TravelMate 3000 WinSX
Notebook Computer
BatterPro & Productivity Software
User's Manual

Contents

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BatteryPro & Productivity Software User's Manual
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Changes may be periodically made to the information in this publication. Such changes will be incorporated in new editions of this manual.

The equipment, as well as the programs that TI has created to use with them, are tools that can help people better manage the information used in their business; but tools including TI products-cannot replace sound judgment nor make the manager's business decisions.

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Preface

Your new Texas Instruments TravelMate™ 3000 WinSX™ Notebook Computer is delivered to you with convenience, power-saving, and productivity utilities intended to help you use your computer more efficiently. These utilities are installed on the hard disk at the factory and also are stored on the *Microsoft(C)* WindoWS™ and Texas Instruments BatteryPro™ & *Productivity* Software 3.5-inch floppies packed with your new computer.

Developed by Texas Instruments, the unique TravelMate 3000 WinSX BatteryPro utility package permits the TravelMate 3000 WinSX to use only the computer battery power required to do your work, preserving valuable battery power usually wasted by many other portable computers. BatteryPro prolongs the battery charge life by performing power management and battery maintenance functions.

Productivity Utilities

The BatteryPro program package supplied with your new TravelMate 3000 WinSX also provides you the following utilities to operate your computer and maintain your application programs and data files and directories.

- ❑ Microsoft Windows, version 3.0
- ❑ LM.COM, the Laptop Manager utility
- ❑ LFM.EXE, the Laptop File Manager utility
- ❑ RPAL.COM, a palette utility
- ❑ CURSORCOM, a cursor and typematic control utility
- ❑ CHCURSOR.EXE, a utility to design your own cursor

Microsoft Windows

The Microsoft Windows Graphical Environment already installed on your new TravelMate 3000 WinSX can change the way you use your computer. Windows enables you to run several applications simultaneously and transfer data between applications. Windows has extensive online help displays to help you learn and use the program.

Windows also provides several applications of its own, including the Write word processor, the Paintbrush illustration program, plus print manager, program manager, file manager and even games.

See the Microsoft Windows User's Guide furnished with your new TravelMate 3000 WinSX for full details.

Change Cursor

The Change Cursor utility enables you to design the shape and appearance of the seven cursors used by Windows. Or you can change the shape of the default cursors furnished by Windows.

Laptop Manager

The Laptop Manager (LM) utility is supplied with your TravelMate 3000 WinSX as a standard user interface (shell) between MS-DOS and your application programs. LM is both a user convenience and a key interface to the BatteryPro power-savings and monitoring package. LM gives you quick, one-key access to your application programs and MS-DOS management.

You can program LM to require a password to access MS-DOS or any other application program you designate. LM provides one-key access to your application programs, or you can use a mouse to access the programs. The TravelMate 3000 WinSX can access the furnished Laptop File Manager utility with a single keystroke.

Another feature of LM is its automatic loading of your grayshade palette selections for many of your application programs when you use LM to load your applications.

Laptop Manager **is** a key contributor to BatteryPro's power management features because LM enables you to control CPU clock speed and set the appropriate power-savings level for each application program you select via the LM main menu.

Laptop File Manager

The Laptop File Manager (LFM) utility is another time-saving feature, enabling you to quickly access and manage your files and directories without having to directly access MS-DOS. You can set up LFM to permit one-key access to your word processing program and one-key editing and show-file capability. LFM also enables you to use the TravelMate 3000 WinSX's built-in VGA display or an attached external VGA analog monitor in either 25- or 50-line text mode.

Other Utilities

The other utilities which complete the BatteryPro powersavings package include:

- The ALTVID utility enables you to switch from the computer's built-in display to an external monitor.
- The MODSCRN utility enables you to switch the display between the computer's built-in LCD or an external monitor connected to the computer.
- The RPAL palette utility lets you enhance the color or gray shades of the computer's LCD display or an external VGA monitor. RPAL provides palette selection from a hot-key pop-up menu or from a disk file.

- The SETCMOS utility enables you to save computer configuration data for each application program to a custom file, precluding the need to run the Setup Program for each application.
- The SETPOWER utility enables you to change the current power-saving level maintained by the BatteryPro utility to maximize battery charge life in relation to the application program you are currently using.
- The SPEED utility permits you to change the computer's CPU operating speed to conserve power when operating on batteries.
- The NBHELP utility displays online help screens for BatteryPro and its utilities.
- The MS-DOS HELP utility displays online help screens for MS-DOS commands.
- The INSTRUCT utility on the *VGA Software Utilities* floppy displays online help screens for VGA installation and operation of external monitors.

About This Manual

The information in this manual is presented mostly in independent chapters and sections so you can skip pages with information that you already know or that does not apply to your operating environment. Look at the top of each page to determine its major subject.

Keyboard keys are shown several ways in this manual, depending on the number of keys you must press to produce a character or function. Some keys on the keyboard are color coded to indicate their use only in conjunction with another key.

- If the instructions refer to the **Enter** key, simply press and release the **Enter** key.

- Some keys (for example, **Break** and **NumLk)** must be pressed in conjunction with another key (for example, **Ctrl** or **Fn).** The text in this manual refers to these keys according to their function, preceded by the additional key you must also press. For example, to toggle the number lock (Num Lk) feature through its modes, you must press and hold the **Fn** key, then press the **F7** key **(F7** is printed on the keytop; **NumLk** is printed on the key front).

- If the instructions refer to the **Ctrl-Alt-Del** keys, press and hold both the **Ctrl** key and the **Alt** key, press the **Del** key, and then release all three keys.

The word *type* means to press the appropriate alphabet and numeric keys to *enter* data. The word enter means to invoke a function or to initiate an action; for example, *to enter a menu means* to cause the computer to display that menu so you can perform some action.

The word *floppy* is used in this manual to refer to diskettes, microdiskettes, disks, and other terms commonly used to describe a removable, nonvolatile, magnetic-media diskette. The words *disk* and *diskette* are used in direct quotations, for example, in describing a displayed error message, setup menu, etc.

To describe commands and other data you type at prompts, this manual shows uppercase (capital) alphabet characters for clarity. However, you may type all referenced alphabet characters in either uppercase or lowercase.

Preface

Conventions and Symbols

Throughout this manual, the following conventions are used to distinguish elements of text:

italics	Used to denote Setup Program items and settings, key words, and references to other publications
Monospace	Used for prompts and menus that display during operation of your computer, including prompts (text generated by the computer) and entries you are supposed to type on the keyboard
Bold	Used for keys, key sequences, and drive designator prompts

Several international symbols are used throughout this manual to advise you of important information.

This symbol indicates a **Note** concerning operating procedures or information you should know to help you operate your computer.

This symbol alerts you to a **Warning** or **Caution** which can prevent you from causing a hazard to your computer or your data.

This symbol tells you that more information about the same subject is continued on the next page.

Contents of This Manual

Chapter 1 - Using Microsoft Windows briefly tells you about the Windows graphical environment program furnished with your new TravelMate 3000 WinSX.

Chapter 2 - Laptop Manager explains how to set up and use the Laptop Manager utility to access your application programs at the touch of a key.

Chapter 3 - Power Saving Utilities tells you about the BatteryPro power-saving utilities, including the SETPOWER and SPEED utilities and the SMARTDrive device driver.

Chapter 4 - Palette Utilities describes several utilities designed to enhance and modify the gray shades of the built-in display and colors of an external monitor.

Chapter 5 - Laptop File Manager describes how to use the furnished file manager utility (LFM) to help you manage and manipulate your directories and data files.

Chapter 6 - VGA External Monitor Utilities explains the capabilities and operation of the furnished VGA software when using an external monitor. This chapter also includes technical data for programmers.

Chapter 7 - Other Utilities describes how to use several convenience utilities, plus the RAM drive device driver.

Appendix - Creating Help Displays explains how to create your own help displays.

An **Index** is included in the back of this manual to help you find your subject of interest.

1
Using Microsoft Windows

This chapter tells you about

- ❑ Windows basics
- ❑ Windows Notebook group menu and its custom application icons
- ❑ Change Cursor utility furnished with your TravelMate 3000 WinSX
- ❑ Reinstalling Windows on the hard disk if ever necessary

Contents

Getting Started With Windows

The Microsoft Windows Graphical Environment furnished with your new TravelMate 3000 WinSX Notebook Computer provides you one of the most efficient, versatile application programs available. Windows enables you to run several application programs simultaneously and transfer information between programs.

You can set up Windows to provide quick access to your own application programs, in addition to giving you Window's own programs such as Write, Paintbrush, File Manager, Calculator, and others. The Microsoft Windows version that loads when you first start your new TravelMate 3000 WinSX gives you quick access to several custom utilities designed especially for the TravelMate 3000 WinSX Notebook Computer.

This chapter describes only these custom utilities. The *Microsoft Windows User's Guide* furnished with your new TravelMate 3000 WinSX gives detailed information on using Windows features. Windows also provides extensive context sensitive online help, accessible at most Windows menus by double clicking the appropriate icon or by pressing the **F1** key or the **Alt-H** keys.

Note: Windows is especially designed for convenient use of the furnished TravelPoint pointing device (or other mouse device), but you also can use keyboard keys at Windows menus as explained in the Microsoft Windows User's Guide.

Loading Windows

Windows loads automatically on a new TravelMate 3000 WinSX, but if the **AUTOEXEC.BAT** has been changed, you may have to load Windows manually by typing at the **MS-DOS CA>** prompt:

WIN /3

and pressing the **Enter** key.

Exiting Windows

Always exit Windows-and any applications then running before turning off the computer. Otherwise, you could lose data and possibly damage installed software.

You can exit Windows by double clicking the Shutdown icon visible at lower left corner of the Program Manager menu and then answering any exit prompts to save data (there could be several prompts). The Shutdown feature is explained in more detail later in this chapter.

Note: If the Shutdown icon is not visible, click on the Program Manager menu's up/down arrows in the extreme upper right-hand corner. The Shutdown icon should then be visible in the lower left-hand corner.

You also can exit Windows from the Program Manager menu after quitting any applications) you are running under Windows. Click the File menu and then click the Exit Windows option. Then answer the prompts in the Exit Windows confirmation dialog box. See the *Microsoft Windows User's Guide* for detailed instructions.

Using Notebook Group Programs

The TravelMate 3000 WinSX custom Windows utilities are all accessible from the Windows Notebook group menu by double clicking the individual icons. This section briefly describes the programs. Each program has its own help displays if you need online assistance.

Alarms Off Icon

Double click the Alarms Off icon to turn off both the cover closed alarm and the low-battery alarm. The alarms remains off until you next reboot the computer. You also can change the alarm status using the Setup Program accessed from the System Setup icon. See Chapter 4, 'Customizing Your Computer," in your *TravelMate 3000 WinSX Notebook Computer User's Manual* for instructions on the Setup Program.

Altvid Icon

Altvid enables you to switch between the TravelMate 3000 WinSX's built-in liquid-crystal display (LCD) to an external monitor connected to the computer. Connect your external monitor to your TravelMate 3000 WinSX as described under 'External Monitor" in Chapter 6 of this manual.

Double click the Altvid icon at the TravelMate 3000 WinSX's LCD or at the external monitor to switch the display to the other unit. You also can use the ALTVID command at the MS-DOS prompt to switch between displays as described in Chapter 6.

For optimum operation be sure you interconnect and operate your external display and your TravelMate 3000 WinSX as described in Chapter 6 of this manual and in your monitor documentation.

BitCom Icon

Double click on the BitCom icon to load the BitCom Deluxe main menu at which you can select from several functions to operate your internal modem (if installed).

See the *BitCom Deluxe User's Manual* and the *Internal Modem Option User's Manual* furnished with the option for complete instructions on operating the modem.

Change Cursor Icon

The Change Cursor feature lets you design or edit the shape and appearance of the following seven different cursors used by Windows. You also can use the default cursors furnished by Windows if you wish.

Note: Custom cursors designed specifically for the TravelMate 3000 WinSX automatically load when Windows loads.

- The **arrow** is a mouse pointer if your TravelPoint or other mouse-type pointing device is installed
- The **hourglass** signals that Windows is saving work or loading a program or otherwise performing work that cannot be interrupted
- The **I-beam,** called a *selection cursor*, denotes the place in text or graphics displays where your typing or drawing will appear; usually can be moved using your TravelPoint or mouse
- The four double-arrow cursors used by Windows to denote box sizing, the cursors East-West, NorthSouth, Northeast-Southwest, and Northwest-Southeast, named for the directions to which they point.

Change Cursor Menu

On the Notebook group menu, double click the Change Cursor icon and Windows displays the Change Cursor menu, described in the following subsections.

Detail Window - The left half of the Change Cursor menu is a 32-by-32 element grid, called the *detail window,* on which you can create your own new cursors or edit cursors that you then can use instead of the default cursors. You also can load the default cursors, change them, and save them under new filenames; however, you cannot change the default cursors.

Left Button Box - The two stacked boxes to the right of the detail window, labeled *Left Button* and *Right Button,* let you assign one of four editing functions to the two left and right buttons on your TravelPoint or other mouse. Clicking on the circles within the boxes causes the following when you subsequently move the pencil-shaped editing cursor to the detail window.

White causes the appropriate TravelPoint button to change the grid element to white.

Black causes the appropriate TravelPoint button to change the grid element to black.

Screen causes the appropriate TravelPoint button to change the grid element to the current screen background color: dark gray on the LCD or blue on an external color monitor. Use this selection to cancel a changed element.

Inverse causes the appropriate TravelPoint button to change the grid element to display the inverse of the current screen background color: darker gray on the LCD or green on a color monitor.

Note: The current setting of the computer's standard/reverse video switch may cause the images to be reversed: black is white and white is black.

At the far right of the menu is a stack of eight boxes of various shades of gray (in color if you are using an external color monitor), called the *preview window*. You can move the cursor you are editing or designing into the boxes to judge the cursor's appearance against different backgrounds.

Creating a New Cursor

Creating a cursor involves three primary steps:

- ❑ Using the File menu to open a new file in which to save your new cursor or you can load the default cursor or a previously designed cursor to edit
- ❑ Drawing new cursor(s) on the detail window or editing existing cursor(s)
- ❑ Using the Configure menu to install (or remove) the new cursor(s) to load automatically when you load Windows

You can start creating a new cursor as soon as you load the Change Cursor menu and save it later. Simply move the cursor into the detail window-it then assumes the shape of a pencil. Now click the left or right TravelPoint button on the grid elements you want to color. After you have completed designing the cursor to your satisfaction you can save it by using the File drop-down menu described later in this section.

If you wish to erase a change you made to a single grid element-that is, restore a grid element to its original shade or color-move the cursor to the Left Button or Right Button box and click on the *Screen* option. Then move your pencil cursor to the grid element you want to erase and click the left or right button you just changed to a Screen.

You also can select one of the seven default cursors from the Change Cursor menu bar (described below) and edit it to create a new cursor shape.

Note: Change Cursor must always run in background so as to make the custom cursors available for other Windows applications. Always exit the Change Cursor menu by clicking on the Exit command in the File pulldown dialog box. This keeps Change Cursor running in background. Do not use the Close command in the Control-menu box unless you want to stop running Change Cursor and revert to the default cursors.

After you complete your cursor, you can save it as a new cursor under a new filename and/or install it as one of the active cursors as described under "File Menu" and 'Configure Menu" later in this chapter.

Change Cursor Menu Bar

Select Cursor at the Change Cursor menu bar, and the Cursor menu drops down. The following items are available at this menu.

Set hotspot - lets you move the exact spot where the cursor actually points, defined on the detail window as an x. Select this item and a block cursor with a + (cross) in its center appears on the detail window instead of the pencil. Move the + cursor to the square in the detail window where you want the hot spot and click once. The x then appears on that square.

Use this cursor as arrow - tells the program to use the cursor displayed in the detail window as the mouse pointer, no matter what shape you have made it. However, this does not save the cursor in a file; you must do that using the File command on the menu bar.

Use this cursor as hourglass - tells the program to use the cursor displayed in the detail window as the hourglass cursor (which signals that Windows is working), no matter what shape you have made it. However, this does not save the cursor in a file; you must do that using the File command on the menu bar.

Use this cursor as i-beam - tells the program to use the cursor displayed in the detail window as the selection cursor in text and graphics program displays, no matter what its shape. However, this does *not* save the cursor in a file; you must do that using the File command on the menu bar.

Use this cursor as NS sizer - tells the program to use the cursor displayed in the detail window as the top-to-bottom (North to South) sizing cursor that appears when you resize a window. However, this does *not* save the cursor in a file; you must do that using the File command on the menu bar.

Use this cursor as WE sizer - tells the program to use the cursor displayed in the detail window as the left-to-right (West to East) sizing cursor that appears when you resize a window. However, this does *not* save the cursor in a file; you must do that using the File command on the menu bar.

Use this cursor as NESW sizer - tells the program to use the cursor displayed in the detail window as the lower-left or upper-right (northeast to southwest) corner sizing cursor that appears when you resize a window. However, this does *not* save the cursor in a file; you must do that using the File command on the menu bar.

Use this cursor as NWSE Sizer - tells the program to use the cursor displayed in the detail window as the lower-right or upper-left corner (northwest to southeast) sizing cursor that appears when you resize a window. However, this does not save the cursor in a file; you must do that using the File command on the menu bar.

Get default arrow - displays in the detail window the factory default arrow shape, which is a small arrow pointing slightly to the left of straight up.

Get default hourglass - displays in the detail window the factory default hourglass shape, which is a small hourglass figure.

Get default i-beam - displays in the detail window the factory default I-beam shape, which is a cursor resembling an uppercase I character.

Get default NS sizer - displays in the detail window the factory default NS (north-south) two-head arrow, which is the form that appears when you drag the cursor across a horizontal line on a Windows menu during a menu sizing operations.

Get default WE sizer - displays in the detail window the factory default WE (west-east) two-headed arrow, which is the form that appears when you drag the cursor across a vertical line on a Windows menu during menu sizing operations.

Get default NWSE sizer - displays in the detail window the factory default NWSE (northwest-southeast) two-headed arrow, which is the form that appears when you drag the cursor across a lower -right or upper-left corner of a Windows menu during menu sizing operations.

Get default NESW sizer - displays in the detail window the factory default NESW (northeast-southwest) two-headed arrow, which is the form that appears when you drag the cursor across a lower-left or upper-right corner of a Windows menu during menu sizing operations.

File Menu

The File menu provides several options for manipulating the cursor files.

New - The New command erases any cursor currently in the detail window and displays a clean grid.

Open - The Open command displays a menu at which you can type a new filename at the Open File Name box, or double click the filename of a previously designed cursor.

Save - The Save command saves the cursor shown in the detail window under its existing filename. If you have not yet named the file, the program displays the Save As menu described below.

Save As - The Save As command displays a menu where you can type a new filename for your cursor, or you can double click an existing filename listed in the Files: window. If you select an existing filename, the program displays a menu asking you to verify you want to replace (overwrite) an existing cursor file. Click on the OK button if you still want to replace an existing file.

Exit - The Exit command "minimizes" the Change Cursor program (runs it in background) and returns control to Windows. If you have created or edited a cursor without saving it, the Exit command displays a menu asking if you want to save current changes. If you click on Yes, the program displays the Save As menu described above if the cursor is new or saves the changes if the file already existed.

Configure Menu

The Configure command enables you to save and install the cursor using the following options.

Save cursor settings - This option displays a dialog box listing the filename and path for the seven cursors used with Windows. If the listing is correct, click on the OK button.

Load cursor settings - This option restores cursor settings after you save them and automatically loads them for use in Windows. This function is automatically done if you use the *Install for automatic* setup option described next.

Install for automatic setup - This option modifies Windows so that it always boots (if CHCURSOR also **is** loaded) with the cursor(s) you select, either the default cursors or your own design. Clicking on this option presents a display asking you to OK or cancel the action.

Uninstall Change Cursor - This option removes the CHCURSOR utility from Windows, which then uses the default cursors.

Scheduling - This option is related to battery-power savings features. Do not change the value unless advised by your systems manager or TI representative.

Help Menu

The Change Cursor program Help menu lists several items you can select for further details on use of the program, including an index to the Help file itself.

Laptop Manager Icon

Double click this icon to load the Laptop Manager utility (not to be confused with the Laptop *File* Manager described in Chapter 5 of this manual). Laptop Manager is an application control program that provides menus on which you can enter your own application programs for quick loading.

To return to Windows from the LM main menu, press the **Esc** key.

Laptop Manager is fully described in Chapter 2 of this manual.

LFM (Laptop File Manager) Icon

Double click the LFM icon to load the Laptop File Manager utility, which helps you manage, view, and edit directories and files on the hard disk or on floppies in drive A. LFM enables you to copy, delete, edit, print, rename, and perform other common file management functions using onekey commands.

To return to Windows from the LFM main menu, press the **Q** key and the **Return** key.

LFM is fully described in Chapter 5 of this manual.

Modem Power Icon

Double click the Modem Power icon to get the WMpower dialog box at which you can learn the cur-rent power status of the internal modem option (if installed) and turn the modem off or on.

When running the computer on battery power and you are not using the modem, always turn off the modem to conserve power.

When you intend to use the modem, be sure to turn it on; otherwise, the system may lock up when communication with the modem is attempted.

A help file is available at the box by clicking the *Help* command or by pressing the **Alt-H** keys.

Modem Setup Icon

Double click the Modem Setup icon to get the MSetup dialog box at which you can configure the internal modem option (if installed) for your operating environment.

See the *Internal Modem* Option *User's Manual* furnished with the option for instructions on configuring and operating the internal modem.

Using Notebook Group Programs

Setup Icon

Double click this icon to access the computer's Windows based Setup Program, consisting of several menus of configuration settings corresponding to Pages 2 and 3 of the hard disk-based and ROM-based Setup Program. The Setup Program enables you to specify hardware and software configurations for your TravelMate 3000 WinSX or accept the factory defaults.

Note: Some settings require rebooting the computer to take effect. The exit menus inform you of this if true.

See Chapter 4, "Customizing Your Computer," in the *TravelMate 3000 WinSX Notebook Computer User's Manual* furnished with your computer for descriptions of the available settings.

Shutdown Icon

Double click the Shutdown icon to exit Windows faster than the standard Windows exiting procedure. If you have made any changes to Windows or applications programs, the Shutdown program displays 'save" prompts asking if you want to update your files before exiting the Windows session.

If the Shutdown icon is not visible at the lower left corner of the Windows display, click on the small up/down arrows box in the extreme upper right hand corner of the Program Manager menu. The Shutdown icon should appear in the lower left corner.

Caution: Before turning off your computer, always update changes and exit a Windows session by using the Shutdown feature or by using the standard Windows A Exit command on the pulldown File dialog box. Otherwise, you can lose data and possibly damage some applications programs.

Using Notebook Group Program

Refer to the *Microsoft Windows User's Guide* and your applications programs documentation for details on existing programs before turning off the computer.

Installing Windows

If the Windows files are erased from your TravelMate 3000 WinSX hard disk-by accident, installing a new hard disk, or to gain memory-and you want to restore Windows files to your hard disk, use the floppies furnished with your new TravelMate 3000 WinSX.

If the hard disk is empty, you must reinstall programs to the hard disk in the following order:

1. MS-DOS, using the three *Microsoft MS-DOS 5.0* floppies

2. BatteryPro utilities, using the one *BatteryPro & Productivity Software* floppy

3. Windows, using the four *Microsoft Windows* 3.0 floppies

Refer to the *TravelMate 3000 WinSX Notebook Computer User's Manual* Appendix E, Troubleshooting, for more detailed installation instructions, or see the *Microsoft Windows User's Guide*. Both manuals are furnished with your new computer.

After installation, Windows should load automatically when you start the computer, and you can access the TravelMate 3000 WinSX utilities by double clicking on the appropriate Windows icons.

This chapter tells you about

- How to use the Laptop Manager utility to supervise your application programs
- How to configure the Laptop Manager utility to load your application programs at the touch of a key

Contents

Laptop Manager Features

The Laptop Manager utility, furnished with your TravelMate 3000 WinSX Notebook Computer, is an application control program that provides quick access to your applications. Laptop Manager has two submenus, on one screen into which you can list the names of application programs you have installed on the hard disk. You can then load application programs from one of the submenus with a function key, and from the other submenu using the arrow keys and the **Enter** key.

Laptop Manager (LM) enables you to specify unique operating parameters for each application program you install under its control, including the following.

- ❑ Fixed and prompted parameters that are passed to the application program as it loads
- ❑ Working directory
- ❑ Password protection, if desired, to any or all application programs
- ❑ Individual color palettes for each application program, if desired
- ❑ Power-savings level for each application program
- ❑ Screen background during execution
- ❑ CPU processing speed for each application program

Using these features you can select the parameters and operating environment that maximize battery charge life and application program performance for each of your application programs you load under LM management.

Note: Do not confuse Laptop Manager (LM) described in this chapter with the Laptop *File* Manager (LFM) utility also furnished on your computer and described in Chapter 5 of this manual.

Laptop Manager Main Menu

The Laptop Manager program is installed on your new computer's hard disk at the factory and is also stored on the 3.5-inch *BatteryPro* & *Productivity Software* floppy. LM displays its main menu when you load it from the Windows Notebook group menu or from the MS-DOS prompt.

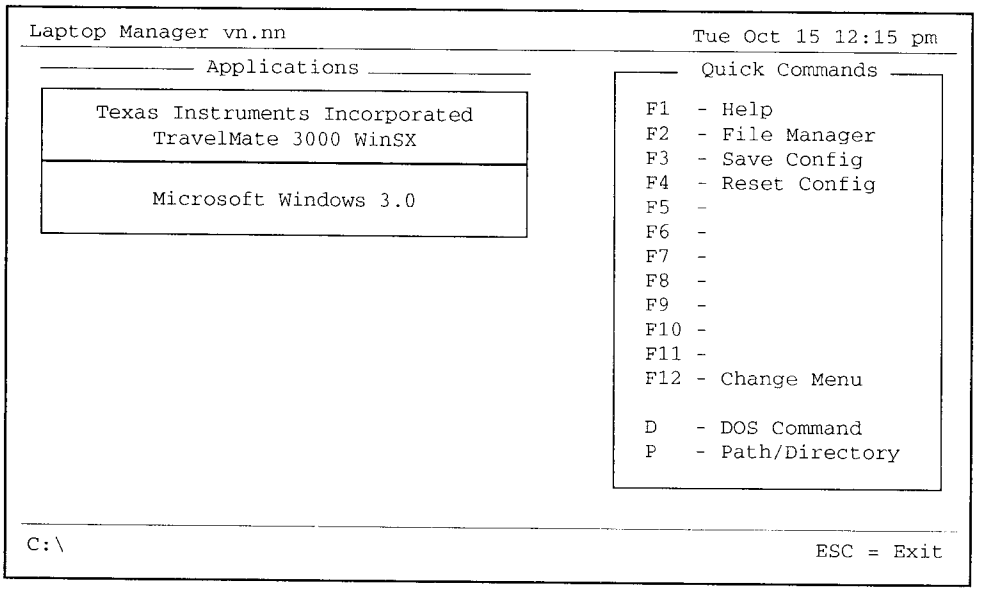
Loading Laptop Manager

You can load Laptop Manager from the Windows Notebook group menu by double clicking the Laptop Mgr icon.

You also can load Laptop Manager at the MS-DOS **C:\>** prompt by typing

LM

and pressing the **Enter** key. Laptop Manager loads and displays its main menu.



The main menu enables you to select your application programs with a few keystrokes. Procedures for adding items to the Applications list and Quick Commands box are described later in this chapter.

Laptop manager Main Menu

Note: If your TravelMate 3000 WinSX is equipped with the optional Internal Modem, the left side of the LM main menu also includes modem control prompts to enable you to control modem operation

Pressing the **F12 (Fn-F2)** key at the Laptop Manager main menu loads the Change Menu screen. It enables you to add, delete, or modify items on the main menu. Procedures for using the Change Menu screen are provided later in this chapter.

Exiting Laptop Manager

You can exit Laptop Manager and return to Windows control by pressing the **Esc** key at the LM main menu. Or if you entered LM from the MS-DOS prompt, the MS-DOS prompt reappears.

Quick Commands Box

Application programs you add to the Quick Commands box can be selected by pressing the function key you assign to it **(F5** to **F11).** Instructions for installing your own application programs are provided later in this chapter.

For your convenience the following utilities are installed on your computer at the factory.

- **F1** - Help screens you can page through to help you use various utilities, commands, and features
- **F2 -** (Laptop) File Manager utility described in Chapter 5 of this manual
- **F3 -** Save Confi(guration) described under the SETCMOS utility in Chapter 7
- **F4 -** Reset Config(uration), which is part of the SETCMOS utility described in Chapter 7

You can delete any of the furnished utilities from the menu and replace them with your own application programm(s) by using the Change Menu procedure explained later in this chapter.

Single-Character Quick Commands

At the bottom of the Laptop Manager menu Quick Commands box are two single-character commands:

- Pressing the **D** key (for *DOS* command) causes Laptop Manager to display a prompt at the bottom of the screen where you can enter MS-DOS commands of up to 67 characters. Pressing the **Enter** key starts the command. When the command is executed, pressing any key returns you to the Laptop Manager main menu.

- Pressing the **P** key (for *path*) causes Laptop Manager to display a prompt at the bottom of the screen where you can change drives or directories. For example, you can change from the **C:** (root directory) to the **C:\UTILS** directory by pressing the **P** key, typing
C:\UTILS, and pressing the **Enter** key.

  You can change from the **C:** drive (hard disk) to the **A:** drive (floppy drive) by pressing the **P** and **A** keys in order, and then pressing the **Enter** key. Note that the **C:** prompt at the bottom left corner of the menu changes to the **A:** prompt.

Selecting Applications From the Applications List

After you have added your own application program names to the Applications list, you can select the program you want by using the ↑ and ↓ keys to highlight the application you want to load and pressing the **Enter** key. Laptop Manager loads your selection into memory for your use.

Adding Applications to the Menu

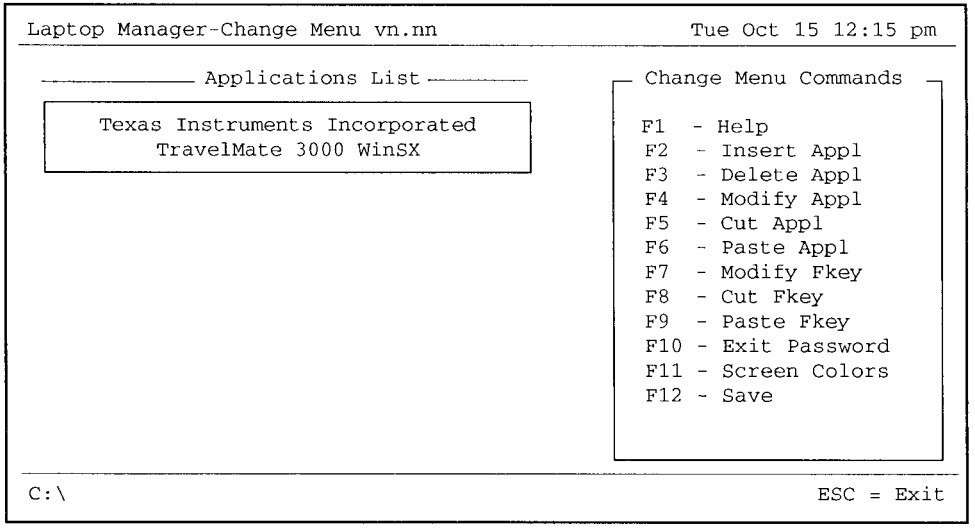
You can add your own IBM ATM-compatible application programs to the LM main menu for easier access; you can also alter or move current menu items. After you have installed your own programs into the hard disk according to the instructions furnished with each program, you are ready to insert listings into the Laptop Manager menu.

You can insert the application program name into either the Applications list or the *Quick* Commands box. Insert the programs you use most often into the *Quick* Commands box for fast, one-key program loading. Put less frequently used programs and those requiring a longer name under the Applications list.

Quick Commands Program Setup Menu

You can set up your own Quick Commands selections to display on the Laptop Manager main menu as follows.

1. At the Laptop Manager main menu, press the **F12** (Fn-F2) key. Laptop Manager displays the following Laptop Manager Change Menu screen.

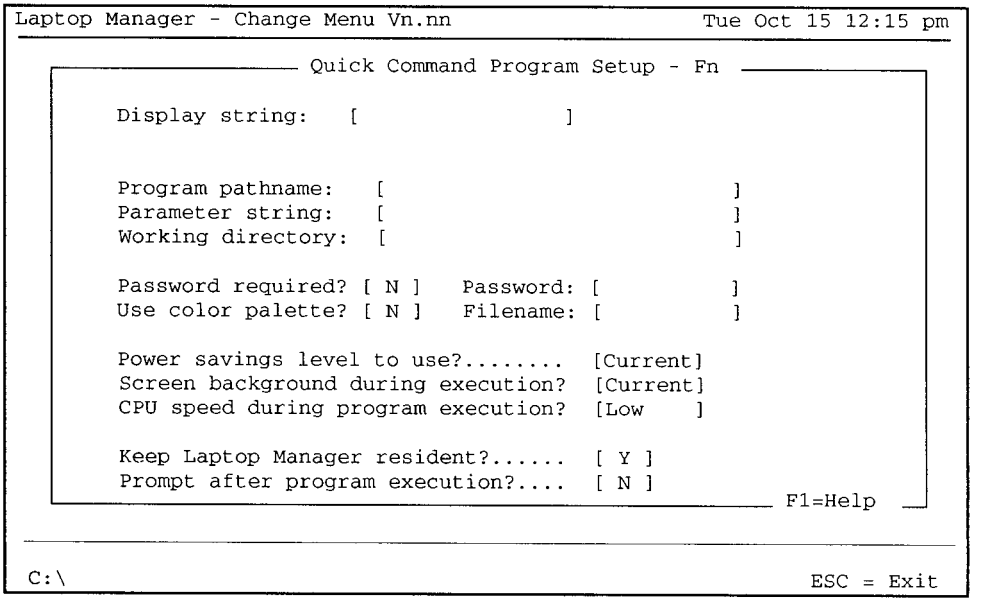


2. Press the **F7** key to get the Modify *Function Key* prompt at the bottom of the Setup menu.

Note: Press the **F1** key at the Laptop Manager Change Menu screen and at the Quick Command Program Setup screen for on-screen help.

3. In response to the *Modify Function* Key prompt, press the function key **(F5** through **F11)** you want to assign to your application program. For example, if you want to assign the **F5** key to your application program, press the **F5** key.

Laptop Manager then displays the following Quick Command Program Setup menu.



The Quick Command Program Setup menu screen provides the following prompts to help you configure the Quick Commands box on the Laptop Manager main menu. Press the **Enter** key

Adding Applications to the Menu

Display String

Type up to 15 alphanumeric characters (including spaces) on the Display string prompt line to identify the name you want displayed beside your selected function key on the main menu. For example, type

Communication

and press the **Enter** key. Thereafter, the phrase *Communication* will be displayed in the main menu Quick Commands box, opposite the function key number you selected.

You also can type line graphics characters to appear on the function key display (press the F1 key for a list of graphic characters you can use). Press and hold the **Fn-Alt** keys and then type the three digits for each graphic character on the embedded numeric keypad (blue key fronts). Then release the **Fn-Alt** keys.

If you have the Numeric Keypad option, you can enter the graphical characters directly by pressing and holding only the **Alt** key.

Program Pathname

In response to the Program pathname prompt, type up to 67 characters for your application program pathname. This is the command your application program tells you to use to load the program at the MS-DOS **CA>** prompt.

For example, if your communication program (named *COMPROG)* is installed under the UTILS directory on the hard disk (drive Q, to load the program you would type UTILS \ COMPROG at the **C:** \> prompt. Therefore, you would type that same command at the Change Menu Program pathname prompt:

C:\UTILS\COMPROG

and press the **Enter** key.

Note: The more complete your pathnarne, the faster Laptop Manager can find and load your program.

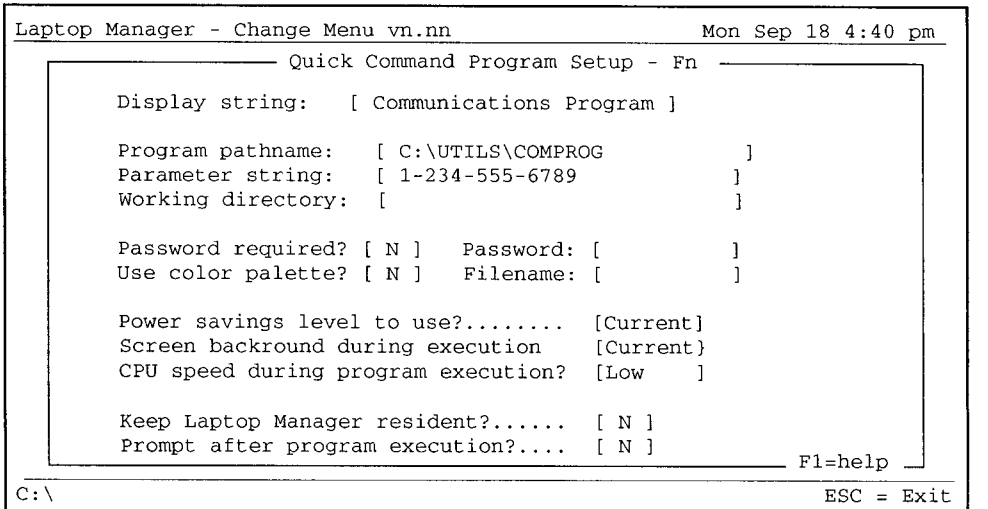
Refer to the *MS-DOS User's Guide and Reference* furnished with your computer for discussions of *paths, pathnames,* and *directories.* See your application program documentation for directions on how to install the program on the hard disk and what command to use to load the program.

Parameter String

The *Parameter string* prompt enables you to set up your menu so it does more than just call application programs. It also enables you to define parameters passed to the program when it is loaded.

For example, if your communications program requires a phone number as a parameter when the program loads, you would type the phone number at the Parameter string prompt.

As a result of the examples discussed here, your Quick Commands Program Setup menu might now resemble the following screen.



Adding Applications to the Menu

In addition, you can create a prompt to solicit a typed input that is passed to the application program as a parameter by using the string flag %S. In the previous sample menu, you would type the Parameter string as:

%S,"Enter phone number to call:,,

When you press the selected function key, the prompt

Enter phone number to call: [ ]

displays at the bottom of the Laptop Manager menu. You can then type a phone number between the square brackets. When you press the **Enter** key, Laptop Manager loads the program into memory and passes the phone number to the program.

If you want the data you type in *response to the prompt* stored and used as a default value each time you load the program from Laptop Manager, you can use the buffer flag %A in the Parameter string. In the previous sample menu, you would type the Parameter string as

%S="%A",”Enter phone number to call:"

With the buffer string in the Parameter string, the phone number you typed is saved in the %A buffer and used as the default value the next time you load the program from Laptop Manager.

You can use up to four optional parameter string buffers (%A, %B, %C, and %D); however, the %D buffer is assigned for use by the Laptop Manager single-character command D (DOS). You can use all four, but the information in the %D buffer will change every time you enter a string for either the application or the D (DOS) command.

Working Directory

A working directory is one that is currently in use. Many application programs require that the program reside in the current directory if it is not in the path. The *Working Direc*tory prompt enables you to change the working directory to meet the program's requirements.

This prompt's primary purpose is for use with application programs that use data files (for example, Lotus 1-2-30, Microsoft Excel(R), and most word processing programs) so you can name the directory that stores the associated data files. For example, if you are installing a word processing program named **LETTERS,** and it might store data files under a directory you call DOC under the LETTERS directory on the hard disk, your working directory prompt could be

C:\LETTERS\DOC

Note: If your application program does not need or use a data-file working directory, leave the *Working Directory* prompt absolutely empty; that is, be sure there are no spaces or anything else in the prompt field.

Password Required?

In response to the *Password* required? prompt, select Yes or No by pressing the **Y** key or the **N** key. If you choose not to use a Password, the highlight skips the Password prompt.

Password

If you choose to assign a password, type up to 19 alphanumeric characters (including spaces) for the password you want to use. To protect the secrecy of the password you type, the characters are not displayed; asterisks are displayed. Carefully memorize your password and record it in a secure place away from where you store or use your computer.

Adding Applications to the Menu

If you change your mind and decide to delete the password (before exiting the Setup menu), press the **Del** key until all asterisks are erased.

Caution: Be careful if you decide to use a password. Once you assign a password, you have to use it every time you want to run the application program to which the password is assigned. This caution is particularly pertinent if you assign a password to the Exit to DOS function (the *Exit Password* - F10 - key choice on the setup menu). If you forget the password for this function, you cannot get the MS-DOS prompt or the Change Menu screen.

Case is important in your password; to be accepted, a password must be typed exactly the way you entered it during setup. For example, if your password is all uppercase letters, you must type it that way to gain access to your program.

Use Color Palette?

If you have used the RPAL utility (described in Chapter 4) to create individual color or gray-shades settings for each of your application programs and stored them in data files, select Y(es) at the Use *color palette?* prompt and press the **Enter** key.

Then, at the Filename prompt, type the pathname of the palette data file associated with this application program and press the **Enter** key.

Note: Your TravelMate 3000 WinSX UTILS directory has several color palette files configured as examples for use with individual application programs. These files end with the PAL extension (for example, the sample palette for Bitfax ™ is BITFAX.PAL). When you install your programs, examine the UTILS directory for available palette files.

Power Savings Level to Use?

Note: This prompt does not function if the BATTERY.PRO device driver is not included in the computer's CONFIG.SYS file.

When operating your computer on battery power, some application programs work more efficiently and still conserve battery power at different power saving levels. If your programs are running satisfactorily at their current power savings level, choose the *Current* selection at the *Power savings level to* use prompt.

If you have determined, after reviewing 'Real-Time Power Savings" in Chapter 3 of this manual, that a particular power savings level works best for this application program, press the **Space Bar** to select that level number (I - 4). Or you can select 0 (zero) to disable the power savings feature.

Screen Background During Execution

If you want the screen image reversed from the normal black on white image, you can select *Reverse* at this prompt. Select *Normal* for the standard black on white image, or select *Current* for the image in effect when you enter the program from LM.

CPU Speed During Program Execution?

In response to the *CPU speed during program execution?* prompt, select the system speed you want to use during program execution by pressing the **Space Bar** to toggle among *High Low*, and *Auto*. Select *Low* for optimum battery-charge conservation. *Auto* uses high speed if the computer is on ac power or medium speed if the computer is on battery power. Your application program may specify a processing speed-, check your application program documentation.

Adding Applications to the Menu

Keep Laptop Manager Resident?

If you want to keep the Laptop Manager program in memory (resident) while your application program is running, select Yin response to the *Keep Laptop Manager resident?* prompt. You may not want to keep Laptop Manager resident when executing large programs; it uses approximately 130 KB memory space the application program may need.

You may want to select Y if you are running an application program that does not use the entire memory and if you want to avoid wasting the time needed to reload Laptop Manager from the disk after running your application. Laptop Manager uses only 2.5 KB memory if not resident.

Prompt After Program Execution?

In response to the *Prompt after program execution*? prompt, select Y if you want Laptop Manager to display the following prompt when you exit your application program:

Press any key to return to Laptop Manager

If you select N, the Laptop Manager main menu automatically returns with no prompt when you exit your application program.

Exiting the Quick Command Program Setup Menu

When you complete all your Quick Command Program Setup menu selections, press the **Esc** key. Laptop Manager prompts you at the bottom of the screen:

Keep changes? [Y]

In response to this prompt, press the **Enter** key, **Esc** key, or **Y** key if you want to keep your changes or additions. Press the **N** key if you want to exit the Quick Commands Program Setup menu without keeping the changes you just made. In either case the Laptop Manager Change Menu returns.

At this point you can either select another Quick Command to program or press the **Esc** key to exit the Change Menu. If you made changes and previously elected to keep the changes, Laptop Manager again prompts you at the bottom of the screen:

Save changes? [Y]

In response to this prompt, press the **Enter** key, **Esc** key, or **Y** key if you want to keep your changes or additions. Press the **N** key if you want to exit the Change Menu without saving the changes you just made. In either case the Laptop Manager main menu returns.

Testing Your Menu

At the Laptop Manager main menu, test your new application program setup by pressing the newly assigned function key. Does it load the application program for you? If you get an error message, press the **F12** key, the **F7** key, and the newly assigned function key again. Check your entries for correctness. Make sure you specified the correct pathname and working directory and that the color palette file exists.

You can add both information display strings and application programs to the Laptop Manager Applications list in the Laptop Manager main menu.

Adding Items to the Application Menu

The procedure for adding items to the Application menu is the same as described previously for the Quick Command Program Setup menu, except you can use several function keys to insert, delete, modify, or cut and paste an item. On the Applications list, you must also designate whether the item is for display only or is to run an application program. Press the **Space Bar** at the *Application Type* prompt on the Application Setup menu to select Display Only or Application.

In other respects, the Application Setup menu works the same as the Quick Command Setup menu. You can enter up to 40 characters in response to the Display string prompt. If you need more space to enter a label or title than is available on one *Display string* prompt line, you can leave the Application Type prompt set to Display only, enter the line of type you want to have displayed, and move down a line at time, inserting lines by pressing the **F2** key (Insert Application) for each line you want to insert. When finished inserting lines, toggle the Application Type prompt to *Application* by pressing the **Space Bar** when you get to the line on which you want to have Laptop Manager run the application program.

Note: If you press the I key when the highlighted item is at the bottom of the Application List, the Change Menu automatically appears for you to create another entry.

You can continue inserting entries-at the beginning, end, or between existing lines-in your Applications List up to a total of 255 lines. After you insert the seventeenth line, succeeding lines require you to use the **PgDn** or **PgUp** keys (or the ↑ and ↓ keys) to view all lines on your list.

Changing LM Menu Colors

Pressing the **F11** key at the LM Change Menu causes LM to display the *Screen Color Setup* menu where you can change the colors of the LM menus displayed by a color monitor connected to your TravelMate 3000 WinSX. This menu also affects the gray shades displayed by your built-in LCD screen.

The menu is self-explanatory and also provides a Help display to assist you.

3
Power Saving Utilities

This chapter tells you about

- How to operate your computer to get the most work from a battery charge
- BatteryPro, ***which*** controls computer battery power levels for optimum power savings-, and the SETPOWER utility that enables you to control BatteryPro power levels
- SMARTDRV.SYS, a hard disk drive performance and battery power-saving enhancement utility
- SPEED, which lets you change CPU operating speed for optimum performance and battery power savings

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Optimizing Battery Operation

Your TravelMate 3000 WinSX Notebook Computer is delivered to you with three ways to save battery power to enable you to get the most work from a battery charge.

You can manually turn off the computer's display and hard disk drive by pressing the **Fn-F4** (Stndby) keys or set up the computer to automatically enter the Standby/Suspend mode

Automatically saves power, in real time, while running your application programs, depending on the program and the power-saving level you select

Enables you to specify hardware and software configurations that best match your applications and battery savings performance

The following table summarizes the power saving modes, and the sections following describe the modes in more detail.

Mode	Activate By	Resume By	Foreground/ Background Tasks Active?	Service Interrupts	Backlight On	HDD/FDD Accesses Drives	Power Used (watts)
Cover Closed Suspend	Closing cover	Opening cover	No	No	No	No	3.0 - 4.2
Manual Standby	**Fn-F4** keys	**Fn-F4** keys	No	Yes	No	No	3.2 - 5.0
Auto Suspend	TravelPoint & keyboard inactivity	Activity	Yes, after wakeup timeout for duration of inactivity timeout	Yes	No, except after wakeup timeout user-specified on/off	Yes, has independent timer	3.5 - 6.0
Typical Operation							
Hard disk on							9.0 - 12.0
Hard disk off							8.0 - 11.0
Max. usage, All functions On							17.5
Battery Capacity							22 - 24 watt-hour

Optimizing Battery Operation

Suspend/Standby Modes

The TravelMate 3000 WinSX provides three separate Suspend/Standby modes you can select as needed. The modes differ in the manner the modes enable/disable:

- ❑ Task execution
- ❑ Task interrupt servicing
- ❑ The computer's LCD display
- ❑ The computer's hard disk and floppy drive accessing

The three modes, listed in order of power saving capabilities, are the cover-closed suspend mode, the manual Standby mode, and the Auto Suspend mode. All three modes are fully effective in the three Windows 3.0 operating modes, including the 386 enhanced mode.

Caution: Using the Suspend/Standby modes for too long can result in the battery discharging to the point it can no longer simultaneously power both the display A and the hard disk drive. Therefore, you should occasionally exit the Suspend/Standby mode to enable the system to correctly indicate the battery charge via the Low Batt indicator.

Closed Cover Suspend Mode

This mode, which you can invoke simply by closing the computer display/cover, saves the most battery power. In this mode (if enabled in the Setup Program), the computer suspends all tasks and does not service interrupts and disables the LCD, the hard disk, and the floppy drive.

If the computer enters the Auto Suspend mode, closing the cover overrides the Auto Suspend mode and sets the computer to the Closed Cover Suspend mode. The computer instantly resumes normal operation when you open the display/cover, displaying the data in effect when you closed the cover. However, time-dependent tasks will have lost their time while in this mode, and tasks dependent on device input/output will have lost data that overflowed their buffers. Otherwise, all operations continue where left off when suspended.

Use this mode-that is, close the computer cover when you want to leave your work for some time and return to your work without rebooting the computer-and the application is not time- nor input/output-dependent. Do not use this mode with tasks that depend on real time, such as schedule applications with audible or visual reminders and communication tasks that depend on input/output.

You also can use this mode to transport the computer short distances without turning it off.

Manual Standby Mode

Pressing the **Fn-F4** (Stndby) keys sets the TravelMate 3000 WinSX to the Standby mode, in which the system turns off the display and both disk drives and suspends all tasks, and the green **Power** indicator above the keyboard turns orange. Use this mode when you want to leave the computer for some time and do not want to turn off or reboot the computer.

This mode uses more battery power than the Closed Cover mode, since the system "awakens" long enough to service task interrupts and then returns to Suspend mode.

To resume normal operation, press the **Fn-F4** keys again. The computer displays the data in effect when it entered
Standby mode, and resumes all tasks where suspended. This mode also is useful for transporting the computer
for short distances.

Optimizing Battery Operation

Note: If you added the /V (view) switch to the BATTERY.PRO command line in the CONFIG.SYS file (not a default switch), you cannot use the manual Standby mode. Also, when the Auto Suspend mode (described below) is active, manual Standby is disabled.

Auto Suspend Mode

In this mode the system suspends all tasks and turns off the display. The disk drives are controlled by the Hard Disk
Timeout item in the Setup Program and the system services task interrupts as needed. The **Power** indicator rapidly
flashes green/orange in this mode. The system remains in the Auto Suspend mode until you press a key, use the
TravelPoint, or the Auto Wakeup Interval (selected in Setup) passes.

Note: Only the TravelPoint or other mouse connected to the computer's round six-pin mouse port is detected by the system, not devices connected to the RS-232 serial port.

When the Auto Wakeup Interval passes (5 to 20 minutes), the system returns to normal operation for the duration of the selected System Timeout Interval (1 to 15 minutes), at which time the system again enters the Auto Suspend mode and the **Power** indicator resumes its normal green color.

Note: If you added the /V (view) switch to the BATTERY.PRO command line in the CONFIG.SYS file (not a default switch), Auto Suspend mode cannot activate. Also, when the **Low Batt** indicator comes on, Auto Suspend mode is disabled.

Real-Time Power Savings

Your computer has a special power-saving feature that can activate in real time while you are running your application program. This feature is implemented by a special device driver called BATTERY.PRO in the CONFIG.SYS file of the following form.

DEV1CE=C:\UTILS\BATTERY.PR0 [/Ln] [/An] [/V] [/MAP]

where:

/Ln specifies the power-savings level (0 through 4) described in the next section of this chapter. If the /Ln switch is omitted, the default value of 2 is used.

/An selects whether or not BatteryPro is on while the computer is operating under ac power. The A0 switch turns off BatteryPro during ac operation; Al turns on BatteryPro. If the /An switch is omitted, the default value of 0 (off) is used.

/V provides a visual indication that power-savings are occurring by turning the normally green **Power** indicator fight to orange. In operation, the **Power** indicator will change to and from orange and green. If the /V switch is omitted, the **Power** indicator light always glows green.

Note: The **Stndby** (Fn-F4) key and the Setup Program's Auto Suspend function do not work when the orange **Power** indicator is on while using the /V switch.

/MAP moves the extended BIOS data area within the base 640 KB system memory. The upper I KB of system memory is mapped to provide a corrective 640 KB of system memory. This switch should be used with applications such as QEMM to enable them to more efficiently manage the high memory area. BATTERY.PRO must be the first device driver in the CONFIG.SYS file to effectively use this switch.

Power-Saving Levels

The power-saving level you should use to optimize battery charge life depends on the operations you are performing and how the application program is written.

For example, Microsoft software typically is written to include significant idle states, resulting in power savings even at level 1. Lotus software yields little power savings at level 1, but performs well at level 2 or 4, reducing power consumed by frequent disk access.

Programs that work well at level 2 sometimes work even better at level 4. For example, Lotus 1-2-3, version 3.0, works better at level 4 because version 3.0 accesses the disk more often than other versions of Lotus.

BatteryPro's power levels generally do not conflict with most available application programs. However, some applications may fail or suffer performance problems. Try your programs at the highest level and evaluate their performance. If undesirable problems occur, simply try the next lower level until performance is satisfactory. (Note that level 0 disables power savings.)

For example, Traveling Software's LapLink program runs well at level 4, but will not allow self-installation at any level except 0. The Lotus PrintGraph utility prints correctly at all levels, but you may find the reduced performance at levels 2 through 4 unacceptable. You also may not like serial printer performance at the higher levels.

The Power-saving levels, 0 through 4, used by the BatteryPro and SETPOWER utilities are defined as follows.

Level 0

Level 0 (zero) disables the battery power-saving feature. BatteryPro performs no real-time power savings.

Level 1

Level 1 conserves battery power when the processor is idle, for example, when waiting for keyboard activity and device input/output. Level 1 features are also active in levels 2 through 4. For example, Microsoft Excel and Windows perform well using level I . Operating system enhancement programs such as DESQview™ also work well at level 1.

Level I is the highest level you can use without affecting processor performance using Lotus PrintGraph or serial printer interfaces.

Note: Some application programs such as Lotus 1-2-3 do not use the Standby mode for keyboard and other devices inactivity. You must use a level higher than 1 to conserve battery power during keyboard activity.

Level 2

The factory default, level 2, induces more idle time between keyboard activations and MS-DOS access. Performance is degraded slightly, but the difference should be unnoticeable. This level is the optimum compromise between program performance and battery charge life.

Most available application programs work well at level 2, for example, Lotus 1-2-3 and Microsoft Paint Brush(R), Word, and Works. Many programs that work well at level I also work well at level 2 (for example, Microsoft Windows 3.0).

Level 3

Level 3 induces less idle time in the keyboard and MS-DOS access areas than level 2 but induces idle time in hard disk and video input/output. This level saves more power overall with application programs that access the hard disk often.

Programs with high disk read/write rates increase battery power consumption. Level 3 "smooths" disk read/write power consumption over longer access periods, thus reducing peak power needs. Using level 3 (and level 4) permits more frequent disk access while using little more power than Standby disk mode.

Note: Generally, use level 3 only if level 4 is not acceptable.

Try level 4 first. Levels 3 and 4 function identically, with increased power savings at level 4.

Level 4

Combining all techniques used by the lower levels at a slightly higher value, level 4 produces the highest power savings-from 10 to 30 minutes extra battery life, depending on your application. This level also affects performance more than the other levels, but you will not notice this with most application programs.

AC Power Savings

To ensure optimum performance during ac operation, your TravelMate 3000 WinSX is shipped from the factory with the BATTERY PRO /An set to turn off power savings during ac operation. However, if you turn on the power savings using the /Al option in the CONFIG.SYS file (see "Real-Time Power Savings" earlier in this chapter), your computer automatically increases to fast charge if operating current falls below 1700 mA. This feature works in this manner when the computer is in the Standby mode and, depending on your usage and your application program, other times as well.

Turning on both power savings and the /V option during ac operation also permits you to visually test an application program at various power levels to determine the optimum level for battery operation. That is, the more the **Power** indicator light changes to orange from green, the more efficient the power-savings features are working. However, note that the Auto Suspend mode and the **Stndby** (Fn-F4) key do not work if the /V switch is on.

Configuration Power Savings

Your new TravelMate 3000 WinSX enables you to configure the hardware and software using the Setup Program to best meet your power/performance operating environment.

Hard Disk Motor Timeout

The hard disk drive turns off automatically after no activity for the time set for the Hard Disk Motor Timeout interval in the Setup Program. You can change the default 5-minutes setting using the Setup Program accessed from the MS-DOS **CA>** prompt or from the Windows Notebook menu Setup icon. Any access to the disk drives turns on the drives.

Note: When the hard disk drive is off, remember that a slight delay occurs for the disk drive to reach operating speed before it performs your command.

Some word processing and file editing programs periodically save your work to a back-up file automatically, causing frequent access to your hard disk. This could use more power than leaving the hard disk always on. With such programs, set the Hard Disk Motor Timeout to higher values. If you find that the hard disk stays on too much even when you are not accessing it, try a lower setting, such as I minute.

Optimizing Battery Operation

CPU Speed

You can set the *CPU Speed* item on the Setup Program to Low, Medium, High (which also corresponds to power consumption), or Auto. The Auto option sets CPU speed to High when you operate the computer on ac power or to Low on battery power. Set *CPU Speed* to the lowest value acceptable to your application to save battery power.

LCD Power

You can set the *LCD Power* item to Low, Medium, High (which also corresponds to power consumption), or Auto. However, The lower the LCD power, the higher is the CPU video update performance. The Auto option sets LCD power to Medium when you operate the computer on ac power or to Low on battery power.

Set *LCD Power* to the lowest acceptable values to save battery power, but note that some graphics programs do not display satisfactorily at lower values, so experiment with your particular application.

I/O (Input/Output) Ports

You can individually disable the parallel, serial, option comm, and TravelPoint (mouse) ports, if not in use, to save battery power.

Modem Power

You can turn the internal modem option, if installed in your computer, by double clicking on the Windows Notebook menu Modem Power icon or an MS-DOS MPOWER/ON(OFF) command. You also can create a batch file to execute your communication application that automatically disables and enables modem power. For example, if you normally execute an application by typing RUNCOMM at the MS-DOS prompt, your batch file would be

MPOWER ION
RUNCOMM
MPOWER /OFF

Display Brightness Control

The LCD is a major power user in the computer. Reducing the LCD brightness control level even a small amount significantly reduces power usage. Always set the brightness control to the lowest comfortable brightness level, especially in low ambient light conditions (for example, on an airliner where longer battery charge life is important).

SETPOWER Utility

Using the SETPOWER Utility, you can also set the BatteryPro power-savings level at any MS-DOS prompt. For example, at the **CA>** prompt you can type

SETPOWER /Ln

where n is the power-saving level (O through 4) you want to use. You can also include this command line in any batch file (AUTOEXEC.BAT) you create to load an application program. Laptop Manager will automatically respond to this command if you configure an application's loading process using the Laptop Manager *Change Menu.*

Note: SETPOWER and all other BatteryPro utilities furnished with your TravelMate 3000 WinSX are loaded on the hard disk at the factory under the UTILS directory with the MS-DOS PATH command already in the AUTOEXEC.BAT file.

If you want to know the current and maximum power levels, at the **CA>** prompt type

SETPOWER /S

and press the **Enter** key. SETPOWER displays the current setting, 0 through 4, and the maximum available setting.

SMARTDRV.SYS Disk Caching Utility

SMARTDRV.SYS is a disk-caching utility that reduces the time and power the computer needs to read data from the hard disk drive.

SMARTDRV.SYS works best if you use many applications and files at one time. It is particularly effective when the computer runs multiple application programs that require swapping, that is, copying applications to and from the hard disk drive to make room for all the applications in memory.

Note: Do not use SMARTDRV.SYS with any other diskcaching or RAM drive utilities.

The SMARTDRV SYS utility works best with expanded memory, but it also works well with extended memory. Since the TravelMate 3000 WinSX provides both extended and expanded memory, SMARTDRV.SYS is assigned to extended memory and expanded memory is reserved for other applications.

See the MS-DOS *User's Guide and Reference* furnished with your new computer for a more detailed description of this utility.

SPEED Utility

The SPEED utility enables you to set the current CPU operating speed to low, medium, or high. Your TravelMate 3000 WinSX computer can operate at 5 MHz, 10 MHz, or 20 MHz. However, because the faster speeds consume more power, you may want to select the low or medium speed to conserve power when you are operating the computer on its internal battery.

Note that you also can change CPU speed at the TravelMate 3000 WinSX Setup Program *Power Savings* category. See your *TravelMate 3000 WinSX Notebook Computer User's* Manual for details.

Show Speed Switch

The SPEED command /S(how) switch displays the current CPU speed setting if you type at the MS-DOS **C:**\> prompt

SPEED /S

and press the **Enter** key. The program displays

Current CPU speed is set to [High, Medium, or Low]

AUTO speed select is [On, Off I

Using the SPEED Utility

You can set the CPU speed to low, medium, or high by typing at the MS-DOS **C:**\> prompt

SPEED [/L] [/M] [/H]

and pressing the **Enter** key. The **/L** switch sets CPU speed to low, **/M** to medium, and **/H** to high. The program responds to the command by displaying

Current CPU speed is set to [Low, Medium, or High]

AUTO speed select is [on, off]

4
Palette Utilities

This chapter tells you about

- ❑ PAL, which controls built-in LCD gray shades and external monitor colors
- ❑ RPAL, which enables you to make real-time changes to gray shades on the LCD or color combinations on an external color monitor

Contents

Color Display Utilities

The TravelMate 3000 WinSX Notebook Computer's LCD screen simultaneously displays up to 16 colors as 32 shades of gray (mapped into the 64 VGA standard colors). You can change the shade of gray selected to represent each of the 16 colors to maximize contrast between adjacent gray scale shades when running programs that use particular color combinations. The mapping of gray scales to colors is called a *palette.*

The TravelMate 3000 WinSX comes with a default palette (PO) which is suitable for most applications, two alternative fixed palettes (P2 for text display and P3 for graphics), and two user-definable palettes (P4 and P5).

In addition, palette PI sets the foreground and background shades for text mode displays to give the best contrast. The P2 palette uses gray scales which uniquely match the colors used in a program displaying in text mode. Palette PI uses a smaller number of gray scales to ensure that the displayed text is always readable on a background of any color combination.

The RPAL utility furnished with the BatteryPro package enables you to modify the two user palettes, P4 and P5. However, in 4-color and 2-color graphics modes, the palette is predefined and cannot be modified.

Note: Some application programs take control of the display and provide their own color setup procedures. See your application program documentation for details.

PAL Utility]

PAL utility defines the current palette. The power-on default is PO. You can use the PAL utility to do the following tasks.

- ❑ Change to a predefined palette
- ❑ Change specific colors and gray shades

Changing to a Predefined Palette

To change to one of the system palettes or a user palette defined by the RPAL utility, at the MS-DOS CA> prompt, type

PAL Pn

and press the **Enter** key.

In this form of the command, n has the following meaning.

0 - Default palette
1 - Standard palette 0 (text)
2 - Standard palette 1 (text)
3 - Standard palette 2 (graphics)
4 - User palette 1
5 - User palette 2

Note: Palettes PO through P3 are system palettes that cannot be changed. Palettes P4 and P5 are user palettes that can be modified using the RPAL utility described later in this chapter.

Changing Specific Shades

To change only a few specific shades, at the MS-DOS **CA>** prompt type

PAL *Cp: c*

and press the **Enter** key.

In this for of the command, p is the color number (hex 0 through F) and c is the gray scale shade number (hex 0 through F). Refer to "RPAL Utility" later in this chapter for the meaning of the color numbers. If c is smaller than p, the shade will be fighter. If c is larger than p, the shade will be darker.

Note: Palettes created or modified with the PAL command are *not* saved.

Other Ways to Select a Predefined Palette

After you define a palette using the RPAL utility, you have two additional ways to select the defined palette.

- ❑ Select the palette from the keyboard
- ❑ Include the command in your AUTOEXEC.BAT file

Selecting the Palette From the Keyboard - To change the current palette, press the **Fn-Alt-Esc** keys. Each time you press the **Fn-Alt-Esc** keys, the display changes to the next palette (PO through P5). Stop pressing **Fn-Alt-Esc** when the palette you prefer is displayed.

Including the Palette in the AUTOEXEC.BAT file - if you want the computer to load a particular palette at start up, include the PAL command in your AUTOEXEC.BAT file. For example, to start up with user palette I loaded, include the command PAL P4 in your AUTOEXEC.BAT file.

Note: You also can press the **Fn-Alt-Esc** keys to toggle through the six available palettes.

RPAL Utility]

With the RPAL utility, you can make real-time gray shade changes to the LCD or color changes to an attached color monitor. RPAL displays a small gray shades or color palette over part of your current screen when you press a hot key (the **Alt** key plus an alphabet key you can assign).

Note: The RPAL pop-up menu is intended for use only with text application programs and has no effect on graphic applications such as Microsoft Windows, Ventura Publisher(R), and the graph display within Lotus 1-2-3.

You can create custom palettes for each of your application programs and store the specific settings in a data file. If you assign the custom palette file to the application using the Laptop Manager Setup Menu, the computer loads the custom palette when you select the application.

By adding RPAL to your AUTOEXEC.BAT file, you can also define the current palette when you turn on your computer.

Note: Some application programs provide their own color setup procedures. Some application programs also take control of the keyboard and do not recognize the RPAL hot key.

RPAL does not display the palette when you run graphics application programs. However, you can adjust your colors or gray shades at an MS-DOS prompt before you load your graphics application program.

Installing RPAL

To see the switches available for use with the RPAL utility, at the MS-DOS **CA>** prompt type

RPAL /?

and press the **Enter** key. RPAL displays the following menu and then returns to the MS-DOS prompt.

RPAL Utility

Resident Palette v386SX-N.NN.N.NN
(C) 1990 Texas instruments Incorporated
Usage: RPAL [/U /I /Ddatafile /Kc /1user1file /2user2file]
[ ] - denotes optional parameters
Parameters:

/U	attempt to uninstall RPAL
/I	install RPAL as a TSR
/Ddatafile	use palette setting in datafile
/Kchar	use char key with the ALT key as hot key, where char is a letter between A and Z
/luser1file	set user palette 1 to setting in user1file
/2user2file	set user palette 2 to setting in user2file

RPAL Switches

/I switch - Installing RPAL as TSR Program - You can install RPAL as a terminate-and-stay-resident (TSR) program. As a TSR program, RPAL is accessible from MS-DOS and most application programs by pressing a hot key (defined by the /Kc switch described on the next page). To install RPAL as a TSR program, at the **CA>** prompt type

RPAL /I

and press the **Enter** key. If you do not include the /Kc switch, the computer uses **Alt-P** as the default hot key.

/U Switch - Removing RPAL From RAM - If RPAL is installed as a TSR program and you want to remove RPAL from RAM, at the **CA>** prompt type

RPAL /U

and press the **Enter** key. RPAL is deleted from RAM but not from the hard disk; you can reinstall RPAL at any time at the MS-DOS prompt.

Note: If other TSR programs are currently installed, you must uninstall them in reverse order from which they were installed. Or you can update your work and reboot to remove all TSRs from RAM.

RPAL Utility]

/Ddatafile Switch - Loading an RPAL Data File - To load an RPAL data file, at the **CA>** prompt type

RPAL /Ddataflle

and press the **Enter** key. In *datafile* include the full path and filename of the RPAL data file. See "Saving an RPAL Data File" later in this chapter for instructions on how to save an RPAL file.

For example, if you stored your custom color data file (named COLOR.DAT) in the utilities directory (UTILS), your command to load the file would be:

RPAL /D\UTILS\COLOR.DAT

/Kc Switch - Defining a Hot Key - If you install RPAL as a TSR file without defining a hot key, the **Alt-P** keys are the default. To define another alpha key (A through Z) as the hot key, at the **CA>** prompt type

RPAL /Kc

and press the **Enter** key, where c is the alphabet character key (A to Z) you want to be the hot key.

/1 and /2 Switches - Defining User Palettes - To establish an RPAL data file as one of the two user palettes, at the CA> prompt type either

RPAL */luser1file*

or

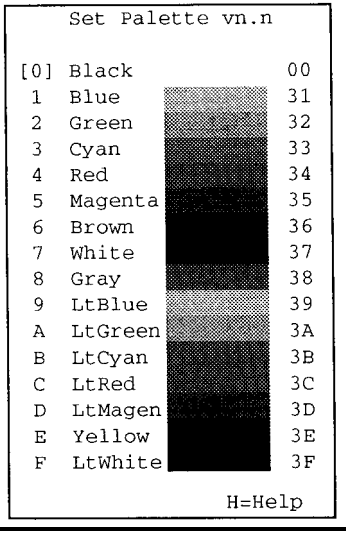
RPAL */2user2file*

and press the **Enter** key. In these commands, *user1file* and *user2file* must be the full paths and filenames of the RPAL data file you select as user palette I (p4) or user palette 2 (p5). You can then access these palettes from the keyboard by pressing the **Fn-Alt-Esc** keys.

Refer to the "Saving an RPAL Data File" later in this section for instructions on how to save an RPAL file.

Using RPAL

To use RPAL at any MS-DOS prompt or during most application programs, press the **Alt-P** keys (or **Alt** plus the hot key you assigned du-ring installation), RPAL displays the following menu on the left side of your screen.



You can use the following keys at the RPAL menu.

RPAL Menu Function Keys

Key	Function
↑ ↓	selects the color to adjust
← →	selects the color hue or gray shade
Ctrl-←,	moves the menu to the left or right
Ctrl →	so you can view the entire screen
R	resets all color hue or gray shades to their factory default values
S	saves the current palette to an RPAL data file (see the following section)
L	load an RPAL data file
1	saves the current palette as user palette I (p4)
2	saves the current palette as user palette 2 (p5)
H	displays help information
Esc	exits the menu

RPAL changes gray shades or colors in real time, so you can see the changes as you make them.

Saving an RPAL Data File

To save an RPAL data file, follow these steps.

1. Press the **S** key from the RPAL Set Up Menu. RPAL displays a filename prompt.

2. Type the full path and filename of the RPAL data file (using standard MS-DOS path and filename rules). RPAL limits your *pathname/filename* to 38 characters.

3. Press the **Enter** key to save the file. Press the **Esc** key to leave without saving the file.

RPAL Utility

Adding RPAL to Your AUTOEXEC.BAT File

By including an RPAL command in your AUTOEXEC.BAT file, you can install RPAL each time you turn on the computer. Add the following line to your AUTOEXEC.BAT file:

RPAL /I /Ddatafile /Kc

where the option datafile is the pathname of your custom RPAL data file (if you do not want the factory default palette), and c is the alphabet character (A through Z) you want to use with the **Alt** key as the hot key combination (if you do not want to use the default **Alt-P** key combination).

Note: Your TravelMate 3000 WinSX UTILS directory has several sample color palette files for use with individual application programs. These files end with the .PAL extension (for example, the sample palette for Bitfax is BITFAX.PAL). When you install your programs, examine the UTILS directory for available palette files and try them.

5
Laptop File Manager

This chapter tells you about

- Using the Laptop File Manager (LFM) program to manage and view your files and directories
- LFM commands that simplify directory and file copying, deletion, printing, renaming, and other common file management functions

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Getting Started with LFM

The Laptop File Manager (LFM) utility supplied with your TravelMate 3000 WinSX Notebook Computer helps you manipulate files and directories stored on your computer's hard disk. Many functions operate on two or more files, called multiplefile operations, described later in this chapter. LFM provides the following functions.

- ❑ Assign or change file attributes to one or multiple files
- ❑ Copy one or multiple files or directories to other directories or to floppies
- ❑ Delete one or multiple directories and files from hard disk or floppies
- ❑ Find files using MS-DOS patterns
- ❑ Send one or multiple files to a printer or other device connected to your computer
- ❑ Rename one or multiple files and directories
- ❑ Show files for viewing
- ❑ Change file's date and time
- ❑ Display hard disk and floppy statistics, such as disk capacity and disk space in use
- ❑ Create files and directories
- ❑ Sort the directory and file listings by name, extension, date, or size
- ❑ Execute MS-DOS commands or shells

Getting Started with LFM

Note: Do not confuse Laptop File Manager (LFM) described in this chapter with the Laptop Manager (LM) utility also supplied on your computer and described in Chapter 2 of this manual.

Loading LFM

The Laptop Manager utility enables you to load LFM from the Laptop Manager main menu by pressing the **F2** key. See Chapter 2 for details about Laptop Manager.

You also can load Laptop File Manager at the MS-DOS **CA>** prompt by typing

LFM

and pressing the **Enter** key. Either way, LFM displays a listing of the files and directories in the current directory similar to the following figure. From this listing you can select drives, directories, and files to view and manipulate.

```
Laptop File Manager vn.nn                                  Mon Nov 30  12:00 pm

C:\
 Filename Ext     Bytes    Attr    Last Update          ┤ Commands ├
  DOS             <DIR>   ....  00/00/90 00:59:59     A - Attr     P - Print
  UTILS           <DIR>   ....  00/00/90 00:00:59     C - Copy     Q - Quit
  AUTOEXEC BAK      183   A...  00/00/90 00:00:59     D - Delete   R - Rename
  CONFIG   BAK       75   A...  00/00/90 00:00:59     E - Edit     S - Show
  AUTOEXEC BAT      184   A...  00/00/90 00:00:59     X - Excl     T - Tag
  CONFIG   SAV       55   A...  00/00/90 00:00:59     F - Find   ESC- Up
  COMMAND  COM    25308   A...  00/00/90 00:00:59     I - Incl     U - Update
  MSETUP   EXE   143680   A...  00/00/90 00:00:59
  CONFIG   SYS       79   A...  00/00/90 00:00:59
  MSDOS    SYS    30128   ARSH  00/00/90 00:00:59

F1=Help F2=CDir F3=ReRd F4=STAT F5=Split F6=Creat F7=Sort F8=DOS F9=Go F10=Setup
```

Using the Main Menu

Use the following keys and commands to move the highlight around the LFM main menu to help you work with your directories and files.

LFM Menu Function Keys

Key	Function
F1	shows Help screen
↑	moves highlight up listing
↓	moves highlight down listing
End	highlights last listing entry
Home	highlights first listing entry
PgDn	shows next page of listing or Help screen if more than I page
PgUP	shows previous page of listing or Help screen
S, Enter	if directory name highlighted, shows selected subdirectory; if filename highlighted, shows contents of file
T	tags or untags highlighted directory or file for multiple command action
Esc	if at subdirectory, returns to higher directory; if at root directory, no action; if command active, cancels command exits LFM or current screen of split screen after the "Are you sure?" prompt: * press **Y** to exit LFM or one screen of split screen *press **N** or **Enter** to cancel exit command

Function Key Commands

The function keys **(F1** through **F10)** listed along the bottom of the LFM main menu provide the functions described in this section.

F1 Help Key

Pressing the F1 key at the LFM main menu-and at some LFM submenus-displays a Help screen with condensed user instructions. Some Help screens have more than one page; look in the upper right corner of the Help screen for the number of pages available. Press the **PgUp/PgDn** keys to move among the pages.

F2 CDir (Change Directory) Key

The change-directory function enables you to view other directories on the current drive and directories on the floppy drive and any optional drives connected to your computer. Press the **F2** key at the main menu and LFM prompts you at the bottom of the screen:

Path: [ ]

At this prompt, you can type the pathname of the directory or drive you want LFM to display. If you want to change directories, type

C:\DIRNAME

and press the **Enter** key. LFM then displays the subdirectory and filenames of the directory named DIRNAME.

If you want to change drives, type the drive letter followed by a colon (for example, A:). You also can name a subdirectory on the new drive for display. For example, type

A:\EDITOR

and press the **Enter** key. LFM displays the EDITOR directory and its files.

F3 ReRd (Reread) Key

Pressing the **F3** key causes LFM to redisplay the listing. This function is useful if you are examining several floppies on the floppy drive. Rather than having to press the **F2** (Change Directory) key and typing the pathname, simply press the **F3** key each time you insert a new floppy into the floppy drive. You can also "untag" all files you may have previously tagged by pressing the **F3** key.

F4 STAT (Statistics) or CMDS (Commands) Key

The **F4** key is a toggle that causes LFM to display in the upper right quadrant of the main menu either the current drive statistics or a list of commands you can use at the main menu. If the statistics are displayed, the F4 prompt on the main menu shows F4=CMDS. If the commands list is displayed, the F4 prompt shows F4=STAT.

The statistics display lists the following information.

- ❑ The cur-rent drive letter and volume name (if any) The number of bytes available on the drive or floppy
- ❑ The number of bytes in use and available for use (free) on the drive or floppy
- ❑ The number of files on the current directory and their size in bytes

Note: Subdirectories are listed as files with no size (0 length).

- ❑ Number of included (tagged) files, if any, and their size in bytes

Function Key Commands

The Commands display reminds you which key to press to activate a file management command. The commands are detailed later in this chapter.

F5 Split (Split Screen) Key

The split screen function enables you to view two directory listings on the same screen. At the LFM main menu, press the **F5** key and LFM prompts you at the bottom of the screen:

Path: [ ]

Type the pathname of the second directory you want to view and press the **Enter** key. The directory can be on the same drive or a different drive. You can use all function key commands and single-letter commands on directories and files in either listing.

Press the **F5** key to switch the highlight between the upper and lower directory listing.

Using Split Screen to Copy Files

You can simplify use of the Copy command using the split screen mode. For example, you first select (highlight) the destination directory to which you want to copy the file and press **F5,** then **Enter.** Then highlight the source file or directory on the other screen and press the **C** key. LFM then displays the destination directory name in the 'Path: [... I" prompt described above, saving you the time and effort to type the destination directory name. The split screen quickly displays the results of the copy process.

Exiting Split Screen

To return to only one screen, press the Q key to exit the highlighted window. LFM prompts you at the bottom of the screen
Are you sure? *N*

To exit the split screen and return to one screen, press the **Y** key. If you do not want to abandon the split screen mode, press the **Enter** key or the **N** key.

F6 Creat (Create) Key

Pressing the **F6** key enables you to create a new directory or filename to the LFM prompt at the bottom of the screen

[F]ile or [D]irectory:

If you want to create a new file, press the **F** key. If you want to create a new directory, press the **D** key. LFM then prompts you

Path: [ ]

Type the filename or directory name and path using standard MS-DOS file and directory naming conventions (see the *MS-DOS User's Guide and Reference* furnished with your computer) and press the **Enter** key.

Example 1: If you want to create a new text file called myFILE under the existing NEWDIR directory on floppy drive A,type

A:\NEWD1R\MYFILE.TXT and press the **Enter** key.

Example 2: If you want to create a new subdirectory called JULY under the existing MEMOS directory on the root directory of hard disk drive C, type

C:\MEMOS\JULY

and press the **Enter** key.

Note: If you do not type a drive letter or directory name, LFM stores the new file or directory under the displayed drive or directory.

Function Key Commands

Note that you cannot create a new directory and a new file with one command. You must first create the new directory before assigning new or existing files to it.

F7 Sort Key

The sort function enables you to display listed files in an order determined by one of several file attributes. Pressing the **F7** Sort key causes LFM to display at the bottom of the screen

Sort file list: [N]ame, [E]xtension, [D]ate/time, [S]ize:

Press the key corresponding to the boxed character in the prompt to begin the sort function. LFM then sorts and displays the files in the current directory listing (and all other directories LFM displays) according the attribute you select from one of the following.

Name

Press the **N** key and LFM sorts all files in alphabetic order (A to Z). If any filenames begin with non-alphabetic characters, they are displayed before the alphabetic names.

Extension

Press the E key and LFM sorts all files by filename extension in alphabetic order. Filenames with no extension are listed first.

Date/time

Press the **D** key and LFM sorts all files by most recent time and date first.

Size

Press the **S** key and LFM sorts all files by number of bytes used, the largest first.

F8 DOS (Disk Operating System) Key

Pressing the **F8** key at the LFM main menu causes LFM to prompt at the bottom of the screen

Execute a DOS (S)hell or (C)ommand:

- If you want to execute an MS-DOS shell, press the **S** key. LFM displays the MS-DOS **CA>** prompt where you can type your shell pathname and press the **Enter** key to execute.

Note: When you finish using the shell, at the MS-DOS prompt type EX IT and press the Enter key.

- If you want to execute an MS-DOS command, pressing the **C** key causes LFM to prompt at the bottom of the screen

  DOS Command:

  where you can type any MS-DOS command and press the **Enter** key to execute.

F9 Go Key

Pressing the **F9** key at the LFM main menu causes LFM to load and execute programs based on the file's extension. For example, if you want to execute the MS-DOS EDIT utility on a particular file, move the highlight to the EDIT.COM line under the DOS directory listing and press the **F9** key. Depending on how you have set up your LFM *Execute* Commands item in the **F10** LFM Setup Commands menu, LFM may prompt you at the bottom of the screen

Press ESC to cancel, any other key to execute:

Press any key-except the **Esc** key. Depending on how you have set up your **F10** LFM Setup Commands menu, LFM then may prompt you

Parameters: [ ]

At this prompt you can type the pathname of the file you want to edit and press the **Enter** key (or, if you are executing another type of Me that requires no parameters, press the **Enter** key to start execution). In the example, the MS-DOS EDIT screen would appear.

When you exit the executable program, LFM reloads and displays its main menu.

LFM uses extended/expanded memory for itself when you use the F9 Go function, reserving all but about 8 KB for the program. If no extended/expanded memory is available, LFM uses about 130 KB of standard base memory.

Note: **Do not** use the F9 Go function to execute a terminate-and-stay-resident (TSR) program. LFM cannot reload itself when you exit the TSR program, and it displays an error message. The MS-DOS PRINT program is an example. If you intend to use PRINT, install it in your AUTOEXEC.BAT file so the resident portion of PRINT will load when you start the computer.

See the Help screens at the F10 LFM Setup Commands menu and at the Execute Commands Setup menu for more information on configuring the F9 Go function.

F10 Setup Key

Pressing the **F10** key at the LFM main menu causes LFM to display a Setup Commands menu at which you can select one of three submenus described in this section to configure LFM operating features.

Pressing the **F1** key causes LFM to display a Help screen describing the setup functions.

When you complete your changes to each menu, press the **Esc** key to return to the Setup Commands menu. Then press the **Esc** key again and answer the "Save changes?" prompt to return to the LFM main menu.

Pathnames/Options setup Menu

Pressing the **P** key at the LFM Setup Commands menu causes LFM to display the *Pathnames Setup* and *Options Setup* menu.

```
Pathname Setup
        Editor Pathname         [C:\DOS\EDIT.COM                ]
        Change Parameters:      [ N ]   Parms: [        %F      ]

        Showfile Pathname:
        Change Parameters:      [ N ]   Parms: [        %F      ]


Options Setup
        Information Display     :       Cmds
        Printer Output          :       LPTI
        Restore Original Dir    :       Yes
        Execute Command         :       Prompt
        Sort File List Key      :       Extension
        Screen Display Rows     :       Normal
        INCLUDE Directories     :       No
        Use DOSPRINT if inst    :       No
```

At this menu you can type the pathnames of your own editing (or word processing) and show-file programs that you have installed in your computer.

Note that the MS-DOS Editor word processing program is furnished on your new computer as the default editor. However, you can change the Editor Pathname field to your own editor's pathname.

If the *Editor Pathname* field is blank, the LFM main menu **E**(dit) command (described later in this chapter) does nothing.

LFM furnishes its own show-file program if you do not type a pathname to another show program.

Function Key Commands

Refer to the Help screens available at this menu by pressing the **F1** key for information on completing the LFM pathnames and options setup process.

LFM Colors Menu

Pressing the **C** key at the LFM Setup Commands menu causes LFM to display the *Screen Color Setup* menu at which you can change the colors of the LFM menus displayed by a color monitor connected to your TravelMate 3000 WinSX or change the gray shades of your built-in LCD screen.

Refer to the Help screens available at this menu by pressing the **F1** key for information on making LFM color choices.

Execute Commands Menu

Pressing the **E** key at the LFM Setup Commands menu causes LFM to display the *Execute Commands Setup* menu at which you can type the filename extension, program pathname, and prompting parameters for executable programs you want to set up to respond to the **F9** Go key described previously.

Refer to the Help screens available at this menu by pressing the **F1** key for information on using the Execute Commands Setup menu.

Character Key Commands

The upper right quadrant of the LFM main menu lists the commands you can use to manipulate the directories and files displayed on the main menu. If the Commands box is not displayed, press the **F4** key and LFM replaces the drive statistics display with the Commands box.

To execute a command press the T and I keys to highlight the directory/filename to which you want to apply the command and then press the first letter of the command name listed in the box (except the **Esc** key) to start the command.

Note: Many of the character key commands are capable of operating on multiple files and directories. See "Multiple File Operations" at the end of this chapter for information.

Attr (Attribute) Command

To set or change file attributes, highlight the filename on the LFM listing and press the **A** key at the LFM main menu. LFM places an "A" to the left of the highlighted file and prompts you at the bottom of the screen

Attributes: [Y]es, [N]o, [I]gnore: [I] arch
[I] rdonly [I] sys [I] hide

Press the --> and <- keys to move the cursor to the attribute you want to change. Then press the **Y** key to set the attribute for the highlighted file, or press the **N** key to delete a previously set attribute, or press the I key to leave the attribute unchanged.

When you have changed the attributes), press the **Enter** key to complete the process. LFM then changes the "Attr" (Attribute) column of the highlighted file to reflect your selections.

arch (Archive) Attribute

Setting a file's Archive attribute affects how MS-DOS and some application programs create a back-up file when you make changes to the file.

Character Key Commands

rdonly (Read Only) Attribute

Setting a file or directory to Read-Only protects the file from any changes or editing. The file cannot be written to or deleted from the storage device (hard disk or floppy).

sys (System) Attribute

The System attribute is used for system files (.Sys) required to start and run your computer. Usually only a user familiar with programming should modify this attribute. System files are hidden in MS-DOS directory (DIR command) listings, but LFM does display system files.

hide (Hide File) Attribute

The Hide attribute 'hides" the file from the MS-DOS DIR and PRINT commands; the file cannot be displayed, read, or printed. However, LFM does display, show, and print 'hidden" files.

Copy Command

The Copy command enables you to copy the file you have highlighted, tagged files (see "Multiple File Operations" later in this chapter), or an entire directory to another directory or to the floppy drive.

To copy a file or directory, highlight the file or directory name you want to copy and press the **C** key. LFM prompts at the bottom of the screen

Path: [ ]

Type the pathname where you want the directory/file copied to and press the **Enter** key.

If you do not type a new drive letter or directory name, LFM copies the file or directory to the current drive or directory.

If you do not type a new filename, LFM assumes you want to use the existing filename. You also can copy a file/directory to another name you type at the Path: prompt.

You also can create a new directory while copying. At the Path: prompt type the new directory name as part of the pathname and press the Enter key. LFM prompts at the bottom of the screen

Directory doesn't exist, CREATE? [Y]

Press the **Y** key if you want LFM to create the new directory**.**

If you attempt to copy a file using the same filename under a different directory, LFM prompts at the bottom of the screen

Copy file : [R]eplace, [A]ppend, [S]kip

To this prompt do one of the following.

- ❑ Press the **R** key if you want LFM to delete the existing file and replace it with the highlighted file.
- ❑ Press the **A** key if you want LFM to append (add) the highlighted file to the end of the existing file. Use this option if you want to combine multiple files into one file.
- ❑ Press the **S** key if you want LFM to abort the Copy process.

Delete Command

The Delete command enables you to delete the file you have highlighted, tagged files (see "Multiple File Operations" later in this chapter), or an entire directory and all files stored in the directory.

Character Key Commands

To delete a file, highlight the file you want to delete and press the **D** key. LFM prompts at the bottom of the screen

Are you sure? [*N]*

If you are certain you want to delete the file, press the **Y** key. LFM deletes the file and removes the filename from the listing. If you do not want to delete the file, press the **N** key or the **Enter** key, and LFM aborts the Delete operation.

To delete an entire directory of files, highlight the directory name you want to delete and press the **D** key. LFM prompts you at the bottom of the screen

Delete Directory and ALL Subfiles?: [*N]*

If you are certain you want to delete the directory and an its files, press the **Y** key. LFM displays a second prompt to make sure you want to delete a directory and all its files

Are you sure? [*N]*

If you still are certain you want to delete the directory and all its files, press the **Y** key. LFM deletes the directory and its files and removes the directory name from the listing. If you do not want to delete the directory, press the **N** key or the **Enter** key, and LFM aborts the Delete operation.

Edit Command

The Edit command loads the highlighted file and the MS-DOS Editor furnished with MS-DOS version 5 and described in Chapter 9 of the *MS-DOS User's Guide* and *Reference* furnished with your new computer.

You can install and use almost any other word processing or editing program by entering its pathname using the F10 Setup function key described previously in this chapter. You must first install your word processor or editor on the hard disk drive (drive C) according to the instructions furnished with your word processing program.

You also can use the Microsoft Windows Write word processing application available under the Windows program furnished with your new computer. See Chapter 7 of the *Microsoft Windows User's Guide* furnished with your new computer for instructions on using Write.

Excl (Exclude) Command

The Exclude command works in conjunction with the Include command described later in this chapter. Both commands are used for multiple file operations where you want to simultaneously execute one command (such as Copy or Delete) on a number of files in one operation. The Exclude command permits you to selectively exclude filenames from files you tagged using the Include or Tag commands, both described later in this chapter.

If you have not tagged any files using the Tag or the Include commands, the Exclude command takes no action. If you have tagged files-indicated by the >> symbol appearing in the left margin by the filename-you can exclude them from the listing by pressing the **X** key at the main menu. LFM then prompts you at the bottom of the screen

Exclude: [A]ttribute, [E]arlier Date, [L]ater Date, [S]elect all, [I]gnore:

Note: This prompt permits you to exclude certain files from a list of tagged files according to the parameters in the above prompt.

If you want to exclude (untag) all included names, press the **Enter** key or the **S** key.

Character Key Commands

Attribute

To exclude (untag) all files with certain attributes, press the **A** key at the Exclude prompt and LFM prompts you at the bottom of the screen

Attributes: [Y]es, [N]o, [I]gnore: [I] arch
[I] rdonly [I] sys [I] hide

This prompt enables you to exclude all files with the same attributes. For example, if you want to exclude all read-only files in a directory, move the cursor to the rdonly option and press the **Y** key to select read-only files. Then press the **Enter** key twice. If you want to exclude all archived files, type **Y** with the cursor in the arch box. You also can select any combination of attributes.

Earlier Date

The Earlier Date prompt enables you to exclude an files dated earlier than the date and time you select. Press the **E** key at the Exclude prompt and LFM prompts

File Date: [12/21/90] Time: [12:34:56]

At this prompt (the current file or directory date and time is first displayed) type the date or time which represents the latest date and/or time you want; LFM excludes all files dated earlier than that date. Then press the **Enter** key and LFM prompts at the bottom of the screen

File pattern: [*.*]

At the File pattern prompt type the wildcard characters if you want to exclude files only by date, or type filename extensions (for example,*.TXT) or filename fragments-pluswildcards to further delimit the Exclude function. See "Find Command' described previously and your *MS-DOS User's* Guide and Reference for discussions of wildcard use.

Later Date

Pressing the **L** key at the *Exclude* prompt displays the same *File Date* prompt as the *Earlier Date* prompt described above, and works the same except LFM excludes all files *after* the date you specify.

Select All

Press the **S** key (or the **Enter** key) at the *Exclude* prompt to exclude (and untag) all files in the directory. This option is particularly useful if you first select all files and then use the Exclude command to deselect certain files from the included list.

Ignore

Press the **I** key at the *Exclude* prompt if you do not want to use any of its options to select files. LFM then prompts at the bottom of the screen

File pattern: [*.*]

At this prompt you can type file patterns for LFM to use to exclude certain files. For example, the filename pattern *.TXT excludes all files with that extension in the tagged listing.

The * character (and the ?) are called *wildcard* characters. You can use these two characters to create the pattern for LFM to conduct the search. See 'Earlier Date," "Find Command" described below, and your *MS-DOS User's Guide* and *Reference* for discussions of file patterns and wildcard characters.

Character Key Commands

Find Command

The Find command helps you find files on the current (displayed) directory, according to their filename/extension pattern. Pressing the F key at the main menu causes LFM to prompt at the bottom of the screen

Find file: find the [F]irst or [N]ext:

If you select the *[F]irst* option by pressing the **F** key, LFM looks for the first occurrence of the filename pattern in the listing, regardless of where the main menu highlight is located.

If you select the *[N]ext* option by pressing the **N** key, LFM looks for the first occurrence of the filename pattern below the main menu highlight.

After you press the **F** key or the **N** key, LFM prompts at the bottom of the screen

File pattern: [*.*]

At this prompt enter the filename pattern for which you are searching. For example, to find the first or next file with a .TXT extension, type

*.TXT

and press the **Enter** key. LFM then searches for the first or next filename with the TXT extension. If you wanted to find the first or next filename beginning with the characters MI, type MI*.* and LFM would look for the first or next filename beginning with those two characters.

Incl (include) Command

The Include command enables you to tag (select) a number of files from the current (displayed) directory listing for later multiple execution of commands such as Delete and Copy. You can tag all files in a directory or certain files according to date, file attribute, or file pattern. You can use the Exclude command in conjunction with the Include command for even greater selectivity (see the "Exclude Command" earlier in this chapter).

Press the **I** key at the main menu and LFM prompts at the bottom of the screen

Include: [A]ttribute, [E]arlier Date, [L]ater
date, [S]elect all, [I]gnore:

Attribute

To include (tag) all files with certain attributes, press the **A** key at the *Include* prompt and **LFM** prompts at the bottom of the screen

Attributes: [Y]es, [N]o, [I]gnore: [I] arch
[I] rdonly [I] sys [I] hide

This prompt enables you to include all files with the same attributes. For example, if you want to include all read-only files in a directory, move the cursor to the rdonly option and press the **Y** key to select read-only files, then press the **Enter** key twice. If you want to include all archived files, type **Y** with the cursor in the arch box. You can also select any combination of attributes.

Earlier Date

This prompt enables you to include all files dated earlier than the date and time you select. Press the **E** key at the Include prompt and LFM prompts you

File Date: [12/21/90] Time: [12:34:56]

Character Key Commands

LFM first displays the current file or directory date and time is first displayed. Type the date or time which represents the latest date or time you want: **LFM** includes all files dated earlier than that date. Then press the **Enter** key and LFM prompts at the bottom of the screen

File pattern: [*.*]

At the *File pattern* prompt type the wildcard characters if you want to include files only by date, or type filename extensions (for example, * TXT) or filename fragments-pluswildcards to further delimit the Include function. See "Find Command" described previously and your *MS-DOS User's* Guide *and Reference* for discussions of wildcard use.

Later Date

Pressing the **L** key at the Include prompt displays the same File Date prompt as the *Earlier Date* prompt described previously, and works the same except **LFM** includes all files after the date you specify.

Select All

Press the **S** key (or the **Enter** key) at the Include prompt to include (and tag) all files in the directory. This option is particularly useful if you first select all files and then use the Exclude command described previously to deselect certain files from the included list.

Ignore

Press the I key at the Include prompt if you do not want to use any of its options to select files. **LFM** then prompts at the bottom of the screen

File pattern: [*.*]

At this prompt you can type file patterns to use to include **files.** For example, type the filename pattern *.TXT to include all files with that extension in the tagged listing. See "Earlier Date," the "Find Command" described previously, and your *MS-DOS User's* Guide and *Reference* for discussions of file patterns and wildcard characters.

Print Command

The LFM Print command enables you to send the highlighted file to your system printer or other device connected to your computer via the LPT or COM ports. Using the F10 Setup key, the LFM Setup Commands, and the Pathnames/Options Setup screen described previously, you can select the printer output port (LPT parallel or COM serial) and whether or not to use the MS-DOS PRINT command.

The LFM Print command prints your file as recorded, with no pagination or perforation-skip capabilities. You must embed the appropriate printer control characters and escape sequences in your file to control your printer (see your printer's user manual). Since most application programs provide their own printing facility, you may find their print functions more convenient to use.

Quit Command

The Quit command at the main menu erases LFM from RAM and returns control to MS-DOS or Laptop Manager, depending on how you loaded LFM. If LFM is in split-screen mode, LFM quits the current screen of the two screens.

To quit LFM or one of the split screens, press the **Q** key at the main menu. LFM prompts at the bottom of the screen

Are you sure? [*N]*

Press the **Y** key if you want to quit LFM. Press the **Enter** key or the **N** key if you want LFM to remain on screen.

Character Key Commands

Rename Command

The Rename command enables you to rename the highlighted file or directory using standard MS-DOS naming rules. (See the *MS-DOS User's Guide and Reference* furnished with your computer for the rules.) You also can use the Rename command to move the highlighted file to another directory under the same or a new filename. However, you cannot move a directory in this manner; you can only rename the current directory.

You can use the Rename command instead of the Copy command when you want to delete the files from their present area while copying the files to another area.

To rename or move the highlighted file or directory, at the main menu press the **R** key and LFM prompts at the bottom of the screen

Path: L FILENAME.EXT

If you only want to change the name of the file or directory and not move it, type the new name, using MS-DOS file naming conventions, and press the **Enter** key.

If you want to move the file or change the name, type the entire pathname where you want the file moved, including the new or existing filename, and press the **Enter** key. For example, if you want to move MYFILE.TXT to the MEMOS directory on the root directory and change the name, you would type:

MEMOS\FILEI.TXT

LFM would delete MYFILE.TXT from the current directory and save it to the FILE 1.TXT file under the MEMOS directory. You also can move files to other directories or subdirectories on the same drive.

Show Command

The Show command has two primary purposes: to display the data in a highlighted file for you to view and to display a subdirectory listing.

Showing a Subdirectory

To view a subdirectory, move the highlight to the directory name and press the **S** key. LFM displays the selected directory listing. To return to the next higher directory level, press the **Esc** key. If the root directory is currently displayed, LFM takes no action.

Showing a File

To view a file, move the highlight to the desired filename and press the **S** key. You cannot edit or modify the file using the Show command (unless you specified a word processor or editor program for the Show command).

You can use the **PgUp** and **PgDn** keys to page through the file, the T and I keys to scroll up and down one line at a time, and the <-- and -> keys to scroll left and right four lines at a time.

Press the **Home** key and the **End** key to display the beginning and end of the file, respectively. Press the **Esc** key to return to the LFM directory listing.

Tag Command

The Tag command enables you to tag (include) directories and files, one at a time, for later multiple file operations. To tag a directory or file, move the highlight to the desired name and press the **T** key. lfM displays the >> symbol in the left margin opposite the name to denote that the directory or file is tagged; LFM then moves the highlight down to the next name.

If you want to "untag" (exclude) a name, move the highlight to the name and press the T key. LFM removes the >> tag symbol. If you want to untag all tags, use the Exclude command or press the **F3** (Reread) key.

Up (ESC Key) Command

The Up command displays the parent directory of the currently displayed directory. Press the **Esc** key at any listing and LFM displays the next higher directory. If the root directory is currently displayed, LFM takes no action.

Update Command

The Update command permits you to change the *Last Update* date and time listing for individual files or multiple tagged files (but **not** subdirectories). At the main menu press the **U** key and LFM prompts at the bottom of the screen

File Date: [01/01/90] Time: [00:00:58]

Type the new date or time you want and press the **Enter** key. LFM changes the date on the *Last Update* column listing to your new date.

Multiple File Operations

You can perform the same character key command on two or more directories or files simply by using the Tag command, Include command, or Exclude command to choose the names and then activate the command. The following commands operate on more than one file:

- Attribute command
- Copy command-be careful with your pathname; do not supply a filename when copying multiple files; make use of MS-DOS wildcard characters * and ? (see your *MS-DOS User's* Guide and *Reference). A Select* each option enables you to choose to copy each file or directory and to *Replace* or *Append* the file.
- Delete command-be cautious using the Delete command with multiple files; examine the tagged names carefully before answering the final 'Are you sure?" prompt
- Print command-places selected files in print queue in order displayed at main menu from top to bottom
- Update command
- Rename command-you can use the Rename command to *move* more than one selected **file** to another directory: in the pathname, type only a directory name, and use MS-DOS * and **?** wildcard characters

Refer to the individual descriptions of these commands earlier in this chapter and, where the directions refer to one file, assume that the directions affect all tagged files and directories.

Multiple File Operations

Tagging Files for Multifile Operation

To select files for multifile commands, you can use the Tag command to individually tag each file in the main menu listing or the Include and Exclude commands to select a large number of related names or extensions. You also can use the Include All command to tag all files and then selectively exclude (untag) files by pressing the T(ag) key.

If you want to include or exclude directories, on the F10 ***LFM*** *Setup Commands*, *Options Setup* submenu, set the *INCLUDE Directories* item to Y(es). See "F10 Setup Key" earlier in this chapter for details on the Setup commands.

Refer to the individual descriptions of these commands earlier in this chapter for more details.

Split Screen

You can simplify use of the Copy command using the lfM split screen mode (press the **F5** key at the main menu to enter split screen mode). For example, using a split screen you can view and tag the source files and directories on one screen and the destination files and directories on the other screen. See 'Copy Command" earlier in this chapter for details.

Copying Multiple Files

When you tag multiple files for copying, lfM assumes you want to use the existing filenames under the new destination directory (or drive). Thus you *do not* have to type the **MS-DOS** wildcard characters in the pathname.

Installing Laptop File Manager

If the Laptop File Manager program has for some reason been deleted from your TravelMate 3000 WinSX hard disk, you can install the LFM files from the 3.5-inch *BatteryPro & Productivity Software* floppy furnished with your computer.

Insert the *BatteryPro* floppy into the floppy drive and at the **A:\>** prompt, type

INSTALL

and press the **Enter** key. Then respond to the prompts to install the appropriate software for your computer and its options.

After installing the software, you should be able to load LFM from the hard disk or from the Laptop Manager main menu.

6
VGA External Monitor Utilities

This chapter tells you about

- ❒ Capabilities and operation of the TravelMate 3000 WinSX VGA software when using an external monitor
- ❒ Technical data for users wanting to program the VGA enhanced modes

Contents

Capabilities

Your TravelMate 3000 WinSX Notebook Computer supports several enhanced modes beyond the VGA standard, including the ability to display 132 columns of text and 256-color graphics at resolutions of 640 x 480 and 640 x 400 on any supported monitor. In addition, the TravelMate 3000 WinSX supports 800 x 600 resolution, 16-color graphics on a multifrequency monitor and 1024 x 768 resolution, 2-, 4-, or 16-color graphics on an 8514 or compatible monitor.

To take advantage of these enhancements, your TravelMate 3000 WinSX includes software support for several popular application programs. The following sections describe the procedures necessary to install these programs so they can take full advantage of your TravelMate 3000 WinSX's enhanced capabilities.

The TravelMate 3000 WinSX external monitor utilities are furnished on a 3.5-inch floppy named *VGA Utilities*. On the floppy is a program named *BRIDGE.COM*, which enables you to use software written for most existing VGA cards that use 800 x 600 and 132-column modes. This program translates the set-mode request into the modes supported by your TravelMate 3000 WinSX VGA display software.

The drivers described in this chapter assume you are using a color VGA configuration. If you are using a monochrome VGA monitor, use the VGA.EXE utility to switch from monochrome VGA mapping to color mapping before using the drivers. The command VGA will set your TravelMate 3000 WinSX to color mapping.

Extended 1024 x 768 Graphics Mode

The TravelMate 3000 WinSX is capable of supporting a 1024 x 768 graphics mode with 2, 4, and 16 colors. This high resolution mode is interlaced and requires the use of an IBM 8514 or equivalent interlaced monitor.

Extended 800 x 600 Graphics Mode

Your TravelMate 3000 WinSX display software can drive a multifrequency display in an extended graphics mode with 800 dots horizontally by 600 dots vertically in 16 simultaneous colors. This increased resolution effectively provides 56 percent more information than standard VGA modes with software that supports this mode.

Note: The extended resolution 800 x 600 graphics mode of your TravelMate 3000 WinSX requires a multifrequency monitor. The 1024 x 768 graphics mode requires an IBM 8514 or compatible interlaced monitor.

The TravelMate 3000 WinSX's 800 x 600 graphics mode is not supported on the IBM PS/2 8503, 8512, 8513 or 8514 or equivalent fixed-frequency displays.

You may need to adjust your multifrequency monitor to display the 800 x 600 graphics mode properly. Use the vertical and horizontal size and position controls on your monitor to display the entire 800 x 600 graphics mode image without distortion.

Extended 256-Color 640 x 400 and 640 x 480 Graphics Modes

The TravelMate 3000 WinSX can display up to 256 simultaneous colors at a resolution of 640 x 480 dots. This mode gives five times the resolution of standard VGA 256-color graphics.

The TravelMate 3000 WinSX also can display up to 256 simultaneous colors at a resolution of 640 x 400 dots. This mode gives you four times the resolution of standard VGA 256-color graphics.

Capabilities

132-Column Text Modes

Your TravelMate 3000 WinSX supports two 132-column text modes on either fixed-frequency or multifrequency monitors. One mode displays 25 rows of 132-column-wide text. The second mode displays 43 rows of 132-columnwide text. These modes display large amounts of information at one time. Compared to standard 80-column by 25-row text modes, these two modes show 65 percent and 184 percent more text on your monitor.

These extended modes require specific software support to take advantage of their capabilities in software applications.

Most software that is compatible with IBM's Personal System/2, VGA, or EGA will run automatically on your TravelMate 3000 WinSX. Just turn on your computer and install your application program for IBM PS/2 models 50, 60, 70 or 80 video, VGA, or EGA as instructed by the program's documentation.

Configuring Your Application Program

Many application programs include an installation or configuration program to prepare them for operation on particular hardware. Most newer programs are able to run in the default VGA configuration of your TravelMate 3000 WinSX.

However, some programs are written specifically for certain non-VGA or non-EGA video hardware so you may have to configure your TravelMate 3000 WinSX to behave identically to the video board needed by the particular software. For this purpose, your TravelMate 3000 *WinSX VGA Utilities* floppy includes a utility to configure your TravelMate 3000 WinSX to behave like each of the IBM standard video devices. This utility, called VGA.EXE, is described in the following section.

The following table lists the fully compatible video standards supported by the TravelMate 3000 WinSX and the video modes and resolutions available under each video standard.

Using the VGA Utility

Video Standards Supported by TravelMate 3000 WinSX

Standard Mode	Resolution	Simultaneous Colors (1)	Mapping (2)
VGA, PS/2 Display Adapter including MCGA and EGA modes (default)			
Monochrome Text	80 columns x 25 rows	-	Monochrome
Color Text	80 columns x 25 rows	16	Color
	40 columns x 25 rows	16	Color
132-Col. Text (4)	132-columns x 25 rows	16	Color
	132-columns x 43 rows	16	Color
	132-columns x 25 rows	-	Monochrome
	132-columns x 43 rows	-	Monochrome
Graphics	320h x 200v (3)	4	Color
	640h x 200v (3)	2	Color
	320h x 200v (3)	16	Color
	640h x 200v (3)	16	Color
	640h x 350v	16	Color
	640h x 350v	-	Monochrome
	320h x 200v (3)	256	Color
	640h x 480v	2	Color
	640h x 480v	16	Color
Extended Graphics (4)	1024h x 768v	2	Monochrome
	1024h x 768v	4	Color
	1024h x 768v	16	Color
	800h x 600v	16	Color
	640h x 400v	256	Color
	640h x 480v	256	Color
CGA, Color/Graphics Adapter			
Color Text	80 columns x 25 rows	16	Color

Notes to the table:

(1) "Simultaneous colors" refers to the number of colors or shades that can be displayed at one time.

(2) This column refers to the old style display the mode was originally designed for. The 800h x 600v graphics modes require a multifrequency monitor and 1024h x 768v graphics modes require an 8514 or equivalent compatible monitor.

(3) The 200-line vertical resolution modes are double-scanned to display 400 lines on screen.

(4) These modes require use of application-specific drivers included on your VGA *Utilities* floppy or special drivers furnished with your application program.

Installation Hints

The following software installation tips may help you achieve the best monitor image.

- ❑ The best display images usually are achieved by installing your application programs for the highest resolution mode available.
- ❑ Some applications automatically detect what type of video card and monitor combination is installed and configure themselves to take best advantage of the available hardware.
- ❑ Install your software for VGA, IBM PS/2 video, or EGA, if possible. This permits your software to run on your TravelMate 3000 WinSX in start-up configuration.
- ❑ If your software does not specify a VGA, IBM PS/2, or EGA option and you are using a color analog monitor, try installing the application for 'color' if available. This usually works in the TravelMate 3000 WinSX's default color mode on color monitors.

- If your application still does not display video properly, try using the VGA.EXE utility to set the TravelMate 3000 WinSX to a completely hardware-compatible video standard (such as CGA or Hercules) that might be supported by your application. The VGA.EXE utility is described later in this chapter.

Notes on Operation

The only way the TravelMate 3000 WinSX will run application programs that will not run on VGA hardware is to configure the computer to operate in another mode, such as CGA or Hercules, by way of the VGA.EXE utility.

Hercules-compatible applications and some CGA-compatible games require using the VGA.EXE utility to set the TravelMate 3000 WinSX to the appropriate video standard.

Applications requiring a specific video mapping may require using the VGA.EXE utility to set the TravelMate 3000 WinSX to color or monochrome VGA mode, as needed.

The default mapping of your TravelMate 3000 WinSX display software depends on the type of external monitor you are using. If you are using a color display such as the IBM PS/2 Color Display model 8514, the default mapping will be color. If you are using a monochrome analog display such as the IBM PS/2 Monochrome Display model 8503, the default mapping will be monochrome.

TravelMate 3000 WinSX VGA Software

The *VGA Utilities* floppy furnished with your TravelMate 3000 WinSX contains several programs designed to help you operate your external monitor most efficiently.

VGA.EXE, enables you to select a video hardware standard either from a menu or directly from the DOS prompt line.

Various drivers that let popular application programs take advantage of your TravelMate 3000 WinSX's extended graphics and 132-column text modes are supplied on the furnished *VGA Utilities* floppy. For driver installation instructions, load the INSTRUCT Me included on the floppy by typing at the MS-DOS **A:\>** prompt

A:\INSTRUCT

and pressing the **Enter** key.

You can copy the utility programs such as VGA.EXE, to your hard disk, and you should make back-up copies of your TravelMate 3000 WinSX *VGA Utilities* floppy.

Note: To switch the display from the computer's built-in LCD to a connected external monitor, use the ALTVID Command at the MS-DOS **CA>** prompt. If you want to restore to the default configuration (display in the center of the physical screen), execute this command again.

Using the VGA Utility

Using VGA.EXE

The VGA.EXE utility permits you to control which video standard the TravelMate 3000 WinSX is emulating. The TravelMate 3000 WinSX default video standard is always VGA, but VGA.EXE enables you to override this setting and choose VGA, CGA, MDA, or Hercules video standards as well and switch between 'color" and "monochrome" VGA modes.

Note: The VGA utility may not operate correctly under Windows.

VGA.EXE also lets you LOCK the board into a particular configuration in order to reboot to that configuration rather than the default VGA mode.

To invoke VGA.EXE, insert the *VGA Utilities* floppy into the floppy drive and at the MS-DOS **CA>** prompt, type

A: \VGA

and press the **Enter** key. VGA displays a simple menu listing some of the options available. Use the ↑ and ↓ keys to select the feature you want and press the **Enter** key.

To quit the VGA program, choose the *Exit to Operating* System option and press the Enter key or simply press the **Esc** key.

You may also load VGA.EXE from the DOS prompt line, thus bypassing the menu. This is useful if you want to incorporate VGA.EXE commands into a batch file.

Using the VGA Utility]

The following commands enable you to use VGA.EXE at the MS-DOS **C:\>** prompt.

VGA Utility Commands

VGA	Displays the VGA.EXE menu.
VGA VGA	Sets the computer to color VGA operation. This is the default configuration of the TravelMate 3000 WinSX.
VGA EGA	Sets the computer to EGA emulation. This emulates the mode video capabilities of the IBM Enhanced Graphics Adapter. A warm boot **(Ctrl-Alt-Del)** returns the computer to VGA mode.
VGA CGA	Sets the computer to CGA emulation. This emulates the video mode capabilities of the IBM Color/Graphics Adapter. A warm boot **(Ctrl-Alt-Del)** returns the computer to VGA mode.
VGA MDA	Sets the computer to emulate the Hercules Graphics Card with no graphics memory allocated. This configuration is equivalent to IBM's text-only Monochrome Display Adapter. A warm boot **(Ctrl-Alt-Del)** returns the computer to VGA mode.
VGA HERC	Sets the computer to emulate the Hercules Graphics Card with one page of graphics memory allocated. This configuration is equivalent to using the Hercules HGC HALF command. A warm boot **(Ctrl-Alt-Del)** returns the computer to VGA mode.
VGA MONO	Changes the computer to monochrome VGA mapping as needed. Allows you to use video modes that use monochrome mapping such as monochrome text mode.
VGA 80 x 25	Switches the computer to 25-line, 80-column text mode. This is the default configuration of the TravelMate 3000 WinSX. A warm boot **(Ctrl-Alt-Del)** restores this mode.

VGA Utility Commands (continued)

VGA 132 x 25	Switches the computer to color, 25-line, 132-column text mode. This mode is only for use with specific application programs that have been designed to take advantage of this mode's extended text capabilities.
VGA 132 x 43	Switches the computer to color, 43-line, 132-column text mode. This mode is only for use with specific application programs that have been designed to take advantage of this mode's extended text capabilities.
VGAALIGN	Aligns the active display with the top of the physical screen. Use this if an application switches to a video mode that truncates the bottom of the display.
VGA LOCK	Locks the current video standard so that it will survive a warm boot. Can be used in conjunction with another parameter to lock that particular mode. However, this command does not lock enhanced text modes. **Example:** VGA CGA LOCK allows the computer to survive a reboot with the computer configured as a color/graphics adapter.
VGA REBOOT	Locks and reboots the currently selected video standard so that the system will re-initialize in the current video standard. This command is equivalent to the VGA LOCK command followed by a warm reboot **(Ctrl-Alt-Del).** Can be used in conjunction with another parameter to lock and reboot that particular mode. However, this command does not lock enhanced text modes.

Any specific video mode command such as VGA CGA will unlock the computer unless used with the LOCK or REBOOT parameter. If you make a mistake in typing the VGA command, the program gives you the option of using the VGA menu or returning to MS-DOS.

Note to TravelPoint and Other Mouse Users

If you are installing your mouse driver by way of a program such as MOUSE.COM, or your mouse driver installs via the CONFIG.SYS file, you may have problems when using VGA.EXE to switch to non-VGA Hercules, CGA or MDA modes.

When using the Microsoft Mouse driver (version 6.1 or later) or the IBM PS/2 Mouse driver, you must use a special procedure when switching from VGA mode to Hercules or CGA modes. Rather than choosing 'Set Hercules Mode" then "Exit to DOS," you should choose "Set Hercules Mode" then execute the menu option to "Reboot System in Current Mode."

This option permits your system to re-initialize in the selected video mode. At this point you should reinstall your mouse, or if your mouse is installed in CONFIG.SYS, it will reinstall automatically. You may also choose the option to "Reboot System in Current Mode" from the MS-DOS command line with the statement VGA REBOOT.

Installing Utilities

The *VGA Utilities* floppy furnished with your TravelMate 3000 WinSX provides a special Help menu to help you install various application programs supported by enhanced VGA display modes. To view the Help menu, insert your *VGA Utilities* floppy into the floppy drive, and at the MS-DOS **A:\>** prompt type

INSTRUCT

and press the **Enter** key. When the Help menu appears, move the highlight to the name of the application program you want to install. The menu then shows installation instructions for that program.

You can copy the INSRUCT file to your hard disk drive by typing at the MS-DOS **CA>** prompt

COPY A:\INSTRUCT.* C:\UTILS

and pressing the **Enter** key.

The INSTRUCT file is installed on your hard disk drive during the system installation procedure. However, if it has been deleted from your hard disk, you can restore it to your hard disk drive from the *VGA Utilities* floppy by typing at the **MS-DOS CA>** prompt

COPY A:\INSTRUCT.* C:\UTILS

and pressing the **Enter** key.

VGA and Extended VGA Programming

This section describes how to access the enhanced modes of your TravelMate 3000 WinSX. The information in this section is intended for users familiar with assembly language programming. An understanding of this information is not necessary for normal operation of your TravelMate 3000 WinSX.

The VGA standard supports a variety of video modes. These video modes can be accessed through standard video BIOS calls from assembly language as well as high-level language routines.

When you start up in MS-DOS, your computer is usually in standard 80-column text or "alphanumeric" mode. On a color system this is mode 3+. VGA 640 x 480 dot 16-color graphics is mode 12H. The following table lists the standard VGA video modes available with your TravelMate 3000 WinSX.

Standard VGA Video Modes

Mode (hex)	Type	Colors (1)	Columns	Rows	Buffer	Char. Size (2)	Res. (3)
0	text	16/256 KB	40	25	B8000	8 x 8	320 x 200
0*	text	16/256 KB	40	25	B8000	8 x 14	320 x 350
0+	text	16/256 KB	40	25	B8000	9x 16	360 x 400
1	text	16/256 KB	40	25	B8000	8 x 8	320 x 200
1*	text	16/256 KB	40	25	B8000	8 x 14	320 x 350
1+	text	16/256 KB	40	25	B8000	9 x 16	360 x 400
2	text	16/256 KB	80	25	B8000	8 x 8	640 x 200
2*	text	16/256 KB	80	25	B8000	8 x 14	640 x 350

Standard VGA Video Modes (continued)

Mode (hex)	Colors Type	(1)	Columns	Rows	Buffer	Char. Size (2)	Res. (3)
3*	text	16/256 KB	80	25	B8000	8 x 14	640 x 350
3+	text	16/256 KB	80	25	B8000	9 x 16	720 x 400
4	graph.	4	40	25	B8000	8 x 8	320 x 200
5	graph.	4	40	25	B8000	8 x 8	320 x 200
6	graph.	2/256 KB	80	25	B8000	8 x 8	640 x 200
7	text	4	80	25	130000	9 x 14	720 x 350
7+	text	4	80	25	130000	9x 16	720 x 400
0	graph.	16/256 KB	40	25	AOOOO	8 x 8	320 x 200
E	graph.	16/256 KB	80	25	AOOOO	8 x 8	640 x 200
F	graph.	4	80	25	AOOOO	8x 14	640 x 350
10	graph.	16/256 KB	80	25	AOOOO	8x 14	640 x 350
11	graph.	2/256 KB	80	30	AOOOO	8x 16	640 x 480
12	graph.	16/256 KB	80	30	AOOOO	8x 16	640 x 480
13	graph.	256/256 KB	40	25	AOOOO	8 x 8	320 x 200

Notes to the table:
Default modes are 3+ for color monitors and 7+ for monochrome monitors.

(1) Colors: Where two numbers are given, the first is the number of colors

Advanced Monitor Operation

Your TravelMate 3000 WinSX display software adds 12 additional modes to the standard VGA modes. These modes are the 1024 x 768 and 800 x 600 extended VGA graphics modes, the 640 x 400, 256-color graphics and the 132column by 25-row and 43-row text modes. These modes each have been assigned mode identification numbers, summarized in the following table.

TravelMate 3000 WinSX Extended VGA Video Modes

Mode (hex)	Type	Colors (1)	Columns	Rows	Char. Buffer	Size (2)	Equip. Res.	Flag (3)
54+	text	16/256 KB	132	43	B8000	7 x 9	924 x 387	
54*	text	16/256 KB	132	43	B8000	8 x 9	1056 x 387	
55+	text	16/256 KB	132	25	B8000	7 x 16	924 x 400	
55*	text	16/256 KB	132	25	B8000	8 x 16	1056 x 400	
56+	text	4	132	43	130000	7 x 9	924 x387	
56*	text	4	132	43	130000	8 x 9	1056 x 387	
57+	text	4	132	25	130000	7 x 16	924 x 400	
57*	text	4	132	25	130000	8 x16	1056 x 400	
58	graph.	16/256 KB	100	75	AOOOO	8 x 8	800 x 600	
59	graph.	2	100	75	AOOOO	8 x 8	800 x 600	
5A	graph.	2	128	48	AOOOO	8 x 16	1024 x 768	
5B	graph.	4	128	48	AOOOO	8 x 16	1024 x 768	
5D	graph.	16	128	48	AOOOO	8 x 16	1024 x 768	

Notes to the table:

(1) Colors: where two numbers are given, the first is the number of colors available at one Lime; the second number is the total number of possible colors. For mono modes this number refers to the number of attributes.

(2) Character Size: The size of the matrix that contains each text character.

(3) Equipment Flag: Required setting of the BIOS data value at address 40: 1 0 bits 5 and 4. (0, 1 or 1,0 = color, 1, I = mono)

++ VESA modes (different monitor timings from modes 58 and 59).

+ Fixed frequency monitor setting.

* Multifrequency monitor setting.

References

Programming the TravelMate 3000 WinSX extended VGA modes is similar to programming the standard VGA video modes of the IBM PS/2 VGA and PS/2 Display Adapter. You may want to refer to the following publications for details on programming VGA in general.

IBM Personal System/2 Display Adapter Technical Reference, April 1987, IBM part number 68X2251 S68X-2251-0

IBM Personal System/2 and Personal Computer BIOS Interface Technical Reference, April 1987, IBM part number 68X2260 S68X-2260-00

Programmer's Guide to PC and PS12 Video Systems, by Richard Wilton, Microsoft Press, 1987 (ISBN 1-55615-103-9)

External Monitor Troubleshooting

The following are typical symptoms of installation problems and their solutions.

Symptom	Solution
No display	**(1)** Computer not configured appropriately for VGA; configure the application program as instructed in the program's documentation. **(2**) Monitor signal and/or power cable not properly plugged in. **(3)** Monitor not turned on. **(4)** Brightness and/or contrast controls on monitor not adjusted properly. **(5)** LCD still active; use the ALTVID command to switch to external monitor.
CRT or setup error on startup	Setup Program not run. See Chapter 4 of your *Texas Instruments TravelMate 3000 WinSX Notebook Computer User's* Manual.
Screen displays distorted images or screen goes blank when software is executed	**(1)** Software is not configured for or compatible with computer's current video standard configuration. Reconfigure software for VGA or EGA video or set the TravelMate 3000

External Monitor Troubleshooting

Symptom	Solution
	(2) Software is configured for a "color mode and the computer is currently operating in "monochrome" mode, or vice-versa. Use the VGA.EXE utility to change mapping mode. **(3)** Check that your monitor was turned on before starting your computer. Your computer may recognize some external color monitors as monochrome when they are turned off during startup. This causes the screen to display data in "monochrome" mapped modes while your software may be configured for "color" operation. Restart your computer with the monitor turned on.
Screen displays distorted image on IBM PS/2 monitor	Your travelmate 3000 WinSX is configured for an older multifrequency monitor via the Setup program; the CRT Type item must be set to match the PS/2 display or equivalent fixed frequency monitor.
Unable to display 800 x 600	Your must have a multifrequency extended graphics monitor to use the extended 800 x 600 graphics mode of the computer. IF you are using a multifrequency monitor, try adjusting the vertical hold and vertical position adjustments.

External Monitor Troubleshooting

Symptom	Solution
Unable to display 1024 x 768 extended graphics	This high-resolution mode is interlaced and requires the use of an IBM 8514 or equivalent interlaced monitor.
Large blank bands at top and bottom of some images on multifrequency monitor: screen image does not MI up entire screen in some modes.	Some multifrequency monitors do not automatically adjust vertical screen size as IBM PS/2 monitors do. Adjust your display for best results.
Diagnostics give a 501, 2401 or 7401 video error or some other video error.	The diagnostics disk you are using does not know about the existence of VGA and is testing the TravelMate 3000 WinSX as if it were an EGA or some other type of video card. Most diagnostics programs are designed to test specific hardware and do not know how to properly test your VGA hardware. This error does not necessarily mean that your computer is malfunctioning. Use the TravelMate 3000 WinSX diagnostics utility, ADVDIAG.EXE to check the computer (see your *TravelMate 3000 WinSX Notebook* Computer User's Manual).

7
Other Utilities

This chapter tells you about

- ❑ The ALARM utility that controls the low-battery and cover-closed alarm beepers
- ❑ The CURSOR utility that controls character repeat rate and cursor appearance
- ❑ The GETSTAT utility that tests for the presence of external devices and the computer power source
- ❑ The MODSCRN utility that switches the display from the built-in LCD screen to an external monitor
- ❑ The RAMDRIVE.SYS device driver that uses part of computer memory as a hard disk
- ❑ The SETCMOS utility that restores your Setup Program settings in case of a power loss

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ALARM Utility

The ALARM utility enables you to turn on or turn off the lowbattery beeper and the cover-closed beeper at the MS-DOS **CA>** prompt. To view the command and its options, at the MS-DOS CA> prompt type

ALARM

and press the **Enter** key. The current status of the ALARM utility is displayed.

The Cover Alarm is turned On.
The Low Battery Alarm is turned on.

To view a brief help display, type

Alarm /?

and press the **Enter** key. The utility displays the following screen listing the command options and the current alarm status.

Usage: - Alarm [/switch]

Alarm - Shows status of Cover and Low Battery Alarms
Alarm /On - Turns the Cover and Low Battery Alarms On.
Alarm /Off - Turns the Cover and Low Battery Alarms Off.

The ALARM utility turns on or turns off the low-battery and the cover-closed alarm beepers.

You also can add either of the commands to your AUTOEXEC.BAT file to control the alarms when you boot the computer. For example, add the line

ALARM ON

to your AUTOEXEC.BAT file to turn on both alarms when you boot the computer. You can also control one or both alarms using the computer's Setup Program as described in your *TravelMate 3000 WinSX Notebook Computer User's Manual*.

Cursor and Typematic Control

The CURSOR Utility gives you control over of the size and visibility of the cursor on your LCD display. This utility also enables you to control the typematic character repeat rate and character repeat delay times.

Note: Many application programs take control of the cursor and typematic features and provide their own cursor setup procedures. See your application program documentation. Adjust the cursor and typematic characteristics as follows.

1 At the **CA>** prompt, type

CURSOR /?

and press the **Enter** key. The CURSOR utility displays the following menu and then returns to the MS-DOS prompt:

usage: cursor [/rx /dx /sx]

/rx char repeat rate, x is:

v	-	30 cps
f	-	20 cps
n	-	10 cps (def)
s	-	5cps
c	-	2 cps

/dx char repeat delay, x is:

1	-	1 second
2	-	.75s
3	-	.5s (def)
4	-	.25s

/sx cursor size, is:

f	-	full cursor
h	-	half
u	-	underline (def)

where X is the one-letter code for the cursor characteristic you want to change (r, d, *or s)*, and Y is the one-letter code for the cursor action you want.

For example, the code to change cursor size is S, and the code for a full-size cursor is F. Therefore, to change the cursor to full-size, you would type

CURSOR */SF*
and press the **Enter** key.

Note that you can include any one or all three parameters on the same line, for example:

CURSOR /RV /D2 /SU

Note: Be sure you include the / (slash) character before each two-letter code. Spaces between codes are optional.

Character Repeat Rate

The character repeat rate, set using the RX code, enables you to adjust the number of characters per second (cps) the keyboard generates when you hold down an alphanumeric key. You can set the rate from 2 cps to 30 cps as shown on the **CURSOR** command listing. The default repeat rate is 10 cps.

Character Repeat Delay

The character repeat delay, set using the DX code, lets you adjust the time you must hold down a key before the typematic feature starts. You can set the delay from 0.25 to I second as shown on the CURSOR command listing. The default delay value is 0.5 second.

Cursor and Typematic Control

Cursor Size

The cursor size adjustment, set using the SX code, lets you set the cursor size to a half, full, or underline cursor. The underline is the default size.

Adding CURSOR to Your AUTOEXEC.BAT File

You can include the cursor setting in your AUTOEXEC.BAT file so that the cursor and character repeat characteristics you want are active when you turn on the computer. For example, to set the character repeat rate to 20 cps, the delay to 1 second, and the cursor to full size when you start the computer, add the following line to your AUTOEXEC.BAT file:

CURSOR /RF/D1/SF

The GETSTAT program can be used in a batch file to test for the following.

- ❑ Presence of an optional external expansion unit (/E)
- ❑ Power source in use, external ac or internal battery pack (/B)
- ❑ Type of monitor in use, external or built-in LCD (/V)

GETSTAT returns an error code to the batch file for it to test.

GETSTAT Commands

To test for the presence of an optional external expansion unit, use the command:

GETSTAT /E

If the expansion unit is connected to the TravelMate 3000 WinSX, GETSTAT exits with an ERRORLEVEL = - 1; if the expansion unit is not connected, GETSTAT exits with an ERRORLEVEL = 0.

To determine the current power source in use, use the command:

GETSTAT /B

If the computer is currently powered by its internal battery pack, GETSTAT exits with an ERRORLEVEL = - 1; if the computer is currently powered by the AC Adapter, GETSTAT exits with an ERRORLEVEL = 0.

To test which video device is in current use, use the command:

GETSTAT /V

GETSTAT Utility

If the computer is displaying data on an external monitor, GETSTAT exits with an ERRORLEVEL = - 1; if the com-puter is using its built-in **LCD, GETSTAT exits With** an ERRORLEVEL = 0.

Sample GETSTAT File

The following sample shows a typical **GETSTAT** file you could create as a batch file named **SAMPLE.BAT.** This file is stored on the BatteryPro *& Productivity Software* floppy furnished with your new computer.

```
@echo off
getstat /e
it ERRORLEVEL -2 goto bad machine
getstat /e
if ERRORLEVEL -1 goto yes_exp
echo no expansion station attached
goto chk batt
:yes-exp
echo the expansion station is attached
:chk batt
getstat /b
if ERRORLEVEL -1 goto yes_batt
echo the unit is currently powered by external power source
goto chk video
:yes_batt
echo the unit is currently powered by the battery
:chk-video
getstat /v
if ERRORLEVEL -1 goto yes_mon
echo the video is currently on the LCD
goto exit_all
:yes-mon
echo the video is currently on the external monitor
goto exit-all
:bad machine
echo detected invalid hardware
```

MODSCRN Utility

The MODSCRN (modify screen state) utility permits you to switch the computer's display from its built-in LCD screen to a compatible external monitor. (The ALTVID command also switches the display from and to the LCD.) You also can use MODSCRN to turn the LCD backlight off and on.

Note: This utility does not work under Windows.

To load the MODSCRN utility, at the MS-DOS **CA>** prompt type

MODSCRN [ID /E /M IL *IS I* and press the **Enter** key; where

/D disables the LCD backlight.

/E enables the LCD backlight. (Pressing any key also enables the backlight.)

/M switches the displayed image from the computer's LCD to an external monitor connected to the computer.

/L switches the displayed image from an external monitor to the computer's built-in LCD.

/S shows the current display state, similar to the following.

Display is currently on the LCD.
Display Backlight is *ON*.

Note: You also can type ALTVID at the MS-DOS CA> prompt and press **Enter** to toggle between the LCD and an external monitor.

RAMDRIVE.SYS Device Driver

Note: When you turn off or warm start your computer, all data stored in RAM disks is lost.

The RAMDRIVE.SYS device driver enables your computer to use some of its memory as if it were a hard disk drive. Called a RAM disk (and sometimes a virtual disk), it is much faster than a hard disk because its data is always loaded into RAM. RAMDRIVE.SYS puts the RAM disks into the memory area above I MB.

Note: Using the RAMDRIVE.SYS device driver increases the size of MS-DOS resident in memory.

Install and use this device driver as described in the *Microsoft MS-DOS User's* Guide and Reference furnished with your new computer.

SETCMOS Utility]

The SETCMOS utility enables you to save and restore, if necessary, the computer configuration data saved in a battery-powered CMOS RAM by the computer's Setup Program. This utility is useful for:

- Restoring configuration data if the CMOS battery is ever removed, disconnected, or fails.

Note: The CMOS battery is a small internal button battery that powers the CMOS RAM; it is completely separate from the internal battery pack.

- Creating custom configuration data files for each of your application programs; for example, if one program works best with extended memory and one works best with expanded memory, you can use SETSCMOS to change configurations without having to use the computer's Setup Program each time you load the application

The SETCMOS utility saves the current configuration data to a file you name. The factory default file, FACTORY. CMS stored under the UTILS directory, is the file used when you press the **F4** (Reset Config) key at the Laptop Manager main menu.

When you change configuration data (for example, when you add options or change configuration for an application), be sure you save the data by pressing the **F3** (Save Config) key on the Laptop Manager main menu, or you can run the SETCMOS utility as described in this section.

SETCMOS Command

To view the SETCMOS command and options, at the MS-DOS **CA>** prompt type

SETCMOS /?

and press the **Enter** key.

SETCMOS Utility

The utility displays the following screen and returns to the MS-DOS prompt.

Usage: setcmos [[/r] file Is file /n /v /h /?]

/r file	Restore from file and reboot
/s file	Save to file
/n	No reboot on restore
/v	Display version
/h or /?	This help message

Saves/restores CMOS RAM to/from a file.

Note: The /R switch is the default switch for the SETCMOS command.

Restoring Factory Default CMOS Data

To restore the factory default CMOS configuration data file, at the MS-DOS **CA>** prompt type

SETCMOS /R C:\UTILS\FACTORY.CMS

and press the **Enter** key.

The factory default configuration values are restored in the CMOS RAM and the computer reboots itself The factory default file (FACTORY.CMS) is stored on the hard disk under the UTILS directory and on the *BatteryPro & Productivity* Software floppy furnished with your computer.

Note: You also can restore the factory default CMOS configuration by press the F4 key at the Laptop Manager main menu described in Chapter 2.

Saving Your CMOS Data

Once you have used the TravelMate 3000 WinSX Setup Program to configure your new computer for your operating environment and options, you should save the data stored in the CMOS RAM to your own custom file.

To save the current CMOS RAM data, at the MS-DOS **CA>** prompt type

SETCMOS IS MYFILE.CMS and press the **Enter** key.

You can type any filename you want instead of the MYFILE.CMS filename shown in the example. If you ever need to restore the computer to your configuration settings, type your filename to the SETCMOS /R command described previously.

Appendix
Creating Help Displays

You can custom design your own Help displays for use in your TravelMate 3000 WinSX Notebook Computer to show information for your own programs or your commercial application programs. You also can add subjects and related descriptions to the HELP.DAT and DOSHELP.DAT files created at the factory.

Use an ASCII word processor or editor (such as the MS-DOS 5. 0 Edit utility) to create and edit the HELP. DAT files or an editor that creates or "exports" files in ASCII format.

Rules for Creating Help Files

Use the following rules to create your own help files.

- **::TIHELP -** must always be the first line in the file, with the first colon in column 0.

- : **T -** precedes the main title for the help display.

- :**C X BF -** precedes the colors used for the help menus, where **X** selects one of the following menus to assign a color:

  1 = main menu
  2 = subject name box
  3 = subject description box
  4 = error message menu
  5 = help menu
  6 = print menu

and **BF** selects the menu color, using **B** for background color and **F** for foreground color in hexadecimal. Colors are defined as follows:

0 = black
1 = blue
2 = green
3 = cyan
4 = red
5 = magenta
6 = brown
7 = light gray (white)
8 = dark gray
9 = light blue
a = light green
b = light cyan
c = light red
d = light magenta
e = yellow
f = bright white

For example, the string: **C 1 97** sets the main menu (1) background to light blue (9h) and the foreground to light gray (7h). You must start each menu color selection on a new line.

- : **P -** precedes the subject name that appears in the left-hand subject name box. You can use up to 12 characters. Data you enter on the lines below the : **P** line make up the description that appears in the righthand subject description box. You can enter any number of data lines for the description box. The description box terminates with a: (colon) in column 0 to start another command or an EOF character.

- **;** - (semicolon) in column 0 precedes a comment line, which is ignored by the program - You can insert any number of comment lines for your own information; comment lines are not displayed in the Help screens. You also can use the; (semicolon) character anywhere on a menu color line after the **:C X Y** characters when preceded by a space character; for example,

  : C 1 0f ; this is a sample color comment line.

Column length of the subject name box is 13 characters maximum; the description box is 52 characters maximum.

Sample Help File

The following figure shows a sample help subject entry, with comment fines explaining the command lines.

Creating Help Displays

```
::TIHELP
;-------------------------------------------------
;the line above must be the first line in the file
;-------------------------------------------------
;the following line is the Help menu main title
;-------------------------------------------------
:T My Help Display, Version 1.0
;-------------------------------------------------
;the following three lines set the colors for the main men,
;and the subject and description boxes
;-------------------------------------------------
;:C 1 0f ; sets main menu to bright white on black
:C 2 f0 ; sets subject box to black on bright white
:C 3 87 ; sets description box to dk gray on lt gray
;-------------------------------------------------
;you can insert a character counter like the following to
;help you keep lines for the description box to the 52-
;character maximum
;-------------------------------------------------
;               10            20            30            40            50
;12345678901234567890123456789012345678901234567890123456789012
;-------------------------------------------------
;the following lines list the subject box entry
; and the description box entry
; the subject name is limited to 13
;characters and the description box is 52 characters
;maximum
;-------------------------------------------------
:PSubject Name
        The words "Subject Name,, will appear in the
left-hand subject name box on the displayed Help
menu and this explanation, whose first line is
indented three characters, will appear in the
right-hand subject description box.
        If more than one page is required to complete
the description, the program will automatically
adjust for additional pages.
```

```
;Processor or editor; no particular command is
;necessary
-----------------------------------------------------
```

Naming Your Help File

You can give your help display data file any name and extension you want-except HELP.DAT and DOSHELP.DAT, which are already in use under the UTILS directory. For example, you could name your help display data file MYFILE.HLP. Then when you want to load your help display, at the MS-DOS **CA>** prompt type

HELP MYFILE.HLP

and press the **Enter** key.

If you type only HELP , without specifying a data file, the program searches first for the default data file: HELP.DAT in the current directory; then it searches through all directories specified in the PATH environment variable defined in your AUTOEXEC.BAT file. The program uses the same search technique if you type only a filename. If you type a filename preceded by a \ (backslash), which creates a pathname, the program searches only for the file specified by the pathname.

Adding Subjects to Existing Help Displays

You can add subjects and descriptions to the existing HELP.DAT and DOSHELP.DAT files, stored under the UTILS directory on the hard disk (drive Q. Use your word processor or file editor to insert new subjects and descriptions anywhere in the file, following the rules outlined previously in this appendix.

Note: Be sure to save the file back to disk in ASCII format, not your word processor's particular format.

f

h

k

u

v