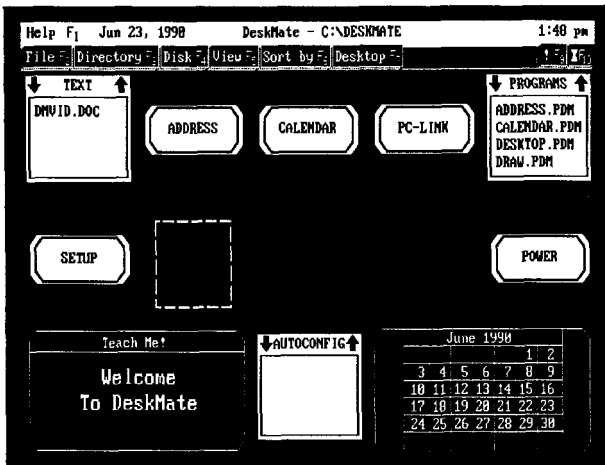
Note: If you leave this box blank, the program runs from the current directory displayed at the top of the desktop.

7. Press **ENTER**. The following dialog box appears.



8. Choose the list box size you want to appear on the desktop.

9. Press **ENTER**. The desktop reappears, displaying a dotted box.



10. Use the arrow keys to position the box in a blank area on the desktop, and press **ENTER**.

You can now run your program by simply highlighting the box and pressing **ENTER**.

See the DeskMate online tutorial and DeskMate Getting Started for other things that you can do with DeskMate.

USING MS-DOS

ENTERING MS-DOS COMMANDS

MS-DOS is a group of programs that manages your computer's operations and conveys your instructions to the computer. How much you need to know about the MS-DOS operating system depends on how you plan to use your computer. If you use your computer only for running programs such as DeskMate, your program can teach you almost everything you need to know to operate your computer.

On the other hand, if you plan to use advanced operating system features or create your own programs, you need to become quite familiar with the MS-DOS operating system.

If your computer system includes options such as a modem, you need to learn about those MS-DOS command features that you use with those options.

You type MS-DOS instructions, or commands, at the system prompt (`C>`), which tells you that MS-DOS is ready to accept commands.

You must enter MS-DOS commands exactly as given. Your computer carries out MS-DOS commands exactly as you enter them. If you mistype a command, MS-DOS gives you an error message.

You can type your instructions to MS-DOS in either uppercase or lowercase letters. However, do not use substitute characters on the computer's keyboard as you might on a standard typewriter's key-

board. For example, do not type the letter O for the number 0, or the letter l for the number 1.

ABOUT THE DRIVES

The Tandy 1500 HD has an internal floppy diskette drive and a hard disk drive. You can start the operating system and most application programs either from the hard disk or the diskette.

The hard disk drive is called Drive C, and can store 20 million bytes (20 MB) of data. The hard disk can store much more information than a floppy disk, and it takes less time to find information on a hard disk than on a floppy disk.

When you store programs (such as MS-DOS) and other information on a hard disk, we recommend that you keep backup copies of the programs and data on a floppy disk. This prevents the loss of all your programs and data even if the hard disk is accidentally damaged.

The diskette drive is called Drive A, and uses 3 1/2-inch floppy diskettes. You can use either high-density diskettes that store 1.44 MB of data (Cat. No. 26-423), or double-density diskettes that store 720 KB of data (Cat. No. 26-417).

USING THE HARD DISK

You seldom need to use your floppy disk drive except for copying files and making backups of hard disk files. You also can use this disk drive to copy your application programs to the hard disk.

BACKING UP YOUR HARD DISK

Making backups of hard disk files is extremely important. Because the storage capacity of a hard disk is so much greater, loss of data can result in the loss of thousands of hours of work.

You can use the BACKUP command to make copies of one or more directories or of the entire hard

disk. For example, if you have a subdirectory named `Mystuff` in the root directory of your hard disk, you can use `BACKUP` to copy it to a diskette. With a formatted diskette in Drive A, type:

```
backup c:\mystuff a: /s ENTER
```

Note: Unless you specify otherwise, using this method causes MS-DOS to erase any files currently on the diskette used for the hard disk backup. Be sure that you are using a newly formatted diskette or a diskette containing files you do not want to keep.

To accomplish the same backup without erasing files currently on the diskette, add the `/a` switch to the command. The `/a` switch causes the `BACKUP` command to add the new files to any existing files on the diskette. In MS-DOS, a switch is always preceded by a slash (`/`) symbol. The same command with the `/a` switch is:

```
backup c:\mystuff a: /s/a ENTER
```

The `/s` switch, used in the previous command, instructs MS-DOS to back up all the files in a directory and all the directories and files that branch from that specified directory.

You can use the `BACKUP` command with the `/s` switch to back up the entire hard disk to diskettes. Before using this command, use the `FORMAT` command to prepare enough diskettes to hold all the files you want to back up. To back up everything on Drive C, type:

```
backup c:\ a: /s ENTER
```

The backward slash (`\`) is an abbreviation for the root directory of any disk. This command line instructs MS-DOS to copy all files from the root directory of Drive C (the hard disk) to the diskette in Drive A. Because all directories branch from the root directory, `BACKUP` copies all the files in all the disk directories. For more information on `BACKUP`

and its switches, see BACKUP in the *MS-DOS Quick Reference* manual.

RESTORING BACKUPS TO YOUR HARD DISK

Use the RESTORE command to copy one or more backed up directories from diskette to hard disk. Use RESTORE only for those directories that were copied to diskette with the BACKUP command.

To restore the directory Mystuff from the diskette in Drive A back to the hard disk (Drive C), type:

```
restore a:\mystuff\c: /s ENTER
```

To restore all the files that were backed up from all directories of Drive C, insert the first backup diskette into Drive A and type:

```
restore a:c: /s ENTER
```

The /s switch instructs MS-DOS to copy all files and directories that were saved on diskettes with the BACKUP command. If the backup required more than one diskette, MS-DOS prompts you to change diskettes during the restore procedure.

For more information on RESTORE and its options, see the *MS-DOS Quick Reference* manual.

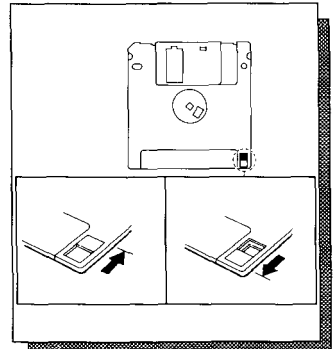
Caution: The HDD indicator lights whenever the computer accesses the hard disk. Do not turn off the computer when the HDD indication is on. The data on the hard disk can be lost or distorted.

WRITE PROTECTION

Diskettes have a special safety feature that protects recorded information from being altered. This special feature is a write-protect window.

To write-protect your diskette, slide the cover up to open the write-protect window.

To be able to edit and store information on your diskette, close the write-protect window.



Note: This write-protection feature does not prevent the information on the diskette from being lost from exposure to a magnetic field or a bulk diskette eraser.

HOW MS-DOS STORES INFORMATION

If you want to learn more about how your operating system works, you need to know how MS-DOS organizes and stores information.

About Files

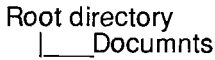
Your computer stores all information on the diskette in files. A file is a collection of information. These are the main types of files:

- *System files* contain operating system information that manages the computer's operations.
- *Program files* contain information that causes the computer to perform a task or set of tasks.
- *Data files* contain information you enter, such as the documents and spreadsheets you create with software.

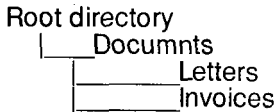
About Directories

All files on a diskette reside in directories. A directory is simply a storage space for your files. When you format a diskette, you create one directory called the root directory. On your MS-DOS system disk, the root directory contains all command and system files. When you start up your computer using MS-DOS, you are automatically in (operating from) the root directory.

You can create other directories using the *md* command. The new directory is a subdirectory of the directory you are in when you create the directory. For instance, if you created a subdirectory named *Documnts*, it would reside in the root directory, and your disk organization would look like this:



You can now store files in the *Documnts* subdirectory. If you change your current directory to the *Documnts* directory using the *cd* command, then make two more subdirectories called *Letters* and *Invoices*, your directory would look like:



In each subdirectory you can save files with related information. For example, save your correspondences in the *Letters* subdirectory of *Documnts* and invoices in the *Invoices* subdirectory of *Documnts*.

Your computer uses a shorter way of referring to subdirectories and files. The computer always refers to the root directory as **. Your computer refers to files and subdirectories of the root directory as that directory or file's name, preceded by **. In the above example, we would refer to the *Documnts* directory as *\Documnts*. To refer to the next level of subdirectory or a file in *\Documnts*, add a **, then the name of the file or subdirectory. For example, your reference is *\Documnts\Letters*.

There is nothing wrong with storing all your files in the root directory. Doing so makes it easy to access them, because you are always in the same directory as your files. However, dividing your files into multiple directories makes it easy to keep your

files organized when you have several files, or if other people are using the same disk.

About Filenames

Following is a complete list of acceptable characters for filenames:

- Uppercase letters A through Z
- Lowercase letters a through z
- Decimal digits 0-9
- Symbols \$ & # % ' () @ ^ { } ! _

When creating filenames and subdirectory names, do not use more than eight characters. MS-DOS ignores any characters after the eighth. For example, MS-DOS regards both Accounts1 and Accounts2 as Accounts. If you save both files, MS-DOS writes over the first file with the second, destroying the first file. Also, MS-DOS does not distinguish between upper and lowercase letters.

Other than the ones listed above, you cannot use symbols in filenames. There are also a few special words (MS-DOS device names) that you cannot use. These are:

aux	com1	com2	com3
con	lpt1	lpt2	com4
lpt3	nul	prn	

Filename Extensions

Any filename can contain an extension, which further identifies the file. An extension appears at the end of a filename, preceded by a period. You can not assign an extension to a subdirectory name.

Extensions can have up to three characters and can include the same characters allowed in filenames. If you attempt to give extensions more

than three characters, MS-DOS uses only the first three.

If you include an extension in a filename, you must use that extension whenever you specify the file.

Note: Some programs automatically assign an extension to your filename.

Examples of valid filenames are:

mydata1	SAMPLE
1.TST	\$100GIFT
records.art	'HELP'.fil
XXX.XX	File# 1.txt
10%SALES	par@64.gam
PROG1.BAS	Check.bal
PROG2.bas	myprog.sor

Examples of invalid filenames are:

his* hers—The asterisk is not a valid character for filenames.

.DATA—The period is valid in a filename only when separating the filename from its extension.

regionsales—Filenames have a maximum of eight characters. MS-DOS uses only the first eight characters of the filename (regionsa).

COST+ INT—The plus symbol is not a valid character for filenames.

CON.dat—CON is a word reserved by MS-DOS.

MORE ABOUT MS-DOS COMMANDS AND KEYS

The MS-DOS operating system includes both internal and external commands. MS-DOS stores its internal commands in memory when you startup your computer. Internal commands remain in memory at all times. These commands execute im-

mediately when you enter them. COPY and DIR are examples of internal MS-DOS commands.

External MS-DOS commands are stored on the hard drive or diskettes as program files. When you enter an external command, MS-DOS searches for the command that you specify and, if the command is found, executes it. Because all MS-DOS commands are stored on the 1500 HD's hard drive, you do not have to insert a diskette to access these external commands.

Typing Commands

You can enter a command whenever the screen displays the system prompt.

A command consists of one word, the command name. A *command line* consists of one or more command names and their associated parameters and switches.

Parameters and switches are special information you include with a command. They provide information to the command, or they determine how the command operates.

A command line can have a maximum of 127 characters, including any combination of uppercase or lowercase letters. To execute a command line, press **ENTER**. For example, to clear the screen, type:

```
cls ENTER
```

Editing Commands

MS-DOS tries to carry out the commands you type. If you make a typing mistake that results in an invalid command, MS-DOS tells you so with an error message. If you make a typing mistake, but the resulting command is valid, MS-DOS carries out the command as you entered it.

If you notice a typing mistake before you press **ENTER**, You have two choices:

- Backspace to the mistake, and retype to the end of the line.
- Press **ESC** to exit the line you are typing and start over.

If you use **ESC** to end a line, the system prompt does not reappear. Type the command line, and press **ENTER** to execute it.

Special Keys

The following keys and key combinations have special significance to MS-DOS.

SPACE BAR—Moves the cursor (the blinking underline character displayed on the screen) one space to the right, and adds a space to a line.

CTRL—Lets you give commands to your computer by pressing only two or three keys. Press and hold **CTRL**. Then, while you hold **CTRL**, press the other keys.

BACKSPACE—Moves the cursor left one character and erases the character in that position.

CTRL+C or **CTRL+BREAK**—Stops the execution of an MS-DOS command or a program that uses MS-DOS functions. If the program does not access MS-DOS, the program does not recognize this key combination. (The computer might take a few seconds to recognize the key combination.)

CTRL+PRTSC or **CTRL+P**—Sends each character of output to the printer. Press the combination again to stop print echo.

PRTSC—Sends the current display to the printer.

ESC—Terminates the current line without processing it, and performs a carriage return. (The cursor moves down one line and returns to the left mar-

gin.) Although the system prompt does not appear, the system is ready for a command.

ENTER—Executes a command and begins processing the command line you type. **ENTER** also causes a carriage return and line feed. (The cursor moves down one line and returns to the left margin.)

CTRL+ J—Ends the current line, and moves the cursor to the next line without processing the line. Press **ENTER** to execute the command line when it is complete.

CTRL+ ALT+ DEL—Resets your computer the same as if you had turned it off and then on again.

CTRL+ S or **PAUSE**—Stops scrolling information on the screen to let you view it. Press any key to resume scrolling.

MS-DOS provides several key combinations to help you edit an MS-DOS command line. These keys act on the command line in the last-command memory, or template. Press **F3** to display the template. You can execute the command line again by pressing **ENTER**, or you can use the following keys to edit the command line in the template.

ENTER—Enter line. Make the new line the new template, and executes the command line.

ESC—Void line. Voids the new line but does not affect the template.

INS—Insert character. Goes into the insert mode to enable you to insert characters into the template. Press **F3** to end the insert function.

DEL—Delete character. Erases the next character from the template. The character is skipped and is not copied to the command line.

F1—Copy character. Copies the next character from the template, and displays it on the command line.

F2 CHAR—Copy to character. Copies all characters in the template up to the specified character, and displays them on the command line.

F3—Template. Redisplays the entire template.

F4 CHAR—Delete to character. Deletes all characters up to the character indicated. These characters are skipped and not copied to the command line.

F5—Replace template. Makes the line you type the new template but does not execute the command.

F6 or **CTRL+Z**—End-of-file. Puts an end-of-file marker in the template.

Special Commands

You have learned several commands that help you set up and use your computer. There are many commands available. This section contains information about some of the most helpful commands. Learning these commands makes it easy for you to look up other commands and functions in the *MS-DOS Reference Manual*.

Viewing a Directory

To look at the directory (a list of files) of a diskette, use the **DIR** command. For example, to view the contents of the diskette in the current drive, type:

```
dir ENTER
```

If a diskette contains more filenames than can appear on the screen at one time, all but the last 22 entries scroll off the top of the screen. MS-DOS has three ways to help you avoid this problem:

- Press **CTRL+S** to stop the screen from scrolling. (Press any key to restart the scrolling.)
- Use the **/P** switch with the **DIR** command. The **/P** switch tells MS-DOS to display only 23 lines of the directory at one time. Press the space bar to

display another screen. To use the /P switch, type:

```
dir /p ENTER
```

- Use the /W switch to display the files in five columns. This format usually lets all of the filenames appear on the screen at once. The format for this command line is:

```
dir /w ENTER
```

Looking Inside Files

TYPE is a command that lets you examine files that consist of text characters. For instance, to view the joe.sls file, type:

```
type joe.sls ENTER
```

The file contents appear on the screen. If there are too many lines in the file to fit on the screen, use **CTRL+S** or **CTRL+PAUSE** to stop the screen from scrolling. Press any key to resume scrolling.

If you use TYPE to display a file that is not a text file, it displays meaningless data.

USING OTHER COMMANDS

MS-DOS has more than 50 commands and functions. The guidelines you learned in this manual provide the background you need to make use of MS-DOS's capabilities.

By referring to the *MS-DOS/GWBASIC Reference Manual*, sold separately, you can learn how to create and edit data files, create command files to accomplish numerous tasks in sequence, create directories, send information to your printer, and much more.

HARD DISK FORMATTING

The hard disk in the 1500 HD is pre-formatted, and you should not need to use this procedure in most cases. But if you want to reformat the hard disk for a different version of DOS, add partitions, or reformat for any other reason, use the following procedure.

Caution: Formatting the hard disk erases all information on the drive.

The initialization process has three steps. To perform the three steps, use the following three commands found on the MS-DOS/DeskMate diskette:

1. Run HSECT to low-level format the drive.
2. Run FDISK to partition the drive
3. Run FORMAT to high-level format the drive.

USING HSECT

Caution: The HSECT command initializes the hard disk's tracks and sectors, and erases all information on the disk. Before you use HSECT, be sure you have copied all data from your hard disk to diskettes. Then, follow these steps:

1. Insert the MS-DOS/DeskMate diskette in the diskette drive and type this command at the A> prompt:

```
hsect
```

Then, press **ENTER**.

The following prompt appears:

```
Which hard drive do you  
want to format (C/D)  
?
```

2. Type **c** and press **ENTER** to format the hard disk drive.

The screen displays the following warning:

```
All data on drive c will be
DESTROYED!!
```

Do you want to continue (Y/N) ?

3. Type **N** and press **ENTER** to exit the formatting procedure, or type **Y** and press **ENTER** to continue.

If you continue, Hsect prompts:

```
Hard drive is type 4
Number of heads = 4
Number of cylinders = 615
Is this correct (Y/N)
?
```

4. Type **Y** and press **ENTER**.

The following prompt is displayed:

```
Do you want to flag defective
tracks (Y/N)
?
```

5. Type **N** and press **ENTER**.

The following prompt is displayed:

```
Formatting...
```

The formatting procedure begins. Do not interrupt HSECT while it is formatting the drive.

When the format is complete, HSECT displays
Format complete!

After using HSECT, use FDISK. Then, use FORMAT to complete the hard disk format process.

USING FDISK

To prepare the hard disk for the MS-DOS operating system, you must create a DOS partition. Using FDISK, you can do the following:

- Create an MS-DOS partition
- Display partition information

Caution: Reconfiguring the hard disk with FDISK destroys all existing files. Be sure to have backup diskettes for all files on the hard disk before you run FDISK.

The FDISK utility is easy to use because it uses menus to lead you through each procedure. To start FDISK, place the MS-DOS/GW-BASIC diskette in Drive A. Then, type `FDISK` and press `ENTER`.

In response, FDISK displays its main menu on your screen. This menu lists four choices.

Disk Options

Current Fixed Disk Drive: 1

Choose one of the following:

1. Create DOS Partition
2. Change Active Partition
3. Delete DOS Partition
4. Display Partition Information

Enter choice: [1]

Press `ESC` to return to DOS

Note: The following sections describe Options 1 and 4. Options 2 and 3 are not necessary to the operation of the Tandy 1500 HD hard disk, so they are not described here. However, detailed explanations are available in many MS-DOS books.

To return to MS-DOS from the main menu, press **ESC**. You can also use the **ESC** key to return to the main menu from any FDISK menu.

Most FDISK menus display a default value. To choose the default value, press **ENTER**. To choose another value, simply type the value you want, and press **ENTER**.

How to Create a DOS Partition

Choose the first option on the main menu. FDISK displays a screen like the following. If no extended partitions exist, the third option is not displayed:

```
Create DOS Partition
```

```
Current Fixed Disk Drive: 1
```

1. Create Primary DOS Partition
2. Create Extended DOS Partition
3. Create Logical DOS Drive(s) in
the Extended DOS Partition

```
Enter choice: [1]
```

```
Press ESC to return to Fdisk Options
```

Selection 1: Create Primary DOS Partition

Press **ENTER** to accept the default selection (1) and create a primary MS-DOS partition.

The Create Primary DOS Partition menu appears next:

```
Create Primary DOS Partition
```

```
Current Fixed Disk Drive: 1
```

```
Do you wish to use the maximum size  
for a DOS partition and make the DOS  
partition active  
(Y/N).....? [Y]
```

```
Press ESC to return to FDISK Options
```


Press **ENTER** to accept the default selection (Y).

FDISK pauses and then displays the following message:

```
System will now restart
```

```
Insert DOS diskette in drive A:
```

```
Press any key when ready . . .
```

Put your MS-DOS system diskette in Drive A, and press any key to restart MS-DOS.

Now that you have created your MS-DOS partition, you must format your hard disk so that MS-DOS can use it. Enter the **FORMAT** command as outlined in "Using Format", if you intend not to use the Display Partition Data option.

How to Display Partition Data

If you choose the fourth option on the main menu, FDISK displays a menu that contains information about each of the partitions on your hard disk.

For example, the Display Partition Information menu might look like this:

```
Display Partition Information
Current Fixed Disk Drive: 1
Partition  Status Type      Start  End   Size
C:1       A      PRIDOS  0     613  614
```

```
Total disk space is 614 cylinders.
```

```
Press ESC to return to Fdisk Options
```

This information screen shows the partition's number, status, type, starting and ending cylinder numbers, and size (in cylinders).

USING FORMAT

The **FORMAT** command prepares the hard disk to accept MS-DOS files by creating the disk's directory and file allocation tables. You must use this command to format all new disks (hard disks or diskettes) before MS-DOS can use them.

Caution: Formatting destroys any previously existing data on a disk.

To start the **FORMAT** command, follow these steps:

1. Place the MS-DOS/GW-BASIC diskette in Drive A. Type the following command and press **ENTER**:

```
format c:/s
```

In response, **FORMAT** displays the following:

```
WARNING, ALL DATA ON NON-REMOVABLE  
DISK DRIVE C: WILL BE LOST!
```

```
Proceed with Format (Y/N)?_
```

2. To format the hard disk, press **Y** (for Yes) and press **ENTER**.

When formatting is complete, the **FORMAT** command displays a message showing the total disk space, any space marked as defective, the total space used by the operating system, and the space available for your files.

REINSTALLING MS-DOS AND DESKMATE ON THE HARD DRIVE

After formatting the hard disk, you can recreate a DOS directory and recopy the MS-DOS and DeskMate files to the hard drive. To do so, use the following steps:

1. Place Disk 1 in Drive A and type:

```
a: ENTER
```

2. Then, to copy all the DOS files to the DOS directory, type:

```
hdinst ENTER
```

Wait for the DOS files to load to the hard disk.

3. Then at the A:\> prompt, install DeskMate by typing:

```
install ENTER
```

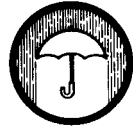
4. Follow the instructions given by the installation program.

For more information on organizing the hard disk, see the *MS-DOS Quick Reference*. Many MS-DOS books are also available for sale at Radio Shack stores.

COMPUTER CARE

Your computer is an example of superior design and craftsmanship. The following suggestions will help you care and enjoy your computer for years.

- Keep your computer and its diskettes dry. If they get wet, wipe them dry immediately. Liquids can contain minerals that can corrode electronic circuits.
- Handle your computer gently and carefully. Dropping your computer can damage circuit boards, the display, case, and can cause your computer to work improperly.
- Use and store your computer and its diskettes only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries and diskettes, and distort or melt plastic parts.
- Keep your computer and its diskettes away from dust and dirt, which can cause premature wear of parts.
- Wipe your computer with a dampened cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean your computer.



Modifying or tampering with your computer's internal components can cause a malfunction and might invalidate your computer's warranty. If your computer is not performing as it should, take it to your local Radio Shack store. Our personnel can assist you and arrange for service, if needed.

SPECIFICATIONS

Processor	μPD70108-10 (V20), 10MHz
Dimensions	12 3/16" x 1 5/8" x 10"
Weight	5.99 lbs
Power Requirements	120-volt AC/60Hz, AC adapter/charger
Battery Type & Life	Nickel-Cadmium rechargeable, Apprx. 3.25 hours (full brightness), Apprx. 3.75 (dim brightness), 90% backlight duty, 10% HDD, 1% FDD,
Temperature	
Operating	40°F-100°F (4°C - 38°C)
Storage	-40°F - 150°F (-40°C - 66°C)
Humidity	
Operating	Max 80%
Storage	Max 80%
Display Type	LCD see-through type, blue characters/white background with FL backlight
Screen Size	640 dots x 200 dots, 80 characters x 25 lines
Hard Disk Drive	2 1/2-inch, 20MB capacity with 23 msec seek time
Diskette Drive Capacity	1.44MB/720KB (formatted)
Media Standard	3 1/2-inch, double-sided, high-density 160 tracks or double density 80 tracks
Interface	Serial DB-9, Parallel DB-25

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SERVICE POLICY

Radio Shack's nationwide network of service facilities provides quick, convenient, and reliable repair services for all of its computer products, in most instances. Warranty service will be performed in accordance with Radio Shack's Limited Warranty. Non-warranty service will be provided at reasonable parts and labor costs.

The FCC wants you to know...

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful radio and TV interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed in accordance with the instructions, may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation.

If this equipment does interfere with radio or television reception, which you can tell by turning the equipment off and on, you are encouraged to try to correct the interference. Use one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the radio/TV.
- Connect the equipment to an outlet that is on a different circuit from the one used for the radio/TV.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded cables must be used with this equipment. If you add or replace any cables, the new cables must have shielding capabilities equal to or higher than those provided by the dealer.

Modifying or tampering with internal components can cause a malfunction and might invalidate the warranty and void your FCC authorization to operate this equipment.

USA ONE-YEAR LIMITED WARRANTY

I. CUSTOMER OBLIGATIONS

- A. CUSTOMER assumes full responsibility that this computer hardware purchased (the "Equipment"), and any copies of software included with the Equipment or licensed separately (the "Software") meets the specifications, capacity, capabilities, versatility, and other requirements of CUSTOMER.
- B. CUSTOMER assumes full responsibility for the condition and effectiveness of the operating environment in which the Equipment and Software are to function, and for its installation.

II. LIMITED WARRANTIES AND CONDITIONS OF SALE

- A. RADIO SHACK warrants to the original CUSTOMER that the Equipment is free from manufacturing defects for a period of one (1) calendar year from the date of purchase as evidenced by a RADIO SHACK sales document. RADIO SHACK warrants to the original CUSTOMER that any diskette, disk cartridge, cassette tape, tape cartridge or other external storage media included with the Equipment is free from manufacturing defects for a period of ninety (90) calendar days from the date of purchase.
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VI. STATE LAW RIGHTS

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