

If you change the computer's hardware configuration, for example by adding more memory, you must record this in the hardware information. You can access the SETUP program at any time by pressing the following keys at the same time:

<Ctrl - Alt - S>

Using The Setup Menu Program:

When you turn on the computer it first goes through a series of self tests. As part of these tests, the computer uses a record of the hardware present to check the system. This record is created by using software that is permanently recorded in the computer, called a SETUP program. If the self-test discovers a difference between the record and the existing hardware it displays a message on the screen asking you to run the SETUP program. You can then correct the record.

In most cases the record should be correct when you receive the computer. If so, the self-test finishes and the computer loads the Operating System into the computer's memory.

Even if you do not get any message to use the SETUP program, at sometime in the future you might want to change the equipment on your computer. As your need change, you will very likely have to reconfigure your system using the SETUP program to let the computer recognize these changes.

For example, you should run SETUP under all of the following conditions:

You have setup the computer for the first time and you got a message stating that you should use the SETUP Program.

You added or removed memory (RAM).

You want to reset the system clock.

You added an "external" video display and want the computer to recognize it's existence.

You want to change the Expanded Memory.

You want to automatically set the CPU clock speed so it runs either fast or slow.

You want to redefine the Communication Ports to prevent any conflicts.

Note: The above are only examples.

The next section discusses how to use the SETUP Menu Program and how to switch and save your new settings. A brief discussion of the optional settings among the different submenus follows.

If the hardware configuration is changes or the "Self Test" does not pass, the following message appears on the screen. "Invalid

configuration information, please run SETUP program. Press the F1 key to continue, [F2] to run the setup utility." Press [F2] and wait for the SETUP Main Menu to appear on the screen. Check the SETUP menu and correct it, then press the escape key (ESC) to leave the program and reboot. You will see a list of items which can be highlighted. Press the [up] or [down] arrow keys to switch among the settings. Each choice in the list provides you with further access to a sub menu when you hit the [F1] key at a given highlighted field.

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#### Standard System Parameters

System Time:	15:00:00	Video initial state
System Date:	April 12, 1992	Video Display: LCD (Normal)
		LCD Contrast: Auto Map
Diskette A:	3.5", 1.44 MB	Font Select: Expanded
Diskette B:	Not Installed	Cyl Hd Pre Lz Sec Size
Hard Disk 1:	Type 49	980 15 0 980 17 122
Hard Disk 2:	Not Installed	
Base Memory:	640 KB	Password: Disabled
Extended Memory:	1024 KB	
Video Card:	VGA/EGA	
keyboard:	Installed	
CPU Speed:	Fast	Numlock on at boot: YES

Figure 2-2

NOTE: The Notebook uses the SETUP program and BIS from Phoenix Corp. The main object in this section is for you to understand the standard entries and parts of the record you can/might modify.

Function Keys in Setup Menu:

There is a menu bar across the bottom of the screen. It tells you which key to press to activate various program functions.

ESC: Pressing the Esc key brings up a menu that lets you exit the program in various ways.

FIELD: The arrow keys move the highlight bar between entries.

VALUES: After you highlight an entry field you can change most of the values using the plus and minus keys. This key changes to say "Numeric Value" for some entries. Memory entries and some other entries do this on page 2 and page 3 of the SETUP program.

PAGE: Pressing either PgUp or PgDn switches to another page of the SETUP program. To use the Page Keys you have to hold down the Fn key at the same time (lower left corner of the keyboard).

F1: When you press this key a window pops up with help information about the entry on the screen that is currently highlighted. Highlight then entry you have a question about before you press the key.

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Standard System Parameters

System Time: 20:51:50  
System Date: Oct 14, 1991  
  
Diskette A: 3.5: 1.44 MB  
Diskette B: Not Installed  
Hard Disk 1: Type 2  
Hard Disk 2: Installed  
Base Memory: 640 KB  
Extended Memory: Not Installed  
Video Card: VGA/EGA  
keyboard: Installed  
CPU Speed: Fast

**Exiting SETUP**	
ESC	Continue with SETUP.
F4	Save values, exit SETUP, and reboot
F5	Load default values for all pages.
F6	Reboot without saving values.

The SETUP program has three pages. The first page is for the "Standard System Parameters," the second is for setting up the VLSI82C310 chipsets, and the third page is for entering the power management settings. On the first page there are 15 entries. The correct information about the computer hardware should appear here. IF it is not correct, you must enter the appropriate entries. The correct default settings are as follows.

System Time: [Current Time]  
System Date: [Current Date]  
Base Memory: 640KB  
Extended Memory: 1024KB  
Video Card: VGA/EGA  
Keyboard: Installed  
CPU Speed: Fast  
Diskette A: 3.5"", 1.44 MB  
Diskette B: Not Installed  
Hard Disk 1: Refer to Page A-2  
Hard Disk 2: Not Installed  
Video Display: LCD Normal

LCD Contrast: Auto Map  
Font Select: Expanded

Num Lock on at boot: Yes

Standard System Parameters:

The time and date should be the current time and date. If they are not correct, change the settings.

Base and Extended Memory

The Notebook comes with 2MB system memory divided into base memory and extended memory.

The base memory should be set at 640KB. If the setting is not 640, you should type in 640. You do not need to type the "KB".

The extended memory settings vary with how much memory is installed in the computer. In the basic 2 MB configuration the extended memory setting is 1024KB. You'll note that 640KB base memory does not add up to 2 MB (2048KB). This is because the memory design of PC-compatible computers reserves the 384KB from 640KB to 1024KB for other uses. One of these uses is the BIOS shadow function mentioned in the description on page 2.

#### Video Card:

This setting should always be left at VGA/EGA. The Notebook's display runs at VGA resolution. If you connect an external monitor to the computer as described later in the manual, it should also be a VGA or multifrequency monitor with VGA resolution.

#### Keyboard:

This should always be set as installed. If you attach an external keyboard as described later in the manual, the computer automatically detects it and switches it to the external keyboard.

#### CPU Speed:

There are two settings for this; fast and slow. This setting defines what the default CPU operating speed is when you turn on the computer. In most cases you'll prefer the performance of the maximum processing speed. If you need to run the computer at the slower speed, you can always use the CPU key commands described later to temporarily switch to the slower speed.

#### Disk Drives:

The computer does not have a second floppy disk drive so the Diskette B is recorded as "Not Installed."

The floppy drive is a 3.5", 1.44 MB type. The hard drive type is located on the bottom of notebook, just below the rating label.

#### Video Display:

There are three settings for this: LCD (Normal), External CRT, Simulscan. You can choose any one to meet your requirement.

#### LCD Contrast:

There are two settings for this: Max. Contrast and Auto Map. Select Auto Map to make text mode display automatically map 256 colors into 64 shades of grey. Select Max. Contrast to provide the highest contrast level. It makes text vivid.

#### Font Select:

There are two settings for this: Normal Font and Expanded Font. Select Normal to use the normal font; select Expanded to use the expanded font.

#### Password:

This option provides the password setting for the system security. You can leave it set to "Disabled" to choose not to need to key in a password

while booting or entering the SETUP-Utility, or enter a password at less than 7 characters directly on this entry to protect your Notebook PC from unauthorized users.

When a password is set, the system locks up if you fail the password request 3 times when booting or entering the SETUP-Utility.

Pressing the backspace until "Disabled" appears to clear your password.

NumLock On At Boot:

This is used to select whether the embedded numeric keypad is selected when the system boots.

Check all settings on Page 1 and make sure the correct information is entered. When you're all set, you can go on to Page 2 as described below.

Setup Program Page 2

To access Page 2 of the SETUP program press the Fn and PgDn keys at the same time.

The default value on Page 2 of BIOS SETUP program screen.

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\*\* VLSI SCAMP Chip Set Feature Control \*\*

Shadow BIOS ROM:	Enabled	Enabled EMS:	Disabled
Shadow 16K at C0000h:	Disabled	EMS Memory Size:	512 KB
Shadow 16K at C4000h:	Disabled	Use RSVD Memory:	Disabled
Shadow 16K at C8000h:	Disabled		
Shadow 16K at CC000h:	Disabled		
Shadow 16K at D0000h:	Disabled		
Shadow 16K at D4000h:	Disabled		
Shadow 16K at D8000h:	Disabled		
Shadow 16K at DC000h:	Disabled		

Shadow BIOS ROM:

The computer has some information permanently stored in a type of computer chip called a ROM (read Only Memory) chip. This is where the SETUP program is stored. It also contains a very basic level of software called the BIOS (Basic Input Output System) which the computer references while operating. Shadowing is the process of copying the contents from the ROMs to the reserved 384KB of system memory within the 640KB to 1MB range. The advantage of this procedure is that system memory access time is typically much faster than ROM access time.

This setting should be set to Enabled if you want to speed up system BIOS operation.

The other addresses listed in the left column can be left disabled. Each entry shadows 16KB in the reserved system memory area. You can enable all of these without any ill effect. You might not want to do this

however, since leaving these disabled allows you to recover the unused reserved memory by using any of a number of programs designed for this purpose.

Phoenix EMX Driver:  
Enable EMS / EMS Memory Size:

Expanded memory enables you to run programs to manipulate larger amounts of data. If you want to use the Phoenix PEMS driver as the expanded memory device driver, you must set "Enable EMS" to Enabled and set an amount of memory above 1024KB to be used as expanded memory by 128KB increments. The amount of expanded memory is based on the requirements of the applications you want to use. The Phoenix EMS device driver (PEMS) command should be installed in the CONFIG.SYS file.

Refer to your software and driver documentation for information on its memory setup requirements. To set the amount of extended memory reassigned as expanded memory, highlight the "EMS Memory Size" entry and type in the amount of memory you want to use as expanded memory.

Setup Program Page 3:

The BIOS Setup Program Page 3.

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\*\* Miser (tm) Power Management \*\*

Power Management Features: Enabled  
Hard Drive Power Save Mode: 1 min  
Doze Mode: 4 sec  
Sleep Mode: 1 min  
COM1/COM2: Tracking Ball/COM2  
Internal Printer Port: LPT1 (378H)

Battery Low Warning: Beep

Power Management Feature:

These entries control the power saving features of the Notebook. If you intend to operate the computer on battery power, you should enable the "Power Management Features" entry and set the Hard Disk, Doze Mode, Sleep Mode, and LCD Panel timer properly.

Hard Drive Power Save Mode:

The major power consumption of a Hard Disk is from the spin-motor and the controller. If the time set in this entry expires, the power of the spin-motor is removed, so the Hard Disk enters into a Standby state. When it is accessed again, the Hard Disk automatically powers up.

Doze Mode:

This entry can be set from a maximum of 14 seconds to a Minimum of 1/8 second. If the system is idle for longer than the preset time, the power management feature automatically slows down the system clock. This

action saves considerable power consumption.

#### Sleep Mode:

Sleep Mode is the maximum power saving mode. The system supports a timer to count system idle time for Sleep Mode operation. You can enable this entry by setting a timeout period ranging from 1 to 15 minutes. When the time expires, the power management system puts the system into a Sleep Mode all the peripheral are turned off and the system clock is decreased.

#### COM 1/COM 2:

This entry field lets you set the communication port (see System Reference page 3-8) to be COM1 or COM2. If you intend to use the built-in track ball, select Tracking Ball/COM2. This sets the communication port to be COM2 and links the Built-in Track Ball to COM1.

You can choose COM1/Modem to set the communication port as COM1 and link the internal modem (if installed) with COM2, or choose Tracking Ball/Modem to link the Track Ball with COM1 and Modem with COM2 and to disable the communication port.

The power management features are discussed in detail in section five of this manual. You must enable "Power Management Feature" for the power saving features to work.

You can select Disable/COM2 or Disable/Modem to disable Internal COM1.

You can select COM1/Disable or Tracking Ball/Disable to disable Internal COM2.

You can select Disable/Disable to Diabile Internal COM1 and COM2.

#### Internal Printer Port:

This entry field lets you set the Internal Printer Port to be LPT1, LPT2 or to disable it.

#### Confirming The Setup:

After you confirm the setup information is correct, you must record the changes. To do this, press the Esc key. A window pops up explaining the exit choices. Press F4 to record the current values or press F6 if you do not want to make any changes. The computer restarts.

(smc/jej-05/18/94)