

EUT:Mini-Notebook PC

FCC ID:IVUSOYO-PW9800S

Soyo Tek Inc

USER'S MANUAL

NOTICE

Specifications and information found in manual are subject to change without notice. Any changes therefore will be incorporated in future editions. The manufacturer assumes no responsibility for errors or omissions in document.

TRADEMARKS

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Pentium® is a trademark of Intel Corporation.

Sound Blaster Pro is a trademark of Creative Technology Ltd.

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SAFETY INSTRUCTIONS

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for future reference.
3. Please disconnect this equipment from AC outlet before cleaning DO NOT Use liquid or sprayed detergent for cleaning. Use a clean moistened cloth.
4. Please keep this equipment from humidity.
5. The wall socket used should be positioned near the equipment and should be easily accessible.
6. Place the equipment on a reliable surface at all times. A drop or fall can Cause severe damage.
7. The openings on the enclosure are for air ventilation and is meant the equipment from overheating. DO NOT COVER THE VENTILATION OPENINGS.
8. Verify the voltage of the power source connecting the unit to any power

Standards

The following standards are adopted throughout this manual:

- Mini-notebook in boldface (with or without capitalization) refers to the mini-notebook computer which you have purchased.
- Boldface type is also used to highlight important information in this document.
- The messages which appear on the Notebook screen will be boxed when they are referenced.
- Whenever extra caution is called for, the information will be boxed in a dark frame preceded by "Note:" or "Warning:"
- Usually after performing a step-by-step instruction, you will be asked to:
Press the Esc key
which means you should press the Esc Key located at the upper left-hand corner of keyboard.

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includes :

- Built-in 16bit CD-Quality Sound
- Built-in stereo Speakers and Microphone
- Built-in FIR (Fast Infrared Interface) for wireless computing
- Built-in Touch Pad as an ease-of-use pointing device
- Built-in USB port by 2.(PW9800, PW9801 only)
- Built-in external PS/2 keyboard connector located on the rear side of mini-notebook.(PW9802 only)
- Built-in external IDE connector located on the rear side of mini-notebook for CD-ROM Player, LS-120 high capacity FDD and DVD Player.

This is by no means an entire list of notebook features. For a complete understanding, we recommend you to review the full set of documentation that accompanies your unit.

With this notebook upgrades have never been easier. You can switch from the standard 120MHz Pentium to the 150, or 166MHz model. For detail on CPU upgrade please refer to Chapter 11. You system memory is easily to upgrade from 16MB to 32, 64, or 128MB. The hard disk system can handle most of the 12.7mm IDE industry standard drives, giving you virtually unlimited storage capability. You can also use the notebook's optional internal Fax/Modem; and standard PCMCIA type 2 or type 3 cards for expansion with a wide variety of options.

While we hope that this overview has made you aware of some the most exciting features of your computer, there is much more to the notebook. The remainder of this manual is dedicated to helping you get the most out new

notebook please read each chapter carefully and we recommend you to explore each of the explained functions.

New, read on to find out more about what the amazing can do for you !

- FIR port for wireless Infrared connections (IrDA Compliance).
- Two port for USB.
- One Modem socket for proprietary Internal Fax/Modem Module.

POWER

- A Lithium-Ion battery pack. Support 28.8 Watts power.
- Battery charging time for battery pack are around two and half hours.
- Full rage 100 to 240V auto-switching AC-DC adapter.

PHYSICAL

Weight (STN, TFT color)	: 1.6kg (3.5-lbs) include battery pack.
Length	: 240.00mm (9.4")
Width	: 180.00mm (7")
Height (STN, TFT color)	: 42.0mm (1.6")

Note: Weigh might change due to different configurations and models.

ENVIRONMENT

Operating Temperature	: 10 °C to 35°C (50 to95°F)
Non \-Operating Temperature	: -20°C to 60°C (-4°F to 140°F)
Humidity	: 20 to 80% non-condensing
Shock	: 5G operating, 60G non-operating
Vibration	: 3-200Hz@ 1.0G operating : 3-200Hz@ 1.5G non-operating

Warning: Don't expose your notebook to excessive heat or coldness (frost). Don't drop, spill fluids or open the exterior of the case. This can damage the notebook and void the warranty.

OPTION

- Standard EDO 60-ns S.O. DIMM self-refresh 16/32/64MB Memory Modules for expansion from 16MB up to 32/48/64/128MB. (for PW9800 only)
- Standard SDRAM 100MHz clock S.O. DIMM self-refresh 16/32/64MB Memory Modules for expansion from 16MB up to 32/48/64/128MB. (for PW9801, PW9802)
- Battery - Lithium Ion battery pack.
- Internal Fax/Modem board.
- External CD-ROM Player.
- External DVD Player.
- External LS-120 high capacity Floppy Diskette Drive.

SOUND SYSTEM

This internal sound provides you 16-bit CD quality stereo sound, and it is Sound Blaster pro compatible. The notebook includes built-in stereo speakers, microphone, and connectors for microphone-in, and earphone output.

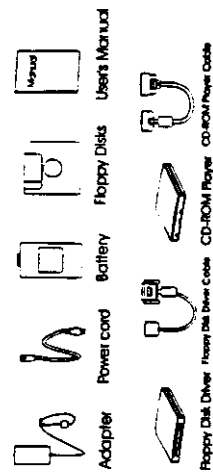
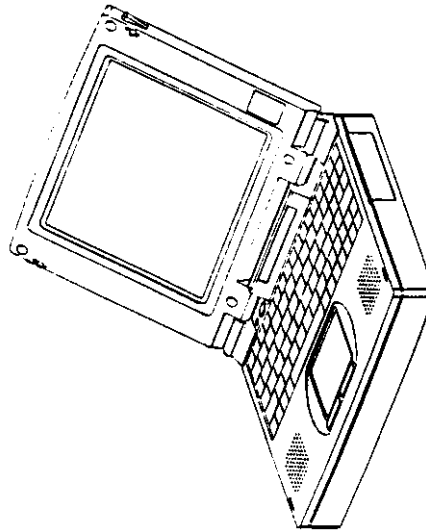
Chapter 2 Before You Begin

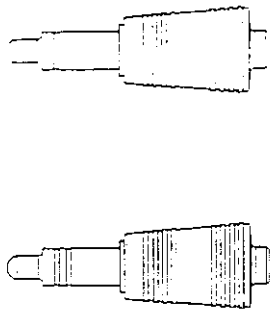
Please read this section before you start using your computer.

2.1 Checking What You Received

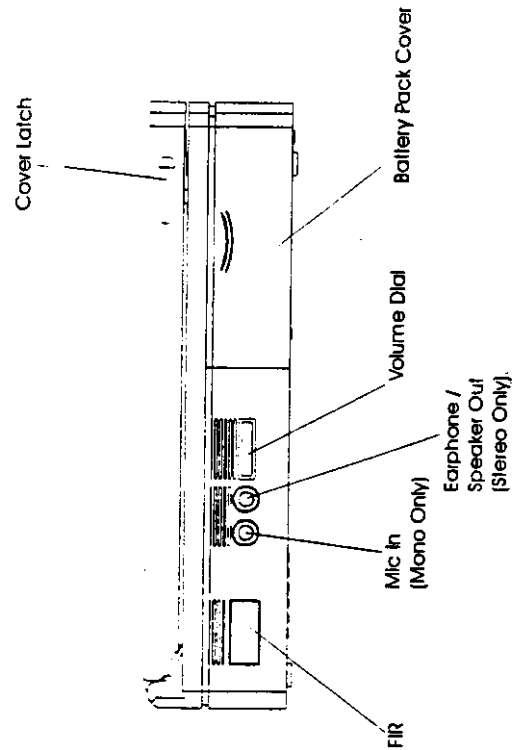
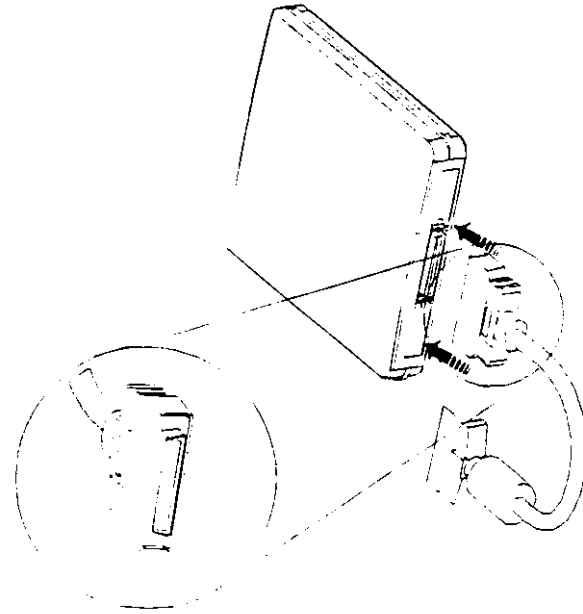
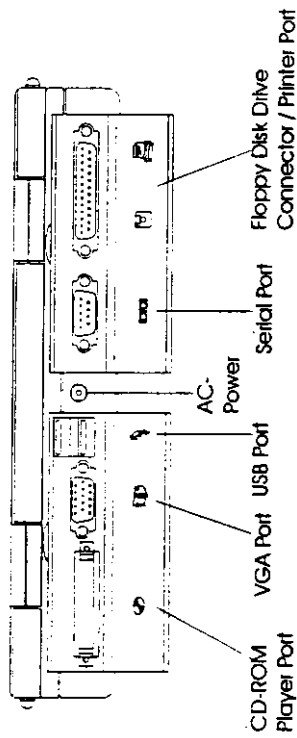
Your mini-notebook package should contain the following items:

- | | |
|------------------------------|---|
| (a) this notebook | (g) Floppy Diskette Drive with cable |
| (b) AC Adapter | (h) CD-ROM Player with cable (Optional) |
| (c) AC Power Cord | |
| (d) Battery Pack | |
| (e) Driver Utility Diskettes | |
| (f) User's Manual | |





Sample of Stereo and Mono Connectors





ADAPTER Indicator

Icon appears if AC Adapter is connected to mini-notebook.



NUMLOCK Indicator

The keyboard is in Numeric Lock mode. In this mode, all the embedded numeric keypad can be used.



CAP LOCK Indicator

The keyboard is in Lap Lock mode. In this mode, all the characters you type are in upper case.

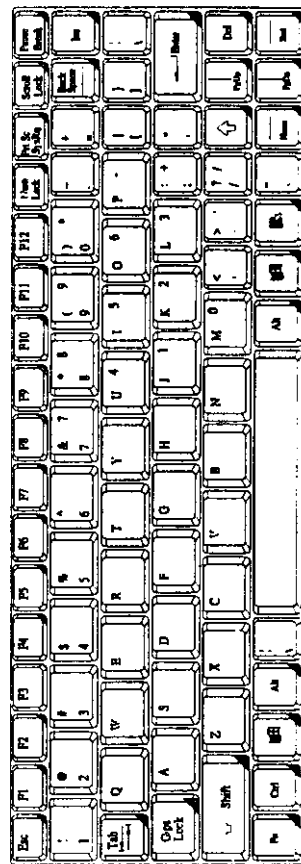


SCROLL LOCK Indicator

The keyboard is in Scroll Lock mode. In this mode, text that takes up more than a full screen scrolls up the screen line-by-line.

Chapter 3 Keyboard

The mini-notebook features an enhanced keyboard that incorporates the functions of a full-featured desktop keyboard. An embedded numeric keypad, accessed via the Numeric Lock key is included. The screen control keys are conveniently located near the right side and lower right corner of the keyboard.



3.3 Other Keys

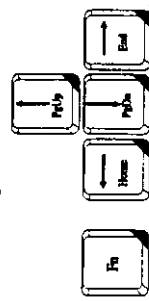
The Fn (Function) Key :

The (Function) Fn key is located in the bottom-left corner of the keyboard. This key is used to access the notebook's system " Hot Keys " or " function keys ". For example, to change the notebook into a simultaneous video mode, you hold down the Fn Key while pressing the F2 (LCD/CRT) key. For more information on the Fn or Hot Keys, see Appendix B.

The cursor movement / Page control keys

There are four cursor movement keys those can be used as page control functions, in power-on default, these keys are cursor movement function, you can switch them to page control function by press and hold "Fn" key and press cursor movement keys.

For example:



Fn + " ↑ " key will get "Page-Up" function.

Fn + " ↓ " key will get "Page-Down" function.

Fn + " ← " key will get "Home" function.

Fn + " → " key will get "End" function.

The Ctrl (Control) Key :

Both Ctrl keys have the same function. Holding down the Ctrl key together with another key can activate certain functions of an application program ; such as Excel or Word.

The Alt (Alternate) Key :

Both Alt keys have the same function. Holding down the Alt key together with another key can activate certain functions of an application program ; such as

Excel or Word.



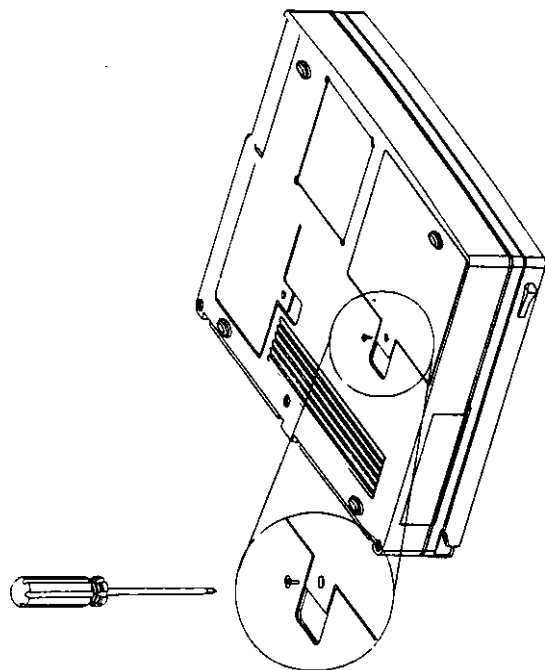
The Win95/98 () Key :

This Win95 has the same function as selecting START icon in Win95.

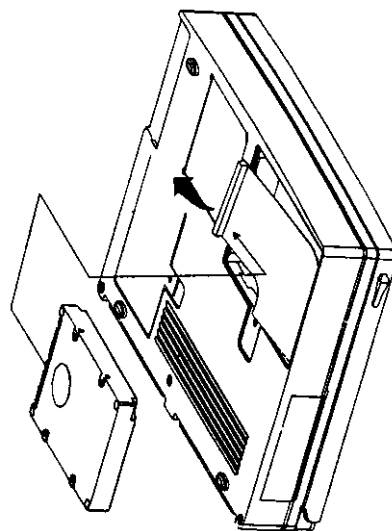


The Win95/98 () Key :

This Win95 key has the same function as clicking the right mouse button, when in Win95. This key can activate certain function of application program ; such as Excel or Word.



Note : Reverse the above steps to install a hard disk drive. If you have just changed a HDD, don't forget to change the HDD type in the Setup Utility unless you have the BIOS setup's IDE Adapter 0 Master set to Auto-Detect. For detail, see Chapter 12.3.



5.3 Resolutions and Colors

STN and TFT :

Depending on the different drivers under Windows, DOS or other operating systems; you can have different resolutions with different fonts and colors. For more information on Display Modes, run the utility software supplied with your notebook. See Chapter 10, for installation procedure.

CRT :

The resolution on the CRT depends on both the CRT and its driver program. The VGA driver supplied can display up to 1024x768 (non-interlaced) under the Windows environment.

Note : To get the fastest speed and most colors under Windows, you need to install the VGA drivers that comes along with notebook. For more information on how to install the drivers, see Chapter 10.

Chapter 6 Batteries

6.1 Battery Packs

One high energy rechargeable Lithium-Ion (Li-Ion) battery pack is included with the mini-notebook. In general, a fully charged battery pack can support around 2-3 hours of operation, with power Management option enabled. However, difference in configuration (CPU, HDD, Memory etc.) and system utilization (especially I/O activities) can affect the operation time greatly.

Warning : To reduce the risk of injury or damage to the battery pack, do not crush, puncture, or incinerate the battery pack or short the metal contacts. Do not attempt to open or service the battery pack.

6.2 Extended Battery Pack Operating Time

Battery operating time varies depending on the system components, options, and applications in use. You can get the maximum operating time from battery packs by:

Selecting the High level of Power Management in Computer Setup and Advance (default) setting in Windows Power Properties.

Initiating Standby (Suspend) or turning the computer off when you are not using it.

Reducing the brightness on the display and selecting a shorting a shorter screen timeout.

Q: I didn't use my spare battery for a few days. Even though in was fully recharged, there wasn't as much power left as a newly charged one. Why?

A: The battery will self-discharge (2-5% per day for Ni-MH, and 1% per day for (Lithium-Ion) when then they are not being recharged. To make sure a battery pack is fully charged, recharge before use. Always keep the battery inside the notebook and have the AC adapter connected whenever possible.

Q: I didn't my spare battery for months. I have problem in recharging it.

A: If you happen to leave your battery pack to go through an extended period of self- discharge, say more than three months, the battery voltage level will become too low and needs to be Trickle Charged (to bring the battery voltage level high enough) before it can automatically (for Li-Ion only) resume its normal Fast Trickle Charge may take may take several hours. Fast Charge usually takes 2~3 hours. So, in this situations, full charge will take totally about 5~6 hours.

What you experience is pre-matured termination of recharge. After leaving your battery pack un-used (in storage) for months, the fist couple of (Fast) recharge will last for a relatively short while, say 10 minutes, and recharge will terminate prematurely and indicate incorrectly that the pack is fully charged. In reality, the battery is not fully recharged. If this happens, take the pack out and return it back for recharging. Repeat this take-out and return-back operation until the pack is actually being recharged. A rule of thumb to tell if the recharge is "real" or fake" is as follows. A "real" recharge will generate heat, while a "real" recharge will not.

6.5 Battery Capacity Indicator and Alarm

There is a battery indicator icon on the LCD indicator (System Status Indicator). All battery packs in the notebook are equipped with built-in gas gauge. Each LED signifying approximately 25percent energy level. For detail, refer to table below.

LCD Indicators	Energy Level
■ ■ ■ ■ ■	75%~100%
■ ■ ■ ■	50%~75%
■ ■ ■	25%~50%
■ ■	0%~25%

During battery recharge, the segments will gradually lit up one by one, indicating the energy accumulation of the battery pack.

During batting discharge, the segments will be turned off gradually one by one indicating the energy depletion of the battery pack.

Battery LOW 1

When the battery charge is depleted to approximately its 10-15% level, the mini-notebook reaches Battery LOW1 state, you will hear buzzing sound from speakers and the battery icon of LCD indicator will flicker.

Battery LOW 2

When the battery charge is depleted to approximately its 5-10% level, the mini-notebook reaches Battery LOW 2 state. There are two scenarios:

Hard Disk Timeout:

Depending on the timer setting in the Power Management setup (See Chapter 13), HDD will spin-down and be power off; thus consumes less power. When there is any disk accessing, HDD will automatically wake itself up before performing any disk accessing. The wake-up, or spin-up, time varies from FDD manufacturers to manufacturers.

Suspend To HDD (Information Mode):

There are three different ways to perform Suspend to HDD:

- Press the Function Key <Fn> <F4> couple Hot Keys.
- Allow the system to invoke this action, by setting the Suspend Timeout, and setting the Suspend Function to Save-to-HDD in Chapter 13.
- Allow the system to invoke this action, by setting the Suspend Timeout, and setting Low Battery Activity in Chapter 13.

When Suspend To HDD is invoked, all data in memory and system status will be saved to the HDD partition created by ZVHDD. The system will shut the power down automatically. When you power-on the computer again, you will return exactly where you left off. For more information on ZVHDD and Suspend To HDD, refer to Chapter 11.

6.8 Reducing Power Consumption

Although power conservation is a built-in function of your notebook, there are measures you can take to reduce the power consumption:

- Use the AC power whenever possible (for battery only).
- Lower the intensity of the LCD backlight. A very bright screen translates to higher power usage.

- Try to use the HDD or the PCMCIA drive to read and write files, rather using the FDD.

6.9 AC Adapter Indicator

If you connect the AC Adapter to the notebook, the indicator AC-Adapter icon will be displayed on the Status LCD, indicating that you are using the power through the AC-Adapter.

Warning: Use only apply approved AC Adapter with your notebook. Using the wrong type of AC Adapter may cause serious damage to your mini-notebook.

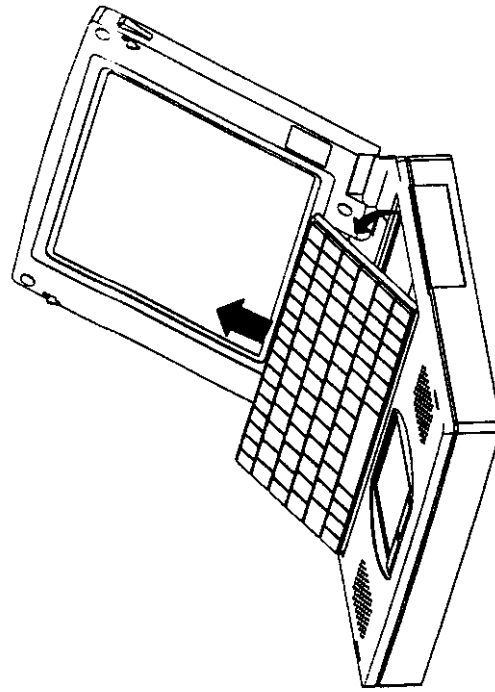
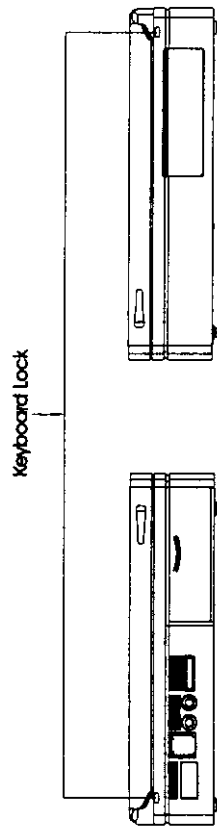
Warning: Handle the battery very carefully. Avoid touching the metal leads on the front of the battery case.

Note: The AC Adapter can accept a line voltage ranging from 100V to 240V and is compatible will most international power sources. If you are unsure whether your power source is compatible, please the local dealer for assistance.

6.10 Removing the Battery Pack

Your battery can easily be removed and replaced. Make sure that the computer is power off before changing. If you would like to change the battery while power is on, make sure the AC Adapter is inserted or that you have saved your work via the Suspend to HDD feature. Follow these to remove the battery pack.

7.1 Memory Installation for Bank A



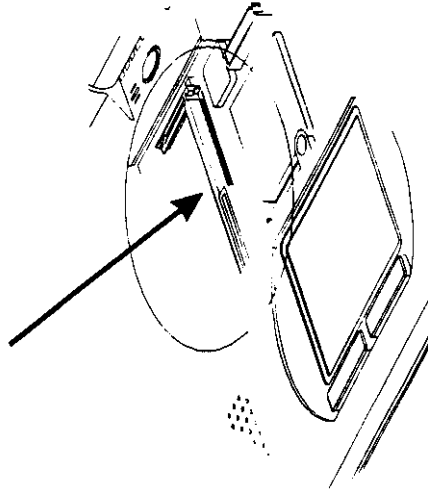
Keyboard Lock

- Make sure the mini-notebook is powered off.
- There are two keyboard locks located on the back panel of mini-notebook, as shown in figure above.
- Press the two keyboard locks with pointing objects, such as ball pens. The

keyboard will tilt up slightly.

- Gently slide the keyboard upward, and flip it over as shown. Be careful, not to damage the keyboard cable.

The arrow as shown on the right indicates the position of Memory Bank A. Follow the steps below to install the memory module into bank A:



- Insert the module into the bank (as indicated by arrow 1). When inserting, the module should have an angle of 135° with the system board and that the module's groove matches the protrusion of the memory bank.
- Gently press the module down (as indicated by arrow 2).
- You will hear a clicking sound when the spring-lock (as indicated by arrow 3) bands outward and then bends inward to lock the memory module.

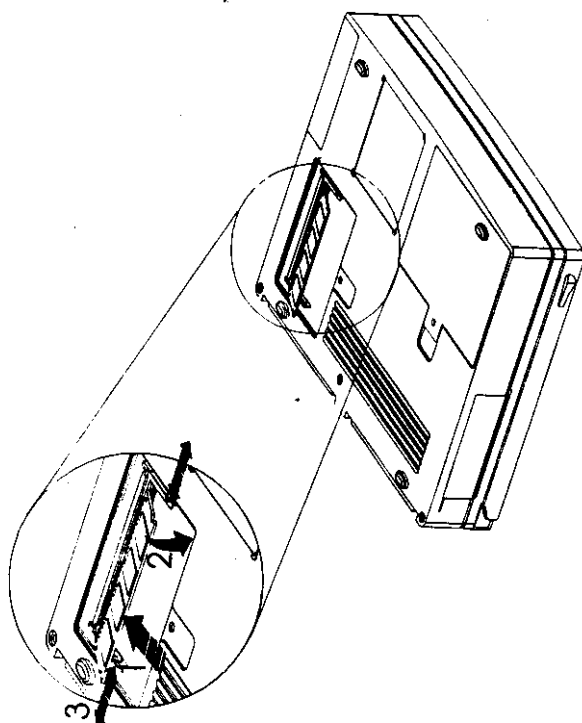
Chapter 8 CD-ROM Player

The external IDE connector is located on the rear side of your mini-notebook.

This connector can accommodate a CD-ROM Player, a DVD Player, a LS-120 high capacity Floppy Drive or a second Hard Disk Drive.

The CD-ROM Player can read both 8 cm and 12 cm discs. It supports CD-DA, CD-ROM, CD-ROM/XA, CD-I, CD-Plus, PHOTO-CD disc modes. All of these disc modes can be accessed through your operating system or application software. Contact your local dealer for more detail. Audio-CD playback is built-in and can be accessed through your Windows or OS/2 applications.

Warning: Use of controls, adjustments, or the performance of procedures other than those specified may result in hazardous radiation exposure.

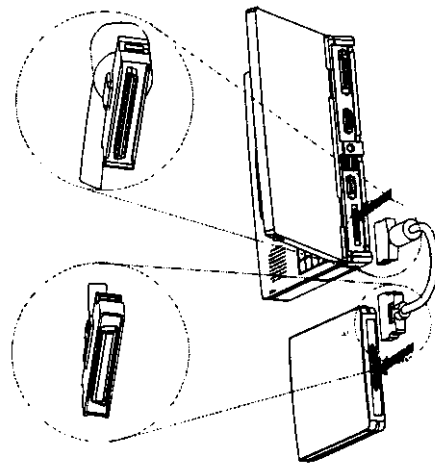


To take out the memory module, you need unlock the memory module by bending the spring-lock outward with your hand. Then reverse the steps above.

Note: Model PW-9800 Memory Bank B supports 16MB, 32MB and 64MB EDO S.O.DIMM 3.3V memory modules.
Model PW-9801/2 Memory Bank B supports 16MB, 32MB and 64MB SDRAM S.O.DIMM 3.3V memory modules.

8.4 Connect/Disconnect the CD-ROM to System

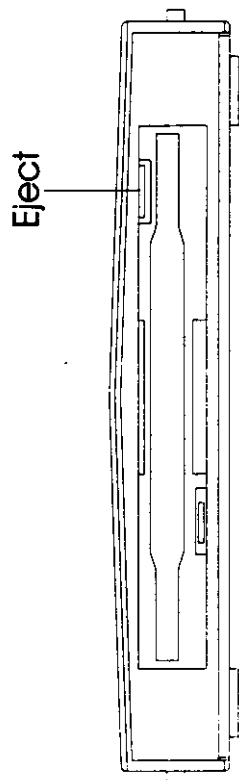
- Warning :** When connection the CD-ROM Player to the mini-notebook through the IDE Port, your are required to :
- Use only the proprietary IDE Cable for CD-ROM Player connection.
 - Make sure the system is powered off before CD-ROM Player connect/ disconnected the IDE port.
 - There is a locking mechanism on the CD-ROM Player end of the IDE Cable. When connecting the cable into CD-ROM Player, please make sure the cable is lock-in
 - There is a locking mechanism on the System end of the IDE Cable. When connecting the cable into notebook, make sure the cable is lock-in.
 - Once the connection is made, do not fiddle with the connection when notebook is powered on.
- Hot (without powering down) connections may cause damage to system board, (and floppy diskette if diskette is inserted).



Chapter 9 Floppy Diskette Drive

The Parallel Port connector can accommodate a Line Printer, a Laser Printer or a 3.5inch Floppy Diskette Drive.

9.1 The Front Panel of Floppy Drive



The above figure illustrates the front panel of the Floppy Drive. Its functions are described below:

Eject Button

Press this button to open or close the disk tray. When the Eject Button is pressed, you will hear a clicking sound and the disk tray eject.

The FDD can read and write files from both 720KB and 1.4KB (2HD) floppies formatted for IBM compatible computers. In order to use a diskette for the first time, it needs to be formatted ; otherwise the computer cannot read or write to it.

Note : By formatting a diskette, all information in the diskette will be lost !

For more information on formatting diskette read your MS-DOS, OS/2, or UNIX Operating Systems Manual.

Chapter 10 Peripherals

You can attach a great variety of accessories to your notebook's ports. Each port will be described below.

10.1 Parallel Port

The Parallel Port, also known as Printer port, uses a standard D-type 25-pin connector. You can connect either a pocket LAN adapter, a printer or any EPP/ECP device to this bi-directional port. This port can be controlled either through BIOS setup or application programs. For detail, refer to Integrated Peripherals in Chapter 12.4.

10.2 COM Port

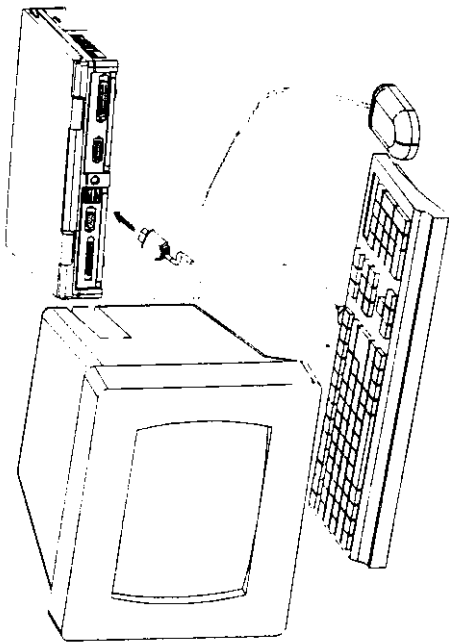
This COM Port allows external Fax/Modem, serial Mouse, or any other standard RS-232C devices to be connected to your notebook. Since this port is port is equipped with a high speed buffer (16550 compatible), it supports high-speed serial devices, such as 56-Kbps Fax/Modem. This port is a 9-pin D-type standard connector. If your peripheral uses the larger 25-pin connection, ask your local dealer for a 9-pin to 25-pin converter.

10.3 VGA Connector

You can attach a VGA or Super VGA Monitor (CRT) to the standard 15-pin D-type VGA Connector. The notebook has capability to display to the LCD and the external Monitor) CRT) at the same time.

10.4 PCMCIA Port

The PCMCIA slot gives you wide variety of connection different options such



10.8 PS/2 Keyboard Connector (PW 9802 only)

The mini-notebook includes a 6-pin mini DIN Connector. You can use this connector to attach an external keyboard or PS/2 mouse.

Chapter 11 Utility Programs

Utility and Driver Diskettes are bundled with your notebook. The contents of the diskettes are as follows:

Item	Contents	Sub-Chapter
1	Utility Diskette (MOUSE, ZVHDD, CD-ROM)	11.1
2	TOUCH PAD Drivers for Win95/98	11.2
3	VGA Drivers for: Windows NT Win95	11.3
4	VGA Drivers for OS/2	11.4
5	PCMCIA Utility for Windows 3.1x	11.5
6	PCMCIA Utility for Win95	11.6
7	Audio Driver for Win95	11.7
8	Audio Driver for OS/2	11.8
9	PCMCIA for OS/2 (procedure only/no driver diskette)	11.9

11.1 Utility Diskette

There are three kinds of program on this diskette: MOUSE (Touch Pad), ZVHDD, and CD-ROM.

11.1.1 Mouse (Touch Pad) Drivers:

Touch Pad Driver for Windows 3.1 and DOS

The files is under A:\TOUCHPAD\A. You need to complete your Windows OS installation before installing the Touch Pad .To complete installation, restart windows 3.1, just insert the floppy in drive A: then type "A: \POINTDEV \INSTALL" command to install the driver of the Touch Pad . The Logitech Touch Pad driver provides additional features not supported by your Windows OS. For detail, type the MOUSE /? command after installation .

11.1.3 CD-ROM DRIVER:

This CD-ROM Driver is for DOS and Window 3.1x. To install, perform the steps below:

- EXIT Windows.
- Insert the driver diskette in drive A:
- Type A:\CDROMINSTALL.BAT [Enter]
- Boot system.

The INSTALL.BAT file will update the CONFIG.SYS and AUTOEXEC.BAT files.

Upon completion, the original content of these two files will be in CONFIG.OAK and AUTOEXEC.OAK.

11.2 Touch Pad Driver for Win95/98

- In Start, choose Run.
- Insert the driver diskette in drive A:
- Type A:\SETUP in the dialog box ,then click OK
- Answer the questions of the Logitech Touch pad install wizard .
- Restart to complete installation.

Features of the Logitech Touch pad can be accessed by choosing Mouse, (General, and then Option) in Control panel of Settings. For more detail, please refer to README.TXT file in diskette.

11.3 VGA Drivers

this diskette contains VGA drivers for Windows NT, and Win95/98.

11.3.1 VGA Drivers for windows NT

Windows NT 3.5 display drivers installation.

- Select Control Panel from Main.
- Select the Display, and Change Display Type.
- Select Change from the Adapter Type area.
- Select Other.
- Insert the Windows NT 3.5 installation Disk in drive A:
- In the Manufacturer's information Located in: dialog box, type
A:\ [Enter]
- In the Models window, select "NeoMagic"
- Select Install and click "Yes" when the Installing Driver dialog box appears.
- When the Windows NT Setup dialog box appears, Select A:\ and click Continue.

A message will appear stating that the driver has been successfully installed. Click "OK" . You must now restart Windows NT 3.5.

For more information, see a readme file in Windows NT VGA driver diskette.

11.3.2 VGA Drivers for win95/98

Do not use the SVGA display driver bundled with the Win95/98, and replace it with the Win95/98 driver that come along with this notebook. The installation is as follows:

- Insert the driver diskette in drive A:
- In Start of Win95, choose Control Panel of Settings.
- Choose Display icon to get into Display properties window.
- Choose Settings, then select Advanced Properties.
- Choose Change, inside Adapter area. You are now in Select Device window.

A:\SETUP [Enter]

Follow the instructions to complete installation. For detail on installation, please refer to readme file in the Win95 PCMCIA Utility diskette. Upon completion, the PCMCIA group, Card Works, can be found under Program of Start. For detail on its functions and operations, please refer to Card Wizard Help.

11.7 Audio Driver for Win95/98

Follow these steps to install the Audio Driver:

- Insert the audio driver diskette in drive A:
- In Start, choose Control Panel of Settings.
- Choose System, and then Device Manager.
- From the device list, choose Sound, video and game controllers. ESS ES1688 Plug And Play Audio Drive will be displayed.
- Choose ESS ES1688 Plug And Play Audio Drive.
- Choose Driver, and then Choose Driver.
- Choose Have Disk. You are now in Install From Disk window.
- Choose A:\to list. inf files. Make file selection (OEMSETUP .inf file).
- Follow instructions to complete installation.
-

11.8 Audio Driver for OS/2

To install the Audio Driver in OS/2 v3.0, follow the steps below:

- Insert the driver diskette to floppy drive A:
- open an OS/2 command prompt session by:
 - Click the icon OS/2 System, and then Command Prompts.
 - Click the icon OS/2 Window.
- Type: A:\EINSTALL.EXE
- Select INSTALL, then follow instruction to complete installation.

- During installation, it is important to verify the base address, DMA and interrupt level are the same as those setup in the BIOS Setup (Chapter 12.4).
- Upon completion, re-boot system.

11.9 PCMCIA for OS/2

You need to perform the steps below before OS/2 can recognize the PCMCIA card:

- In OS/2 select Selective Install.
- Select System and then PCMCIA Support.
- Select the type of PCMCIA card you have.
- Select OK twice.
- Select Install in OS/2 Setup and Installation screen.
- Insert OS/2 CD-ROM disc.
- Select Install again.
- Follow instructions.
- Upon completion, shut down and reboot system.

This mini-notebook uses TI PCMCIA controller TI-1131.

12.2 CPU Switches

Upon completion of the above procedure, if you have just changed a CPU whose speed and voltage are different from the one which you have just swapped out, you need to adjust the following DIP Switch S1, as indicated in the figure below. The DIP switches have 4 switches, running from left to right (1..4).

The S1-1 and S1-2 are used for setting the speed of the CPU. The S1-3 and S1-4 are used for setting the Multiplier (Bus Speed). Example, the external frequency for a 200 Pentium CPU is 66M (thus Multiplier is 3). Therefore settings for DIP switches S1-1, S1-2, S1-3, and S1-4 should be all OFF.

CPU Speed Setting

CPU	SPEED		Multiplier		
	S1-1	S1-2	S1-3	S1-4	Multiple
200 MHz	Off [↓]	Off [↓]	Off [↓]	Off [↓]	3x66MHz
233 MHz	On [↑]	Off [↓]	On [↑]	Off [↓]	3.5x66MHz
266 MHz	Off [↓]	On [↑]	Off [↓]	On [↑]	4x66MHz
300 MHz	On [↑]	On [↑]	On [↑]	On [↑]	4.5x66MHz

CPU Voltage Setting:

	S1-5	S1-6
2.0V	Off [↓]	Intel Off [↓]
1.8V	On [↑]	AMD On [↑]

The S1-5 is used for setting the CPU's voltage, and S1-6 is used to select CPU vendor. Please adjust these DIP switches carefully.

Warning: If you do not understand the exact meaning of these DIP Switches, do not change their settings. In correct setting may cause system hang or damage the CPU. Should you need assistance, contact you local dealer.

13.3 Main Setup

ROM PCI/ISA BIOS(Part NO.) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
LOAD BIOS DEFAULTS	
Esc : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type...	

Hot Keys for Setup:

Key	Command	Description
F1	Help	Gives the list of options available for each item.
Shift F2	Color	Change the color of the display window.
F5	Old values	Restore the old values. These are the values that the user started the current session with.
F6	Load BIOS Defaults	Loads all options with the BIOS Setup default values.
F7	Load Setup Defaults	Loads all options with the Power-On default values.
F10	Save & Exit Setup	Saves changes and reboots the system.
Esc	Quit	Return at anytime and from any location to the Main Menu.

STANDARD CMOS SETUP

ROM PCI/ISA BIOS STANDARD CMOS SETUP AWARD SOFTWARE, INC.	
Date (mm:dd:yy) : Mon, Jun 1 1998	
Time (hh:mm:ss) : 7 : 30 : 33	
IDE	TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
Primary (HD) : AUTO	0 0 0 0 0 0 0 AUTO
Secondary(CDROM) : AUTO	0 0 0 0 0 0 0 AUTO
Drive A : 1.44M, 3.5 in.	
Floppy 3 Mode Support :Disable	
LCD&CRT : Both	
Halt On : All Errors	
Base Memory: 640K	
Extended Memory: 15360K	
Other Memory: 384K	
Total Memory: 16384K	
Esc : Quit	↑ ↓ → ← : Select Item
F1 : Help	(Shift) F2 : Change Color

Date & Time

Date	Display	Setting	Please Note
	mm,dd,year	Type the current date	
Time	Hh:mm:ss	Type the current time	24-hour clock format 3:15 PM is displayed as 15:15:00

System Boot Control Settings

System/Boot Control Settings	Setting	Description	Note
Quick Power On Self Test	Disabled Enabled	Provides a rapid boot at boot-up.	Default
Boot Sequence	A, C C, A C, CD-ROM, A CD-ROM, C, A C ONLY LS120, C	Chooses the boot sequence adapted to your needs, for example: (A, C) means the BIOS will look for an operating system first in drive A, then in drive C.	
Boot Up NumLock Status	On Off	Plus numeric keypad in NumLock mode at boot-up. Plus numeric keypad in arrow key mode at boot-up.	

Typematic Settings

Typematic Settings	Setting	Description	Note
Rate Setting	Disabled Enabled	Enables to adjust the keystroke repeat rate.	
Typematic Rate (Char/Sec)	6	Chooses the rate at which a character repeats.	
Typematic Delay (Msec)	250	Chooses how long after you press a key down the character begins repeating.	

Security Option

Security Option	Setting	Description
	System	Each time the system is booted, the password prompt appears.
	Setup	A password is set; the password prompt only appears when you attempt to enter the BIOS Setup program.

Other Control Options

Other Control Options	Setting	Description	Note
OS Select for DRAM > 64MB	OS2 Non-OS2	When using an OS2 operating system. When using another non-OS2 operating system.	
Report No FDD For WIN 95	Yes	Windows will release IRQ line 6 (normally used by the Floppy Disk Drive) after you disable your on-board FDD and set this field to Yes.	
	No	Windows will reserve INT 6 for your FDD, whether it is disabled or not.	
Video or Adapter BIOS Shadow	Disabled		

Power Management Controls

Power Management Controls	Setting	Description	Note
Power Management	User Define	When you define the BIOS, the system power will be set to the user-defined value.	Default
	Disabled	Disables the power management features.	
		Doze timer: Standby timer down	
	Min Saving	1 Hour 15 Min	
	Max Saving	1 Min 1 Min	

PM Timers

PM Timers	Setting	Description	Note
Standby Mode	Disabled	When the setting has elapsed, BIOS sends a command to the system to enter Standby Mode.	Default
	1Min-1Hour		
HDD Power Down	Disabled	When the setting has elapsed, BIOS sends a command to the HDD to power down. This turns off the HDD motor.	Default
	1-15Min		Some older model HDDs may not support this function.
MODEM Use IRQ	3,4,5,7,9,10,11,NA		Default :3

SAVE TO HDD MODE

SAVE TO HDD MODE	Setting	Description	Note
	Disabled	All standby actions will enter normal standby mode. Only Hot key <Fn>+<F4> can invoke saving to HDD action.	Default
	Enabled	All suspend and standby actions will cause saving to HDD.	

Notes :

You should use ZVHDD.EXE program for the feature of saving to HDD . Please refer to Chapter 11.1.2 .

PNP/PCI CONFIGURATION SETUP

ROM PCI/ISA BIOS PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.	
Resources Controlled By : Manual	PCI IRQ Activated by : Level
Reset Configuration Data : Disabled	Used MEM base addr : N/A
IRQ-3 assigned to : Legacy ISA*	ESC : Quit ↑ ↓ → : Select
IRQ-4 assigned to : Legacy ISA*	F1 : Help ← : Item
IRQ-5 assigned to : PCI/ISA PnP*	F5 : Old PU/PD/ : Modify
IRQ-6 assigned to : PCI/ISA PnP*	Values +/- (Shift) : Color
IRQ-7 assigned to : PCI/ISA PnP*	F2 : Load BIOS Defaults
IRQ-8 assigned to : PCI/ISA PnP*	F7 : Load Setup Defaults
IRQ-9 assigned to : PCI/ISA PnP*	
IRQ-10 assigned to : PCI/ISA PnP*	
IRQ-11 assigned to : PCI/ISA PnP*	
IRQ-12 assigned to : PCI/ISA PnP*	
IRQ-13 assigned to : PCI/ISA PnP*	
IRQ-14 assigned to : PCI/ISA PnP*	
IRQ-15 assigned to : PCI/ISA PnP*	
DMA-1 assigned to : PCI/ISA PnP*	
DMA-3 assigned to : PCI/ISA PnP*	
DMA-5 assigned to : PCI/ISA PnP*	
DMA-6 assigned to : PCI/ISA PnP*	
DMA-7 assigned to : PCI/ISA PnP*	

Type [Y] to use the Setup Defaults followed by [Enter] or otherwise [N] to return to the Main Menu and keep current values.

INTEGRATED PERIPHERALS ROM PC/ISA BIOS INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.

IDE HDD Block Mode	: Enabled	Build In CPU Audio	: SB 16
Primary IDE Channel	: Enabled	Audio I/O Base Address	: 220H
Read Prefetch	: Disabled	MPU-401 I/O Base Address	: 330H
Write Buffer	: Disabled	Audio IRQ Select	: IRQ5
Master Drive PIO Mode	: Auto	Audio Low DMA Select	: DMA1
Secondary IDE Channel	: Enabled	Audio High DMA Select	: DMA5
Read Prefetch	: Disabled		
Write Buffer	: Disabled		
Master Drive PIO Mode	: Mode 1		
Onboard FDC Controller	: Enabled	ESC : Quit ↑↓→← : Select Item	
Onboard Serial Port 1	: 3F8/IRQ4	F1 : Help PUP/D+/ : Modify	
Onboard Serial Port 2	: 2F8/IRQ3	F5 : Old	
UART2 Mode	: IrDA FIR	Values (Shift) F2 : Color	
FIR Mode Use DMA	: 3	F6 : Load BIOS Defaults	
Onboard Parallel Port	: 378/IRQ7	F7 : Load Setup Defaults	
Parallel Port Mode	: Compatible		

IDE Device Controls

IDE Controls	Setting	Description	Note
IDE HDD Block Mode	Disabled Enabled	Invokes multi-sector transfer instead of one sector per transfer. Not all HDDs support this function.	Default
IDE Primary Master PIO mode	0-4	0 is the slowest speed & 4 is the fastest speed	
IDE Secondary Master PIO			

Auto	For better performance and stability we suggest you install the setting of auto for hard disk controller.	Default
------	---	---------

FDC Controls

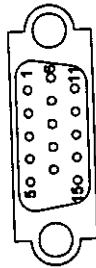
FDC Controls	Setting	Description	Note
Onboard FDC Controller	Disabled Enabled	Turn off the on-board floppy controller. Use the on-board floppy controller.	Default

Onboard Serial Ports

Onboard Serial Port	Setting	Description	Note
Onboard Serial Port 1	Disabled	Onboard serial port 1.	Default
Onboard Serial Port 2	3F8/IRQ4 2F8/IRQ3 3E8/IRQ4 2E8/IRQ3	Onboard serial port 2. Onboard serial port 3. Onboard serial port 4. Onboard serial port 5.	Default Default
UART2 Mode	IrDA FIR IrDA SIR	Supports a serial infrared (IR) interface. Supports a serial infrared interface.	Default
Sharp IR	Sharp IR	Supports a Sharp serial interface format.	
Modem	Modem	Supports a modem serial interface format.	

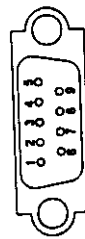
Appendix A Connectors and Pin Assignments

1. VGA Monitor Connector



PIN	Assignment	PIN	Assignment	PIN	Assignment
1	RED	6	GROUND	11	N.C.
2	GREEN	7	GROUND	12	N.C.
3	BLUE	8	GROUND	13	HSYNC
4	N.C.	9	N.C.	14	VSNC
5	GROUND	10	GROUND	15	N.C.

2. Communication Port Connector(Serial Port)

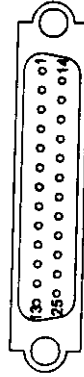


PIN	Assignment	PIN	Assignment	PIN	Assignment
1	Carry detect	4	Data Terminal	7	Req. To Send
2	Receive Data	5	GROUND	8	Clear To Send
3	Transmit Data	6	Data Send	9	Ring Indicator

3. Keyboard Connector(PW9802 only)

PIN	Assignment	PIN	Assignment	PIN	Assignment
1	Keyboard Data	3	GROUND	5	Keyboard Clock
2	N.C.	4	+5V POWER	6	N.C.

4. Parallel Port(LPT / FDD connector)



For Printer

PIN	Assignment	PIN	Assignment	PIN	Assignment
1	STROBE-	10	Acknowledge	19	GROUND
2	DATA-0	11	BUSY	20	GROUND
3	DATA-1	12	Paper Empty	21	GROUND
4	DATA-2	13	Selected	22	GROUND
5	DATA-3	14	Auto Feed-	23	GROUND
6	DATA-4	15	Initialize	24	GROUND
7	DATA-5	16	SLIN-	25	GROUND
8	DATA-6	17	GROUND		
9	DATA-7	18	GROUND		

For FDD

PIN	Assignment	PIN	Assignment	PIN	Assignment
1	N.C.	10	Drive Select-	19	GROUND
2	INDEX-	11	Motor on-	20	GROUND
3	DATA-1	12	Write Data-	21	GROUND
4	DATA-2	13	Write Gate-	22	GROUND
5	TRACK0-	14	Den SEL	23	GROUND
6	DATA-4	15	Initialize	24	GROUND
7	DATA-5	16	SLIN-	25	GROUND
8	DATA-6	17	GROUND		
9	Media-type	18	GROUND		

Gradually increase the Brightness of the LCD display. The Hot-key works for both STN and TFT models.

Step decreasing switch of the audio volume.

Step increasing switch of the audio volume.

Appendix C Troubleshooting Guide

If you have a problem with your computer, you may be able to easily solve it with the aid of this appendix and the online Troubleshooting. This appendix provide similar information: a brief checklist for solving minor problems and a list of possible problems and solutions for the following topics:

- Audio
 - Keyboard
 - Battery/Battery Gauge
 - CD-ROM Player
 - Diskette/Diskette Drive
 - Hard Disk Drive
 - Hardware
 - Infrared
- Memory
 - PC Card (PCMCIA)
 - Pointing device
 - Power
 - Printer
 - Screen (display and external monitor)

Solving Battery and Battery Gauge Problems *Continued*

Problem	Probable Cause	Solution(s)
	Battery pack has partially self-discharged.	Computer the battery pack by fully charging, then fully recharging it. To maintain the charge, leave battery packs in the computer when it is connected to external power. If the computer is disconnected from external power for more than two weeks, remove battery packs from the computer to reduce the discharge rate.
	Battery pack is being exposed to high temperatures or extremely cold temperatures.	Keep the battery pack within the recommended temperature ranges. Operating: 50°F to 104°F (10°C to 30°C) storage: -4°F to 86°F (-20°C to 30°C) Recharge the battery pack.

Solving CD-ROM Drive Problems

Problem	Probable Cause	Solution(s)
CD-ROM drive cannot read a compact disc.	Compact disc is upside down or is improperly inserted in the CD-ROM drive.	Open the CD loading tray, lay the compact disc in it (label side up), then close the tray.
CD-ROM drive does not work.	CD-ROM drive is not connected properly.	Shut down the computer, pull out the cable then plug in the drive and turn on the computer again.
	CD-ROM drive was connected while computer was on, in Standby (Suspend), or in Hibernation.	Shut down computer; then turn it on again. The drive is initialized during power up.

Solving Hard Drive Problems *Continued*

Problem	Probable Cause	Solution(s)
Hard drive error occurs.	Hard drive was inserted while computer was on, in Standby (Suspend), or in hibernation.	Shut down computer; turn it on again. The hard drive is initialized during power up.
Hard drive has bad sectors or has failed.	Click the Device Manager tab in System Properties, then double-click Disk Drives and verify the hard drive is recognized. Double-click the hard drive to view the status and settings for the drive.	

Solving Infrared Problems

Problem	Probable Cause	Solution(s)
Cannot link with another computer.	Interrupt request (IRQ) conflict.	Check for IRQ conflicts in System Properties Device Manager and in Computer Setup. Reassign if two devices have the same IRQ address.
	Baud rate conflict.	Select the same baud rate for both computers.
	A physical condition exists that affects the connection.	Refer to the solutions below for data transmission problems.
Cannot transmit data.	Direct sunlight, fluorescent light, or flashing incandescent light is close to the infrared connections.	Remove the interfering light sources.

Continued

Solving PC Card (PCMCIA) Problems *Continued*

Problem	Probable Cause	Solution(s)
When the computer is on, it does not beep when a PC Card is inserted.	Card is not fully inserted into the slot or is not inserted properly.	Be sure card inserted right side up, is aligned properly within the slot, and is fully inserted (see Chapter 7).
PC Card beeps are disabled.		Double-click the PC Card icon in Control Panel, click the Global Settings tad, then enable PC Card sound effects.
Speakers are turned off or volume is turned down.		If the speaker icon is not visible on the status panel, press the Fn+F5 hotkey to turn the speakers on, then adjust the volume control.
The PC Card slots are disabled.		Run Computer Setup and enable PC Card slots on the Security menu (see Chapter 11). Click the Device Manager tad in System Properties, double-click PCMCIA socket, then double-click the PC Card controller. If no check marks are in the boxes next marks are in the boxes next to the docked and undocked configurations under Device Usage, click the boxes to add checks.

Continued

Solving PC Card (PCMCIA) Problems *Continued*

Problem	Probable Cause	Solution(s)
	PC Card or card driver is not PCMCIA compliant.	Contact your authorized dealer, reseller, or service provider for a list of PC Cards tested successfully in PC Card computers.
When the computer is on, it beeps only once when a PC Card is inserted.	The PC Card is not recognized but is properly configured.	The card may need card-specific drivers or formatting (see Chapter 7).
Computer beeps twice but PC Card modem, fax, or network card does not work.	Telephone card is not plugged in all the way.	Verify that the telephone connection is secure.
	Card-specific drivers for network card are not installed.	Install card-specific drivers (see Chapter 7).
	Network server is unavailable.	Contact system administrator.
Computer beeps twice when a storage card is inserted, but the card does not work.	You are trying to access the storage card using the wrong drive letter.	Click the Device Manager tab in System Properties, double-click the storage card, then click the settings tad and verify the letter assigned to the card.

Solving Printer Problems

If you experience problems printing, run a printer self-test. Refer to the documentation provided with your printer for instructions. If the self-test fails, it is a printer-specific problem. Also refer to printing section of your application documentation.

Problem	Probable Cause	Solution(s)
Printer will not turn on.	The signal cable may not be connected properly, or the printer is unplugged.	Ensure that the signal cable is properly connected and that the power cord is connected to the electrical outlet.
Printer will not print.	Printer is not turned on or is offline.	Turn the printer on and set it to online.
	Correct printer driver not installed.	Double-click the Printer icon in Control Panel to add a new printer. Also refer to the printer documentation.
	Printer that is set up for a network is not connected to the network	Connect the printer to the network.
	Printer cable is too long, unshielded, or defective.	Replace the cable.

Continued

Solving Printer Problems *Continued*

Problem	Probable Cause	Solution(s)
	Paper tray is empty.	Fill the paper tray with paper and set the printer to online.
Printer prints garbled information.	Correct printer driver is not installed.	Double-click the Printer icon in Control Panel to add a new printer. Also refer to the printer documentation.
	Cable is not connected properly.	Ensure that the printer signal cable is properly connected to the computer.
	Cable is damaged.	Replace the cable.

Solving Screen Problems

This section lists some common causes and solutions for computer display and external monitor problems.

You can perform a monitor self-test on an external VGA color or monochrome monitor by disconnecting the monitor from the computer.

To do so, complete the following steps:

1. Switch to the internal display.
2. Turn off the external monitor.
3. Disconnect the external monitor signal cable from the computer.
4. Turn on the monitor and allow it to warm up for one minute.

Name: _____ Type: _____ Revision: _____ IRQ: _____
DMA: _____

Name: _____ Type: _____ Revision: _____ IRQ: _____
DMA: _____

Name: _____ Revision: _____ Error

Message:

☐ Config.sys ☐ Autoexec.bat ☐ Advanced BIOS setup ☐ Power Manager

Attach another page with detail description of your problem or use the backside.

Your cooperation is most appreciated!

[illegible]

The screen should be white. A narrow black border may also appear on the left and right sides of the display. Either of these displays indicates that the monitor is working properly.

Problem	Probable Cause	Solution(s)
Characters are dim.	The brightness or contrast (if applicable) control is not set properly.	Adjust the control(s) on the right side of the computer display.
Screen is blank.	Computer screen is in direct light.	Tilt the display or move computer.
	Screen save was initiated after the Power Management screen timeout (period of inactivity).	Press any key or click the mouse.
	You have another screen blanking utility installed.	Press any key and/or enter your password.
	Standby (Suspend) was initiated.	Press the Standby (Suspend) button to exit Standby.
	You initiated QuickLock/QuickBlank.	Enter your password to exit QuickLock/QuickBlank.

Appendix D Error Log

Dear User:

Thank you for purchasing mini-notebook!

If you have any problems with your computer, especially with software or hardware compatibility we would like to hear from you so that we can maintain 100% compatibility. Please fill-out this report and fax to your local dealer for technical support.

Your Name : _____
 Phone Number : _____
 Fax Number : _____
 E-mail Address: _____

Mini-notebook Model: ☐PW9800 ☐PW9801 ☐PW9802

Serial Number : _____

Memory: ☐16MB ☐32MB ☐48MB ☐64MB ☐128MB

Display: ☐STN ☐TFT ☐CRT ☐CRT+LCD

HDD: Manufacturer: _____ Model: _____
☐1.6GB ☐2.1GB ☐3.0GB ☐5GB ☐_____

BIOS Revision: _____ Date: _____

O.S. : ☐DOS ☐Win95 ☐Win98 ☐OS/2 ☐_____

Peripheral Attached:

Sound system: ☐Enable ☐DMA ☐IRQ ☐Ext. Microphone

☐Internal Fax/Modem ☐Mouse

☐Printer

Solving Pointing Device Problems

Problem	Probable Cause	Solution(s)
External pointing device does not work.	Incorrect device driver or no device driver is installed.	Double-click the Add New Hardware icon in Control Panel to install driver.
Integrated pointing device does not work.	An external pointing device is connected and the system has disabled the internal pointing device.	Initiate Standby (Suspend) and disconnect the external pointing device.

Solving Power Problems

Problem	Probable Cause	Solution(s)
Computer will not turn on.	Computer is not connected to a power source.	Insert a battery pack or connect an external power source.
Battery pack in computer is discharged.	Battery pack in computer is fully charged	Insert a fully charged battery pack or connect an external power source.
Power cords to the external power source are unplugged.	Power cords to the external power source are connecting the computer and the external power source are plugged in properly.	Ensure that power cords connecting the computer and the external power source are plugged in properly.
The computer turned off while it was left attended and the status panel is off.	Computer initiated Hibernation after a preset timeout.	Turn on the computer.

Continued

Solving Power Problems Continued

Problem	Probable Cause	Solution(s)
Computer initiated Standby (Suspend) automatically or turned off automatically when it was docked in the expansion base.	Computer initiated Hibernation because of a critical low-battery condition.	Replace the battery pack with a fully charged battery pack or connect an external power source. Then turn on the computer.
Computer initiated Standby (Suspend) automatically or turned off automatically when it was docked in the expansion base.	The maximum operating temperature was exceeded.	Computer is in an exceedingly hot environment and the fan was not able to cool it adequately. Let the computer cool down, then turn it on again.

Solving Infrared Problems *Continued*

Problem	Probable Cause	Solution(s)
	Interference from wireless devices.	Keep remote control units such as wireless headphones and other audio devices away from the infrared connections.
	Physical obstruction.	Do not place objects between the two units that will interfere with a line-of-sight data transmission.
	Movement.	Do not move either unit during data transmission.
	Orientation.	Adjust devices so that they point within 30 degrees of each other.
	Distance.	Verify that devices are not more than 3 feet (1 m) apart.

Solving Keyboard Problems

Problem	Probable Cause	Solution(s)
Embedded numeric keypad on computer keyboard is disabled.	Num Lock function is not enabled.	Press the NumLock keys to enable the Num Lock function and embedded numeric keypad. The Num Lock icon on the LCD indicator turns on (see chapter 2).

Solving Memory Problems

Problem	Probable Cause	Solution(s)
Memory count during Power-On Self-Test (POST) is incorrect.	Optional memory expansion board is installed incorrectly or is defective.	Ensure that the optional memory expansion board is installed correctly (see Chapter 10).
"Out of Memory" message is displayed on the screen or insufficient memory error occurs during operation.	System ran out of memory for the application.	Refer to the application documentation for memory requirements.
	Too many programs are open.	Install additional memory. Close any programs that you do not need.

Solving Diskette and Diskette Drive Problems

Problem	Probable Cause	Solution(s)
Cannot access diskette drive.	Diskette drive is not connected properly.	Shut down the computer, pull out the cable then plug in diskette drive, turn on the computer again.
Diskette drive cannot write to a diskette.	Diskette is write-protected.	Disable the diskette's write-protect feature or use a diskette that is not write-protected.
	Diskette is not formatted.	Double-click the My Computer icon, click the icon for the disk you want to format, click the File menu, then click Format.
	Diskette has a bad sector	Run the Windows Scan Disk program. Copy files to hard reformat the diskette.
	Drive error has occurred.	Click the Device Manager tad in System Properties, then double-click Disk Drives and verify the diskette drive is recognized.
Diskette drive cannot read a diskette.	The wrong type diskette is being used.	Use the type diskette required by the drive.
	Diskette is defective or damaged.	If you can read other diskettes in the drive, try reading this diskette in another diskette drive to verify it is damaged.

Continued

Solving Diskette and Diskette Drive Problems *Continued*

Problem	Probable Cause	Solution(s)
	Drive error has occurred	Click the Device Manager tab in System Properties, then double-click Disk Drives and verify the diskette drive is recognized.
Cannot boot diskette.	from Bootable diskette is not in drive.	Double-click the diskette drive to view the status and settings for the drive. Put the bootable diskette in drive.
	Diskette Boot is disabled in Computer Setup.	Run Computer Setup and enable Diskette Boot on the Initialization menu.

Solving Hard Drive Problems

CAUTION: To prevent loss of information in case of errors or failures, maintain an up-to-date backup of your hard drive at all times.

Problem	Probable Cause	Solution(s)
Reading hard drive takes an unusually long time after starting the computer.	System is restoring from Hibernation.	Give the system time to restore the save data to its exact state before Hibernation.
Cannot access hard drive.	Hard drive is not seated properly.	Shut down the computer, remove and reinsert the hard drive, then turn on the computer.

Continued

Solving Battery and Battery Gauge Problems

Problem	Probable Cause	Solution(s)
Computer won't turn on when battery pack is unplugged.	Battery is discharged.	Connect the computer to an external power source and charge the battery pack. Replace the battery pack with a fully charged battery pack.
Computer is beeping and battery capacity is blank.	Battery charge is low.	Immediately save any open file(s). Then do any one of the following: ■ Connect the computer to an external power source to charge the battery pack. ■ Initiate Standby (Suspend) and replace the battery pack with a fully charged battery pack. ■ Turn the computer off or initiate Hibernation until you can find another power source or charge the battery pack. The speaker can be turned off/on by pressing the Fn+F5 hotkey.

Continued

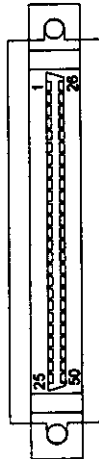
Solving Battery and Battery Gauge Problems

Continued

Problem	Probable Cause	Solution(s)
Battery pack is warm to the touch after charging.	Normal warming has occurred due to charging.	No action is required.
Percentage of battery capacity is inaccurate.	The battery pack is new or has not been used for a long time.	Condition the battery pack by fully charging, then fully discharging, then fully recharging it.
The computer shut down and information in memory was lost when a battery pack was being replaced.	Standby (Suspend) was not initiated before removing the discharged battery pack, or a charged battery pack was not inserted within the minutes after removing the discharged battery pack.	To prevent loss of information next time, initiate Standby (Suspend), remove the discharged battery pack, and insert a fully charged battery pack within the minutes.
You have to set date and time every time you turn on the computer.	CMOS battery is at end of its life.	Replace the CMOS battery.
Battery pack operating time is far less than the documented average operating time.	Power management is turned off or disabled.	Enable power management in Computer Setup and in Windows Power Properties (see Chapter 4). The power management icon should be visible on the status panel.
An external device or PC Card is draining the battery.	Turn off or disconnect external devices when not using them.	

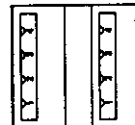
Continued

5. IDE Port



PIN	Assignment	PIN	Assignment	PIN	Assignment
1	AUDIO_L	18	DATA-14	35	CA1-
2	AUDIO_R	19	DATA-1	36	CS0-
3	AUDIO GND	20	DATA-15	37	DASP-
4	GROUND	21	DATA-0	38	+5V POWER
5	RESET-	22	DMA REQ	39	+5V POWER
6	DATA-8	23	GROUND	40	+5V POWER
7	DATA-7	24	IOR-	41	+5V POWER
8	DATA-9	25	IOW-	42	+5V POWER
9	DATA-6	26	GND	43	GROUND
10	DATA-10	27	IOCHRDY	44	GROUND
11	DATA-5	28	DMA ACK	45	GROUND
12	DATA-11	29	IRQ	46	GROUND
13	DATA-4	30	IO16-	47	SLAVEMASTER
14	DATA-12	31	A1	48	GROUND
15	DATA-3	32	DIAG	49	GROUND
16	DATA-13	33	A0	50	GROUND
17	DATA-2	34	A2		

6. USB Port



PIN	Assignment	PIN	Assignment	PIN	Assignment
1	+5VPOWER	2	DATA_L	3	DATA_H
2	GROUND				

Appendix B Hot-Keys

To use the Hot Keys function, press and hold down <Fn> together with the key described below:

F2 LCD, CRT display switch. Press this combination to switch between CRT, LCD and CRT/LCD for simultaneous display.

F4 Suspend-To-Disk. In this mode, data in memory will be saved to partition of HDD created by ZVHDD. The system then shut down automatically. When you switch on the power again, you will then return to the point exactly where you left off.

F5 Turn off the warning buzzer when the battery reaches Battery Low 2 or Low1 level.

F6 Switch the LCD/CRT screen off/on for power saving.

F7 Gradually decreases the color Contrast of STN display. The Hot-key has no effect on TFT LCD model.

F8 Gradually decreases the color Contrast of STN display. The Hot-key has no effect on TFT LCD model.

F9 Gradually decrease the Brightness of the LCD display. The Hot-key works for both STN and TFT models.

Onboard Parallel Ports

Onboard Parallel Port	Setting	Description	Note
Onboard Parallel Port	378/IRQ7	Set the printer port address	Default
Onboard Parallel Port	3BC/IRQ7		
Onboard Parallel Port	278/IRQ5		
Onboard Parallel Port	Disabled		
Onboard Parallel Port	Compatible EPP	Use mode dependent on source device	
Onboard Parallel Port	ECP	Use mode that is compatible with ECP	Default

Others Control Options

Others Control Options	Setting	Description	Note
Buildup of Audio	SB 16		Default
Audio / Video	Disabled		Default
Audio / Video	220H		
Audio / Video	240H		
Audio / Video	260H		
Audio / Video	280H		
Audio / Video	330H		Default
Audio / Video	300H		
Audio / Video	Disabled		Default
Audio / Video	IRQ5		
Audio / Video	IRQ7		
Audio / Video	IRQ10		
Audio / Video	Disabled		
Audio / Video	DMA0		Default
Audio / Video	DMA1		
Audio / Video	DMA3		
Audio / Video	Disabled		
Audio / Video	DMA5		Default
Audio / Video	DMA6		
Audio / Video	DMA7		
Audio / Video	Disabled		

SAVE AND EXIT SETUP

SAVE to CMOS and EXIT (Y/N)? _

Type [Y] to save the changes and exit or [N] to return to the Main Menu and keep current values

EXIT WITHOUT SAVING

Quit Without Saving (Y/N)? _

Type [Y] to abandon changes and exit or [N] to return to the Main Menu and keep current values.

PNP/PCI Configuration Controls

PNP/PCI Control	Setting	Description	Note
Resource Controller	Manual	Allows you to manually assign resources to devices.	
	Auto	Allows the system to automatically assign resources to devices.	Recommended
Resource Allocation	Disabled	Prevents the system from allocating resources to devices.	Default
	Enabled	Allows the system to allocate resources to devices.	Default

PNP/PCI Configuration Setup

PNP/PCI Setup	Setting	Description	Note
IRQs and DMA	PCI/ISA PnP	Allows the system to automatically assign IRQs and DMA channels to PCI and ISA devices.	IRQs: 3, 4, 5, 7, 9, 10, 15 DMA: 0, 1, 3, 5, 6, 7
	Legacy ISA	Allows the system to manually assign IRQs and DMA channels to legacy ISA devices.	IRQs: 3, 4, 5, 7, 9, 10, 15 DMA: 0, 1, 3, 5, 6, 7

Other Control Options

Other Control Options	Setting	Description	Note
POST Beep	Level	Controls the level of the POST beep.	
	Edge	Controls the edge of the POST beep.	
	NA	No beep.	
	G800, CC00, D000, D400, D800, DC00	Controls the frequency of the POST beep.	

LOAD SETUP DEFAULTS

STANDARD CMOS SETUP
INTEGRATED PERIPHERALS
LOAD SETUP Defaults (Y/N)? _

LOAD BIOS DEFAULTS

Type [Y] to use the Setup Defaults followed by [Enter] or otherwise [N] to return to the Main Menu and keep current values.

LOAD BIOS DEFAULTS

STANDARD CMOS SETUP
INTEGRATED PERIPHERALS
LOAD BIOS Defaults (Y/N)? _

LOAD BIOS DEFAULTS

Other Options	Control Setting	Description	Note
	Enabled	The BIOS is shadowed to a 64K segment. It is enabled and it has BIOS present. These 16 segments can be shadowed from ROM to RAM. BIOS shadow copies BIOS code from slow ROM to faster RAM. BIOS can then execute from RAM.	

CHIPSET FEATURES SETUP

ROM PCI/ISA BIOS CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.			
System Clock Speed	: 30MHz		
DRAM Speed	: 60ns		
Hyper Page (EDO) DRAM	: Enabled		
16 Bit I/O Recovery Time	: 5		
8 Bit I/O Recovery Time	: 5		
USB Keyboard Support	: Disabled		
ZV port buffer	: Disabled		
		ESC: Quit ↑ ↓ → ← : Select Item F1: Help PUPD/+/- : Modify F5: Old Values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	

CHIPSET FEATURES SETUP

CHIPSET FEATURES	Setting	Description	Note
System Clock	30MHz LOW		
DRAM Speed	60ns		
	70ns		
	User		
Hyper Page (EDO) DRAM	Enabled		
	Disabled		
8 Bit I/O Recovery Time	5	Use the default setting.	Default
16 Bit I/O Recovery Time	5	Use the default setting.	Default
USB Keyboard Support	Disabled	Turn on the optional USB.	Default
ZV port buffer	Enabled	Use a USB keyboard.	
	disabled	Turn off the ZV port buffer.	
	Enabled	Use the ZV port.	

POWER MANAGEMENT SETUP

ROM PCI/ISA BIOS POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.	
Power Management : Disabled	IRQ1 (Keyboard) : ON IRQ3 (FIR) : ON IRQ4 (COM 1) : ON IRQ10(Reserved) : OFF IRQ11(Reserved) : OFF IRQ12(Touch Pad) : ON
** PM Timers **	
Standby Mode : Disabled	
HDD Power Down : Disabled	
MODEM Use IRQ : 3	
Save to HDD MODE : Disabled	
ESC: Quit ↑ ↓ → ← : Select Item F1: Help PUPD/+/- : Modify F5: Old Values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	

Hard Disks Type & Mode

Primary/HD (Secondary/IDE)	Setting	Description	Note
Type	Auto	BIOS automatically detects and sets up the system.	Default
	1-46	Selects disk type manually.	
	User	User defines the disk type manually.	
Mode	Auto	BIOS detects hard disk type automatically.	Default
	LBA	Enhanced IDE hard disk.	>528MB

Floppy Drives

Floppy Drives	Setting	Description	Note
Drive A	1.44MB, 3 1/2 in.		Default
	None	Not installed.	

Floppy 3 Mode Support

Select Enable or Disable for using the 3 mode floppy disk or not.

LCD&CRT

Select the display device: Both (Default).

Halt On

When the BIOS detects system errors, this function will stop the system. Select which type of error will cause the system halt: All Errors (Default), No Errors, All But Diskette, All But Keyboard, All But Disk/Key.

BIOS FEATURES SETUP

ROM PCI/ISA BIOS	
BIOS FEATURES SETUP	
AWARD SOFTWARE, INC.	
Virus Warning	: Disabled
CPU Internal Cache	: Enabled
Quick Power On Self Test	: Enabled
Boot Sequence	: A, C
Boot Up NumLock status	: Off
Security Option	: Setup
OS Select for DRAM	: Non-OS2
>64MB	
Report No FDD For WIN	: Yes
95	
ESC : Quit	↑ ↓ → ← : Select Item
F1 : Help	PU/PD+/ : Modify Values
F5 : Old Values	(Shift)F2 : Color
F6 : Load BIOS Defaults	
F7 : Load Setup Defaults	
Video BIOS shadow	: Enabled

Virus Warning

Virus Warning	Setting	Description	Note
	Disabled		Default
	Enabled	Enable this option to protect the boot sectors and partition tables of your hard disk. Any attempt to write to them will the system to halt and display a warning message.	

Cache Memory Options

Cache Memory Options	Setting	Description	Note
CPU Internal Cache	Disabled		
	Enabled	Enables the CPU's internal cache.	Default

Chapter 13 Configuring Your System

13.1 Configuration Software

The mini-notebook can easily be configured to suit your personal needs. The built-in SETUP program allows you to setup standard advanced parameters as well as the Power Management Features. The information is stored in a battery-backed CMOS memory; so when the power is turned off, your setup is retained. This Configuration Software is sometimes refer as CMOS Setup, BIOS Setup, or simply the SETUP.

Note: The Setup can only be activated be pressing during system boot-up.

You are requested to perform the following one-time procedure immediately after you have upgraded/reprogrammed your BIOS:

- Press during system boot-up to get into the SETUP.
 - Go to the SAVE & EXIT SETUP sub-menu and key in "Y(or y)". Press Enter.
 - The system will boot-up automatically. Press during system boot-up to get into the SETUP.
 - Now, you can customize the BIOS for your personal needs.
- For detail on the BIOS setup, read on.

Note: For information on the BIOS upgrade, contact your local notebook dealer.

13.2 Running the Setup Utility

The main menu in the SETUP program is CMOS SETUP UTILITY. There are fourteen items in the main menu. Selecting six of these items will bring out sub-menus respectively: STANDARD CMOS SETUP, BIOS FEATURES SETUP, CHIPSET FEATURES SETUP, POWER MANAGEMENT SETUP, PNPP/PCI CONFIGURATION, and INTEGRATED PERIPHERALS. Detail on the six major sub-menus are described on the following pages.

Movement within the setup utility

To move between the different item fields vertically, use the cursor keys ↑ and ↓. To move between the different item fields horizontally, use the cursor keys ← and →. To change the value of a field press the PgUp and PgDn keys or + and - keys. When you select one item, that item will be highlighted, if you press <F1> a brief explanation will be displayed within a Help box located on the center of the screen, and you can press <F1> or <Esc> to close the box. When in the main menu, <Esc> is the hot key to select the EXIT WITHOUT SAVING item, and <F10> is the hot key to select the SAVE & EXIT SETUP item.

The followings are some of the most commonly used keys:

- Pressing <F5> will load the previous saved values for you.
- Pressing <F6> will load the BIOS default values for you.
- Pressing <F7> will load the SETUP default values for you.
- Pressing <Shift> + <F2> will change the color settings of the menu.
- Pressing <Esc> will back to main menu from any of the sub-menus.

Chapter 12 System CPU

Mini-notebook PW980 series will build in different CPU. PW9800 will support Cyrix Gxi-180MHz CPU only. PW9801 will support 233MHz or 266MHz Cyrix-Gxm CPU, but the CPU speed will be fixed before shipping. PW9802 mini-notebook supports the following standard Intel Pentium® CPUs or AMD K6 series CPU: 200MHz, 233MHz, 266MHz and 300MHz CPU. However, there are restrictions on the voltage of these CPUs. At the time when this manual is written (8/98), the followings are their specifications.

	1.8Volts	2.1Volts
Intel 200 MHz (SPGA)	✓	
Intel 233 MHz (SPGA)	✓	
Intel 266 MHz (SPGA)	✓	
AMD 233 MHz (SPGA)		✓
AMD 233 MHz (SPGA)		✓
AMD 300 MHz (SPGA)		✓

The entries above checked with "✓" are what are available in the market currently.

Note: The availability of the above CPUs subjects to the latest market trend. For detail, please Consult your local notebook dealer.

12.1 Replacing CPU Module(PW9802 ONLY)

- Make sure the system is powered off.
- Follow instructions, as described in Chapter 7.1, to open keyboard. The CPU is located on the upper right corner under keyboard, as shown in the right.
- Insert a screw driver into the CPU (left) groove and gently push it to the right (as shown in figure), until the CPU module slides to the right by approximately 2 mm.
- Take the CPU module out as shown.
- Figure on the left shows the bottom view of a Pentium® CPU, with CPU pins pointing upward.
- The arrow 1, as shown, indicates the cut-off corner of the CPU. This cut-off corner serves to indicate the orientation of the CPU module, when it is being inserted into its bay.
- As shown in figure, position the CPU module with the cut-off corner on the upper left corner (arrow 1), before gently push the module into its bay (with CPU pins pointing downward).
- Insert a screw driver into the CPU (right) groove and gently push it to the left (as shown in figure), until the CPU module slides to the left by approximately 2 mm.
- The CPU module is now properly inserted in its bay.
- Replace the CPU pad. For heat conduction purpose, the CPU Pad needs to be applied to the CPU module squarely in the middle with no air bubble in between. Press the CPU Fan into the pad firmly. Then connect fan cable to system board.
- The CPU Pad can be used one time only.

- Choose Have Disk. You are now in Install From Disk window.
- Choose Browse to list *.inf files. Select the nmgc.inf file and click OK. You are now back to Install from Disk window.
- Click OK again to get into the new Select Device window.
- Select driver NeoMagic MagicGraph 128ZV+ and then click OK. After the completion of file copying from A:\, you are now in Advanced Display Properties window.
- Choose Close. You are now back to the Display properties window.
- Choose Apply, or you can change Color palette or Desktop area setting before select Apply.
- Choose Yes to restart Win95.

Upon completion of installation, you should be using the NeoMagic MagicGraph 128ZV+ driver.

11.4 VGA Driver for OS/2

To install the OS/2 VGA Driver in OS/2 v3.0, follow the steps below:

- Insert the driver diskette to floppy drive A:
- Open an OS/2 command prompt session by:
 - Click the icon OS/2 System, and then Command Prompts.
 - Click the icon OS/2 Window.
- Change the prompt to the floppy drive A: Make sure the diskette have volume label "MAGICI".
- Type: SETUPC
- From the Display Driver Install window, select Primary Display and then OK.
- From the Primary Display List window, select Neo Magic NM2090 and then OK.

- Select INSTALL in Source Directory window.
- Select OK in Display Directory window.
- Remove diskette from drive. Shutdown and re-boot system.
- In OS/2, select OS/2 System, and then System Setup.
- Select System and then Screen.
- Select 800x600x256, then close current window.
- Re-boot system.

11.5 PCMCIA Utility for Windows 3.1x

Follow these steps to install the PCMCIA Utility in Windows 3.1x:

- Start Windows. In Program Manager, choose Run from File Menu.
- Insert Windows 3.1x PCMCIA utility diskette in drive A: In Run dialog box, type:

A:\SETUP [Enter]

Follow the instructions to complete installation. For detail on installation, please refer to readme file in the Windows 3.1x PCMCIA Utility diskette. Upon completion, a window group System Soft Tools will be created. For detail on its functions and operations, please refer to Card Wizard Help.

11.6 PCMCIA Utility for Win95/98

Follow these steps to install the PCMCIA Utility in Win95:

- Insert Win95 PCMCIA utility diskette in drive A:
- In Start of Win95, choose Run.
- In Run dialog box, type

11.1.2 ZVHDD:

If you would like to use the Suspend to Disk option (Function Key couple <Fn> <F4> and Low Battery Activity), you need to run the ZVHDD program first.

The Suspend to Disk saves all the memory settings (RAM, Video Memory and system status) to the HDD. The ZVHDD program allows you to set aside an area in the HDD, a special partition, or a hidden file for such memory backup.

For more detail on Suspend to Disk and Power Management, refer to Chapter

12.6.

There are five options for this program, and they are described below:

- /C(create)** Use this option when you have upgraded memory; when you want to change the size of the partition; or when installing a new HDD. Upon completing the creation, the partition is formatted and is ready for use.
- /D(delete)** Delete the partition or the hidden file, disables the Suspend to Disk function.
- /FILE** If the HDD is formatted, you can use this option to specify a dedicated hidden file in your HDD to store the suspended data.
- /PARTITION** Before you format the HDD, You can use this option to specify a dedicated partition of the HDD to store the suspended data.
- /M: memory size** Use this option to specify the onboard memory size of your notebook. memory size here is in MB. If the system memory size is 32M bytes, you should plus 4M to for reservation of the VGA memory or other expand memory, this means the memory size to specify here is 36 (32 + 4).

Note: Users are advised to create the ZVHDD partition before installing any OS into HDD. For memory expansion in the future, when creating the ZVHDD partition, it is a good idea to set aside HDD space that is more than you need now. For example, if your system currently has 8MB memory and 1MB Video Memory, it is recommended to specify 12MB for the partition. If you do have any plan to upgrade your system memory to say 16MB, you should reserve at least 20MB for the partition. Otherwise, after upgrading your system memory to 16MB you have to do without Suspend To Disk function, or to go through the trouble of backing up all files in the HDD before deleting, and re-creating the ZVHDD partition. After that, you have to format the user's partition and to restore your OS and user's data files.

Example: ZVHDD /C /PARTITION /M: 20

When you are running the ZVHDD to facilitate function of suspension to HDD, we recommend you to choose the /FILE option for convenience:

ZVHDD /C /FILE /M: [SIZE]

Without the SIZE option, the notebook detects how much memory you have, and reserves space for this. The amount of HDD space used is equal to amount of system memory (8, 16, 24, or 40MB), plus 1MB or 2MB for the video RAM.

Warning: For safety purpose, keep a copy of all the files before running ZVHDD (/C /PARTITION) program. The function of the program is to make a new partition. Incorrect operations during ZVHDD may effectively erase all the information on the Hard disk.

The extra partition, you have made with ZVHDD program, cannot be accessed nor can it be used to store any user's data file.

as: Fax/Modem, Flash Memory, SCSI Adapter, LAN connection, HDD, and etc. Even Win95 has built-in support for PCMCIA cards and will recognize any "plug and play" compatible PCMCIA cards after its insertion. Before inserting a card into the PCMCIA slot, be sure that you have installed the PCMCIA drivers (Chapter 10.4 and Chapter 10.5) that came with the notebook. Otherwise, the notebook may not be able to recognize that a card has been inserted.

If you have any problem with a particular card, perform the followings:

- Read the "readme" file in the PCMCIA utility.
- Contact your dealer for assistance. Provide them with the following information:
 - The name of your BIOS Driver, phoenix, and its revision.
 - Printed listing of your CONFIG.SYS and AUTOEXEC.BAT files.
 - The type and revision of your PCMCIA card.
 - Fill out the two-page Error Log, in Appendix E of this manual.

10.5 Sound jacks and Volume Dial

The notebook has two built-in Sound Jacks and one Volume Dial:

Mic In: A microphone can be connected to record speech, music or sounds.

Input impedance is 30-kohm ~ 100-kohm.

Earphone: You can connect your earphones, speakers or tuner system.

Output impedance is 80-ohm.

Volume: Adjust the volume of the built-in stereo speakers as well as any audio device that is connected the mini-notebook the Earphone jack. Adjust the volume also can be down by keyboard.

Use <Fn> <F11> can decrease the volume and use <Fn> <F12> can increase the volume.

10.6 FIR Port

FIR stands for Fast Infra Red. FIR Port is, therefore, a normal serial port but it communicates via infrared transmission rather than via an attached cable. With but it feature, you can transfer data without cable attachment. Just place the FIR Port of the two devices (e. g. a notebook and a printer both equipped with FIR Port) within line of sight distance (typical: 1.0 meter; $\pm 15^\circ$), and run the IR software. And data will be transmitted between the two devices through infrared rays. Microsoft win95 has built-in support for IrDA. If your notebook is not pre-installed with Win95, IR software is not bundled with your notebook and needs to be purchased separately. This FIR Port is compatible with the HP IrDA standard, and has a transmission rate up to 4Mb/s baud.

10.7 USB Port (PW9800/9801 only)

Two USB (Universal Serial Bus) ports were on the rear side of PW9800 and PW9801 mini-notebook. The USB port can let you to access an USB-KeyBoard, USB-Mouse, and so on.

9.2 Floppy diskette Loading/Ejection

Diskette Loading

- Press the Eject button on the front panel to release the disc tray.
- Gently pull the disc tray to its fullest extend.
- Place the disc on the tray with its labeled side facing up.
- Gently push the disc tray back into the drive.

Diskette Ejection

- Press the Eject button on the front panel to release the disc tray.
- Gently pull the disc tray to its fullest extend.
- Remove the disc from the disc tray, and put it in its protective case.
- Gently push the disc tray back into the drive.

9.3 Connect/Disconnect the Floppy Drive to System

The FDD is used to transfer data to and from your hard disk via 3.5-inch diskettes.

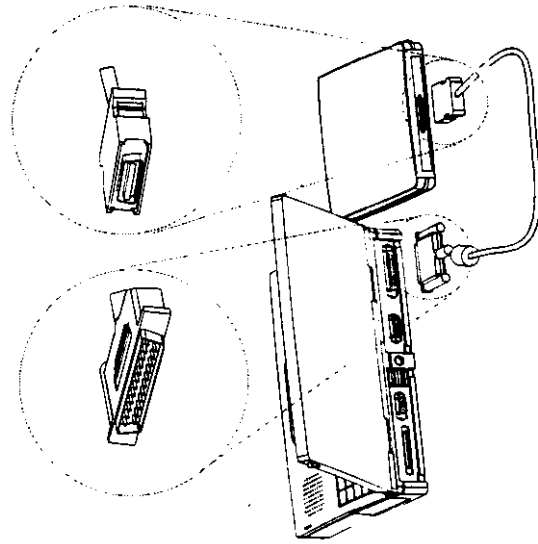
Your standard notebook package includes one FDD with proprietary cable. You can connect your standard FDD to your mini-notebook through the parallel port directly.

Warning : When connection the FDD to the mini-notebook through the Parallel Port, your are required to :

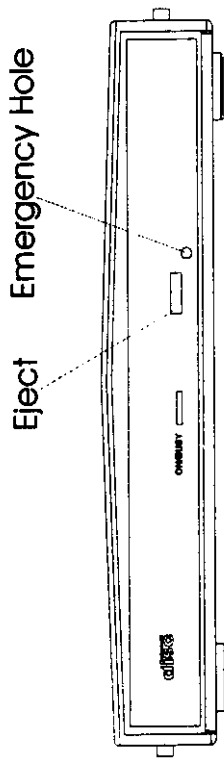
- Use only the proprietary FDD Cable for FDD connection.
- Make sure the system is powered off before FDD connect/ disconnected the parallel port.
- There are two hand-held screws on the System end of the FDD Cable.

When connecting the cable into FDD, make sure these screws are tightly fasten into the FDD.

- There is a locking mechanism on the FDD end of the FDD Cable. When connecting the cable into notebook, make sure the cable is lock-in.
 - Once the connection is made, do not fiddle with the connection when notebook is powered on.
- Hot (without powering down) connections may cause damage to system board, (and floppy diskette if diskette is inserted).



8.1 The Front Panel of CD-ROM Player



The above figure illustrates the front panel of the CD-ROM Player. Its functions are described below:

Press this button to open or close the disk tray. When the Eject Button is pressed, you will hear a clicking sound and the disk tray eject.

Emergency Hole

When the notebook is powered off, the Eject Button does not function. To open the CD-ROM drive, insert a metal rod (an extended large paper clip with diameter of 1.2 mm or less is suitable) into this hole, then push the rod to eject the drive.

8.2 DISC Loading/Ejection

Disc Loading

- Press the Eject button on the front panel to release the disc tray.
- Gently pull the disc tray to its fullest extend.
- Place the disc on the tray with its labeled side facing up.
- Gently push the disc tray back into the drive.

Disc Ejection

- Press the Eject button on the front panel to release the disc tray.
- Gently pull the disc tray to its fullest extend.
- Remove the disc from the disc tray, and put it in its protective case.
- Gently push the disc tray back into the drive.

8.3 CD-ROM Maintenance

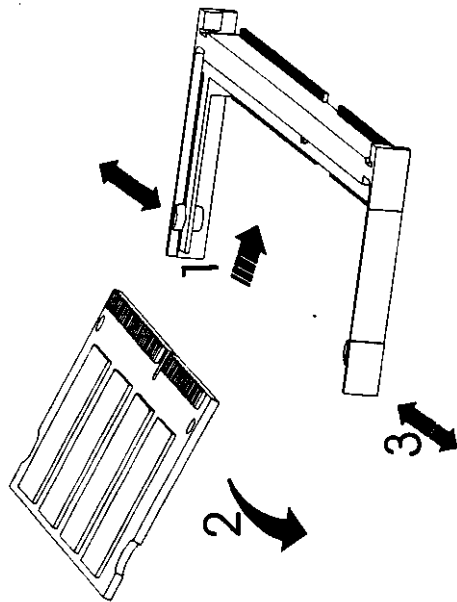
Disc Handling

When removing a disc from its protective case or loading a disc to a drive, hold it by its edges only. NEVER touch the disc's data surface (labeled side).

To protect the disc against scratches and dirt, keep it in its protective case when not in use.

Disc Cleaning

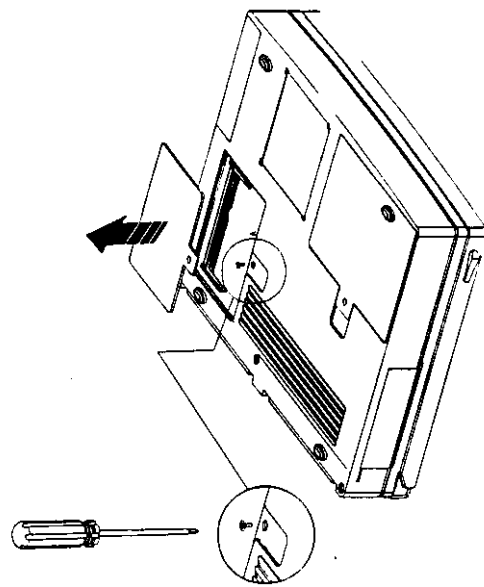
When cleaning the disc, be sure to wipe it from center to edge. Don't wipe the disc in a clockwise/counter clockwise direction. Otherwise, this can damage the disc. Keep the discs away from high temperature and high pressure.



To take out the memory module, you need to need to unlock the memory module by bending the spring-lock outward with your hand. Then reverse the steps above.

7.2 Memory Installation for Bank B

- Make sure the mini-notebook is powered off.
- Flip the notebook up side down, and unscrew screw on the door of the cabinet for Memory Banks B as shown.
- Open cabinet door.

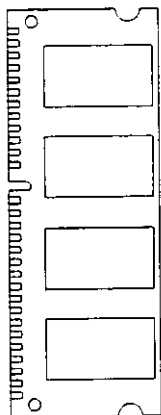


Follow the steps below to install the memory module into bank B:

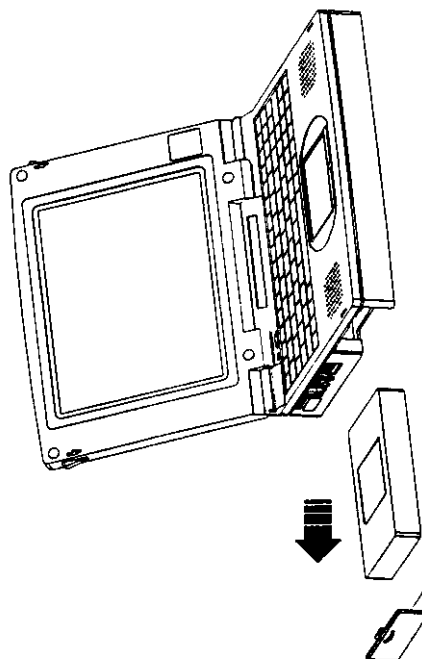
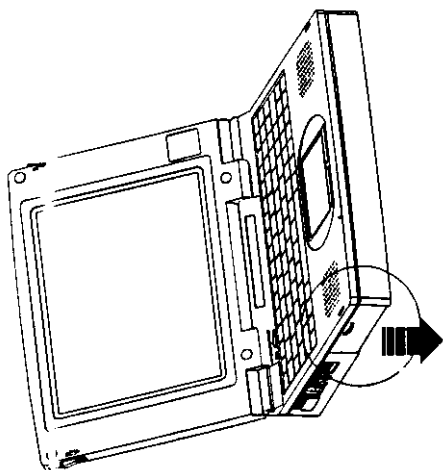
- Insert the module into the bank (as indicated by arrow 1). When inserting the module should have an angle of 45° with the system board and that the module's groove matches the protrusion of the module down (as indicated by arrow 2).
- You will hear a clicking sound when the spring-lock (as indicated by arrow 3) bends outward and then bends inward to lock the memory module.

Chapter 7 Memory

Your mini-notebook is equipped with a highly configurable memory sub-unit. Industry standard 3.3 Volts EDO /SDRAM 60ns 144-Pin S.O. DIMM self-refresh memory modules. For PW-9800, please choose EDO memory module; for PW-9801 and PW9802, choose SDRAM memory module. 16MB/32MB/64MB are available for memory upgrade from 16MB to /32MB/48MB/64MB/128MB. There are two memory banks: one on the top-side of system board under keyboard, and another on the bottom side of system board. They will be referred to as Bank A and Bank B respectively. The table below illustrates how your system memory can be configured.



Memory	Bank A	Bank B
16 MB	16 MB	None
	None	16 MB
32 MB	16 MB	16 MB
	32 MB	None
	None	32 MB
48 MB	16 MB	32 MB
	32 MB	16 MB
64 MB	64 MB	None
	None	64 MB
128 MB	64 MB	64 MB



- Make sure the system is Power off.
 - Press the battery cover and push the cover downward (as show).
 - Pull the Battery Pack as shown.
- To insert primary, reverse the steps above.

- The flickering battery icon will be accompanied a buzzing sound from the speakers. If ZVHDD partition has been created, Suspend Function set to Save-to-HDD, and the Low Battery Activity in the BIOS setup has been enabled, Save-to HDD will be performed automatically by the system. For detail on ZVHDD, Save-to HDD and BIOS setup, refer to Chapter 10.1.2 and Chapter 12.6. Without the Save-to HDD, you are running the risk of running out of power soon. If you haven't saved your work, now is definitely a good time. Otherwise all modifications you have made since last save will be lost. The buzzing sound can be turned OFF via Function <Fn> <F5> couple Hot Keys.

6.6 Battery Maintenance

To maintain the battery pack's maximum capacity, you should occasionally let the mini-notebook deplete its battery power completely before recharging.

To carry out a complete depletion of battery, disconnect the AC adapter and let your mini-notebook consume the remaining battery power. To speed up the depletion, use the FDD and HDD as much as possible, and the LCD be set as bright as possible. When the battery should be within 15-25°C (59-77°F). Then insert the AC adapter to recharge the battery.

6.7 Power Consumption

The mini-notebook's Power Management System reduces power consumption when the computer is running. Power reduction is accomplished via an activity monitor which reduces CPU's clock speeds and puts peripheral devices in the Suspend Mode during periods of "inactivity" (i.e. power is ON but the computer is idle). This function works independent of any DOS or Windows applications.

Standby Mode:

When your mini-notebook is ON but left with no I/O Standby for user selected timeout (refer to Standby Timeout in Chapter 12.6), the system will enter Standby Mode (unless Power Savings is disabled in the Setup Utility). In Standby Mode, the system keeps running but uses less power because the CPU clock speed is reduced and various devices are powered down. Simply press any key (or any I/O, FDD, HDD, CD-ROM, printer or LCD activity) to "wake-up" the system. The CPU clock will instantly return to its original speed. When system is heavily involved in CPU/Memory bound operations, such as HIMEM's memory testing and internal spreadsheet computations, the notebook will enter Standby Mode. In a situation like this the performance of your system will fall dramatically. However according to experience, when notebook is not powered by an AC Adapter, this setting is very effective in extending the battery pack's operation time. For more detail, refer to Chapter 12.6.

Suspend Mode:

In Suspend Mode, most of the system components are in low power mode, and the Power Management Indicator will be on. When system is already in Standby Mode and there is no system activity for a user selected time duration, system enters Suspend Mode. See Suspend Timeout and Standby Timeout in Chapter 12.6. Just press any key to return to normal operation.

LCD Cover Switch:

By closing the LCD cover, the notebook's backlight will automatically shut down. Backlight will be on again when you open up the LCD cover.

Disconnecting any external equipment that does not have its own power source. External equipment that is powered by the computer drains the battery pack.

Exiting modem program when not in use.

Remove PC Cards when they are not in use. Cards inserted into the PC Card slots may drain the battery more quickly than expected, even if the computer is in Standby (Suspend).

Disable the infrared port and PC Card slots in Computer Setup when that are not being used.

Keeping the battery pack in the mini-notebook when it is connected to external power. This maintains the full charge by supplying a constant trickle charge to the battery pack.

6.3 Recharging the Battery Packs

Your mini-notebook supports both on-line and off-line recharge. Follow the procedure below to recharge battery:

- Make sure the battery pack/s is installed in the mini-notebook.
- Connect the AC Adapter to the mini-notebook and to an electrical outlet.

When the battery pack is being recharged, the battery indicator will be on.

While the mini-notebook is OFF, a depleted Li-Ion battery will take about three hours to recharge.

6.4 Questions and Answers

Q: I can feel the heat next to Touch Pad during recharging, is it normal?

A: The battery will generate heat during recharging and discharging. There is protection circuit inside the notebook to prevent overheating. User needs not to worry.

Q: My battery operation time isn't as long as it should be. Why?

A: The battery is heat sensitive and can only be charged to its maximum if the battery and its environmental temperature is within 15-25°C (59-77°F).

The more the temperature deviates from this range during recharging, the less chance there is the battery to be fully charged. In order to recharge the pack to its full capacity, users are requested to cool down the unit by unplugging the AC Adapter. Wait until it is cooled down, and then plug in the AC Adapter to start recharging again.

Chapter 5 The LCD Screen

The mini-notebook has two screen options : STN (Scan Twist Neu-matic) 8.0 inches color in 640x480 resolutions and TFT (Thin Film Transistor) 8.4inches color in 800x600 resolutions.

5.1 Adjusting Contrast-Brightness

The notebook uses "Hot Keys" to adjust contrast and brightness.

Contrast Control :

Press and hold down the function key couple <Fn> <F7> together or <Fn> <F8> together to adjust the Contrast.

Note : Contrast cannot be changed on the TFT brightness Contrast !

Brightness Control :

Press and hold down the function key couple <Fn> <F9> together or <Fn> <F10> together to adjust the Brightness.

5.2 LCD to CRT to Simultaneous Display

By pressing and holding down the Function key couple <Fn> <F2> together, you can switch your display between CRT (External Monitor), LCD (Internal Display), and CRT/LCD simultaneous.

Note : The resolution on LCD display is 640x480(STN) or 800x600(TFT) pixels. Higher resolution can be displayed on both the LCD and CRT. When higher resolution (such as 1024x768) is selected for the LCD, you can take advantage of the display panning option; whereby the displayable area is larger than that of the display panel. Move the mouse cursor (pointer) to the extreme left/right/top/bottom of the access the other part of the screen. In 800x600 setting, the displayable area equals to the size of the display panel. For software alternatives, please refer to Chapter 10. See figure below on Displayable Area.

Figure on 1024x768 Displayable Area on 800x600 LCD panel display

Note : When you switch your display from CRT Only Simul (both LCD and CRT simultaneously), the following symptoms may occur:

- Depends on your CRT, the size of the screen may be different from (smaller/larger than) the size CRT displayable area.

- The displayed screen is off-centered.

- The screen flickers.

The symptoms are caused by the lower CRT refresh rate when Simul display is selected. This problem is usually more severe in STN than in TFT. If you want a better display, you should select CRT Only.

Chapter 4 Hard Disk Drive

The mini-notebook is equipped with an internal HDD (Hard Disk Drive) and one external IDE connector. See below for a description on these two drives. You can use a CD-ROM player, a LS-120 high Capacity FDD, a DVD player or Secondary HDD through the external IDE connector.

4.1 Removable Hard Disk Drive (HDD)

Your mini-notebook is equipped with a replaceable HDD. The HDD can easily be upgraded to higher capacities. Your mini-notebook is compatible with most industry standard 12.7mm IDE interface hard disk drives. Consult your dealer for more information.

Note : Before formatting the Hard disk, drives Chapter 10.1.2 on ZVHDD. ZVHDD is necessary for Suspend-to-Disk option.

When the notebook is accessing the HDD, indicator light is on. The hard disk enters Suspend Mode if there is no disk access for a user selected time duration (e.g. two minutes). In Suspend Mode, the disk motor "Spins Down" . Disk accessing will wake the drive up, but reading or writing is enabled after the motor spins back to normal speed. "Spin up" needs about 5~10 seconds to reach normal speed.

Note : Caution ! Always keep a backup of your files on HDD to prevent data loss.

4.2 Removing the Hard Disk Drive

Your Hard disk drive is easily removable and can be replaced or upgraded.

There are many advantages to that use the computer, or separate hard disks for different purposes.

Follow these steps to remove the hard disk drive.

- Make sure the system is powered off.
- Flip the notebook upside down, and un-screw the screw on the door of the HDD as shown.
- Open HDD door.
- Slide the HDD to the left (as indicated by arrow) to un-lock HDD, and lift HDD up gently.
- Gently holds HDD connector ring and pull it to the left (as indicated by arrow) while pulling the HDD to the right (as indicated by arrow).

3.1 General View

The keyboard has a total of 85 keys, include 3 win95/98 keys. Some keys have multiple symbols on them. Their functions can be accessed via different key combinations:

EXAMPLE :



To access the " 0 " , press the key only.

To access the ") " , press the shift and the key.

To access the " * " , press the Numeric Lock key first, then press the key.

F1 to F12 keys are Function keys

Caps Lock Key :

When the Caps Lock indicator light on, letters are typed in upper-case. When the Caps Lock indicator light is off, all letters are typed in lower case.

Print Screen Key :

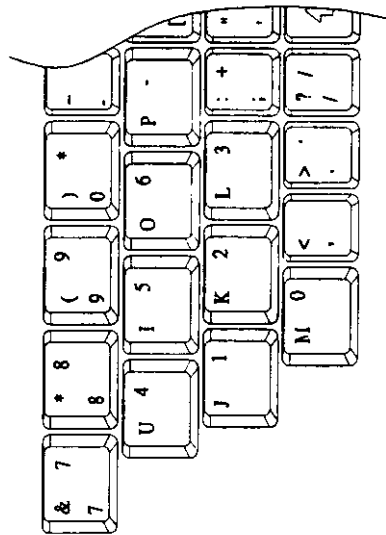
By pressing the Print Screen key, the characters or text shown on the screen will be printed on your printer.

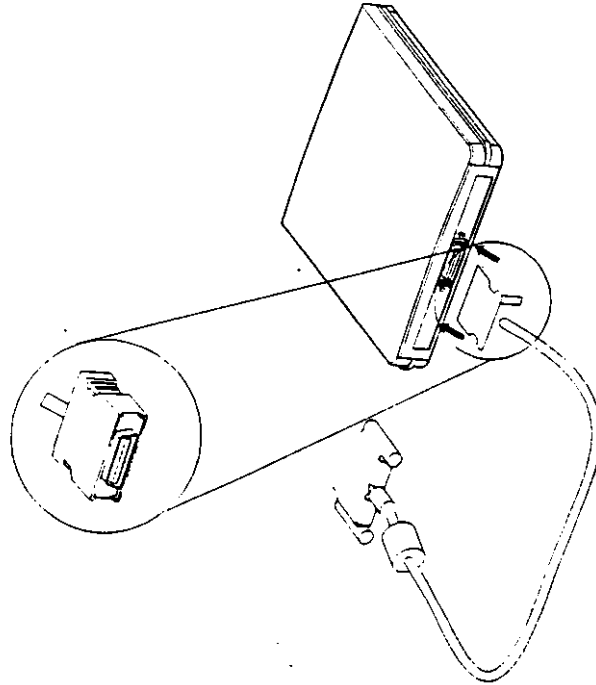
Warning : Don't press the Print Screen key unless a printer is connected to the mini- notebook otherwise the system may hang.

3.2 The Embedded Numeric Keypad

The figure below shows the location of the embedded numeric keypad which can be activated via the Numeric Lock key.

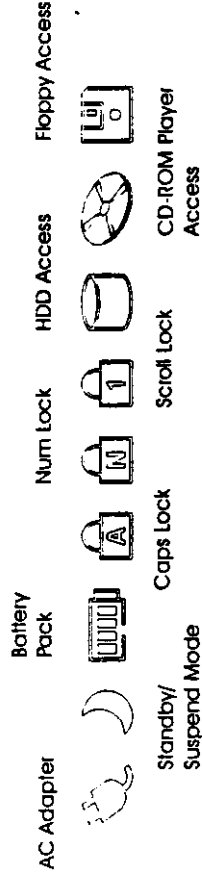
The Numeric Lock key which is located near the upper right corner of the keyboard is printed in blue color, and the keys on the embedded numeric keypad are also in blue color.





A Panoramic View of the FDD. The proprietary FDD cable is for connecting the FDD to notebook's LPT Port (located in rear panel of mini-notebook)

2.3 System Status LCD



STANDBY/SUSPEND Mode Indicator

Icons will appeared if system is in STANDBY or SUSPEND mode.



FLOPPY Access Indicator

Icon appears if FDD is in I/O activity.



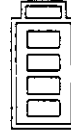
HDD Access Indicator

Icon appears if HDD is in I/O activity.



CD-ROM Player Access Indicator

Icon appears if an external CD-ROM Player, LS-120 FDD or a second HDD is connected to IDE connector.



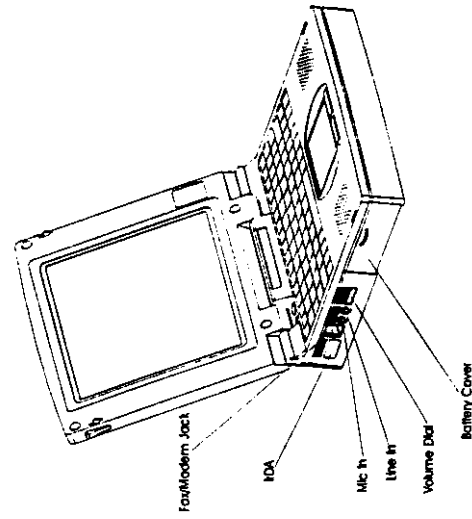
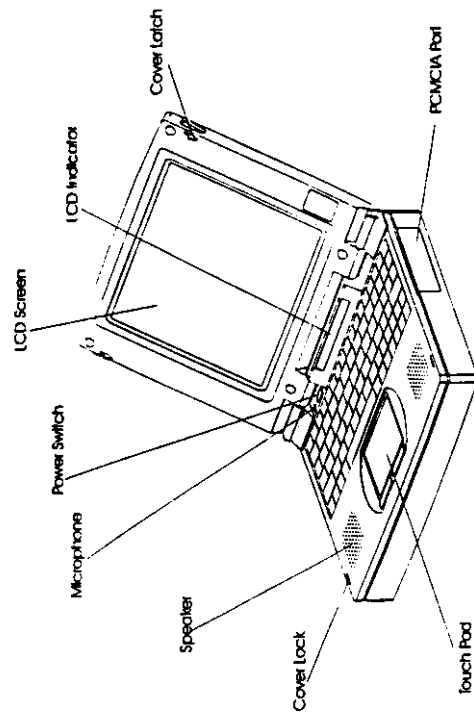
BATTERY PACK Indicator

Icon appears if Battery Pack is installed to mini-notebook. The display message will be include "Battery no install", "25% Capacity", "50% Capacity", "75% Capacity", "100% Capacity".

Note: You should keep the original factory carton and packing materials in case you need to ship the unit.

2.2 Examining Your Computer

Before you start using your computer, you need to get acquainted with your mini-notebook's main features and interfaces:



A Panoramic View of the mini-notebook

1.2 Special Features

Power Management

- Power Saving can be switched OFF, Maximum (ON) or Customize (ON) in the BIOS Setup.
- The LCD panel will automatically turn off when the cover is closed.
- Support Advanced Power Management (APM).
- System enters Standby Mode when no device activity occurs after a user selected time duration.
- In Standby mode, CPU speed is reduced to low speed to consume less power. Any I/O activity will wake up the system.
- Suspend Mode enable/disable. The VGA subsystem (including LCD panel) goes into Suspend Mode after a user selected time duration of inactivity. Access to the video will cause the VGA subsystem to return to normal mode, with the screen backlight activated.
- Suspend Function, and Low Battery Activity allows system to save memory contents and system activities into a HDD partition created by ZVHDD. When you power on the system again, the system will return to exactly where you left off.
- Timeout timers (no activity) for various including Video, Audio, PCMCIA, HDD, and Serial ports. The power of these devices will be turned off when their corresponding timers expire.
- Status LCD to display the status of various aspects of the system: such as POWER ON, Suspend, Battery Status, Caps-Lock, Numeric-Lock and Scroll Lock, HDD activity, CD-ROM installed, FDD activity, Numeric-Lock and Scroll Lock.

Memory Expansion

System memory can be upgrade from 16MB to 32/48/64/128MB. For more information, refer to Chapter 7.

Hot Keys

Please see Appendix B for all available Hot Key functions such as Contrast and Brightness adjustment, and Suspend To Disk etc.

Touch-Pad

The touch-pad is conveniently located, making it easily accessible to both left and right handed people. There are two buttons at the bottom of the Touchpad, emulating the right and left mouse buttons. Use your finger as mouse pointer to draw lines or point to as item as needed. Double click (tap) on the Touch-pad to simulate mouse button clicking.

Note: You are advised clean your Touch-pad with a dry cloth in a regular basis. Grease, dirt, and moisture on Touch-pad and lead to abnormal mouse operations.

PCMCIA

PCMCIA card provides many powerful features for your mini-notebook. Many cards are available today, such as Fax/Modems, Network Adapter, Memory Expansion, SCSI Adapters, Sound modules and more. The PCMCIA unit of your mini-notebook provides connections to two type 2 (5mm height) or one type 3 (10.5mm height) standard cards. Type 3 cards are usually hard disk cards (ATA HDD).

1.1 Standard Features

SYSTEM

- Intel Pentium® or Pentium-grade NS Gxi/GXm processor 180MHz
- 16MB DRAM expandable up to 32, 64, or 128MB.
- 256KB Flash ROM contains BIOS.
- ROM BIOS and Video BIOS shadowing for better performance.
- High capacity HDD, from 2.1GB, 3.0GB and 5GB. Can be changed easily.

DISPLAY

- PCI Local Bus and hardware graphics accelerator for superior performance.
- Simultaneous LCD and CRT display, or only LCD, or only CRT.
- The LCD and display 640x480(VGA) by STN Panel while video CRT output can display 640x480, 800x600, and 1024x768 (all model).
- Depends on model, your LCD screen size is either 8.0"
- LCD will automatically enter sleep mode if inactive for a period of time (determined by user).
- Fast Video Memory (inside VGA chip)

STORAGE

- Upgradable hard disk subsystem: 2.1 Gigabyte, 3.0Gigabyte or 5.0Gigabyte (higher capacities when available) 12.7mm height 2.5 inches IDE HDD.
- A 3.5 inch 1.44MB industry standard floppy disk drive via LPT port (Parallel port).

- A CD-ROM Player, high capacity FDD (LS-120), DVD Player or second HDD can easily be installed via IDE connector.

KEYBOARD

- 85 full keys , plus 3 Win95/Win98 keys, with an embedded numerical keypad, indicators in Status LCD for Caps Lock, scroll Lock, and Numeric-Lock.
- External PS/2 keyboard connector located on the right side of notebook.(PW9802 only)
- Two external USB connectors located on rear side of mini-notebook.(PW9800/9801)

CONNECTIVITY and EXPANSION

- Built-in Touch-pad, IBM PS/2 mouse compatible.
- One serial D-type 9-pin connector.
- One 6-pin mini DIN external keyboard, or PS/2 mouse connector.(PW9802 only)
- One 15-pin D-type connector for external VGA monitor support.
- One parallel port 25-pin D-type for printer, FDD or pocket LAN. High-speed bi-directional port under either hardware or software control (EPP/ECP compliance).
- One PCMCIA type 3 or two type 2 slots.
- One Audio Line connector.
- One Earphone/Speaker-out connector.
- One External Microphone In connector.
- One Volume Dial.
- External Floppy Diskette Drive Connector.

Chapter 1 Introduction

Thank-you for purchasing the multimedia Mini-notebook ! You are holding the most powerful, feature-rich and expandable mini-notebook ever made. We encourage you to read over this manual to familiarize yourself with all the capabilities that your machine has to offer. For those of you who just cannot wait to get start, please take time to read the safety instructions at the very beginning of this manual, the overview in this chapter, the basic operations in chapter 2, and configuring your system as explained in chapter 12. The you can go ahead and get with you new notebook !

Overview

This mini-notebook is a full-function portable multimedia computer. You can take advantage of high-resolution graphics, images, audio, video, and text animation. The notebook can access CD-DA, CD-ROM, CD-ROM/XA, CD-I (CD-Video) and PHOTO-CD discs via the external CD-ROM drive.

The mini-notebook utilizes all the advanced features of the Intel Pentium® processor or NS Pentium-grade processor whose speed and performance is much higher then its predecessor, the 486 family of CPUs. And to its use of the high speed PCI interface for the system components, the notebook can take advantage of the new "plug and play" standard which allows your system to automatically itself every time you add or remove options or components.

The list of standard features built into the notebook is as it is impressive. It