

Chapter 8 Configuring the Terminal: Terminal Setup

Introduction

This chapter discusses the initialization of the terminal, which includes setting up the terminal by running the SETUP.COM program on the terminal. Additionally, instructions on overriding default parameters in XSYMBIOS and booting the terminal are provided.

Terminal Set-Up

The PPT 41xx terminal's default ROM Disk contains a set up program. This program, called SETUP.COM, resides in C:\ on the terminal and in C:\SDK4100\SYSTEM\BIOS\ on the development PC, following installation of the SDK. The setup program allows certain parameters to be defined which control a variety of terminal-specific features.

Running SETUP.COM

If you have an IBM XT-compatible keyboard attached to the PPT 41xx terminal, you may invoke SETUP.COM by doing the following:

Note: Some keyboards can support either XT- or AT- modes via a switch setting. Ensure that the switch is in the XT position.

1. Type **C:SETUP**
2. Continue with Step 4, below.

To run SETUP.COM from the default ROM Disk AUTOEXEC.BAT:

1. Press and release the RESET button on the terminal, using the pen.
2. As soon as you release the RESET button, press and hold the right side button.
3. When prompted, press and release the left side button to run SETUP.
4. Test the pen calibration by drawing in a blank area on the screen.

5. If the calibration is not accurate, select the recalibration box to recalibrate the pen. (If you cannot do this, wait and the recalibration option will be automatically selected).
6. Follow the on-screen instructions to complete the recalibration.
7. If calibration is good, select the SETUP box using the pen.
8. Set the Standard System Parameters. Parameters may be changed by first selecting them with the pen, and then pressing on the appropriate boxes on the bottom of the screen until the desired value is reached. When all values on the screen appear correctly, select the Next Page box.





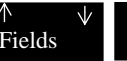

Phoenix SETUP Utility (Version 1.xx)					
(c) Phoenix Technologies Ltd. 1985, 1993 All Rights Reserved					
Standard System Parameters					
Page 1 of 3					
System Time:	10:24:49				
System Date:	April 5, 1994				
Socket 1:	DISKETTE A				
Socket 2:	Card Driver				
Base Memory:	640KB				
Extended Memory:	3072KB				
Video Card:	Color 80X25				
CPU Speed:	14MHz				
					

Figure 8-1. Standard System Parameters Screen

Options

The pen-selectable options at the bottom of each page enable easy movement between fields on the screen and proper selection of the correct value for each field. An explanation of each of these options is as follows:

Note: All modifiable fields can also be changed by lightly tapping on the field itself using the pen. You may continue to tap on the field until the desired value is displayed in the field.

Exit
Menu

Selecting the **Exit Menu** option brings up a menu of options for exiting SETUP. The options for exiting SETUP are the following:

Continue Continues with SETUP.

Save & Exit Saves current values in CMOS, saves calibration changes made during recalibration of terminal, and exits SETUP and reboots.

Load Defaults Loads all default values for all pages of SETUP.

Abort & Exit Abort SETUP without saving changes in CMOS (The current selections will be used until the next reboot).

Next
Page

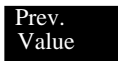
Selecting the **Next Page** option brings up the next page of SETUP. In other words, if Next Page is selected from Page 3, Page 1 will be returned.

< >
Fields

There are two option within this one box. Selecting the **left arrow** moves the cursor to the next field. Selecting the **right arrow** moves the cursor to the previous field.



There are two options within this one box. Selecting the **up arrow** moves the cursor to the previous field. Selecting the **down arrow** moves the cursor to the next field.



Selecting the **Prev. Value** option scrolls backward through the list of values for the selected field. Once the desired value appears in the field, select one of the **Fields** boxes to move to another field.



Selecting the **Next Value** option scrolls forward through a list of values for the selected field. Once the desired value appears in the field, select one of the **Fields** boxes to move to another field.

Field Explanations

System Time:This field contains the running system time. Each segment of the System Time (e.g., Hour, Minute, Second) is a separate field.

System Date:This field contains the current system date. Each segment of the System Date (e.g., Month, Day, Year) is a separate field.

Socket 1:This field allows the user to specify how socket 1 will be used. The two valid values for this field are: **DISKETTE A** and **CARD DRIVER**. Specifying **DISKETTE A** means that socket 1 is reserved for an SRAM card, formatted as a diskette disk drive, and accessible through the BIOS disk services. The socket cannot be used for any other purpose. Specifying **CARD DRIVER** means that the BIOS will not reserve socket 1 for use as an SRAM card. The socket can be used for any other purpose. It can be used for an I/O card, but cannot be processed by the BIOS disk services. (Default: **DISKETTE A**.)

Socket 2: This field allows the user to specify how Socket 2 will be used, and has the same options as Socket 1. (Default: **CARD DRIVER**.)

Note: To boot from an SRAM card, socket 1 must be set to Diskette A. Socket 2 cannot be set to Diskette B unless Socket 1 is also set to Diskette A.

Base Memory:This field displays the base memory of the terminal. This value is calculated by the terminal and is displayed as a read-only value.

Extended Memory:This field displays the extended memory of the terminal. This value is calculated by the terminal and is displayed as a read-only value.

Video Card:This field displays and allows you to change the type of video card supported by the terminal. Options are: Color 40x25, Color 80x25. (Default: Color 80x25.)

CPU Speed:This field displays the speed setting for the terminal's CPU. Options are 7MHz and 14 MHz. (Default=14MHz.)

Set the PC/CHIP Advanced Feature Control Parameters:

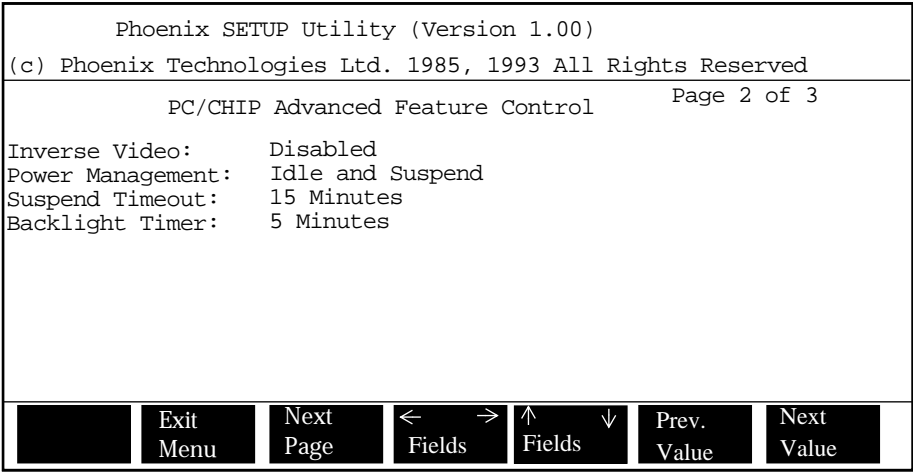


Figure 8-2. PC/CHIP Advanced Feature Control Screen

Field Explanations

Inverse Video:This field contains the inverse video option. If enabled, the screen appears as light letters on a dark screen, thus making cursor location very difficult to ascertain. The two options are: Enabled and Disabled. (Default: Disabled.)

Power Management:This field contains the power management option for the terminal. The options for this field are:

Idle and Suspend: The terminal suspends itself after a defined length of time, if no activity has occurred on the terminal. The time length is defined in the Suspend Timeout field. We strongly recommend that you **NOT** change this option.

Disabled: The terminal will not suspend itself after a defined length of time. **This option is NOT RECOMMENDED, and will prevent XSYMBIOS from loading.**

Suspend Timeout: This field contains the option for the timeout value for the terminal. This value refers to the length of inactivity time before which the terminal times out. To turn the terminal back on, use any allowed wakeup cause (Power switch, left button, right button, pen touch, RS-232 Ring). Valid values are: 30 seconds, 1 minute, 2 minutes, 3 minutes, 5 minutes, 10 minutes, 15 minutes, 20 minutes, 30 minutes. (Default: 15 minutes.) **Keep this value as short as possible to best save power.**

Backlight Timer: This option contains the value for the time limit for the backlight. After this limit, if no activity on the screen has taken place, the backlight goes out. Valid values are: 30 seconds, 1 minute, 2 minutes, 3 minutes, 5 minutes, 10 minutes, 15 minutes, 20 minutes, 30 minutes, or Continuous. (Default: 5 minutes.) The backlight uses a lot of power. **Keep this value as short as possible to prolong battery life.**

Note: If your terminal does not have a Backlight, this option will not work.

Set the PPT 41xx Advanced Feature Control Parameters:

Phoenix SETUP Utility (Version 1.00)						
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PPT 41xx Advanced Feature Control					Page 3 of 3	
Backlight Brightness: Off						
LCD Contrast: 8						
Buzzer Volume: High						
Boot Sequence: A,C						
	Exit Menu	Next Page	<=> Fields	<=> Fields	Prev. Value	Next Value

Figure 8-3. PPT 41xx Advanced Feature Control

Field Descriptions

Backlight BrightnessThis field contains the brightness value for the backlight. The valid options are: Off, Low, and High. (Default: Off.) If your terminal does not have a backlight, this option will not work. **To conserve power, keep this option set to Off.**

LCD ContrastThis field contains the value for the LCD contrast, and refers to the brightness, or contrast, of the LCD.
(Default: 8.)

Buzzer VolumeThis field contains the terminal's buzzer volume. The valid values are: High and Low. (Default: High.) **To conserve power, keep this option set to Low.**

Boot SequenceThis field defines the order in which the terminal seeks to boot the disk drive. The valid options are: A,C and C,A.

Overriding Default Parameters in XSYMBIOS

The setup program allows parameters to be defined which control certain terminal features. XSYMBIOS provides functions that allow some of these parameters to be modified dynamically by an application. Any modifications via XSYMBIOS are temporary in nature, and the values defined by SETUP.COM are restored when the terminal is rebooted.

The following parameters may be modified via XSYMBIOS:

- **SUSPEND TIMER:** This value is defined in the second page of SETUP.COM. It can be overridden by XSYMBIOS call **int B1h, Function 14h, sub-function 03h** (set suspend inactivity timer for CPU)
- **BACKLIGHT TIMER:** This value is specified in the second page of SETUP.COM. It can be overridden by XSYMBIOS call **int B1h, Function 13h, sub-function 02h** (set sleep inactivity timer for LCD)
- **BACKLIGHT BRIGHTNESS:** This value is specified in the third page of SETUP.COM. It can be overridden by XSYMBIOS call **int 32h, Function 82h**, (get/set backlight brightness)
- **LCD Contrast:** This value is specified in the third page of SETUP.COM. It can be overridden by XSYMBIOS call **int 32h, Function 86h** (get/set viewing angle)
- **Buzzer Volume:** This value is set in the third page of SETUP.COM. It can be overridden by XSYMBIOS call **int 32h, Function 81h** (get/set buzzer value).

Booting the Terminal

The PPT 41xx has several boot options. It may boot off of Diskette A or the ROM disk, or it may boot into Default Setup or IPL. Additionally, it may boot into a special sequence of menu options offered from the default ROM disk AUTOEXEC.BAT file. The following are the available boot options:

- If both side buttons are held while resetting, the terminal boots into IPL.
- If the left side button is held after booting (pressing the RESET switch), the terminal boots into Default Setup. This occurs regardless of whether there are SRAM cards present in the drives.
- If neither the left side button nor both side buttons are held while booting, the terminal boots from the SRAM card in socket 1, if there is a bootable SRAM card present in socket 1, and socket 1: is configured for DISKETTE A.
- The terminal attempts to boot into the ROM disk (C:), unless there is an SRAM card formatted as a system diskette in socket 1, and socket 1 is configured for DISKETTE A. If socket 1 does not contain an SRAM card (or socket 1 is not configured for DISKETTE A), the terminal boots into the ROM Disk (C:) if it is bootable. If the default ROM disk is present, and the right side button is held down while booting, then the custom AUTOEXEC.BAT that supports side button menus executes.
- The terminal attempts to boot into the ROM disk (C:), unless there is an SRAM card formatted as a system diskette in socket 1, and socket 1 is configured for DISKETTE A. If socket 1 does not contain an SRAM card (or socket 1: is not configured for DISKETTE A), the terminal boots into the ROM Disk (C:), if it is bootable. If the default ROM Disk is present, and the right side button is not held down while booting, then socket 2 is checked for an SRAM card with an AUTOEXEC.BAT file on it. If an AUTOEXEC.BAT file is found on the SRAM Card in socket 2 (B:), then it executes. If no SRAM card is in socket 2, or if it does not contain an AUTOEXEC.BAT file, then the AUTOEXEC.BAT on the ROM Disk drops out to a C: prompt. Further operation from that point would require an XT keyboard.