XP Manual

XP USER'S MANUAL

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FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT XP

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. Their limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio TV technician for help.

Notice:

1.) Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2.) Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.

MANUAL CONVENTIONS

This manual uses the following conventions:

When we refer to key commands, the name of the key is enclosed in single quotes, e.g. 'Esc'.

If a key command is incorporated into a sentence, where the name of the key has previously been mentioned (in single quotes, to separate it from non-technical text) we will forgo the quotes.

When you must use several keys to activate a command, the keys have a plus sign between them, e.g. 'Ctrl' + 'Alt' + 'S'.

Command lines you must type in will be enclosed in quotation marks, don't type the quotes when you type the command.

Comments in the gray sidebars serve to draw your attention to special procedures, warning, or a additional information. Especially important information is indicated by this icon:

CHAPTER ONE: THE GUIDED TOUR

[WinBook XP]

This chapter contains everything you need to get started using your WinBookXP. Take a look at it before you go racing for the power switch and we'll save you a little time. We'll go over what you'll pull out of the box, what everything is, and how to connect things so you can be up and running in no time. You can use your WinBookxp right out of the box after you do just a few things, so, here we go.

Unpacking

When you open your WinBookXP shipping carton you'll find several items – including this manual, which of course you looked at before you did anything else, right? The rest of the goodies are all carefully packed to protect them during shipping – and reshipping – so go easy on the packing materials in the box and don't throw anything away. You'll need the whole setup later should you ever need to ship your computer for upgrades, service, or anything else. Take everything out to make sure that what should have come with the compute is there. There's a quick visual guide on the next pages, for you to refer to . In addition to the computer and its AC Adapter and power cords, there should be software packages with manuals and disks. Once you're sure everything's there, go ahead and take a look at the computer. If anything is missing, contact the number listed on the "Read-Me-First"sheet, which is packed with the WinBookXP. This sheet has the information you'll need to contact Customer Service for your version of the WinBookXP.
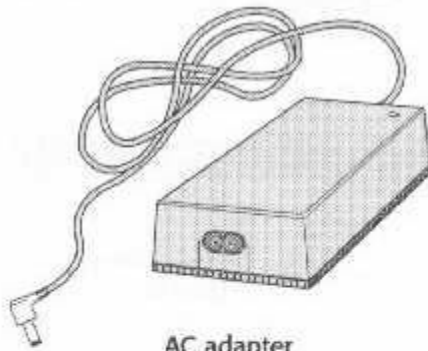
What's in the WinBookXP Box?

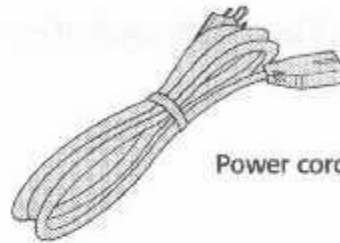When you unpack your computer you should find the following things:

- WinBookXP notebook computer

  (battery installed).

- AC Adapter

- Power Cord

- PS/2 Port Duplex Adapter

- This Manual

- PCMCIA Reference Manual

- Utility Floppy Disks

- Additional Floppy Disks and manuals for sound card and fax modem options, if installed
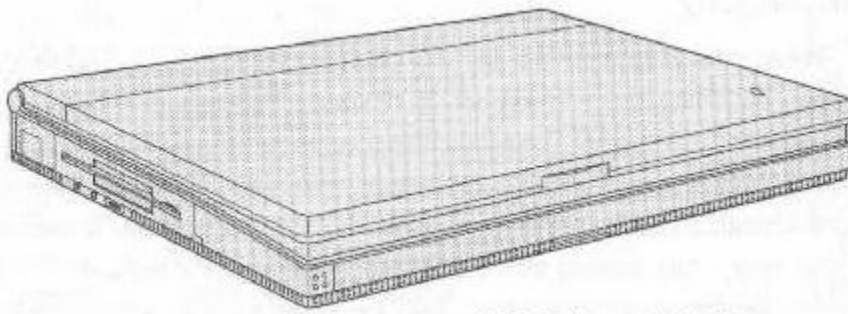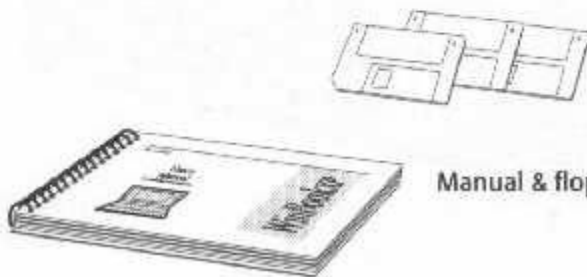
Fig. 1: The Basic WinBookXP Package

Anything Missing or Damaged?

Contact the number listed on the "Read-Me-First" instructions packed with your WinBookXP.

Important: Don't plug the notebook in yet! See pages about preparing the battery first.

[A Walk Around the Block](#)

A Walk Around The Block

[WinBook XP]

Now that you've got everything unpacked, let's take a quick look at where things are on the exterior of the computer. The following illustrations point out what's what.
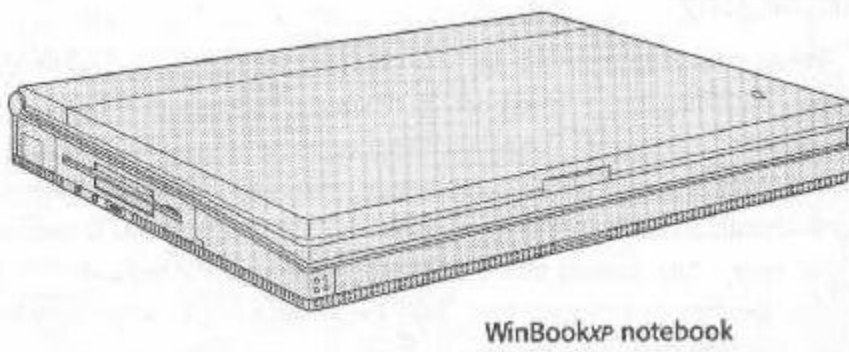
Fig. 2: Front-Left View
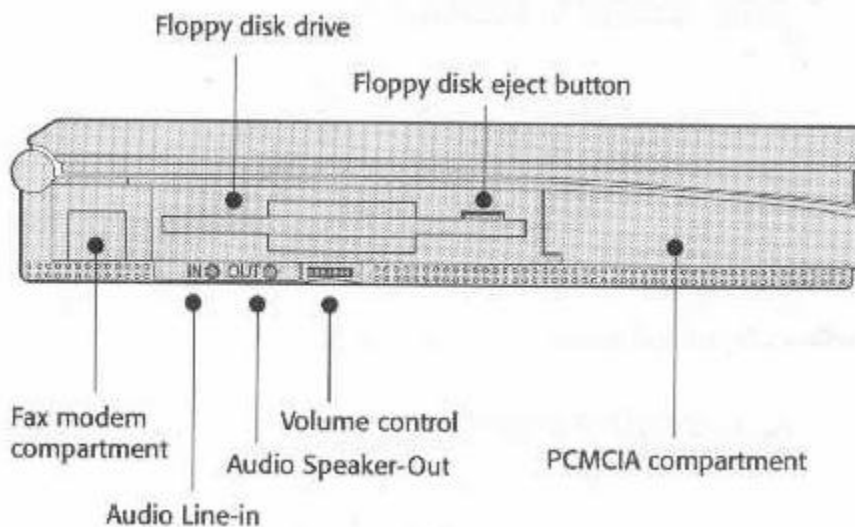
Fig. 3: Left View Close Up

Left Side Controls & Ports

The floppy disk drive has an eject button. The button pops out when you put a disk in the drive. Push it in to eject the disk. When the drive is active, the activity icon on the LCD status panel flashes.

The audio connectors and volume control work with the optional audio card. A small panel that slides out from the bottom covers the fax modem port.f

Port Covers

A hinged access panel that drops down covers the rear ports. The Docking Station connector has a removable cover that pulls off.

Parallel port

External monitor port

Serial port

Docking station connector
cover panel

PS/2 keyboard/mouse port

Fig. 4: Rear View

Removable hard disk bay

Fig. 5: Right Side View

Battery compartment

Upgrade compartment access panel

Optional audio card access panel
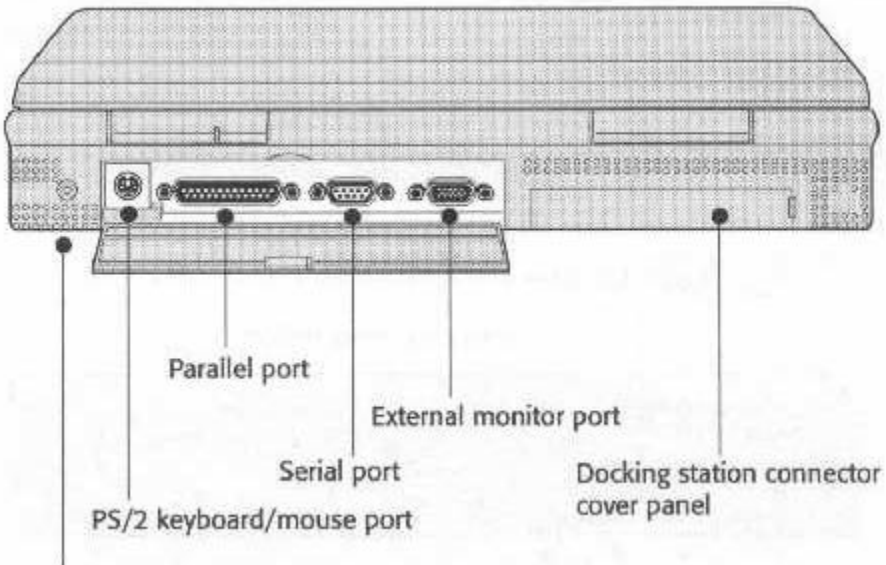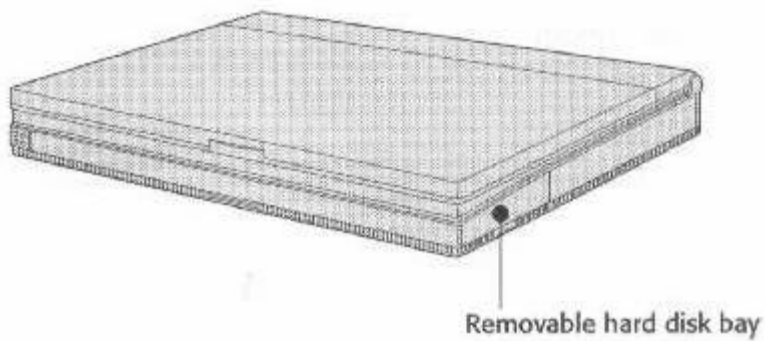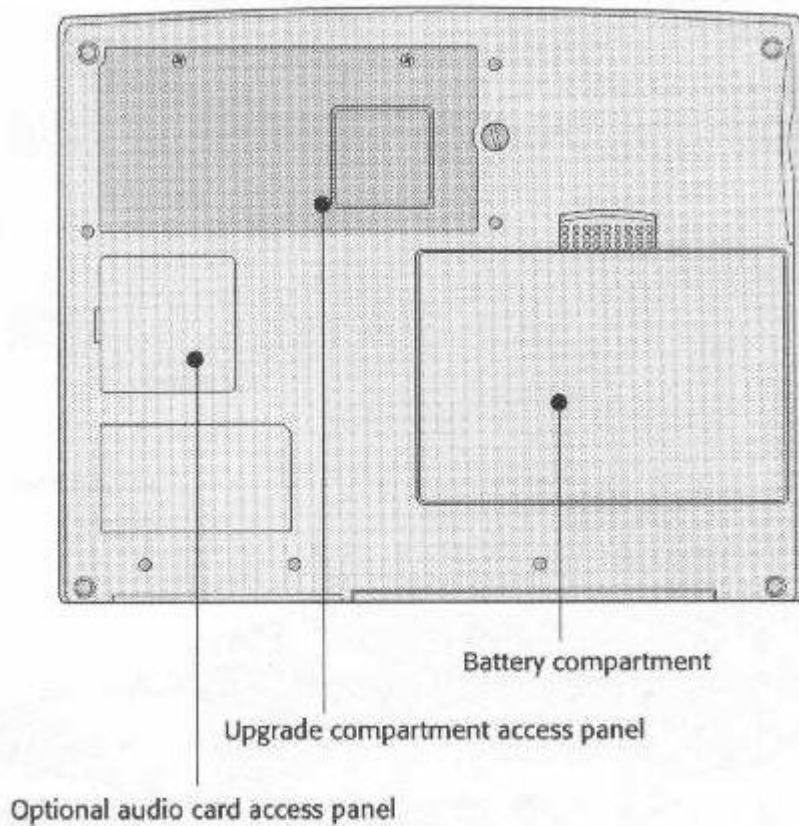
Fig. 6: Underside View

Underside Compartments

The battery, audio card, and memory compartments are on the underside of the computer.

For more information, see Chapter 4 regarding the audio card and Chapter 5 about memory and hard disk upgrades.

Note

The battery pack has a shipping insert you have to remove before you use the computer:

1. Push the latch slide away from the battery to release it

2. Remove the battery

3. Pull out the insert

4. Replace the battery

The WinBookXP opens like most other notebook computers; there's a hinge at the back edge and a latch at the front. Push in on the latch release bar at the front and raise the top half. The following illustrations show where things are.
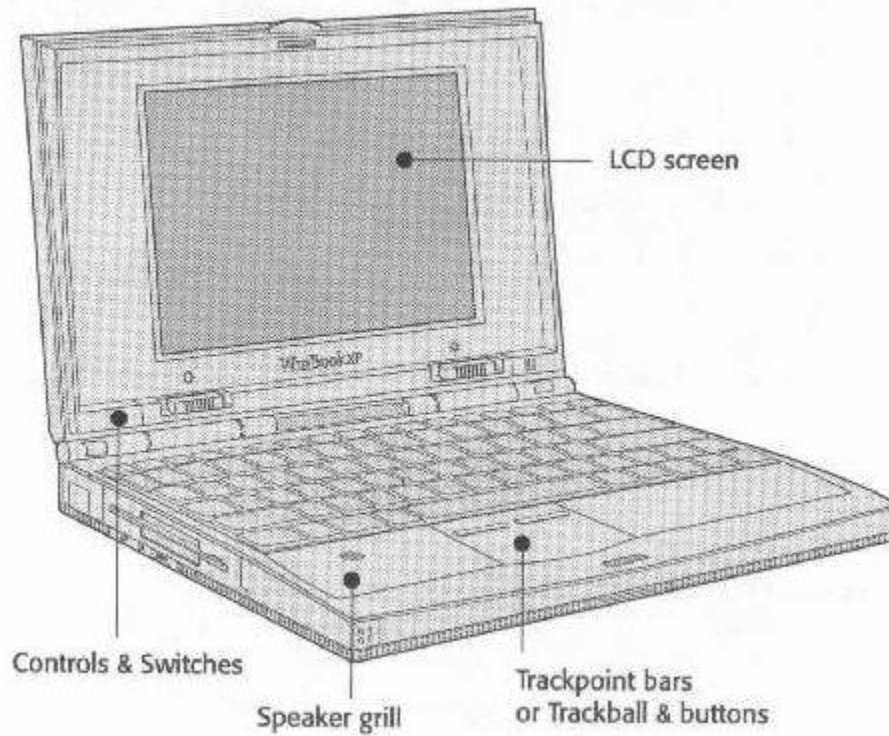
Fig. 7: Open View

The Trackball Model
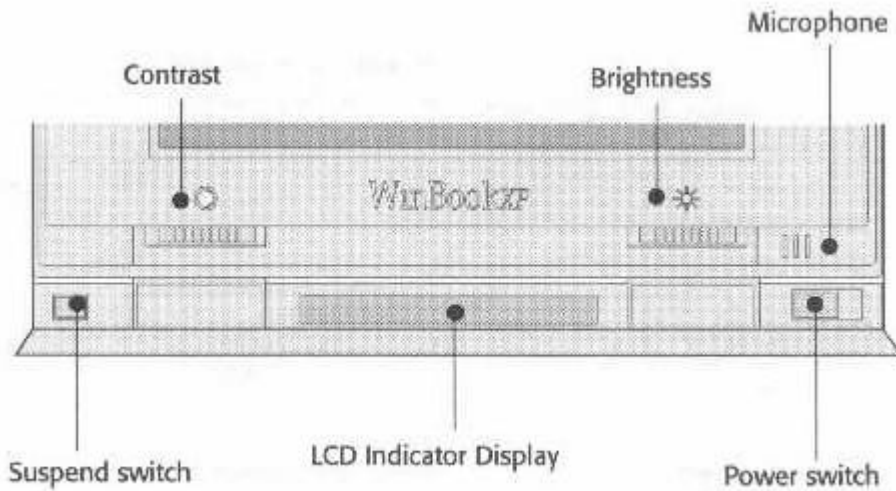
Fig. 8: Hardware Controls and Indicators

Switch & Control Operation

All the controls and switches except audio volume are at the cover hinge. The power switch and

contrast & brightness controls slide left/right. The suspend switch is a push button.
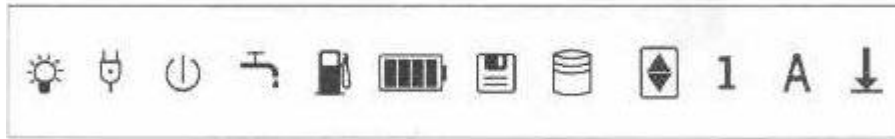
Fig. 9: LCD Indicator Panel Icons

The LCD Indicator Panel

The LCD indicator panel displays system status information. There are twelve icons, which are explained on the next. The icons display, flash or change appearance to indicate the current status of the part of the system they represent.f

LCD Indicator Panel Icon Functions

Power On

Indicates the computer is turned on, using either AC or battery.

AC Adapter connected

Indicates the computer is connected to an AC power source.

Suspend state activated

Indicates the computer is in Suspend-to-Ram mode.

Power Management

Indicates power management is enabled on the Power Management Setup page of the Setup program.

Battery Gauge

Four bars and the cap show the charge level. With AC Adapter connected, it indicates charge progress. Running on battery power, it indicates the remaining charge.

Floppy Disk Drive active

Flashes when the floppy drive is in being accessed.

Hard Disk Drive active

Flashes when the hard drive is in being accessed.

PCMCIA Indicator

Arrows show PCMCIA slots in use. Arrows indicate upper and lower slots. Only the bottom arrow displays for Type 3 cards.

Num Lock

Indicates the embedded numeric keypad is turned on. Press the 'Num Lock' key once to turn it off.

Caps Lock

Indicates that caps lock is active. Press the 'Caps Lock' key once to turn it off.

Scroll Lock

Indicates that scroll lock is turned on. Press Fn and the insert/ScrLk key to turn it off.

The AC Adapter

The AC adapter converts the alternating electrical current from your wall outlet to the direct current the computer uses. There is a cord permanently attached to the adapter, with a connector jack that plugs into the computer. A power cord comes with the adapter. One end is designed to plug into the adapter; the other is a standard plug for your wall outlet or power strip. We recommend using a surge protector. The AC adapter is not designed to protect the computer from power spike and surges. Use a surge protector to protect against power fluctuations.

You can use the AC adapter with any AC source from 90 to 260 Volts and 50 to 60 Hz. It is an auto-switching adapter; with the proper plug adapters you can use it anywhere that the electricity falls within these electrical specifications.

The AC Adapter Components

The adapter power light should come on when you connect the adapter to an AC power source. If the light doesn't come on, there's either a problem with the adapter or the power outlet.
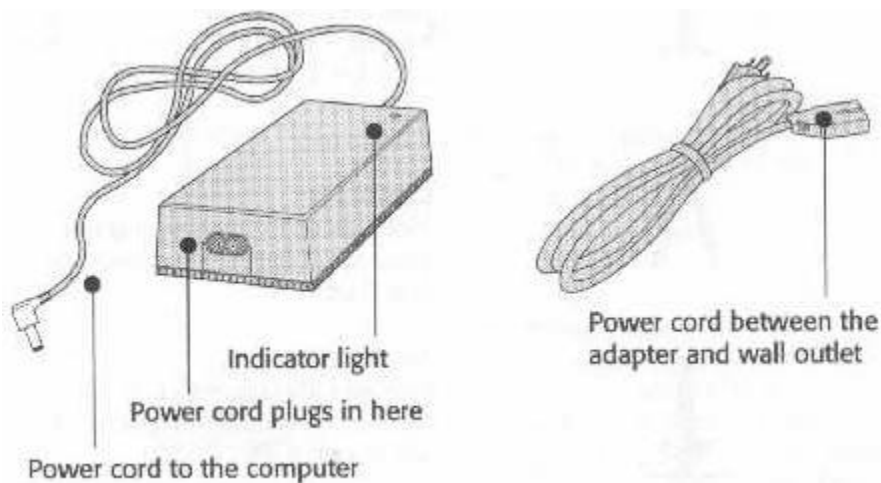

Indicator light

Power cord plugs in here

Power cord to the computer

Power cord between the adapter and wall outlet

Fig. 10: Adapter and Power Cord

Ready to Go

READY TO GO

Now you're ready to start using the computer. This section covers how to charge the battery, use the computer controls, including keyboard commands, and the software configuration.

First Step – Charge The Battery

When you get your system, the removable battery pack is already installed in the computer. To protect the battery and the computer during shipping, a protective insert blacks the connection between the battery and the contacts in the battery compartment. You must remove the insert before you use the computer. Also, we strongly recommend that you charge the battery before you use the computer the first time. Although the battery is conditioned at the factory, Nickel-Metal Hydride (NiMH) batteries perform best if you fully charge them before you use them. We recommend the following procedure:

1. Turn the computer over so you can see the battery compartment.

2. Remove the battery pack by pressing the release latch away from the pack so that it pops up and you can pull it out.

3. Remove the insert and replace the battery.

4. Connect the AC adapter to the computer; plug the power cord into the adapter first, and then into an electrical outlet.

5. Charge the battery for two and a half hours with the computer off or in suspend mode, five hours with the computer on, or, in either case, until the top cover status light stops blinking.

You can charge the battery while you are using the computer on AC power, but it will take much longer, and you must make sure to fully charge the battery the first time. The easiest way to do it is just to charge the battery first before you use the computer.

The Top Cover Status Light

The status light on the top cover is an LED that indicates battery charging and system suspend status when the notebook is closed. The color of the light changes to indicate what is happening:

Flashing red – Battery charging

Solid red – Battery fully charged

Solid green – System suspended to RAM

Flashing amber – System suspended, Battery charging

Solid amber – System suspended, Battery fully charged

Hit The Switch

Turn on the computer by sliding the power switch to the right. Some icons on the indicator panel will light or flash as the system powers up.

What You'll See

When the system starts up, some text will appear on the screen while the computer tests itself and processes the config.sys and autoexec.bat files. Windows will then load automatically.

If There's A Problem

It's not likely, but in the event that you encounter a problem when you turn the computer on, the solution will probably be relatively simple. There are a few suggestions here of what to look for. If these aren't enough, refer to the Troubleshooting section in Appendix A to see if you can work out what the problem is. If you can't solve the problem alone, contact the umber listed in the "Read-Me-First" sheet that came with the system.

When you turn the computer on, it does three things. It checks itself (the Power-On Self Test), loads DOS with its Config.sys and Autoexec.bat configuration files, and then loads Windows.

If the computer doesn't complete the process and successfully load Windows, or you get error messages, try turning the computer off then on again to see if the problem clears up. Also, check to make sure the screen contrast and brightness controls are adjusted so you can see the screen clearly. If you're using the AC adapter, make sure the connections in the chain from the electrical outlet to the computer are secure. If you're using battery power, make sure the battery is charged.

Pointing Devices

POINTING DEVICES - TRACKBALL OR TRACKPOINT

A mouse is the pointing device most people are familiar with. Alternate devices perform the same function. The WinBookXP comes with one of two pointing device options.

Depending on which model you have, there'll be either be a trackball and buttons installed in the center of the palm rest, or there'll bee a TrackPoint pointing stick in the center of the keyboard and two buttons mounted in the center of the palm rest. They both function as Microsoft Mouse-compatible pointing devices and can be configured by double clicking on the Mouse icon (the rodent kind) in the Windows Control Panel.

When you get your WinBookXp, it will also be set up to run a DOS mouse driver. This means you can use the pointing device with DOS programs that support a mouse, including the DOS 6.2 utilities that have mouse support.

Trackball Use

You control the built-in trackball by rolling the ball around to direct the mouse cursor on the screen. Use the two buttons below the Trackball like you use left and right mouse buttons.

Using the TrackPoint

To use the TrackPoint control stick place your index fingertip on the stick and direct the mouse cursor by gently pressing the stick in the direction you want the cursor to go. It doesn't require much force. The two bars in the center of the palm rest below the keyboard are equivalent to the left and right mouse buttons.

The TrackPoint has a replaceable rubber cover. You get spares with the computer so you can replace the cover if it wears out, or if you want to use a black cover instead of the standard red one.

The Keyboard

THE KEYBOARD

The keyboard has all the standard computer typing and control keys. It also has a numeric keypad and some other key functions "embedded." The standard letter, number and symbol keys are printed in white on the key-tops. The computer control and cursor keys are printed in yellow. The embedded keys are printed in gray or teal.

The embedded numeric keypad characters are printed in gray on the lower right-hand corner and the front of the keys used. They reproduce the functions of the numeric keypad on an IBM 101-type keyboard, which has a dedicated keypad. To use the embedded keypad, turn on Number Lock by pressing the 'Num Lock' key once. With Num Lock on, the numeric keys are active. If you hold down either Shift key as well, the keypad cursor control functions, printed in gray on the front of the keys, are activated. The Num Lock function is disabled in the default system Setup program configuration.

There are also some additional Fn-key activated functions printed in Teal on the front of some keys. These include screen controls and a key to call up the power management setup screen.

The keyboard layout is the same for both the trackball and Track Point models, with the exception that the TrackPoint control button sticks up out of the keyboard between the G and H keys. The following figures show the keyboard layout and which keys are used by the embedded keypad. There is more information on specific key functions in Appendix B.
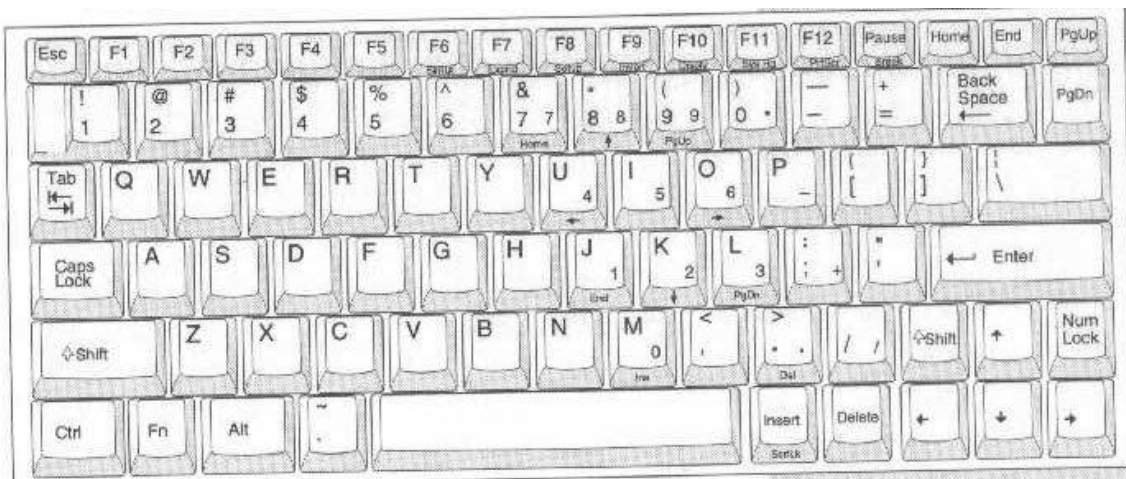
Figure 11: Full Keyboard

Key Color Coding Scheme

Color	Function
White characters	Standard typing keys
Yellow characters	Computer & cursor control keys
Gray characters	Embedded keypad keys
Teal characters	Special computer functions activated by the Fn key
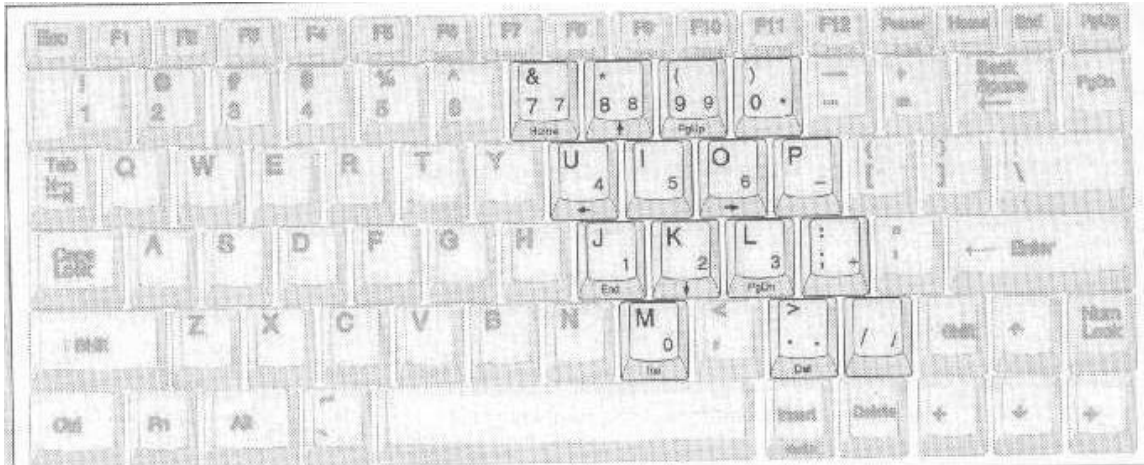
Fig. 12: Embedded Keyboard

Key Combination Effects – Embedded Keypad

Status	Effect
NumLock On	Gray numeric keys active
Shift pressed	Gray cursor control keys active
NumLock Off + Fn	Gray cursor control keys active
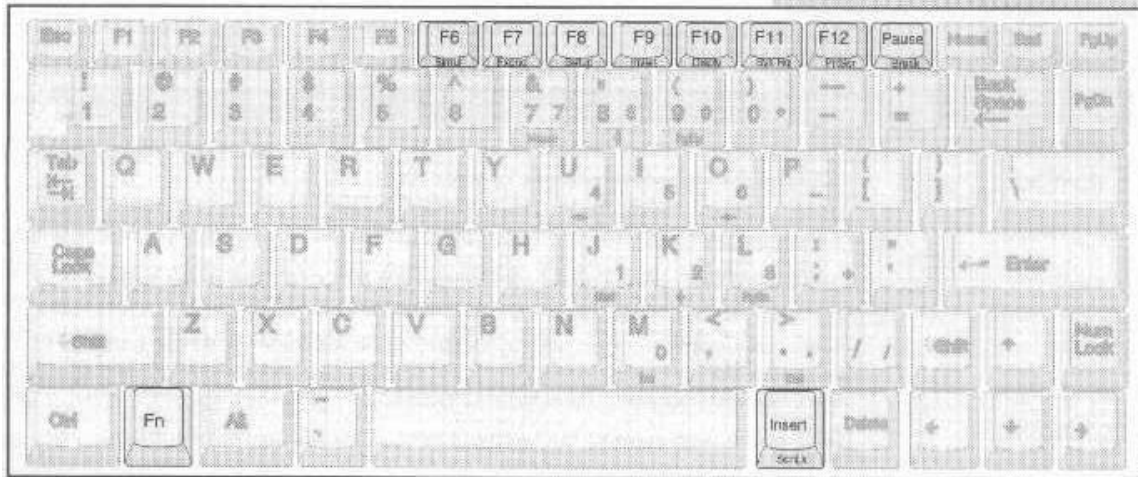
Fig. 13: Fn-activated functions

So Now What?

SO NOW WHAT?

Now you're up and running and you can start using your computer. Let's briefly go over the software that came with your system. If you purchased your WinBookXP with pre-loaded system software, the hard disk has already been set up and all the software installed. If you purchased a model without pre-loaded system software, refer to the "Read-Me-First" setup and initialization guide for further instructions.

[The Software You Get](#)

The Software You Get

[WinBook XP]

Most WinBookXPs come with pre-loaded software, including MS-DOS and Windows, configured so that you can start using them right away. You don't have to do anything unless you need to change the configuration, so you can install whatever application software you plan to use right away. We recommend backing up the hard disk first, so that if the software installation gets corrupted, you can restore the WinBook XP configuration. You do get the floppy disks for all the software installed on the hard disk, so you could reinstall from master disk copies. Backing up, however, is preferable to doing a generic installation from the software floppies because you don't have to then re-configure the system.

MS-DOS and Windows both come with a back-up utility, so you can use either one to backup your hard disk onto floppy disks. Both programs are in your DOS directory. The DOS version is called "msbackup.exe" and the Windows version is "mwbackup.exe". You can run the DOS version from the DOS command line by typing the name of the program and pressing the 'Enter' key. Run the Windows version from the "Run&ldots;" command in the File menu of the Program Manager or by clicking twice on the MSBACKUP icon in the Applications group. Both programs have Help files that explain how to use them.

WinBookXP Software (Pre-loaded systems only)

- Microsoft MS-DOS

- Microsoft Windows

- Logitech mouse drivers

- Western Digital display drivers for DOS and Windows

- PCMCIA software (card and socket services support PCMCIA 2.01 specifications)

- Phoenix PHDisk utility

There are Windows display drivers specific to the computer's video display circuitry already installed in the Windows System sub-directory and there are also display drivers for various DOS programs installed in sub-directories on the hard disk. Video display drivers are explained in more detail in Chapter 6.

To use the PCMCIA card feature, you must set up the basic software required to use PCMCIA cards in general, as well as any software specific to the type of card you plan to use. We have provided sample config.sys and autoexec.bat files that you can use or copy from to set up the PCMCIA feature. There is some explanation of this in Chapter 4, and you should refer to the PCMCIA Card Reference Guide that comes with the computer.

If you purchase either the audio card or fax modem option, their software and manuals are packed with them. If you specified either of these options when you got your computer, the hardware will already be in- stalled and the software installed on the hard disk drive. If you got

them separately, you will need to install everything yourself. Refer to the manuals that come with them for instructions on how to install the hardware and software. The audio card comes with Windows sound drivers and utility software. The fax modem comes with WinFax Lite. There is more information about these options in Chapter 4.

[Installing More Software](#)

Installing More Software

[WinBook XP]

To install applications or utility software, follow the instructions that come with the software. Most Windows programs install from within Windows. Install DOS programs from the DOS command line. Many programs have "Install" or "Setup" utility programs that explain in detail how to install the program and often allow you to customize the installation according to your preferences, or by selecting which parts to install.

Some Windows and DOS programs request information about your system hardware during the installation process. Refer to the specifications below for information you're likely to need.

Hardware Specifications for Installing Software

Hardware	Specifications
Audio	I/O Port 220-22F DMA Channel 1 IRQ 5 or 7 (set in the System Setup; default is IRQ7) (SoundBlaster compatible)
PCMCIA	Vadem VG-468 chip
Mouse	Logitech PS/2 pointing device
Floppy disk	3.5" High density floppy (1.44MB)
Display	VGA, 640 x 480 resolution, 256 colors

Chapter Two: On the Road

Chapter Two: ON THE ROAD

This section covers running your computer on battery power, using the power management features and some general precautions you should take when using your computer on the road.

BATTERY OPERATION

The battery pack inserts in the underside of the computer, and is already installed when you get it. The pack is a set of batteries encased in a plastic shell, the bottom of which forms part of the bottom of the computer. This section explains how to charge and exchange the battery, and contains information on operating the computer on battery power.

Charging the Battery

You must charge the battery completely the first time you use it. This is explained in Chapter One, so please go back and refer to the explanation if you missed it. Before you start, don't forget to remove the protective insert in the battery compartment by pulling it out. The battery takes two and a half-hours to charge with the computer turned off, and stops charging automatically when it is full. The battery gauge should show full when you first turn on the computer after having charged the battery.

Normally, you should try to charge the battery when you aren't using the computer. When you use the computer with the AC adapter, the battery charges automatically. You can charge it while the computer is turned on, but it can take as much as five hours to charge completely. The charge icon will display in the LCD status bar while the battery is charging. After the battery is fully charged and the charge icon goes out, the charger still provides a small amount of current to the battery, so that as you use the computer, the battery stays fully charged.

Warning, Do not charge the battery while the computer is in its carrying case. Charging the battery builds up a significant amount of heat, which can damage the computer if there is no way for the heat to dissipate.

Changing the Battery

If you buy an extra battery, you can replace the installed one when it runs out, and recharge it later. To remove the battery pack, turn off the computer and unplug the AC adapter. Turn the computer over and slide the retaining latch away from the battery pack. The battery will pop up and you can pull it out. Put the replacement battery in the way the original came out. Make sure the latch secures the battery in place so it won't fall out when you turn the computer right side up.

If you are using a replacement battery for the first time, make sure you charge it fully, just as you did the original battery when you first got the computer. You can refer to Chapter One for a reminder of the details.

Battery Life

A feature of NiMH batteries is that they tend to self-discharge, which is why you must charge the

battery when you get the computer. In addition, they have a limited "cycle life" of about 500 charges. It is therefore quite possible you will need to replace the original battery at some point.

The Battery Gauge

When you run the computer on battery power, the battery gauge displays the amount of charge left. It's best to recharge the battery when the gauge reaches the last bar.

If you charge the battery while the computer is turned on, the battery gauge will display charge progress. When the entire icon is visible, the battery is fully charged.

Battery Operation - What You Can Expect

The amount of time you can operate the computer on battery power will vary considerably depending on your work habits, your software, and your use of the power management features. The WinBookXP has a power management scheme that, if used effectively, will greatly increase the amount of operating time you can expect from one charge.

In general, any program that makes extensive use of the disk drives will use more power. Even Windows can be a power-drain if you use too many programs at the same time, so it is better to only run programs you are actively using.

Another influential factor is the hardware configuration of the model you purchased. Power consumption will depend on which LCD screen and CPU you have, and whether you have the optional audio card and fax modem installed. A monochrome screen uses the least power, while color screens use substantially more. Likewise, the faster your CPU, the more power it will use at full speed. Adding either fax or audio options also adds to the overall load.

From all of this you can see that it's something of a problem to arrive at a useful figure for how long one battery charge will last, but we'll do it anyway. If you're an average user, you'll probably have the power management default settings active, be using the hard disk 50% of the time, and be using the display 80% of the time. These figures are typical for word processing work.

Battery Charge Temperature Limits

Temperature affects battery cycle life, self-discharge rate, operating and charge time. Below 10°C, the colder the battery, the longer it will take to charge, and the lower its charge capacity will be. The operating period for one charge is also greatly reduced in cold temperatures. Above 35°C, the battery will not charge fully at all. Using the battery in extreme temperatures will reduce its cycle life by as much as 50%. For the most efficient operation and longest life, you should try to use battery power at temperatures between 20°C and 30°C.

If that is the case, you can probably expect one charge to give you four to five hours of battery life for a monochrome model, three to four and a half hours for dual-scan color, and two to three and a half for an active matrix color (TFT) screen. From this you can see, by the way, that the LCD types is the most influential factor. Note that if you use a lot of power, the average time a battery charge may be lower than the figures listed. If you are careful to conserve power, you can expect one charge to last longer.

The battery gauge in the LCD status panel indicates approximately how much charge is left in the battery.
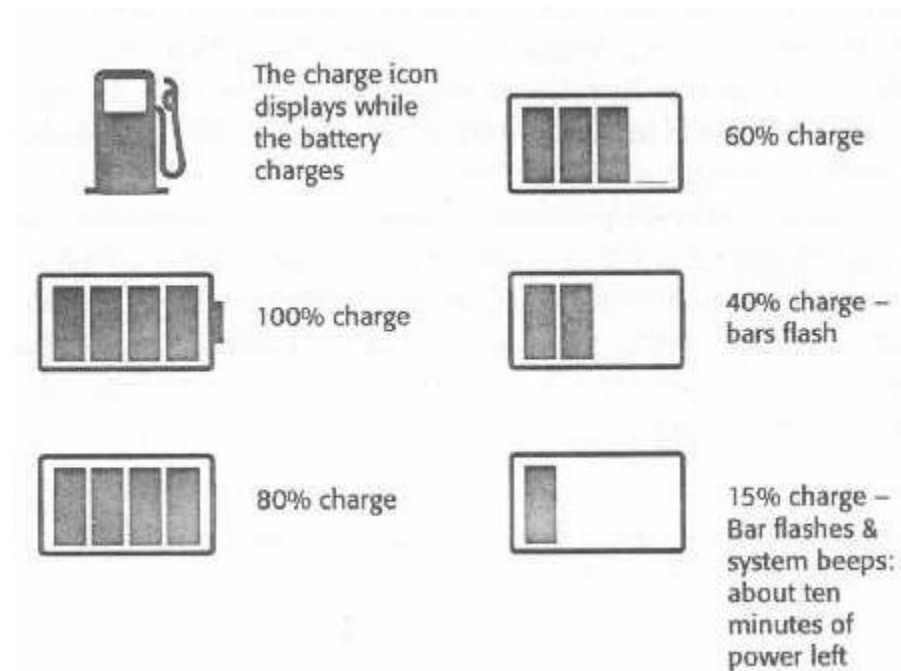
Figure 14: Battery Gauge Display

The Battery Gauge Display

The Battery Gauge gives as precise an estimate as possible of the current state of your battery. The estimate is based on an average user scenario, which includes assumptions about your use habits and that you will use Power Management. If you use your WinBook substantially differently from these assumptions the gauge will behave differently than represented here. Remember, the purpose of the gauge is to protect you from losing power at a critical moment. Its best to err on the side of caution and always charge or change the battery well before it runs out.

Power Management

POWER MANAGEMENT

Power management can be divided into two categories, the part the computer manages and the part you take care of. First we'll take a look at how the computer's end of it works, then talk a little about your end.

Hint

You can tell at a glance if Power Management is turned on because the faucet icon on the LCD indicator panel displays.

Setting Up Power Management

The WinBookXP uses power management software permanently stored in the computer to conserve power in a variety of ways. You use Page 2, Power Management Setup, of the system Setup program to set up the power management features. We'll explain how to use Page 2 in this section. For information on how to use the other two Setup pages, refer to Chapter Six.

The basic idea behind power management is to reduce the time the system's most power-consuming devices operate at full power. This is accomplished in several ways. The hard disk drive, the LCD display panel and its backlight, and the microprocessor (CPU) consume the most power of any component in the computer. The floppy disk drive also uses a lot of power, but since it isn't generally in constant use, and you have more control over it, we won't consider it here. The innards of the computer use power in a variety of ways, too.

The power management scheme automatically reduces power consumption of major components when they are not actively in use. This means, for instance, that the CPU will slow down or suspend processing temporarily, or the hard disk drive will stop spinning for a while. They then return to full activity when needed.

Power-Hungry Devices:

In order of the amount of power they consume when active:

1.) Display
2.) Hard Drive
3.) Floppy Drive
4.) CPU
5.) PCMCIA Cards (if installed)

[Accessing Power Management](#)

Accessing Power Management Setup

[WinBook XP]

You can call up the Power Management screen in two ways. In DOS, you can run System Setup by holding down the 'CTRL' and 'ALT' keys and typing 'S'. This brings up Page 1, Standard Setup. Then press the 'PgDn' key to switch from Page 1 to Page 2, Power Management Setup.

You can access the Power Management Setup screen (only) at any time under DOS or Windows. When you use the "Setup" 'Fn' + 'F8' command, the Power Management Setup screen will appear. You can use this command to tailor your power management setting on the fly without having to exit to DOS to run the system Setup program, and without having to re-boot the computer.

When you're finished, you can exit Power Management Setup and return to where you left off by pressing the 'Esc' and then the 'F4' key. In this situation, the system will Resume, rather than reboot, as it would if you were running s System Setup session.

There are sixteen items in the Power Management screen. We'll explain them here in order, then talk about how to configure the options to produce either more power saving or faster performance. For average users, the WinBook default power management settings should provide a good trade-off between snappy performance and long battery life.

The power management scheme allows you to configure each feature independently. You can set the interval of time after which a feature will activate for many of the items. The following chart lists the items on the Power Management screen. We've shown a chart here rather than the screen, because the chart allows us to show you all the options for each field, rather than just one. There are instructions at the bottom of the Setup screen explaining how to navigate within the program.

[Power Management Settings](#)

Loading Default Settings

If you accessed Power Management Setup only, by using the 'Fn' + 'F8' key command, when you press 'F5', it will load only the defaults for Power Management. If, however, you accessed the entire Setup program using the 'CTRL' + 'ALT' + 'S' command, then 'F5' will load the system defaults for all the Setup program pages.

Power Management

This line is the master switch for all the power management features. You have to enable power management here for any of the features to work. There are two options for this feature. "Always" enables power management while you're using either battery or AC power. "Battery only" means power management will only be active if you're running the computer on battery power.

If you enable power management, you can load default setting for all items by pressing the 'Esc' and then the 'F5' key.

Note: If you accessed Power Management Setup only, by using the 'Fn' + 'F8' key command, when you press 'F5', it will load only the defaults for Power Management. If, however, you accessed the entire Setup program using the 'CTRL' + 'ALT ' + 'S' command, then 'F5'will load the system defaults for all the Setup program pages.

CPU Doze Timeout

This is an automatic timeout. With this feature enabled, the CPU will automatically switch speeds so lower power-demand speeds after 30ms of system inactivity. In practice, this means the CPU is conserving power a large part of the time you are using the computer, since the interval is short enough for the CPU to enter this mode even between keystrokes.

Sleep Timeout

This sets the interval of time after which the system will enter "Sleep" mode. The default setting is "02 minute". You can change the interval in one-minute increments. You can also disable this feature.

Sleep mode shuts the CPU down to its minimum power consumption state, where it consumes almost no power. The CPU will resume full speed operation as soon as any system activity takes place.

Suspend Timeout

This sets the interval of time after which the system will enter Suspend mode. The default setting is "Disabled". You can change the interval in one-minute increments. You can also disable this feature.

The Suspend feature has two modes, Suspend to RAM and Suspend to Disk. They are explained in the next item. If you have activated the suspend timeout option and selected Suspend-to-RAM,

the system will automatically suspend to RAM after the timeout period. If, however, you have selected Suspend-to-Disk, the system will automatically suspend to disk after the timeout period.

Suspend Data To

This assigns which method is used when the system enters the Suspend mode. The default setting is "RAM". The alternate settings are "DISK" and "Disabled". The system will not suspend automatically if the Suspend Timeout field is set to "Disabled". You can use the Suspend button to put the system into the selected suspend mode at any time.

The Suspend feature saves the current system state using the method selected. It does this under both Windows and DOS. You can then "Resume" to the exact state the system was in when it was suspended, and continue working.

The two Suspend methods are sufficiently different that you can almost think of them as two different features.

For Example

So you're finishing up that presentation to the big client in O'Hare airport, and they've called final boarding. You hit the suspend button, put the WinBook back in its carrying case, and rush to the plane. An hour later, after a fine airline meal, you take your WinBook out of its carrying case and press resume. Voila; no wait, no boot, you're right where you were back in the boarding area, with power to spare.

Suspend-To-RAM is quick and simple and allows almost instant Suspend/Resume. It does, however, continue to consume power, although significantly less than the Doze or Sleep modes. You can use it to minimize power consumption when you take even a short break from activity using the computer. If you get in the habit of suspending the system whenever possible, you will greatly extend the usable length of one battery charge. This feature also works with the automatic Modem Ring and Alarm Resume features described later in this section.

Suspend-To-Disk is a bit more complicated and not as fast as Suspend-to-RAM, since the system information must be written to the hard drive. The advantage is that you can save the system state for an unlimited period, without using any battery power. The system state and your data are stored in a dedicated hard disk partition, separate from the main partition used by the rest of the computer. Setting up this feature requires using a utility program, PHDisk, which comes with your computer. We've detailed its use in a section in Appendix B.

Once you've set up the special partition, and enabled Suspend-to-Disk in the Power Management Setup, the rest is easy. When you want to suspend, simply press the suspend switch and the system will save the system state to disk. Note that this takes time – how long is determined by the amount of RAM memory you have in your WinBook. After the data is stored on disk, the computer will automatically turn itself off. You can restart later either by pressing the Suspend button or by pushing the On/Off switch to OFF, and then ON. You can also leave the computer turned off until the next time you use it, when it will start from the suspended state rather than the usual start-up.

Very Important

When you suspend the system to disk the power switch is still in the ON position even though the computer has turned itself off. You can restart the system by pushing the Suspend button again, or by pushing the On/Off switch to the OFF position, and then back ON. You can also just turn the computer power switch off. When you use the computer later on, turn it on the way you normally would and the system will resume from the suspended state.f

Hard Disk Timeout

This sets the interval of hard disk inactivity after which the hard disk drive motor will turn off. The default setting is "02 minutes". You can change the interval in one-minute increments. You can also disable this feature.

The hard disk timeout will save power, but it reduces performance because it delays access after the hard disk has powered down. When disk access is required, the drive motor has to restart, so there is a delay of about ten seconds before the disk is available again.

Display Timeout

This sets the interval of system inactivity after which the LCD screen will turn off. The default setting is "02 minutes". You can change the interval in one-minute increments. You can also disable this feature.

Unlike the hard disk timeout, where you must wait for the drive to 'spin up', the LCD will come back on instantly when there is any system activity. Refer also to the Auto Dim feature described below.

FDD Timeout

This sets the interval of floppy disk inactivity after which the floppy disk controller shuts down. The default setting is "02 minutes". You can change the interval in one-minute increments. You can also disable this feature.

This feature, used in concert with the other features similar to it, helps maximize overall power conservation. There is no noticeable performance disadvantage when you enable the floppy timeout option.

Modem Timeout

Fax modems – whether built-in, or on a PCMCIA card – use a lot of power, even when they're not in use. For the internal fax modem, we have provided an inactivity timeout that significantly reduces power-consumption when it powers down the modem. The modem will automatically restart when your communications software accesses it, so you should use this feature. If you're like most people, you'll use the fax modem infrequently, so you can increase battery life by leaving the default setting at "60 seconds". You can change the interval in ten-second increments. You can disable this feature, but you will barely notice any effect on modem performance with the option enabled.

You should note that some communications software written in the days before power management or portable computers were available cannot tolerate timeouts like this. If you have software with this problem, don't use this feature while you're running the software. Also, if you

use your modem for file transfers – for example, downloading files from a BBS – try disabling this feature if you experience communication problems. If the problem clears up, leave the timeout disabled.

Audio Timeout

This sets the interval of inactivity after which the optional audio card will enter low-power mode. The default setting is "02 minutes". You can change the interval in one-minute increments. You can also disable this feature.

Normally you will want to use this, but you could possibly experience audio problems with some games and multimedia programs under both Windows and DOS. If you have an audio problem while using a program, try disabling this feature. If the problem clears up, leave this disabled while you're using that program.

Auto Dim

The default setting for this is "Enabled". When enabled, and the computer is operating on battery power, at maximum brightness the backlight will be 30% dimmer than its actual maximum intensity. This has the same effect as reducing the screen brightness using the manual control, but it does it automatically, and to a fixed degree. The backlight will automatically operate at full intensity while using AC power with the Auto Dim feature enabled.

CPU Clock Throttle

Clock throttle is a special hardware feature, which automatically stops the CPU clock at routine intervals regardless of system activity; although, it decreases the CPU clock at routine intervals regardless of system activity. Even though it decreases the CPU performance by about 10%, it results in a 10 % power saving. If you want the highest performance possible, disable this feature. If you want to extend battery charge-life, enable it.

Brightness & Power Saving

If you like to have a bright screen even when you use battery power, disable the Auto Dim feature. But remember the LCD backlight accounts for about 30% of the system's power consumption. You can realize substantial conservation by using this feature, or by manually adjusting the screen brightness to the lowest level you find acceptable.

Battery Low Suspend

The default setting for this is "Enabled". When enabled, the system will automatically suspend when the battery has about ten minutes of usable operating time left. The system will suspend using the method you have specified in the "Suspend Data to" field. Don't use this feature.

The purpose of this option is to ensure that you don't lose work by giving you time to connect the AC adapter while the system is in a minimum power consumption mode. The idea is that once in suspend mode (to RAM, that is) the remaining time before the battery fails is significantly extended, giving you time to decide what you want to do. If you want to, you can reactivate the system from Suspend-to-RAM by pressing the Suspend button. You will still have enough time to immediately save your work, quit, and turn off the computer.

If you have set the computer to suspend to the hard disk, you won't be able to return to the active system state without first completely suspending to disk and then restoring. In this case, you should definitely connect the AC adapter before you reactivate the system. Restoring the active system state is very disk-intensive and could use up the battery before the system fully restores.

A better approach is to keep your eye on the battery gauge, and recharge or place the battery before time gets critical. If you don't want to use this feature, leave it disabled.

Modem Ring Resume

When you enable this, the system will automatically 'wake up' (Resume) from Suspend-to-RAM if the fax modem detects an incoming call on the telephone line connected to it. The default setting for this is "Disabled".

Alarm Resume

This works like an alarm clock. When enabled, the system will automatically 'wake up' (Resume) from Suspend-to-RAM at a time you set in the "Alarm Time" field that follows it. The default setting for this is "Disabled".

Alarm Time

This is where you set the alarm for the "Alarm Resume" feature. The time format is 24-hour or "military" time. The alarm will activate and wake up the system at the next point the system clock reaches the time you set. This will either be during the same day, or on the next day if the time you set has already passed on the day you set the alarm.

For example, if at the end of the day you want to set your computer to wake up at 8 AM the next morning, you would enable "Alarm Resume" and then set the Alarm Time to 08:00. As you can see, you can also use this feature with the AC adapter connected.

To set the time, select either the hour or minute field and use the plus or minus keys to scroll to the setting you want.

BE A CONSERVATIONIST

At your end, there are many things you can do to extend the usable period of one battery charge. First of all, try to use AC power whenever possible. It may be tempting not to bother, but a little extra effort will leave you with a full battery when you really need it. Otherwise, you should use the power management software. Set it up to match your work habits and preferences. If your habits and preferences don't contribute to conserving power, you can consider adopting habits that do.

For example, many people use a 'screen saver' nowadays. These are fine for a desktop computer (where they are intended to prevent wear on the desktop monitor) or for when you are using the AC adapter to power the computer, but a screen saver still requires that the LCD screen operate at full power. A better solution for battery operation is to use the setting that turns the LCD off when you don't use the computer for more than two minutes – or whatever length of time you set.

You should also try to minimize the amount of time you use the floppy disk drive. It consumes a lot of power, and generally speaking, you can probably wait until you have access to AC power before using it.

[Care and Handling](#)

MENU ITEM	DEFAULT	OPTIONS
Power Management	Always	Battery only Disabled
CPU Doze Timeout	Enabled	Disabled
Sleep Timeout	02 Minutes	(increments of 1 minute) Disabled
Suspend Timeout	Disabled	(increments of 1 minute) Enabled
Suspend Data to	Ram	Disk Disabled
Hard Disk Timeout	02 Minutes	(increments of 1 minute) Disabled
Display Timeout	02 Minutes	(increments of 1 minute) Disabled
Floppy Disk Timeout	02 Minutes	(increments of 1 minute) Disabled
Modem Timeout	60 seconds	(increments of 10 sec.) Disabled
Audio Timeout	02 Minutes	(increments of 1 minute) Disabled
Auto Dim	Enabled	Disabled
CPU Clock Throttle	Enabled	Disabled
Battery Low Suspend	Disabled	Enabled
Modem Ring Resume	Disabled	Enabled

[Back to Power Management Text](#)

CARE & HANDLING

[WinBook XP]

Obviously, one of the main points of having a notebook computer is so you can easily carry it around with you. But because it is so easy and convenient to transport, it's easy to forget that any computer is a somewhat delicate piece of electronic equipment and requires some care handling and usage.

CAUTIONARY NOTES

Rough Handling

While your WinBookXP is sturdily constructed, it wasn't designed to travel around by itself. Micro Center offers a range of carrying case options to suit your lifestyle. It is a good idea to always transport your WinBook in a case. If you don't use one of Micro Center's cases, make sure to put the computer in a safe transport container – which might or might not be your briefcase, depending on its design and contents. If you like a bigger case with more storage space, Micro Center offers products that cover a full range of designs and features.

The most important thing to remember is, DON'T DROP IT! Sounds silly and obvious to say don't it? Nonetheless, many people still tend to treat their notebook computer as if it could take a lot more punishment than one should reasonably expect. This simple precaution will save you and everyone else a lot of headaches.

A corollary to this is Don't Check It As Luggage. Always carry-on your computer when you fly. We can tell you right now, it quite likely will not come out fine if you put it in that hard shell suitcase. And certainly never check the computer in its carrying case. Commercial baggage handling equipment, and often bag handlers, are not gentle on luggage, so protect your investment.

Don't Check It!

Never check your WinBookXP as luggage, either by itself or packed inside other luggage. It is very likely it will get damaged or possibly even destroyed if you do this.

X-Rays, Metal Detectors and Grief

One of the most common hazards facing your travelling notebook is modern-day security equipment. While the staff at airports and elsewhere will usually assure you that their X-ray equipment is safe for your computer, it is difficult to be absolutely sure, especially outside the USA. The safest bet is not to put your computer through X-ray inspections and to ask for a hand inspection. Be prepared for the security staff to ask you to turn the computer on to prove that it works and isn't hiding something. You may not always be able to do this, and many, or even most, X-ray machines are probably safe. You'll have to make your own appraisal of the risk on a case-by-case basis.

Metal detectors project a powerful magnetic field that can wipe credit and other magnetic cards, and can damage the information on your hard disk (they won't hurt the hardware) as well as any

PCMCIA disk drive devices you might have installed in your computer. While you would not normally carry your computer through one in an airport, you might encounter them elsewhere. Never carry or pass your computer through a metal detector. Pass it around the outside of the detector.

Some Common Sense Precautions

Here are a few additional precautions you should take to ensure the long life of your computer. Many computer problems can be traced to sources outside the computer rather than to component malfunction. If you are careful to avoid the things most likely to cause trouble, you are much less likely to experience problems with your WinBook.

Liquids – Computers don't like them. They don't get thirsty, so don't give them anything to drink. If you're like many people who like to work with a beverage around, keep it to yourself and well away from your notebook. It's pretty simple really: if you spill liquid in your computer while it's turned on, you will quite probably either damage it beyond repair or cost yourself a bundle. It's your call.

Temperature - Computers, like you, like to be cool. Don't use yours in high heat and humidity if you can avoid it. And especially do not put your computer someplace where it will be subjected to extreme heat while it's turned off – the seat or shelf of a car in the sun, for example. You know what happens to dogs when you do that.

Dirt – Computers, particularly notebook computers, are fastidious. They don't like to get dirty (they don't like baths either so don't get ideas). Don't let dirt or dust build up, or you're asking for at best fitful performance, and more likely, outright malfunction. There are a number of places that well allow dirt and dust and who-knows-what into the computer. The trackball assembly, keyboard, microphone orifice, floppy disk drive, PCMCIA compartment, and audio jacks are all particularly susceptible to contamination. Try to keep the computer in the case (or at least closed) when you aren't using it, and keep your workspace clean.

Electricity – It's fickle. It runs through a lot of things in your computer, including things you probably don't know about, so avoid temptation. Except for PCMCIA cards and the AC adapter while the computer is in Suspend mode, don't connect or disconnect anything while the computer is turned on. You may get away with it once in a while, but unless Russian Roulette is your favorite parlor game, err on the side of caution and you won't have to pay for it.
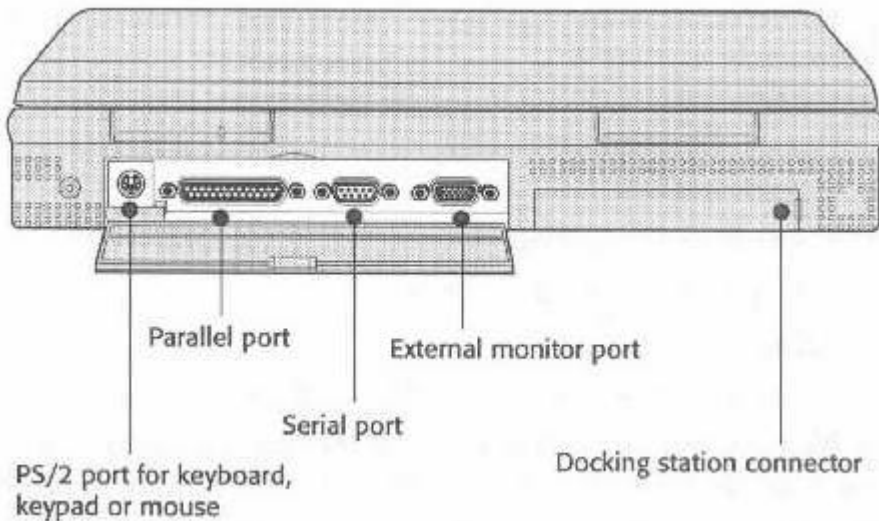
Also, you should always plug the AC adapter into a protected outlet strip rather than directly into an electrical outlet.

[Setting Up Base Camp](#)

CHAPTER THREE: SETTING UP BASE CAMP

When you use your WinBook XP at a base location, you're likely to want to connect various peripherals to the computer. This section covers how to do it. The connection ports are shown again below for your reference.

Figure 15: Peripheral Connection Ports

Parallel port

External monitor port

Serial port

PS/2 port for keyboard,
keypad or mouse

Docking station connector

Using A PS/2-type Mouse

You must use the adapter described in this chapter if you want to connect a PS/2-type mouse to the PS/2 port.f

CONNECTING COMMON PERIPHERALS

When you use your WinBook at an office or at home you may want to take advantage of the option to use desktop peripherals. Doing this has two advantages. You may find that a desktop keyboard and monitor are more comfortable for extended use for some kinds of work. In addition, using these whenever you can, along with the AC adapter, will prolong the life of the less easily replaced components built into your WinBook.

Connecting Peripherals – The Basic Procedure

To connect any peripheral device to your computer, you should always follow this basic procedure:

1. Make sure everything is turned off, and better yet, unplugged.

2. Set up the peripheral according to the instructions in the manual that comes with it.

3. Connect the device to the computer with an appropriate cable.

4. Plug in the device and the computer.

5. Turn everything on.

6. Configure the device or other software if required.

Remember, never connect or disconnect anything other than a PCMCIA card from your computer if *anything* is turned on. Turn the power to both the computer and the peripheral device off before you connect them.

Connecting A Printer

You will most likely use at least a printer with your notebook. You may even have purchased a portable model to take along with the computer. Whatever kind of printer you have, it is almost certainly going to connect to the parallel port. You'll need a standard parallel cable to connect the printer, unless your printer comes with a special cable connector for the end that plugs into the printer. Connect the end of the cable that matches the parallel port on the computer and secure the cable to the computer by tightening the thumbwheels attached to the cable connector.

The standard configuration for the parallel port on the WinBookXP is LPT1 at address 378. Refer to section six for more details.

To use a printer, you must configure a software printer driver in Windows. You can view a list of drivers that come with Windows by clicking on the "Add>>" button in the Printers section of the Windows Control Panel. The WinBookXP comes with a generic printer driver installed as the default printer driver on the LPT1 port. This should allow you to at least print text for test purposes on most printers. To test the connection, plug the printer into the LPT1 port, test print some text from a text editor like DOS Edit or Windows Write. Once you've confirmed that your printer works with the WinBook, you will want to install the specific printer driver that matches your printer, so you can print both text and graphics.

If You Install A New Printer

You must have the Windows disks with you to install a printer driver, because the printer drivers are not pre-loaded on the hard disk. Once you've installed the printer driver(s), you won't need to carry the disks with you to switch between various printers. If you want, you can delete the generic text printer driver that comes installed on a system with pre-loaded software.f

If you want to install a driver for another printer, the basic procedure is as follows:

1. Open the Windows Control Panel.

2. Open the Printers section of the Control Panel.

3. Click on the Add>> button.

4. See if the printer you want to use is listed in the list of printers that appears.

5. If your printer is there, select its name and click on the Install button.

6. Follow the instructions for inserting the appropriate Windows printer driver disk and

install the driver.

7. Select the name of your printer when it appears in the "Installed Printers" box and click on the Set As Default Printer button just below the box to assign it as the default printer. The name of your printer should appear in the "Default Printer" box at the top of the window.

After you install the new driver, you may want to re-configure the printer using the Connect and Setup buttons. Click the Help button or refer to the Windows manual if you

need information on how to do this. Once you've completed this, you are ready to use the printer to print in both text and graphics modes.

Connecting A Monitor

The on-board video supports a broad range of CRT monitors. You can connect a standard, multifrequency desktop monitor to the external monitor port on the computer. It is a standard 15-pin VGA port. Though the LCD maximum resolution is 640 x 480 x 256 colors, on an external monitor CRT, it can produce resolutions up to 1024 x 768 x 256 colors. In practice, this means you should be able to use any VGA or Super VGA monitor from 14' to 21' inches with the WinBookXP, as long as it can support these resolutions. Any standard multifrequency SVGA monitor can do this.

To connect an external monitor do as follows:

1. Turn off the computer.

2. Plug the monitor cable into the VGA port.

3. Plug the monitor power cord into a power source.

4. Turn on both the monitor and the computer, and run the system Setup and Preferences.

You can switch active display modes under DOS or Windows, by using one of two hot-key commands.

If you want to set the screen image to display on just one screen, use the 'Fn' + 'F10' key command to select between the LCD and the external monitor. The command toggles the selection between the two.

Typing 'Fn' + 'F6' simultaneously turns the Simulscan function on or off. Simulscan displays an image on both the LCD and the external monitor. There is some display limitations in this mode. See the "Video Drivers & Utilities" section at the end of Chapter Six for more information.

Hi-Color Video Drivers

There are also drivers you can use on an external monitor that display more than 256 colors. You can use the Windows video utilities described in Chapter Six to select drivers that will display 32,000 or 64,000 colors.f

An external monitor will work in standard resolution (640 x 480 x 16 color VGA mode) with

DOS without using a video driver, but you must have a video driver for Windows installed in order for Windows to run.

You can use the preinstalled Windows video driver with an external monitor. Refer to the "Video Drivers & Utilities" section at the end of Chapter Six for more information about video drivers and installing them in your system. The installed video driver supports the colors and resolutions shown below. The default Windows driver

for the WinBook is the Western Digital 640 x 480 x 256 color mode with the Small Front option.

Figure 16: Windows Video Drivers
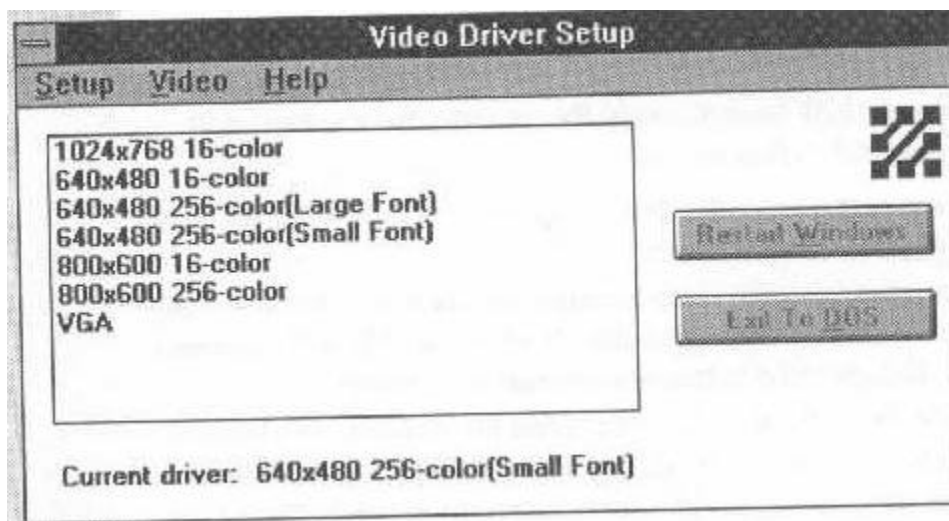
Connecting An External Keyboard

You can connect a full-size keyboard to the PS/2 mini-DIN port. Just plug it in and it will work. If your desktop keyboard uses the larger type of connector, get a DIN to mini-DIN PS/2 adapter for the mini-DIN port.

You can also plug an external keyboard and mouse into the PS/2 port at the same time by using the PS/2 port duplex adapter explained in the mouse section below.

Connecting a PS/2 Keypad

Embedded keypads on notebook computers provide a modified keypad, which although fully functional, is not identical to the IBM 101-keyboard layout because the keys rows are on a slant. For this reason, several suppliers make a special PS/2 keypad you can use with your notebook. These keypads are ideal for people who must to numeric data entry, as they reproduce the familiar layout of the IBM 101 keyboard. You can use this kind of keypad with the WinBookXP by connecting it to the PS/2 mini-DIN port, as you would an external keyboard. You can use a keypad with or without the duplex adapter.

Connecting A Mouse

You can use either a Serial or PS/2-type Microsoft-compatible mouse with your WinBookXP.

Both will work under Windows or DOS, but, since the computer has a built-in pointing device, you must change system settings if you want to use a serial mouse. The WinBook is shipped with a Logitech mouse driver which loads automatically when you turn the computer on. This happens because there is a line in the Autoexec.bat file telling DOS to load the driver. The driver works with most PS/2 or serial mice, but you may want to substitute the Logitech driver that came with your mouse. Mouse software normally comes with an install disk that edits the Autoexec.bat file for you and puts in the commands needed.

Serial Mouse

We have provided a simple way to allow you to use a serial mouse without having to edit the Autoexec.bat file. Call up the system Setup program using the 'CTR' + 'ALT' + 'S' key command and select Page 3, the Advance Setup screen. Select "PS/2 Pointing Dev", and set it to "Disabled". Save the configuration and the system will automatically reboot and find the serial mouse.

PS/2 Mouse

To use a PS/2 mouse, you must use the PS/2 adapter included with your system. Plug the adapter into the PS/2 port, then plug the PS/2 mouse into the bottom jack. When your are using a PS/2 mouse, the WinBookXP will detect an external PS/2 mouse is plugged in and switch to it automatically when you turn on the computer. Since you cannot use two pointing devices at the same time in DOS or Windows, the WinBookXP automatically disables the internal pointing device whenever it detects the external PS/2 mouse is plugged in.

Using the PS/2 Adapter With A Mouse

Do not plug a PS/2 mouse directly into the PS/2 keyboard port. You must use the duplex adapter supplied with the computer to connect the mouse to the port. The adapter has two PS/2 jacks on one end and a PS/2 plug on the other. The lower jack is for the mouse, the upper is for an extended PS/2 keyboard. To connect the mouse, do as follow:

1. Turn off the computer.

2. Plug the mouse cable into the low jack.

3. Plug the adapter into the PS/2 port on the computer.

Never connect or disconnect the mouse or the keyboard while the computer is turned on.

When you connect a PS/2 mouse to the computer, the built-in pointing device will automatically be disabled.

Figure 17: PS/2 Port Duplex Adapter

Mouse connector

Keyboard connector

PS/2 port connector
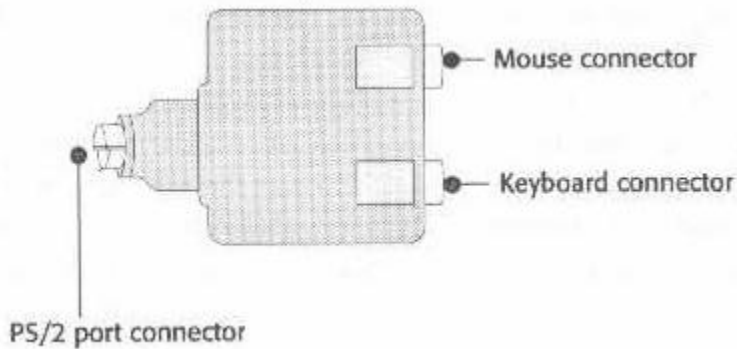
THE OPTIONAL DOCKING STATION

The optional docking station gives you a number of expansion capabilities. There is space for one half-height 5 ¼" device in the front. It is also possible to install four ISA expansion cards in the docking station. The back panel has two power ports, one parallel port, one serial port, and one external monitor port. There are also connectors for a PS/2-type keyboard and mouse, as well as audio jacks for the optional sound card.

The manual that comes with the docking station explains how to dock and undock the notebook. You will also find information about how to use the hardware together to good effect in that manual.

CONNECTING SOUND EQUIPMENT

The WinBookXP includes Line In and Speaker Out mini phone jacks on the left-hand side of the case. You can connect any external audio source that uses a standard mini phone plug to the computer's Line in port. However, you cannot plug a non-amplified external microphone into the Line In port, as the mic must meet the minimum input amplitude requirements. Some microphones on the market have a high output level, and can be plugged into the Line In input. You can plug either self-amplified speakers, non-amplified speakers or headphones into the Speaker Out jack.

The system automatically configures itself for stereo/mono configuration depending on the audio option board installed. When you use the internal speaker, both channels will play through that speaker. External speakers or headphones will receive either stereo or mono input, depending on the option you have installed. The internal microphone records in mono only – even if you have a stereo audio board installed.

Be Careful With Headphones

You should always be careful about excess volume when using headphones. Adjust the Volume control for the Speaker Out jack to a lower volume before you plug headphones into it. Otherwise, as with personal audio devices, you risk hurting your ears and damaging your hearing.

Connecting Other Hardware

To connect any other devices that use a standard port, follow the directions that come with the

device on how to connect it to your computer. This notebook comes equipped with a number of ports, some of which have additional capabilities. The parallel port supports both EPP and ECP transfer modes, which significantly increase parallel port transfer speeds. The WinBookXP also uses the high performance 16550 serial ports, which give superior performance, especially within Windows.

CHAPTER FOUR: GREAT COMMUNICATIONS

CHAPTER FOUR: GREAT COMMUNICATIONS

This section briefly describes two major WinBookXP options you may have gotten with the computer, or may decide to get later on. These are the Fax Modem and the Audio Card. A third section covers PCMCIA basics. All three cards have their own documentation, so our goal here is to give you an overview.

THE FAX MODEM

The fax modem option includes the internal fax modem hardware and software to go with it. The fax modem hardware is dual function. It is a 4.4K bps fax with voice capability and also a 14.4K bps data modem. The software includes WinFax Lite, a program that lets you send and receive faxes. Because the WinFax driver installs like a printer driver, the fax capability is available, by selecting the WinFax driver as the active or default printer, to any Windows application that can print.

Figure 18: Fax Modem Telephone Jack

Fax modem telephone jack

All the software that comes with the fax modem comes with its own documentation that explains how to install and use it. We install the software for you when you order the fax modem with your WinBookXP, so if the fax modem is already installed in your system, you'll find the software for it installed and configured on your hard disk.

THE AUDIO CARD

The audio card option includes the audio card hardware and software to go with it. There are two versions of the audio card: a 12-bit monophonic card and a 16-bit stereo card. The computer automatically configures its built-in audio hardware for stereo or mono depending on which card is installed. The internal speaker plays both stereo channels together, producing a mono output. External speakers or headphones will receive stereo signals. The mono version produces mono output both internally and externally. The built-in microphone records in mono only.

The audio software includes the ESS Windows sound programs and drivers. Under DOS, the audio card is Business Audio and Sound Blaster™ compatible, so you can run DOS-based games and multimedia programs.

The audio card installs in a small compartment on the underside of the computer. If you buy the

audio card later, you can easily install it yourself using the instructions that come with the hardware.

Figure 19: Audio Upgrade Compartment Access

Optional audio card access panel

Audio cards can enhance:

- Presentations

- Game audio

- CD-ROM soundtracks

- System sounds

All the software that comes with the audio card comes with its own documentation that explains how to install and use it. We install the software for you when you order toe audio card with your WinBook, so if the card is already installed in your system, you'll find the software for it installed and configured on your hard disk.
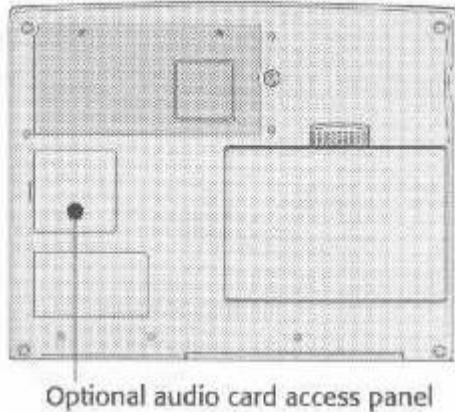
Audio System Setup Options

The Setup program allows you to enable or disable the internal audio function and select which IRQ line the audio card will use. The BIOS will default to the IRQ7 setting. In some instances, this may cause a conflict with other hardware. If you have problems getting the audio card to work correctly, you may need to set the audio board to use IRQ5. You can set the IRQ on Page 3, Advanced Setup, of the Setup program.

Using DOS Games

Although no special software or drivers are required to run DOS games and multimedia software on your computer, programs like this will normally have setup options when you install them. Then you're installing them, you should select the "SoundBlaster™" option. Most newer software will automatically configure itself so you won't need to worry about port setting, etc. Older software may ask for setup parameters at installation. For these programs, select "SoundBlaster™" with port settings at 220, IRQ set to 7, and DMA channel set to 1.

Connecting Audio Equipment

The audio components built into the WinBookXP function when the audio card is installed. There are Line In and Speaker Out mini phone jacks and a volume control dial on the left-hand side of the computer below the floppy disk drive. You can plug any external audio source that uses a standard mini phone plug into the Line In jack. You cannot, however, plug a non-amplified external microphone into the Line In jack.

You can connect the Speaker Out jack to either self-amplified speakers, non-amplified speakers, or headphones. To avoid hurting your ears, be sure to first set the audio volume to minimum when you plug in headphones, and then adjust the volume to a comfortable level. The internal amplifier can produce volumes, which can damage your ears, so use care when adjusting the volume.

Figure 20: Audio Jacks & Volume Control
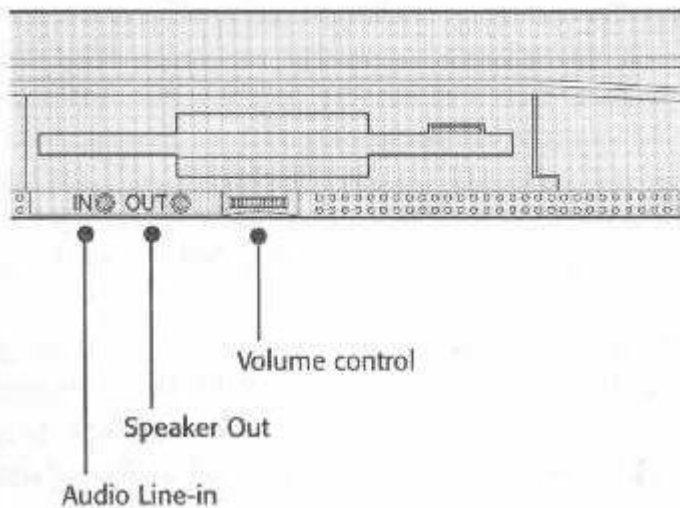
PCMCIA CARDS

The WinBookXP can use most PCMCIA cards. There are two Type II PCMCIA slots, into which you can also insert one Type III card, at the left front corner of the computer. They are in a compartment covered by an access door. The door swings open by gently pressing on the front, left corner of the computer and pushing the door to the side and back.

PCMCIA cards slide into the slots from the side. When you insert a card in a slot, an eject button, which is at the front side of the compartment opening, will pop out. To eject a card, press the button in again and the card will come out enough for you to pull it out of the slot. A Type III card is twice the height of a Type II cards, so it occupies both slots. However, you can only insert it in the bottom slot, so the bottom eject button will pop out. You can use both Type I and Type II cards individually in the slots. Cards insert face up.

The PCMCIA compartment door is removable to allow for oversized cards, or cards with special connectors needing extra room outside the computer. The door hinge is a flexible pressure fitting with nubs at the top and bottom that fit into corresponding receptacles in the housing. To remove

the door, open it all the way, until you feel some resistance, then twist the door slightly to the right to pop it out. To reinstall the door, insert the hinge end at the same angle you removed it and pop it into place. The nubs must snap into their receptacles, and you may need to squeeze the pressure fitting slightly to retract a nub in order to get the door to snap into place.

All PCMCIA cards require at least some configuration software that must be added to the Config.sys file. The PCMCIA Card Reference Manual that comes with the computer explains in detail how to set up your WinBookXP to use PCMCIA cards, so that 's all we'll say about them here.

PCMCIA Options:

- Ethernet & Token Ring LAN cards

- High speed modem cards

- Wireless modems

- SRAM memory cards

- FLASH memory cards

- Type III ATA hard disks

- Silicon disk cards

- SCSI cards

- Multimedia cardsf

Figure 21: PCMCIA Compartment

To remove door, twist counter-clockwise slightly to pop it out

Eject buttons

2 Type I/II PCMCIA slots or 1 Type III
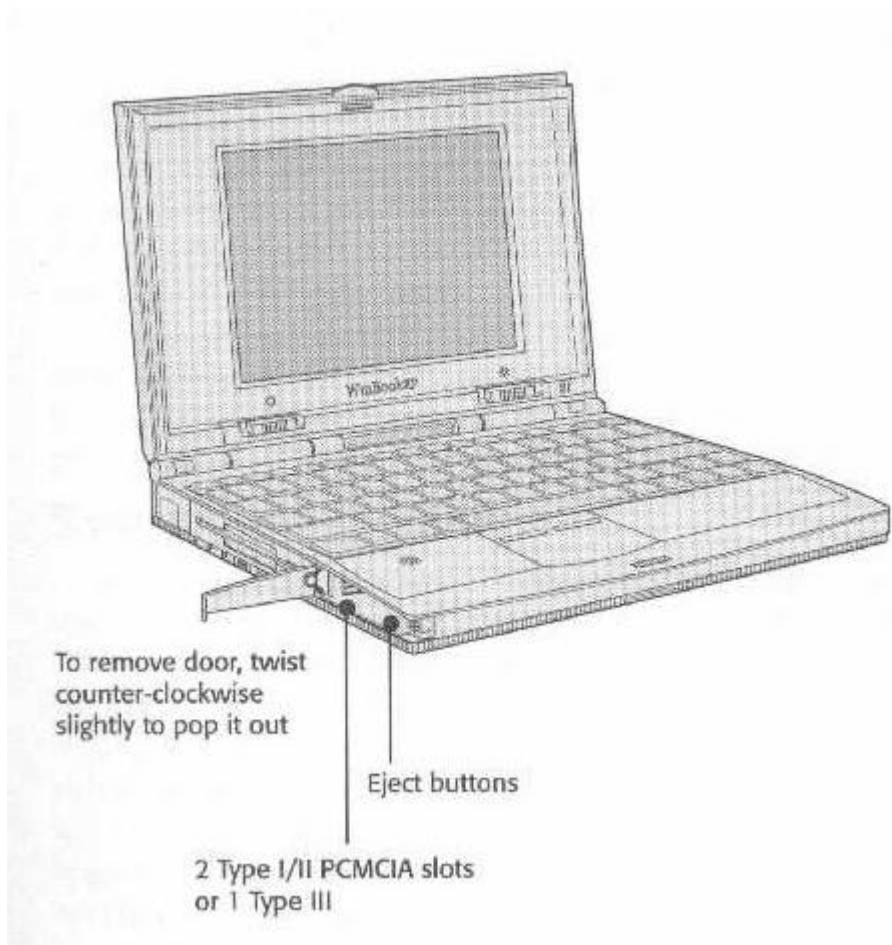
CHAPTER FIVE: UPGRADES

CHAPTER FIVE: UPGRADES

HARDWARE UPGRADES

In Chapter Four we described two options you can either buy when you get your WinBook or install yourself, namely audio and fax modem cards. This chapter covers the upgrades you can get for your WinBookXP. These options are also available when you buy the computer, so you may already have some. If you didn't opt for any of them at the outset or you want to upgrade further, contact the number listed on the "Read-Me-First" sheet that came with your system.

You can add more memory, a faster CPU and/or external cache memory to improve try your WinBookXP's performance. You can also get an additional hard disk drive to either supplement or replace the one you got with the computer. First, we'll look at the upgrades you can install yourself.

SYSTEM MEMORY

You can upgrade your system DRAM memory from the base memory configuration of either 4 or 8MB (megabytes) to a total of 8MB, 16MB, or 32MB. Upgrading system memory lets you run more programs at one time and in many situations will speed up the system.

There are two ways you can upgrade the memory in your system: install it yourself, or have it installed for you through a customer service upgrade. If you are familiar with installing memory SIMs in a computer, upgrading the WinBook memory follow the same procedure and you'll have no problem with the installation. If you are unfamiliar with this process or don't feel confident about doing the upgrade yourself, please contact the telephone number on the "Read-Me-First" sheet, which came with your computer.

Static Electricity Warning

All components you handle are sensitive to static electric discharge. In order to protect the components from damage (and you from shock) please take the following precautions *before* handling the open computer or any components:

1. Wear a grounding wrist-strap. This strap is widely available in computer stores. It has an alligator clip you must attach to something metal, and a strap that fits snugly around your wrist.

2. Use an anti-static pad. All computer components come in their own anti-static bags, but there are also foam pads, which give you a larger anti-static work area.

Once you've taken these precautions, you can proceed.f

Installing Memory Upgrades

To install a memory upgrade module yourself, follow the procedure below. Don't forget to take static electricity precautions.

1. Turn off the computer and disconnect all cables.

2. Turn the computer upside down.

3. Remove the two Phillips screws that secure the metal CPU/Memory compartment cover panel and remove the cover panel.

4. Gently, push down on the two release tabs that secure the memory board in the socket.

5. The memory board will spring up to a 45° angle, remove it by holding it by the edges and gently pulling it out of the socket.

6. Insert the new memory board into the socket at a 45° angle. The memory board is designed to insert only in the correct orientation. If it won't go into the socket, turn it over and try again.

7. Push the board firmly into the socket, then press down until the spring latches hold the board securely in place.

8. Replace the cover panel and secure it with the screws.

9. Turn on the computer. The system will automatically detect the additional memory and prompt you to press 'F2' to run the Setup program. When the program comes up, just press 'Esc' and then 'F4' and the new memory configuration will be recorded.

The system will automatically reconfigure itself for the additional memory. If you check in the Setup program, you should see that the extended memory total listed on Page 1 has increased.

Memory & Suspend-to-Disk

If you use the Suspend-to-Disk feature, whenever you add memory, you must increase the size of the dedicated disk partition to be the same size as your new system memory total. Please refer to Appendix B for instructions on using the PHDisk utility to change the disk partition.f

Figure 22: Installing a Memory Upgrade
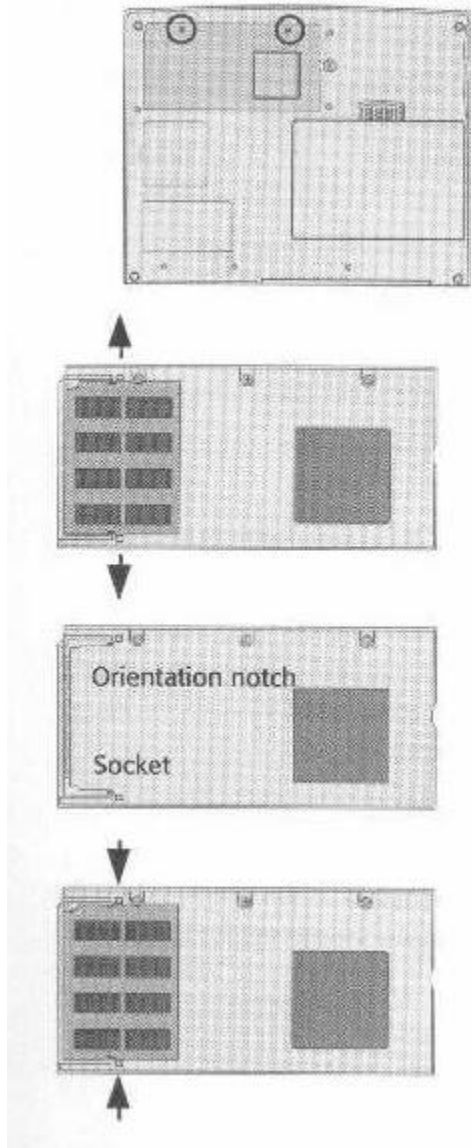
Take Static Electricity Precautions!

Everything in the upgrade compartment can be damaged by static electric discharge.

Make sure to take precautions against it.

REPLACING THE HARD DISK DRIVE

If you decide you need more storage space, you can get a hard disk drive with more storage capacity. The options include 340MB and 520MB drives, among others. If you decide you want to upgrade, call the number listed on the "Read-Me-First" document for the latest options. The upgrades come installed in replacement mounting frames that fit in the computer's hard disk compartment.

You can install a hard disk upgrade yourself in a few steps.

1. Turn off the computer and disconnect all cables.

2. Turn the computer upside down.

3. Remove the large retaining screw that secures the hard disk housing inside the computer.

4. Turn the computer right side up.

5. Pull the hard disk out of the compartment and put it on an anti-static surface.

6. Remove the new hard disk/mounting frame assembly from its packaging and slide the assembly into the hard disk compartment. Press the assembly into the compartment so that you can feel its connector insert in the compartment socket.

7. Turn the computer over and replace the retaining screw to secure the new drive in the compartment.

The system BIOS will detect the new hard disk when you next turn the computer on and will automatically configure the system for it.

Figure 23: installing an Alternate Hard Disk Drive
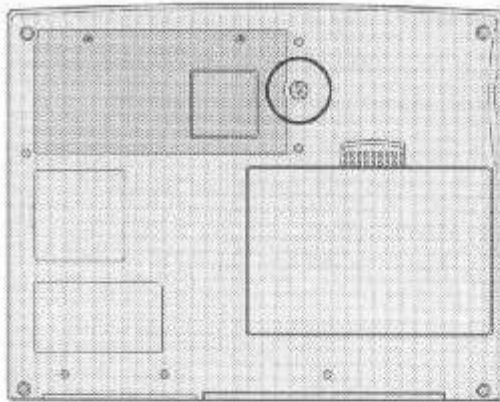
Unscrew and remove the hard disk assembly retaining nut
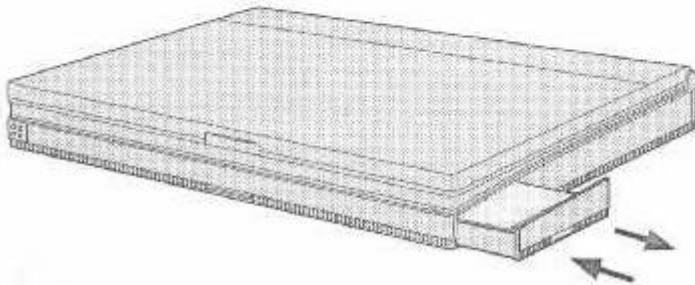
Slide the hard disk assembly out and insert the new drive assembly

Static & Storage

When you remove a hard disk assembly from the compartment the components on the exposed hard disk drive are also susceptible to damage from static electric discharge. Take normal anti-static precautions to prevent this. Put the assembly you remove in an anti-static bag or storage bag. Do not leave it unprotected when you store or transport it.

CPU UPGRADES

Upgrading the computer's CPU is the most effective thing you can do to increase your WinBook's speed and power. We must install this upgrade for you. If you want to upgrade your CPU, contact the number listed on the "Read-Me-First" document, which came with your WinBookXP. CPU options are listed in the specification section of Appendix B.

The range of CPU options is designed to meet your computing needs and budget. The higher the speed of the CPU, the faster the system performance will be, but this will also affect battery life. For CPU-intensive applications, the Intel DX4™-75, or Intel DX4™-100 are best.

CHAPTER SIX: CONFIGURING YOUR SYSTEM

This chapter explains how to use the system Setup program and the special Video Display drivers that come with your WinBookXP.

THE SETUP PROGRAM

You need to understand how to use the system Setup program even if you dot your WinBookXP ready-to-roll when it came out of the ox. The program isn't difficult and you don't have to be a computer whiz to use it.

The Setup program creates a configuration record that gets stored in the computer hardware. Every time you turn on the computer the system refers to this record. If the entries are incorrect, your computer may not function properly.

As we've already seen in Chapter Two, to access all three pages of the program you have to run it from the DOS prompt. If you're already in Windows, exit Windows before you run Setup. To run Setup hold down the 'Ctrl" and 'Alt' keys and press the 'S' key. The Setup program will come on screen. The program has three 'pages'.

Page 1: Standard Setup

Page 2: Power Management Setup

Page 3: Advanced Setup

Page 1 displays first. You can switch to the next page by pressing the 'PgDn' key. To return to previous page, press the 'PgUp' key. Use the keyboard arrow keys to move between items on the page. The field for the currently selected item will be highlighted. You can select the field option you want by using the plus and minus keys to change the displayed entry to another option.

In summary:

Change Pages – Page Down (PgDn) & (PgUp) keys

Highlight Item – Arrow Keys

Select Option – Plus & Minus keys

The 'Esc' (Escape) key brings up a menu with a list of F-key commands, the commands displayed are:

Esc Goes back to Setup

F4 Saves any changes you've made, exits Setup and reboots the computer

F5 Loads default setting for all pages, including a set of power management settings

F6 Exits Setup without saving any changes

PAGE 1: STANDARD SETUP

Page 1 configures the basic system hardware. Most of the entries are defined by the hardware in the computer. The entries must be the same as the hardware present. The chart on the next page shows the items listed on the screen in the order they appear, with the default setting and the options for each item.

Page 1: Standard Setup

MENU ITEM DEFAULT OPTION

System Time 00:00:00AM(PM)

System Date MM/DD/YY

Diskette A 3.5", 1.44MB Not installed

Diskette B Not installed 3.5', 2.88MB 3.5", 1.44MB 3.5",720K

1. 25", 1.2MB 5.25",360K

Hard Disk 1 Auto-detect Not installed User defined

Base Memory 640KB

Extended Mem. 3072KB

CPU Speed Fast Slow

Quick Boot Enabled Disabled

Boot Drive Order C:, A: A:, C:

Password Disabled

Boot Display Auto-detect Simulscan

Note: System Time is shown in 12-hour format, with hours, minutes, and seconds displayed.

System Date is shown with months, days, and years designated by either one or two-digit numbers

Extended Memory will vary depending on how much system memory your computer has.

System Time & System Date

You can set the correct date and time in the "System Time" and "System Date" fields if the current system clock setting is incorrect.

Diskette A & B

Leave "Diskette A:" set to "3.5", 1.44" setting. Set "Diskette B:" to "Not Installed" unless you have the optional docking station and it has a floppy disk drive in it, in which case set "Diskette B:" to the correct type.

Hard Disk 1

Hard Disk 1 will be set to Auto Detect. Don't change the setting.

Hard Disk Auto Detection

You should never need to change this setting, since the system software determines the hard disk settings automatically at power-up. This is a particularly useful feature if you are using more than one type of hard disk in your system. You can mix and match hard disk drives without concern for their individual specifications and the BIOS will automatically reconfigure the system for the drive installed. For instance, if you share a system with another user, you can each have your own hard disk, and swap them in and out without having to reconfigure the system.

Base Memory & Extended Memory

These are automatically detected by the system.

CPU Speed

The default setting for "CPU Speed" is "Fast". You can set it to "Slow" to reduce power consumption at the expense of system performance.

Quick Boot

This setting eliminates the memory test when the system is first powered up, and the memory test can take quite some time to run. Since the MS-DOS 6.2 "Himem" driver now performs a memory test before it runs, it is no longer necessary for the BIOS to run a similar test.

Boot Drive Order

"Boot Drive Order" is set to "C:, A:" which causes the system to go to the hard disk first to load the operating system. If you want it to check the floppy disk drive first, so the computer will boot from it if a system floppy is in the drive, switch this to the "A:, C:" setting.

Password

The Password feature allows you to password protect access to your WinBook. When you set a password in this field, the computer will not complete the boot process without the password, effectively preventing unauthorized access.

To use this feature, highlight the "Password" field and follow the instructions that pop up to guide you through the process of creating and saving a password.

If you reach the point where you are supposed to type in your password and you decide you want to stop, type any key, press 'Enter' and then press 'Enter' again **without typing ANYTHING when it asks you to confirm the new password.** This will send you back to the beginning.

You must use the F4 command to exit Setup and save the new password setting, or it will not work even if you set a password.

You can change or remove the password by highlighting the "Password" field, typing in the existing password at the prompt, and following the instructions.

Boot Display

The "Boot Display" field defines which display the system will use when you turn the computer on. There are two options:

Auto-Detect – The default. If no CRT is connected, the system will use the LCD display. If a monitor is connected to the VGA port, the system will default to Simulscan mode.

Simulscan – Setup option 1. Both LCD and CRT display (slows response a little). If no external monitor is connected, the LCD will still display the screen image.

PAGE 2: POWER MANAGEMENT SETUP – CONTROL CENTRAL

Page 2 of the Setup program is for the power management features. You can disable all the features together, enable power management and adjust the features individually, or load a default set by loading all the BIOS defaults with the F5 command. There is a full explanation of how to use the power management features in Chapter Two.

The options table is listed here again for your convenience.

Page 2: Power Management Setup

MENU ITEMS DEFAULT OPTIONS

Power Management Always Battery only Disabled

CPU Doze Timeout Enabled Disabled

Sleep Timeout 02 Minutes (Increments of 1 minute) Disabled

Suspend Timeout Disabled (Increments of 1 minute) Enabled

Suspend Data to RAM Disk Disabled

Hard Disk Timeout 02 Minutes (Increments of 1 minute) Disabled

Display Timeout 02 Minutes (Increments of 1 minute) Disabled

Floppy Disk Timeout 02 Minutes (Increments of 1 minute) Disabled

Modem Timeout 60 Seconds (Increments of 10 seconds) Disabled

Audio Timeout 02 Minutes (Increments of 1 minute) Disabled

Auto Dim Enabled Disabled

CPU Clock Throttle Enabled Disabled

Battery Low Suspend Disabled Enabled

Modem Ring Resume Disabled Enabled

Alarm Resume Disabled Enabled

Alarm Time 00:00

PAGE 3: ADVANCED SETUP

The Advanced Setup section of the Setup program is for additional hardware configuration settings. These include settings for some of the optional hardware.

Page 3: Advanced Setup

MENU ITEM DEFAULT OPTIONS

Internal Audio Enabled Disabled

Audio IRQ IRQ7 IRQ5 Off

External Cache Disabled Enabled

COM Port 3F8h 2F8h 3E8h 2E8h Disabled

Internal Modem 2F8h 3F8h 2E8h 3E8h Disabled

LPT 378h 278h Disabled

PS/2 Pointing Device Enabled Disabled

HDD Block Mode Disabled Enabled

Note: Disabling the PS/2 pointing device disables both the internal and the external PS/2 devices.

Internal Audio & Audio IRQ

If you have either of the optional audio cards, you must set "Internal Audio" to "Enabled."

You can use the default IRQ setting of IRQ 7 for the audio card, or you can select IRQ 5 instead. IQ selection is explained in detail in "Audio System Setup Options" in Chapter Four.

Com Port, Internal Modem, & LPT

These settings for these entries are the standard address assignments used for these ports in IBM-compatible PCs. The Internal Modem Port, which normally functions as COM 2, is reserved for the fax modem even if you don't have it installed. Do not change the addresses unless you have a specific reason why you need to , and you know what you are doing. Normally, there should be no need to change the.

PS/2 Pointing Device

This enables the built-in pointing device (either the trackball or the TrackPoint)

And mouse support for the external PS/2 port. The default setting is "Enabled". If you disable this setting none of them will work.

HDD Block mode

The default setting for these two is "Disabled".

VIDEO DRIVERS & UTILITIES

The WinBookXP uses video display drivers to support several screen resolutions and numbers of colors. A Windows video driver set for the optimum setting of 640x480x256-colors is already installed when you get the computer. The advantage of using this driver over the standard Windows VGA driver is that this one takes advantage of the WinBookXP's video display circuitry to speed up graphic display. It also offers more colors than the stock 640x480x16-color VGA driver that comes with Windows.

Alternate drivers for Windows are on the hard disk, if you have a system with pre-loaded software, as well as on video driver floppy disks that come with the computer. You can use the same driver you use for the LCD screen for an external monitor, or you can change to another one. The Windows drivers support several resolutions and number of colors displayed, including two HiColor modes at 640 x 480 that display approximately 32,000 and 64,000 colors.

There are also high-resolution display drivers for a number of DOS programs. There are installation instructions for them in the "Readme" text files that come with the drivers.

The DOS drivers are included on the floppy disks, which come with your WinBook, and, if you have a system with pre-loaded software, are on your hard disk. They are in the \DRIVERS\WD directory, and include drivers for such popular DOS programs a AutoCad, WordPerfect, and Word for DOS> The drivers for these applications are located in separate directories for each application within the \DRIVERS\WD directory. If you are not using any of these DOS-based applications, you can delete the drivers from your hard disk. If you need them later, you can install the drivers from the floppy disks.

Windows Video Utilities

In addition to the Windows video drivers, you get two Windows utilities that allow you to change drivers from within Windows and to adjust some display features.

The utilities, Western Digital Video Driver Setup and Video Changer, are from Western Digital Corporation, the maker of the WinBookXP's video controller and driver software. Both are in the "Main" Windows program group.

Western Digital Video Driver Setup

The main purpose of Video Driver Setup is to install Western Digital video drivers. When you run the utility, the list in the box shows the currently installed options. The default WinBookXP 256-color driver supports resolutions of 640 x 480, 800 x 600 and 1024 x 768 at 256 colors. Remember, however, that you can only see the higher resolutions on an external monitor. Using Video Driver Setup is reasonably straightforward and since the drivers you're likely to want are already installed, you may not need to use this utility. The "Help" feature explains in detail how

to use it if you do. You can also acc4ess the Video Changer utility by using the "Change Video' command in the Video menu. You must restart Windows in order for any changes you make to take effect.

The "Small Font" and "Large Font" notations refer to the basic display font that Windows uses in the Program Manager, Windows utilities and application programs. The "Small Font" is the 'standard' size for a given resolution. Generally speaking, to get closest to a WYSIWYG (What You See Is What You Get) display, 14- and 15 –inch monitors should use the 640 x 480 resolution, while 16- or 17-inch monitors should use 800 x 600. The 1024 x 768 resolution are for 19- or 20-inch monitors.

Sometimes, however, you might like to display a higher resolution on a smaller monitor so that you get more displayed in the same screen dimensions. In this case, you might want to use the "Large Fonts" option so that menus etc. are easier to see on the smaller –looking image that results from this arrangement.

Figure 24: WD Video Driver Setup
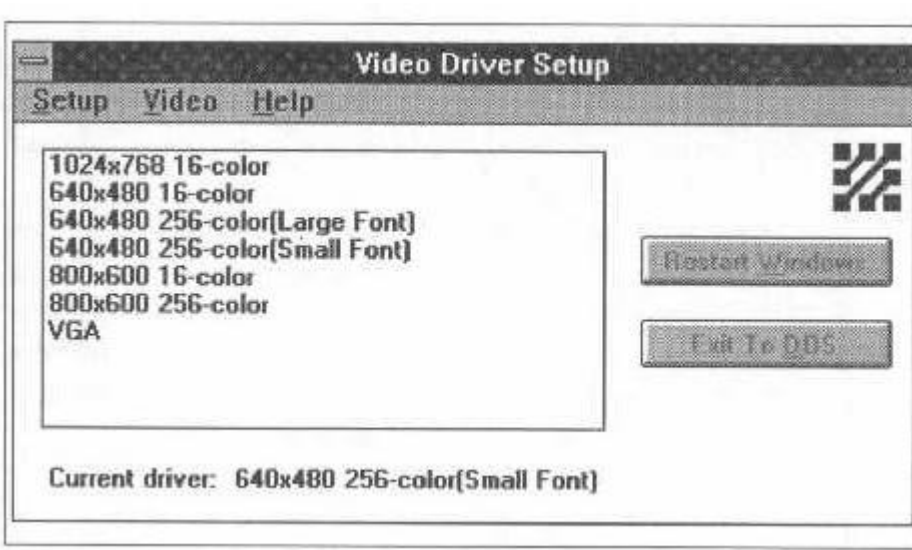
WD Video Driver Setup Program

This program allows you to conveniently change the current display drivers to meet your needs. The maximum LCD resolution is 640x480x256 colors, but if you're using a CRT, you can select from resolutions up to 1024x768x256 colors. The program will automatically restart Windows when you select a new display driver.

Video Changer

You should use the Video Changer utility to change between currently installed resolutions and numbers of colors. You can also change between the Small and Large Font options. The Figure on the next page shows the Video Changer window.

To make changes, you click on the item you want to change and then select an option from the items presented. Not all items on the screen are usable for the LCD screen. The '32K or 64K

HiColor' modes require that the display be set for an external monitor only before they will work.

Windows Display Driver Special Characteristics

The video display drivers have some special characteristics that result from the WinBookXP's added capability of using either its own LCD screen or an external monitor, or both at the same time.

The LCD panel in color WinBookXP models, as is standard for this type of screen, can display a maximum resolution of 640 x 480 and a maximum of 256 colors. This means it can not display all the resolutions and modes the video controller and drivers can produce. The result of this is that at some resolutions, you can display both the LCD's maximum resolution on the LCD panel, and a higher resolution on an external monitor.

Figure 25: WD Video Changer
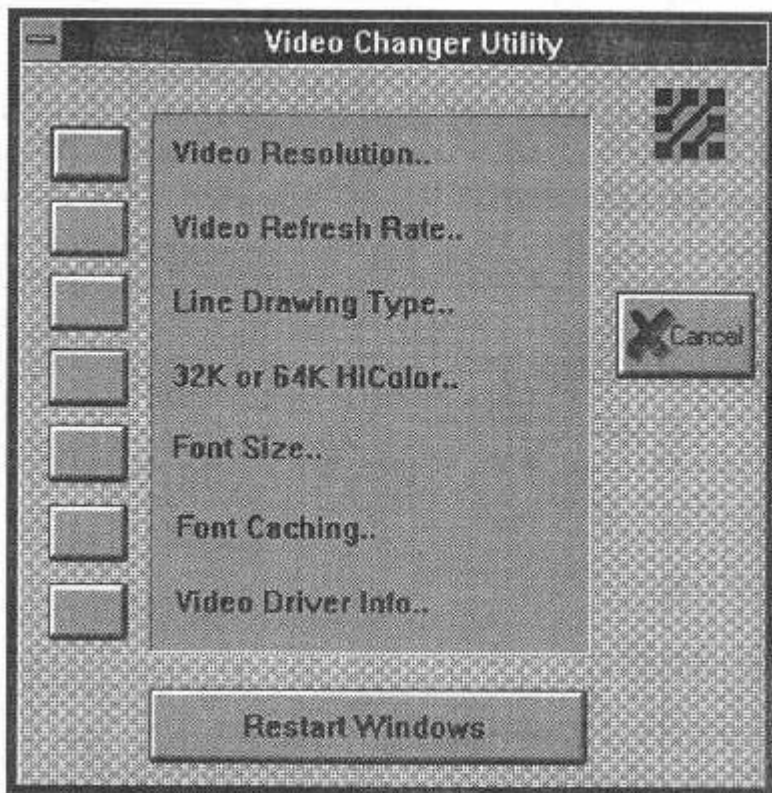
WD Video Changer Program

This program allows you to control some features of the display controller individually. We've optimized the settings for the LCD display at the factory. If you're using the WinBook with an external monitor, you may want to experiment with the Video Refresh rate and HiColor settings to see which combination is best for you r application.f

At 800 x 600 and 1024 x 768 resolutions, in either 16- or 256-color modes, both the LCD and an external monitor will display 640 x 480 resolution in LCD and Simulscan modes. In CRT-only

mode, however, the actual resolution setting will display. Both the Simulscan and Display Fn/function key commands will work in this situation. This allows you to set up the following arrangement:

1. In the system Setup program on Page1, Standard Setup, make sure the Boot Display line is set to "Auto-detect". This is the default setting so it should already be set for this unless you changed it.

2. Reboot and set the Windows driver to the high resolution and 16- or 256-color mode you want using the Video Changer utility.

- When you use the computer with no external monitor connected, the auto-detection feature will set the video display to run in LCD-only mode at a resolution of 640 x 480.

- When you connect an external monitor, the system will operate in CRT-only mode and the monitor will display the higher resolution.

Display Driver Limitations

There are two limitations to how you can use the video display drivers. The first is that you can not use the high-resolution drivers in Simulscan mode. You have to use the method described above to switch between standard resolution o the LCD panel and higher resolutions.

The second limitation concerns the HiColor modes. The HiColor modes will only work on an external monitor and when you use them the display switching Fn/Function key commands F6 and F10 do not work. Moreover, if you try to run Windows using a HiColor mode in Simulscan or LCD mode, Windows will not run and will produce an error message saying that the driver does not support that configuration. If you have this problem, shut down, connect an external monitor, run Windows again and use the Video Changer utility to switch to 16- or 256-color mode. You can then return to LCD-only operation.

[APPENDIX A: TROUBLESHOOTING MAINTENANCE](#)

APPENDIX A: TROUBLESHOOTING & MAINTENANCE

This Appendix is designed to help you solve problems you may encounter while using the WinBookXP. If you have a problem that's not listed here, please telephone the number listed on the "Read-Me-First" document that came with your computer.

SOLVING PROBLEMS YOURSELF

Following is a list of some commonly experienced problems, and their possible solutions. If nothing you do helps the situation, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Error Messages During "Boot" Process

Problem: BIOS setup or configuration error, type 'F1' to continue.

Action: - Enter setup program (press 'CTRL' + 'ALT' + 'S') and

use default setup configuration.

- If a new option has been added, be sure to run the Setup

program.

- Unplug any external keyboards and/or pointing devices

and retry.

- If you are using a docking station, unplug WinBookXP

from dock and retry.

Problem: Invalid CMOS error message, type 'F1' to continue.

Action: - Enter setup program (press 'CTRL' + 'ALT' + 'S')

and use default setup configuration.

Problem: System reports an error message on screen that is not related to any setup problems.

Action: - If you are using a docking station, unplug WinBookXP from dock and retry.

- Write down error message and call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Problem: System prompts for password at boot time.

Action: - Boot password has been enabled, type in password to continue.

- If you have lost the password, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Problem: Message indicates missing operating system.

Action: - Hard drive type is not selected correctly:

A.) Enter setup program (press "CTRL' + 'ALT" + "S');

B.) Select IDE drive C: to be "Auto-detect".

- Hard drive needs to be re-initialized, check with the service center first.

- Try booting from a floppy disk with an operating system installed on it.

- Re-install the operating system.

- If problem persists, call the Serve Center listed on the "Read-Me-First" sheet that came with the WinBook.

Problem: Computer cannot locate startup device.

Action: - Enter setup (press 'CTRL' + 'ALT' + 'S') and make sure the boot

devices are active.

A. Drive A: (floppy drive) should be set for 1.44MB, 3.5";

B. Drive C: should be set for "Auto-detect";

C. Your drive "boot sequence" should be set to "C:, A:".

Problem: System stops partway through boot process, after single beep is heard.

Active: - Corrupt CONFIG.SYS or AUTOEXEC.BAT files:

A. Turn the computer off and then on;

B. Press 'F5' key to bypass these files at boot time;

C. If system boots, write AOTOEXEC and CONFIG settings down, then re-install backups of these files and try again;

D. If problem persists, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook. If you are using a docking station, detach WinBookXP from the dock and retry.

Problem: Computer does not come on when the power switch is pressed.

Action: - Be sure the AC adapter connectors are fully plugged into the wall outlet, the computer, and the AC adapter.

Plug in and run the unit from the AC adapter. When done, turn off the computer and leave it connected to the AC adapter for two hours, to fully charge the battery.

- Make sure the wall outlet is not defective, by plugging something else

- (e.g., a lamp) into the outlet to check it.

Internal or External Display-Related Problems:

Problem: There is a blank display, no beeps were heard, and the LCD indicator is blank.

Action: - If you are running on AC power, make sure the adapter is plugged in and the green power indicator is lit.

- If you are running on battery power, make sure a charged battery is installed in your system.

- If you are using a docking station, unplug your WinBookXP from the dock and retry.

Problem: There is a blank display, no beeps were heard, and the LCD indicator panel is active.

Action: - Make sure the WinBookXP power switch is turned on.

- If using battery power, make sure battery is charged.

- If using AC power, see that AC power indicator is on.

- Unplug all external connections except for the AC power and try again.

- If you are using a docking station, unplug WinBookXP from dock and retry.

Problem: The power switch is on, but there is a blank display, no beeps, and the LCD indicator panel is active.

Action: - System is in suspend, check to see if the suspend icon is displayed on the indicator panel.

- Press suspend switch to reactivate.

- If you are using a docking station, unplug WinBookXP from dock and retry.

- External display may be selected. Press 'Fn' + 'F6' to set display to Simulscan mode.

Problem: The display is blank and a single beep was hear.

Action: - Check to make sure brightness and contrast controls are at it's midpoint settings.

- Check that the active display option has been set to LCD or Simulscan:

A. Press the 'Fn' + 'F10' keys simultaneously to change the active display type setting;

B. Press 'CTRL' + 'ALT' + 'S' to enter setup screen to select display type.

C. Press 'Fn' + 'F6' to force display to Simulscan mode.

Problem: There is a blank screen and a series of beeps, or a long continuous beep.

Action: - If an option has just been installed remove the newly installed option:

A. Check to be sure memory expansion card is correctly installed:

B. Check to be sure audio card is correctly installed:

C. Check to be sure modem is correctly installed.

- If you are using a docking station, unplug WinBookXP from dock and try again.

- If failure persists, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Problem: Display is on, but system will not display any messages (blank screen).

Action: - If an option has just been installed, remove newly installed option:

A. Check to be sure memory expansion card is correctly installed;

B. Check to be sure audio card is correctly installed;

C. Check to be sure modem is correctly installed.

- If you are using a docking station, unplug WinBookXP from dock and try again.

- If failure persists, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Problem: The screen is not readable.

Action: - If an option has just bee installed, remove newly installed option:

A. Check to be sure memory expansion card is correctly installed;

B. Check to be sure audio card is correctly installed;

C. Check to be sure modem is correctly installed.

- If failure persists, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Problem: Incorrect image is on display.

Action: - Be sure operating system is installed correctly.

- Boot system from DOS "Boot" diskette to see if problem goes away.

- If a new hard drive has been installed, remove it and insert old one.

- When using LCD display, be sure S/W has correct driver (VGA) installed.

- If failure persists, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Problem: Display has vertical or horizontal stripes on it when it is powered up.

Action: - Call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Problem: Display has small, colored dots, which are always present

Action: - If you a TFT panel, a small number of colored dots is a acceptable.

- If you have a TFT panel with more than seven of these dots, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook

- If you have a dual scan color or monochrome system, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Problem: Display brightness is poor.

Action: - Adjust contrast and brightness for optimum viewing. Relocate system away from direct light sources or high ambient light.

- If running on battery power, go into setup and deselect "Auto-Dim" function.

- If brightness control is set at maximum, backlight may need replacing.

- If contrast must be set at maximum while operating at room temperature, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Problem: Cannot get external display to work.

Action: - External CRT will not activate.

A. Press 'CTRL' + 'ALT' + 'S" to select Auto or Simulscan display mode;

B. Press 'Fn' + 'F10' to switch active display;

C. Make sure you plugged in the CRT monitor before you powered up the WinBook.

D. Press 'Fn' + 'F6' to force display to Simulscan mode.

Problem: External display is not working in the high-resolution mode.

Action: - High-resolution drivers are not activated:

A. In Windows, use WD display Utility to select resolution/mode;

B. In DOS, install WD drivers in the \DRIVERS\WD directory.

Keyboard or Pointing Device Problems

Problem: Internal keyboard keys are not working or are only working intermittently.

Action: - If an external keyboard is plugged in, remove it.

- If problem persists, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Problem: External keyboard is not working.

Action: - Keyboard is defective.

- Duplex adapter is defective, contact the Service Center.

- If other PS/2 device is plugged in, disconnect it.

- Keyboard is incompatible with PS/2 specifications.

- WinBookXP is defective, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook for instructions.

Problem: External PS/2 pointing device is not working.

Action: - Setup program has disabled PS/2 pointing device:

A. Press 'CTRL' + 'ALT' + 'S" to enter setup;

B. Select Advanced Setup screen (screen3);

C. Enable PS/2 pointing device.

- Check if any external PS/2 devices are plugged into the duplex adapter.

- Check if the external PS/2 device is defective, by unplugging it and retrying.

- If the system is plugged into the docking station, unplug and retry.

Problem: Internal-pointing device is too sensitive, or not sensitive enough.

Action: - Invoke Windows Control panel and select mouse icon;

A. Readjust tracking and sensitivity as appropriate.

Problem: Cursor disappears when moved rapidly.

Action: - Move pointing device more slowly.

- Open Windows Control panel and select mouse icon:

A. Readjust tracking and sensitivity as appropriate;

B. Enable large cursor, mouse trails or mouse locator.

Problem: Internal trackball operation is intermittent.

Action: - Trackball may be dirty. Clean trackball according to instructions at end of this chapter.

- If problem persists, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook for further instructions.

Communication Port Problems

Problem: External serial port is not working.

Action: - Port is not enabled:

A. Press 'CTRL' + 'ALT' + 'S' to enter Setup;

B. Select Advanced Setup screen (Page 3);

C. Enable External COM port for 3F8 (COM1 default).

- Incorrect cable, purchase correct cable.

Problem: Internal modem not functional.

Action: - Port is not enabled:

A. Press 'CTRL' + 'ALT' 'S' to enter Setup;

B. Select Advanced setup screen (Page 3);

C. Enable Internal modem port for 2F8 (COM2 default);

D. Make sure your communications software is set to use COM2.

- Refer to Modem Installation Guide for more details.

Printer Port Problems

Problem: External parallel port or printer is not working.

Action: - Port is not enabled:

A. Press 'CTRL' + 'ALT' + 'S' to enter setup;

B. Select Advanced Setup screen (screen 3);

C. Enable LPT port for 378 (LPT1 default.

- Incorrect cable, purchase correct cable.

- Correct printer driver not installed, install correct driver in Printers section of Windows Control Panel.

- Make sure correct printer port is selected in Windows (LPT1).

Problem: Printer doesn't print correct characters.

Action: - Incorrect cable, purchase correct cable.

- Correct printer driver not installed, run Printers section of Windows Control Panel or application setup.

PCMCIA Problems

Problem: No system beep when the PCMCIA card is installed.

Action: - PCMCIA drivers not installed:

A. Back up your current CONFIG.SYS file;

B. Copy CONFIG.PCM to CONFIG.SYS;

C. Reboot your system;

D. Plug PCMCIA card in slot A or B, and check LCD status panel;

E. Some cards need software referred to as a Client Driver, or card 'enabler'. LAN and SCSI controller cards are examples of this. Refer to installation instructions, which came with your PCMCIA cards.

Problem: System issues a single beep when card is installed.

Action: - The PCMCIA card is not being recognized:

A. Select correct boot option at startup for your card;

B. Refer to PCMCIA reference guide for further details.

Miscellaneous Problems

Problem: Disk drive is not working correctly.

Action: - Setup configuration is incorrect

A. Press 'CTRL' + 'ALT' + 'S' to enter Setup;

B. Make sure Floppy drive A: with the 1.44MB, 3.5" specs is enabled.

- Be sure diskette is formatted for a DOS computer.

- Be sure diskette is installed correctly.

- If docking station is attached, remove computer from it and retry.

Problem: Diskette will not eject when eject button is pressed.

Action: - Label may have become detached and is obstructing diskette exit:

A. Check for condition by looking inside slot;

B. Call the Service Center listed on the "Read-Me-First" packing sheet that came with the WinBook for further instructions.

Problem: Cannot boot from floppy disk.

Action: - Boot sequence is set to boot from C: first.

A. Type 'CTRL' + 'ALT' + 'S' to enter setup;

B. Set boot sequence to "A:, C:".

- Floppy does not have the correct operating system loaded on it.

- Floppy is defective.

Audio Problems

Problem: Internal audio is not functioning, or is malfunctioning.

Action: - The audio volume is turned all the way off.

- Headphones or external speakers are plugged in, but are not turned on.

- Internal audio is not enabled; enable it on Setup Page 3.

- Internal audio IRQ is not enabled; use Setup Page 3 to set this to IRQ7 (default) or IRQ5.

- Internal audio power management is interfering (disable it).

- Audio board is not installed correctly, refer to Audio Installation Guide.

- Application software or drivers are not configured correctly:

A. Select SoundBlaster option (or ESS 488 if available);

B. Select I/O port 220h;

C. Select DMA channel as 1;

D. Select either IRQ7 or IRQ5 (depending on how you have set this up on Setup Page 3).

- If docking station is installed, remove it and retry.

- If a PCMCIA Multimedia card is installed, remove it and retry.

- Audio board is defective, call the Service Center listed on the "Read-Me-First" sheet that came with your WinBook.

Problem: WinBookXP is interfering with radio or TV reception.

Action: - Unplug external cables and verify that they are at fault.

- Use only shielded cables and be sure they are attached properly.

- Reposition WinBookXP away from these devices.

- If problem persists, call the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Power Management Problems

Problem: System won't operate from the battery.

Action: - Battery not charged correctly, plug in AC adapter and turn system off to allow the battery to fully charge. Full charge should take about two hours.

- Battery is not correctly inserted, or the contacts are broken. You can check by removing battery from compartment and examining the contacts in the computer to see if they are broken or bent.

- Battery pack is defective, call the service number listed on your "Read-Me-First" sheet for details on ordering a replacement battery.

Problem: Battery life is too short.

Action: - Battery is not charged correctly, plug in AC adapter and turn system off to allow the battery to fully charge which should take about two hours. The battery is sensitive to extreme temperatures and should only be charged between 20°C and 30°C for best operation. Also, there is a safety mechanism in the WinBookXP that stops the charging process when the temperature exceeds 40°C, regardless of whether the battery is fully charged or not.

- Power management is not turned on. Using the 'Fn' + 'F8' key combination, enter the Power Management setup screen and enable power management.

- Device power-down options are disabled. Load defaults in the Power

Management setup screen.

- POWER.EXE program is not loaded in CONFIG.SYS file. You can test this by typing "Power" and pressing 'Enter' at the DOS prompt. If the program is loaded in your CONFIG.SYS file, you will get a list detailing system status or it will tell you power management is not installed. You must have the following line somewhere in your CONFIG.SYS file:

"DEVICEHIGH=C:\DOS\POWER.EXE ADV:MAX".

Note that the WinBookXP is shipped with a CONFIG.SYS with this line already inserted. A

backup copy of this file is also included in the C:DOS directory, in case you have accidentally deleted the original one.

- Battery pack is defective, call the service number listed on your "Read-Me-First" sheet for details on ordering a replacement battery.

Problem: System won't suspend to disk.

Action: - Suspend to disk is not enabled in the power management setup. Using the 'Fn' + 'F8' key combination, enter the Power Management setup screen and change the selection for "Suspend to" from Suspend-to-RAM to select Suspend-to-DISK.

- There is no partition for suspending to disk, or the partition is too small to suspend to disk. Use the PHDisk utility (in the C:\DRIVERS\PHOENIX directory on the hard drive) to check for the presence of a disk partition. If you don't find one, refer to page B-18 for information about setting up a Suspend –to-Disk partition.

Problem: Resume from disk error message.

Action: - The most common cause of this error comes from using more than one hard disk with the WinBook. If you suspend to disk, you must always power the system back up with the disk that was in the WinBook when it was put Suspend mode.

- The suspend-to-disk partition has somehow become corrupted. You can use the PHDISK/REFORMAT command to reformat the partition.

- There is a bad sector on the hard disk, causing you to lose information when you enter suspend mode. Try using the PHDISK/REFORMAT command to reformat the partition. PHDISK will automatically map out bad sectors if they are found.

Problem: Battery charge LED never stops flashing.

Action: - Ambient temperature is too hot for the battery to completely charge.

- Battery is not correctly inserted, or the contacts are broken. You can check by removing battery from compartment and examining the contacts in the computer, to see if they are broken or bent.

- Battery pack is defective, call the service number listed on your "Read-Me-First" sheet for details on ordering a replacement battery.

- The battery charge circuit inside the WinBook is defective. Call the service number listed on your "Read-Me-First" sheet for further instructions.

Problem: Battery fuel gauge indicator icon is inaccurate.

Action: - The battery fuel gauge is a *rough approximation* of the actual battery capacity and is highly dependent on the amount of energy you are using. As with an automobile, the heavier you are on the accelerator, the fewer miles you can travel before you hit Empty. Likewise, the more you use the WinBook's power-hungry devices (hard disk, floppy disk, or display) the less time you'll have on the gauge. Note that we have set the fuel gauge to reflect an average user profile, with power management set to the default settings. *If you have power management disabled, the*

battery gauge will perform differently.

- The battery pack is nearing the end of its usable life, and cannot sustain a full charge. The usable life of a NiMH battery is approximately 500 cycles (depending on operating, charging, and storage temperatures). You can order a spare battery by contacting the service number listed on your "Read-Me-First" sheet for details on ordering a replacement battery.

- The battery gauge circuit inside the WinBook is defective. Call the service number listed on your "Read-Me-First" sheet for further instructions.

ERROR MESSAGE HANDLING

Power-on self-tests are the system tests and component initialization processes performed by the computer's AT-compatible ROM BIOS. The self-tests first initialize, and then test the central hardware. The central hardware must function properly before further system tests can be run. In general, a failure in a test of the system board or its components halts the test and causes a beep. Each time the system boots, the BIOS performs diagnostic testing of the various system components. During a standard implementation, if the BIOS detects an error, one of the following events occurs:

A message is displayed informing the user where the error occurred. Following the message, the prompt "Press F1 to continue," or "Press F2 to enter setup," is displayed. The system pauses until the user presses F1 or F2.

The following section lists the messages that may appear while booting up the WinBookXP. Where applicable, possible solutions are included.

Message: Gate A20 failure

Description: System gate A20 cannot run.

Action: - Contact the Service Center listed on the "Read-Me-First" sheet that

came with the WinBook.

Message: Memory failure at read expecting ****

Description: System memory read failure at****bank, where****is a memory address.

Action: - Contact the Service Center listed on the "Read-Me-First" sheet that came with the WinBook to replace the memory card.

Message: No timer tick interrupt

Description: System controller failure.

Action: - Contact the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Message: Shutdown failure

Description: System controller failure.

Action: - Contact the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Message: Timer 2 failure

Description: System controller failure.

Action: - Contact the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Message: Keyboard controller clock line or data line failure

Description: The keyboard failed the self-test command.

Action: - Unplug external keyboard, if installed.

- Contact the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Message: Keyboard controller stuck key failure

Description: Press 'F1' to continue.

Action: - Check to see if a key has actually become stuck.

- Refrain from pressing keys during boot process.

- Unplug any other PS/2 devices connected to the computer.

- Contact the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Message: Diskette drive failure

Description: The floppy controller failed to respond to the reset command.

Action: - Check system Setup by pressing 'CTRL' + 'ALT' + 'S'.

- Turn off the system and check relevant connections.

- If the problem persists, you may need to replace the floppy drive, or contact the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Message: Pointing device failure

Description: The pointing device does not respond during the power-on self-test.

Action: - If external PS/2 device is plugged in, unplug it.

- If external PS/2 pointing device is plugged in, it must use duplex adapter.

- Try re-installing the pointing device.

- If the problem persists, you may need to change your pointing device, or contact the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Message: Fixed disk configuration error

Description: The drive parameters stored in the CMOS setup do not match the hard disk detected in your system.

Action: - Press 'F2' to enter CMOS setup, and make sure the hard disk parameter is set to Auto-detect.

Message: Fixed disk controller failure

Description: The hard disk controller failed to respond to the reset command.

Action: - First, check the drive parameters, then turn off the power to check all appropriate connections. Make sure the hard drive is installed, and check to make sure the locking screw is secure.

- If the problem persists, you may need to replace the hard disk controller; contact the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Message: Real-time clock failure

Description: CMOS RAM lost power and needs to be reinitialized.

Action: - Re-enter configuration settings in the Setup program.

- If the problem persists, contact the Service Center listed on the "Read-Me-First" sheet that came with the WinBook.

Message: System halted

Description: Password is incorrect.

Action: - Restart your computer and enter the correct password. If you can't remember the correct password, contact the Service Center listed on the "Read-Me-First" sheet that came with the WinBook. Be sure to have the serial number and registered owner's name to insure correct identification before you call the Service Center.

CARE & MAINTENANCE

There are a few things you can do to help insure that your WinBook provides you with trouble-free service for an extended period. The computer is designed so that most of the vital components are protected from external contamination. The main things you should do are to keep the exterior of the computer clean and free from accumulated dust and dirt, and protect it from electrical and physical shock hazards. We've already talked about electrical and physical precautions elsewhere, so this section focuses on how to minimize contamination and how to deal with dirt related problems.

No Vacuum Cleaner Inside

You can use a computer vacuum cleaner to vacuum the outside of the computer, but make sure the computer is turned off. Never vacuum any part of the interior including the upgrade compartments. A vacuum generates static electricity at the nozzle tip that can damage interior components.

Cleaning the Computer

It's good ideal to keep your computer clean. If it gets dirty, you should use a clean, lint-free, non-abrasive cloth to wipe it. You can use a damp cloth - just make sure that it isn't so wet that any liquid can get into the computer. Be particularly careful not to scratch the LCD screen.

They're several places on the WinBookXP where dust & dirt can get inside the computer. You should do what you can to prevent this. Here's a list of the sensitive areas and what you can do:

- Rear Ports

  If dust and dirt get in the rear ports and affect the contact pins or receptacles, you may experience problems when you connect devices to the ports. To prevent this, keep the port cover door closed when you aren't using the ports. If you have cables connected to some, but not all of the ports, try to keep the area behind the computer clean. Always keep the Docking Station connector covered when not in use.

- Fax Modem Port

  The internal fax modem compartment is covered by a two-piece cover if you don't have the fax modem, leave the cover in place. If you have the fax modem, the telephone connector jack replaces the compartment cover.

- Audio Jacks & Volume Control

  The audio jacks and volume control thumbwheel have no cover, and since they are close to the base of the computer are more easily contaminated. Be especially careful not to let them get clogged up.

- Floppy Disk Drive

  The hinged panel that covers the drive opening will keep out most dust and dirt as long as it its completely closed. The thing you need to be more careful of is the floppy disks themselves. It won't matter if the panel keeps dust out if you put dirty disks in the drive.

- PCMCIA Card Compartment

  Always keep the compartment door shut when you aren't using any cards. If you have a card installed in only one slot, be careful not to let the compartment get contaminated.

- The Keyboard

  Try to keep the keyboard as clean as possible. Don't eat or drink over it and remove any dust or dirt that builds up, especially between the keys.

- The Trackball

  The trackball is susceptible to contamination inside its housing, just like a mouse is. You will need to clean the housing occasionally. When the ball starts moving less easily and your control of the cursor becomes less precise, you know it is time to clean it. The next section explains how to do it.

  ### Cleaning the Trackball

  Cleaning the trackball is actually a two-part operation. You have to clean both the trackball and the housing it sits in. Follow this procedure to do it:

1. Remove the trackball-retaining ring.

   There is a small hole in the ring at the 12 o'clock position. Stick the tip of a straightened paper clip in the hole, press down slightly and rotate the ring counter-clockwise until the hole is at the 11 o'clock position. The ring will pop up a little and you can take it off.

2. Remove and clean the trackball.

   With your hand covering the housing, remove the ball by turning the computer over so the ball falls out into your hand. Use a clean, lint-free cloth to wipe the ball clean, then put it aside on the cloth.

3. Clean the housing

   There are several bearings and rollers built into the side of the trackball housing. Gently use a computer-cleaning swab moistened with isopropyl alcohol to clean the bearings and the inner surface of the housing. Don't overdo it. Use as little pressure as will get the job done. You can use more than one swab if necessary.

4. Replace the trackball and retaining ring.

   Drop the ball back into the housing and replace the retaining ring so that the hole in the ring is at the 11 o'clock position. Insert the tip of the paper clip in the hole, press down slightly and rotate the ring clockwise to the 12 o'clock position.

   When you're finished, turn on the computer and test the trackball to make sure it's working properly.

Figure 26: Cleaning the Trackball
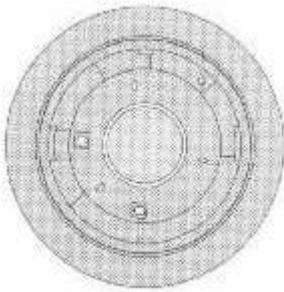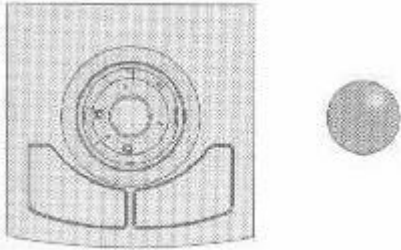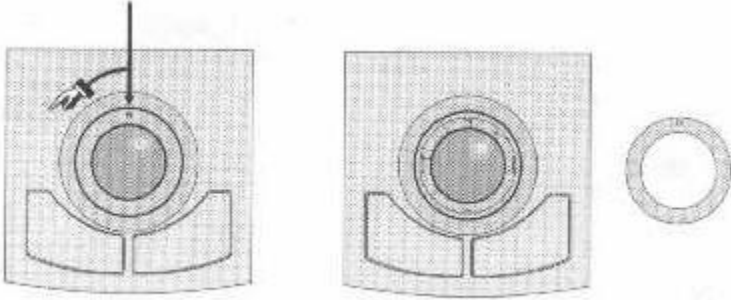
APPENDIX B: SPECIFICATIONS

APPENDIX B: SPECIFICATIONS

This appendix list hardware and environmental specifications for the WinBookXP. It also contains additional system-use information.

HARDWARE SPECIFICATIONS

Dimensions

Width Depth Height

Mono 292mm (11.68") 220mm (8.66") 43.5mm (1.71")

Color STN 292mm (11.68") 220mm (8.66") 48.5mm (1.91")

Color TFT 292mm (11.68") 220mm (8.66") 48.5mm (1.91")

AC adapter 36mm 60mm 20mm

Weight

Pounds Kilograms

Mono 5.4 2.45

Color STN 5.9 2.68

Color TFT 6.2 2.82

AC adapter & Power Cord 0.8 0.367

CPU

Intel 486SX/25 Intel 486SX/33

Intel 486SX2/50 Intel 486DX/33

Intel 486DX2/50 Intel 486DX4/75™

Intel 486DX4/100™

Cyrix Cy486DX/33 Cyrix Cy486DX2/50

System Memory

4MB, 8MB, 16MB, 32MB

Video Controller

Western Digital 90C24 controller wit graphics acceleration

VESA local bus interface

1MB Video RAM

CRT output resolutions up to 1024x768x256 colors

HiColor modes at 640x480 and 800x600 resolutions

ROM BIOS

Phoenix Notebook Miser BIOS, 128KB Flash ROM

Battery

Removable pack consisting of ten 2500ma/h NiMH cells

Total capacity of 30 W/h

Battery Capacity

Raw Average Use

Mono, DX4/75 3:30 4:00

TFT, DX4/75 2:15 3:00

Color STN, DX4/75 2:30 3:45

Note:

Raw = all power management disabled; *power.exe* at off setting; running the PC Magazine 8.0 Battery Rundown test

Average = default power management enabled; *power.exe* at max setting; running test applications which have 50% display utilization and 20% disk utilization

Display Type

9.4" STN Color 10.3" STN Color 9.4"TFT Color

Response Time 300 ms 300 ms 35 ms

Pixel Pitch 0.25 x 0.3 mm 0.33 x 0.318 mm 0.3 x 0.3 mm

Contrast Ratio 18 20 50

Brightness 80 cd/m2 80 cd/m*2* 60 cd/m2

9.4" Mono LCD

Response Time 270 ms

Pixel Pitch 0.3 x 0.3 mm

Contrast Ratio 18

Brightness 60 cd/m^

Hard Drive

12.5mm, 15mm, 17mm, or 19mm IDE
120MB, 260MB, 340MB, and 520MB

Optional fast transfer and block mode support

Floppy Drive

Internal 3.5" high density drive (1.44MB)

PCMCIA

Card types supported:

2 Type I

2 Type II

1 Type III

PCMCIA 2.01 complaint

AC Adapter

90-264 V, 47-63 Hz, two-wire AC input cable

Output: 30W (1.5A max.)

LED indicator: Power on

Pointing Device

Either 19mm Trackball or

TrackPoint pointing stick

Audio

Optional internal monophonic or stereophonic audio modules;

Business Audio and SoundBlaster™ compatible.

FAX Modem

Composite 14.4K bps Send/Receive Fax, 14.4K bps data modem, including voice capability

Ports

I/O Port Assignments:

Device Address

Fixed Disk 1F0-1F8

Audio 220-22F

Parallel Printer Port 2 278-27F

Serial Port 2 2F8-2FF

Device Address

Parallel Printer Port 1 378-37F

Display Adapter 3A0-3E5

Floppy Controller 3F0-3F7

Serial Port 1 3F8-3FF

DMA Channel Assignment

Channel No. Function

1. Reserved

2. Opt. Audio Bd.

3. Floppy Disk

4. ECP Support

5. (Cascade)

6. Available

7. Available

8. Available

IRQ Assignments:

Interrupt Function

IRQ0 System Timer

IRQ1 Keyboard

IRQ2 (Cascade)

IRQ3 COM2, COM4

IRQ4 COM1, COM3

IRQ5 Parallel Printer Port 2 (Optional Audio)

IRQ6 Floppy Disk

IRQ7 Parallel Printer Port 1 (Optional Audio)

IRQ8 Clock/Calendar

IRQ9 Cascaded to INT 0AH (IRQ2)

IRQ10 Available

IRQ11 Available

IRQ12 Trackball

IRQ13 Coprocessor

IRQ14 Fixed Disk Controller

IRQ15 Available

Port Descriptions

Parallel: EPP, ECP support

Serial: Dual 16550 UARTS

PS/2: Keyboard/Mouse combination port

VGA: supports up to 1024x768x256 color

Audio Line In: Microphone

Speaker Line out: Self- or Non-amplified speakers, or Headphones

Microphone: Built-in

High quality internal speaker with volume control

Docking Station connector

Keyboard

82-key Lexmark keyboard, 3mm travel, 19mm pitch

ENVIRONMENTAL SPECIFICATIONS

Temperature

Operating: 5-35° C (41-95°F)

Non-operating: -15 - 55° C (5-131°F)

Gradient: not to exceed 20° C/h (35.66°F/h)

Humidity

Operating: 30%-90% (non-condensing)

Non-operating: 5%-95% (non-condensing)

Altitude

Operating: 0-10,000 ft. (0-3280m)

Non-operating -200- 30,000 ft. (-65.6-9840m)

Shock

Operating: 9G, 11ms

Non-operating: 50G, 11ms

Vibration

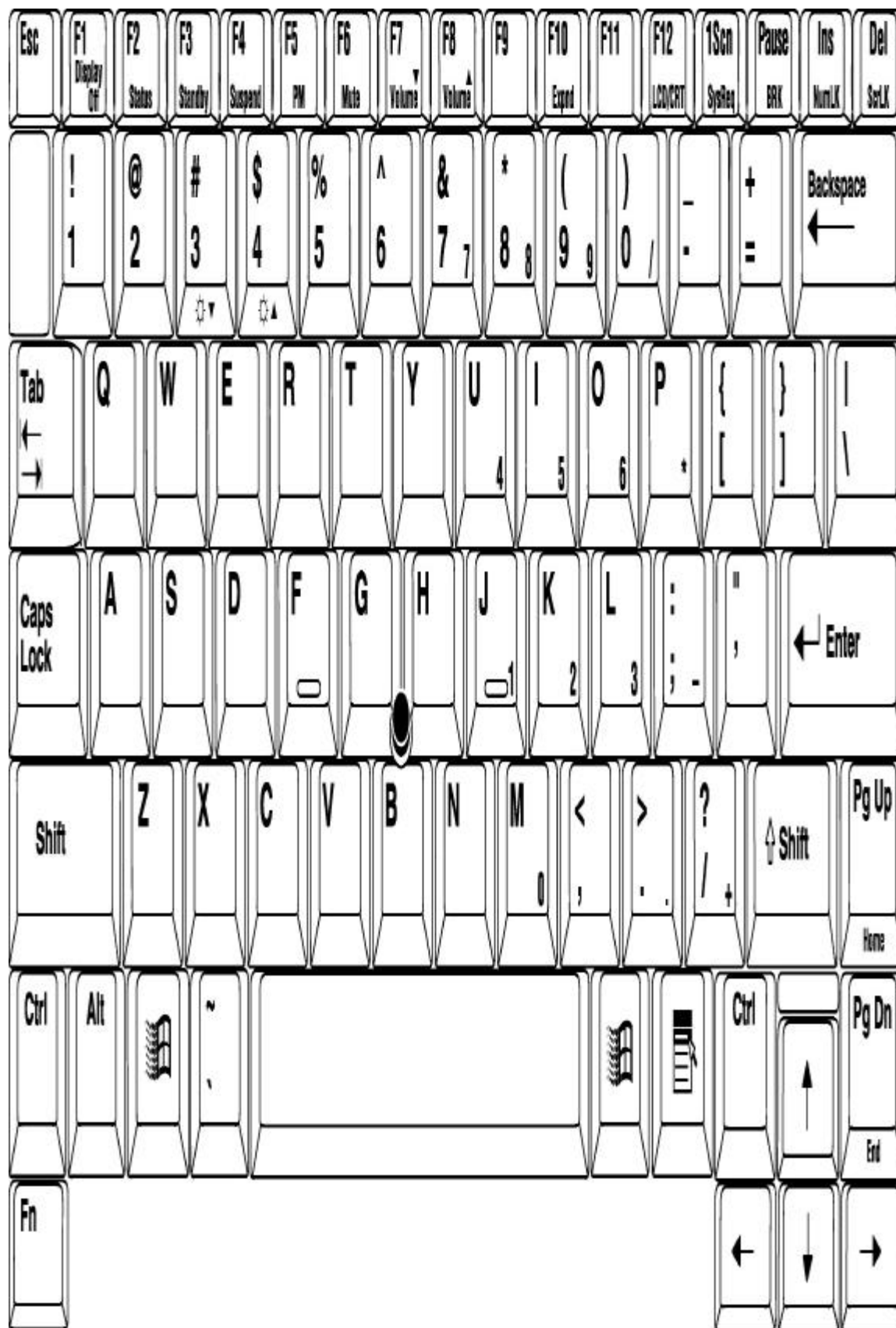Operating: 10-27Hz, 0.01"

Non-operating: 5-62Hz, 0.02"

Noise

35dB max at 1 meter

THE KEYBOARD

This section explains the keyboard in more detail. Use the chart on the next page as a quick reference for the meanings of the color-coded characters printed on the keys.

Figure 27: WinBookXP Keyboard

THE TYPEWRITER KEYS

The typewriter keys are arranged in a standard typewriter layout. The Caps Lock key corresponds to the Shift Lock key on a typewriter, with one important exception. The Caps Lock key only affects letter keys. In order to use the symbols above the number keys and the alternative punctuation marks, you must still press the Shift key.

Note that when the Caps Lock key is engaged, the Caps Lock status indicator icon comes on. Pressing the Shift key and typing a letter at this time will result in a lower case, rather than an upper case letter.

Key Color Coding Scheme

Key Color Coding Scheme

Color	Function
White characters	Standard layout typewriter keys
Yellow characters	Computer & cursor control keys
Gray characters	Embedded keypad keys
Teal characters	Special functions used in combination with the Fn key

THE FUNCTION KEYS

There are 12 dedicated function keys located across the top edge of the keyboard. They are labeled F1 to F12. These keys are used in many different ways, depending on the operating system and software in use. They are also programmable. See your operating system and software user's manuals for detailed information.

THE CONTROL KEYS

There are a number of non-typing keys that issue commands or enable functions as listed below.

Escape

Command: 'Esc'

Many applications use this key to cancel a command or exit the application. Refer to your application manual for details.

Simulscan

Command: 'Fn' + 'F6'

Overrides the current BIOS setup selection governing whether both the LCD and CRT screens are active at the same time. Changes are temporary, and revert to BIOS setup settings when the system is rebooted. Command is active under DOS and Windows.

Expand

Command: 'Fn' + 'F7'

This command will force the image to fill the entire LCD screen, and is only used in DOS applications. The changes are saved so the system will remember the setting when rebooted. It's only active under DOS or in DOS applications.

Setup (Power Management screen only)

Command: 'Fn' + 'F8'

This command calls up the power management Setup Utility page (page 2). When you finish your modifications and exit, the system is restored. Note that while the system is in power management Setup, your DOS or Windows application's state is also saved. When you leave Power Management Setup, you automatically resume your application. The key is active no matter which application or operating system you are using.

Invert – Normal/Reverse Video (monochrome only)

Command: 'Fn' + 'F9'

This command toggles the display between Normal and Reverse modes in text mode. In most cases you will probably want to leave it on Normal. Command is active under DOS and Windows.

Display – Active Display

Command: 'Fn' + 'F10'

This command sets the active display. The options are the LCD or a CRT monitor. Command is active under DOS and Windows.

ScrLk

Command: 'Fn' + 'Insert'

Some applications use this function to control cursor movement.

SysRq

Command: 'Fn' + 'F11'

This key may be used in conjunction with other keys for other specific functions within an application program. Consult your software user's manuals for information.

Print Screen

Command: 'Fn' + 'F12'

Pressing this key will print a text rendition of whatever is on the screen at the time.

Pause

Command: 'Pause'

This key temporarily halts a program or command –in-progress under DOS.

Break

Command: 'Fn' + 'Ctrl' + 'Pause'

This will cause some DOS operating programs to terminate.

Num Lock

Command: 'NumLock'

This key activates the embedded numeric keypad.

The Break Command

You must also press the 'Ctrl' key to activate Break.

CURSOR CONTROL KEYS

Arrow Keys

These cursor control keys move the cursor in the direction indicated. They are also available as Fn key combinations:

'Fn' + '8' – up

'Fn' + 'U' – left

'Fn' + 'O' – right

'Fn' + 'K' – down

Page Keys

Home, End, PgUp (Page Up) & PgDn (Page Down)

They are also available as Fn key combinations:

'Fn' + '7' – Home

'Fn' + 'J' – End

'Fn' + '9' – PgUp

'Fn' + 'L' – PgDn

The Page Up and Down keys move the cursor a page, or sometimes a screen, at a time. The Home and End keys move the cursor to either the beginning or end of the file or line you're working on.

Insert

Command: 'Ins' or 'Fn' + 'M'

The Ins key is used in editing and word processing programs. It inserts material into a text passage so that it overwrites text to the right of the insertion point. Some software packages under Windows assign other functions to this key.

Delete

Command: 'Del' or 'Fn' + '>'

The Del key deletes text or graphics in a wide variety of software programs.

Embedded Numeric Keypad

Command: 'NumLock'

This turns on the embedded keypad, which replicates the functions of the numeric keypad on an extended keyboard. The assignment for each function is printed on the lower right of the key. The cursor control functions are printed on the front faces of the keys.

SUSPEND-TO-DISK – USING THE PHDISK UTILITY

The PHDisk utility creates a dedicated partition on your hard disk drive that the Suspend-To-Disk feature uses to store the system state when you suspend the system to disk. There is a copy of PHDISK.EXE on your hard drive in the \DRIVERS\PHOENIX directory. *Do not run PHDISK.EXE on a pre-loaded hard disk drive before you back it up, or you will end up erasing the whole drive!* As noted earlier, all pre-loaded drives come with a Suspend-To-Disk partition large enough for a system with up to 8MB of memory. If you install more than 8MB in your system you must increase the size of the dedicated partition. In doing this, you eliminate the old partition and erase the entire hard disk. Therefore, before you use the program, you must back up the entire hard disk drive. After you create a new partition you can restore your system configuration from the backup.

You can back up your hard disk either by copying your data to floppy disks, to another computer on a network, or to a stand-alone desktop PC. We recommend using Microsoft's backup program that comes with DOS.

Here's a sample of the procedure for using PHDisk:

1. Back up the hard disk

Back up all your files onto the media of your choice. You start the backup program by typing "MSBACKUP" at the DOS prompt and pressing 'Enter'. From there on, just follow the programs on-screen instructions. You can read about how to use the program in the DOS User's Manual, too.

2. Make a PHDisk bootable floppy disk

After each of the following commands, press the "Enter" key.

Make a bootable floppy disk by typing:

FORMAT A:/u/s

Copy the files you will need onto the floppy as follow:

CD\DOS

COPY FDISK.EXE A:\

COPY FORMAT.COM A:\

COPY MSB*.* A:\

COPY DEFAULT.* A:\

COPY C:\DRIVERS\PHOENIX\PHDISK.EXE A:\

3. Set the boot drive order

Run the system Setup program and on Page 1Standard Setup, select the "Boot Drive Order" to be "A: C:" so that the system will boot from the floppy disk drive.

Press 'Esc' and the 'Alt' + 'F4' to save the new configuration.

4. Reboot from drive A:

Hold down the 'Ctrl' and 'Alt' keys and type 'Del; to reboot the computer and boot from the floppy disk in Drive A:.

5.Run PHDisk, delete old Suspend-To-Disk partition if necessary

Type "PHDISK" at the A: command line. PHDisk will run and a list of options will appear. If your hard disk does not already have a disk partition for Suspend-To-Disk, go on to step 7. If your system has a Suspend-To-Disk partition, delete it by typing "PHDISK/DELETE" and pressing 'Enter'.

6. Create a new Suspend-To-Disk partition

Type the command for your system memory total:

4MB: "PHDISK/CREATE 5552/VRAM 1024"

8MB: "PHDISK/CREATE 9576/VRAM 1024"

16MB: "PHDISK/CREATE 17648/VRAM 1024"

32MB: "PHDISK/CREATE 34280/VRAM 1024"

Press 'Enter'. It will take the system a while to complete the task. When complete, you will be back at the A: DOS prompt. For pre-loaded systems, use the 4MB command if your system has 4MB of memory and you want to make more disk space available by reducing the pre-loaded drive's default 8MB-partition size.

7. Use FDisk to partition the rest of the hard disk

Reboot the computer as before. The system will reboot to the A: prompt.

Type "FDISK" and 'Enter' to run the standard FDISK disk-partitioning program. Select "1" to create a new partition and then press 'Enter' in response to the series of questions that pop up on screen. When FDISK is complete, it will automatically reboot the computer from the floppy drive.

8. Format drive C:

Type "FORMAT C:/s/u" and press 'Enter'

9. Copy the floppy files back to a hard disk DOS directory

Type "MD C:\DOS" and press 'Enter'.

Type "COPY *.* C:\DOS" and press 'Enter'.

Remove the floppy disk after there is no more drive activity and reboot your computer. You should see the C: prompt.

10. Configure the system for Suspend-To-Disk

Run the system Setup program by pressing 'Ctrl' + 'ALT' + 'S'.

Change the "Boot Drive Order" line back to "C: A:".

Press 'PgDn' to go to Screen 2.

Select the "Suspend to" line and press the "+" (plus & equal sign)

Key until "Suspend-to-Disk" appears.

Press 'Esc' and 'F4' to save and exit. The system will reboot.

Selecting Suspend-to-Disk

You cannot select Suspend-to-Disk in the Setup program unless there is a Suspend-to-Disk partition on the hard disk and the partition is large enough to support the current memory configuration – the BIOS automatically detects if the Suspend-to-Disk partition exists and if it is big enough. If there is no partition or it is too small the BIOS will not allow you to select the Suspend-to-Disk option.

11. Test the new Suspend-To-Disk partition

After the system has powered up, press the suspend button, and the system will now suspend to disk. Push the button again to return to normal.

If the test is successful (it should be), go to the next step. If there is a problem, try repeating steps 5 through 11.

12. Restore your hard disk backup

Type "CD\DOS" and press 'Enter'.

Type "MSBACKUP" and press 'Enter'.

Follow the program instructions to restore the hard disk from your backup.

To make sure that you are not using any power at all after you have suspended to disk, be sure to turn the computer OFF.