Kiosk-P

Service Manual V1.0

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Version 1.0

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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

The service manual provides service information for the Kiosk-P Photo Kiosk. This manual is designed to help trained service personnel to locate and fix failing parts on the Kiosk-P.

This manual consists of the following sections:

Chapter 1 Getting Started	This section provides general information on the Kiosk-P, a packing list, and illustrations to identify components.
Chapter 2 BIOS Setup Utility	The BIOS chapter provides information on navigating and changing settings in the BIOS Setup Utility.
Chapter 3 Installing Drivers and Software	This chapter provides information on installing drivers for supported operating systems.
Chapter 4 Locating the Problem	Refer to this chapter to locate the failing part or cause of the problem that requires servicing.
Chapter 5 Replacing Field Replaceable Parts (FRUs)	This chapter provides drawings and instructions to replace all FRUs.
Appendix Exploded Diagrams and Parts List:	The appendix includes an exploded diagram of the Kiosk-P, the parts list, and the order number for each part.

Safety information

Before servicing the Kiosk-P, read the safety information under “Safety and precautions” on page 57.

Revision history

Version 1.0, January 2005

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CHAPTER 1
GETTING STARTED

This chapter describes the preparation before servicing the Kiosk-P. The following topics are described.

Unpacking and listing the Kiosk-P contents

If the Kiosk-P is returned for servicing in its original packing, save the packing materials for return to the customer. List and ensure that the items you unpack are repacked after you finish servicing.

- Kiosk-P
- Cable cover
- Power cable
- Print roller
- USB rubber
- Other

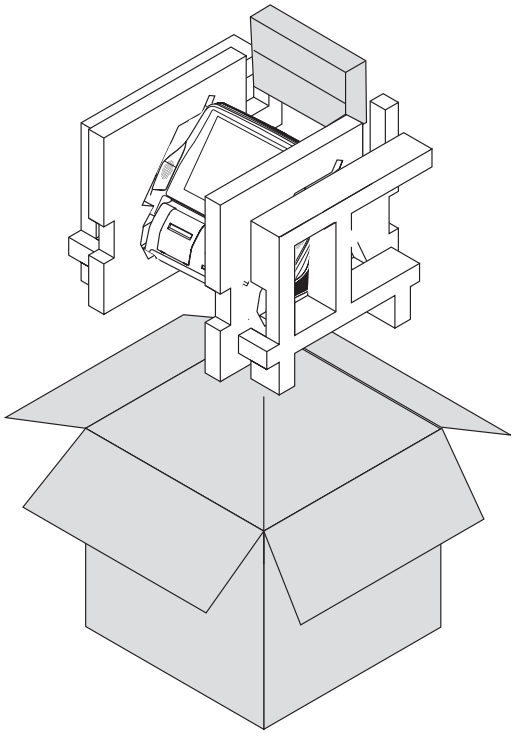


Figure 1.1 Unpacking the Kiosk-P

Identifying components

This section describes the parts and connectors on the Kiosk-P.

Front-right view

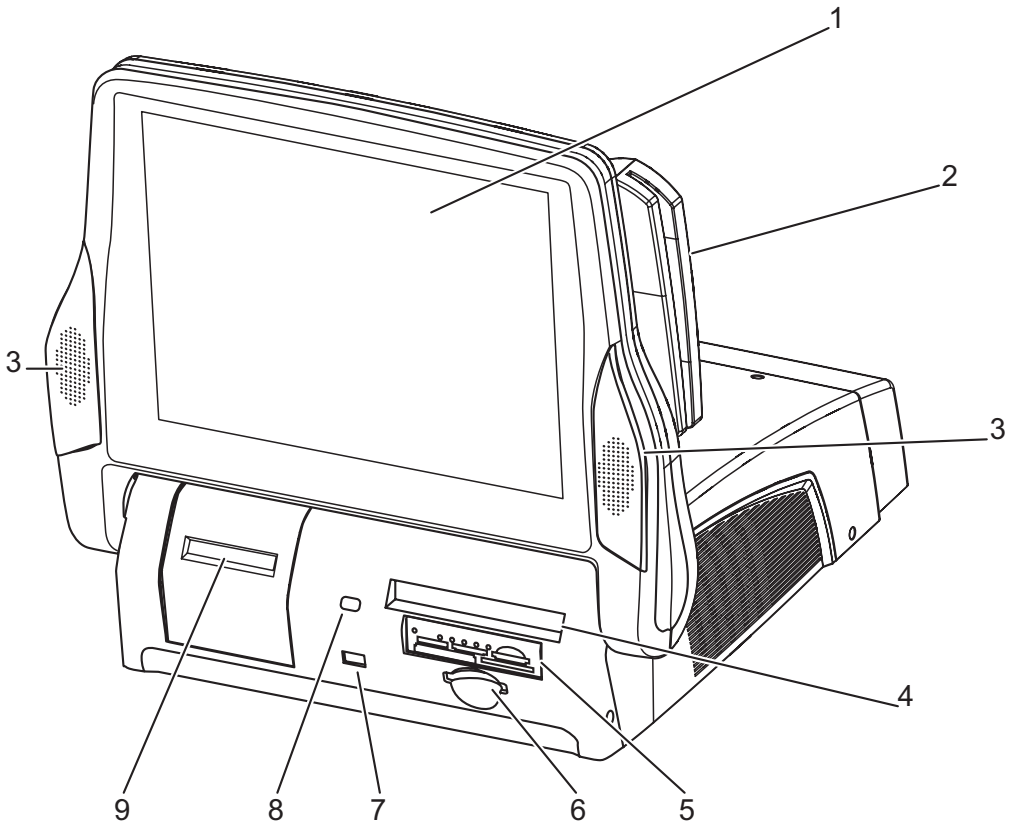


Figure 1.2 Front-right view of Kiosk-P

	DESCRIPTION
1	15-inch TFT LCD touch screen
2	Magnetic card reader
3	Stereo speakers
4	DVD/CD-RW combo drive
5	8-in-1 card reader
6	CompactFlash slot
7	USB port
8	IR receiver
9	Print-paper slot

Front view detail

Figure 1.3 shows the DVD/CD-RW drive and the card reader.

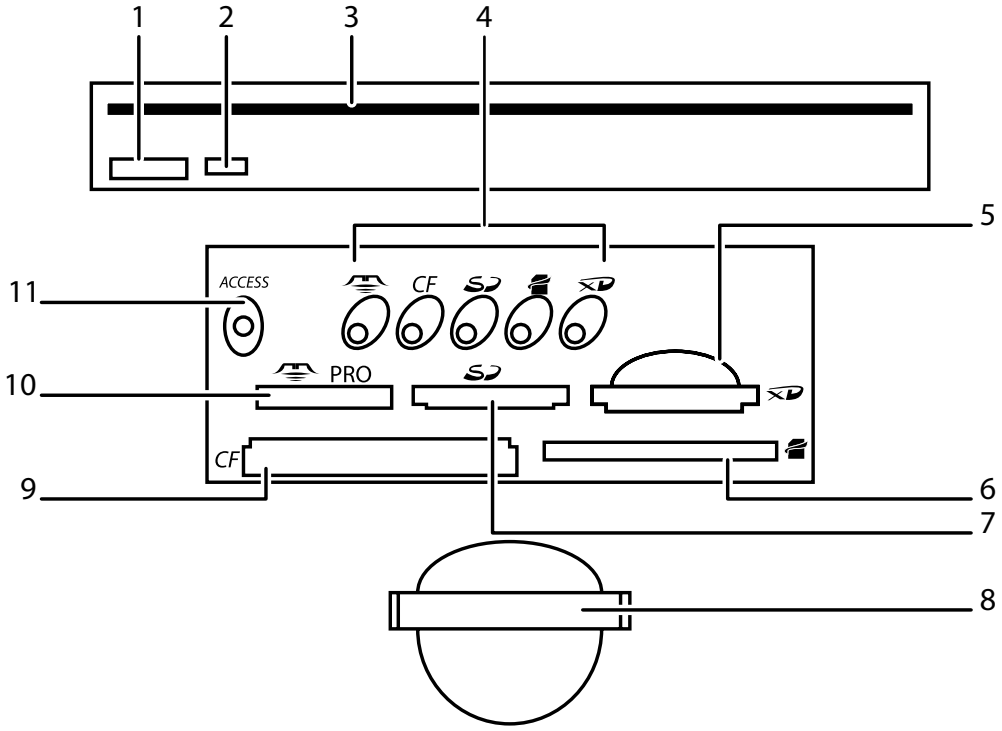


Figure 1.3 Card readers and DVD/CD-RW combo drive

	DESCRIPTION
1	DVD/CD-RW eject button
2	DVD/CD-RW access LED
3	DVD/CD-RW drive
4	Card LEDs light when a card is in the slot
5	xD-Picture Card™ slot
6	SmartMedia™ slot
7	SD Memory Card™ and MultiMediaCard™ slot
8	CompactFlash™ Type II or Microdrive slot
9	CompactFlash™ Type II or Microdrive slot
10	Memory Stick™ and Memory Stick PRO™ slot
11	Access LED lights at boot up and card read

Rear-right view

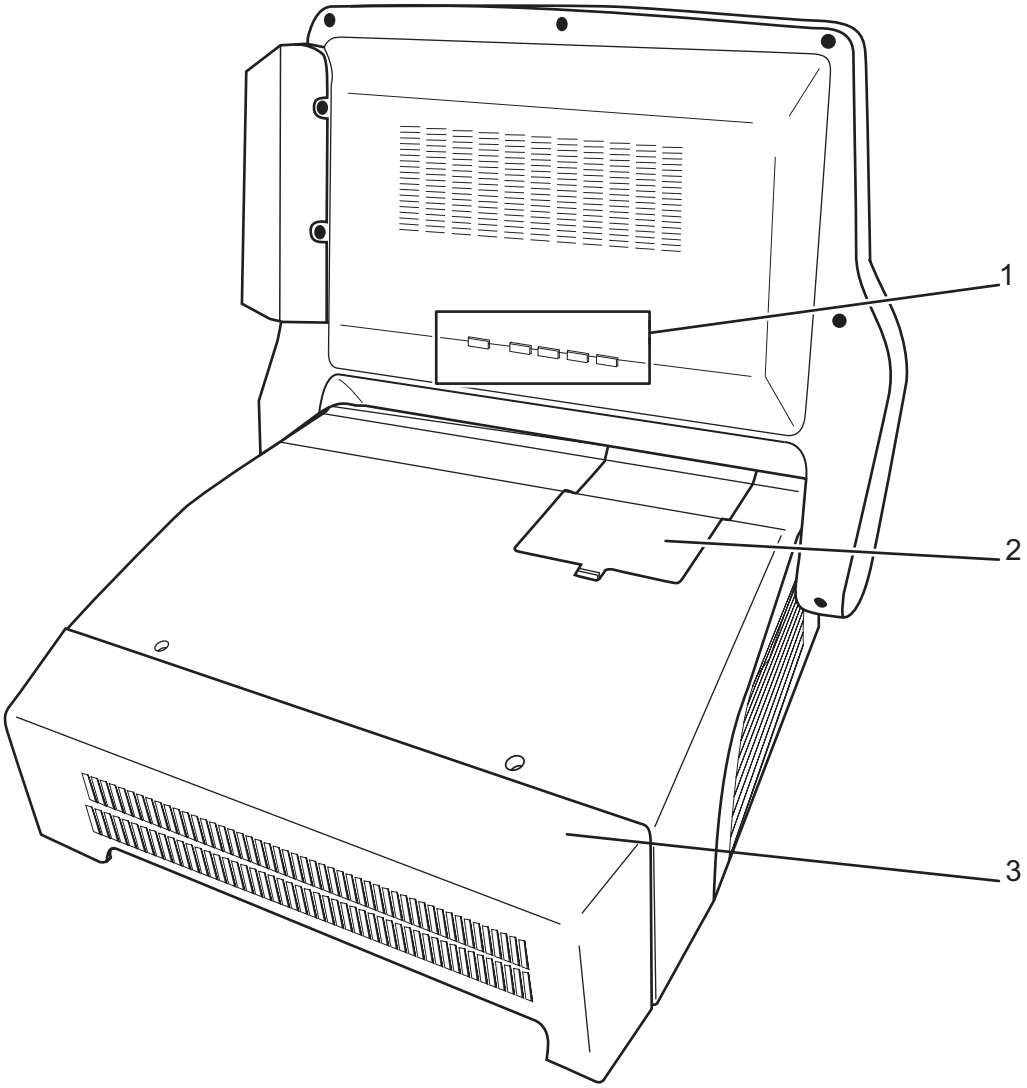


Figure 1.4 Rear-right view of Kiosk-P

	DESCRIPTION
1	OSD control buttons
2	Print-roll cover
3	Cable cover

Connectors and rear cables

In Figure 1.5 the cables are shown disconnected for easier identifcation. Figure 1.6 shows the correct placement for connecting cables.

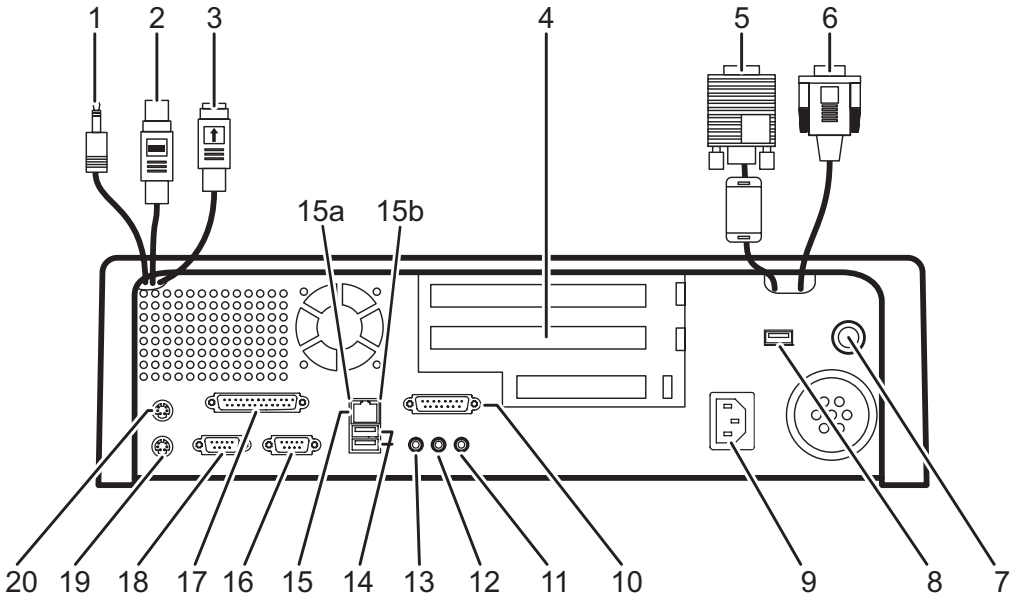


Figure 1.5 Connectors with cables disconnected

DESCRIPTION			
1	Audio cable	2	PS/2 (female) connector
3	PS/2 (male) connector	4	Add-on card covers
5	VGA connector	6	Touch screen cable
7	Main power button	8	USB connector
9	Power connector	10	Game/MIDI connector
11	Microphone connector	12	Audio line-in connector
13	Audio line-out connector	14	USB connectors
15	RJ-45 connector	15a	Act LED (green) lights when network activity is detected
15b	Link LED (orange) lights when network is found	16	VGA connector
17	Parallel connector	18	COM 1 connector
19	PS/2 keyboard connector	20	PS/2 mouse connector

Checking cable placement

Figure 1.6 shows the placement for connecting cables. The VGA, touch screen, and audio-out cables are always attached as shown here. If the Kiosk-P is installed with a card reader, attach the card-reader/keyboard splitter cable to the PS/2 connector.

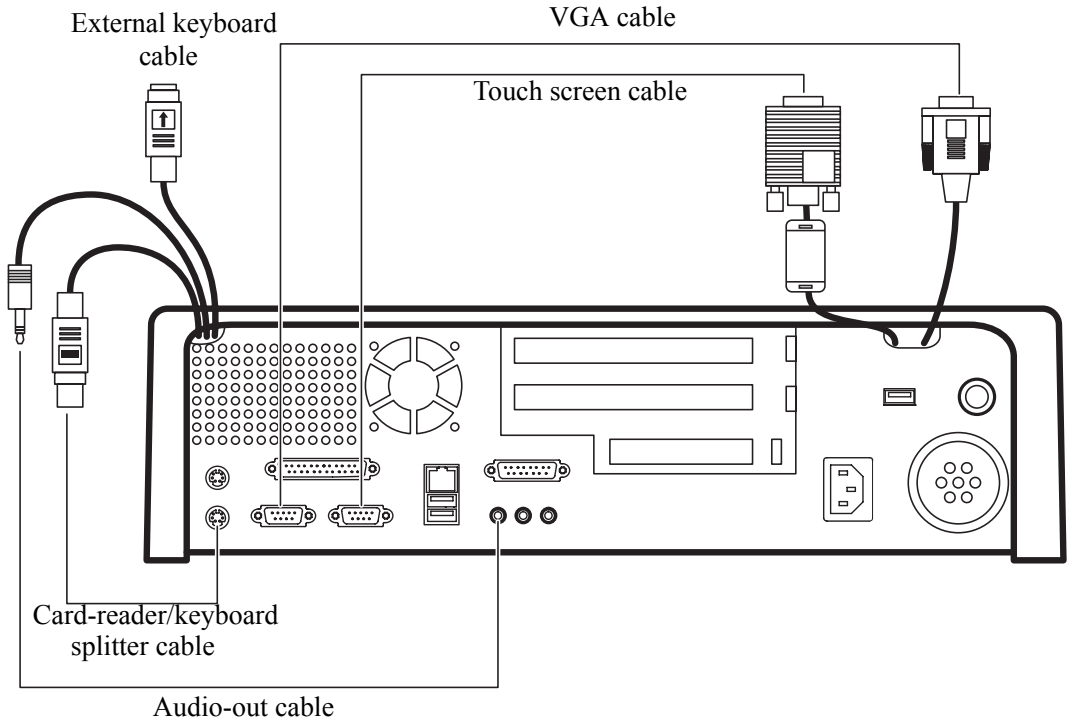


Figure 1.6 Placement for rear cables

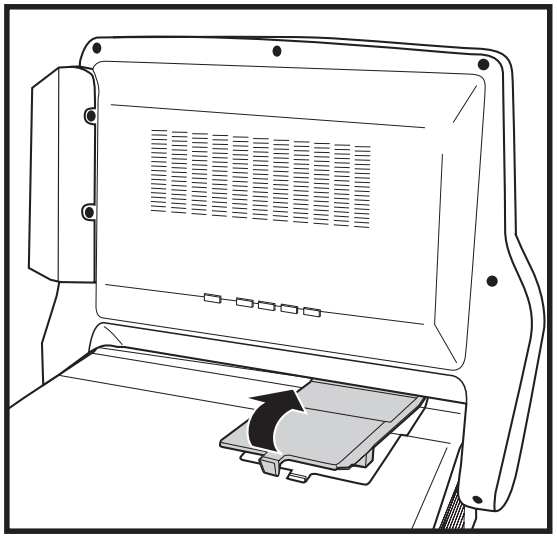
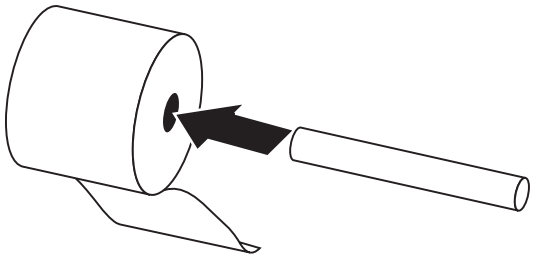
Before packing the Kiosk-P for return to the customer, ensure the cables are connected as shown above.

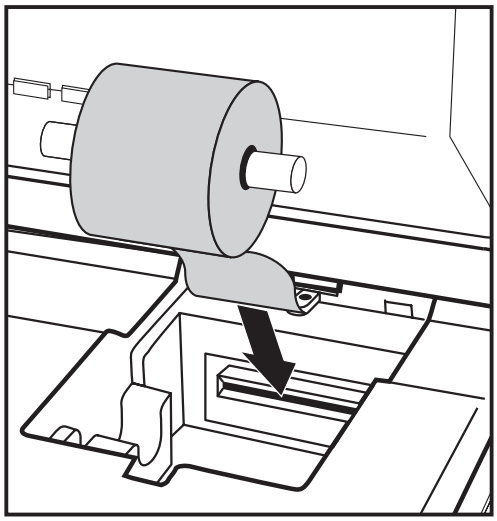
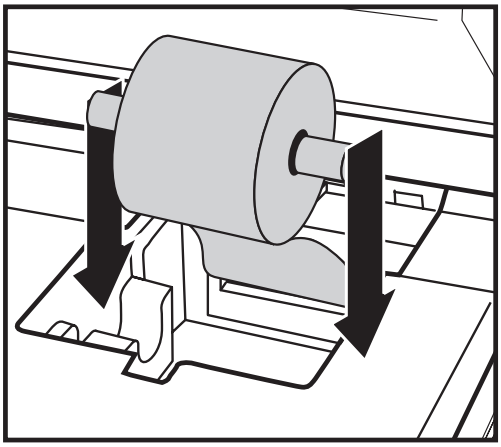
Testing the thermal printer

Refer to this section if the Kiosk-P is returned due to a problem with the thermal printer. To test the printer, load a 58-mm wide by 75-mm diameter thermal paper roll.

Loading the print roll

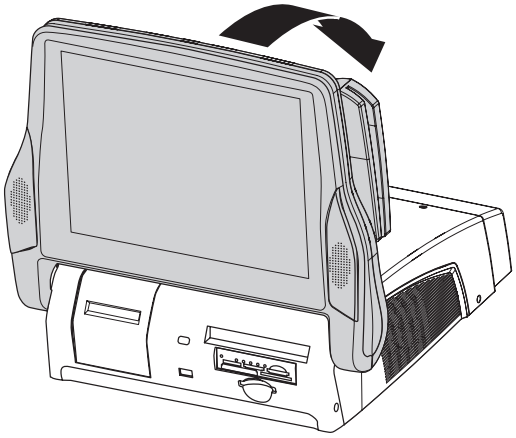
To load the print roll refer to the following. If any paper appears to be jammed, refer to “Clearing a paper jam” on page 8.

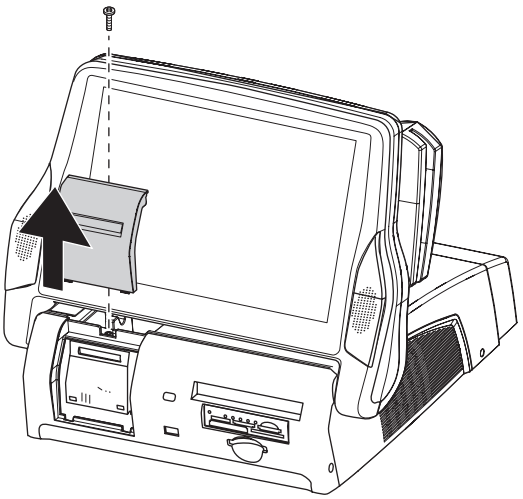
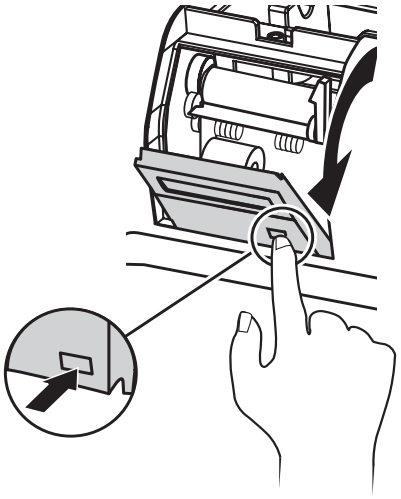
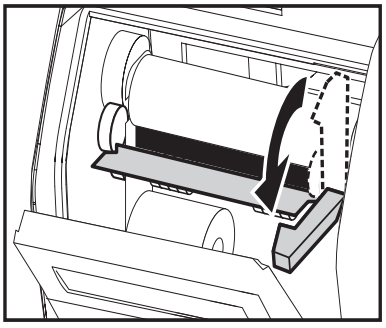
1 Lift up on the latch to open the print-roll door.	
2 Put the print roll onto the print roller.	

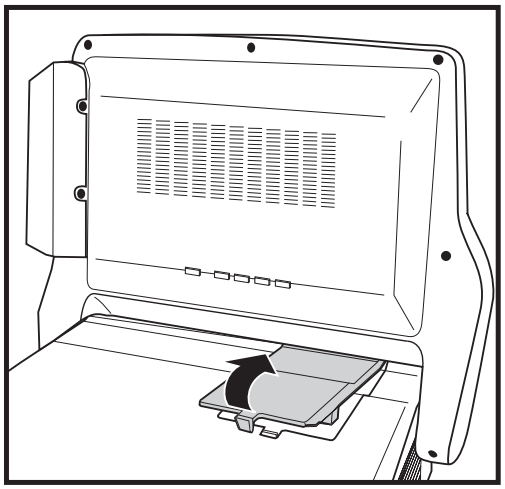
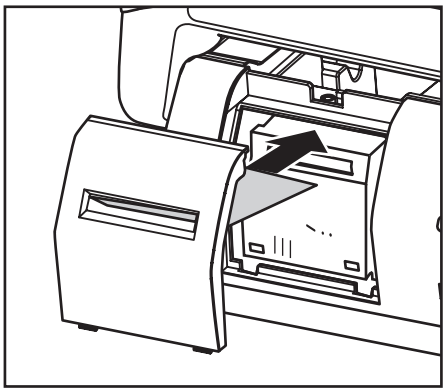
3 Align the paper at the right side of the print roll slot and push it evenly into the slot. The paper is automatically loaded.	
4 Put the paper roll in place and replace the print-roll door.	

Clearing a paper jam

Refer to the following to clear a paper jam.

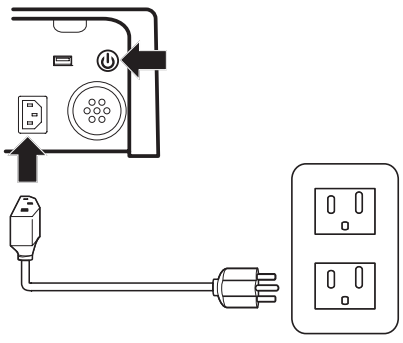
1 Tilt the display back to about 45 degrees.	

2 Remove the screw from the print cover and remove the cover.	
3 Push down as shown below to lever the print slot down.	
4 Push the green lever down and remove any jammed paper that is visible.	

5 Lift up on the latch to open the print-roll door. **6** Remove the print roll and any jammed paper. **7** At the front of the Kiosk-P, push the green lever back up and close the print slot.	
8 Replace the print cover. Be sure the plastic sheet goes over the printer and not into the print slot.	

Powering the Kiosk-P on and off

Refer to the following to power on and off the Kiosk-P.

1 Connect the power cable to the Kiosk-P and press the power button. **2** Connect the other end to an electrical outlet. **3** Press the main power button. **4** If the display is dark, press the power button on the rear of the display. **5** To turn off the Kiosk-P, shut down the operating system: the main power turns off automatically.	

CHAPTER 2
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

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:

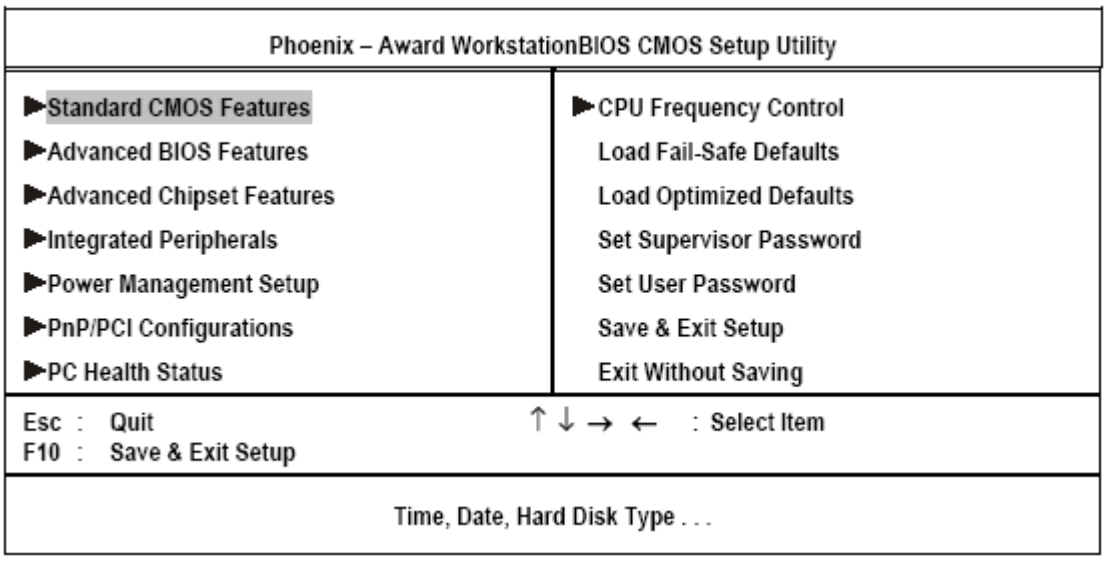


Figure 2.1 Main BIOS menumenu

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:

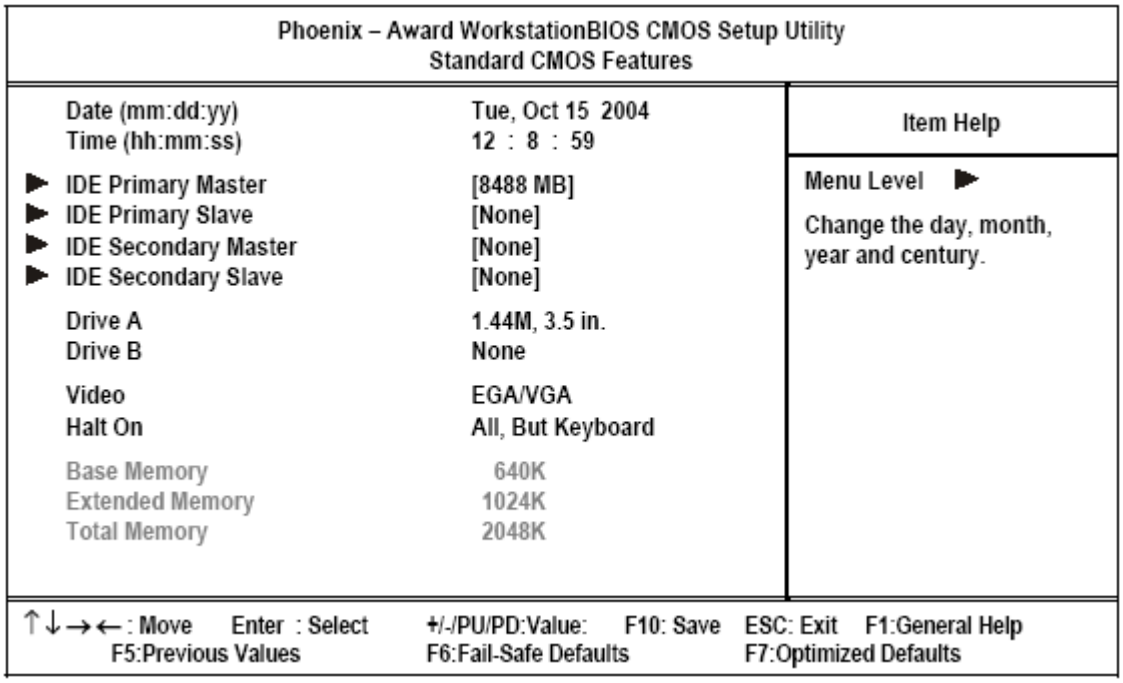


Figure 2.2 Standard CMOS Features menu

Date and Time

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

►*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:

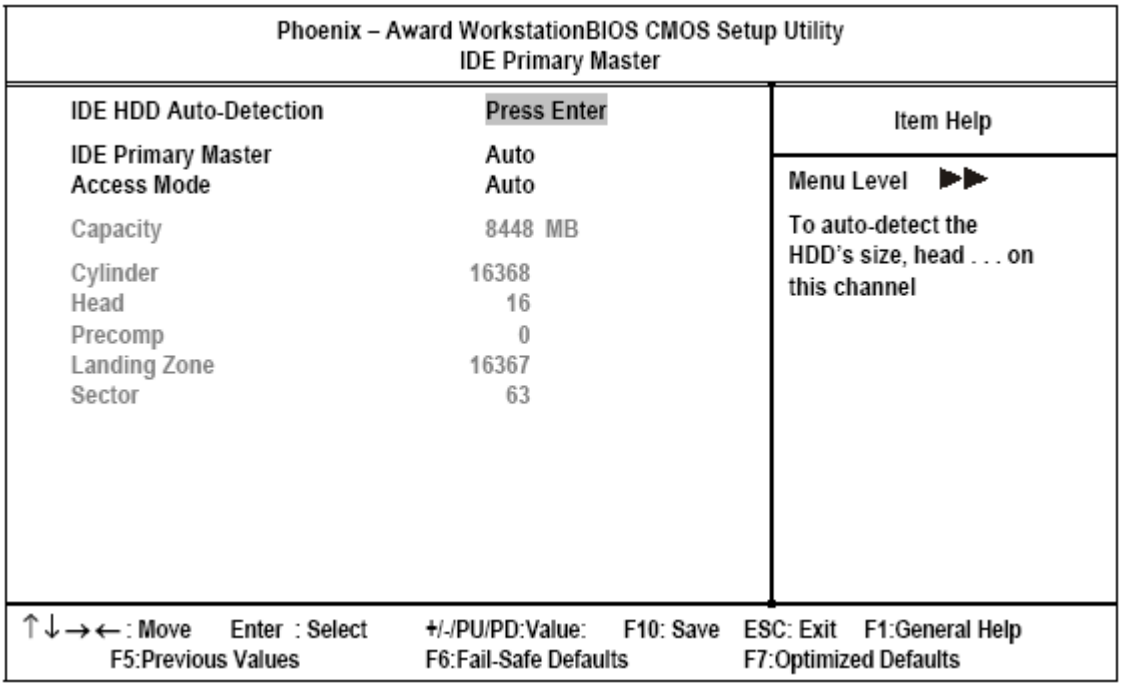


Figure 2.3 IDE Primary Master Submenu

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 (M).
- **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 menu and return to the Standard CMOS Features menu.

Drive A/Drive B (1.44M, 3.5 in./None)

These items define the characteristics of any diskette drive attached to the system. You can connect one or two diskette drives.

Video (EGA/VGA)

This item defines the video mode of the system. This mainboard has a built-in VGA graphics system; you must leave this item at the default setting.

Halt On (All Errors)

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.

Advanced BIOS Features

Selecting Advanced BIOS Features on the menu displays this menu:

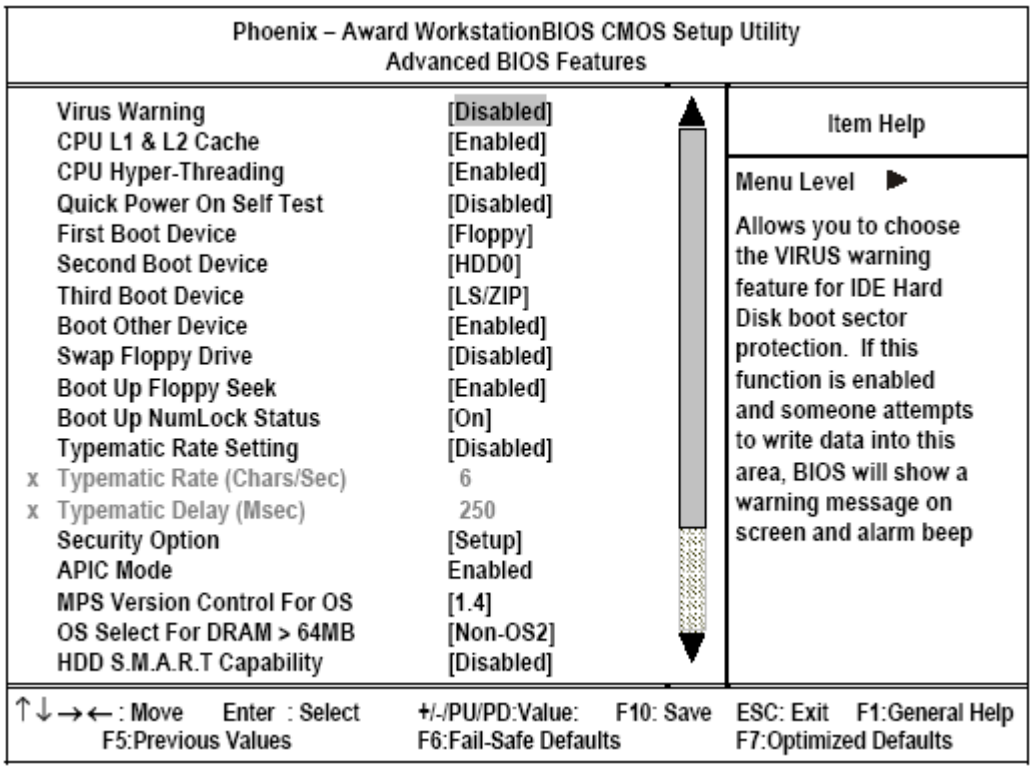


Figure 2.4 Advanced BIOS Features menu

Virus Warning

When enabled, this item provides protection against viruses that try to write to the boot sector and partition table of your 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

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

CPU Hyper-Threading

This option is supported by certain Pentium 4 chips and only appears when they are installed. The default setting is Enabled.


NOTE

Hyper-Threading makes one physical CPU appear as two logical CPUs. Multi-threaded applications take advantage of the Hyper-Threaded hardware as they would on any dual-processor system; however, the performance gain cannot equal that of true dual-processor boards.

Quick Power On Self Test

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

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 Floppy/CD-ROM/HDD0.

Boot Other Device

When enabled, the system searches all other possible locations for an operating system if it fails to find one in the devices specified under the First, Second, and Third boot devices. The default setting is Enabled.

Swap Floppy Drive

If you have two floppy diskette drives in your system, this item allows you to swap the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A. The default setting is Disabled.

Boot Up Floppy Seek

If this item is enabled, it checks the size of the floppy disk drives at start-up time. You don't need to enable this item unless you have a legacy diskette drive with 360K capacity. The default setting is Enabled.

Boot Up NumLock Status

This item defines if the keyboard Num Lock key is active when your system is started. The default setting is On.

Typematic Rate Setting

If this item is enabled, you can use the following two items to set the typematic rate and the typematic delay settings for your keyboard. The default setting is Disabled.

Typematic Rate (Chars/Sec)

Use this item to define how many characters per second are generated by a held-down key. The default setting is 6.

Typematic Delay (Msec)

Use this item to define how many milliseconds elapse before a held-down key begins generating repeat characters. The default setting is 250.

Security Option

If you have installed password protection, this item defines if the password is required at system start up, or if it is only required when a user tries to enter the Setup Utility. The default setting is Setup.

APIC Mode

APIC (Advanced Programmable Interrupt Controller) mode provides symmetric multiprocessing (SMP). This setting should be left at its default setting. The default setting is Enabled.

MPS Version Control for OS

The MPS (MultiProcessing Specification) is a specification for designing SMP-based PCs using Pentium processors. It defines how memory and interrupts are shared. This setting is used to select the MPS version that the motherboard is using. The default setting is 1.4.

OS Select For DRAM > 64 MB

This item is only required if you have installed more than 64 MB of memory and you are running the OS/2 operating system. Otherwise, leave this item at the default. The default setting is Non-OS2.

HDD S.M.A.R.T Capability

SMART (Self Monitoring Analysis and Reporting Technology) is a drive technology that reports its own degradation enabling the operating system to warn the user of potential failure. It is supported in ATA/33 or later drives. If you are using hard drives that support SMART, set this field to Enabled. The default setting is Disabled.

Report No FDD For WIN95

If you are running a system with no floppy drive and using Windows 95, select Yes for this item to ensure compatibility with the Windows 95 logo certification. Otherwise, select No. The default setting is No.

Full Screen Logo Show

This field is used to display a particular logo at boot up. The default setting is Enabled.

Small Logo (EPA) Show

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

Press <Esc> to return to the main menu.

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 your system hardware. If you change the values incorrectly, you may introduce fatal errors or recurring instability into your system.

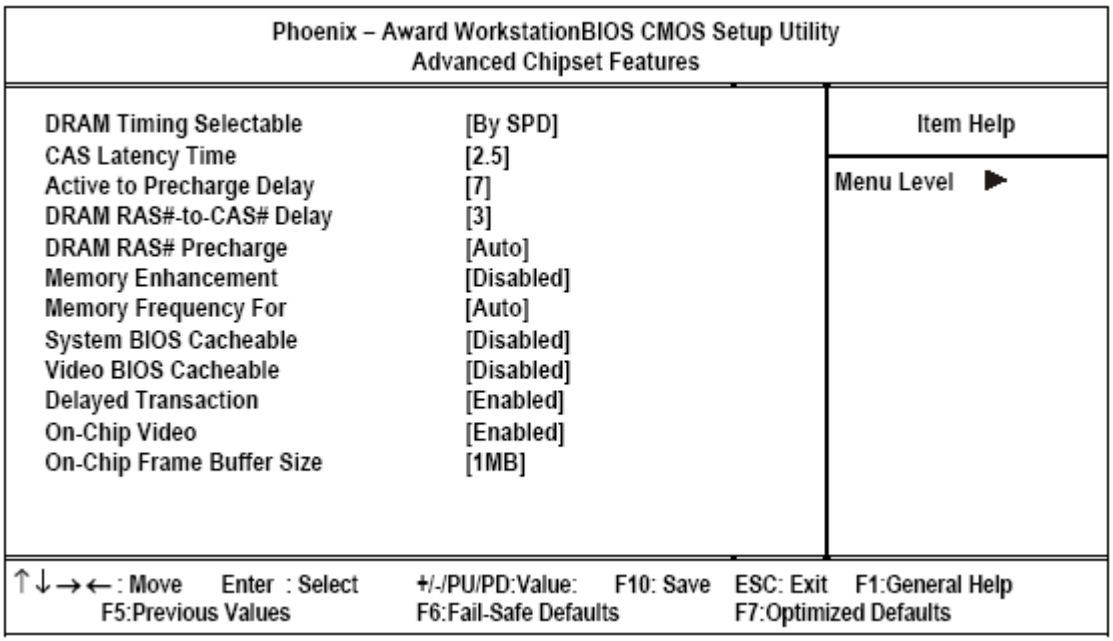


Figure 2.5 Advanced Chipset Features menu

DRAM Timing Selectable

The EEPROM on a memory card has Serial Presence Detect (SPD) data structure that stores information about the module such as memory size and speed. When SPD is selected, the “CAS Latency Time” and “Active to Precharge Delay” items are set to their defaults, and the system runs according to information in the EEPROM providing the most stable condition. The default setting is 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

To change the active-to-precharge delay, the “DRAM Timing Selectable” setting must be set to **User**. The default setting is 7.

DRAM RAS# to CAS# Delay

This item enables you to set the time it takes data to move between the Row Address Strobe (RAS) and Column Address Strobe (CAS). You can also insert a timing delay between RAS and CAS. When set to higher values, reads, writes, and refreshes take longer, but data is transferred with better reliability. The default setting is Auto.

DRAM RAS# Precharge Time

DRAM must continually be refreshed or it will lose its data. Normally, DRAM is refreshed entirely as the result of a single request. This option allows you to determine the number of CPU clocks allocated for the Row Address Strobe (RAS) to accumulate its charge before the DRAM is refreshed. If insufficient time is allowed, refresh may be incomplete and data lost. The default setting is Auto.

Memory Enhancement

This setting enhances the memory speed of the system. The default setting is Disabled.

Memory Frequency For

This setting is used to select the memory clock speed of the DIMM. The default setting is Auto.

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 Disabled.

Delayed Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Enable this item to support compliance with PCI specification version 2.1. The default setting is Enabled.

On-Chip Video

This item is used to enable or disable the onboard video. The default setting is Enabled.

On-Chip Frame Buffer Size

This item is used to select the video frame buffer size. The default setting is 1MB.

After you have made your selections in the Advanced Chipset Features menu, press <ESC> to go back to the main menu.

Integrated Peripherals

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

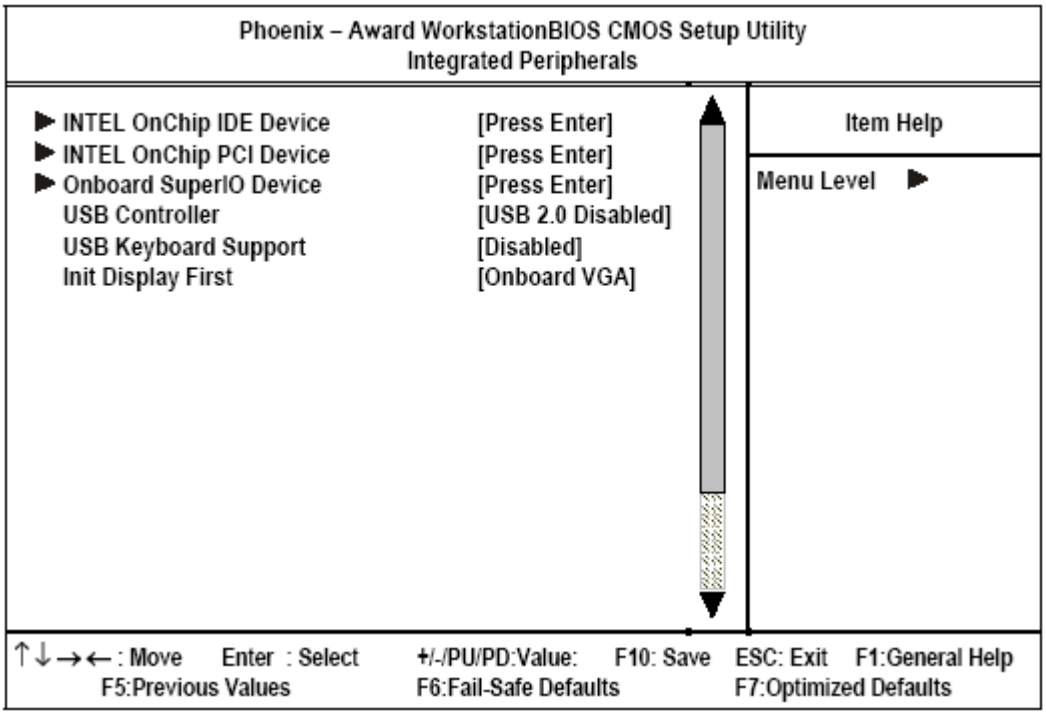


Figure 2.6 Integrated Peripherals menu

INTEL OnChip IDE Device (See “INTEL OnChip IDE Device” on page 21.)

INTEL OnChip PCI Device (See “Intel OnChip PCI Device” on page 22.)

Onboard SuperIO Device (See “Onboard SuperIO Device” on page 23.)

USB Controller

Set this item to **All Enabled** to use USB 2.0 and USB 1.1 devices. When set to **USB 2.0 Disabled**, USB 1.1 devices can still be used. The default setting is USB 2.0 Disabled.

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. This field can only be configured if the “USB Controller” field is enabled. The default setting is Disabled.

Init Display First

Use this item to specify whether your graphics adapter is installed in one of the PCI slots or is integrated on the main-board. The default setting is Onboard VGA.

INTEL 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:

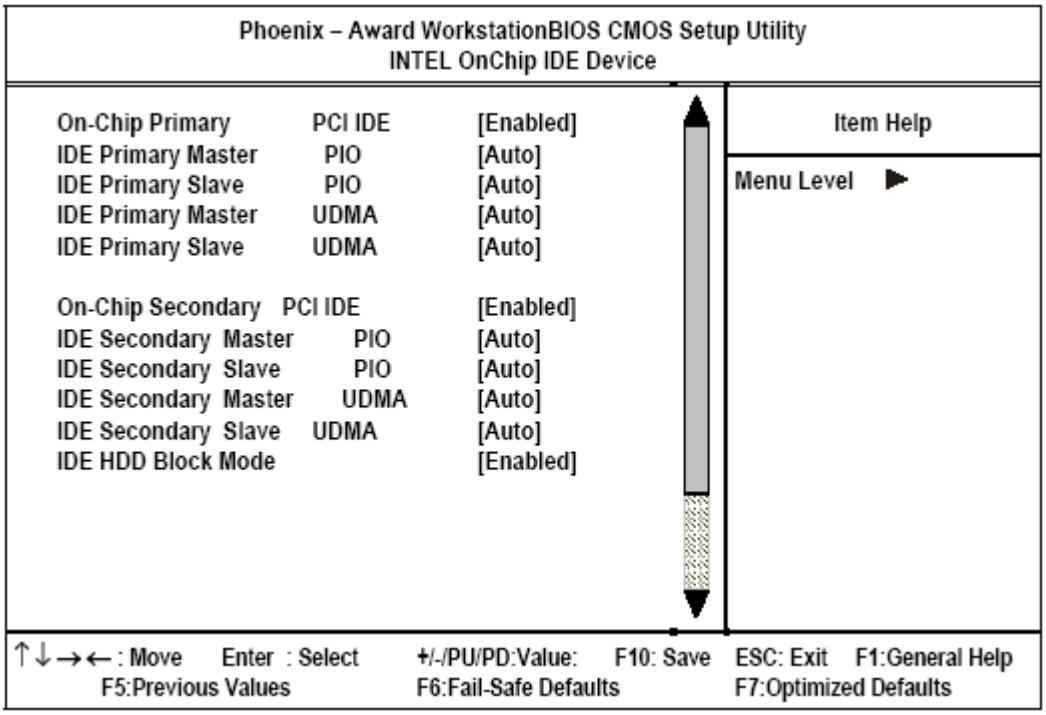


Figure 2.7 Intel OnChip IDE Device menu

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 UltraDMA

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 your 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.

Intel OnChip PCI 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:

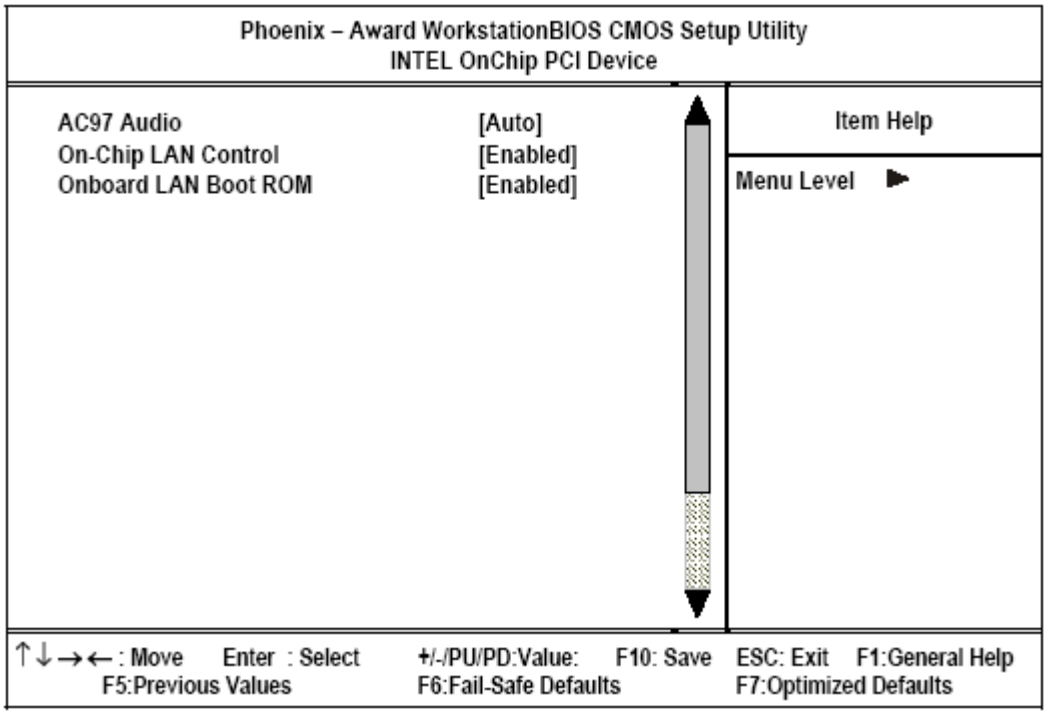


Figure 2.8 Intel OnChip PCI Device menu

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.

On-Chip LAN Control

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 Enabled.

Onboard LAN Boot ROM

Enable this item if you use the boot ROM (instead of a disk drive) to boot the system and access the LAN directly. To change the boot ROM setting, type <Shift> + <F10> when prompted at boot up. This item must be enabled to access the boot ROM's program. The default setting is Enabled.

Onboard SuperIO Device

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

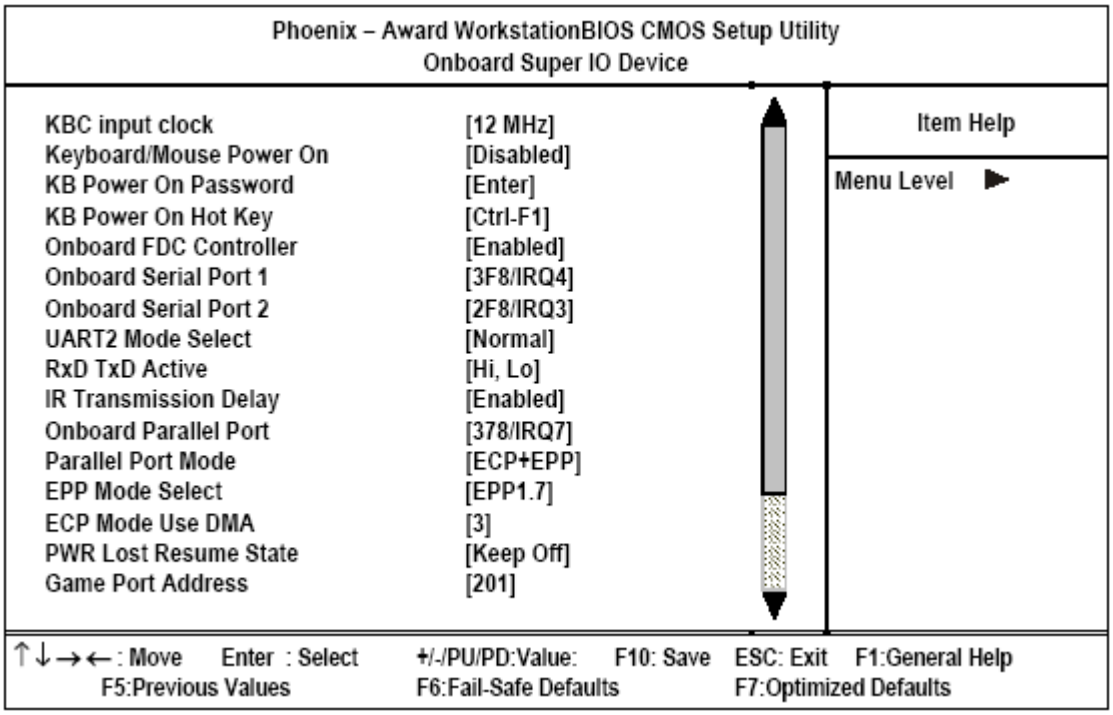


Figure 2.9 Onboard Super IO Device menu

KBC Input Clock

Use this item to select the input clock of your keyboard. The default setting is 12 MHz.

KB/Mouse Power ON

Enables you to use a PS/2 mouse or keyboard to power on the system. The default setting is Disabled. The following options can be set:

Password	Use the “KB Power On Password” value to power on the system.
Hot Key	Use the “KB Power On Hot Key” value to power on the system.
Mouse Left	Double-click the left mouse button to power on the system.
Mouse Right	Double-click the right mouse button to power on the system.

KB/Mouse Power ON Password

Enables you to set a password to be entered when using the keyboard to power on the Kiosk-P. The default setting is <Enter>.

Hot Key Power ON

Enables you to select a hot key to turn on the Kiosk-P. The default setting is <Ctrl-F1>.

Onboard FDC Controller

This option enables the onboard floppy disk drive controller. The default setting is Enabled.

Onboard Serial Port 1

This option is used to assign the I/O address and IRQ for the onboard serial port 1 (COM1). 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 (COM2). The default setting is 2F8/IRQ3.

UART2 Mode Select

This field is available if the Onboard Serial Port 2 field is set to any option but Disabled. UART Mode Select enables you to select the infrared communication protocol-Normal (default), IrDA, or ASKIR. IrDA is an infrared communication protocol with a maximum baud rate of 115.2K bps. ASKIR is Sharp's infrared communication protocol with a maximum baud rate of 57.6K bps. The default setting is Normal.

RxD, TxD Active

Defines the voltage level for Infrared module RxD (receive) mode and TxD (transmit) mode. This setting has to match the requirements of the infrared module used in the system. The default setting is Hi, Lo.

IR Transmission Delay

When enabled, uses the capability of the mainboard to allow faster infrared transmission rates. The default setting is Enabled.

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 ECP+EPP.

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 bipoloar mode.

ECP Mode Select

Sets the ECP mode version. 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.

PWR Lost Resume State

Enables you to set options for how the system resumes after a power loss. The default setting is Keep Off. The following options can be set:

Keep Off	The systems power stays off.
Turn On	The system powers on.
Last State	If the system was turned off at the time of the power loss, it stays off after power is restored. If the system was turned on at the time of the power loss, it turns on after power is restored.

Game Port Address

This item sets the I/O address for the game port.

Midi Port Address

This item sets the I/O address for the Midi function.

Onboard Serial Port 3

This option is used to assign the I/O address for the onboard serial port 3 (COM3), which is used for the rear customer display. The default setting is 3E8H.

Serial Port 3 Use IRQ

This option is used to assign the interrupt request (IRQ) for the onboard serial port 3 (COM3). The default setting is IRQ 10.

Onboard Serial Port 4

This option is used to assign the I/O address for the onboard serial port 4 (COM4). The default setting is 2E8H.

Serial Port 4 Use IRQ

This option is used to assign the interrupt request (IRQ) for the onboard serial port 4 (COM4). The default setting is IRQ 7.

Power Management Setup Option

Use this 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).

Power Management Timeouts

The power-saving modes can be controlled by timeouts. If the system is inactive for a time, the timeouts begin counting. If the inactivity continues so that the timeout period elapses, the system enters a power-saving mode. If any item in the list of Reload Global Timer Events is Enabled, then any activity on that item will reset the timeout counters to zero.

Wake Up Calls

If the system is suspended, or has been powered down by software, it can be resumed by a wake up call that is generated by incoming traffic to a modem, a LAN card, a PCI card, or a fixed alarm on the system realtime clock,

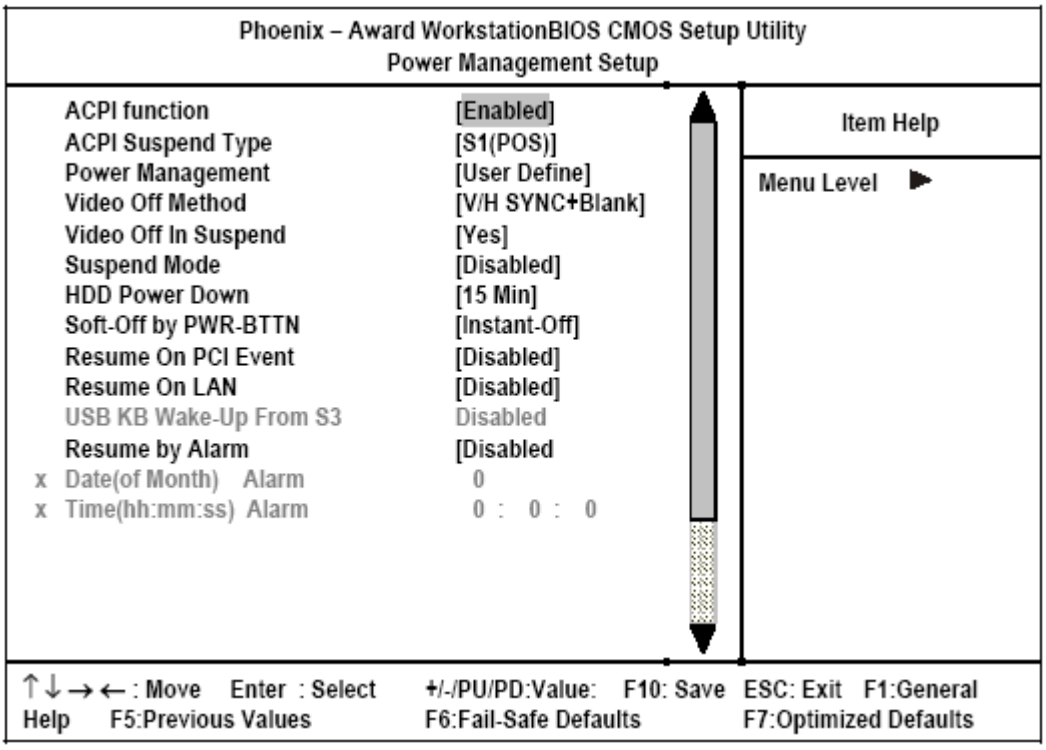


Figure 2.10 Power Management Setup menu

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 Kiosk-P.

ACPI Suspend Type

Use this item to define how your 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).

Power Management Option

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 insert your own timeouts for the power-saving modes. The default setting is Min Saving.

Video Off Method

This item defines how the video is powered down to save power. The default setting is V/H SYNC+Blank.

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 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 15 Min.

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 your 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.

Resume on PCI Event

Use this item to enable PCI activity to wake up the system from a power-saving mode. The default setting is Disabled.

Resume On LAN

Use this item to enable LAN activity to wake up the system from a power-saving mode. The default setting is Disabled.

USB KB Wake-Up From S3

When enabled, the system power will resume the system from a power saving mode if there is any USB keyboard activity. 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 13.

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 PnP/PCI Configurations; otherwise, the mainboard will not work properly. Selecting "PnP/PCI Configurations" on the main menu displays this menu:

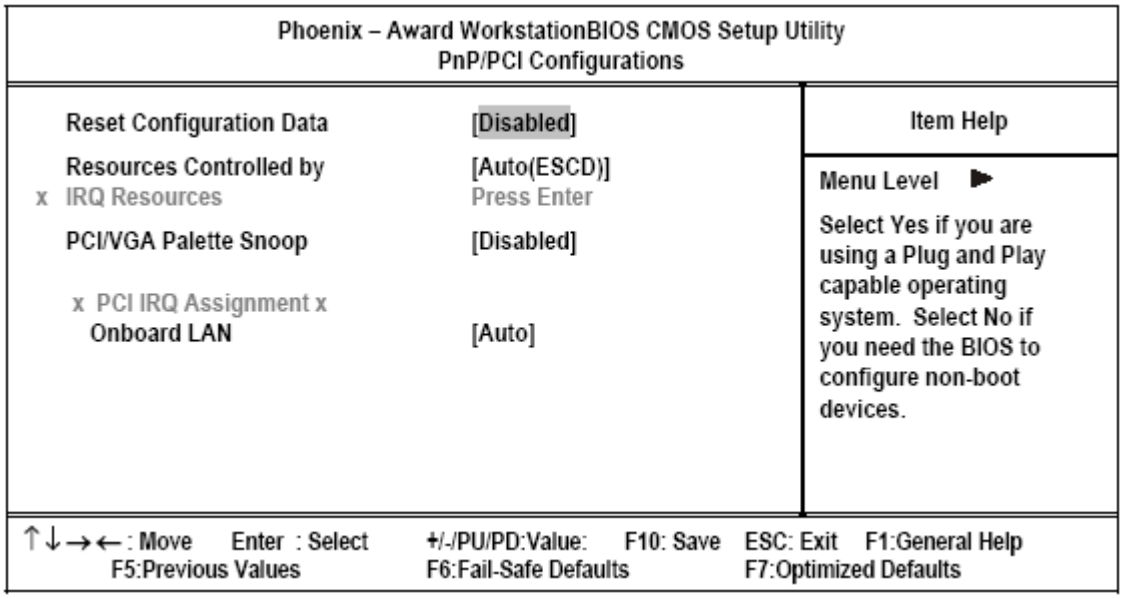


Figure 2.11 PnP/PCI Configurations menu

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* menu.

IRQ Resources

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

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

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.

PCI IRQ Assignment - Onboard LAN

By default, an IRQ is automatically assigned to the onboard LAN. Use this field to manually assign an IRQ to the onboard LAN.

Press <Esc> to return to the main menu.

PC Health Status

On mainboards that support hardware monitoring, this item lets you monitor the parameters for critical voltages, critical temperatures, and fan speeds. Except for *Shutdown Temperature*, you cannot make any changes to these fields. They are display only.

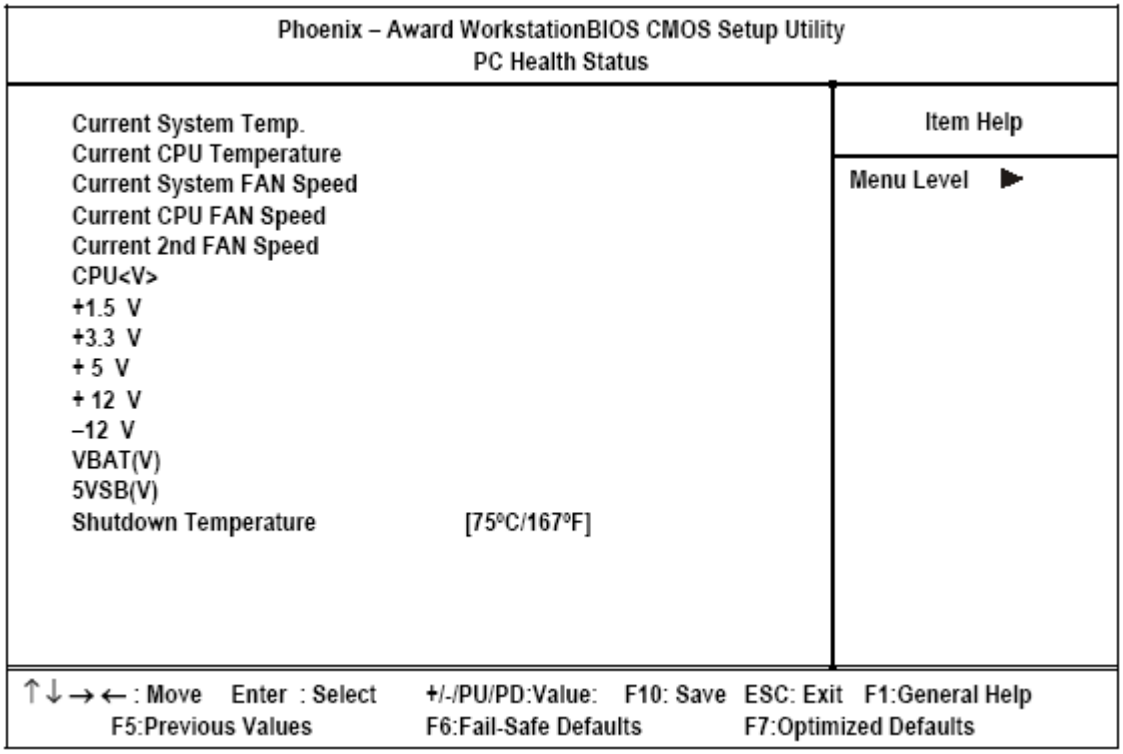


Figure 2.12 PC Health Status menu

System Component Characteristics

These fields provide you with information about the systems current operating status, including component voltages, CPU and system temperatures, and fan speeds.

Shutdown Temperature

Enables you to set the maximum temperature that the CPU will reach before the system shuts down. The default setting is 75C/167F.

Press <Esc> to return to the main menu.

Frequency Control Option

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

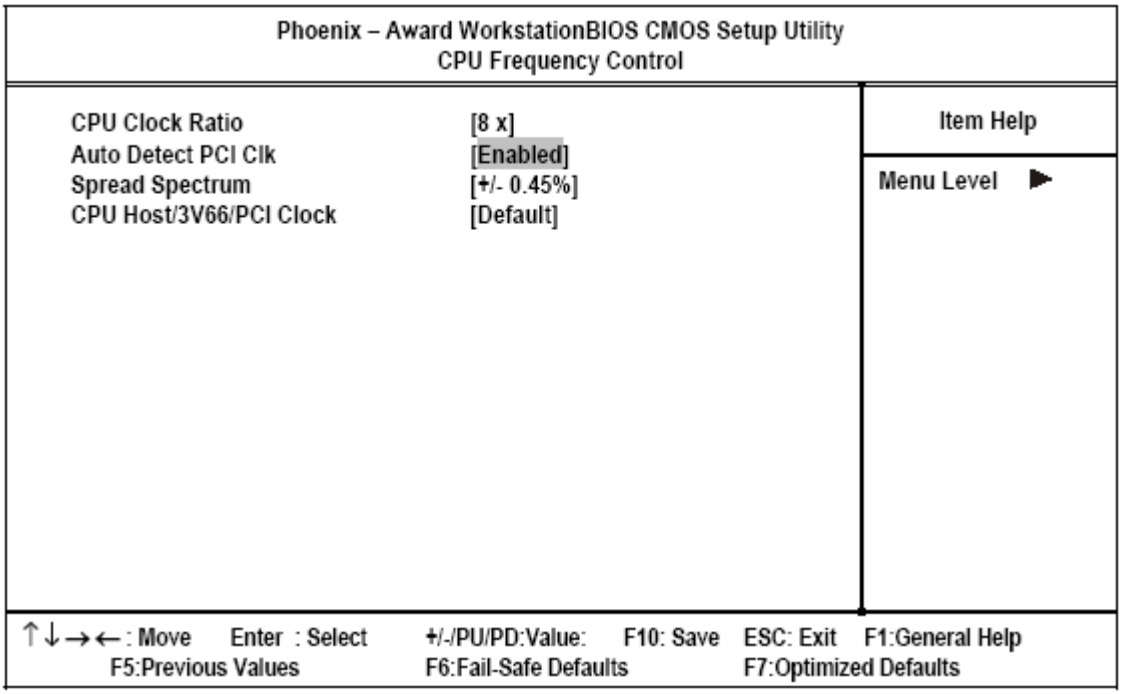


Figure 2.13 CPU Frequency Control

CPU Clock Ratio

Use this item to set a multiple for the CPU clock. The multiple times the system bus must equal the core speed of the installed processor. The default setting is 8 x.

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 +/- 0.45%.

CPU Host/3V66/PCI Clock

This field provides options for selecting the external system bus clock of the processor. The AGP and PCI clock appear next to the selected external bus clock. For example, “100/66/33MHz” are the settings for the external bus clock, the

AGP clock, and the PCI clock respectively. The default setting is “Default”, whereby the system runs according to the clock frequency of the processor.

IMPORTANT

Overclocking can cause premature wear on the processor.

If you change this setting and the system no longer boots, there are two methods to restore the original setting.

Method 1:
Clear the CMOS data by putting the shunt on pins 2 and 3 of JP4. All fields in the BIOS Setup are reset to their default settings. See “Motherboard jumper settings” on page 53.

Method 2:

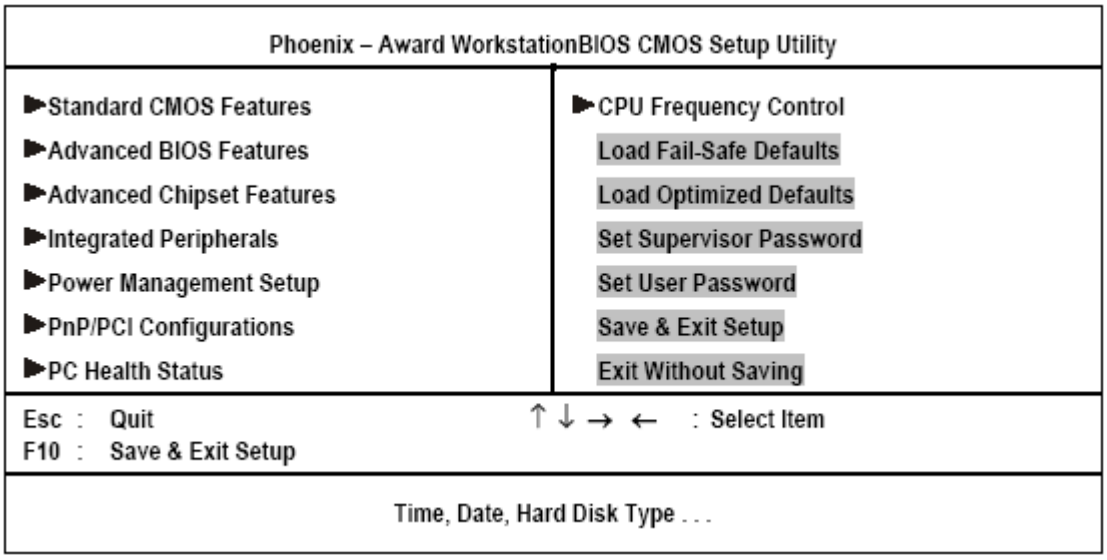
For this method, use a PS/2 keyboard or an AT keyboard with a DIN-to-mini-DIN adapter.

1. Press <Insert> and the power button at the same time.
2. Release the power button while still holding the <Insert> key until the power-on screen appears. This forces the system to boot according to the FSB of the processor.
3. Now press <Delete>.
   The BIOS main menu opens.
4. Open the CPU Frequency Control submenu and set the “CPU Clock Ratio” or “CPU Host/3V66/PCI Clock” to its default setting.

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 Option

This option opens a dialog box that lets you load fail-safe defaults for all appropriate items in the Setup Utility.

Follow these instructions:

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.

The fail-safe defaults place no great demands on the system and are generally stable. If your system is not functioning correctly, try loading the fail-safe defaults as a first step in getting your 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>.

Load Optimized Defaults Option

This option opens a dialog box that lets you load optimized defaults for all appropriate items in the Setup Utility.

Follow these instructions:

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.

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 your 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>.

Set Supervisor and User Passwords Options

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.


IMPORTANT

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

Save & Exit Setup Option

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.


NOTE

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.

CHAPTER 3
INSTALLING DRIVERS AND SOFTWARE

This section explains how to install the drivers for the Kiosk-P. The following topics are described.

Driver Auto Installation

The ACP Mainbaord Utility autoinstall CD automatically installs the drivers for the mainboard. Insert the autoinstall CD into the CD-ROM drive. The following screen appears:

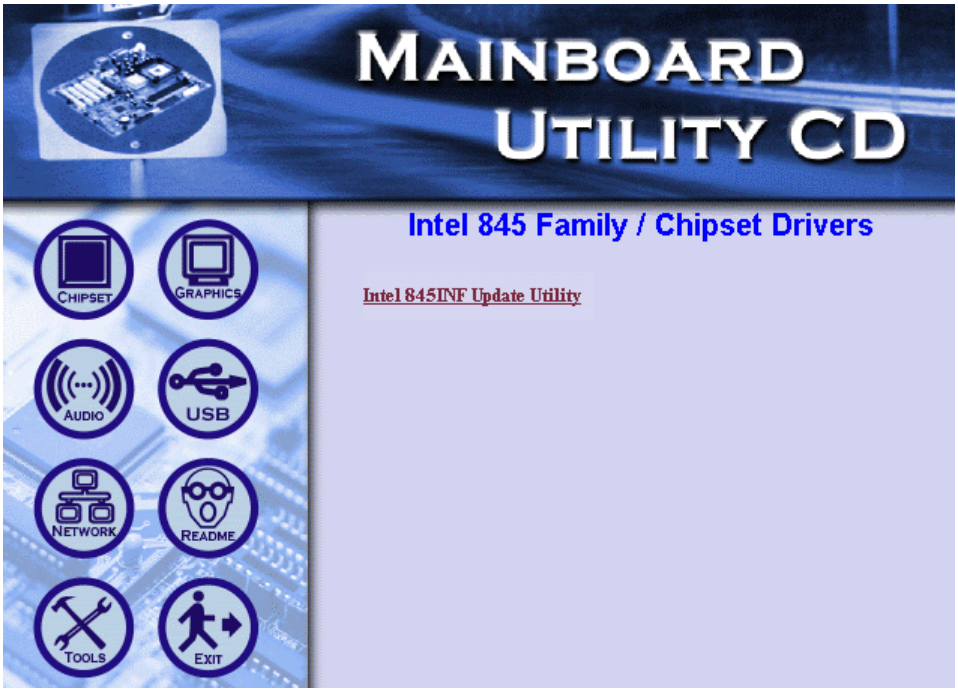


Figure 3.1 Mainboard drivers autoinstall screen

NOTE

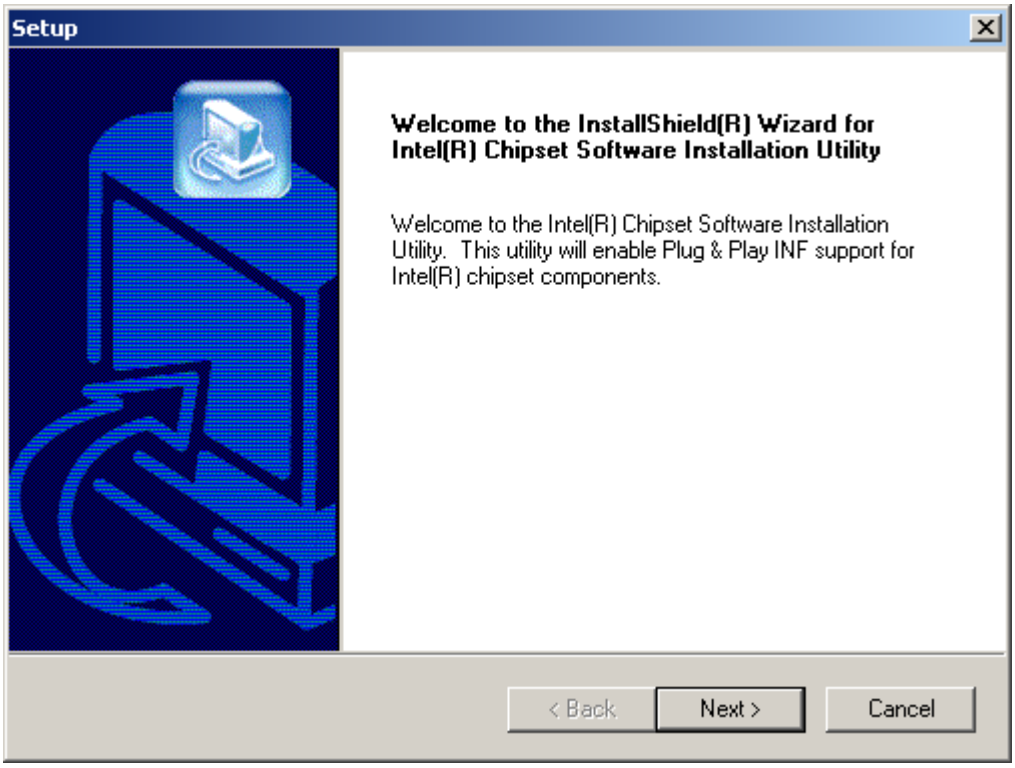
If the screen doesn't automatically appear, double-click the My Computer icon on the desktop. Then right-click on CD-ROM drive icon and select AutoPlay.

ICON	DESCRIPTION
	Click the CHIPSET icon to install the Intel 845INF update utility. See "Chipset drivers utility" on page 35.
	Click the GRAPHICS icon to install the Intel 845 graphics drivers. See "Graphics drivers" on page 36.
	Click the AUDIO icon to install the Realtek audio drivers. See "Audio drivers" on page 37.
	Click the USB icon to install the USB 2.0 drivers. See "USB drivers" on page 38.
	Click the NETWORK icon to install the LAN drivers. See "LAN drivers" on page 40.
	Click the README icon to open the G4V50.txt README file. See "Manual installation through the README file" on page 41.
	Click the TOOLS icon to open the Intel 845 Family / Tools menu. See "Other utilities and manuals on the CD" on page 42.
	Click the EXIT icon to close the autoinstall utility.

Chipset drivers utility

The Intel 845 INF Utility is used for updating Windows XP/2000/ME/98SE INF files so that the Intel Chipset is configured correctly. Refer to the following to install the utility.

1. Click the **CHIPSET** icon.
2. Click **Intel Chipset Software Installation Utility**. The following screeen appears.



3. Follow the onscreen instructions to complete the installation.

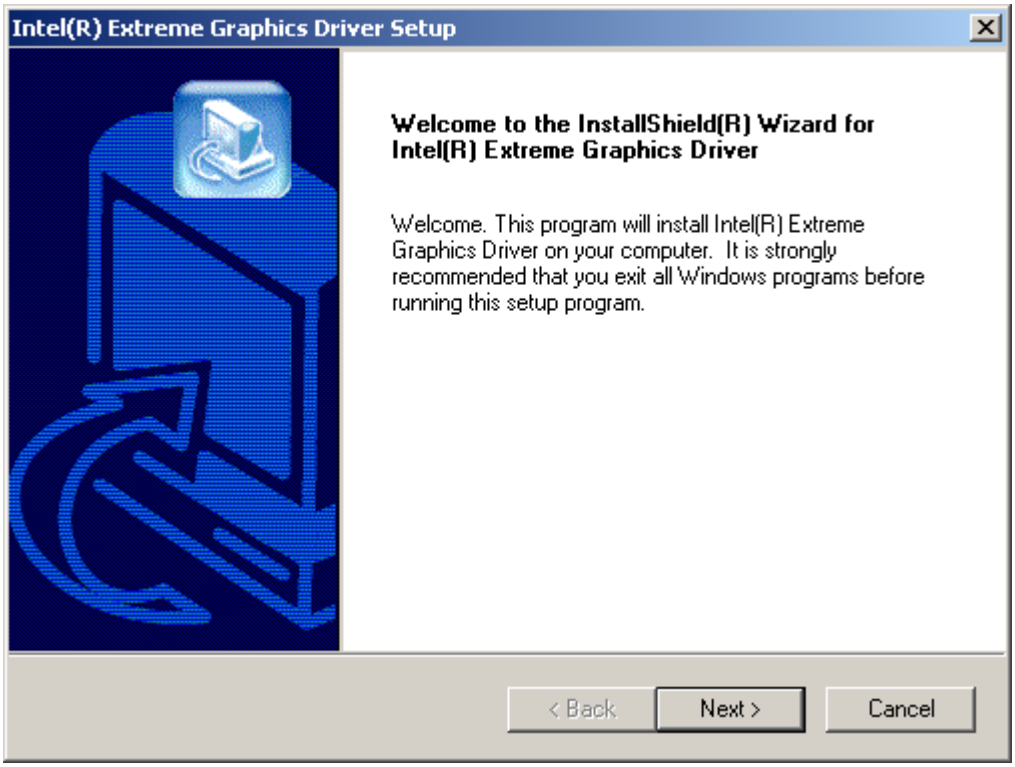
NOTE

It is recommended that you install the Intel 845 INF Utility before installing AGP, PCI, AMR, or CNR drivers.

Graphics drivers

This screen installls the Intel Extreme Graphics drivers. Refer to the following to install the drivers.

1. Click the **GRAPHICS** icon.
2. Click **Intel 845 Graphics Drivers**. The following screeen appears.



3. Follow the onscreen instructions to complete the installation.

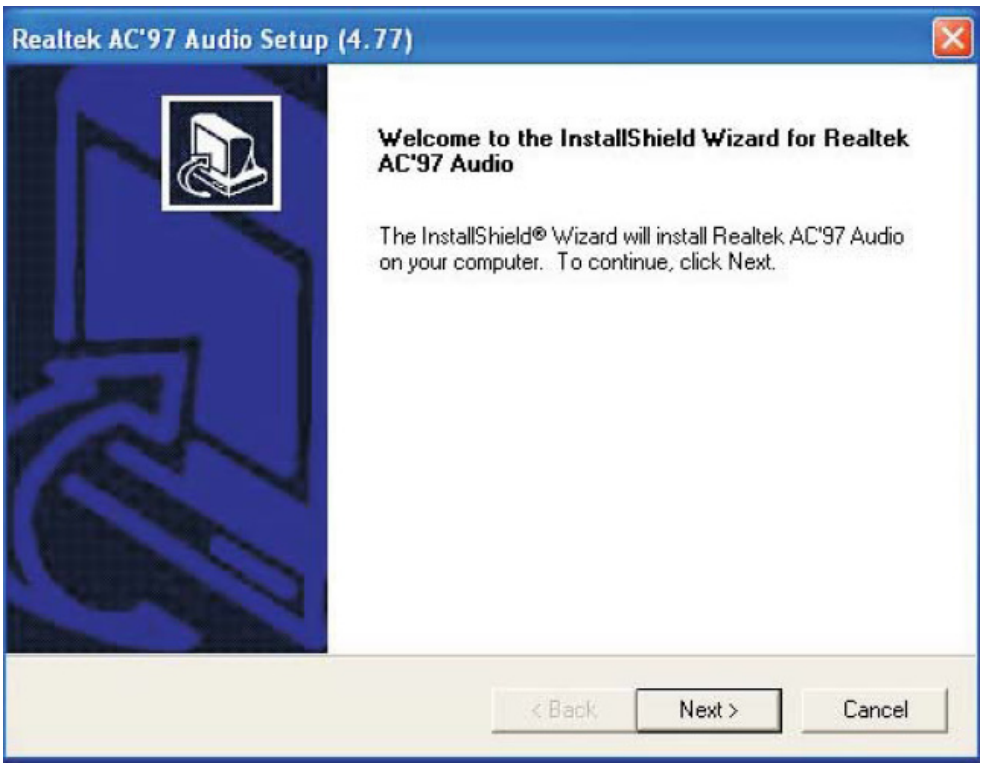
NOTE

To install the graphics drivers, it is recommended that the system has a minimum of 128 MB of system memory/

Audio drivers

The Realtek audio drivers package includes the AC'97 drivers, and audio software. It supports Windows XP/2000/NT/ ME/98SE. Refer to the following to install the drivers.

1. Click the **AUDIO** icon.
2. Click **Realtek Audio Drivers**. The following screeen appears.



3. Follow the onscreen instructions to complete the installation.

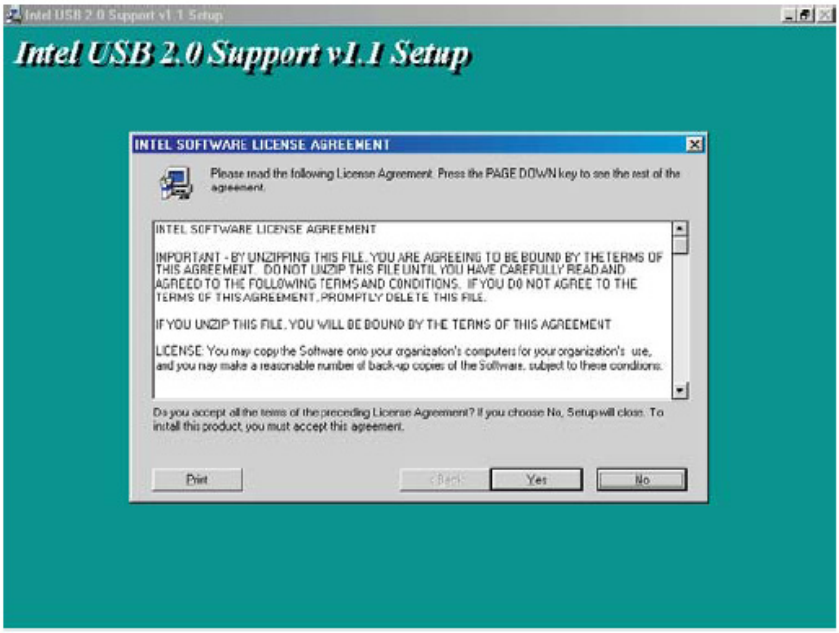
USB drivers

To avail of the faster transfer speed of USB 2.0, the USB 2.0 drivers must be installed. These drivers support Windows XP/2000/ME/98SE. Refer to the following to install the drivers.

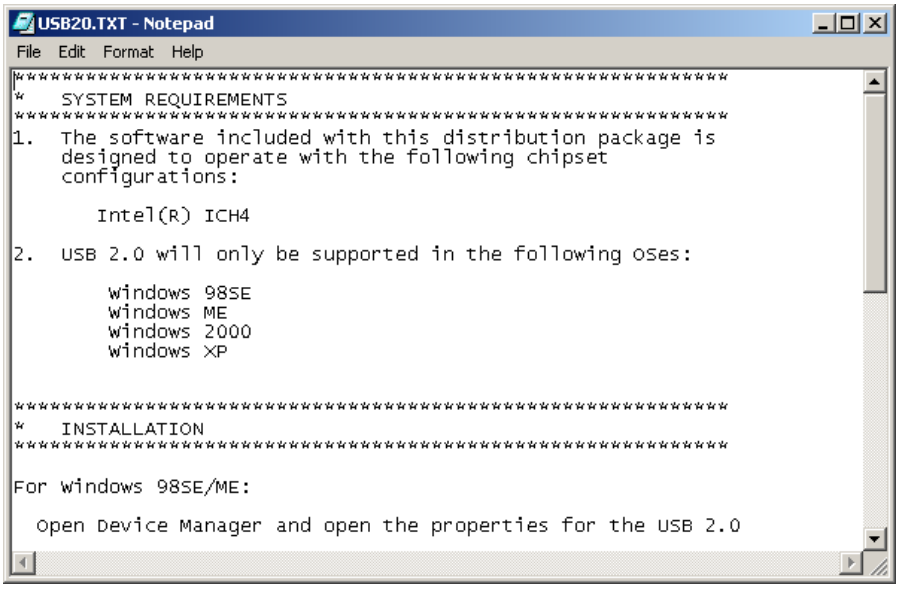
IMPORTANT

Before installing the USB driver make sure the USB controller is set to All Enabled in the Integrated Peripherals menu of the BIOS. ***See "Integrated Peripherals " on page 20.***

1. Click the **USB** icon.
2. Click **USB2.0 Drivers**.
   If the OS is Windows ME or 98 SE, the following screeen appears.



3. Windows XP and Windows 2000 do not support USB driver autoinstallation. If the OS is Windows XP or 2000, the following screeen appears:



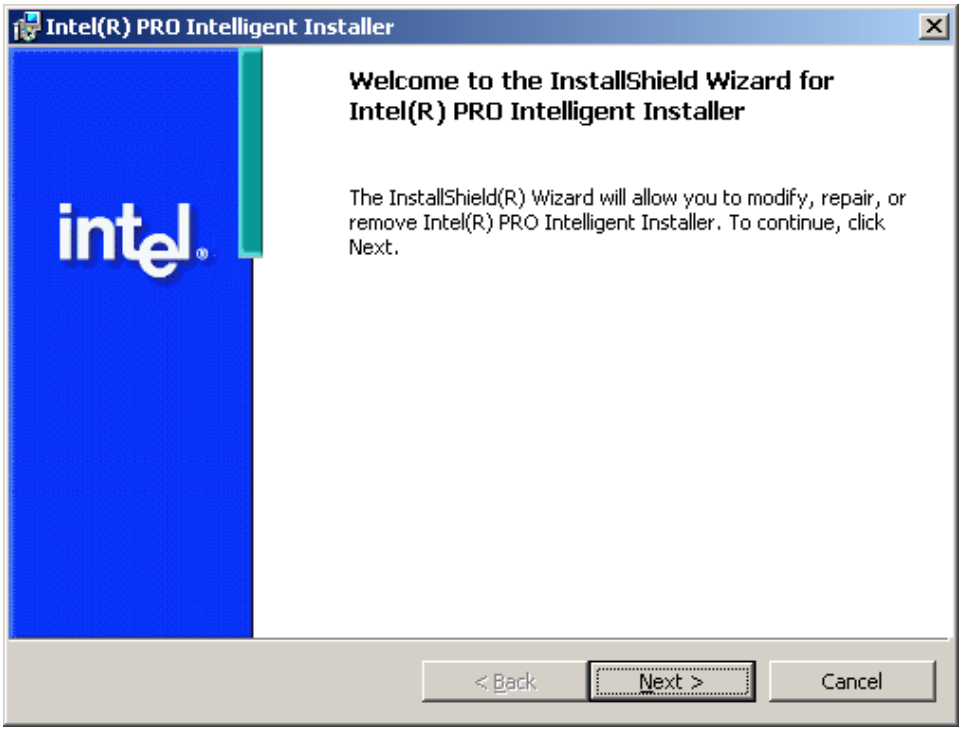
4. Follow the onscreen instructions to complete the installation.

LAN drivers

The network drivers support Windows XP/2000/NT/ME/98SE. Refer to the following to install the drivers.

1. Click the **LAN** icon.
2. Click **Intel LAN Drivers**. The following screeen appears.

3. Click **Install Software**. The following screeen appears.

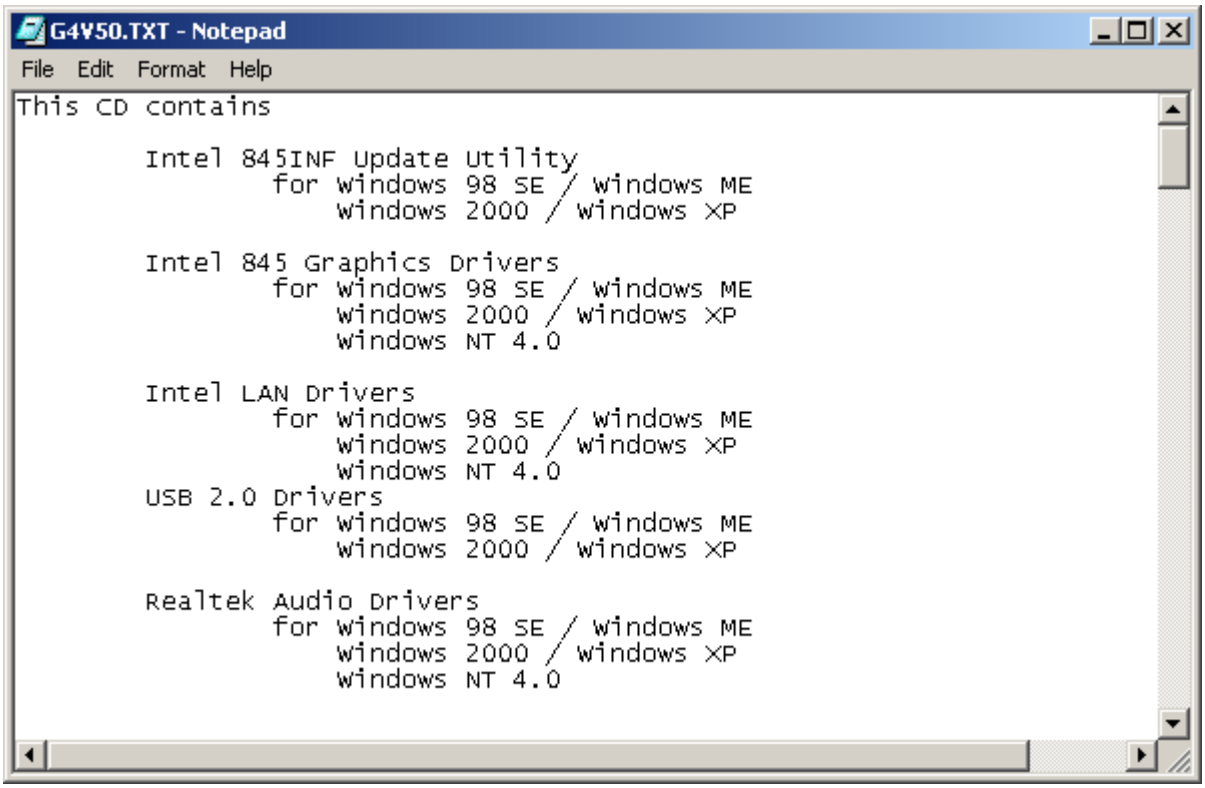


4. Follow the onscreen instructions to complete the installation.

Manual installation through the README file

The drivers for Windows XP/2000/NT/ME/98SE can be manually installed according to the instructions on the G4V50.txt file (this text file can also be opened by double-clicking README.EXE in the root folder). Refer to the following to open the README file from the autoinstall screen.

1. Click the **README** icon. The following G4V50.txt file opens.



2. Scroll down to the driver you want to install.
3. Follow the onscreen instructions to complete the installation.

Other utilities and manuals on the CD

The CD also contains a hardware monitoring utility, DirectX drivers, and user documentation. Click the TOOLS icon to see the list of included items.

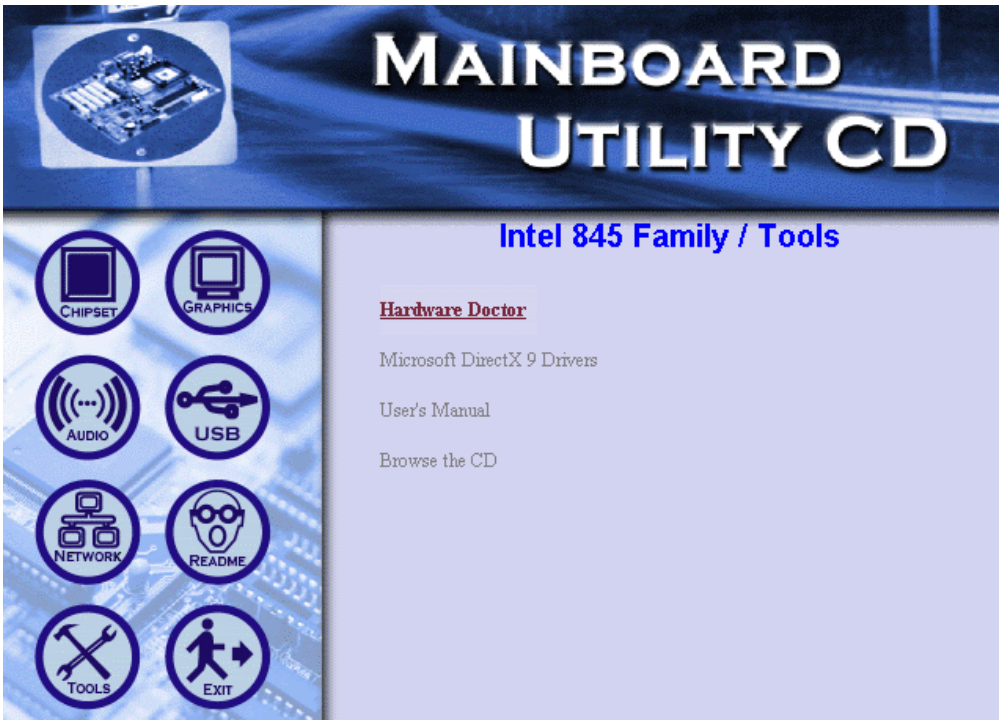


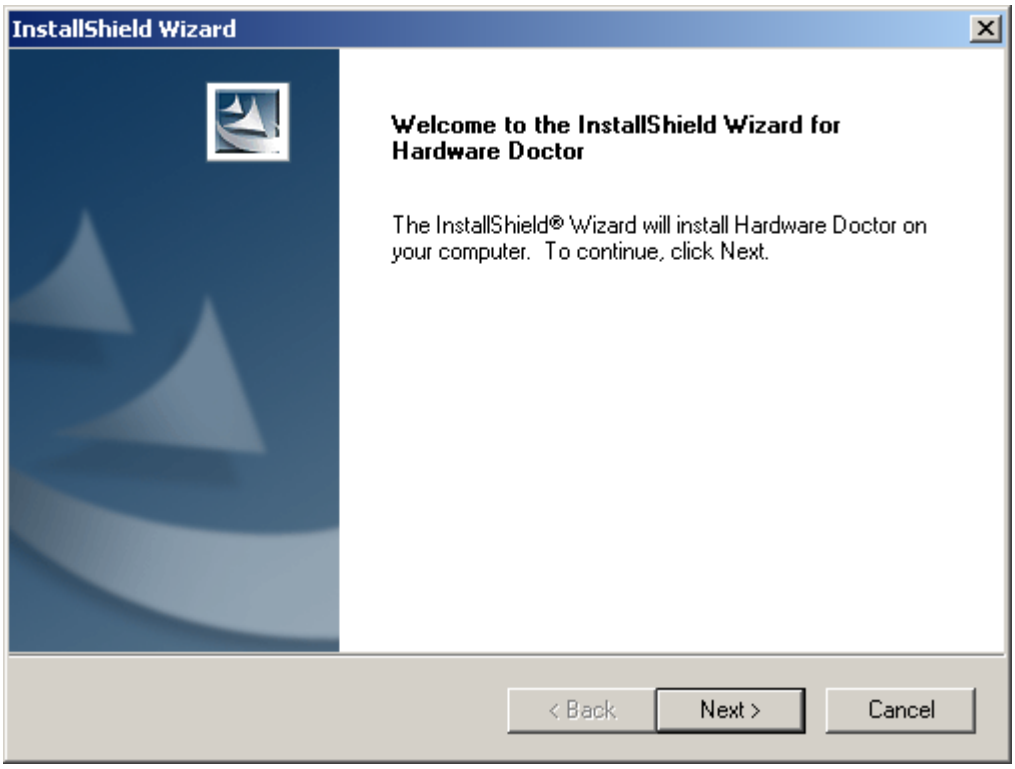
Figure 3.2 Tools and user manual screen

Click **Browse the CD** to view the contents of the CD in Windows Explorer.

Hardware Doctor

The Hardware Doctor utility monitors the system for conditions such as CPU temperature and fan speeds. Monitoring ranges can be set to show a warning message or alarm when the specified level is exceeded. Refer to the following to install the utility.

1. In the TOOLS menu, click **Hardware Doctor**. The following screen appears.

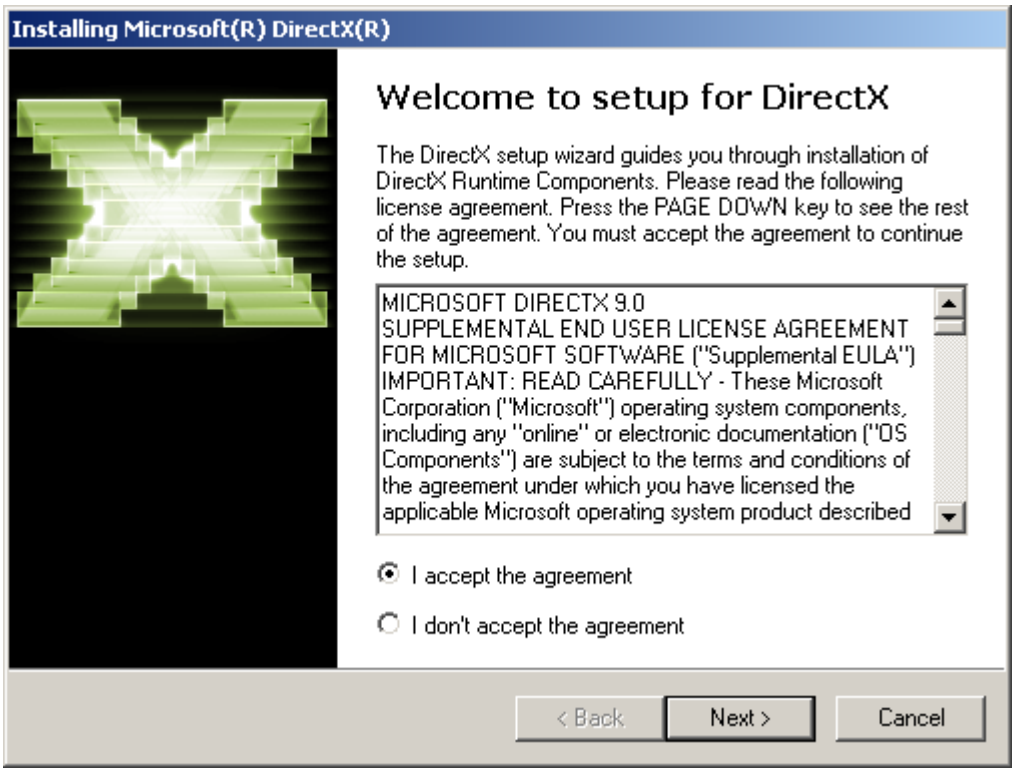


2. Follow the onscreen instructions to complete the installation.

DirectX drivers

The DirectX setup wizard installs the Microsoft DirectX 9.0 runtime components. Refer to the following to install DirectX 9.0.

1. In the TOOLS menu, click **Microsoft DirectX 9 Drivers**. The following screen appears.



2. Follow the onscreen instructions to complete the installation.

Touch screen drivers

The TouchKit autoinstall CD automatically installs the drivers for the touch screen. Insert the CD into the CD-ROM drive. The following screen appears:

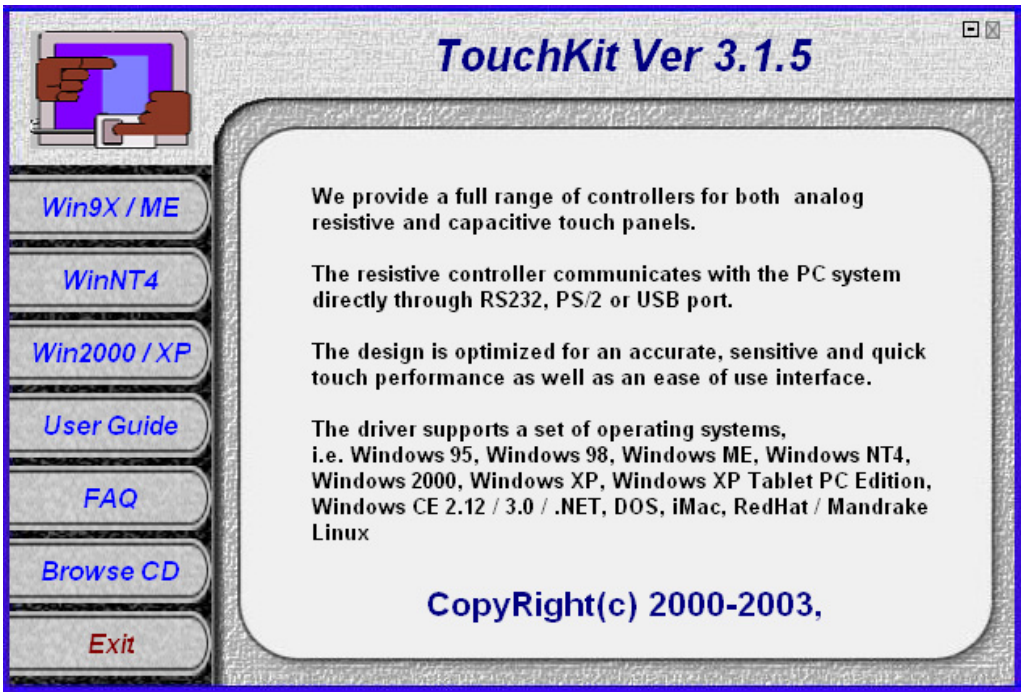


Figure 3.3 Touchkit drivers autoinstall screen

NOTE

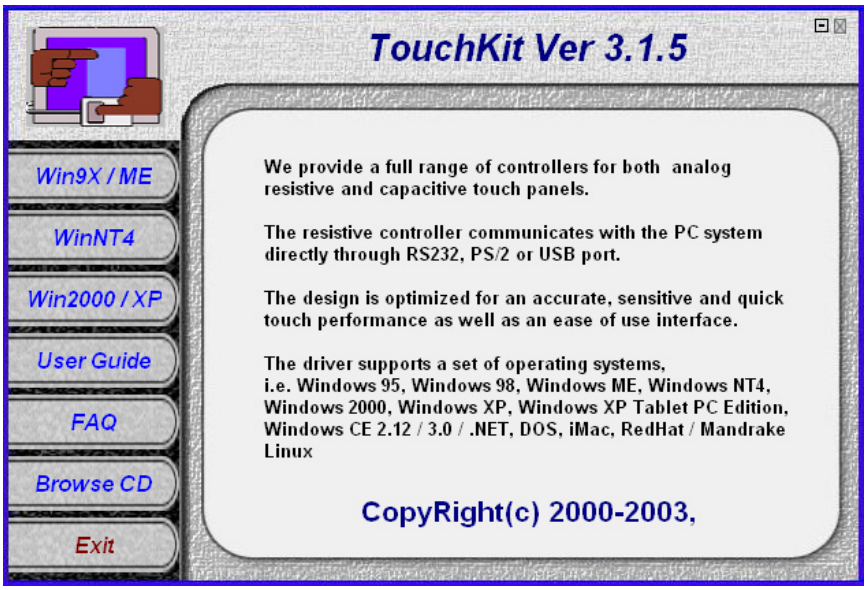
If the screen doesn't automatically appear, double-click the My Computer icon on the desktop. Then right-click on CD-ROM drive icon and select AutoPlay.

ICON	DESCRIPTION
Win9X/ME	Select this option to install the drivers Windows 98 or Windows ME.
WinNT4	Select this option to install the drivers Windows
Win2000/XP	Select this option to install the drivers Windows 2000 or Windows XP.
User Guide	Select this option to view installation guides for each OS.
FAQ	Select this option to view an FAQ list.
Browse CD	Select this option to view the contents of the CD in Windows Explorer
Exit	Select this option to close the autoinstall utility.

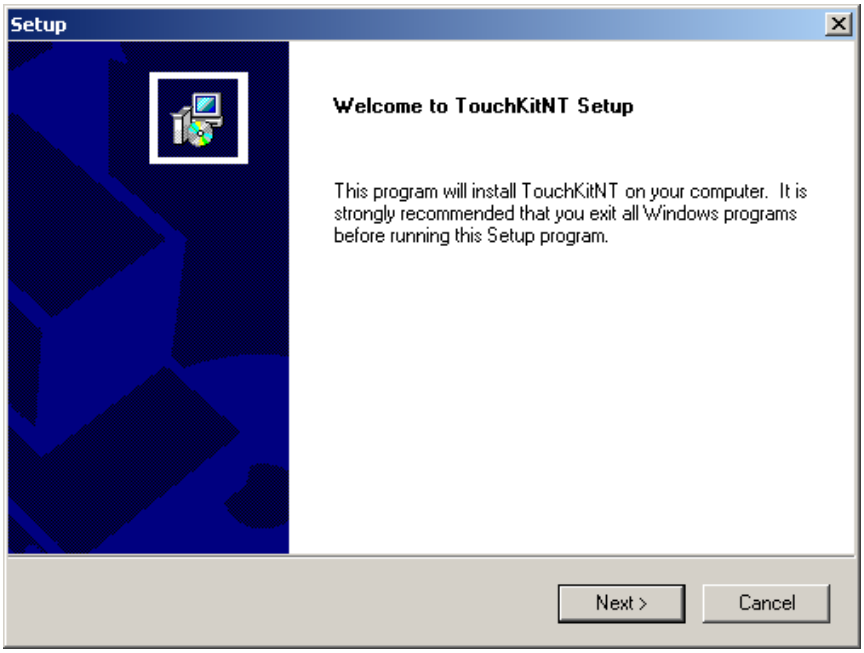
Installing the drivers

Refer to the following to install the touch screen drivers for the operating system you want.

1. Insert the TouchKit CD into the CD-ROM drive. The following screen appears:



2. Select the driver for the operating system you want to install. The following screen appears:

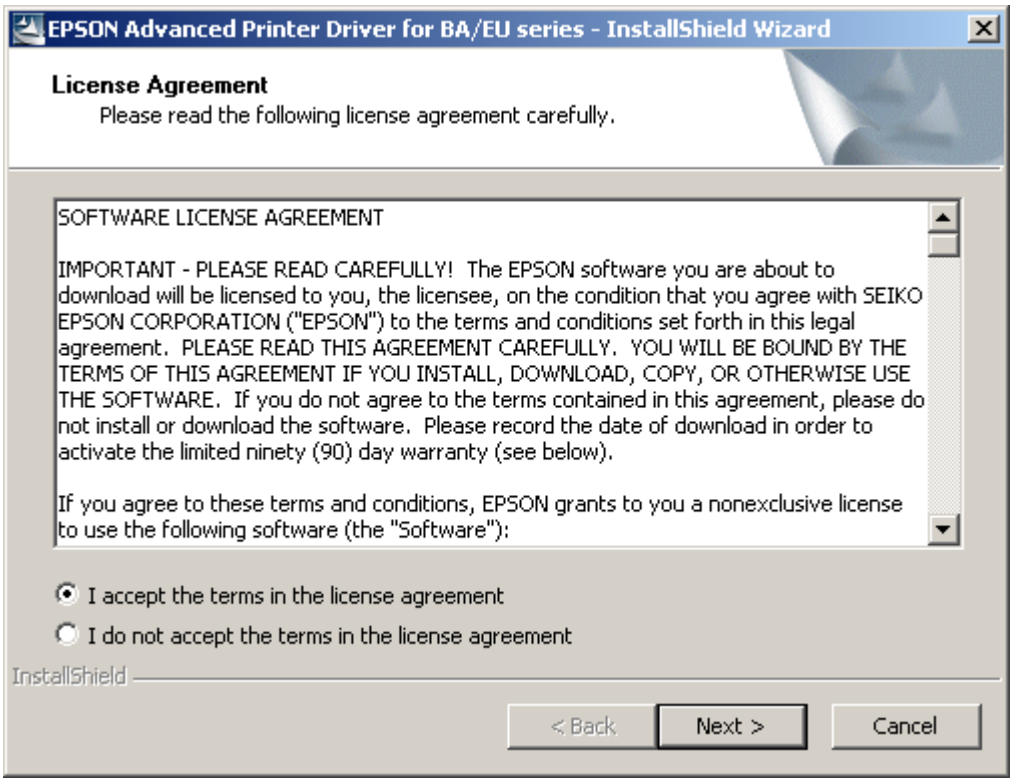


3. Follow the onscreen instructions to complete the installation.

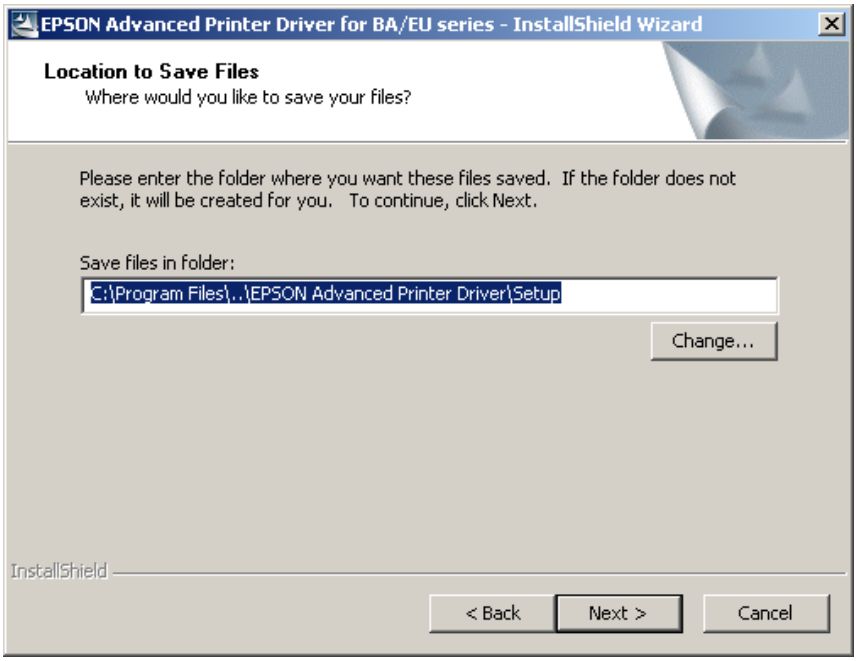
Installing the printer drivers

Refer to the following to install the printer drivers for the operating system you want.

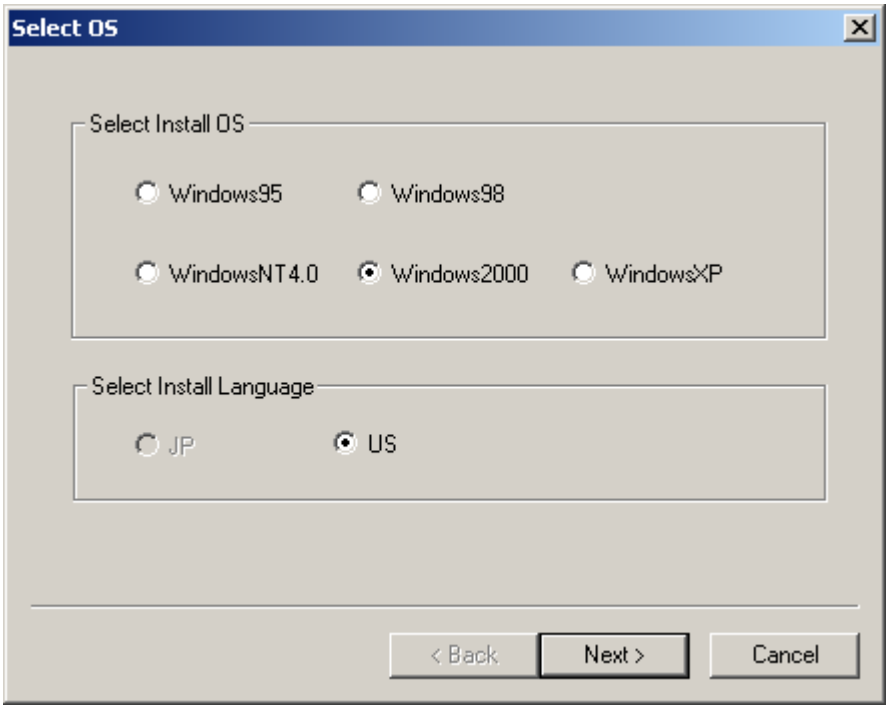
1. Insert the driver CD into the CD-ROM drive. The following screen appears:



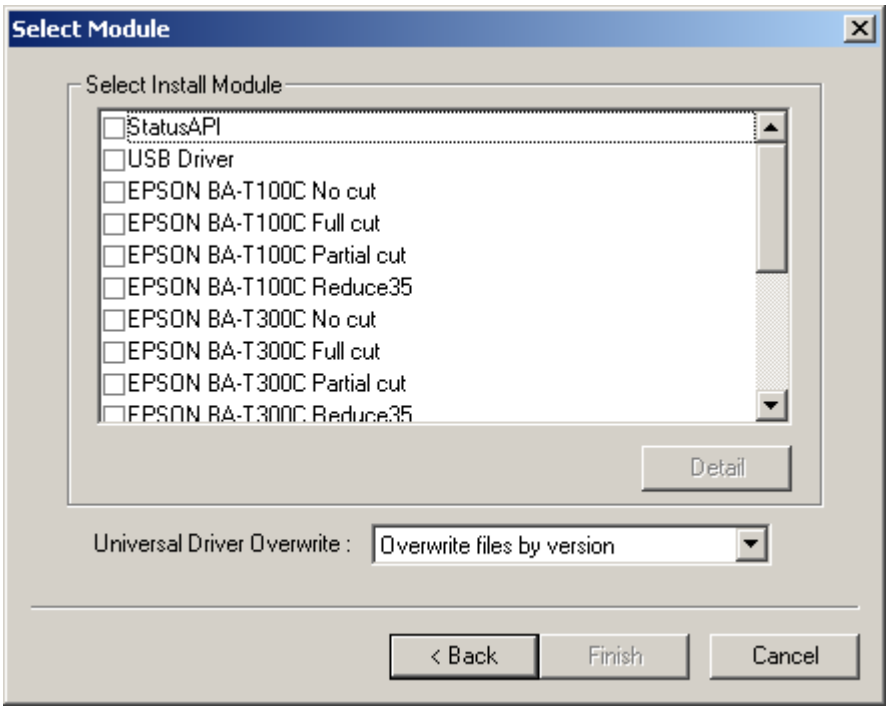
2. Select the **I accept the terms in the license agreement** radio button and click **Next**. The following screen appears:



3. Click Next to unzip the installation files. The following screen appears:



4. Select the radio button for the appropriate operating system. The following screen appears:



5. Select “EPSON BA-T100C Full cut”. Click finish and follow the onscreen instructions to complete the installation.
6. Open your application software and print something to test the printer is working.

CHAPTER 4
LOCATING THE PROBLEM

Refer to this section to locate the problem with the Kiosk-P. The following topics are described.

General checkout guidelines

Use the following procedure to troubleshoot problems:

- Identify as many symptoms as possible in detail.
- Verify symptoms by recreating them.
- Follow the corrective procedures in order.
- If you replace an FRU and the symptom remains, reinstall the original FRU before going to the next step. Do not replace non-defective FRUs.

Power system checkout

Power system problems can result from a faulty power supply unit, incorrect power management settings, or undetermined problems (such as loose connections). This section helps you check the power supply unit or power management features.

1 Connect the power cord to an electrical outlet.

2 Turn the Kiosk-P on. If the LCD turns on, go to "Power symptoms" on page 51.

LCD symptoms

SYMPTOM		CORRECTIVE PROCEDURE
LCD backlight is not working but text is still visible onscreen.	**1**	Reseat the LCD cable.
	2	Reseat the inverter cables.
	3	Replace the inverter cables.
	4	Replace the inverter.
LCD backlight is working but text is not visible onscreen.	**1**	Reseat the LCD cable.
	2	Reseat the inverter cables.
	3	Replace the LCD.
LCD screen is garbled Characters are missing pixels Screen is distorted Screen displays wrong color Screen displays extra vertical/horizontal lines	**1**	Reseat the LCD cable.
	2	Replace the inverter cables.
	3	Replace the LCD panel.
	4	Replace the motherboard.

Touch screen symptoms

SYMPTOM		CORRECTIVE PROCEDURE
Touch screen does not function No virtual mouse Cursor doesn't follow when touching the screen	**1**	Install and run the touch screen calibration program from the Touchkit driver CD.
	2	Remove and reinstall the USB driver.
	3	Reseat the panel cable.
	4	Reseat the touch screen board-to-touch panel cable.
	5	Replace the touch control board.
	6	Replace the touch panel.

Power symptoms

SYMPTOM		CORRECTIVE PROCEDURE
Power shuts down unexpectedly Cannot turn the system on	**1**	Reseat the power AC cable.
	2	Reseat/replace power fan if not on.
	3	Replace the power button.
	4	Replace the motherboard.
Cannot turn the system off	**1**	Hold down the power button for 4 seconds.
	2	Replace the motherboard.

Network symptoms

SYMPTOM		CORRECTIVE PROCEDURE
Cannot access LAN	**1**	Confirm that network hub/switch (if present) is functioning correctly.
	2	Reseat the RJ-45 cable.
	3	Confirm green and orange LED activity of the RJ-45 jack.
	4	Check the network TCP/IP settings.
	5	Remove and reinstall the driver.
	6	Replace the network cable.
	7	Replace the motherboard.

USB symptoms

SYMPTOM		CORRECTIVE PROCEDURE
USB port does not function	**1**	Check that the USB port is detected in Windows Device Manager.
	2	Reinstall the USB driver.
	3	Replace the motherboard.

MSR reader symptoms

SYMPTOM		CORRECTIVE PROCEDURE
The MSR reader does not function	**1**	Reseat the MSR reader cable.
	2	Reseat the MSR board cable.
	3	While at a DOS prompt, swipe a card through the MSR. If no text appears on the screen replace the MSR.
	4	While at a DOS prompt, swipe a card through the MSR. If text appears on the screen the MSR is ok. Reinstall application software.

Card reader symptoms

SYMPTOM		CORRECTIVE PROCEDURE
The card reader does not function	**1**	Reseat the card reader cable.
	2	Replace the card reader.

Boot symptoms

SYMPTOM		CORRECTIVE PROCEDURE
System continually reboots on power up	**1**	Restore the BIOS defaults.
	2	Remove all I/O device drivers, then reinstall the drivers one by one.
	3	Reseat the IDE cable.
	4	Reseat the memory card.
	5	Ensure the proper CPU FSB speed is selected.
	6	Replace the power supply.
	7	Replace the motherboard.

Peripheral-device symptoms

SYMPTOM		CORRECTIVE PROCEDURE
USB ports don't work.	**1**	Reinstall the drivers.
Parallel Port doesn't work	**2**	Replace the motherboard.

IR-device symptoms

SYMPTOM		CORRECTIVE PROCEDURE
IR port doesn't work.	**1**	Remove obstructions.
	2	Reinstall the drivers.
	3	Replace the IR board.
	4	Replace the motherboard.

Printer symptoms

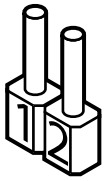
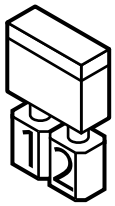
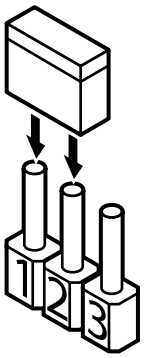
SYMPTOM		CORRECTIVE PROCEDURE
Printer doesn't work.	**1**	Replace paper.
	2	Reseat printer cables.
	3	Reinstall the drivers.
	4	Replace the printer board.
	5	Replace the printer.

Motherboard jumper settings

Before replacing the motherboard or a PCB board, ensure that the problem is not due to an incorrect jumper setting or a loose connection.

Setting a jumper

The mainboard jumpers are to set system configuration options.When setting the jumpers be sure the shunts (jumper caps) are placed on the correct pins.

This 2-pin jumper is **Open**.	
This 2-pin jumper is **Closed**.	
This 3-pin jumper is **Closed** on pins 1 and 2.	

Motherboard jumpers and connectors

Refer to the following illustration to locate the jumpers and connectors on the motherboard:

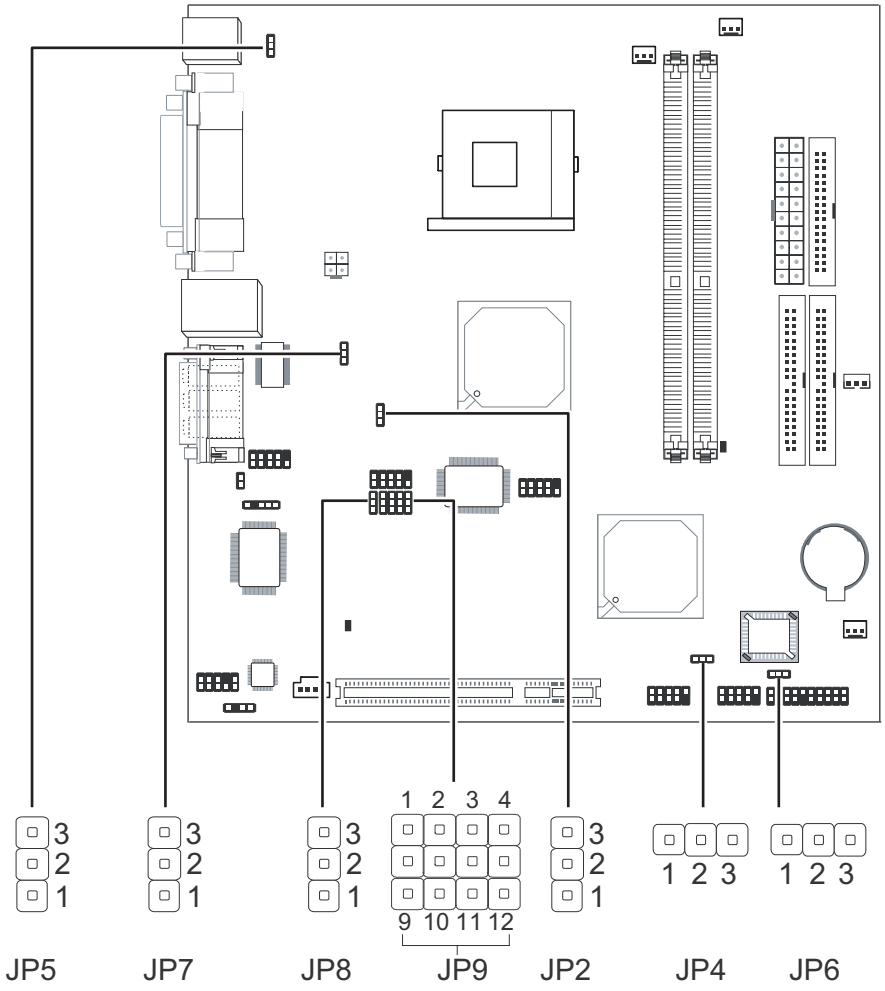


Figure 4.1 Mainboard jumper settings

JUMPER	SETTING	DESCRIPTION
JP2	1-2 closed	CPU FSB select: Auto (default)
JP2	2-3 closed	CPU FSB select: 100 MHz
JP2	all open	CPU FSB select: 133 MHz
JP4	1-2 closed	Normal (default)
JP4	2-3 closed	Clear COMs
JP5	1-2 closed	PS/2 wake up setting: 5V (default)
JP5	2-3 closed	PS/2 wake up setting: 5VSB
JP6	1-2 closed	USB wake up setting: 5V (default)
JP6	2-3 closed	USB wake up setting: 5VDU

JUMPER	SETTING	DESCRIPTION
JP7	1-2 closed	USB wake up setting: 5V (default)
JP7	2-3 closed	USB wake up setting: 5VDU

JUMPER 8	JUMPER 9	DESCRIPTION
1-2 closed	1-5, 2-6 closed	COM 4 set to RS232
2-3 closed	5-9, 6-10 closed	COM 4 set to RS485
1-2 closed	7-11, 8-12 closed	COM 4 set to Auxiliary power

CHAPTER 5
REPLACING FIELD REPLACEABLE PARTS (FRUS)

This chapter provides instructions for replacing FRUs. The following topics are described.

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 Kiosk-P 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 Kiosk-P. Damage due to unauthorized servicing is not covered by the warranty.

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

Under no circumstances touch the inverter card while power is connected to the Kiosk-P. Unplug the power cord before attempting to replace any FRU.

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 Kiosk-P components and cause a 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.

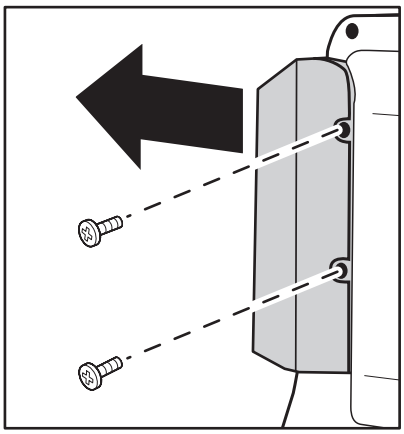
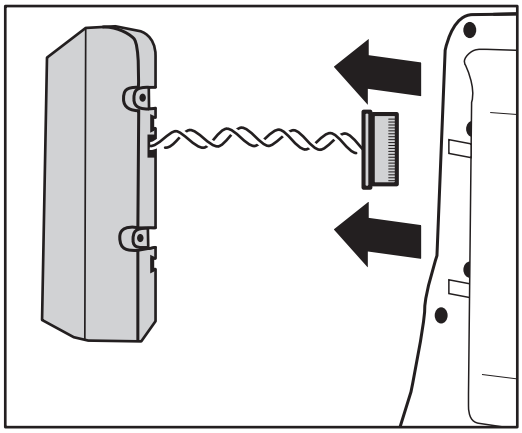
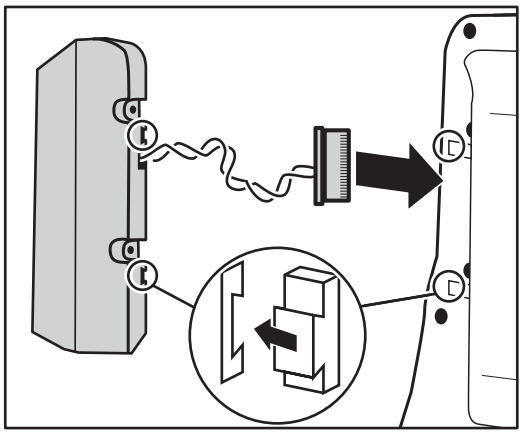
To prevent scratching the case of the Kiosk-P, make sure the worktop surface is clean and flat.
If you need to put the display facing down, be sure to use a foam mat.

Replacing Parts

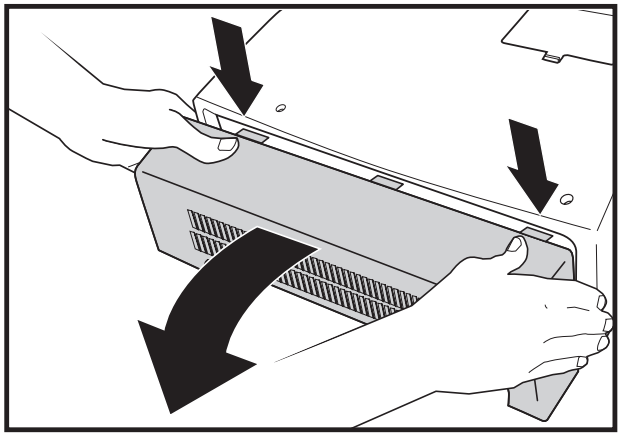
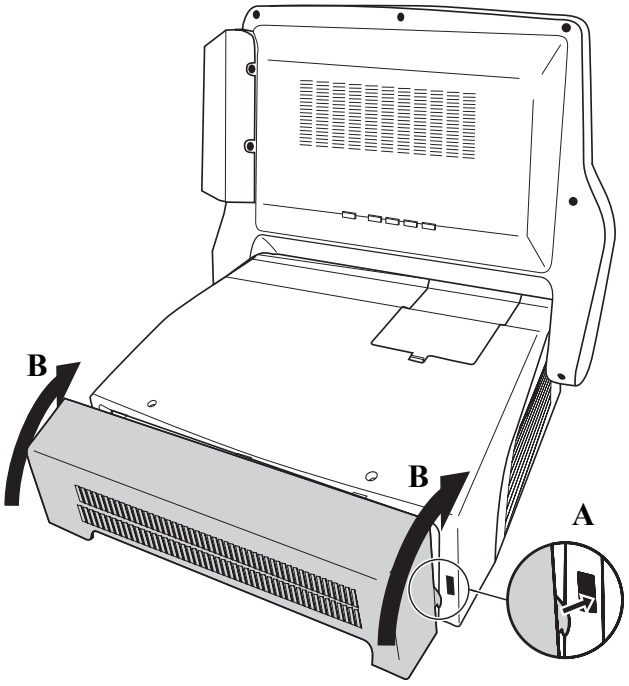
Take note of the following when replacing parts:

- If you replace an FRU and the symptom remains, reinstall the original FRU before going to the next step. Do not replace non-defective FRUs.
- When replacing a failing part, other parts that have to be removed before the failing part are listed at the top of the page.
- The arrows in the following procedures show the direction of movement to remove/replace a part, or to turn a screw or key to release a device.
- Always use the correct screw size as indicated in the procedures.
- Always use new screws.
- To replace a part, reverse the removal procedure.

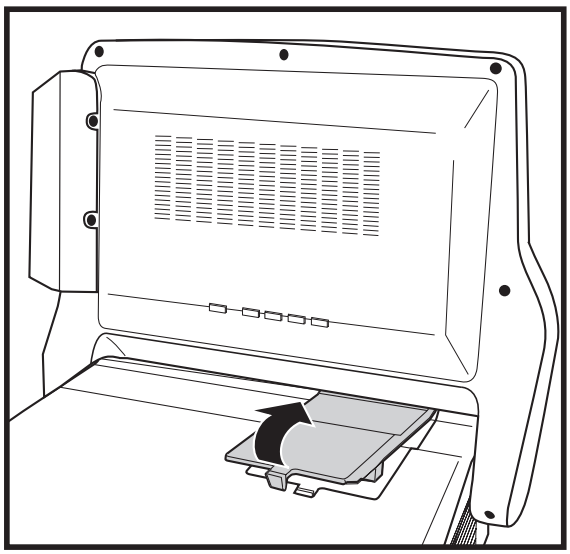
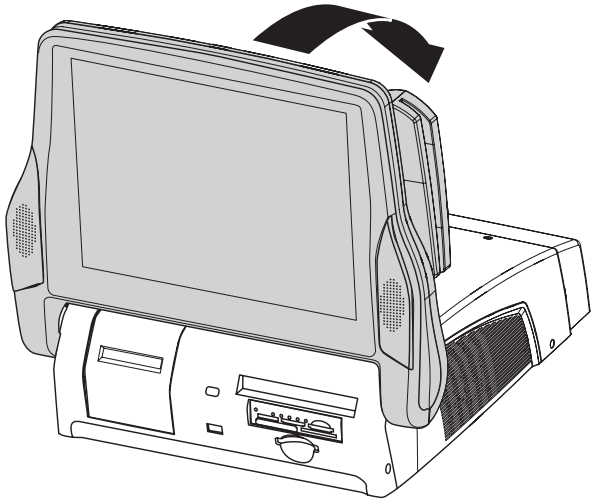
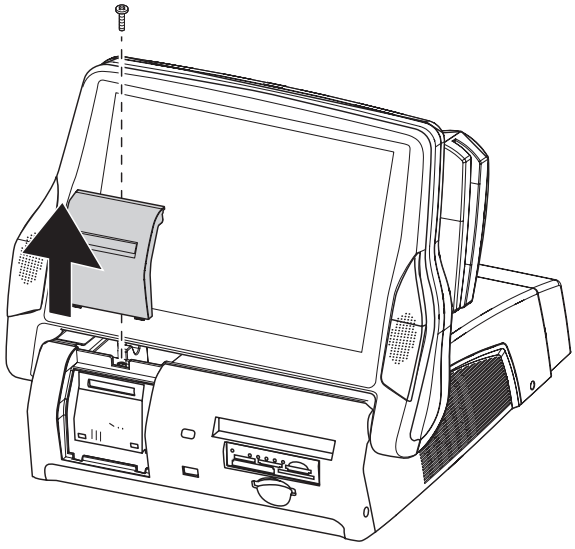
MSR

1 Remove the two screws (M3 x 8 mm, black). **2** Slide the MSR off.	
3 Disconnect the cable.	
When replacing: Tuck the cable into the display after connecting the cable. Align the tabs on the display with the slots on the MSR.	

Cable cover

1 Press at the top latches. **2** Pivot the cover away from the Kiosk-P.	
When replacing: Insert the latches into the slots at both sides **(A)**. And then pivot the cover upwards until the latches on the top click into place **(B)**.	

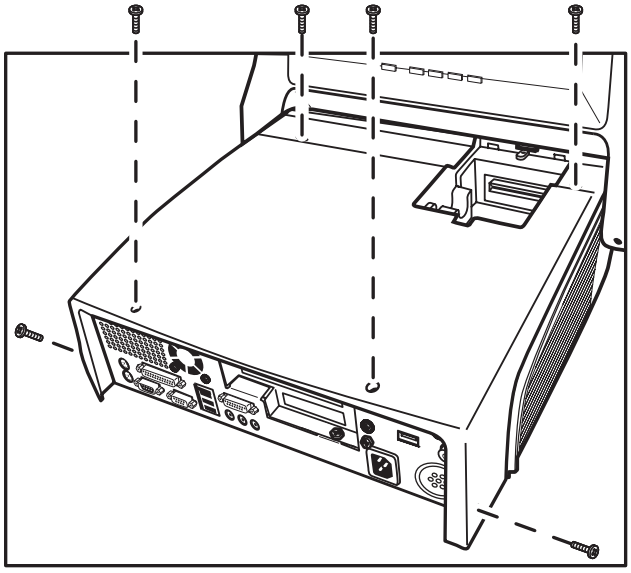
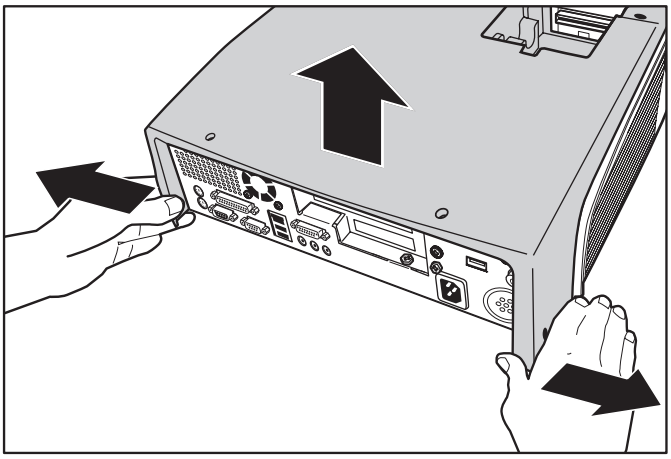
Printer cover

1 Lift up on the latch to remove the print-roll door.	
2 Tilt the display back to about 45 degrees.	
3 Remove the screw (M3 x 8 mm, black). **4** Remove the cover.	

Rear base cover

Before proceeding, remove the following FRUs:

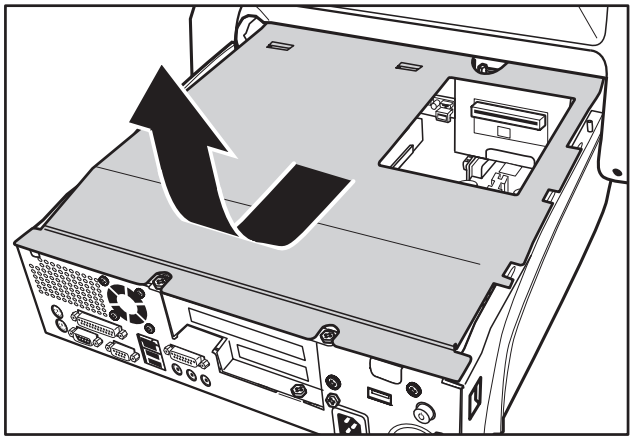
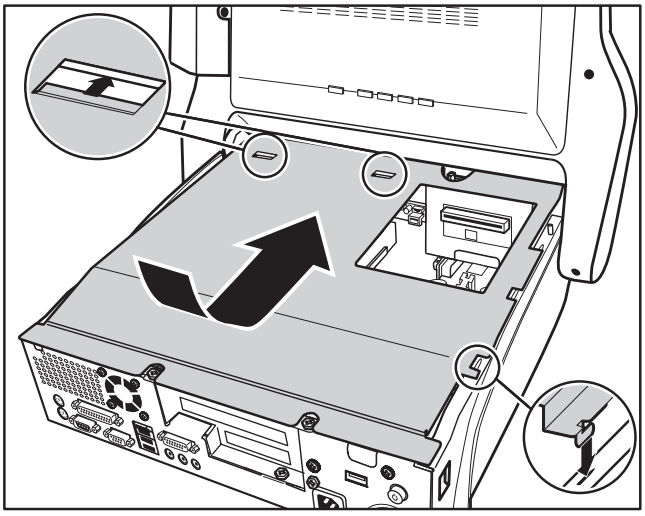
"Printer cover" on page 61

1 Remove the 6 screws (M3 x 8 mm, black).	
2 Pull the cover edges outward slightly and lift up.	

Base case top

Before proceeding, remove the following FRUs:

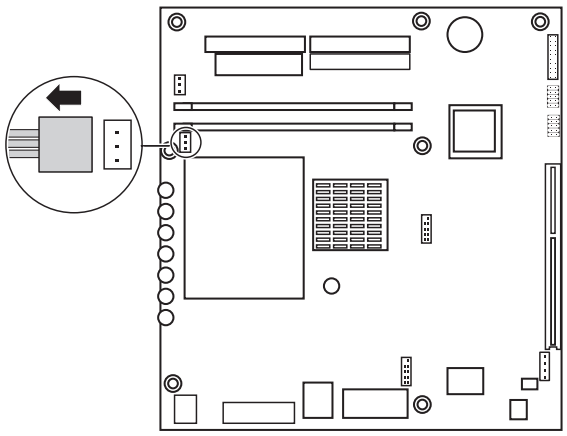
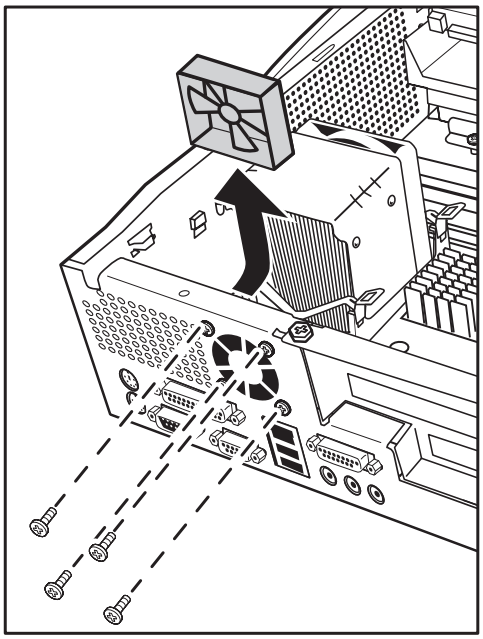
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62

1 Slide back then lift off the base case top.	
When replacing: Align the tabs and slots.	

Fan

Before proceeding, remove the following FRUs:

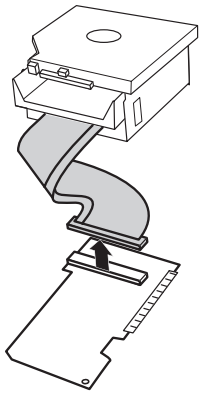
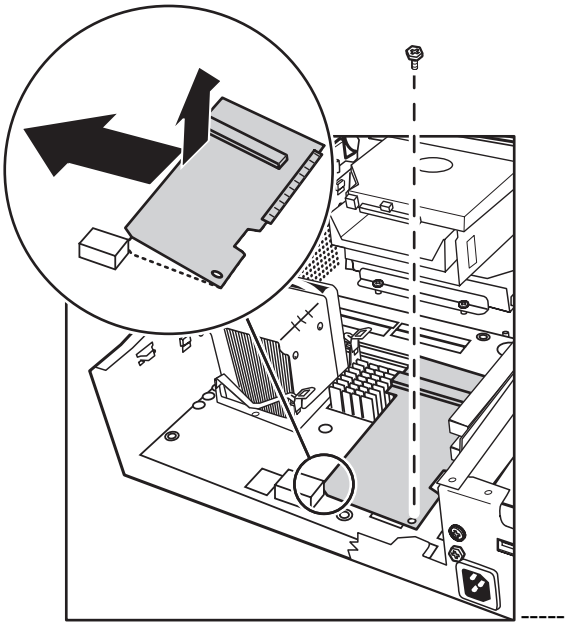
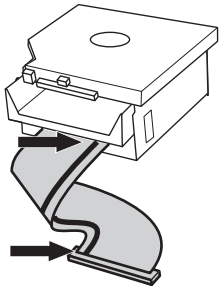
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63

1 Disconnect the cable.	
2 Remove the 4 screws (M3 x 15 mm, silver). **3** Remove the fan.	

PCB

Before proceeding, remove the following FRUs:

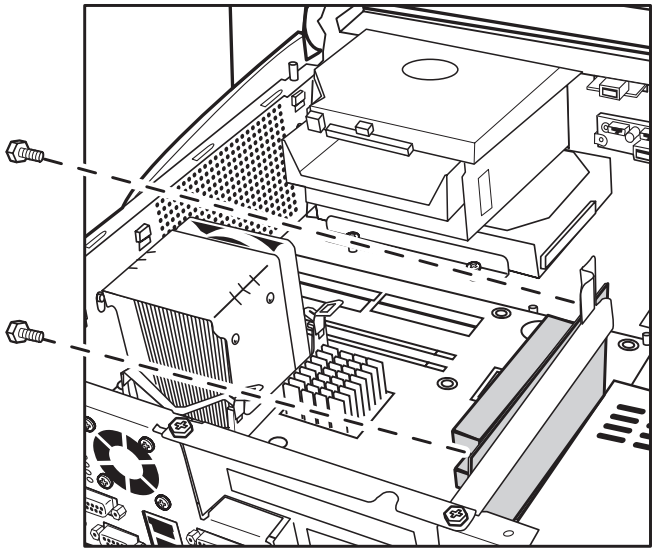
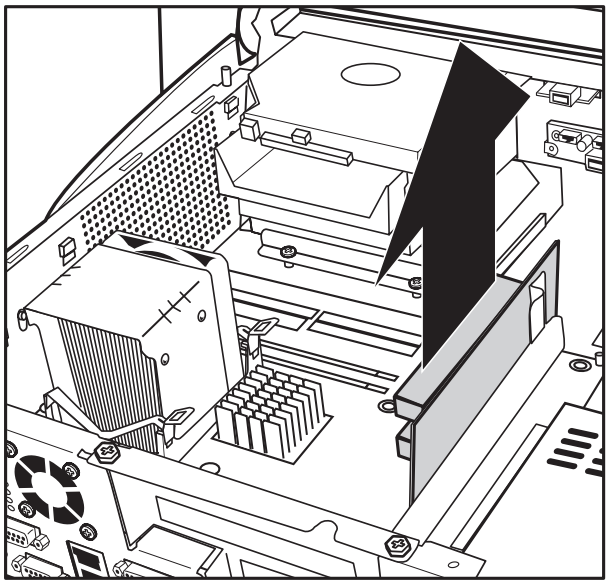
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63

1 Disconnect the cable.	
2 Remove the screw (M3 x 6 mm, silver). **3** Tilt the PCB board up slightly so it can clear the connector. **4** Pull the PCB board out.	
When replacing: The cable makes a half twist. The red stripe indicating the pin one position on the connector is shown here.	

PCI slot

Before proceeding, remove the following FRUs:

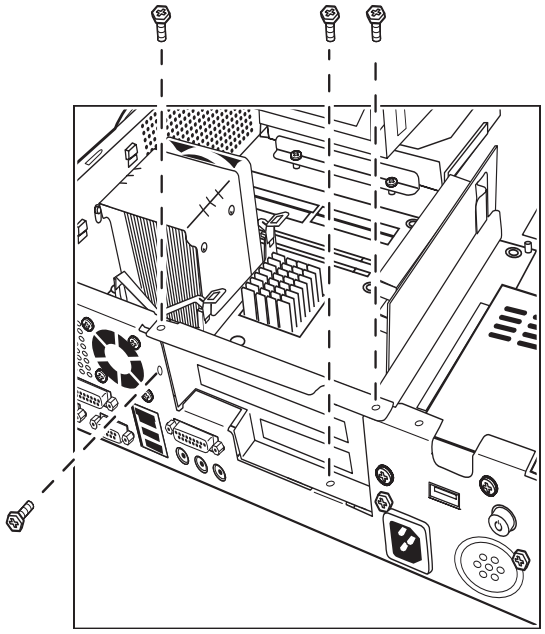
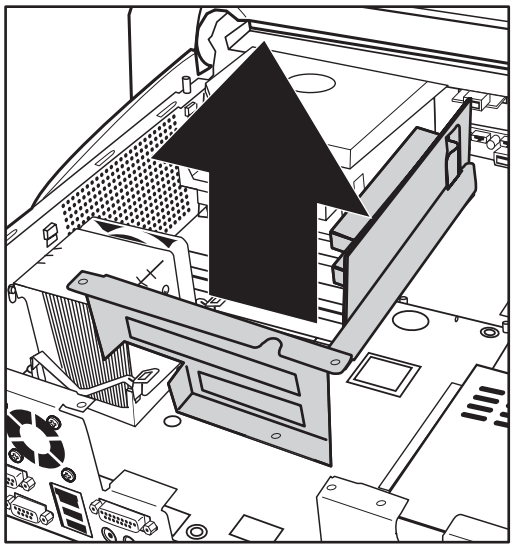
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “PCB” on page 65

1 Remove the 2 screws (M3 x 6 mm, silver).	
2 Lift the PCI slot out.	

PCI slot frame

Before proceeding, remove the following FRUs:

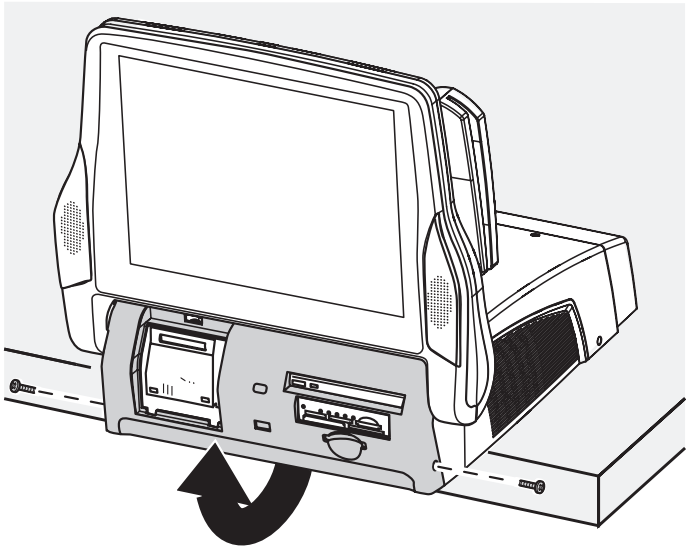
- "Cable cover" on page 60
- "Printer cover" on page 61
- "Rear base cover" on page 62
- "Base case top" on page 63
- "PCB" on page 65
- "PCI slot" on page 66

1 Remove the 4 screws (M3 x 6 mm, silver).	
2 Lift the PCI slot frame out.	

Front base cover

Before proceeding, remove the following FRUs:

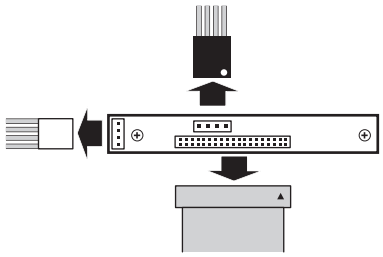
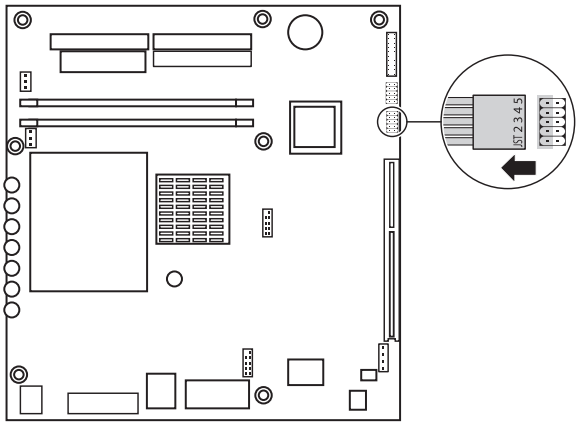
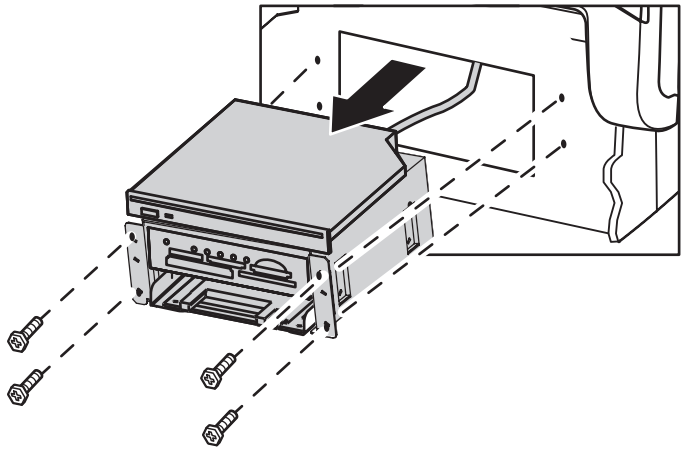
- “Printer cover” on page 61

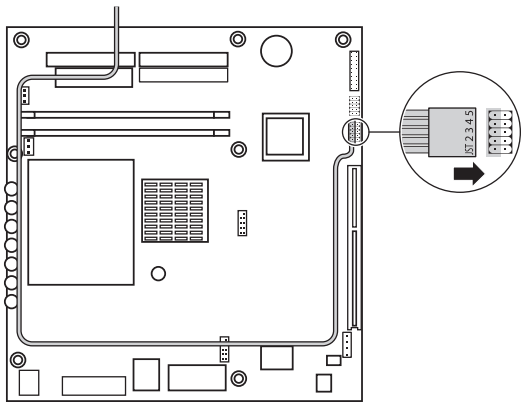
1 Place the machine on a table with the front base cover slightly over the edge. **2** Remove 2 screws (M3 x 8 mm, black). **3** Pull the front base cover off from the bottom.	

Card reader frame

Before proceeding, remove the following FRUs:

- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “Front base cover” on page 68

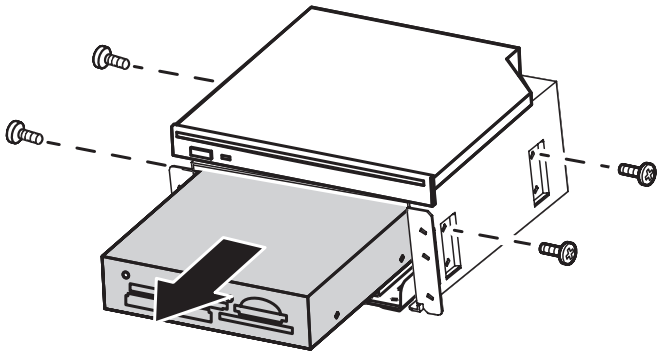
1 Disconnect the 3 cables from the optical drive.	
2 Disconnect the cable from the mainboard.	
3 Remove the 4 screws (M3 x 6 mm, silver). **4** Slide the card reader frame out. Take care not to disconnect the 6-in-1 card reader cable because reconnecting the cable to the card reader requires disassembly.	

When replacing: The 6-in-1 card reader cable must be replaced as shown.	

6-in-1 card reader

Before proceeding, remove the following FRUs:

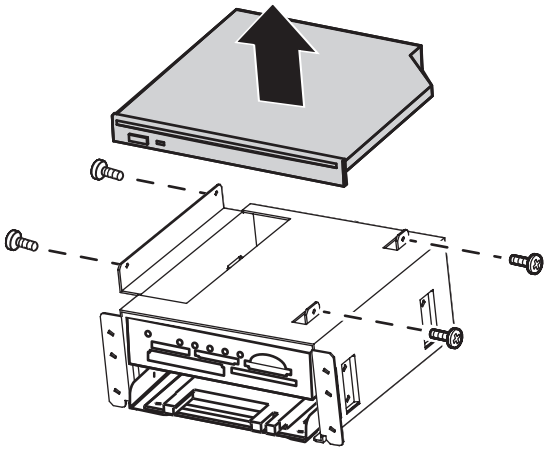
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “Front base cover” on page 68
- “Card reader frame” on page 69

1 Remove the 4 screws (TP3 x 6 mm, silver). **2** Slide the card reader out.	
When replacing: Use the original cable.	

Optical disk drive

Before proceeding, remove the following FRUs:

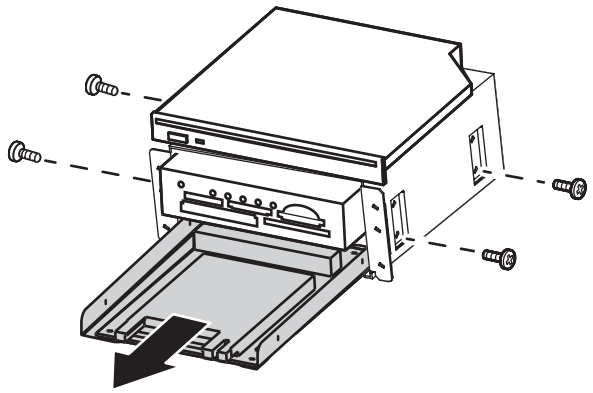
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “Front base cover” on page 68
- “Card reader frame” on page 69

1 Remove the 4 screws (M2 x 3 mm, silver). **2** Remove the optical drive.	

PCMCIA slot

Before proceeding, remove the following FRUs:

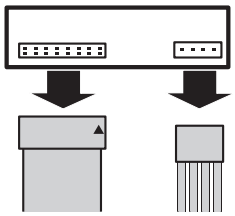
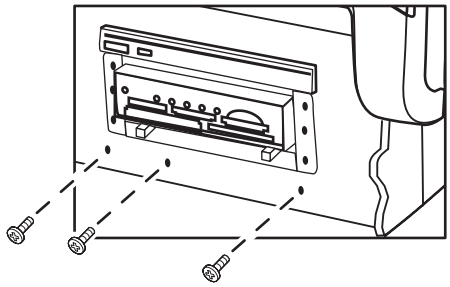
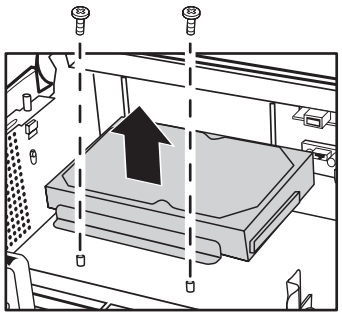
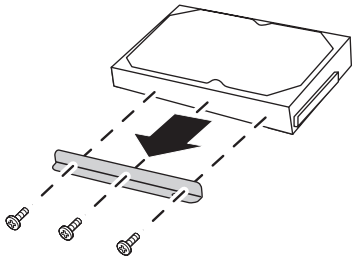
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “Front base cover” on page 68
- “Card reader frame” on page 69

1 Remove the 4 screws (M3 x 6 mm, silver). **2** Slide the PCMCIA slot out.	

Hard drive

Before proceeding, remove the following FRUs:

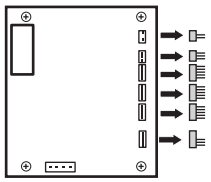
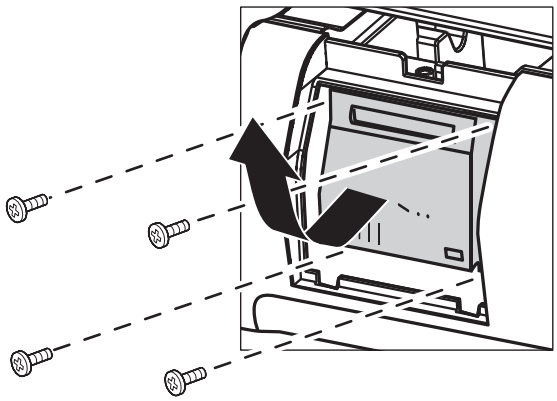
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “Front base cover” on page 68
- “Card reader frame” on page 69

1 Disconnect the 2 cables.	
2 Remove the 3 screws (flat head, 6#-32, x 5 mm).	
3 Remove the 2 screws (M3 x 6 mm, silver). **4** Lift the hard drive out.	
5 Remove the 3 screws (flat head, 6#-32, x 5 mm). **6** Remove the bracket.	
When replacing: Attach the original bracket to the replacment hard drive.	

Printer

Before proceeding, remove the following FRUs:

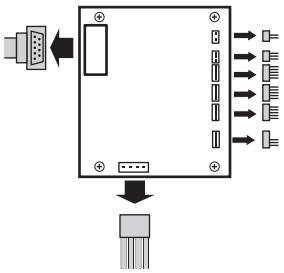
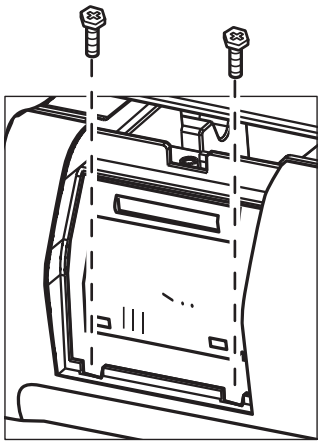
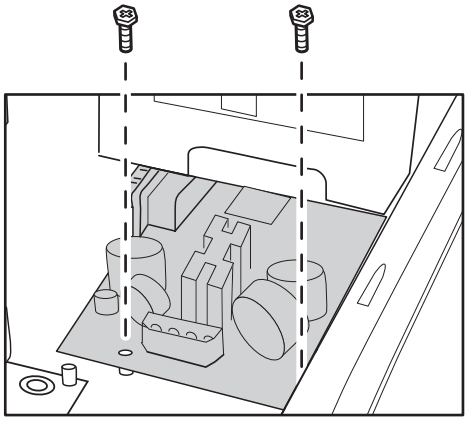
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “Front base cover” on page 68

1 Remove the 6 cables from the printer PCB.	
2 Remove the 4 screws (M2.5 x 6 mm, silver). **3** Remove the printer.	

Printer PCB

Before proceeding, remove the following FRUs:

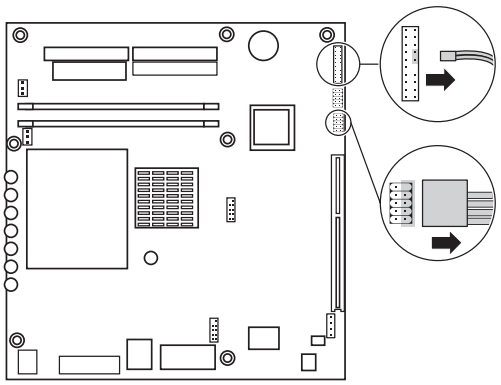
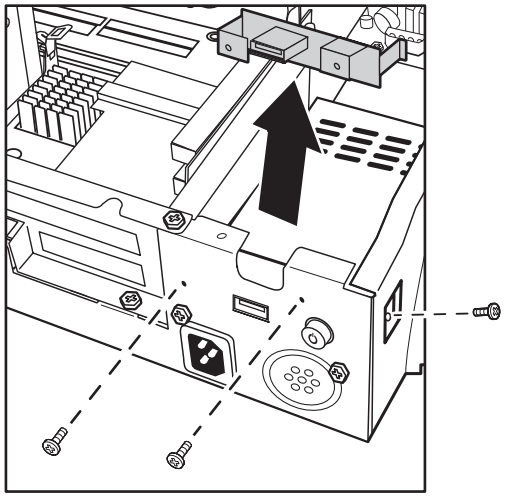
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “Front base cover” on page 68

1 Remove the 8 cables.	
2 Remove the 2 screws (M3 x 6 mm, silver).	
3 Remove the 2 screws (M3 x 6 mm, silver). **4** Lift the printer PCB out.	

Power button frame

Before proceeding, remove the following FRUs:

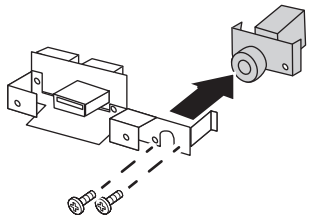
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63

1 Disconnect the 2 cables.	
2 Remove the 3 screws (M3 x 6 mm, silver). **3** Lift the power button frame out.	

Power button

Before proceeding, remove the following FRUs:

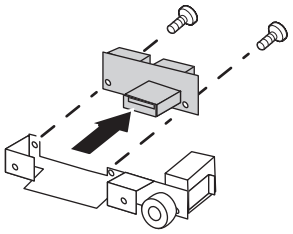
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “Power button frame” on page 77

1 Remove the two screws (M3 x 6 mm, silver). **2** Remove the power button.	

Rear USB

Before proceeding, remove the following FRUs:

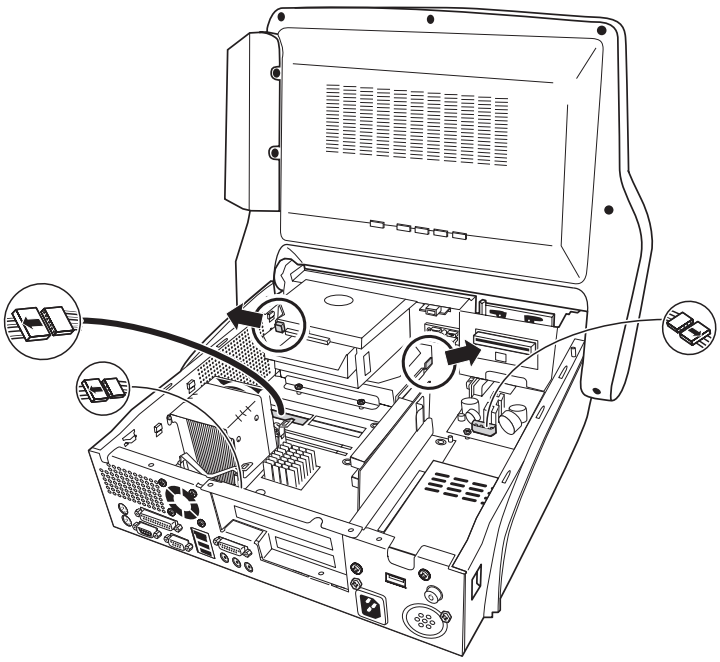
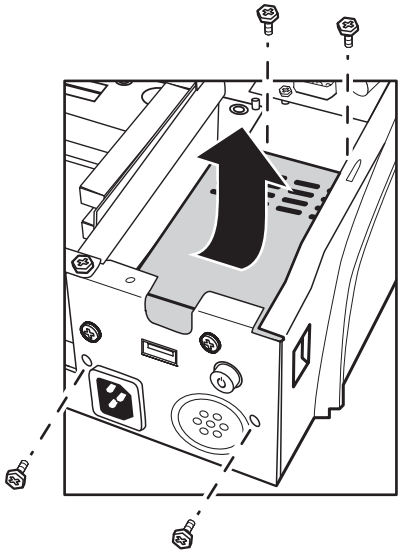
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “Power button frame” on page 77

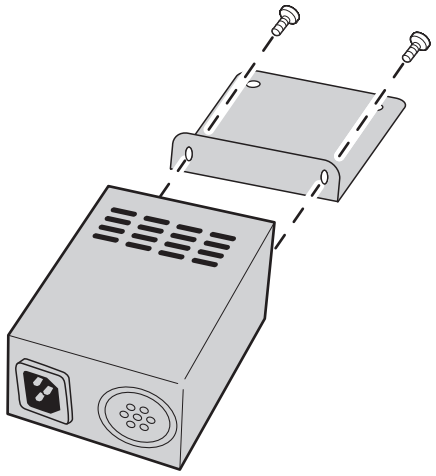
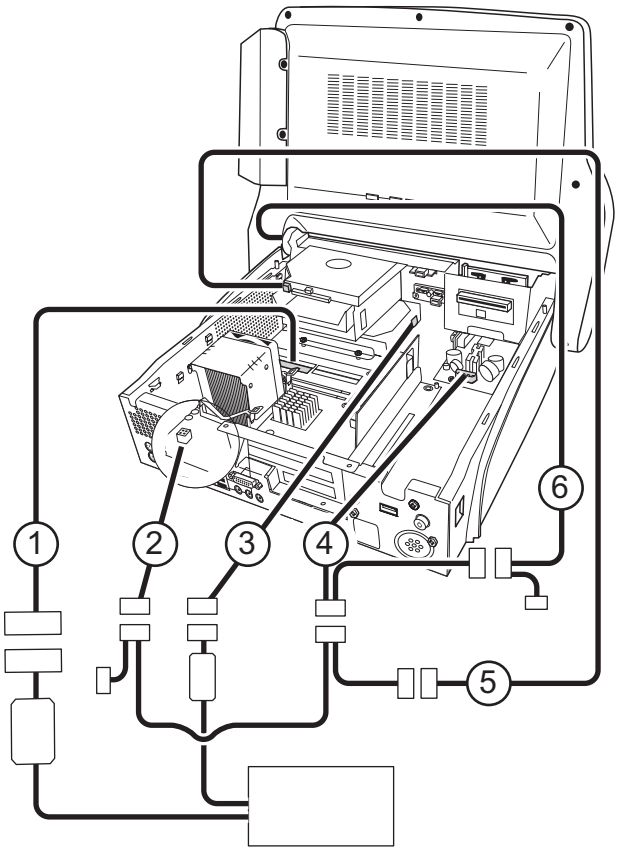
1 Remove the two screws (M3 x 6 mm, silver). **2** Remove the rear USB.	

Power supply

Before proceeding, remove the following FRUs:

- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63

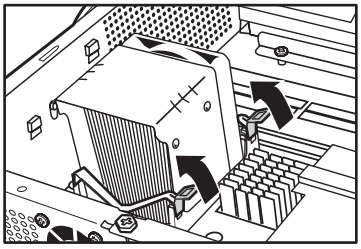
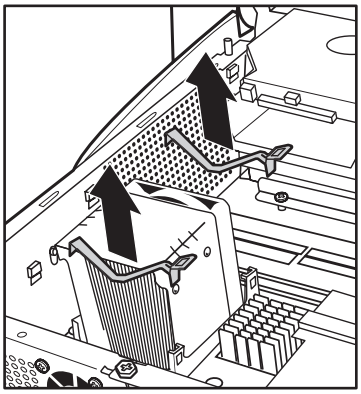
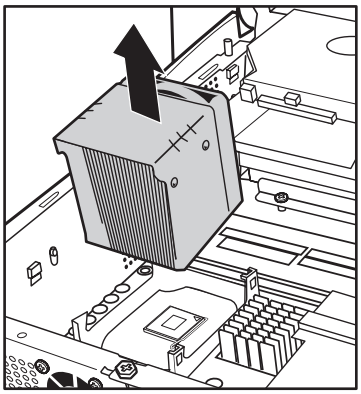
1 Disconnect the 5 cables.	
2 Remove the 4 screws (hex6 x 6 mm, silver). **3** Lift the power supply out.	

4 Remove the 2 screws (hex6 x 6 mm, silver) and the bracket.	
When replacing: Screw the original bracket to the replacement Power supply. Reconnect the cables as shown (1-6) Be sure to connect the EMI protected power cable to the HDD (3) as shown.	

Heatsink

Before proceeding, remove the following FRUs:

- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63

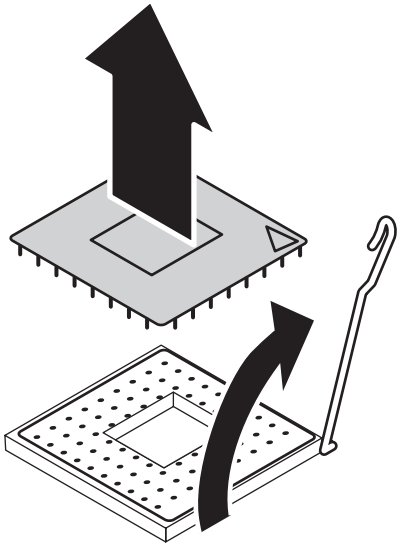
1 Flip the release levers.	
2 Remove the release levers.	
3 Lift the heatsink straight up.	
When replacing: Apply thermal compound to CPU.	

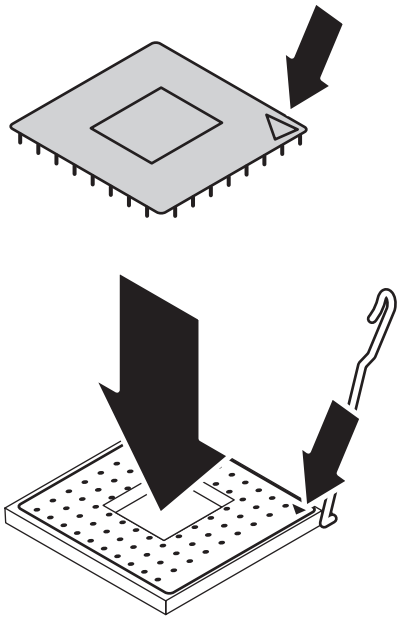
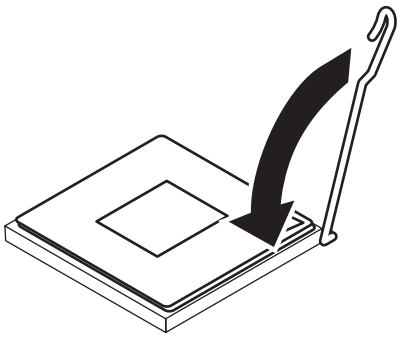
CPU

Before proceeding, remove the following FRUs.

> CAUTION
>
> ***The CPU socket is a ZIF socket (Zero Insertion Force socket). This type of socket is designed for easy insertion of the CPU. The chip is easily dropped into the socket, and the lever is pulled down to lock it in. If any resistance is noticed when inserting the CPU, check that it is aligned correctly.***

- "Cable cover" on page 60
- "Printer cover" on page 61
- "Rear base cover" on page 62
- "Base case top" on page 63
- "Heatsink" on page 82

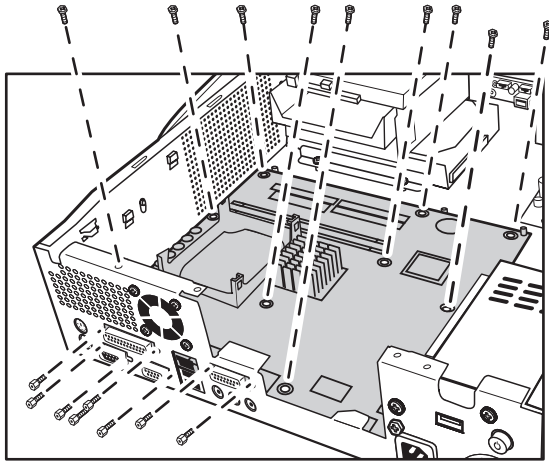
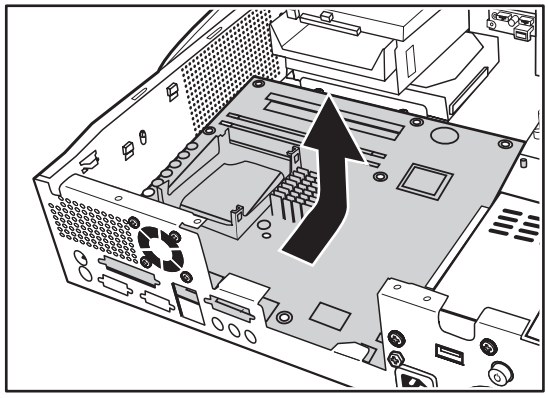
1 Open the release lever. **2** Lift the CPU straight up.	

3 Put the new CPU on. Be sure to align the pin 1 marks on the CPU and the socket. It is not necessary to push down to insert the CPU. See the caution above.	
4 Push the lever down to lock the CPU in place.	
When replacing: Apply thermal compound to CPU.	

Mainboard

Before proceeding, remove the following FRUs:

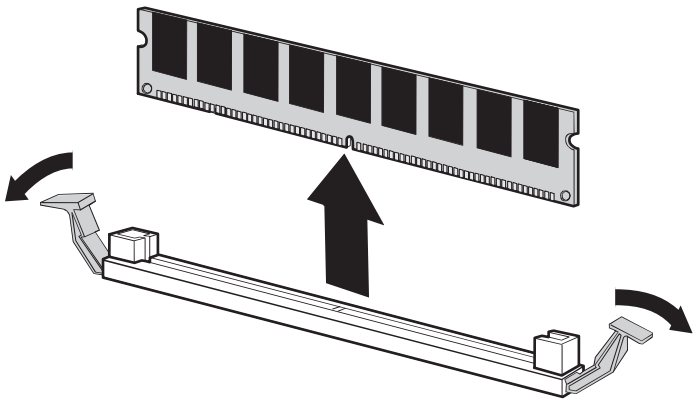
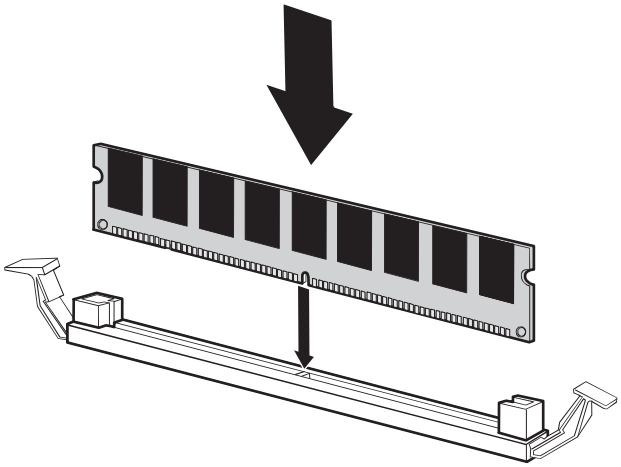
- "Cable cover" on page 60
- "Printer cover" on page 61
- "Rear base cover" on page 62
- "Base case top" on page 63
- "PCB" on page 65
- "PCI slot" on page 66
- "PCI slot frame" on page 67
- "Heatsink" on page 82
- "CPU" on page 83

1 Remove the 9 screws (M3 x 6 mm, silver) from the mainboard. **2** Remove the 8 screws (M3 x 7 mm, silver) from the case.	
3 Remove the mainboard.	

Memory module

Before proceeding, remove the following FRUs:

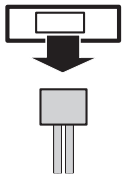
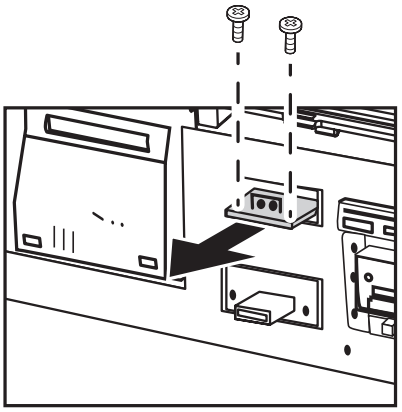
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63

1 Push the two release levers down. **2** Remove the memory module.	
When replacing: Align the notch in the memory module with the slot. Then press the module firmly into the slot until the release levers close on the module.	

IRDA PCB

Before proceeding, remove the following FRUs:

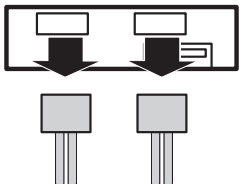
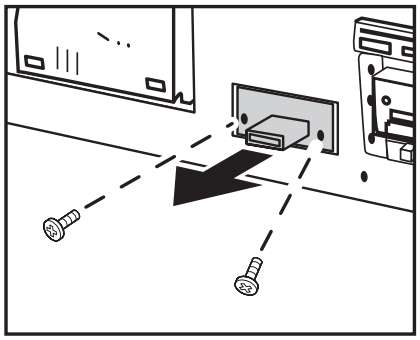
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “Front base cover” on page 68

1 Disconnect the cable.	
2 Remove the 2 screws (M3 x 6 mm, silver). **3** Remove the IRDA PCB.	

Front USB

Before proceeding, remove the following FRUs:

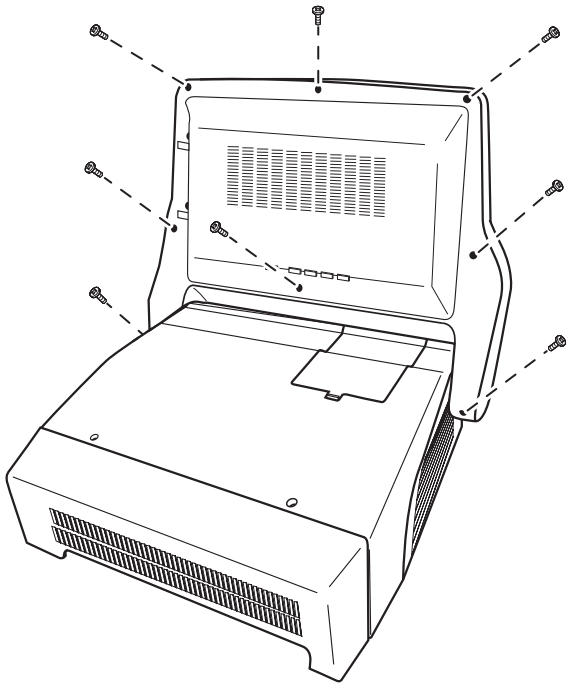
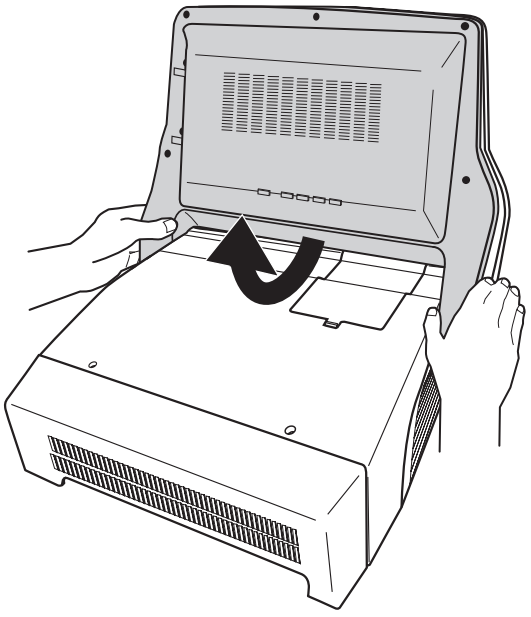
- “Cable cover” on page 60
- “Printer cover” on page 61
- “Rear base cover” on page 62
- “Base case top” on page 63
- “Front base cover” on page 68

1 Disconnect the 2 cables.	
2 Remove the 2 screws (M3 x 6 mm, silver). **3** Remove the front USB.	

Rear display cover

Before proceeding, remove the following FRUs:

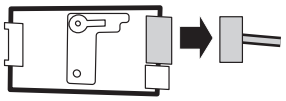
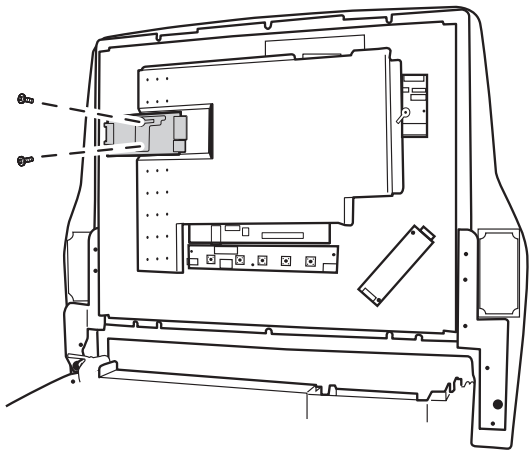
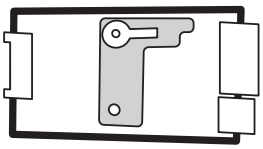
- "MSR" on page 59

1 Remove the 8 screws (M3 x 8 mm, silver).	
2 Remove the cover starting at the bottom.	

MSR PCB

Before proceeding, remove the following FRUs:

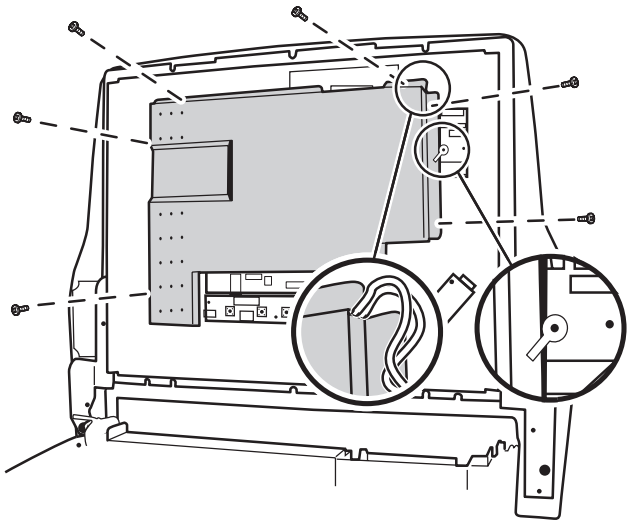
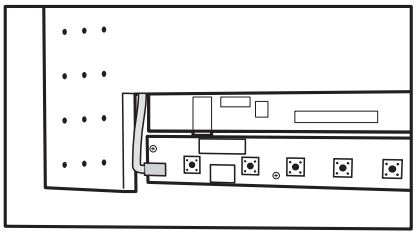
- "MSR" on page 59
- "Rear display cover" on page 89

1 Disconnect the cable.	
2 Remove the 2 screws (M3 x 6 mm, silver). **3** Remove the PCB.	
When replacing: Be certain to position the ground wire lead horizontally. Failure to position the ground wire lead inside the gray area shown here will result in a short circuit.	

Shield top

Before proceeding, remove the following FRUs:

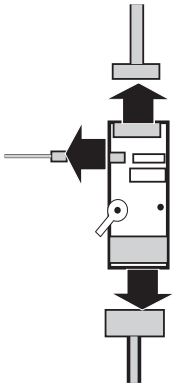
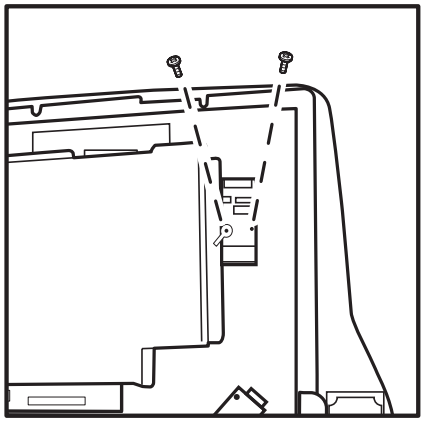
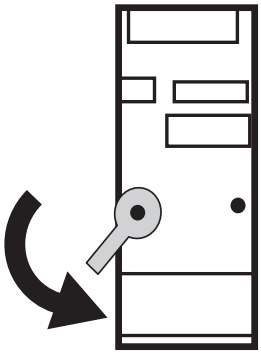
- "MSR" on page 59
- "Rear display cover" on page 89
- "MSR PCB" on page 90

1 Remove the 6 screws (M3 x 4 mm, silver). **2** Remove the shield top. Take care with the cable at the upper right corner. Also, avoid bending the ground wire lead.	
When replacing: Be sure the OSD button PCB cable passes outside the shield top, and *not* next to the inverter.	

Touch panel converter PCB

Before proceeding, remove the following FRUs:

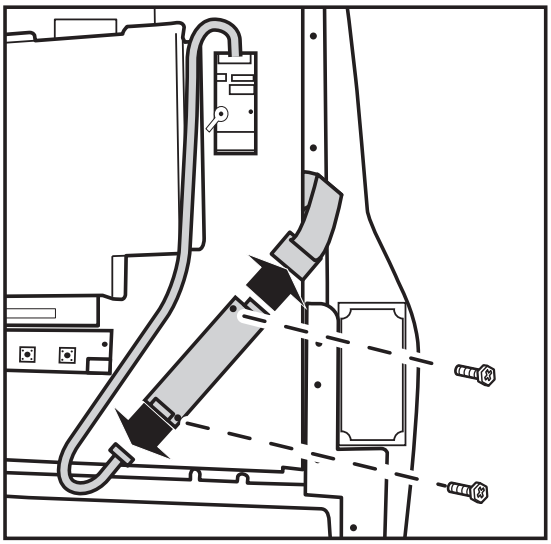
- "MSR" on page 59
- "Rear display cover" on page 89

1 Disconnect the 3 cables.	
2 Remove the 2 screws (M3 x 6 mm, silver).	
When replacing: Ensure the ground wire lead is rotated down as far as possible to avoid interference with the shield top.	

Touch panel PCB

Before proceeding, remove the following FRUs:

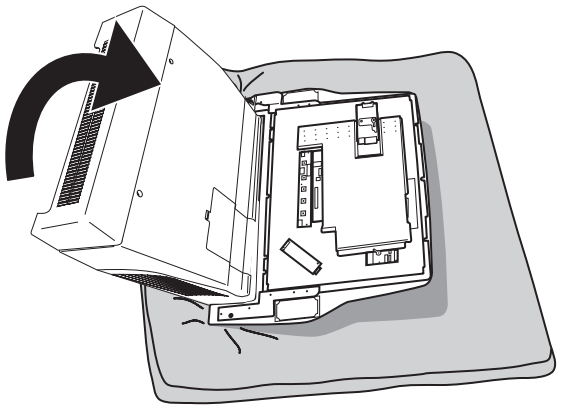
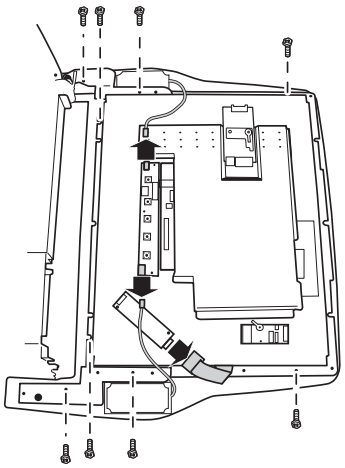
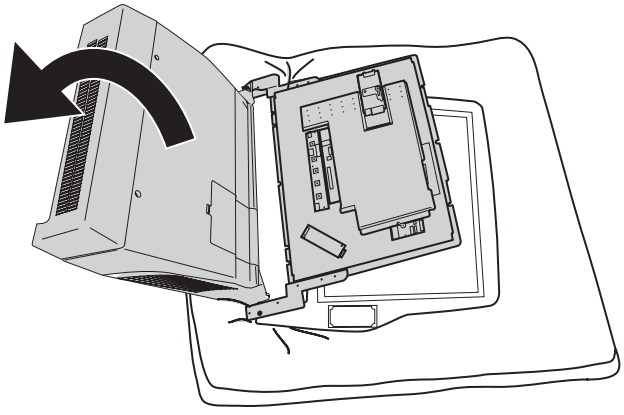
- “MSR” on page 59
- “Rear display cover” on page 89

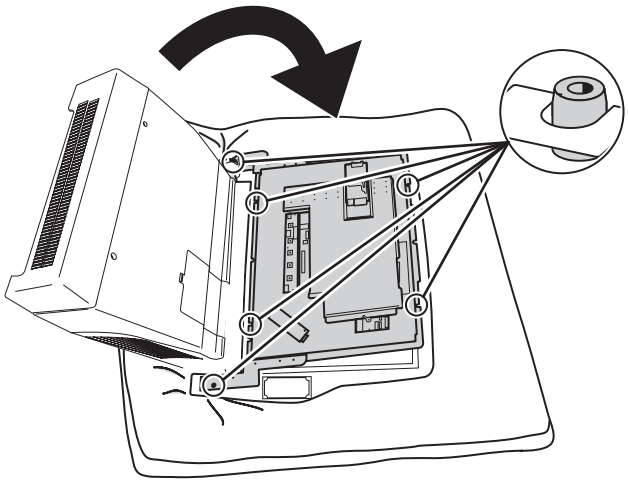
1 Disconnect the 2 cables. **2** Remove the 2 screws (top: M2.5 x 6 mm, silver - bottom: M3 x 4 mm, silver). **3** Remove the touch panel PCB.	

Front display cover

Before proceeding, remove the following FRUs:

- "MSR" on page 59
- "Rear display cover" on page 89

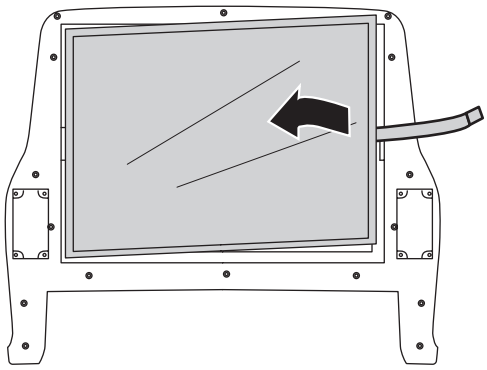
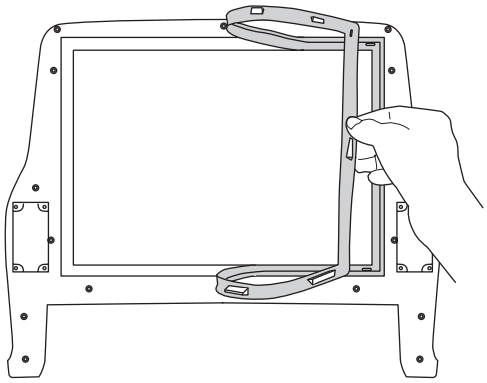
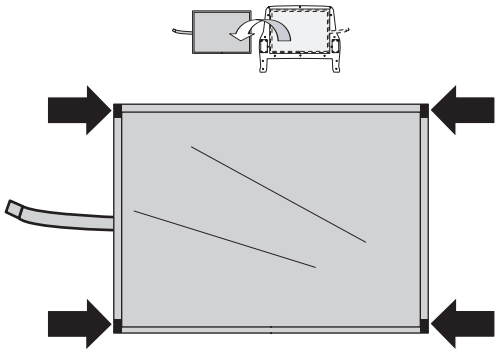
1 Tilt the Kiosk-P onto a foam pad to prevent damage to the touch panel or scratches on the display.	
2 Remove the 8 screws (M3 x 6 mm, silver). **3** Disconnect the 3 cables.	
4 Tilt the Kiosk-P back down leaving the front display cover and touch panel on the foam pad.	

When replacing: Align the 6 plastic locator pins on the front display cover with the holes on the frame.	

Touch panel

Before proceeding, remove the following FRUs:

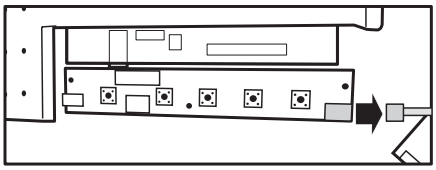
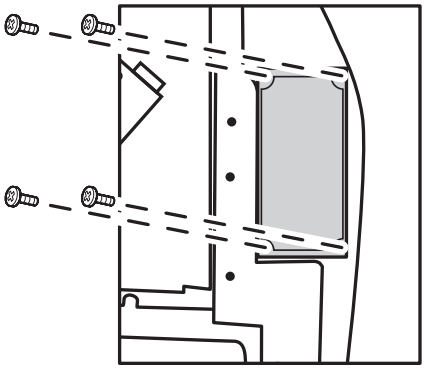
- "MSR" on page 59
- "Rear display cover" on page 89
- "Front display cover" on page 94

1 Lift the touch panel off the glass rubber.	
2 Remove the glass rubber. Note the orientation of the glass rubber tabs (shown here in white).	
When replacing: The corners of the replacement touch panel must be protected from protrusions in the moulding on the front display cover. Apply a 1-cm square adhesive rubber to each corner of the replacement touch panel.	

Speakers

Before proceeding, remove the following FRUs:

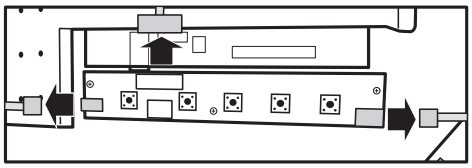
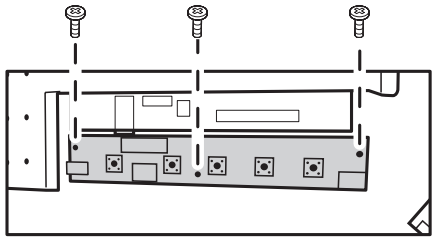
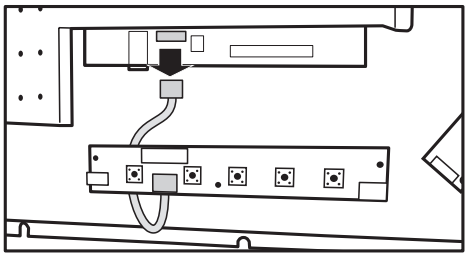
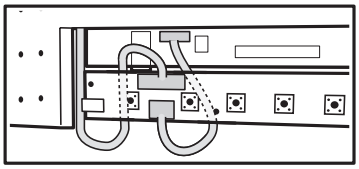
- “MSR” on page 59
- “Rear display cover” on page 89

1 Disconnect the cable.	
2 Remove the 4 screws (M3 x 6 mm, silver).	

OSD button PCB

Before proceeding, remove the following FRUs:

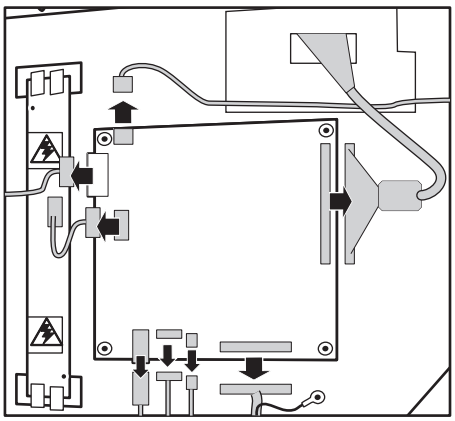
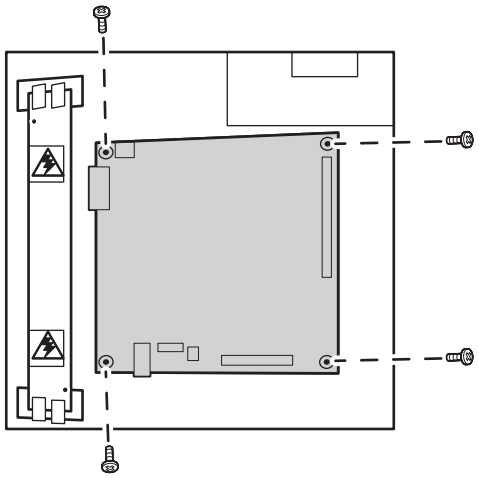
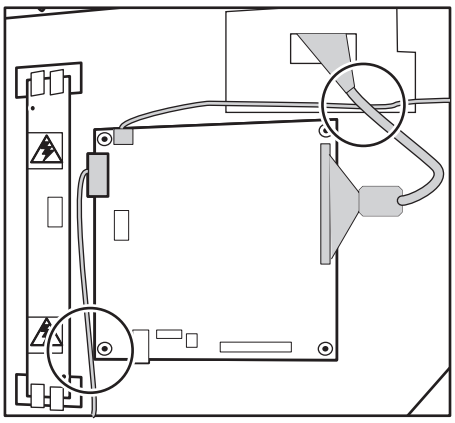
- "MSR" on page 59
- "Rear display cover" on page 89

1 Disconnect the 3 cables.	
2 Remove the 3 screws (M3 x 6 mm, silver).	
3 Disconnect the last cable from the main panel PCB. **4** Remove the OSD button PCB.	
When replacing: Note the 2 cables run under the OSD button PCB.	

Main panel PCB

Before proceeding, remove the following FRUs:

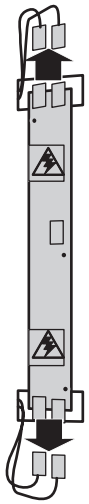
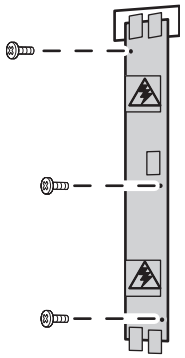
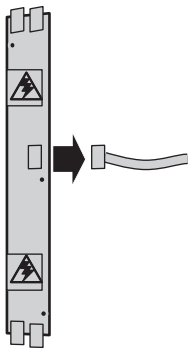
- “MSR” on page 59
- “Rear display cover” on page 89
- “MSR PCB” on page 90
- “Shield top” on page 91

1 Disconnect the 8 cables.	
2 Remove the 4 screws (M3 x 6 mm, silver). **3** Remove the PCB.	
When replacing: Note the cable that goes to the touch panel converter PCB passes underneath the LCD cable. Ensure the cable that goes to the OSD button PCB passes outside the shield top. See “Shield top” on page 91.	

Inverter card

Before proceeding, remove the following FRUs:

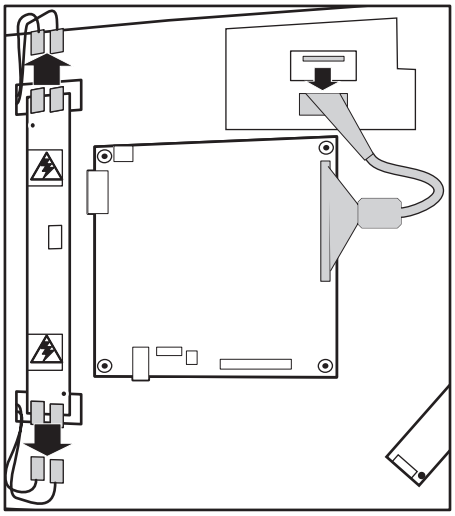
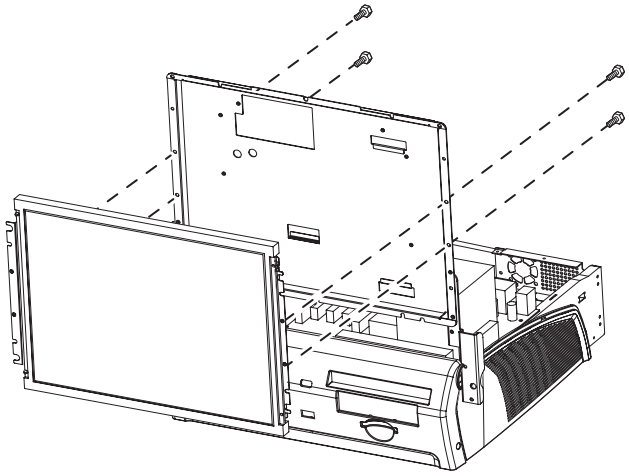
- “MSR” on page 59
- “Rear display cover” on page 89
- “MSR PCB” on page 90
- “Shield top” on page 91

1 Disconnect the cables. (Depending on the model, 2 or 4 cables.)	
2 Remove the 3 screws (M3 x 6 mm, silver).	
3 Disconnect the remaining cable and remove the inverter card.	

LCD panel

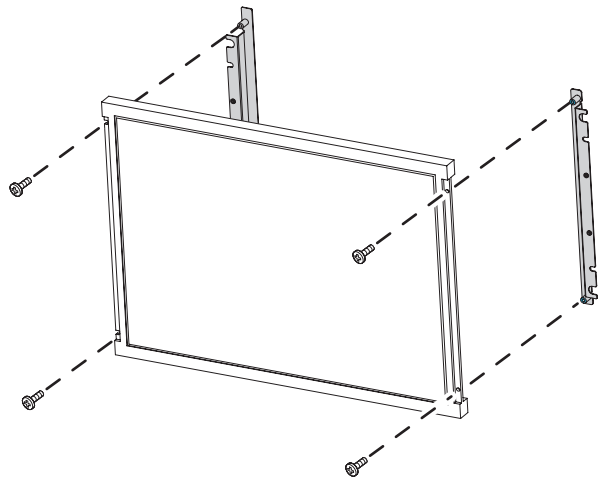
Before proceeding, remove the following FRUs:

- “MSR” on page 59
- “Rear display cover” on page 89
- “Front display cover” on page 94
- “MSR PCB” on page 90
- “Shield top” on page 91

1 Disconnect the inverter card cables. (Depending on the model, 2 or 4 cables.) **2** Disconnect the LCD cable.	
3 Remove the 4 screws (M3 x 6 mm, silver). **4** Remove the LCD panel.	

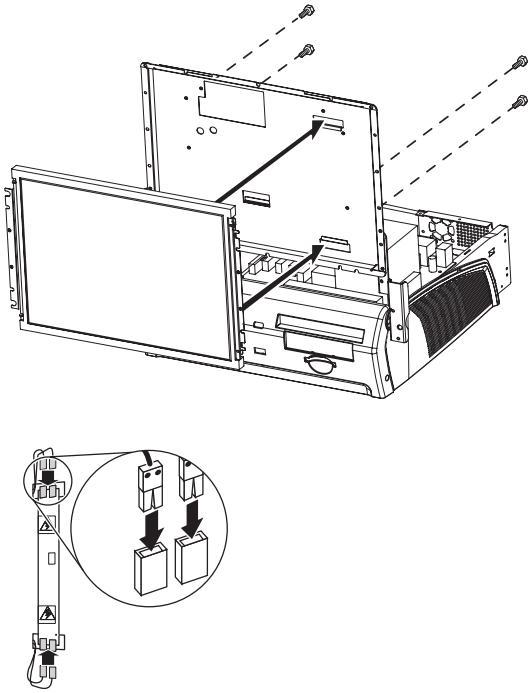
5 Remove the 4 screws (M3 x 6 mm, silver).

6 Remove the bracket.



When replacing:

Use the original brackets to install the replacement LCD panel.
Allow the inverter card cables to pass through the openings in the frame before screwing the LCD to the frame.
Inverter card cables are marked with black dots to show the orientation.



APPENDIX
EXPLODED DIAGRAMS AND PARTS LIST

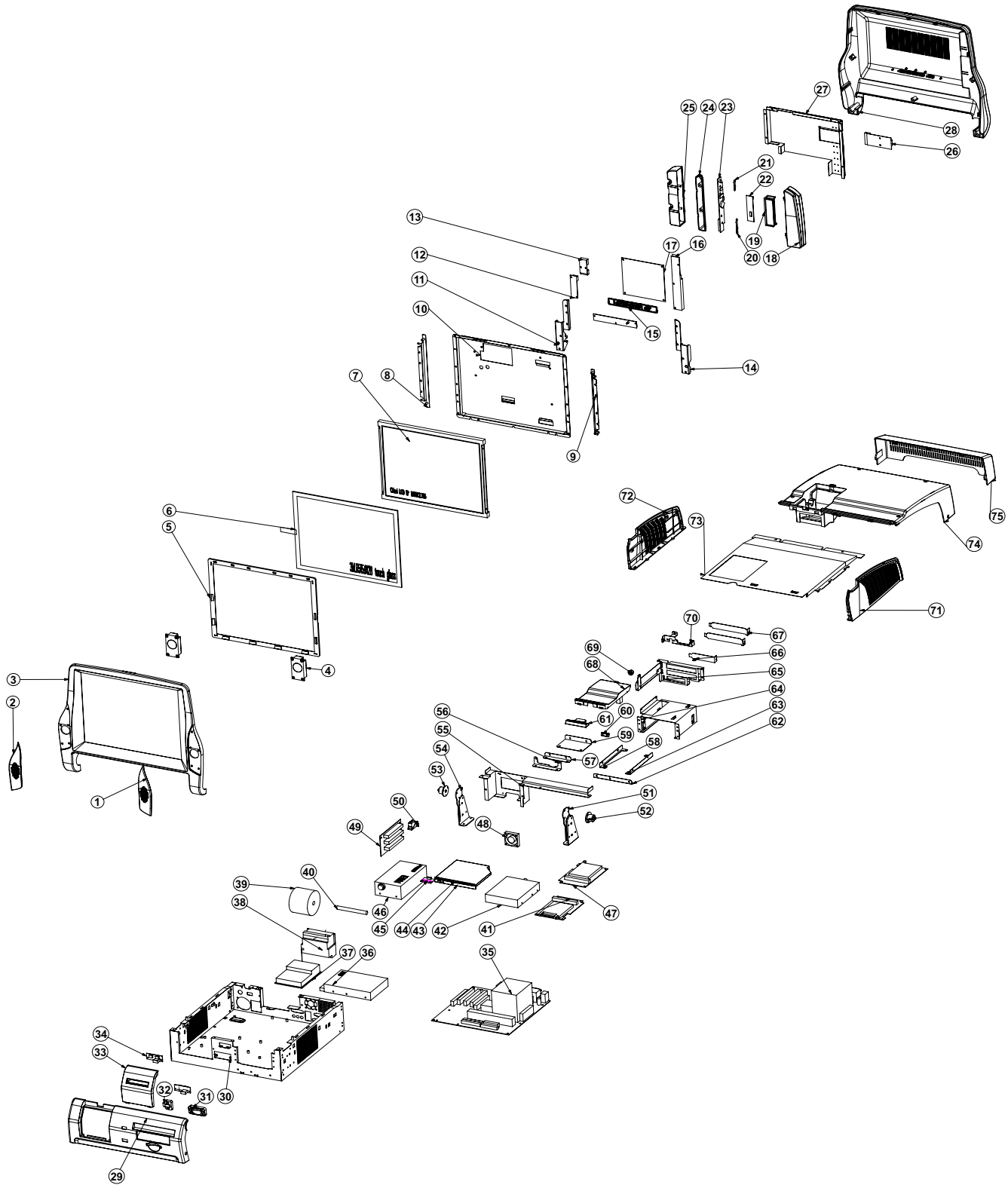


Figure 6.1 Exploded diagram

List of FRUs

NO.	COMPONENT NAME	PART NUMBER
1	P_COVER-SPEAKER-RIGHT	
2	P_COVER-SPEAKER-LEFT	2500090260010
3	P_PANEL-FRONT	
4	Z_SPK-38X70-3W	1379999000015
5	R_RUBBER-GLASS	2500590260001
6	Z_GLASS-3M_R515_012B-TOUCH	2619040000014
7	Z_PANEL-CHIMEI-15-PANEL-M150X3	2610100004315
8	M_BRACKET-CHIMEI-M150X3-LEFT	2100490260017
9	M_BRACKET-CHIMEI-M150X3-RIGHT	
10	M_SHIELD-MAIN	2100490260018
11	M-HINGE-LEFT	2100490260060
12	PCB-RS232-OLD	2619040000067
13	PCB-POWER	7005950010035
14	M-HINGE-RIGHT	2100490260061
15	P_BUTTON	with no. 28
16	PCB-INVERTER	261BC30700206
17	PCB-MAIN-PANEL	7009026010060
18	P_MSR-FRONT	2500090260015
19	Z_MSR	2690605100005
20	M_MSR-PLATE-1	with no. 18
21	M_MSR-PLATE-2	with no. 18
22	PCB-MSR	with no. 19
23	PCB-MSR-SUB	7009026010050
24	P_MSR-COVER	2500290260025
25	P_MSR-REAR	2500290260020
26	PCB-MSR-MAIN	7005950010004
27	M_SHIELD-TOP	2100490260010
28	P_PANEL-REAR	2500290260015
29	P-COVER-BASE-FRONT	2500290260000
30	M-BASE-CASE	2100290260000

NO.	COMPONENT NAME	PART NUMBER
31	R-PCMCIA-RUBBER	2509040902610
32	R-USB-RUBBER	2509040902600
33	P-PRINTER-COVER	2500290260005
34	USB	7009026010005
35	MOTHER_BOARD	2610100001110
36	HDD	2611530108000
37	PCB-PRINTER	2630600000000
38	PRINTER-EPSON-M_T103A	2630002000000
39	PAPER-ROLLER-90	2308100580000
40	P-ROLLER-PIN	2500390260000
41	PCB	7009026010047
42	CARDREADER-6_IN_1	26190D0000000
43	CDROM	2611932400000
44	DVD-ROM-CW8123	2611830000000
45	PCB-IRDA	7009026010015
46	POWER-AM860-SHORT	2706091099031
47	PCB-PCI-PCMCIA	7009026010025
48	FAN_40X40X10	2103000000076
49	PCI_SLOT	2619050000110
50	SWITCH	1721201240000
51	M_HINGE_FRAME_RIGHT	with no. 30
52	ROL-32201_1	2108100000008
53	ROL-32201	2108100000007
54	M_HINGE_FRAME_LEFT	with no. 30
55	M-FRAME-PRINTER	2100490260020
56	M-FRAME-POWER	2100490260030
57	M-FRAME-POWER-AM860	2100490260031
58	M-SUPPORT-PCMCIA-LEFT	2100490260045
59	M-FRAME-POWER-SHORT	with no. 57
60	P-IR-LENS	with no. 29
61	R-PRINTER-RUBBER	2509040902605
62	M-BRACKET-HDD	2100490260040

NO.	COMPONENT NAME	PART NUMBER
63	M-SUPPORT-PCMCIA-RIGHT	2100490260046
64	M-BRACKET-CDROM	2100490260025
65	M-FRAME-PCI-SLOT	2100490260035
66	M-PCI-PCMCIA	2100490260055
67	M_BRACKET-PCI	2100490260056
68	P-ROLLER-DOOR	2500090260000
69	P-POWER-CAP	2500390260005
70	M-FRAME-SWITH-POWER	2100490260050
71	P-COVER-BASE-RIGHT	2500290260011
72	P-COVER-BASE-LEFT	2500290260010
73	M-BASE-CASE-TOP	2100090260000
74	P-COVER-BASE-TOP	2500090260000
75	P-BASE-CABLE-CAP	2500090260025