

Setup

This chapter tells how to use the Setup utility. This utility allows you to configure the system without setting any jumpers or switches.

4.1 When to Use Setup


The system is already correctly configured for you and you do not need to run Setup. If you make any changes to the system or you receive an Equipment Configuration Error message after you turn on the notebook, you need to run Setup. Run Setup also if you want to do any of the following:


- Change the system date, time or speed
- Add or remove a serial mouse or printer
- Change the system boot drive or display device
- Set the video display features
- Enable or disable the power-saving features
- Set, change, or remove a system password



The system configuration values reside in the battery-powered CMOS RAM.

4.2 Entering Setup

To enter Setup, you can either press **m** during the power-on self test (POST) routine or the no-reboot Setup () button.

If you enter Setup using **m**, the system reboots when you exit. Pressing the no-reboot Setup button () allows you to access the power-saving page of the Setup utility, and does not reboot when you exit.

The parameters in Setup are grouped into four categories:

- Main
- Advanced
- Security
- Power Saving

Press **v** to access the sections. Press **|** to access the Exit menu from any screen.

4.3 Main

The following screen is the Main page of Setup.

Phoenix NoteBIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.			
Main	Advanced	Security	Power Saving Exit
<div>System Time [16:46:00] System Date [03/03/1995] Language [English] Floppy A: [1.44 MB, 3½"] Floppy B: [Not Installed] > IDE Adapter 0 Master (C 810 MB) > IDE Adapter 0 Slave (None) > IDE Adapter 1 Master (None) > IDE Adapter 1 Slave (None) Boot sequence [A: then C:] > Numlock [Off] System Memory 640 KB Extended Memory 7 MB External Cache [Enabled]</div>			<div>Item Specific Help <Shift-Tab>, or <Enter> selects field</div>
F1 Help	↑↓ Select Item	→ ← Change Values	F9 Setup Defaults
ESC Exit	Tab Select Item	Enter Select > submenu	F10 Previous Values

Most of the Setup parameters are self-explanatory. Use w or y to move from one parameter to another, and z or x to change parameter settings. Use e to select submenus. Press t to load the default values and u to restore the previous values. Press l for help.

When you press | from any Setup screen, the Exit screen appears. Refer to section 4.7 for details.

4.3.1 System Time and Date

The system displays the current date in MM/DD/YYYY format and the current time in HH:MM:SS format. The system uses a 24-hour clock. For example, 6:25:50 PM appears as 18:25:50.

4.3.2 Language

The system has a multi-language Setup utility. The languages supported include the following:

- English
- Italian
- German
- French
- Spanish

The default setting is [English].

4.3.3 Floppy Drives

The default setting for Floppy A: is [1.44 MB, 3½"]. Floppy B: is set to [Not Installed].

4.3.4 IDE Adapter 0 Master

The IDE Adapter 0 Master parameter allows you to access a submenu containing all information on the primary/master IDE device connected to the system. Press e to access this submenu.

Phoenix NoteBIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.			
Main			
IDE Adapter 0 Master (C 810 MB)		Item Specific Help	
Autotype Fixed Disk	[Press Enter]	Attempts to automatically detect the drive type for drivers that comply with ANSI specifications.	
Type	[Auto] 810 MB		
Cylinder	1517		
Heads	16		
Sectors/Track	63		
Write Precomp	0		
Multi-Sector Transfers	16 Sectors		
LBA Mode Control	Enabled		
32 Bit I/O	[Disabled]		
Transfer Mode	Fast PIO 3		
F1 Help	↑↓ Select Item	→ ← Change Values	F9 Setup Defaults
ESC Exit	Tab Select Item	Enter Select > submenu	F10 Previous Values

Autotype Fixed Disk

Pressing e commands the system to attempt to set the drive type based on the parameter setting of Type. Once detected, the system fills up the remaining fields in the screen with their optimum setting.

Type, Cylinders, Heads, Sectors/Track, Write Precomp

Setup automatically detects the drive parameters at each boot-up when Type is set to [Auto]. The Cylinders, Heads, Sectors/Track and Write Precomp parameter information display automatically. You can also choose to key-in the drive type and parameters by setting Type to [User], or select from 39 pre-defined drive types. To determine your drive type, compare the data on the label pasted on your hard disk (or supplied in vendor documentation) with the disk types found in Appendix B. Be sure to select the correct drive type; otherwise, an error message appears when you boot the system.

We suggest that you set Type to [Auto] to allow the system to detect the drive parameters at each boot-up. This also allows you to do hard drive swapping and upgrades without the need to enter Setup and change drive types.

Multi-Sector Transfers

This enhanced IDE feature allows you to specify the number of sectors per block to be used in multi-sector data transfer. Setting Type to [Auto] sets the number of sectors per block to the highest number supported by the drive, though this may not be the fastest option.

LBA Mode Control

Set this parameter to [Enabled] if your hard disk drive supports LBA mode control. Logical Block Address (LBA) mode translation allows you to use hard disk drives with capacities higher than 528 MB. The default setting is [Disabled].

32 Bit I/O

This enhanced IDE feature allows you to enable or disable 32 bit I/O communication between the CPU and the IDE adapter. The default setting is [Disabled].

Transfer Mode

This enhanced IDE features allows you to select the method used to transfer data between hard disk and memory. This parameter accepts the following options:

- Standard
- Fast PIO 1
- Fast PIO 2
- Fast PIO 3

Setup only displays the modes supported by the drive.

4.3.5 IDE Adapter 0 Slave

The IDE Adapter 0 Slave parameter allows you to access a submenu containing all information on the primary/slave IDE device connected to the system. Press e to access this submenu.

Phoenix NoteBIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.		
Main		
IDE Adapter 0 Slave (None)		Item Specific Help
Autotype Fixed Disk	[Press Enter]	Attempts to automatically detect the drive type for drivers that comply with ANSI specifications.
Type	[None]	
Cylinder		
Heads		
Sectors/Track		
Write Precomp		
Multi-Sector Transfers	[Disabled]	
LBA Mode Control	[Disabled]	
32 Bit I/O	[Disabled]	
Transfer Mode	[Standard]	
F1 Help	↑↓ Select Item	→ ← Change Values
ESC Exit	Tab Select Item	Enter Select > submenu
		F9 Setup Defaults
		F10 Previous Values

IDE Adapter 0 Slave is used when you want to boot from an installed CD-ROM drive module. Press e to modify the primary slave device parameters. Then set the Type parameter to [CD].

The other parameters in this page are then set to [Disabled]. Transfer Mode is set to [Standard].

4.3.6 IDE Adapter 1 Master

The IDE Adapter 1 Master parameter allows you to access a submenu containing all information on the secondary/master IDE device connected to the system. Please refer to section 4.3.4 for related information.

This item is reserved for IDE devices installed in an optional docking station.

4.3.7 IDE Adapter 1 Slave

The IDE Adapter 1 Slave parameter allows you to access a submenu containing all information on the secondary/slave IDE device connected to the system. Please refer to section 4.3.5 for related information.

This item is reserved for IDE devices installed in an optional docking station.

4.3.8 Boot Sequence

This parameter determines which drive the system boots from when you turn on the system. The following table lists the three possible settings.

Table 4-1 Boot Sequence Settings

Setting	Description
A: then C: (default)	System boots from the SRAM card if one is installed in the PCMCIA slot. If no SRAM card is present, the system boots from diskette drive A. Otherwise, the system boots from hard disk drive C.
C: then A:	System boots from diskette drive C. If the hard disk drive is a non-system disk, the system boots from the diskette drive A.
C:	System boots from the hard disk drive C. If the hard disk drive is a non-system disk, an error message appears.

4.3.9 Numlock

The Numlock submenu allows you to access the keyboard features parameter settings. Press e to access this submenu.

Phoenix NoteBIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.			
Main			
Keyboard Features		Item Specific Help	
Numlock	[Off]	Select Power-on state for Numlock.	
Key Click	[Disabled]		
Keyboard Auto-Repeat Rate	[30/sec]		
Keyboard Auto-Repeat Delay	[1/2 sec]		
F1 Help	↑↓ Select Item	→ ← Change Values	F9 Setup Defaults
ESC Exit	Tab Select Item	Enter Select > submenu	F10 Previous Values

Numlock

When the Numlock parameter setting is [On], Num Lock is on and the embedded keypad acts as a numeric keypad. The default setting is [Off].

Key Click

Set Key Click to [Enabled] to turn on the audible key click. The default setting is [Disabled].

Keyboard Auto-Repeat Rate

This parameter specifies the number of times a second to repeat a keystroke when you hold the key down. This parameter accepts the following options:

- 2/sec
- 6/sec
- 10/sec
- 13.3/sec
- 18.5/sec
- 21.8/sec
- 26.7/sec
- 30/sec

The default setting is [30/sec].

Keyboard Auto-Repeat Delay

This parameter specifies the delay time after the key is held down before it begins to repeat the keystroke. This parameter accepts the following options:

- 1/4 sec
- 1/2 sec
- 3/4 sec
- 1 sec

The default setting is [1/2 sec].

4.3.10 Memory Configuration

The system detects the amount of base (system) and extended memory and then displays these values in the Setup screen. These parameters are for display only and you cannot change them manually.

When you run Setup after installing additional memory, the system automatically sets these parameters to reflect the new memory size.

4.3.11 External Cache

If you want to disable external cache, select [Disabled]. The default setting is [Enabled].

4.4 Advanced

The following screen is the Advanced page of Setup.

Phoenix NoteBIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.				
Main	Advanced	Security	Power Saving	Exit
<p>Warning!</p> <p>Setting items on this menu to incorrect values may cause your system to malfunction.</p> <p>> Integrated Peripherals</p> <p>Plug & Play O/S [No]</p> <p>Reset Configuration Data [No]</p> <p>Large Disk Access Mode [DOS]</p>			Item Specific Help	
F1 Help	↑↓ Select Item	→ ← Change Values		F9 Setup Defaults
ESC Exit	Tab Select Item	Enter Select > submenu		F10 Previous Values

4.4.1 Integrated Peripherals

This parameter allows you to access a submenu containing all information on serial and parallel port addresses and operation modes.

Phoenix NoteBIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.			
Advanced			
Integrated Peripherals		Item Specific Help	
Serial Port 1	[3F8h, IRQ4]	Set COM port address.	
Serial Port 2	[2F8h, IRQ3]		
SIR or COM2	[SIR]		
Parallel Port	[378h, IRQ5]		
Operation Mode	[Uni-directional]		
Floppy Controller	[Enabled]		
Internal Audio	[Enabled]		
F1 Help	↑↓ Select Item	→ ← Change Values	F9 Setup Defaults
ESC Exit	Tab Select Item	Enter Select > submenu	F10 Previous Values

Serial Ports

Serial port 1 can accommodate a serial mouse, serial printer or other serial devices. Serial port 2 can be used for serial infrared (SIR) communication or a second serial device. The serial port 1 / serial port 2 range options are:

- 3F8h, IRQ4 / 2F8h, IRQ3
- 3E8h, IRQ4 / 2E8h, IRQ3
- 338h, IRQ4 / 238h, IRQ3
- 2E8h, IRQ4 / 2E0h, IRQ3
- 220h, IRQ4 / 228h, IRQ3
- Auto
- Disabled

Disable these ports when not in use to save power.

The SIR port cannot be accessed from a “docked” notebook, so Serial Port 2 is fixed to [COM2] when the notebook is connected to a docking station.

Parallel Port

Connect a parallel printer or other parallel device to the parallel port. Settings for this port are:

- 378h, IRQ5
- 278h, IRQ5
- 378h, IRQ7
- Disabled

The parallel port supports three operation modes:

- Uni-Directional
- Bi-Directional
- ECP

ECP stands for Extended Capabilities Port. ECP is a fast, bidirectional parallel interface backward-compatible with the standard parallel port. It boosts the I/O bandwidth to meet the demands of high-performance peripherals. The default setting is [Uni-Directional].

Disable the parallel port when not in use to save power.

Floppy Controller

Diskette Controller enables or disables the onboard diskette drive controller. The default setting is [Enabled].

Internal Audio

Internal Audio enables or disables the onboard 16-bit stereo feature. The default setting is [Enabled].

4.4.2 Plug & Play O/S

Select [Yes] if you are using a Plug & Play (PnP) operating system. The default setting is [No].

4.4.3 Reset Configuration Data

Select [Yes] if you want to clear the system configuration data of the docking station. The parameter is set to [No] after system boot-up. Reset the configuration data during boot.

4.4.4 Large Disk Access Mode

This parameter allows you to use large disk access mode when you have a hard disk drive capacity larger than 528MB. Set this parameter to [DOS] if your system has DOS and/or Windows, and [Other] if you have another operating system such as UNIX.

4.5 Security

The following screen is the Security page of Setup.

Phoenix NoteBIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.				
Main	Advanced	Security	Power Saving	Exit
<div>Supervisor Password is Disabled</div> <div>User Password is Disabled</div> <div>Set Supervisor Password [Press Enter]</div> <div>Set User Password Press Enter</div> <div> </div> <div>Password on Boot [Disabled]</div> <div> </div> <div>Floppy Access [Supervisor]</div> <div>Hard Disk Boot Sector [Normal]</div>				<div>Item Specific Help</div>
F1 Help	↑↓ Select Item	→ ← Change Values		F9 Setup Defaults
ESC Exit	Tab Select Item	Enter Select > submenu		F10 Previous Values

4.5.1 Supervisor and User Passwords

The supervisor and user passwords both prevent unauthorized access to the system. When password check parameters, Password on Boot and Password Check During Resume are enabled, the system prompts for the user or supervisor password during system boot-up and resume from standby/suspend, respectively. The supervisor password also gives access to Setup. The user password does not give access to Setup.

Setup requires the supervisor password to be set prior to setting the user password.

4.5.2 Set Passwords

Setting a Password

Passwords are not case-sensitive. To set a password, select the password you want to set (supervisor or user) and press e. The password box appears.

Set Password	
Enter new password:	[]
Re-enter new password:	[]

Enter a password consisting of up to seven alphanumeric characters. These characters do not appear on the screen when you type them. Press e after typing your password. Retype your password for verification and press e. Press | to abort the operation.

After you specify a password, you can set the Password on Boot parameter to [Enabled]. When you boot the system, it prompts you to enter the password after the power-on self-tests, before loading the operating system.

When you exit suspend mode and return to normal, the system requires that you enter the password if the Password Check During Resume is enabled.

Removing a Password

To remove the password, select the password you want to remove (supervisor or user) and press e. The password box appears.

Set Password	
Enter new password:	[]
Re-enter new password:	[]

Press e twice without entering anything in the password box.

Changing a Password

To change the password, select the password you want to set (supervisor or user) and press e. The password box appears.

Enter a new password consisting of up to seven alphanumeric characters. Press e after typing your new password. Retype it for verification and press e. Press | to abort the operation.

4.5.3 Password On Boot

When enabled, the system prompts you for a password during system boot-up.

Setting this parameter requires prior setting of the Supervisor Password. If the supervisor password is set and this option is disabled, Setup assumes the user is booting.

4.5.4 Floppy Access

The Floppy Access parameter accepts two settings:

- Supervisor
- User

When set to [Supervisor], the system restricts the use of the diskette drive to the supervisor. To access the diskette drive, the system requires the supervisor password. The default setting is [Supervisor]

Setting this parameter requires prior setting of the supervisor password.

4.5.5 Hard Disk Boot Sector

The Hard Disk Boot Sector parameter accepts two settings:

- Normal
- Write Protected

When set to [Write Protected], this parameter helps prevent against viruses from writing to the partition table of the hard disk drive. The default setting is [Normal].

4.6 Power Saving

The following screen is the Power Saving page of Setup.

Phoenix NoteBIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.				
Main	Advanced	Security	Power Saving	Exit
<div>Power Management Mode [Enabled] Hard Disk Standby Timer [1 Minute] Display Standby Timer [1 Minute] System Standby/Suspend Timer [3 Minutes] Battery-Low Warning Beep [Enabled] Standby/Suspend Upon Battery-Low [Enabled] Password Check During Resume [Disabled] LCD Panel Control Display Device [Auto] LCD Expanded Mode [Disabled]</div>				<div>Item Specific Help Select Power Management Mode. Choosing modes changes system power management settings. To alter these settings, choose Enabled. To turn off power management, choose Disabled.</div>
F1 Help	↑↓ Select Item	→ ← Change Values		F9 Setup Defaults
ESC Exit	Tab Select Item	Enter Select > submenu		F10 Previous Values

When you access page 4 of Setup by pressing the no-reboot Setup button (F7), the following screen displays:

Phoenix NoteBIOS Setup - Copyright 1985-95 Phoenix Technologies Ltd.		
Power Management Mode:	[Enabled]	Select Power Management Mode. Choosing modes changes system power management settings. To alter these settings, choose Enabled. To turn off power management, choose Disabled.
Hard Disk Standby Timer:	[1 Minute]	
Display Standby Timer:	[1 Minute]	
System Standby/Suspend Timeout:	[3 Minutes]	
Battery-Low Warning Beep:	[Enabled]	
Standby/Suspend upon Battery-Low:	[Enabled]	
Password Checking During Resume:	[Disabled]	
LCD Panel Control		
Display Device:	[Auto]	
LCD Expanded Mode:	[Enabled]	
ESC Exit ↑↓ Select Item → ← Change Values F7 Battery Discharge		

The r function key in this screen allows you to discharge the battery. This function depletes battery power even when your system is running on AC power. See section 2.4.2.

When you access page 4 of Setup by pressing the no-reboot Setup button (F7), the following menu appears when you press |.

Esc	Continue with Setup
F4	Exit Setup with saving values
F6	Exit Setup without saving values

Press o to save the changes you made. Press q to cancel any modifications. The system does not reboot when you exit Setup.

4.6.1 Power Management Mode

Set this parameter to [Enabled] to activate all of the power-saving features unless specifically disabled by the user. Select [Disabled] to turn off the power-saving features. In this case, the system ignores the power-saving parameter settings.



If APM is installed under the DOS or Windows environment, you cannot disable the Power Management Mode under Setup. To disable APM, type Power Off under DOS, or disable the Power icon in the Windows Control Panel.

4.6.2 Hard Disk Standby Timer

The hard disk drive enters a standby mode if there are no disk read/write operations within the period specified by this timer. The hard disk returns to normal mode once the system accesses it.

The valid values for this timer range from 1 to 15 minutes. Select [Off] to turn off the timer.

4.6.3 Display Standby Timer

The system shuts off the LCD backlight¹ if it detects no activity from the keyboard, external PS/2 mouse or built-in touchpad within the period specified by this timer. To reactivate the display, press any key or move the pointing device.

The valid values for this timer range from 1 to 15 minutes. Select [Off] to turn off the timer.

¹ The system also shuts off the external CRT monitor if one is being used, either as the main display or simultaneously with the LCD.

4.6.4 System Standby/Suspend Timer

The absence of any system activity within the period specified by this timer sends the system into system standby or suspend mode. If the reserved disk space for the zero-volt suspend function is larger than the combined system and video memory size, the system goes into suspend mode. Otherwise, the system enters system standby mode.



You can enlarge the reserved disk space if it is too small for the system to enter suspend mode by executing the PHDISK suspend utility. Remember to back-up your hard disk before doing so. Refer to Appendix D.

If the system is in system standby mode, press the standby/suspend button to return to normal mode. If the system is in suspend mode, press the power switch or the standby/suspend button to return to normal mode.

The valid values for this timer range from 1 to 15 minutes. Select [Off] to turn off the timer.

When the notebook is connected to a docking station, the two buttons (setup and suspend) are disabled and the notebook can only enter standby mode and not suspend mode — even if the zero-volt suspend function is present in the system.

4.6.5 Battery-Low Warning Beep

This parameter allows you to enable or disable the warning beeps generated by the system when a battery-low condition occurs. If this parameter is disabled, the system does not generate warning beeps but still displays the battery low icon in the status LCD. The default setting is [Enabled]. Refer to section 2.7 for further information.

4.6.6 Standby/Suspend Upon Battery-low

This parameter enables the system to enter zero-volt suspend mode five minutes after a battery-low condition occurs if the reserved disk space for the zero-volt suspend function is larger than the combined system and video memory size. Otherwise, the system enters system standby mode.. The default setting is [Enabled]. Refer to section 2.7.

4.6.7 Password Check During Resume

This parameter allows you to prevent unauthorized resumption from suspend mode to normal mode when this parameter is set to [Enabled]. When you exit suspend mode and return to normal mode, the system requires you to enter the password.

4.6.8 Display Device

The display device is the device on which the operating system prompt appears when you boot the system.

Table 4-2 describes the different parameter settings.

Table 4-2 Display Parameter Settings

Setting	Description
Auto (default)	If an external monitor is connected, the system uses the external monitor. Otherwise, the system uses the LCD display.
LCD	The system uses the LCD display even if an external monitor is present.
Both	The system uses the LCD and an external monitor simultaneously. (SVGA STNDD LCD models do not support this feature.)

4.6.9 LCD Expanded Mode

If the LCD Expanded Mode is enabled, the VGA subsystem paints in a few extra lines so that a display output with less than 640 x 480 resolution can fill up the entire LCD screen. The expanded mode gives a better and more balanced display.



Expanded display mode may not work in some applications, in which case, disable this parameter.

4.7 Exit

The following screen is the Exit page of Setup.

Phoenix NoteBIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.			
Main Advanced Security Power Saving Exit			
<div>Save Change & Exit Discard Change & Exit Get Default Values Load Previous Values Save Changes</div>			<div>Item Specific Help</div> <div>Exit after writing all changed SETUP item values to CMOS.</div>
F1 Help ESC Exit	↑↓ Select Item Tab Select Item	→ ← Change Values Enter Select > submenu	F9 Setup Defaults F10 Previous Values

Save Change & Exit

After making your selections in Setup, always select either Save Change & Exit or Save Current Values. These options store the selections displayed in the menus in CMOS (a special section of memory that stays on after you power off the computer). The next time you boot your computer, BIOS configures your system according to the Setup settings stored in CMOS.

After you save your selections, the program displays this message:

Changes have been saved.
[Continue]

During boot-up, BIOS attempts to load the values saved in CMOS. If these values cause the system boot to fail, reboot and press **m** to enter Setup. You can then restore the default values or try to modify parameters which caused the boot to fail.

Discard Change & Exit

This option lets you exit Setup without storing in CMOS any modifications made to the parameters. The previous settings remain in effect.

Get Default Values

This option lets you load all the default values in Setup to CMOS RAM and displays the following message:

Default values have been loaded.
[Continue]

During boot-up, if BIOS detects a problem in the integrity of the values stored in CMOS, it displays the following message:

```
System CMOS checksum bad - run SETUP
Press <F1> to resume, <F2> to Setup
```

In this situation, the CMOS values have been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS.

Press **l** to resume the boot or **m** to run Setup with the ROM default values already loaded into the menus. You can make other changes before saving the values to CMOS.

Load Previous Values

During a Setup session, if you decide to disregard the changes you have made and have not yet saved the values to CMOS, you can restore the values you previously saved to CMOS.

Selecting Load Previous Values from the Exit menu updates all the settings and displays this message:

Previous values have been loaded.
[Continue]

Save Changes

This option lets you save all the settings without exiting Setup. You can return to the other menus if you want to review and change your selections.