4 The BIOS Setup Utility

Configuration

After the LPX30WB system board and all hardware is installed, the system is ready for configuration. Before turning on the computer, make sure all cables are correctly connected and all jumpers are correctly set.

It is recommended you keep the computer cover off the first time you boot the system. If you have any difficulties, they will be easier to correct.

Initial Boot Up

Power up the LPX30WB. If the system doesn't properly boot, check all your cables and peripherals for bad connections. You may also get error messages or beep codes. If this occurs, consult Appendices A and/or B for a guide to possible solutions.

After the system properly boots, it is ready to be configured. The following pages explain the proper procedures for BIOS configuration.

Setup

The Setup procedure is built into the system. Setup begins after the completed system is powered up. Once the system is powered up and goes through a memory test, the following screen appears on your monitor:

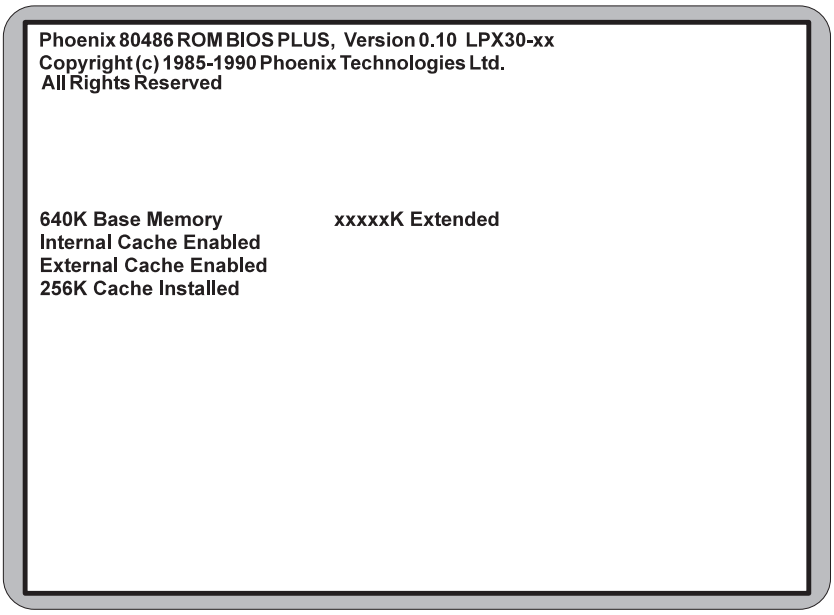

Figure 4-1 Power-Up Screen

If the systems detects a configuration error, it displays an error message. After the error message, another message displays indicating the choice to "press <F1> to continue (boot up), or <F2> to run the Setup procedure." Normally, you will press <Ctrl>, <Alt>, and <Esc> simultaneously to begin the Setup procedure.

Running the Setup Procedure

Upon pressing <F2>, the CMOS Main Screen (Figure 4-2) should appear and the prompt should be on the time line. If the Power-Up Screen does not appear but a DOS prompt does (i.e., A:\ or C:\), press the <Ctrl>, <Alt>, and <Esc> keys simultaneously to begin the Setup procedure.

The LPX30WB system board has two CMOS configuration screens: the Main Screen (Figure 4-2) and the Extended Screen (Figure 4-3). To toggle between the screens, press the PgUp/PgDn keys.

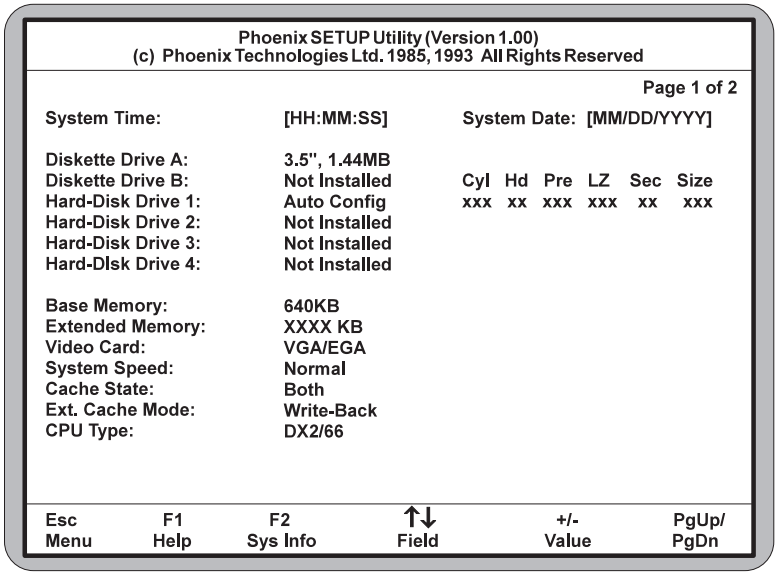

Figure 4-2 CMOS Main Screen

Now, configure the parameters to match your specific requirements. See the following pages for procedures on how to set the computer's parameters.

To return to the CMOS configuration screens at any time to change or view any of these parameters, press <Ctrl>, <Alt>, and <Esc> simultaneously.

Setting the CMOS Parameters

Before running the computer, certain parameters on the CMOS configuration screens must be set so the computer properly operates. First, set the parameters on the CMOS Main Screen, then press the PgUp/PgDn key, and set the parameters on the CMOS Extended Screen.

Note:
Some of the parameters are already set and should not be changed. Only change the settings if necessary.

Setting the CMOS Main Screen

System Time and Date

To set the time, use the minus <-> key to decrease the number and the plus <+> key to increase the number. To move the prompt forward, use the right arrow <→> key; to move the prompt backward, use the left arrow < ←> key. Follow the same procedure for the date.

Diskette Drive A or B

This allows you to configure a diskette drive added or removed from your computer. Use the <+/-> keys to toggle between the options.

Hard-Disk Drive 1-4 (IDE Drives Only)

This selection allows you to configure a hard disk installed in your system. Use the <+/-> keys to toggle between the options. See Appendix C for a complete listing of all possible hard drive types.

To install most SCSI hard drives, select NOT INSTALLED. To manually configure the hard drive, select USER CONFIG. Press the down arrow <↓> key and type in the appropriate parameters. To automatically configure an IDE hard drive, select AUTO CONFIG. Drives that can be Auto-Configured report parameters to the BIOS.

Base Memory and Extended Memory

Both of these memory settings are automatically configured. Press the down arrow <↓> key to move to the next selection.

Video Card

This sets the type of monitor required for your computer. The display peripheral supports VGA/EGA, CGA80, CGA40, Monochrome (MONO), or no monitor at all. Use the <+/-> keys to toggle between the options.

Note:
If you set the video card option to Not Installed, it will automatically support a VGA card, if installed. If no video card is installed, there will be no error beeps and the system will perform normally.

System Speed

This parameter selects two speeds on the computer. When set to NORMAL, the system operates at full speed. When set to SLOW, it runs at about half of the normal speed.

CPU Type

This option selects the CPU installed and has auto detection with corresponding jumper settings on board. You must choose the correct CPU selection with the corresponding CPU. This selection is for user-upgradeable CPUs.

Cache

This category allows you to enable both the internal and the external cache, enable the internal cache only, or disable both caches. For optimal performance, select BOTH.

External Cache Mode

This selection sets the secondary cache scheme. Setting the scheme to WRITE-BACK will improve performance up to 4%.

Setting the CMOS Extended Screen

You can toggle between the Main screen and the Extended screen (Figure 4-3) using the PgUp and PgDn key.

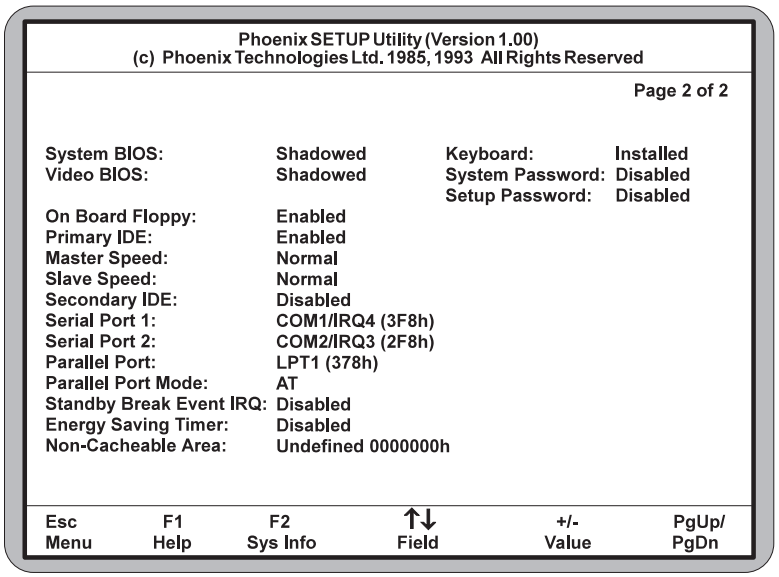

Figure 4-3 CMOS Extended Screen

System BIOS

The System BIOS Option allows you to Shadow, Shadow & Cache, or Disable the BIOS Shadow on the system board. Choosing SHADOWED copies the system's BIOS into RAM for faster execution. Choosing SHADOWED & CACHED caches the shadowed system BIOS for even higher performance. This allows you to take advantage of the high-speed 32-bit bus and the 70 nanosecond RAM. Use the <+/-> key to toggle between the options.

Video BIOS

The Video BIOS Option allows you to Shadow, Shadow & Cache, or Disable the BIOS Shadow on the system board. Choosing SHADOWED copies the system's video BIOS into RAM for faster execution. Choosing SHADOWED & CACHED caches the shadowed video BIOS for even higher performance. Use the <+/-> key to toggle between the options. The System BIOS Shadow option must be set to SHADOW or SHADOW & CACHE before enabling the Video BIOS Shadow options.

On-Board Floppy

The On Board Floppy controller can be set to ENABLED or DISABLED.

Primary IDE

The ISA IDE controller can be set to ENABLED or DISABLED.

Master Speed

The speed can be set for SLOW, NORMAL, or ENHANCED. To improve the performance of your system, see the manufacturer's specifications to determine the optimal setting. The default setting is NORMAL.

Slave Speed

The speed can be set for SLOW, NORMAL, or ENHANCED. To improve the performance of your system, see the manufacturer's specifications to determine the optimal setting. The default setting is NORMAL.

Secondary IDE

The ISA IDE controller can be set to ENABLED or DISABLED.

Serial Port 1

Serial Port 1 may be set for COM1 (default), COM3, or may be disabled. Be sure this setting does not conflict with any other peripherals.

Serial Port 2

Serial Port 2 may be set for COM2 (default), COM4, or may be disabled. Be sure this setting does not conflict with any other peripherals.

Parallel Port

The parallel port may be set for LPT1 (default), LPT2, or may be disabled. Be sure this setting does not conflict with any other peripherals.

Parallel Port Mode

The parallel port may be set for AT mode (output only), PS/2 mode (bidirectional), or may be disabled.

Energy Saving Timer

The Energy Saving Timer conserves energy by putting the system into a "sleep mode." When the system is in sleep mode, it consumes less energy.

If a specified time elapses and no keystrokes are performed, the computer goes into sleep mode. The timer recognizes keyboard activity and mouse movements.

This category can be set for one minute or in increments of fifteen minutes (up to 120 minutes). After the allotted time, the CPU will reduce its speed to 8MHz. The Scroll Lock light will flash to indicate reduced speed. To return to full processing speed, press any key.

Non-Cacheable Area

This category allows a block of 32-bit memory to be set as NON-CACHEABLE. The size and address can be selected. The sizes include: 64K, 128K, 256K, 512K, 1M, 2M, and 4M.

To select the memory to be Non-Cacheable, use the <+/-> keys to change the first three zeros to the appropriate address (only these zeros can be changed). It must start from 0000000h to 0FF0000h (15.94MB). The default setting for this category is UNDEFINED.

Keyboard

If the keyboard category is set to INSTALLED, the computer will test the keyboard during boot. If set for NOT INSTALLED, the system will ignore any keyboard errors and always attempt to boot. Set this for INSTALLED unless using the system board in an application which does not require a keyboard.

System Password

When enabled, a password will be required to enter the system.

To set a system password, set this category to ENABLED. After you have finished configuring the BIOS, press the <Esc> key to exit followed by the <F4> key to save the changes and reboot. When the system reboots, it will ask you to enter a new password. After you enter the new password, the System Password feature will be in effect.

Warning:
If you forget your password, it cannot be changed without discharging the CMOS.

Setup Password

When enabled, a password will be required to enter Setup.

To activate the Setup Password, set this category to ENABLED. After you have finished configuring the BIOS, press the <Esc> key to exit followed by the <F4> key to save the changes and reboot. After the system reboots, press <Ctrl>, <Alt>, and <Esc> simultaneously to re-enter the setup program. On re-entering the Setup program, you will be asked to enter a new password. After entering the new password, the Setup Password feature will be in effect.

Re-Configuring Your Computer

Press the <Esc> key to reach the Exit Pop-Up Screen. Now select <F4> to save and initialize the new Setup.

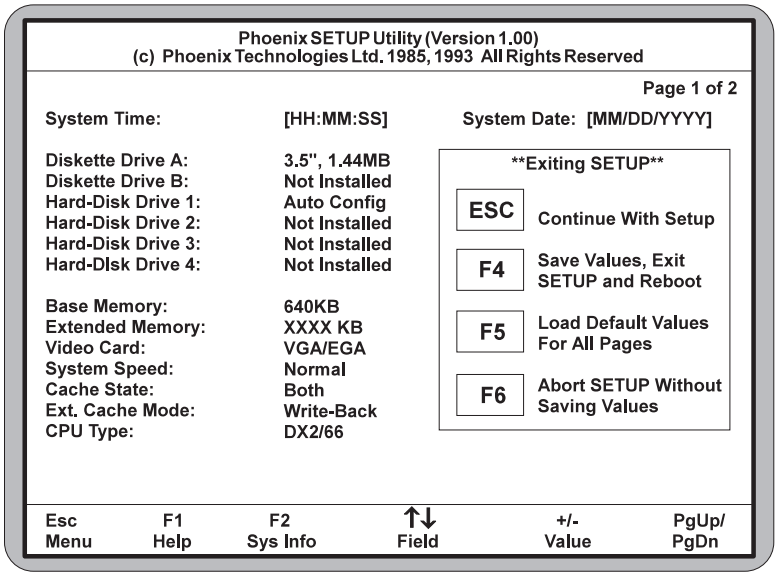

Figure 4-4 Exit Pop-up Screen