

PT-6900

User manual



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Trademark recognition

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Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

Declaration of conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

About this manual

This manual is intended for system administrators who are familiar with setting up a new system and installing an operating system.

The manual consists of the following sections:

- | | |
|---------------------------------|--|
| Chapter 1 Getting Started: | This section covers unpacking and checking the package contents, and identifying components. Information on connecting peripheral devices, and powering on is also provided. |
| Chapter 2 Upgrading Components: | This section provides information on upgrading components such as a hard disk drive or CompactFlash card reader. |
| Chapter 3 BIOS Setup Utility: | The BIOS chapter provides information on navigating and changing settings in the BIOS Setup Utility. |
| Appendix: | The appendix covers troubleshooting, information on having the PT-6900 serviced, and technical specifications. |

Safety information

Before installing and using the PT-6900 POS, take note of the following precautions:

- Read all instructions carefully.
- Do not place the unit on an unstable surface, cart, or stand.
- Do not block the slots and opening on the unit, which are provided for ventilation.
- Do not push objects in the ventilation slots as they may touch high voltage components and result in shock and damage to the components.
- Only use the power source indicated on the marking label. If you are not sure, contact your dealer or the Power Company.
- The unit uses a three-wire ground cable, which is equipped with a third pin to ground the unit and prevent electric shock. Do not defeat the purpose of this pin. If your outlet does not support this kind of plug, contact your electrician to replace your obsolete outlet.
- Do not place anything on the power cord. Place the power cord where it will not be in the way of foot traffic.
- Follow all warnings and cautions in this manual and on the unit case.
- When replacing parts, ensure that your service technician uses parts specified by the manufacturer.
- Avoid using the system near water, in direct sunlight, or near a heating device..



The system uses a 3V CR2032 battery mounted on the mainboard to keep time. There is a risk of explosion if the wrong battery type is used when replacing. Dispose of used batteries according to local ordinance regulations.



The USB ports may be damaged if care is not taken when connecting devices. Ensure USB devices are correctly inserted. Plugging a phone line into the LAN port (RJ-45 connector) may damage the connector. Plug only an RJ-45 connector into the LAN port.

Revision history

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CHAPTER 1

GETTING STARTED

This chapter describes the procedures from unpacking the PT-6900 POS, to powering it on. The following topics are described.

- “Unpacking the PT-6900”
- “Checking the package contents” on page 2
- “Identifying components” on page 3
- “Removing the rear cover” on page 7
- “Attaching the customer display” on page 8
- “Adjusting display angles” on page 9
- “Setup considerations” on page 9
- “Connecting peripheral devices” on page 10
- “Connecting a cash drawer” on page 11
- “Powering the PT-6900 on and off” on page 12

Unpacking the PT-6900

The PT-6900 and cable accessories are packed in a cardboard carton with foam padding for protection during shipping.

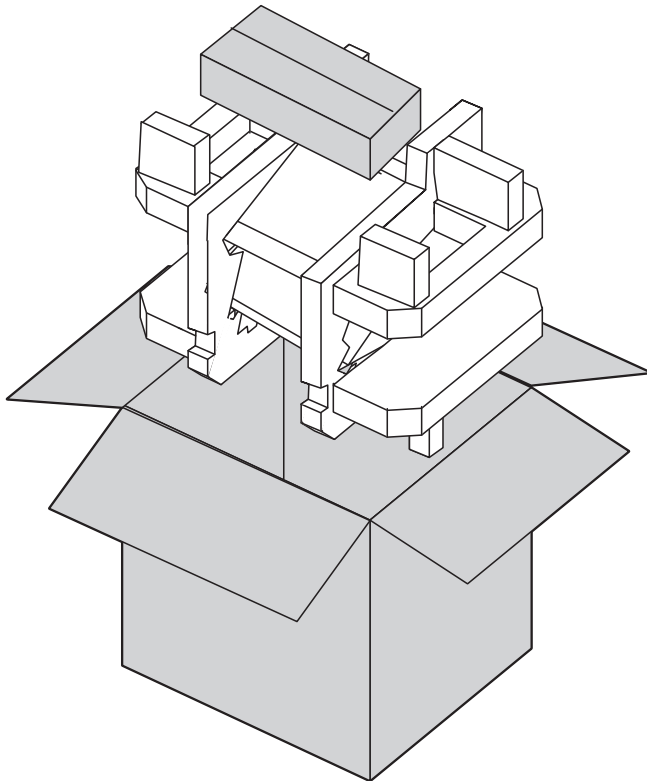
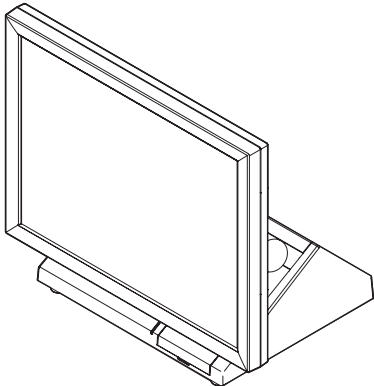


Figure 1.1 Unpacking the PT-6900

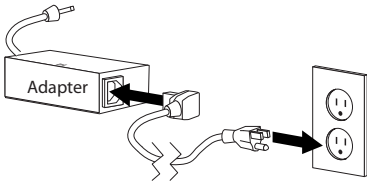
Carefully unpack the PT-6900 and keep the packing materials. If you need to ship the PT-6900 in the future, repack it as shown in Figure 1.1.

Checking the package contents

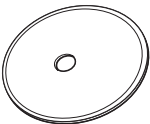
After you unpack the PT-6900 check that the following items are included.



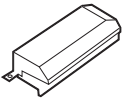
PT-6900 (SOME UNITS SHIP WITH CUSTOMER DISPLAY AND MSR INSTALLED)



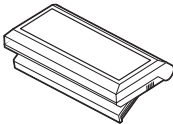
POWER PLUG



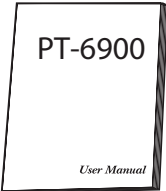
DRIVER CD-ROM WITH DRIVERS AND USER MANUAL PDF



MSRs (OPTIONAL)



CUSTOMER DISPLAY (OPTIONAL)



(THIS) USER MANUAL

If any item is missing or appears damaged, contact your dealer immediately.

Identifying components

This section describes the parts and connectors on the PT-6900.

Front-right view

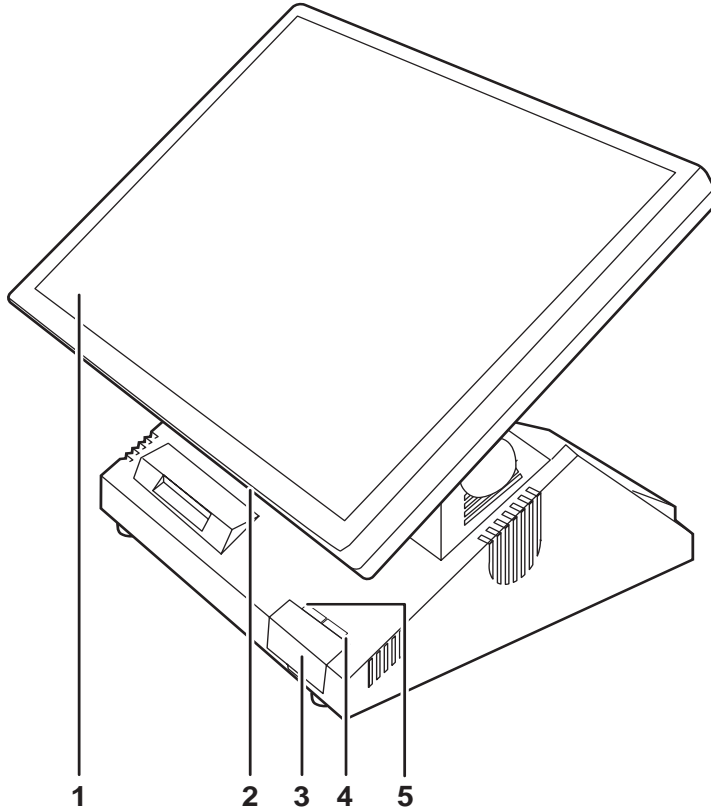


Figure 1.2 Front-right view of PT-6900

DESCRIPTION	
1	15-inch TFT LCD touch screen
2	Power button
3	USB cover
4	Green Power LED
5	Amber Hard drive LED



NOTE

There are two USB connectors under the USB cover and two more USB connectors on the rear of the PT-6900.

Rear-right view

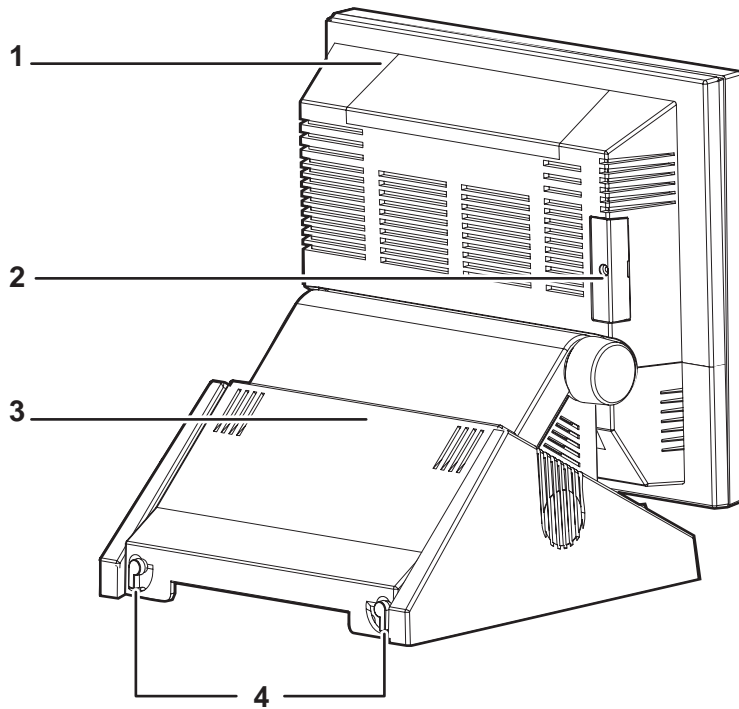


Figure 1.3 Rear-right view of PT-6900

DESCRIPTION	
1	Customer display cover
2	CompactFlash card cover
3	Rear cover
4	Rear cover latches

Rear connectors

Figure 1.4 shows the connectors on the rear of the PT-6900. You must remove the rear cover to access the connectors. See “Removing the rear cover” on page 7.

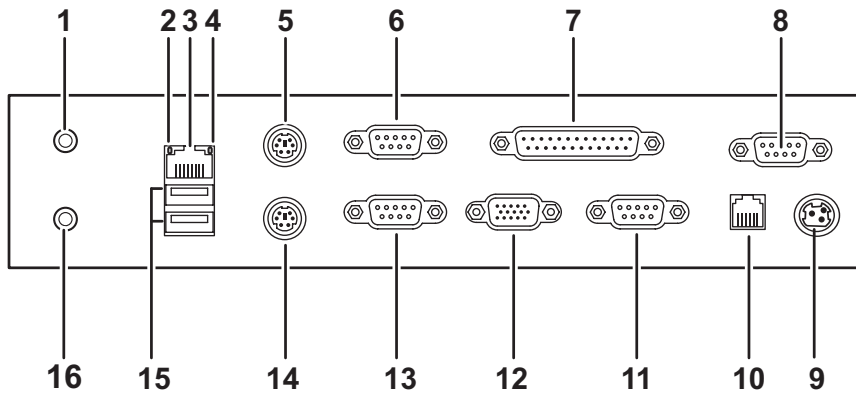


Figure 1.4 Rear connectors labeled

DESCRIPTION	
1	Line out
2	Act LED (green) lights when network activity is detected
3	RJ-45 (LAN) connector
4	Link LED (orange) lights when the network is found
5	PS/2 mouse connector
6	COM3 connector
7	Parallel connector
8	COM2 connector
9	Power connector
10	RJ-11 cash drawer connector
11	COM1 connector
12	VGA connector
13	COM4 connector
14	PS/2 keyboard connector
15	USB connectors
16	Mic in

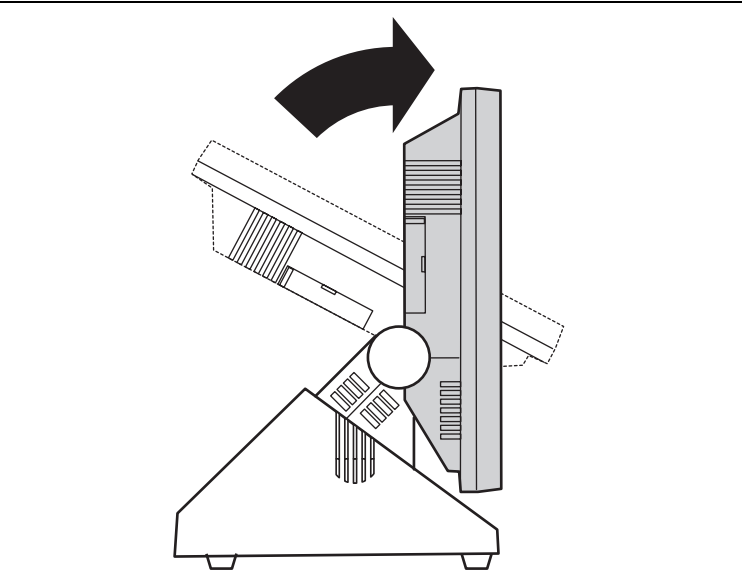


Plugging a phone line (RJ-11) into the LAN port (RJ-45 connector) may damage the connector. Connect only an RJ-45 plug to the LAN port.

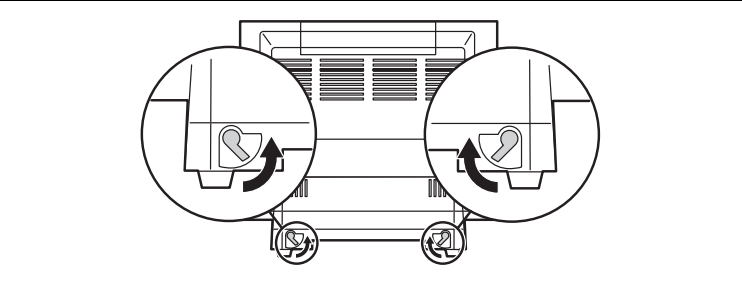
Removing the rear cover

Refer to the following to remove the rear cover.

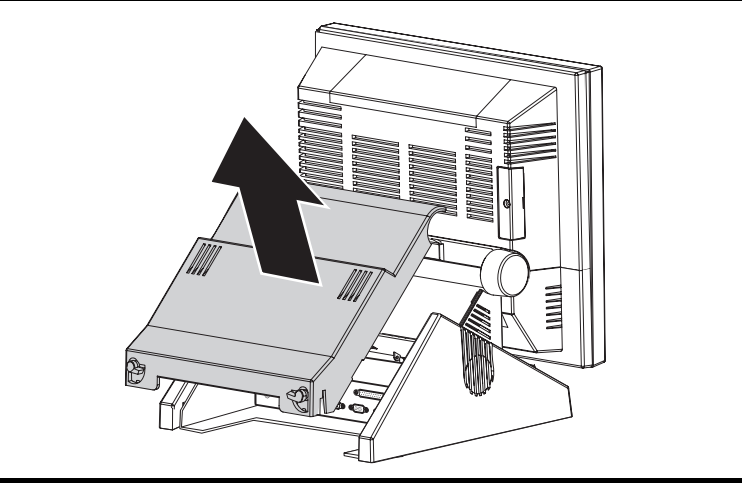
1 Rotate the display until it's perpendicular.



2 Open the rear cover latches.

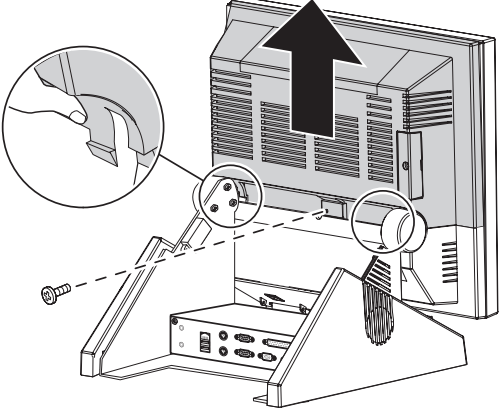
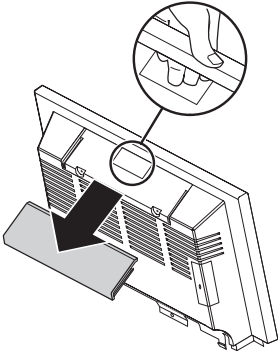


3 Remove the rear cover.



Attaching the customer display

The PT-6900 may ship with a customer display attached. If you ordered the display separately, refer to the following to attach it.

<ol style="list-style-type: none">1 Remove the rear cover. See “Removing the rear cover” on page 7.2 Remove the screw.3 Push with your thumbs as shown and lift up to remove the panel cover.	
<ol style="list-style-type: none">4 While pushing from the underside, slide the customer display cover firmly in the direction of the arrow to remove it.5 Replace the panel cover and secure it with the screw.	
<ol style="list-style-type: none">6 Connect the customer display cable.7 Align the grooves on the customer display bracket and slide the customer display firmly into place.8 Secure the display with the two supplied screws.	



NOTE

To supply power to the customer display, the COM6 voltage is factory set to DC+12V.

Adjusting display angles

The main display can be tilted back from an upright perpendicular position to about 45 degrees as shown in Figure 1.5. The customer display can be tilted as shown in Figure 1.6.

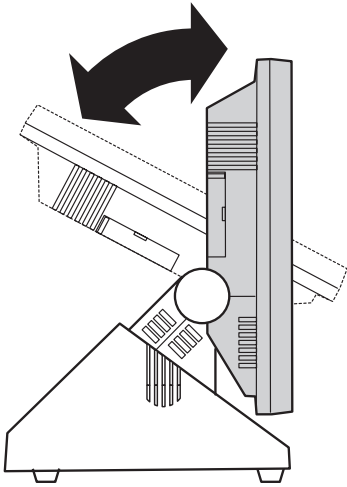


Figure 1.5 Adjusting the display

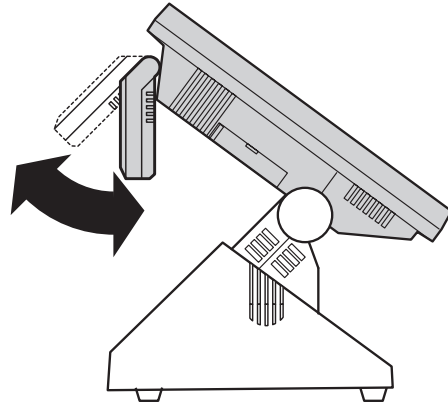


Figure 1.6 Adjusting the customer display

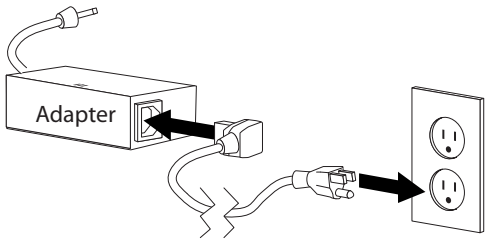
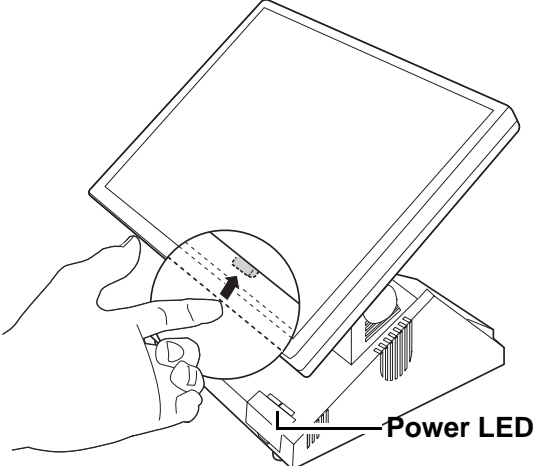
Setup considerations

When setting up the PT-6900, consider the following:

- Use a desktop or counter that is stable and even.
- Ensure there is enough room around the sides and rear of the PT-6900 for ventilation.
- Ensure there is room to connect cables and that cables are long enough to reach peripheral devices or a power outlet.

Powering the PT-6900 on and off

Refer to the following to power on and off the PT-6900.

<ol style="list-style-type: none">1 Remove the rear cover. See “Removing the rear cover” on page 7.2 Connect the power cable to the power connector on the PT-6900 rear panel and to the AC adapter.3 Connect the AC adapter to an electrical outlet.	 <p>The diagram shows a rectangular AC adapter with a power cord on the left. A power cable with a connector on one end is plugged into the side of the adapter. The other end of the power cable is plugged into a standard two-prong electrical outlet on the right. Arrows indicate the direction of connection.</p>
<ol style="list-style-type: none">4 Press the power button on the underside of the display panel. The power LED turns on.5 To turn off the PT-6900, shut down the operating system. The main power turns off automatically.	 <p>The diagram shows a hand reaching from the left to press a circular power button located on the underside of the display panel. A dashed line indicates the button's location. A label 'Power LED' with an arrow points to a small light on the bottom edge of the device's base.</p>



You may need to use the main power button to turn off the power, for example if the operating system you are using does not support power down by the OS or if the system crashes or hangs.

CHAPTER 2 UPGRADING COMPONENTS

This chapter describes how to upgrade components for the PT-6900. The following topics are described.

- “Safety and precautions”
- “Before you begin” on page 14
- “Installing a hard disk drive (HDD)” on page 14
- “Installing a CompactFlash card” on page 16

Safety and precautions

Computer components and electronic circuit boards can be damaged by discharges of static electricity. Working on computers that are still connected to a power supply can be extremely dangerous. Follow these guidelines to avoid damage to the computer or injury to yourself.

- Always disconnect the unit from the power outlet.
- Leave all components inside the static-proof packaging that they ship with until they are ready for installation.
- After replacing optional devices, make sure all screws, springs, or other small parts are in place and are not left loose inside the case. Metallic parts or metal flakes can cause electrical shorts.



Only qualified personnel should perform repairs on the PT-6900. Damage due to unauthorized servicing is not covered by the warranty. If you are not confident of installing a hard drive or CompactFlash card, we recommend that you refer the job to qualified personnel.



If the LCD breaks and fluid gets onto your hands or into your eyes, immediately wash with water and seek medical attention.



The inverter card has high voltage. Do not touch the inverter card while power is connected to the PT-6900. Unplug the power cord before attempting to replace any part.



To prevent static damage to components, wear a grounded wrist strap. Alternatively, discharge any static electricity by touching the bare metal chassis of the unit case, or the bare metal body of any other grounded appliance.



Hold electronic circuit boards by the edges only. Do not touch the components on the board unless it is necessary to do so. Do not flex or stress the circuit board. Do not hold components such as a processor by its pins; hold it by the edges.

Before you begin

Make sure you have a stable, clean working environment. Dust and dirt can get into components and may cause malfunction. Adequate lighting and proper tools can prevent you from accidentally damaging the internal components.

Most of the electrical and mechanical connections can be disconnected by using your fingers. It is recommended that you do not use needle-nosed pliers to disconnect connectors as these can damage the soft metal or plastic parts of the connectors.

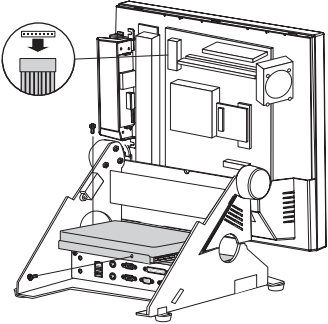
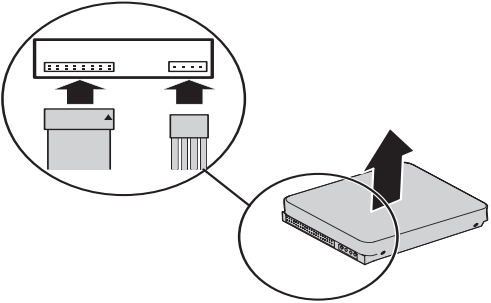
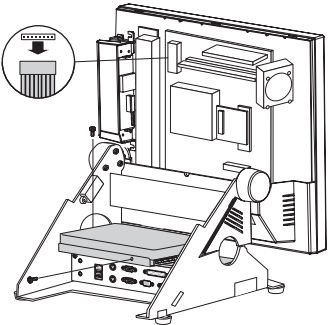


To prevent scratching the case of the PT-6900, make sure the worktop surface is clean and flat.

Installing a hard disk drive (HDD)

Refer to the following to install a HDD.

<ol style="list-style-type: none">1 Open the rear cover latches.2 Tilt the display back.	
<ol style="list-style-type: none">3 Pull the front cover away from the unit at the sides and then pull it away at the front to remove it.	

<p>4 Remove the two screws, then remove the hard disk drive tray.</p>	
<p>5 Connect the IDE and power cables to the HDD rear connectors.</p> <p>6 Place the hard disk drive on the tray, then secure it with a screw.</p>	
<p>7 Fold the cable as shown.</p> <p>8 Replace the HDD tray, then secure it with two screws.</p>	

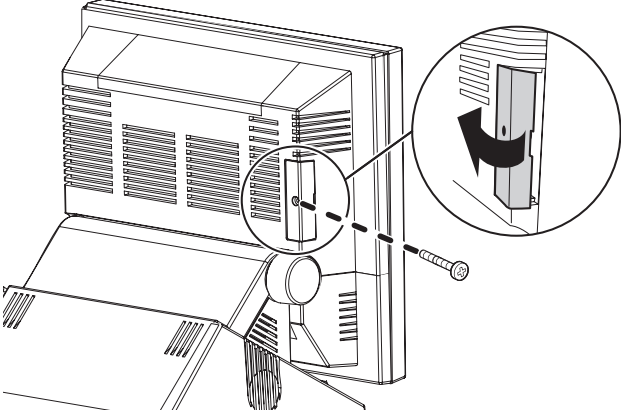
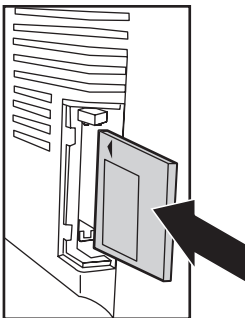
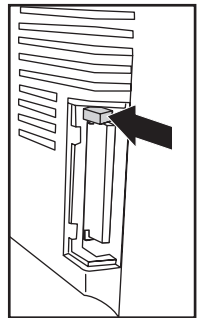
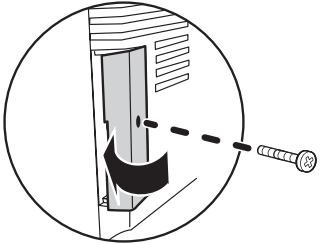


Refer to the documentation with the replacement drive for instructions on setting drive jumpers and formatting the drive.

Installing a CompactFlash card

The CompactFlash card reader uses an IDE (Integrated Drive Electronics) interface and only supports storage cards. Plug and play is not supported so you must insert the card before you turn the PT-6900 POS on. After inserting a CompactFlash card, replace the cover to prevent the card from being accidentally removed while power is on.

Refer to the following to install a CompactFlash card.

<p>1 Remove the screw and the card reader cover.</p>	 A line drawing of the PT-6900 POS device. A circular inset shows a close-up of the card reader slot. A screw is shown being removed from the cover of the slot. A curved arrow indicates the cover is being lifted away from the device.
<p>2 Insert the CompactFlash card as shown. Caution: The CompactFlash card inserts to the card reader in one orientation. Incorrect insertion may damage the card reader pins. Refer to the illustration for the correct orientation before installing.</p>	 A close-up line drawing of the card reader slot. A CompactFlash card is shown being inserted into the slot. A large black arrow points to the right, indicating the direction of insertion.
<p>3 To remove a card press the eject button and pull the card out.</p>	 A close-up line drawing of the card reader slot. A small rectangular button (the eject button) is shown being pressed. A black arrow points to the right, indicating the direction of the button press.
<p>4 Replace the cover and screw.</p>	 A circular inset showing a close-up of the card reader slot. The cover is shown being placed back over the slot. A screw is shown being inserted into the cover to secure it. A curved arrow indicates the cover is being pushed back into place.

CHAPTER 3

BIOS SETUP UTILITY

The BIOS (Basic Input and Output System) Setup Utility displays the system's configuration status and provides options to set system parameters. The parameters are stored in battery-backed-up CMOS RAM that saves this information even when the power is turned off. When the system is turned back on, the system is configured with the values found in CMOS. The following topics are described in this chapter.

- “About the Setup Utility”
- “Entering the Setup Utility” on page 18
- “Standard CMOS features” on page 19
- “Advanced BIOS Features ” on page 21
- “Integrated Peripherals ” on page 25
- “Power Management Setup” on page 30
- “PnP/PCI Configurations” on page 32
- “PC Health Status” on page 34
- “Frequency/Voltage Control” on page 35
- “Other BIOS Options” on page 36

About the Setup Utility

The BIOS Setup Utility enables you to configure the following items:

- Hard drives, diskette drives, and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power management features



If you have made settings that you do not want to save, use the "Exit Without Saving" item and press Y to discard any changes you have made.

This Setup Utility should be used for the following:

- When changing the system configuration
- When a configuration error is detected and you are prompted to make changes to the Setup Utility
- When trying to resolve IRQ conflicts
- When making changes to the Power Management configuration
- When changing the User or Supervisor password

Entering the Setup Utility

When you power on the system, BIOS enters the Power-On Self Test (POST) routines. POST is a series of built-in diagnostics performed by the BIOS. After the POST routines are completed, the following message appears:

Press DEL to enter SETUP

Press the delete key <Delete> to access the Award BIOS Setup Utility:

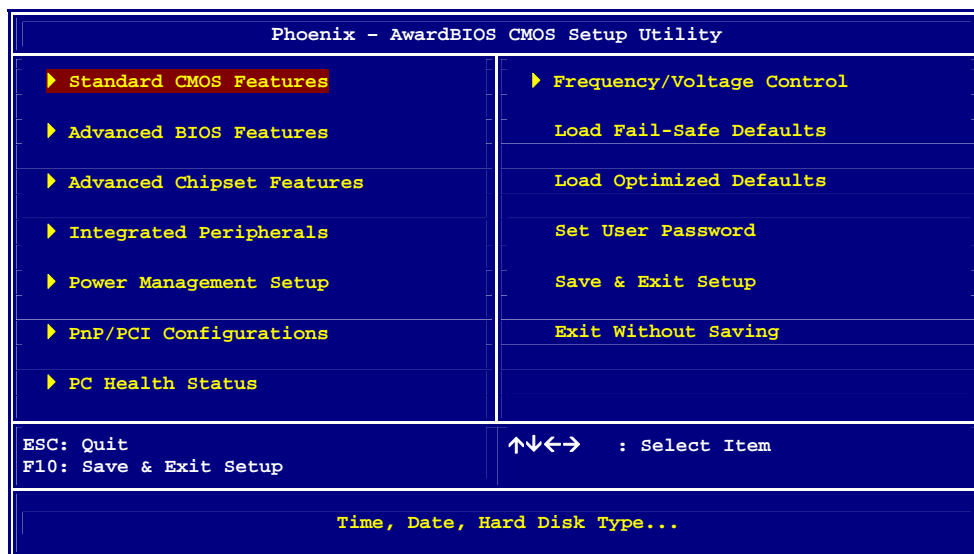


Figure 3.1 Main BIOS menu

BIOS navigation keys

The BIOS navigation keys are listed below.

KEY	FUNCTION
←↑↓→	Scrolls through the items on a menu
+/-/PU/PD	Modifies the selected field's values
Esc	Exits the current menu
F1	Displays a screen that describes all key functions
F5	Loads previously saved values to CMOS
F6	Loads a minimum configuration for troubleshooting
F7	Loads an optimum set of values for peak performance
F10	Saves the current configuration and exits Setup
Shift + F2	Changes the color of the BIOS menu

Using BIOS

When you start the Setup Utility, the main menu appears. The main menu of the Setup Utility displays a list of the options that are available. A highlight indicates which option is currently selected. Use the cursor arrow keys to move the highlight to other options. When an option is highlighted, execute the option by pressing <Enter>.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a triangle ►) lead to submenus that enable you to change the values for the option. Use the cursor arrow keys to scroll through the items in the submenu.

Standard CMOS features

Selecting Standard CMOS Features on the main menu displays the following menu:

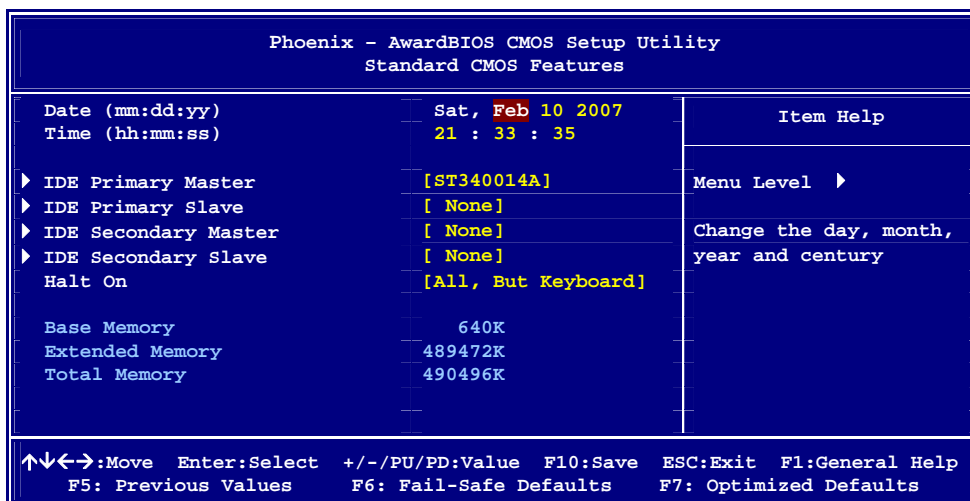


Figure 3.2 Standard CMOS Features menu

Date and Time

The Date and Time items show the current date and time held by the PT-6900. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

Halt On

This item defines the operation of the system POST (Power On Self Test) routine. You can use this item to select which types of errors in the POST are sufficient to halt the system.

Base Memory, Extended Memory, and Total Memory

These items are automatically detected by the system at start up time. These are display-only fields. You cannot make changes to these fields.

- **Base Memory** – This field displays the amount of conventional memory detected by the system during boot.
- **Extended Memory** – This field displays the amount of extended memory detected by the system during boot.
- **Total Memory** – This field displays the total amount of memory (Base and Extended) detected by the system during boot.

Press <Esc> to return to the main menu.

► IDE Primary/Secondary Master/Slave

This field is used to configure the IDE hard drive installed in the system. Move the cursor to highlight the IDE Primary/Secondary Master/Slave fields and press <Enter>. The IDE Primary Master submenu opens:

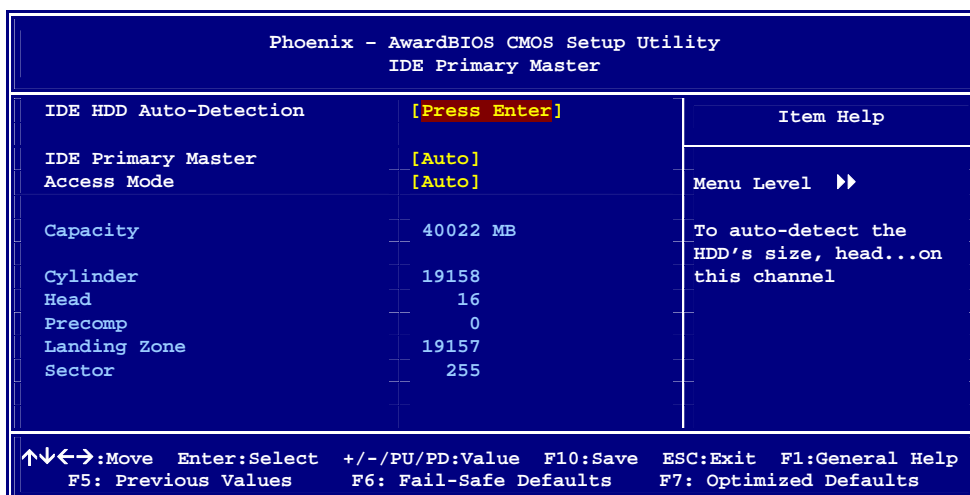



Figure 3.3 IDE Primary Master submenu

IDE HDD Auto-Detection

Press **Enter** while this item is highlighted if you want the Setup Utility to automatically detect and configure a hard disk drive on the IDE channel.



NOTE

If you are setting up a new hard disk drive that supports LBA mode, more than one line will appear in the parameter box. Choose the line that lists LBA for an LBA drive.

IDE Primary/Secondary Master/Slave

If you leave this item at *Auto*, the system will automatically detect and configure any IDE devices it finds. If it fails to find a hard disk, change the value to *Manual* and then manually configure the drive by entering the characteristics of the drive in the fields described below:

- **Capacity** – displays the capacity of the HDD in megabytes (MB).
- **Cylinder** – indicates the number of cylinders that the HDD has. A cylinder is the sum total of all tracks that are in the same location on every disk surface.
- **Head** – displays the number of heads in the HDD. A head is a device that reads and writes data on the hard disk.
- **Precomp** – displays the track where precompensation is initiated. Precompensation is a feature whereby the HDD uses a stronger magnetic field to write data in sectors that are closer to the center of the disk. In CAV recording, in which the disk spins at a constant speed, the sectors closest to the spindle are packed tighter than the outer sectors.
- **Landing Zone** – displays the location of the safe non-data area on a hard disk that is used for parking the read/write head.
- **Sector** – displays the number of sectors available on the HDD. A sector is the smallest unit of storage space on a disk.

Access Mode

This item defines special ways that can be used to access IDE hard disks such as LBA (Large Block Addressing). Leave this value at *Auto* and the system will automatically decide the fastest way to access the hard disk drive.

Press <Esc> to close the IDE device sub-menu and return to the Standard CMOS Features menu.

Advanced BIOS Features

Selecting Advanced BIOS Features on the main menu opens up this screen:

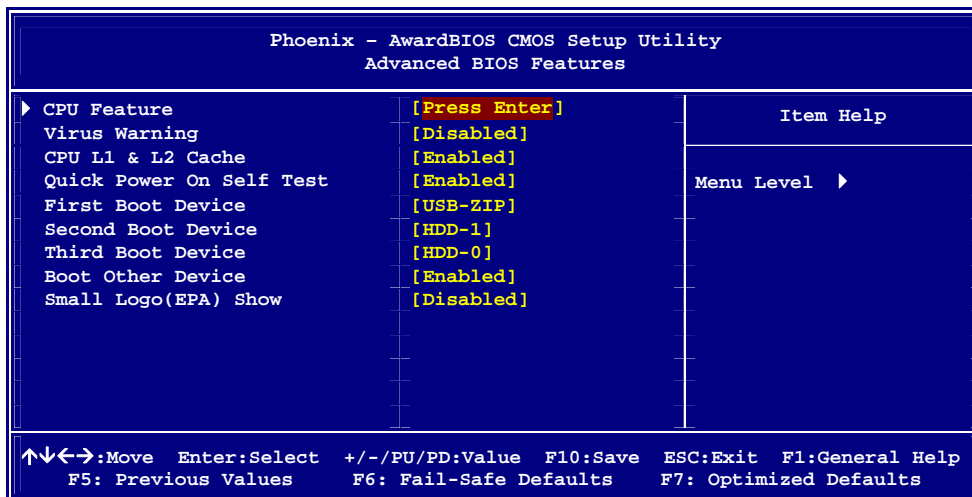


Figure 3.4 Advanced BIOS Features menu

Virus Warning

When enabled, this item provides protection against viruses that try to write to the boot sector and partition table of the hard disk drive. You need to disable this item when installing an operating system. We recommend that you enable anti-virus protection as soon as you have installed an operating system. The default setting is Disabled.

CPU L1 & L2 Cache

All processors that can be installed in this mainboard use internal level 1 (L1) and external level 2 (L2) cache memory to improve performance. Leave this item at the default setting for better performance. The default setting is Enabled.

Quick Power On Self Test

Enable this item to shorten the power on testing (POST) and have the system start up faster. You can enable this item after you are confident that the system hardware is operating smoothly. The default setting is Enabled.

First/Second/Third Boot Device

The BIOS loads the operating system from the disk drives in the sequence selected in these three fields. The default setting is USB-ZIP/HDD-1/HDD-0.

Boot Other Device

When enabled, the system searches all other possible locations for an operating system if it fails to find one in the device. The default setting is Enabled.

Small Logo (EPA) Show.

Determines whether the EPA logo appears during boot up. The default setting is Disabled.

Press <Esc> to return to the main menu.

► CPU Feature

This menu comes with CPU-related parameters:

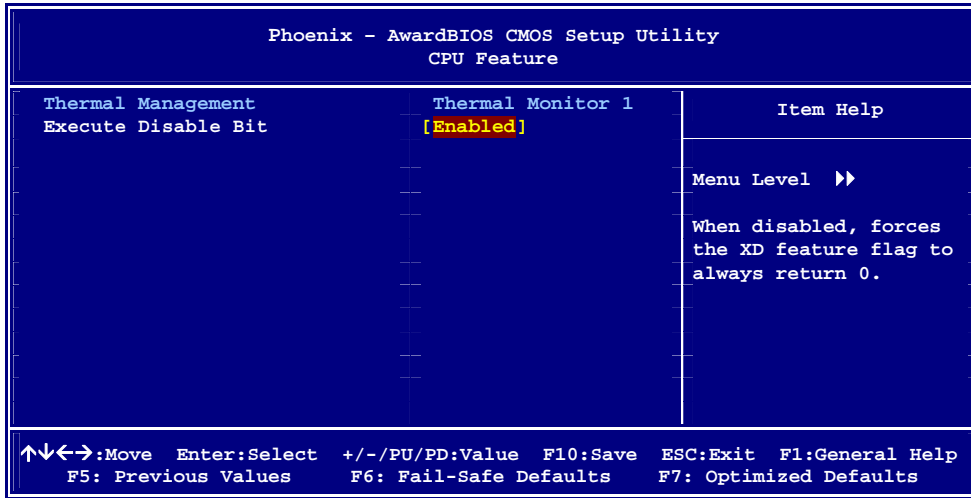


Figure 3.5 CPU Feature submenu

Thermal Management

Shows the thermal management monitor. This item is non-configurable. The default setting is Thermal Monitor 1.

Execute Disable Bit

The default setting is Enabled.

Advanced Chipset Features

This option displays critical timing parameters of the mainboard. Leave the items on this menu at their default settings unless you are very familiar with the technical specifications of the system hardware. If you change the values incorrectly, you may introduce fatal errors or recurring instability into the system.

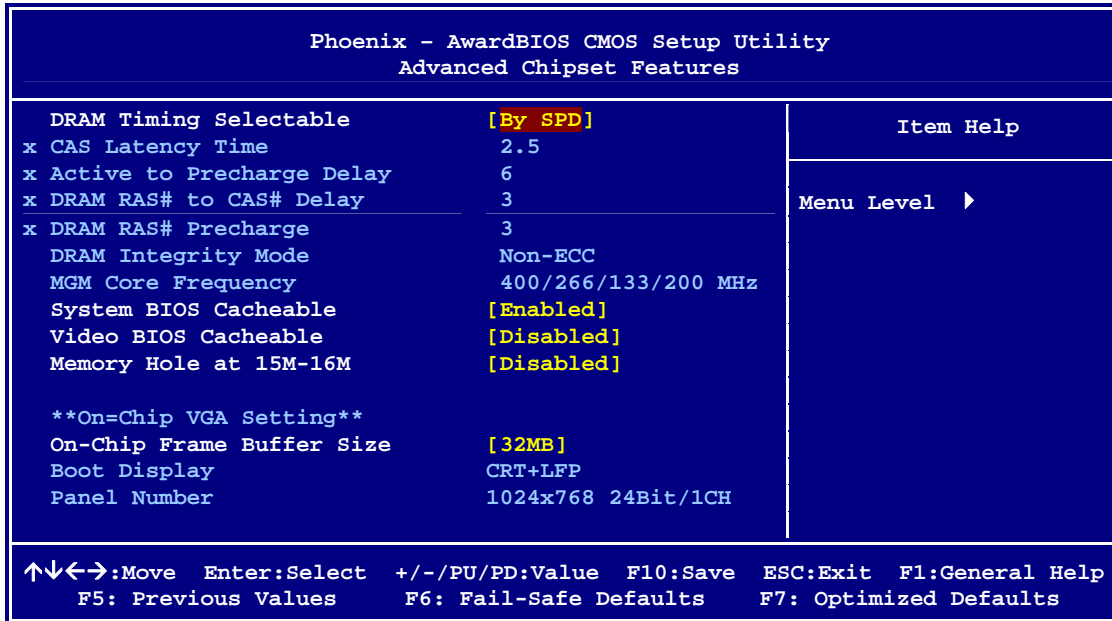
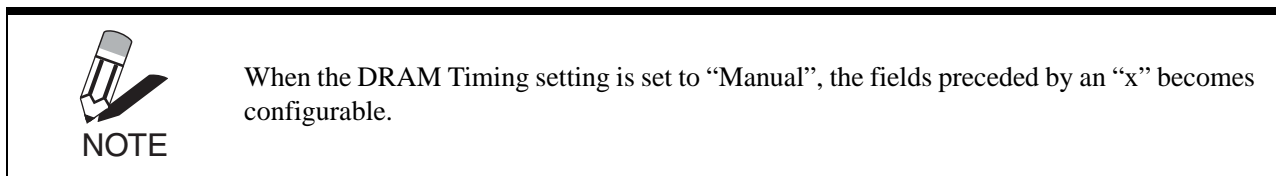


Figure 3.6 Advanced Chipset Features menu

DRAM Timing

Set this to the default value to enable the system to automatically set the SDRAM timing by SPD (Serial Presence Detect). SPD is an EEPROM chip on the DIMM module that stores information about the memory chips it contains, including size, speed, voltage, row and column addresses, and manufacturer. The default value is By SPD.



CAS Latency Time

This item enables you to specify the time delay (in clock cycles or CLKs) that elapses before the SDRAM carries out a read command after receiving it. The value specified here also sets the number of CLKs that will elapse for the completion of the first part of a burst transfer. Low values indicate a faster data transaction. When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. The default is 2.5.

Active to Precharge Delay

This item specifies the number of clock cycles needed after a bank active command before a precharge can occur. The default is 6.

DRAM RAS# to CAS# Delay

The default is 3.

DRAM RAS# to Precharge

The default is 3.

DRAM Data Integrity Mode

This item detects whether the installed DRAM has error correction. This parameter is non-configurable.

MGM Core Frequency

Shows the supported DRAM clocks. This parameter is non-configurable.

System/Video BIOS Cacheable

These items allow the video and/or system to be cached in memory for faster execution. We recommend that you leave these items at the default value. The default setting is Enabled/Disabled.

Memory Hole At 15M-16M

This item can be used to reserve memory space for some ISA expansion cards that require it. The default setting is Disabled.

On-Chip Frame Buffer Size

Sets the frame buffer memory of the built-in VGA controller. The default setting is 32 MB.

Boot Display

If you connect an external display to the PT-6900, you can use this setting to turn off the LCD and only use the external display. To use dual displays this must be set to CRT+LCD. The default setting is CRT+LFP.

Panel Number

This setting auto-detects the panel resolution and other panel settings. Unless you changed the panel of the PT-6900, leave this setting at its default. The default setting is 1024x768 24Bit/1CH.

Press <Esc> to return to the Advanced Chipset Features menu.

Integrated Peripherals

This option defines the operation of peripheral components on the system's input/output ports.

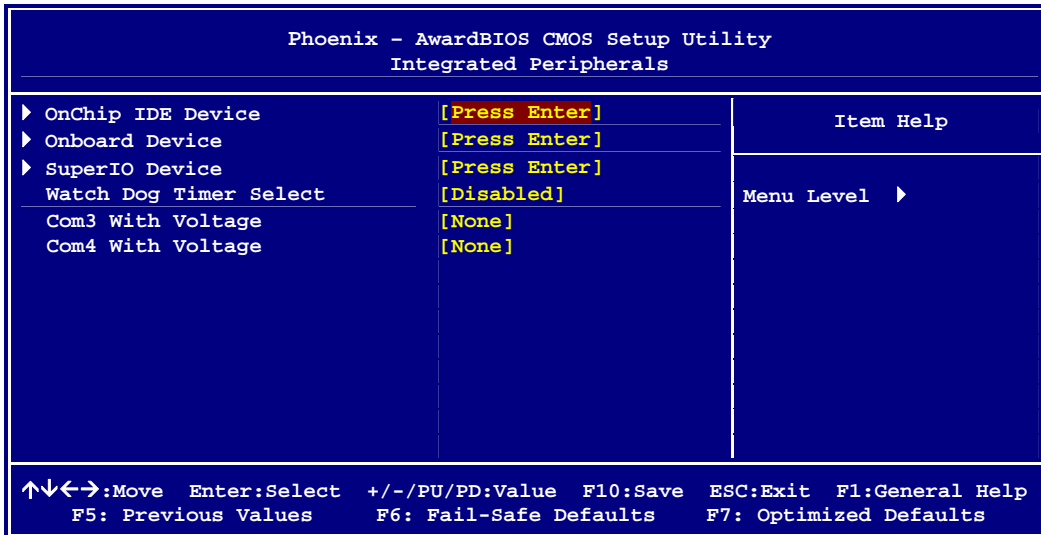


Figure 3.7 Integrated Peripherals menu

OnChip IDE Device (See “OnChip IDE Device” on page 26.)

Onboard Device (See “Onboard Device” on page 27.)


SuperIO Device (See “SuperIO Device” on page 28.)

Watch Dog Timer Select

Sets the watch dog timer. The default setting is Disabled.

Com 3/4 With Voltage

COM ports can be set to supply both data and power to the peripherals that connect to them. Check if the device you connect needs power from the COM port or if it has its own power supply. The factory setting for the COM ports is None.



IMPORTANT *The voltage for the COM ports is set at None at the factory. However, for example to provide power to an installed customer display, this setting must be set at 12V for the corresponding COM port. For a 5V device such as a barcode scanner, the setting should be 5V.*

OnChip IDE Device

Use this item to enable or disable the PCI IDE channels that are integrated on the mainboard. Select the item and press <Enter> to open the following menu:

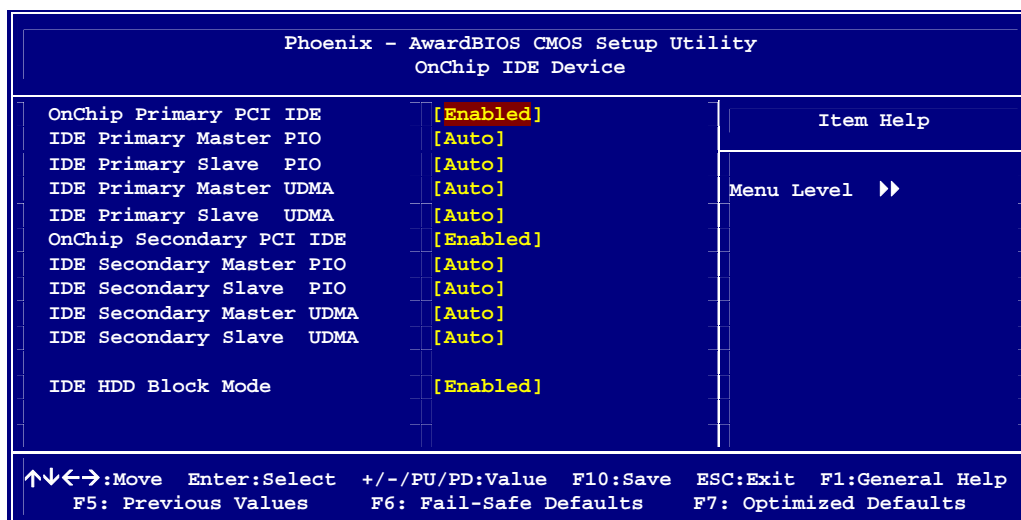


Figure 3.8 OnChip IDE Device menu

On-Chip Primary/Secondary IDE

Use these items to enable or disable the PCI IDE channels that are integrated on the mainboard. The default setting for both fields is Enabled.

IDE Primary/Secondary Master/Slave PIO

Each IDE channel supports a master device and a slave device. These four items let you assign which kind of PIO (Programmed Input/Output) is used by IDE devices. Choose Auto to let the system auto detect which PIO mode is best, or select a PIO mode from 0-4. The default setting is Auto.

Primary/Secondary Master/Slave UDMA

Each IDE channel supports a master device and a slave device. This mainboard supports UltraDMA technology, which provides faster access to IDE devices. If you install a device that supports UltraDMA, change the appropriate item on this list to Auto. You may have to install the UltraDMA driver supplied with this mainboard in order to use an UltraDMA device. The default setting is Auto.

IDE HDD Block Mode

Enable this field if the IDE hard drive supports block mode. Block mode enables BIOS to automatically detect the optimal number of block read and writes per sector that the drive can support and improves the speed of access to IDE devices. The default setting is Enabled.

Press <Esc> to return to the Integrated Peripherals menu.

Onboard Device

Use this item to enable or disable the PCI devices that are integrated on the mainboard. Select the item and press <Enter> to open the following menu:

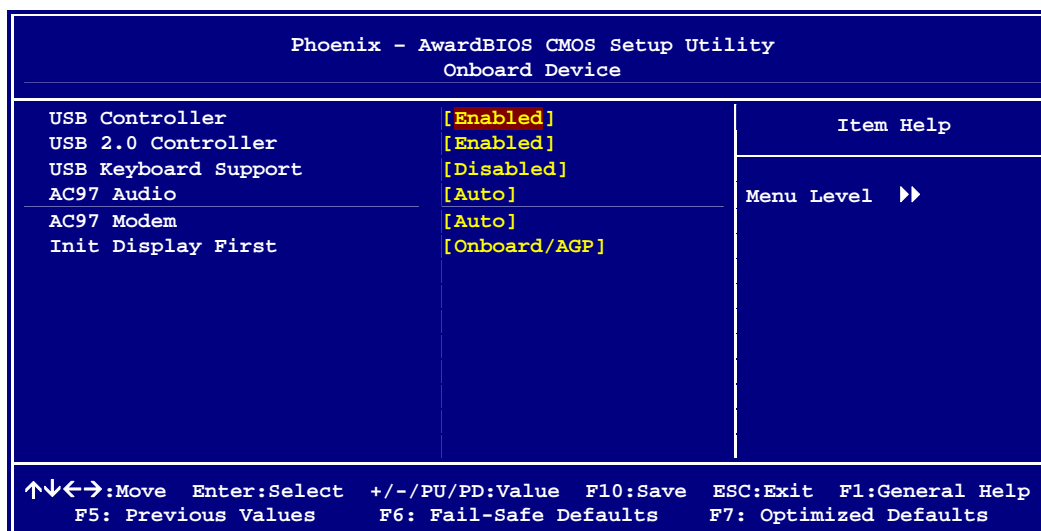


Figure 3.9 Onboard Device menu

USB Controller

This item must be enabled to use the Universal Serial Bus ports on the mainboard. The default setting is Enabled.

USB 2.0 Controller

The USB 2.0 Controller item allows USB 2.0 functionality. The default setting is Enabled.

USB Keyboard Support

Enable this item if you plan to use a keyboard connected through the USB port in a legacy operating system (such as DOS) that does not support Plug and Play. The default setting is Disabled.

AC97 AUDIO

Enables and disables the onboard audio chip. Disable this item if you are going to install a PCI audio add-in card. The default setting is Auto.

AC97 Modem

Enables and disables the onboard modem chip. Disable this item if you are going to install a PCI audio add-in card. The default setting is Auto.

Init Display First

Use this item to specify whether the graphics adapter is installed in one of the PCI slots or is integrated on the mainboard. The default setting is Onboard/AGP.

Press <Esc> to return to the Integrated Peripherals menu.

SuperIO Device

Use this item to change settings for I/O devices. Select the item and press <Enter> to open the following menu:

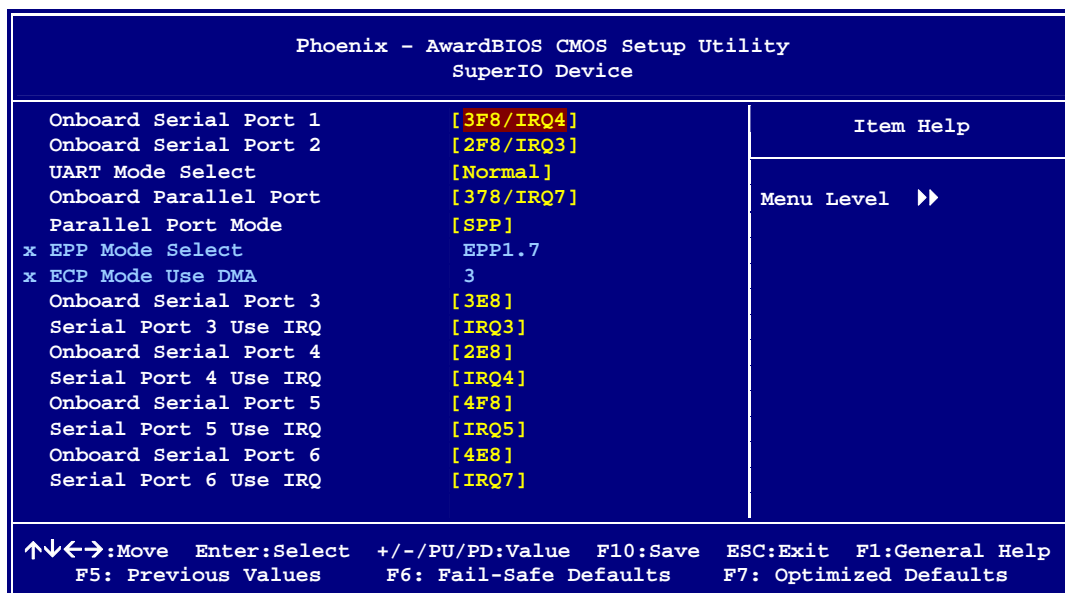


Figure 3.10 Super IO Device menu

Onboard Serial Port 1

This option is used to assign the I/O address and IRQ for the onboard serial port 1. The default setting is 3F8/IRQ4.

Onboard Serial Port 2

This option is used to assign the I/O address and IRQ for the onboard serial port 2. The default setting is 2F8/IRQ3.

UART Mode Select

This option is used to set the UART mode. The default setting is Normal.

Onboard Parallel Port

This option is used to assign the I/O address and IRQ for the onboard parallel port. The default setting is 378/IRQ7.

Parallel Port Mode

Enables you to set the data transfer protocol for the parallel port. There are five options: SPP (Standard Parallel Port), EPP (Enhanced Parallel Port), ECP (Extended Capabilities Port), ECP+EPP, and PntMode. The default setting is SPP.

SPP allows data output only. Extended Capabilities Port (ECP) and Enhanced Parallel Port (EPP) are bi-directional modes, allowing both data input and output. ECP and EPP modes are only supported with EPP- and ECP-aware peripherals. PntMode allows the parallel port to operate in bipolar mode.

ECP Mode Use DMA

When the onboard parallel port is set to EPP mode, the parallel port can use EPP1.7 or EPP1.9. The default setting is EPP1.7.

ECP Mode Use DMA

When the onboard parallel port is set to ECP mode, the parallel port can use DMA 3 or DMA 1. The default setting is 3.

Onboard Serial Port 3

This option is used to assign the I/O address for the onboard serial port 3. The default setting is 3E8.

Serial Port 3 Use IRQ

This option is used to assign the IRQ for the onboard serial port 3. The default setting is IRQ3.

Onboard Serial Port 4

This option is used to assign the I/O address for the onboard serial port 4. The default setting is 2E8.

Serial Port 4 Use IRQ

This option is used to assign the IRQ for the onboard serial port 4. The default setting is IRQ4.

Onboard Serial Port 5

This option is used to assign the I/O address for the onboard serial port 5. The default setting is 4F8.

Serial Port 5 Use IRQ

This option is used to assign the IRQ for the onboard serial port 5. The default setting is IRQ5.

Onboard Serial Port 6

This option is used to assign the I/O address for the onboard serial port 6. The default setting is 4E8.

Serial Port 6 Use IRQ

This option is used to assign the IRQ for the onboard serial port 6. The default setting is IRQ7.



To supply power to the customer display, the COM6 voltage is factory set to DC +12V.

Power Management Setup

Use these items to control system power management. Modern operating systems take care of much of the power management. This mainboard supports ACPI (Advanced Configuration and Power Interface).

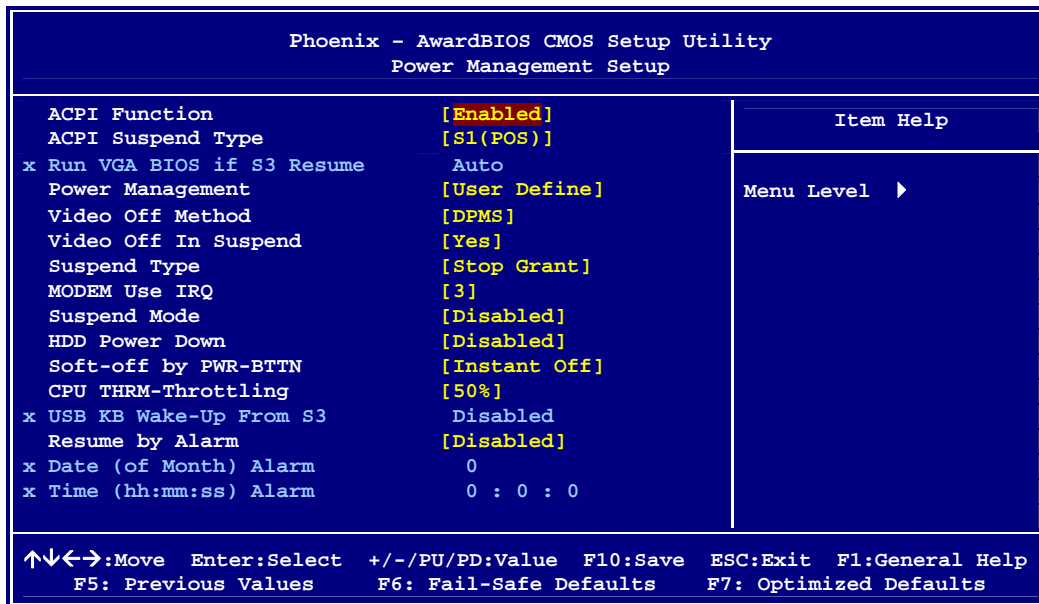



Figure 3.11 Power Management Setup menu

ACPI Function

This mainboard supports ACPI (Advanced Configuration and Power management Interface). Use this item to enable or disable the ACPI feature. The default setting is Enabled.



NOTE

ACPI is a power management specification that makes hardware status information available to the operating system. ACPI enables a PC to turn its peripherals on and off for improved power management. It also allows the PC to be turned on and off by external devices, so that mouse or keyboard activity wakes up the PT-6900.

ACPI Suspend Type

Use this item to define how the system suspends. In the default, S1(POS), the suspend mode is equivalent to a software power down. If you select S3(STR), the suspend mode is a suspend to RAM - the system shuts down with the exception of a refresh current to the system memory. The default setting is S1(POS).

Run VGABIOS if S3 Resume

When the ACPI Suspend Type is set S3(STR), this item enables the BIOS to run the VGA BIOS when the system resumes from S3. The default setting is Auto.

Power Management

This item acts like a master switch for the power-saving modes and hard disk timeouts. If this item is set to Max Saving, power-saving modes occur after a short timeout. If this item is set to Min Saving, power-saving modes occur after a longer timeout. If the item is set to User Define, you can define timeouts for the power-saving modes. The default setting is User Defined.

Video Off Method

This item defines how the video is powered down to save power. The default setting is DPMS.

Video Off In Suspend

This option defines if the video is powered down when the system is put into suspend mode. The default setting is Yes.

Suspend Type

This option defines the suspend type for the video. The default setting is Stop Grant.

MODEM Use IRQ

This option sets the IRQ for the modem chip. The default setting is 3.

Suspend Mode

The CPU clock will be stopped and the video signal will be suspended if no Power Management events occur for a specified length of time. Full power function will return when a Power Management event is detected. Options are from 1 Min to 1 Hour and Disabled. The default setting is Disabled.

HDD Power Down

The IDE hard drive will spin down if it is not accessed within a specified length of time. Options are from 1 Min to 15 Min, and Disabled. The default setting is Disabled.

Soft-Off by PWR-BTTN

Under ACPI (Advanced Configuration and Power management Interface) you can create a software power down. In a software power down, the system can be resumed by Wake Up Alarms. This item lets you install a software power down that is controlled by the normal power button on the system. If the item is set to Instant-Off, then the power button causes a software power down. If the item is set to Delay 4 Sec. then you have to hold the power button down for four seconds to cause a software power down. The default setting is Instant-Off.

CPU THRM-Throttling

The default setting is 50.0%.

USB KB Wake-Up From S3

The default setting is Disabled.

Resume by Alarm

When set to Enabled, the following two fields become available and you can set the date (day of the month), hour, minute and second to turn on your system. When set to 0 (zero) for the day of the month, the alarm will power on your system every day at the specified time. The default setting is Disabled.

Date (of Month) Alarm

When set to "0" the system powers on everyday at the time specified in the "Time (hh:mm:ss) Alarm" field. Select a date from 1 to 31 for the system to power on at the time specified in the "Time (hh:mm:ss) Alarm" field. The default setting is 0.

Time (hh:mm:ss) Alarm

Set the time for the system to power on as defined in the "Date (of Month) Alarm" field. The time set in this field must be later than the time in the RTC time as shown in the "Standard CMOS features" on page 19.

PnP/PCI Configurations

This option configures how PnP (Plug and Play) and PCI expansion cards operate in the system. Both the ISA and PCI buses on the mainboard use system IRQs (Interrupt ReQuests) and DMAs (Direct Memory Access). You must set up the IRQ and DMA assignments correctly through the PnP/PCI Configurations menu; otherwise, the mainboard will not work properly. Selecting “PnP/PCI Configurations” on the main menu displays this menu:

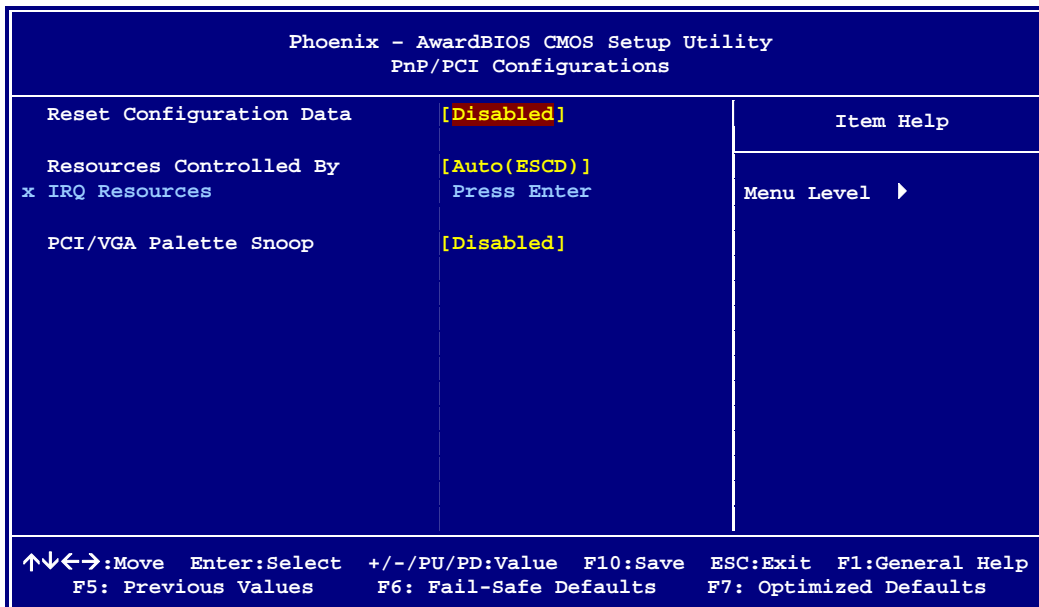


Figure 3.12 PnP/PCI Configurations menu

Reset Configuration Data

If you enable this item and restart the system, any PnP configuration data stored in the BIOS Setup is cleared from memory. The default setting is Disabled.

Resources Controlled By

You should leave this item at the default Auto (ESCD). Under this setting, the system dynamically allocates resources to plug and play devices as they are required. If you cannot get a legacy ISA (Industry Standard Architecture) expansion card to work properly, you might be able to solve the problem by changing this item to Manual, and then opening up the *IRQ Resources* sub-menu.

IRQ Resources (See “IRQ Resources” on page 33.)

PCI/VGA Palette Snoop

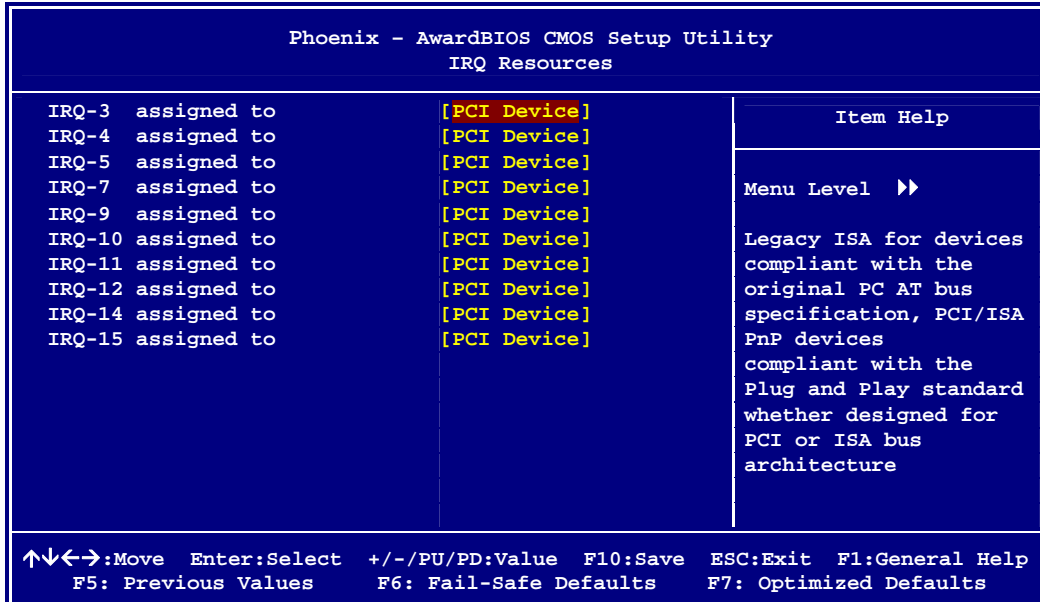
This item is designed to overcome some problems that can be caused by some non-standard VGA cards. This mainboard includes a built-in VGA system that does not require palette snooping so you must leave this item disabled. The default setting is Disabled.

Press <Esc> to return to the main menu.

IRQ Resources

This menu can only be accessed when the *Resources Controlled by* menu is set to Manual.

In the *IRQ Resources* sub-menu, if you change any of the IRQ assignments to Legacy ISA, then that Interrupt Request Line is reserved for a legacy ISA expansion card. Press <Esc> to close the IRQ Resources sub-menu.



PC Health Status

On mainboards that support hardware monitoring, this item lets you monitor the parameters for critical voltages, and critical temperatures. Several fields are for information only and are not configurable.

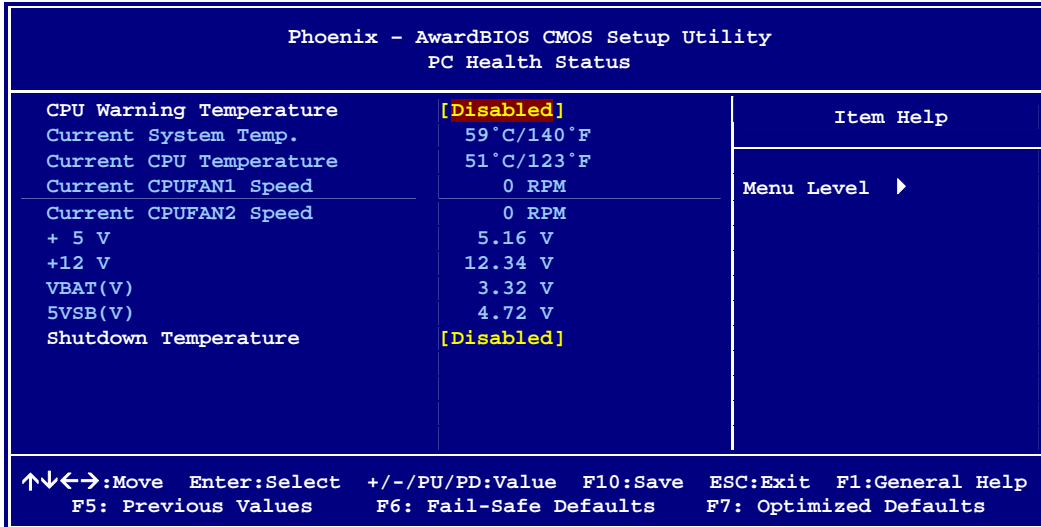


Figure 3.13 PC Health Status menu

CPU Warning Temperature

Sets the CPU warning temperature. The default setting is Disabled.

Shutdown Temperature

Sets the shutdown temperature. The default setting is Disabled.

Press <Esc> to return to the main menu.

Frequency/Voltage Control

This item enables you to set the clock speed and system bus for the system. The clock speed and system bus are determined by the kind of processor you have installed in the system.

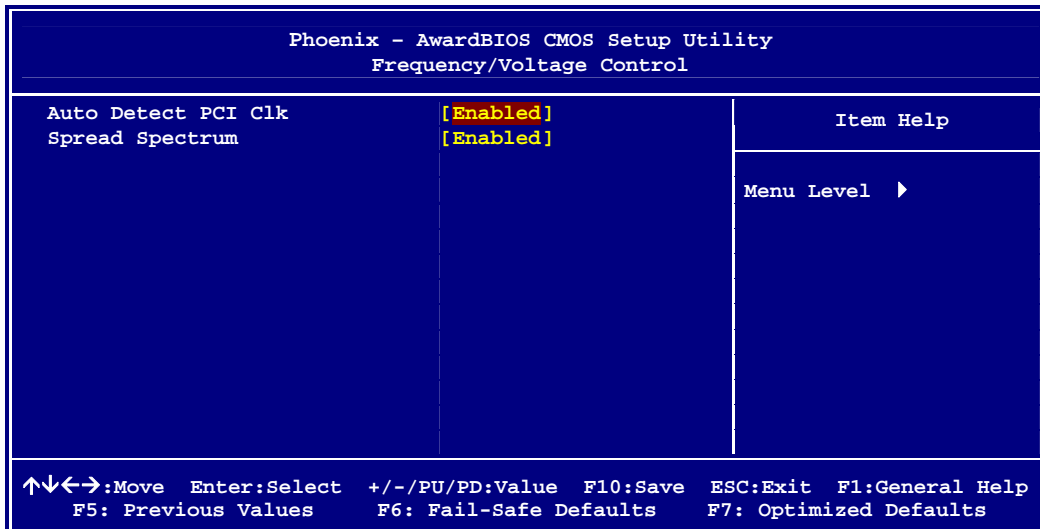


Figure 3.14 Frequency/Voltage Control menu

Auto Detect PCI Clk

When enabled, BIOS disables the clock signal of unpopulated PCI slots, reducing power consumption. The default setting is Enabled.

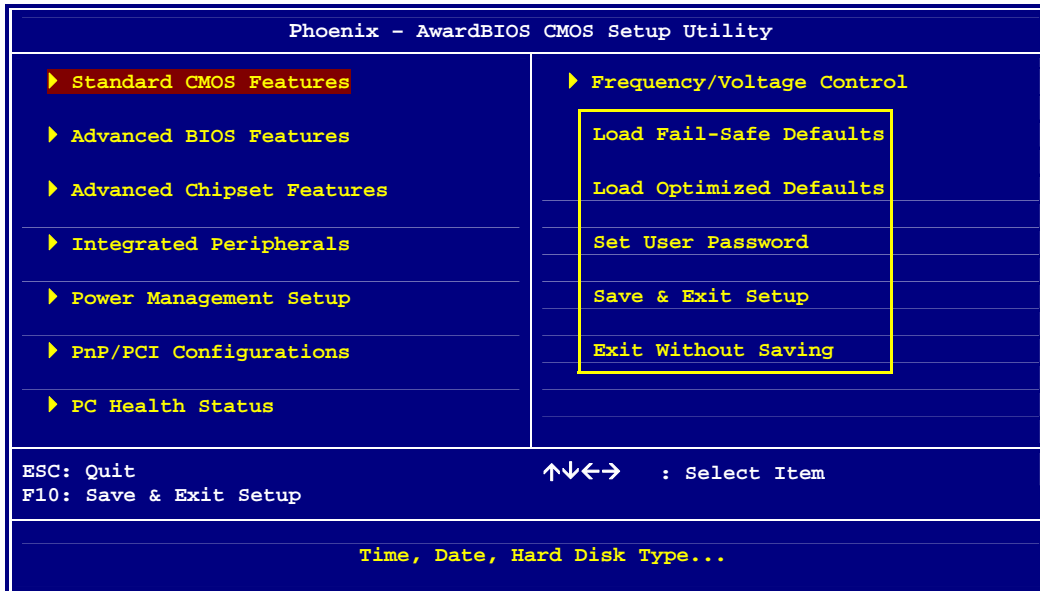
Spread Spectrum

Enable this item to significantly reduce the EMI (Electro-Magnetic Interference) generated by the system. The default setting is Disabled.

Press <Esc> to return to the main menu.

Other BIOS Options

This section covers the other options that are available from the main menu:



Load Fail-Safe Defaults

This option opens a dialog box that lets you load fail-safe defaults for all appropriate items in the Setup Utility. The fail-safe defaults place no great demands on the system and are generally stable. If the system is not functioning correctly, try loading the fail-safe defaults as a first step in getting the system working properly again. If you only want to load fail-safe defaults for a specific option, select and display that option, and then press <F6>.

Follow these instructions: to load the fail-safe defaults:

1. From the main menu, scroll to Load Fail-Safe Defaults.
2. Press <Enter> to open the Load Setup Fail-Safe Defaults menu.
3. Press <Y>.
4. Press <Enter> to load the defaults.

Load Optimized Defaults

This option opens a dialog box that lets you load optimized defaults for all appropriate items in the Setup Utility. The optimized defaults place demands on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you load the optimized defaults when the hardware does not support them. If you only want to load Setup defaults for a specific option, select and display that option, and then press <F7>.

Follow these instructions to load the optimized defaults:

1. From the main menu, scroll to Load Optimized Defaults.
2. Press <Enter> to open the Load Optimized Defaults menu.
3. Press <Y>.

4. Press <Enter> to load the defaults.

Set Supervisor and User Passwords

These items can be used to install a password. A Supervisor password takes precedence over a User password, and the Supervisor can limit the activities of a User. To install a password, follow these steps:

1. Highlight the item Set Supervisor/User Password on the main menu and press <Enter>.
2. The password dialog box appears.

Enter Password:

3. If you are installing a new password, type in the password. You cannot use more than eight characters or numbers. The Set Supervisor/User Password item differentiates between upper and lower case characters. Press <Enter> after you have typed in the password. If you are deleting a password that is already installed press <Enter> when the password dialog box appears. You see a message that indicates that the password has been disabled.

PASSWORD DISABLED !!!

Press any key to continue . . .

4. Press any key. You are prompted to confirm the password.

Confirm Password:

5. Type the password again and press <Enter>, or press <Enter> if you are deleting a password that is already installed.

Write the passwords down and keep them in a safe place.



If you do not save changes when you exit BIOS, changes to the passwords are saved anyway.

Save & Exit Setup

Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility. When the Save and Exit dialog box appears, press <Y> to save and exit, or press <N> to return to the main menu.

Exit Without Saving

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. When the Exit Without Saving dialog box appears, press <Y> to discard changes and exit, or press <N> to return to the main menu.



If you have made settings that you do not want to save, use the "Exit Without Saving" item and press Y to discard any changes you have made.

This appendix describes locating and solving problems that you may encounter while using the PT-6900 POS.

Troubleshooting

Often after time spent troubleshooting, the problem is traced to something as simple as a loose connection. Check the following before proceeding to the problem-specific solutions.

Tips for Troubleshooting

In each problem-specific section, try the steps in the order suggested. This may help you to solve the problem more quickly.

Try to pin point the problem and thus avoid replacing non-defective parts. For example, if you replace batteries and the problem remains, put the original batteries back and go to the next step.

Keep a record of the steps you take when troubleshooting: The information may be useful when calling for technical support or for passing on to service personnel.

- Use some other electrical device to confirm that the electrical outlet is working.
- Ensure all connections are securely attached.

The Power-On Self Test

The Power-On Self Test (POST) runs every time you turn on or reset the computer. The POST checks memory, the mainboard, the display, the keyboard, the disk drives, and other installed options.

If failure is detected in an area other than the mainboard (such as the keyboard or an adapter card), an error message is displayed on the screen and testing is stopped.

If your system does not successfully complete the POST, but displays a blank screen, have the PT-6900 serviced.


Beep Errors at POST

There are two kinds of beep codes in the BIOS.

- Video error - a single long beep followed by three short beeps indicates a video error, the screen can not be initialized and no information can be displayed.
- DRAM error - a single long beep indicates that a DRAM error has occurred.

Beep Message Errors at POST

If the BIOS detects an error during the POST, a message is displayed. Refer to the following table for a list of the errors that display.

	<p><i>The system uses a 3V CR2032 battery (CMOS battery) mounted on the main-board to keep time. There is a risk of explosion if the wrong battery type is used when replacing. Dispose of used batteries according to local ordinance regulations.</i></p>
---	--

ERROR MESSAGE	CAUSE	SOLUTION
CMOS BATTERY HAS FAILED	The CMOS battery is depleted.	Replace the battery.
CMOS CHECKSUM ERROR	The battery may be weak. The CMOS may be corrupt.	Replace the battery. Have the PT-6900 serviced.
HARD DISK(S) FAIL (80)	HDD reset failed.	Have the PT-6900 serviced.
HARD DISK(S) FAIL (40)	HDD controller diagnostics failed.	Have the PT-6900 serviced.
HARD DISK(S) FAIL (20)	HDD initialization error.	Have the PT-6900 serviced.
HARD DISK(S) FAIL (10)	Unable to recalibrate fixed disk.	Have the PT-6900 serviced.
KEYBOARD IS LOCKED OUT - UNLOCK THE KEY	The keyboard is locked and the keyboard controller is pulled low.	Have the PT-6900 serviced.
KEYBOARD ERROR OR NO KEYBOARD PRESENT	A keyboard is not detected.	Make sure the keyboard is attached correctly and no key is pressed during boot.
MANUFACTURING POST LOOP	System keeps rebooting because the keyboard controller is pulled low for testing purposes.	Have the PT-6900 serviced.
BIOS ROM CHECKSUM ERROR - SYSTEM HALTED	The ROM address is incorrect.	Have the PT-6900 serviced.
MEMORY TEST FAIL	The memory card is not correctly installed or is damaged.	Have the PT-6900 serviced.

General Problems

Refer to the following general problems you may encounter.

PROBLEM	SOLUTION
The display screen is dark.	Adjust the screen brightness. Make sure that the PT-6900 is not in suspend mode.
An incorrect date and time are displayed.	Correct the date and time using the DOS DATE and TIME commands or the options in the Setup Utility. (You can also set the date and time in Windows by double clicking the clock on the task bar or in the control panel.) If the date and time become incorrect after a short time, the CMOS battery may be depleted. Replace the battery.
The following message appears at boot up: “Invalid system disk, Replace the disk, and then press any key”	Ensure that an operating system is installed. Check the boot sequence in the BIOS setup utility.
You hear irregular beeps during operation of the computer and the system halts.	Have the PT-6900 serviced.
An unidentified message is displayed.	Reboot the computer and run the BIOS Setup Utility. Confirm the Setup Utility parameters. If the same message is displayed after booting up again, have the PT-6900 serviced.
You cannot operate the printer.	Check the printer cable connection. Ensure that the printer power switch is turned on. Confirm that the printer is on-line.
You cannot use a mouse or keyboard.	Check the cable connection. Check the mouse or keyboard with another computer to see if it works. If the same problem occurs, replace the mouse or keyboard.
The screen is blank and you don't hear any beeps.	Check that the AC adapter is connected to the PT-6900 and the power cord is plugged into a working electrical outlet. Check that the power is on. (Press the power switch again for confirmation.)
The screen is blank and you hear a continuous beep, or two or more beeps.	Have the PT-6900 serviced.
Only the cursor appears.	Reinstall the operating system, and power on the PT-6900.
Audio problems	Ensure the audio cable is not defective. The mute is off.

Having the PT-6900 Serviced

If you are unable to solve the problem, you should have the projector serviced. Pack the projector in the original carton. (See “Unpacking the PT-6900” on page 1.) Include a description of the problem and a checklist of the steps you took when trying to fix the problem. The information may be useful to the service personnel. Return the projector to the place you purchased it.

Specifications

ITEM	DESCRIPTION
Processor	Intel Celeron-M 1GHz CPU
Memory	256MB DDR up to 2GB, 2 memory slots
LCD	15" Active TFT color
Resolution	800 x 600, 1024 x 788
Brightness	250 nit
Viewing Angle	0 to 60° tilt
Touch Screen	EL0 5-wire resistive or optional capacitive
Network	Ethernet 10/100/1G
Storage	1 x 3.5" 40GB HDD
Expansion	1 x CompactFlash socket, 1 x IDE interface, 1 x mini-PCI slot
Power Supply	100 - 240 W AC, DC +19V, 90W power adapter
I/O Ports	4 D-sub 9 RS-232 ports provide +5/12V through jumper-free BIOS setting 1 parallel port, 1 PS/2 KB, 1 PS/2 mouse, 2 USB 2.0 ports in front, 2 USB 2.0 ports in rear, 1 DB-15 VGA port, 1 RS-45 LAN port, 1 RJ-11 24VDC cash drawer port supports two cash drawers, 2 Audio ports (1 line-out, 1 MIC-in)
Operating System	Windows 98/2000/XP/XP E/CE.Net/WEPOS/Linux
Peripherals	Dual or three track magnetic reader, Biometric Reader, Smart Card Reader, iButton Reader KB-32 32 key keypad 2 x 20 VFD customer display
Temperature	Operating temp: 0 ~ 40° C Storage temp: -20 ~ 60° C
Humidity	Humidity: Operating -20% ~ 85%, Storage: 5% ~ 85%
Dimensions	Physical: 318 (W) 254.5 (D) x 351 (H) mm Package: 470 x 410 x 450 mm
Weight	10kg
Certifications	CE/FCC Class A, UL, cUL, VCCI, BSMI, RoHS

Specifications subject to change without notice