
Federal Communications Commission (F.C.C) Statement

This device complies with Part 15 of the FCC Rules, Operation is subject to the following two conditions:(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Accessories: This device has been tested and found to comply with the limits of a Class B digital device, the accessories associated with this equipment are as follows:

1. Shielded serial cable. (Can be obtained from multiple retail outlets)
2. Shielded printer cable. (Can be obtained from multiple retail outlets)
3. Shielded video cable. (Can be obtained from multiple retail outlets)
4. Shielded power cord. (Provided by manufacturer)

These accessories are required to be used in order to ensure compliance with FCC Rules. It is the responsibility of the user to provide and use these accessories.

This equipment has been tested and found to comply with the limits of a Class B 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:

1. Reorient / Relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into and outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

PROBLEM

Missing operating system on hard drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
CMOS setup has been changed.		Run setup and select correct drive type.

PROBLEM

Certain keys do not function.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Keys jammed or defective.		Replace keyboard.

PROBLEM

Keyboard is locked, no keys function.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Keyboard is locked.		Unlock keyboard

Caution: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

Disclaimer

The Vendor makes no representations or warranties with respect to the contents hereof and specially disclaims any implied warranties of merchantability or fitness for any purpose. Further, the Vendor reserves the right to revise this publication and to make changes from time to time in the contents hereof without obligation to notify any party beforehand.

Duplication of this publication, in part or in whole, is not allowed without Vendor's approval in writing.

Trademarks and Remarks

MS-DOS, Windows, Windows NT, and Windows 95 are products of Microsoft corp. with its ownership of trademark, and is distributed by the Vendor under license agreement.

IBM PC/AT is a trademark of International Business Machines Corp.

Hercules is a trademark of Hercules Computer Technology Inc.

All trademarks used in this manual are the property of their respective owners.

Copyright(C)1992
All Rights Reserved

Canadian D.O.C. Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

and

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites appliquees aux appareils numeriques de Class B prescrites dans le reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

PROBLEM

Floppy drive light stays on.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Floppy Drive cable not connected correctly.		Reconnect floppy cable making sure PIN1 on the Floppy Drive corresponds with PIN1 on Floppy cable connector.

PROBLEM

Error reading drive A:

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Bad floppy disk.		Try new floppy disk
Floppy disk not formatted		Format floppy disk (type FORMAT A:type ENTER)>

PROBLEM

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Memory problem, display card jumpers not set correctly.		Reboot computer. Reinstall memory, make sure that all memory modules are installed in correct sockets. Check jumper and switch settings on display card. See display card section for information on settings.
Computer virus.		Use anti-virus programs (McAfee, E-Prot, etc) to detect and clean viruses.

PROBLEM

Screen goes blank periodically.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Screen saver is enabled.		Disable screen saver.

Features

• Hardware

CPU

- The Pentium II™ micro Processor provides the new generation power for high-end workstations and servers.
- Provides slot1.

Speed

- Supports CPU bus frequency 66MHz and 100MHz.
- Supports from 233MHz to 450MHz CPU core speed.
- Supports 33MHz PCI Bus speed.
- I/O clock 8MHz for ISA Bus.
- Supports 66MHz / 133MHz AGP Bus.

DRAM Memory

- Supports 8/16/32/64.....MB DIMM module socket.
- Supports Synchronous DRAM (3.3V).
- Supports a maximum memory size of 384MB with SDRAM.

Green Function

- Supports power management operation via BIOS.
- Power down timer from 1 min to 15 mins.
- Wakes up by any key pressed or mouse activity.

Shadow RAM

- A memory controller that provides shadow RAM and supports 8-bit ROM BIOS.

BUS Slots

- Provides two 16-bit ISA Bus slots and three PCI Bus slots, one AGP Bus slot.

PROBLEM

Disk formatted on IBM PS/2 will not operate with this system.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
The IBM PS/2 uses a different format than other computers.	IBM PS/2 disk format will not work in an AT type computer.	Format disk in the AT type computer insert disk into the IBM PS/2 and copy the files you wish.

PROBLEM

After installing an expansion card (network card, tape drive card, etc.) the system no longer works properly.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
No power to monitor.	All or part of the system may be inoperable. The new card may work but a mouse or COM port may not work	Change the interrupt or RAM address on the new expansion card. See the documentation that came with the new card in order to change pin settings. Many expansion devices come with proprietary software that will assist you in doing this.

• **Software**

BIOS

- AWARD legal BIOS.
- Supports APM1.2.
- Supports USB Function.

O.S.

- Offers the highest performance for MS-DOS, OS/2, Windows, Windows NT, Windows 95/98, Novell, UNIX, SCO UNIX etc.

• **Attachments**

- HDD Cable
- FDD Cable
- Flash Memory Writer for BIOS Update (optional)
- Retention Kits for CPU
- IDE Driver Disk
- Rear I/O Panel for ATX Case (Optional)

PROBLEM

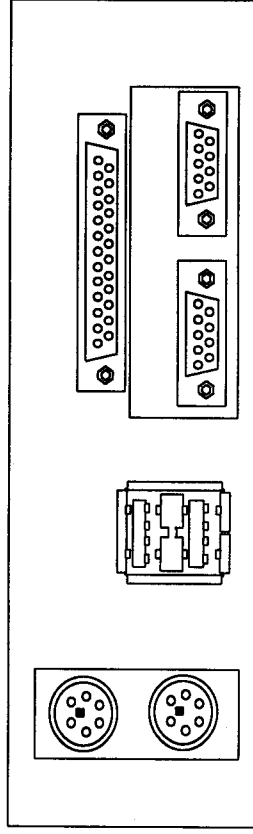
System does not boot from hard disk drive, can be booted from floppy disk drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Connector between hard drive and system board unplugged.	When attempting to run the FDISK utility described in the HARD DISK section of this manual you get a message, INVALID DRIVE SPECIFICATION.	Check cable running from disk to disk controller board. Make sure both ends are securely plugged in; check the drive type in the Standard CMOS Setup (see HARD DISK section of this manual).
Damaged Hard Disk or Disk Controller.	Format hard disk; if unable to do so the hard disk may be defective.	Contact Technical Support.
Hard Disk directory or FAT is scrambled.	Run the FDISK program, format the hard drive (see HARD DRIVE section of manual). Copy data that was backed up onto Hard Drive.	Backing up the hard drive is extremely important. All Hard Disk are capable of breaking down at any time.

Back I/O panel

PS/2
Mouse

Printer



PS/2
Keyboard

USB

COM1

COM2

PROBLEM

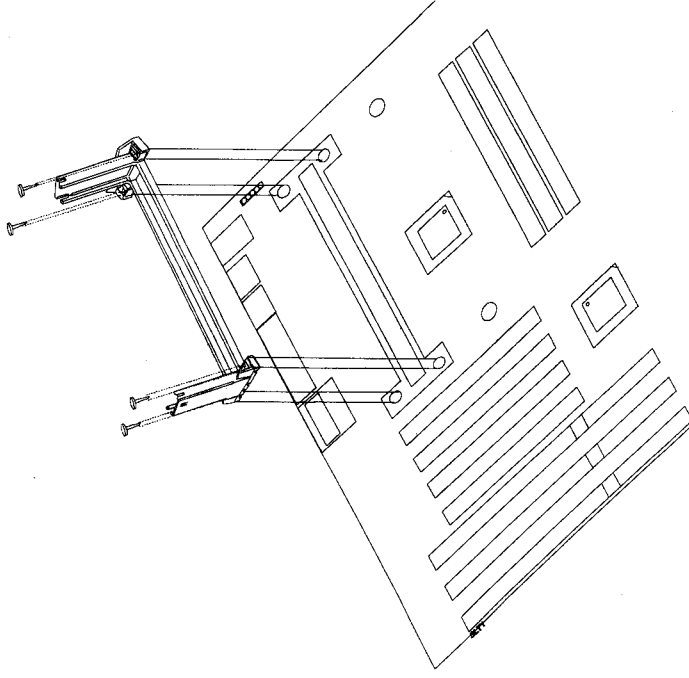
No power to the system at all. Power light does not illuminate, fan inside power supply does not turn on. Indicator light on keyboard does not turn on.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Power cable is unplugged.	Visually inspect power cable	Make sure power cable is securely plugged in
Defective power cable.	Visual inspection, try another cable.	Replace cable.
Power supply failure.	Power cable and wall socket are OK, but system is still dead.	Contact technical support.
Faulty wall outlet; circuit breaker or fuse blown.	Plug in device known to work in socket and test	Use different socket, repair outlet, reset circuit breaker or replace fuse.

CPU Installation/Jumper Setting

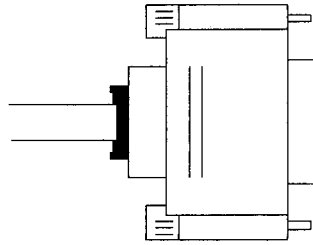
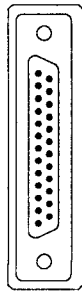
Pentium II CPU Installation Procedure

Step 1:



Parallel Interface Ports

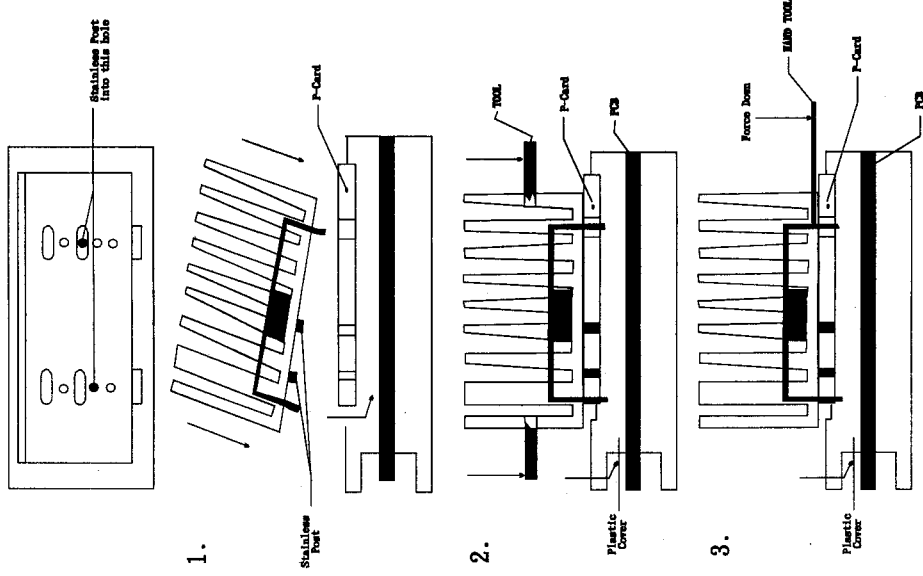
Unlike the serial port, parallel interface ports have been standardized and should not present any difficulty interfacing peripherals to your system. Sometimes called a Centronics port, the parallel port is almost exclusively used with printers. The parallel port on your system has a 25-pin, DB5 connector (see picture below). The pinouts for the parallel port are shown in the table below.



Signal	Pin
-Strobe	1
Data 0	2
Data 1	3
Data 2	4
Data 3	5
Data 4	6
Data 5	7
Data 6	8
Data 7	9
-Ack	10
Busy	11
Paper Empty	12
+Select	13
-Auto FDXT	14
-Error	15
-Init	16
-SLCTN	17
Ground	18
Ground	19
Ground	20
Ground	21
Ground	22
Ground	23
Ground	24
Ground	25
Ground	26

Step 3:

Note : Please remove plastic of the heat sink before installation of the Fan.



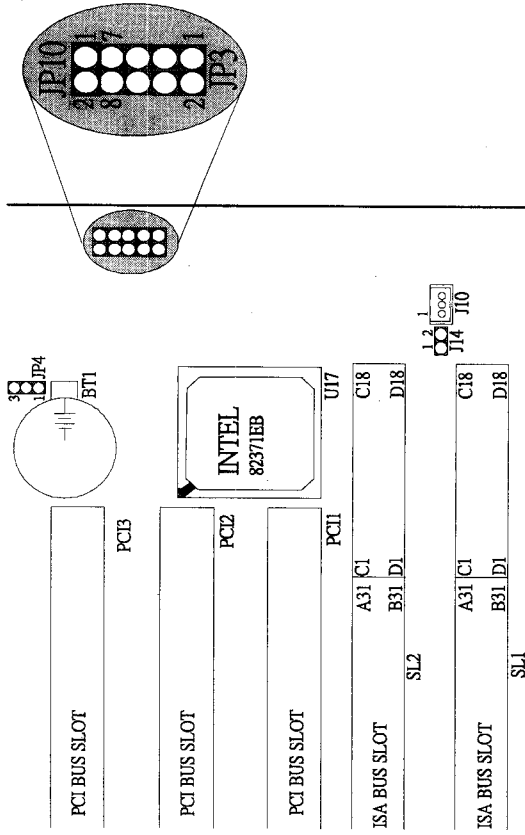
Special Applications

There are two types of serial devices that can be connected to a serial port. One of the devices is called the "DTE" (Data Terminal Equipment) and the other device is called the "DCE" (Data Communications Equipment). If a modem is connected to a computer, for example, the modem is called the DCE and the computer is called the DTE. In situations such as this, the pins on the serial ports can be connected straight through.

In instances when there are two DTE devices connected together, such as a computer and a printer, a special adapter called a "Null Modem" is needed to make communication between the two devices possible.

When using the serial port to communicate between devices one problem in particular may arise. Some manufacturers use one set of signals to begin communication with another device and other manufacturers do not use these signals to begin communication. If you encounter a communication problem that cannot be resolved using a null modem it can generally be assumed that one device is using the initialization signals and the other device is not. This can usually be resolved by wiring the RTS, CTS, and DCD pins together.

(A) JP3 INTEL CPU Clock Select



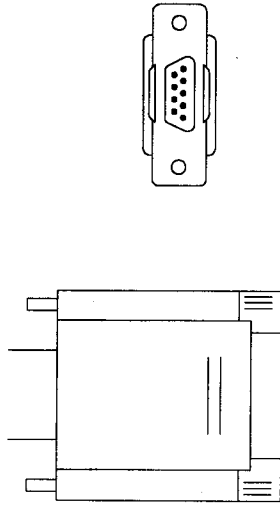
CPU Speed	CLK RATIO	JP3 (1-2)	JP3 (3-4)	JP3 (5-6)	JP3 (7-8)	JP10
233MHz	66MHz X 3.5	closed	open	open	closed	closed
266MHz	66MHz X 4	closed	closed	closed	open	closed
300MHz	66MHz X 4.5	closed	open	closed	open	closed
333MHz	66MHz X 5	closed	closed	open	open	closed
300MHz	100MHz X 3	open	closed	open	closed	open
350MHz	100MHz X 3.5	open	open	open	closed	open
400MHz	100MHz X 4	open	closed	closed	open	open
450MHz	100MHz X 4.5	open	open	closed	open	open

Serial and Parallel Interface Ports

This system comes equipped with two serial ports and one parallel port. Both types of interface ports will be explained in this chapter.

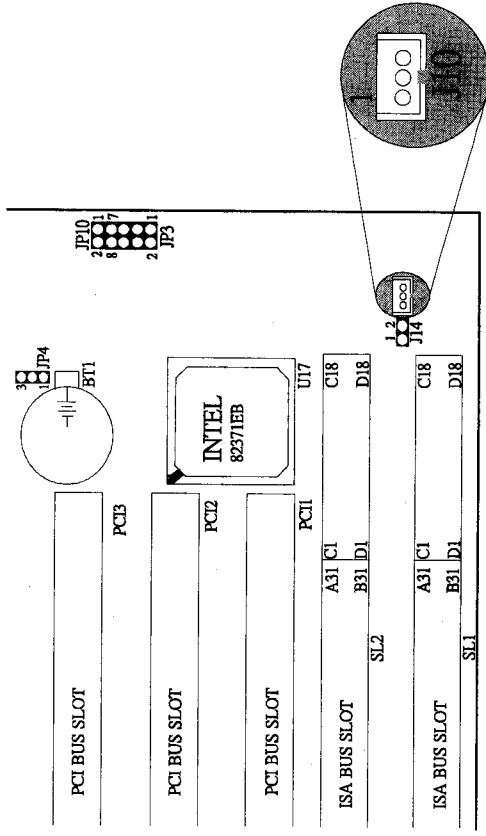
The Serial Interface Port

The serial interface port is sometimes referred to as an RS-232 port or an asynchronous communications port. Mice, printers, modems and other peripheral devices can be connected to a serial port. The serial port can also be used to connect your computer with another computer system. If you wish to transfer the contents of your hard disk to another system it can be accomplished by using each machine's serial port.



The serial ports on this system have two types of connectors, one 9-pin and one 25-pin. Some older computer systems and peripherals used to only have a 25-pin connector. Should you need to connect your 9-pin serial port to an older 25-pin serial port, you can purchase a 9-to-25 pin adapter.

(B) J10 Wake-On-LAN Header



Pin No.	Assignment
1	+5 VSB
2	Ground
3	MP-Wakeup

AWARD BIOS Setup

Entering Setup

Power on the computer and press immediately will allow you to enter Setup. The other way to enter Setup is to power on the Computer, when the below message appears briefly at the bottom of the screen during the POST (Power On Self Test), press key or simultaneously press <CTRL>, <Alt>, and <Esc> keys.

TO ENTER SETUP BEFORE BOOT PRESS CTRL-ALT-ESC OR DEL KEY

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <CTRL>, <Alt>, and <Delete> key. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to,

PRESS F1 TO CONTINUE, CTRL-ALT-ESC OR DEL TO ENTER SETUP

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu/Option Page Setup Menu

Press <F1> to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window Press <Esc>.

PIIX4 Patch Files Setup

This section describes how to install the software on a system where **Windows 95*** is installed.

"**Windows 95***" means the following versions of Windows 95 operating system:

- Version 950** Windows 95 (**Retail Release**)
- Version 950A** Windows 95 OEM Service Release 1 (**OSR1**)
- Version 950B** Windows 95 OEM Service Release 2.0 (**OSR2**)
or Windows 95 OEM Service Release 2.0 plus
USB Supplement (**OSR2.1**)

1. Check the System Requirements. Windows 95* must be fully installed and running on the system prior to running this software.
2. Close any running applications.
3. Remove references to installed real-mode IDE device drivers in the **AUTOEXEC.BAT** and **CONFIG.SYS** files (especially any drivers that control ATAPI CD-ROM and special IDE features). Use the Notepad utility to do this.
4. The driver files are stored in an integrated application setup program. This program is a Windows 95* program that allows the driver files to be INSTALLED.
Execute the driver setup program.
*** Run **BSFIX.EXE**.
5. Click '**Start**' on Main Screen to begin the install procedure.

Main Menu

Once you enter AWARD BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select among the items and press <Enter> to accept or enter the sub-menu.

■ Figure 1. Main Menu

ROM PCI/ISA BIOS (xxxxxxx)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PCI / PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
Esc : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type...	

Exit Without Saving

Abandon all CMOS value changes and exit setup.

■ Figure 12. Save Settings and Exit Screen

ROM PCI/ISA BIOS (xxxxxxxx)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD COMS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP / PCI CONFIGURATION	LOAD SETUP DEFAULTS
LOAD SETUP DEFAULTS	Abandon all Datas & Exit SETUP
Esc : Quit F10 : Save & Exit Setup ↑ ↓ → ← : Select Item (Shift) F2 : Change Color	

Pressing <N> and <ENTER> will return you to the Main Menu.

Pressing <Y> and <ENTER> will continue with booting process without saving any system parameters.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

IDE HDD Auto Detection

Automatically configure hard disk parameters. The parameters on this figure are just for reference.

■ Figure 10. Auto Configuration with Optimal Settings Screen

```
ROM PCI/ISA BIOS (xxxxxxxx)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.
```

HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LAND	SECTOR	MODE
Primary Master	:User	343	665	16	65535	664	63	NORMAL

Note : Some Oses (like SCO-UNIX) must use "NORMAL" for installation

ESC : Skip

When you enter this utility, the screen asks you to select a specific hard disk for Primary Master. If you accept a hard disk detected by the BIOS, you can enter "y" to confirm and then press <Enter> to check next hard disk. This function allows you to check four hard disks and you may press the <Esc> after the <Enter> to skip this function and go back to the Main Menu.

Date

The Date format is <day><month><date><year>.

day	The day, from Sun to Sat, determined by the BIOS and is display-only
date	The date, from 1 to 31 (or the maximum allowed in the month)
month	The month, Jan through Dec
year	The year, from 1994 through 2079

Time

The time format is <hour><minute><second>. The time is calculated based on the 24-hour military-time clock. For example, 2 p.m. is 14:00:00.

Hard Disks Type

The categories identify the types of hard disk that have been installed in the computer. There are 46 predefined types and a user definable type. Type 1 to Type 45 are predefined. Type User is user-definable. Type Auto is automatic-define by BIOS.

Press <PgUp> or <PgDn> to select a numbered hard disk type or type the number and press <Enter>. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use Type User to define your own drive type manually.

If you select type User, related information is asked to be entered to the following items. Enter the information directly from the keyboard and press <Enter>. This information should be provided in the documentation from your hard disk vendor or the system manufacturer.

Supervisor / User Password Setting

■ Figure 9. Supervisor Password Setting

ROM PCI/ISA BIOS (xxxxxxx)
 CMOS SETUP UTILITY
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP / PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT SETUP SAVING
Esc : Quit ↑ ↓ → ← : Select Item F10 : Save & Exit Setup (Shift) F2 : Change Color	
Change / SCT / Disable Password	

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD

Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <ESC> to abort the selection and not enter a password. To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password begin disable. Once the password is disabled, the system will boot and you can enter setup freely.

Halt On

The category determines whether the computer will stop if an error is detected during power up.

No errors	Whenever the BIOS detects a non-fatal error the system will be stopped and you will be prompted.
All errors	The system boot will not be stopped for any error that may be detected.
All, But Keyboard	The system boot will not stop for a keyboard error, it will stop for all other errors.
All, But Diskette	The system boot will not stop for a disk error, it will stop for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, it will stop for all other errors.

Memory

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

Base Memory

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system. The value of the base memory is typically 512K for system with 512K memory installed on the motherboard, or 640K for system with 640K or more memory installed on the motherboard.

Extended Memory

The BIOS determines how much extended memory is presented during the POST. This is the amount of memory located above 1MB in the CPU's memory address map.

Other Memory

This refers to the memory located in the 640K address space. This is the memory that can be used for different applications. DOS uses this area to load device drivers to keep as much base memory free application programs. Most use for this area is Shadow RAM.

Load Setup Defaults

Chipset defaults indicates the values required by the system for maximum performance.

■ Figure 7. Load Setup Defaults Screen

ROM PCI/ISA BIOS (xxxxxxxx)
 CMOS SETUP UTILITY
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PCI & PCI CONFIGURATION SETUP	LOAD SETUP DEFAULTS
LOAD SETUP DEFAULTS	SAVING
Esc : Quit	
F10 : Save & Exit Setup	
↑ ↓ → ← : Select Item	
(Shift) F2 : Change Color	
Load SETUP Defaults except Standard CMOS SETUP	

If you wish to load the SETUP Defaults, change the prompt to <Y> and press <ENTER>.

Chipset Features Setup

The Chipset Features Setup option is used to change the values of the chipset registers. These registers control most of the system options in the computer.

■ Figure 4. Chipset Feature Setup Menu

ROM PCI/ISA BIOS (xxxxxxxx)
 CHIPSET FEATURES SETUP
 AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	ESC : Quit	↑ ↓ → ← : Select Item
SDRAM CAS latency Time	: 3	F1 : Help	P U / P D / + / - : Modify
DRAM Data Integrity Mode	: Non-ECC	F5 : Old Values	< Shift > F2 : Color
System BIOS Cacheable	: Enabled	F7 : Load Setup Defaults	
Video BIOS Cacheable	: Enabled		
Video RAM Cacheable	: Disabled		
8 Bit I/O Recovery Time	: 1		
16 Bit I/O Recovery Timing	: 1		
Memory Hole At 15M-16M	: Disabled		
Passive Release	: Enabled		
Delayed Transaction	: Enabled		
AGP Aperture Size (MB)	: 64		

Power Management Setup

■ Figure 5. Power Management Setup Menu

ROM PCI/ISA BIOS (xxxxxxxx) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.	
Power Management PM Control by APM : Disabled Video Off Method : Yes Video Off After : DPMS MODEM Use IRQ : Standby : NA Doze Mode : Disabled Standby Mode : Disabled Suspend Mode : Disabled HDD Power Down : Disabled Throttle Duty Cycle : 62.5 % VGA Active Monitor : Disabled Soft-Off by PWR-BTTN : Instant - Off Resume by Ring : Disabled IRQ 8 Break Suspend : Disabled	** Reload Global Timer Events ** IRQ [3-7, 9-15], NMI : Enabled Primary IDE 0 : Enabled Primary IDE 1 : Enabled Secondary IDE 0 : Disabled Secondary IDE 1 : Disabled Floppy Disk : Enabled Serial Port : Enabled Parallel Port : Enabled
ESC : Quit ↑ ↓ → ← : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values <Shift> F2 : Color F7 : Load Setup Defaults	

PNP / PCI Configuration Setup

■ Figure 6. PNP / PCI Configuration Setup Menu

ROM PCI/ISA BIOS (xxxxxxxx) PNP / PCI FUNCTION SETUP AWARD SOFTWARE, INC.	
PNP OS Installed : No Resources Controlled BY : Manual Reset Configuration Data : Disabled IRQ-3 assigned to : PCI / ISA PnP IRQ-4 assigned to : PCI / ISA PnP IRQ-5 assigned to : PCI / ISA PnP IRQ-7 assigned to : PCI / ISA PnP IRQ-9 assigned to : PCI / ISA PnP IRQ-10 assigned to : PCI / ISA PnP IRQ-11 assigned to : PCI / ISA PnP IRQ-12 assigned to : PCI / ISA PnP IRQ-14 assigned to : PCI / ISA PnP IRQ-15 assigned to : PCI / ISA PnP DMA-0 assigned to : PCI / ISA PnP DMA-1 assigned to : PCI / ISA PnP DMA-3 assigned to : PCI / ISA PnP DMA-5 assigned to : PCI / ISA PnP DMA-6 assigned to : PCI / ISA PnP DMA-7 assigned to : PCI / ISA PnP	ESC : Quit ↑ ↓ → ← : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values <Shift> F2 : Color F7 : Load Setup Defaults

BIOS Features Setup

!! WARNING !! The information about BIOS defaults on manual (Figure 3.4.5.6.8) is just for reference, please refer to the BIOS installed on board, for update information.

■ Figure 3. BIOS Features Setup Menu

ROM PCI/ISA BIOS (xxxxxxx)
 BIOS FEATURES SETUP
 AWARD SOFTWARE, INC.

Virus Warning	Video BIOS Shadow : Enabled	ESC : Quit	↑ ↓ → ← : Select Item
CPU Internal Cache : Disabled	C8000-CBFFF Shadow : Disabled	F1 : Help	PU/PD/+/- : Modify
External Cache : Enabled	CC000-CFFFF Shadow : Disabled	F5 : Old Values	<Shift> F2 : Color
CPU L2 Cache ECC Checking : Disabled	D0000-D3FFF Shadow : Disabled	F7 : Load Setup Defaults	
Quick Power On Self Test : Enabled	D4000-D7FFF Shadow : Disabled		
Boot Sequence : A,C,SCSI	D8000-DBFFF Shadow : Disabled		
Swap Floppy Drive : Disabled	DC000-DFFFF Shadow : Disabled		
Boot Up Floppy Seek : Enabled			
Boot Up NumLock Status : On			
Gate A20 Option : Fast			
Typematic Rate Setting : Disabled			
Typematic Rate (Chars/Sec) : 6			
Typematic Delay (Msec) : 250			
Security Option : Setup			
PCI/VGA Palette Snoop : Disabled			
OS Select For DRAM > 64MB : Non-OS2			
Report No FDD For WIN 95 : No			

Integrated Peripherals Setup

■ Figure 8. Integrated Peripherals Setup Menu

ROM PCI/ISA BIOS (xxxxxxx)
 INTEGRATED PERIPHERALS
 AWARD SOFTWARE, INC.

IDE HDD Block Mode	Parallel Port Mode	ESC : Quit	↑ ↓ → ← : Select Item
IDE Primary Master PIO : Enabled	IDE Primary Master PIO : Auto	F1 : Help	PU/PD/+/- : Modify
IDE Primary Slave PIO : Auto	IDE Secondary Master PIO : Auto	F5 : Old Values	<Shift> F2 : Color
IDE Secondary Master PIO : Auto	IDE Primary Master UDMA : Auto	F7 : Load Setup Defaults	
IDE Primary Slave UDMA : Auto	IDE Secondary Master UDMA : Auto		
IDE Secondary Slave UDMA : Auto	On-Chip Primary PCI IDE : Enabled		
On-Chip Primary PCI IDE : Enabled	On-Chip Secondary PCI IDE : Enabled		
USB Keyboard Support : Disabled	USB Keyboard Support : Disabled		
Onboard FDC Controller : Enabled	Onboard FDC Controller : Enabled		
Onboard Serial Port 1 : 3F8/IRQ4	Onboard Serial Port 1 : 3F8/IRQ4		
Onboard Serial Port 2 : 2F8/IRQ3	Onboard Serial Port 2 : 2F8/IRQ3		
UART2 Mode : Standard	UART2 Mode : Standard		
Onboard Parallel Port : 378/IRQ7	Onboard Parallel Port : 378/IRQ7		

CYLN	number of cylinders
HEAD	number of heads
WPCOM	write precom
SEC	number of sectors
LBA MODE	type of LBA mode
BLK MODE	type of Block mode
PIO MODE	type of PIO
32BIT MODE	type of 32-Bit transfer mode

If a hard disk has not been installed, select NOT Installed and press <Enter>.

Driver A Type/Drive B Type

The category identifies the types of floppy disk drive A or drive B that have been installed in the computer.

None	No floppydrive installed
360K, 5 1/4	5-1/4 inch PC-type standard drive; 360 kilobyte capacity
1.2M, 5 1/4	5-1/4 inch AT-type high-density drive; 1.2 megabyte capacity
720K, 3 1/2	3-1/2 inch double-sided drive; 720 kilobyte capacity
1.44M, 3 1/2	3-1/2 inch double-sided drive; 1.44 megabyte capacity
2.88M, 3 1/2	3-1/2 inch double-sided drive; 2.88 megabyte capacity

Video

The category selects the type of adapter used for the primary system monitor that must match your video display card and monitor. Although secondary monitors are supported, you do not have to select the type in Setup.

EGA/VGA	Enhanced Graphics Adapter/Video Graphics Array. FOR EGA, VGA, SEGA, or PGA monitor adapters.
CGA 40	Color Graphics Adapter, power up in 40 column mode
CGA 80	Color Graphics Adapter, power up in 80 column mode
MONO	Monochrome adapter, includes high resolution monochrome adapters

PASSWORD DISABLED

If you select System at Security Option of BIOS Features Setup Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup. If you select Setup at Security Option of BIOS Feature Setup Menu, you will be prompted only when you try to enter Setup.

Standard CMOS Setup Menu

The item in Standard CMOS Setup Menu are divided into categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

■ Figure 2. Standard CMOS Setup Menu

ROM PCI/ISA BIOS (xxxxxxxx)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Mon Mar 3 1997		CYLS		HEAD	PRECOMP	LAND	SECTOR	MODE
Time (hh:mm:ss) : 11 : 37 : 30		SIZE						
HARD DISKS	TYPE	SIZE						
Primary Master	: Auto	0	0	0	0	0	0	Auto
Primary Slave	: Auto	0	0	0	0	0	0	Auto
Secondary Master	: Auto	0	0	0	0	0	0	Auto
Secondary Slave	: Auto	0	0	0	0	0	0	Auto
Drive A	: 1.44MB, 3.5 in.							
Drive B	: None							
Video	: EGA/VGA							
Halt On	: All, But Keyboard							
Esc : Quit	↑ ↓ → ← : Select Item							
F1 : Help	(Shift) F2 : Change Color							
		Base Memory		:	PU/PD/+/-: Modify			
		Extended Memory		:	0K			
		Other Memory		:	512K			
		Total Memory		:	512K			

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

■ Figure 11. Save & Exit Setup Screen

ROM PCI/ISA BIOS (xxxxxxxx)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP / PCI CONFIGURATION SETUP	LOAD SETUP DEFAULT VALUES
LOAD SETUP DEFAULT VALUES	
Esc : Quit	
F10 : Save & Exit Setup	
↑ ↓ → ← : Select Item	
(Shift) F2 : Change Color	
Save Data to CMOS & Exit SETUP	

Pressing <N> and <ENTER> will return you to the Main Menu.

Pressing <Y> and <ENTER> will save the system parameters and continue with the booting process.

Standard CMOS Setup

This setup page includes all the items in a standard compatible BIOS.

BIOS Features Setup

This setup page includes all the items of BIOS special enhanced features.

Chipset Features Setup

This setup page includes all the items of chipset special features.

Power Management Setup

This setup page includes all the items of power management features.

PnP / PCI Configuration

This category specifies the value (in units of PCI bus clocks) of the latency timer for this PCI bus master and the IRQ level for PCI device.

Load Setup Defaults

Chipset defaults indicates the values required by the system for the maximum performance. The OEM manufacturer may change to defaults through MODBIN before the binary image burn into the ROM.

Integrated Peripherals

This setup page includes all the items of Integrated Peripherals features.

Supervisor Password / User Password Setting

Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

IDE Hdd Auto Detection

Automatically configure hard disk parameters.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Application Software

- Please use the "BIOS Utility" diskette to setup Flash Memory.
- The diskette contains the intelligent installation utility AWDFLASH.EXE, showing as follow.

■ Figure 13. Flash Memory Writer

FLASH MEMORY WRITER vX.X	
Copyright (C) 1992-1994 Award Software, Inc.,	DATE: xx/xx/xxxx
For xxxxxx-xxx-xxxxxxx	
Flash Type -	
File Name to Program:	
Error Message :	
Do You Want To Save Bios (Y/N)?	

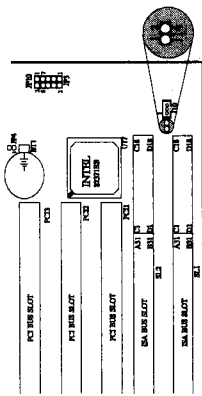
Control Keys

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item in left hand
Right arrow	Move to the item in right hand
Esc key	Main Menu-Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu-Exit current page and return to Main Menu
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
+ key	Increase the numeric value or make changes
- key	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
(Shift) F2 key	Change color from total 16 colors. F2 to select color forward, (Shift) F2 to select color backward
F3 key	Reserved
F4 key	Reserved
F5 key	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
F6 key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 key	Load the default
F8 key	Reserved
F9 key	Reserved
F10 key	Save all the CMOS changes, only for Main Menu

NOTE: If you click '**Cancel**', program will terminate.

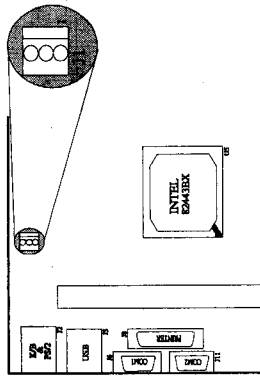
6. After the install procedure completed, click '**OK**' to restart the system when prompted to do so. If you don't want to reboot immediately, you must remember to reboot your system later!
7. Follow the screen instructions and use default settings to complete the setup when Windows 95* is re-started.
Upon re-start, Windows 95* will display that it has found an **Intel PCI Bus Master IDE controller hardware** and also installing hardware for it.
If a "**New Hardware Found**" dialog box is displayed requesting the location of the drivers, use the mouse to click on the scrollbar and click on the **<Windows 95* directory> \ System \ IOSubSys path:**
For example:
 - a. Click on '**C:\WINDOWS\SYSTEM\IOSUBSYS**'
 - b. Click '**OK**'.
8. Select '**Yes**', when prompted to re-start Windows 95*.
9. Select '**Yes**' again, when you prompted to re-start Windows 95*.

(C) J14 Wake-On-Internal Modem



Pin No.	Assignment
1	Ring
2	GND

(D) J1 CPU Cooling Fan Power Connector

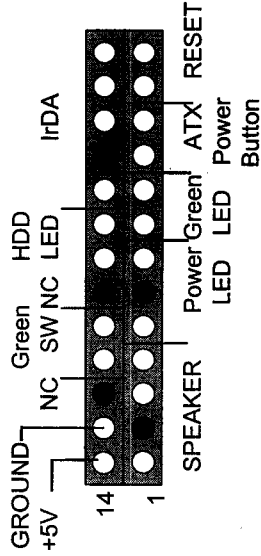


Pin No.	Assignment
1	Ground
2	+12V
3	Sense

Chapter2 Serial and Parallel Ports

Connectors

(A) J15

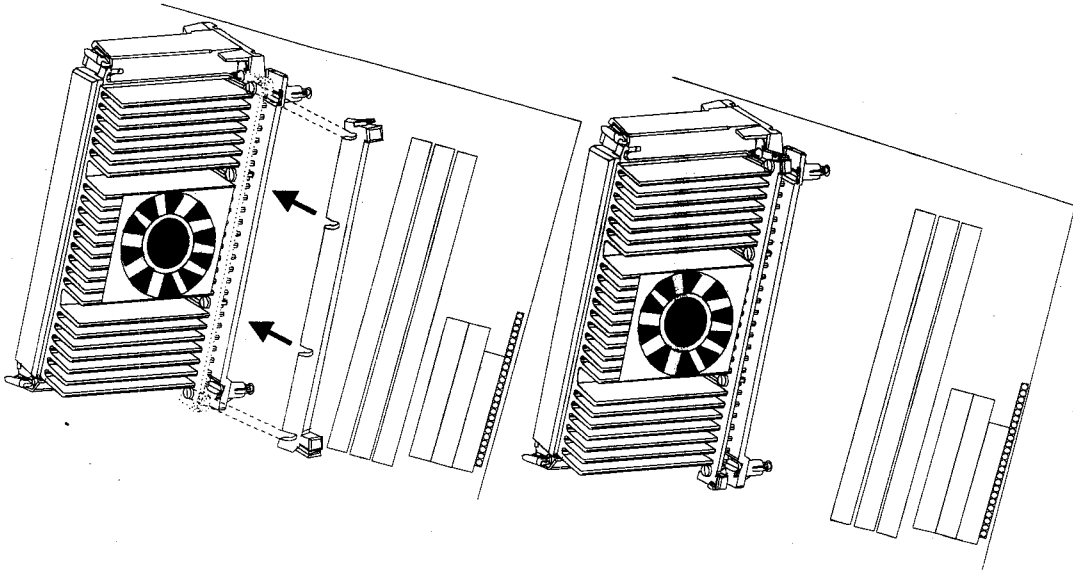


Pin No.	Assignment	Function	Pin No.	Assignment	Function
1	Speaker	Speaker	14	+5V	VCC
2	NC		15	Ground	Ground
3	NC	Connector	16	Ground	Green Switch
4	+5V		17	Green Control	
5	Power LED(+)	Power LED	18	Ground	HDD LED
6	NC		19	NC	
7	Ground	Green LED + LED	20	HDD LED(-)	HDD LED
8	Green LED +		21	HDD LED(+)	
9	Green LED -	ATX Power Button	22	+5V	IrDA Connector
10	Power Switch		23	NC	
11	Standby Voltage	Reset	24	IRRX	Ground
12	Reset Control		25	Ground	
13	Ground		26	IRTX	

Connectivity

The many ways that a serial port can be used make it necessary to be familiar with the pinout diagram. The following chart gives you the function of each pin on the 9-pin connector. This information can be used when configuring certain software programs to work with the serial port.

Signal	Name	DB9 PIN	DB25 PIN
DCD	Data Carrier Detect	1	8
RX	Receive Data	2	3
TX	Transmit Data	3	2
DTR	Data Terminal Ready	4	20
GND	Signal Ground	5	7
DSR	Data Set Ready	6	6
RTS	Request to Send	7	4
CTS	Clear to Send	8	5
RI	Ring Indicator	9	22

Step 4:**Serial Ports/COM Ports**

The two serial ports on the computer are called COM1 and COM2, respectively. If you wish, two more serial ports can be added onto the computer using optional hardware. Should you choose to add the extra Serial ports (COM ports) they would be called COM3 and COM4.

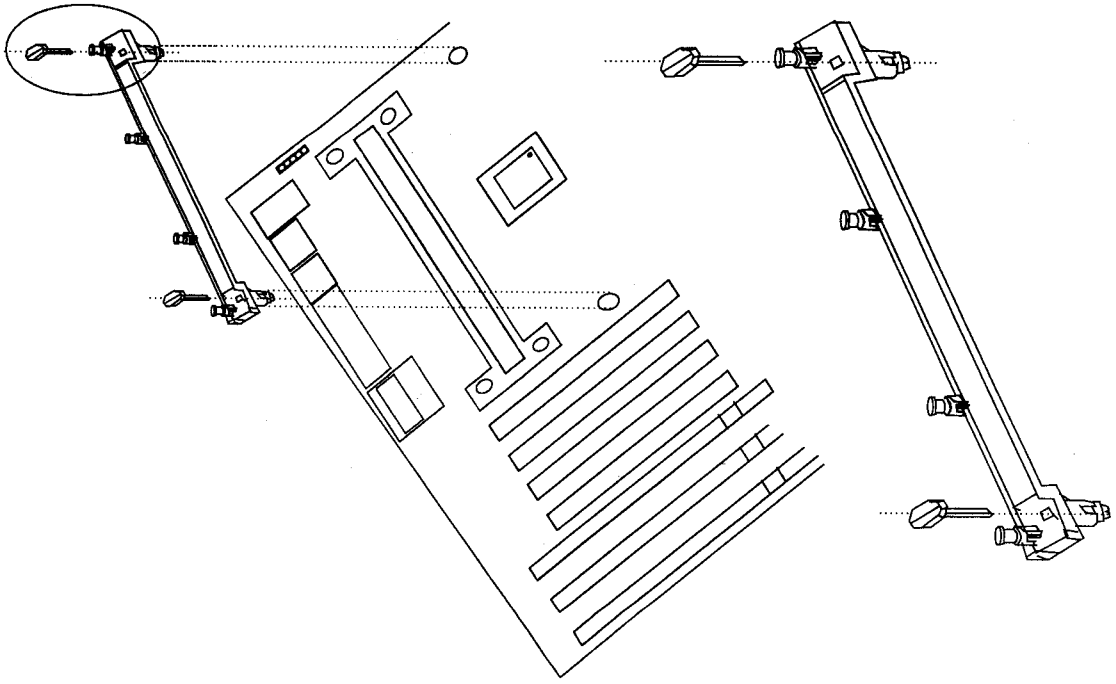
When using serial ports to communicate with a peripheral devices be sure to assign only one COM port number to each device. For example, if a printer and a scanner are both connected to your computer through serial ports the printer must be assigned one COM port (i.e. COM1) and the scanner must be assigned the other COM port (i.e. COM2). No two devices can be assigned to one COM port. Each peripheral must have its own COM port.

NOTE: Four serial ports may be installed on the computer. However, no more than two ports can be used simultaneously.

*If you have installed an internal modem be careful not to assign a COM port number that has already been assigned to another device. This error is common.

When installing a device that is going to require the use of a serial port use a diagnostic program to find out which ports are available. It may be necessary to remove expansion cards that have serial ports in order to check their jumper settings. The jumper settings will indicate which COM port the card has been assigned. Checking the expansion card will eliminate mistakes in overlapping COM ports. Once you have completed the installation of peripheral devices using the serial ports, be sure that the communication parameters such as baud rate, parity bit, etc. are matching. If your computer is set for a baud rate of 9600 and your modem is set for a baud rate of 2400 you will not be able to send messages. The manuals that accompany the peripheral devices will inform you on the procedure for setting their parameters. Software manuals will also have instructions on setting parameters.

Step 2:



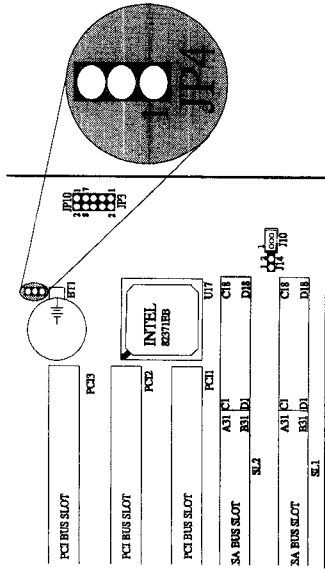
Chapter 3

Troubleshooting

Jumper Settings

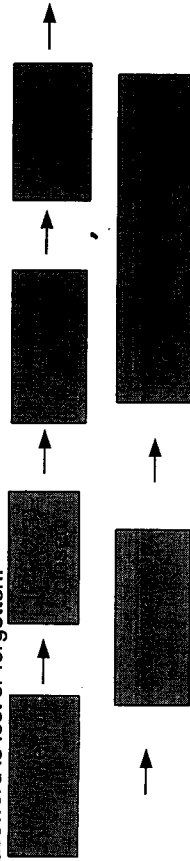
A jumper is several pins which may or may not be covered by a plastic jumper cap. A jumper is used to select different system options.

(A) JP4 CMOS Function Select



JP4	Assignment
 1-2 Closed	Normal Operation (default)
 2-3 Closed	Clear CMOS Data (*Note)
 Open	Onboard Battery Disabled

***Note :** Please follow the procedure as below to clear CMOS Data.
Note : Please follow the procedure as below to clear BIOS Password if your password is lost or forgotten.



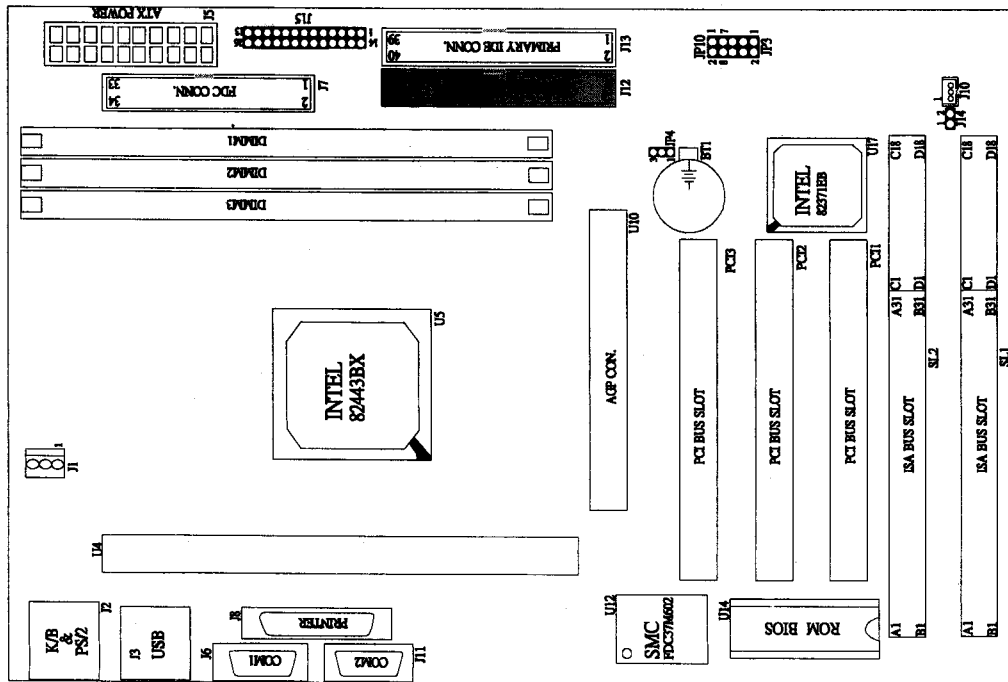
PROBLEM

System inoperative. Keyboard lights are on, power indicator lights are lit, hard drive is spinning.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Expansion card is partially dislodged from expansion slot on the motherboard.	Turn off computer. Take cover off system unit. Check all expansion cards to ensure they are securely seated in slots.	Using even pressure on both ends of the expansion card, press down firmly on expansion card.
Defective floppy disk drive or tape drive.	Turn system off. Disconnect the cables from one of the floppy drives. Turn on the floppy drives. Turn on the system, check to see if the keyboard operates normally. Repeat until you have located defective unit.	Contact Technical Support.
Defective expansion card.	Turn computer off. Remove an expansion card	Make sure expansion card is secure in expansion socket.

Mainboard Installation

Layout of Mainboard



PROBLEM

System only boots from floppy Disk. Hard disk can be read and applications can be used but booting from Hard Disk is impossible.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Hard Disk boot program has been destroyed.	A number of causes could be behind this.	Back up data and applications files. Reformat the Hard Drive as described in the Hard Drive section of this manual. Re-install applications and data using backup disks.

PROBLEM

Error message reading "SECTOR NOT FOUND" or other error messages not allowing certain data to be retrieved.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
A number of causes could be behind this.	Use a file by file backup instead of an image backup in order to backup the Hard Disk.	Back up any salvageable data. Then low level format, partition, and high level format the hard drive (see Hard Disk section of this manual for instructions). Re-install all saved data when completed.

Flash Memory

- Supports flash memory.
- Supports ESCD Function.

PCI Enhanced IDE Built-in On Board

- Supports 4 IDE hard disk drives.
- Supports PIO mode 4, Master Mode, high performance hard disk drives.
- Supports Ultra DMA/33, Bus Master Mode.
- Supports IDE interface with CD-ROM.
- Supports high capacity hard disk drives.
- Supports LBA mode.
- Supports LS120/ZIP 100.

ISA I/O Built-in On Board

- Supports one multi-mode Parallel Port.
 - (1) Standard & Bidirection Parallel Port.
 - (2) Enhanced Parallel Port (EPP).
 - (3) Extended Capabilities Port (ECP).
- Supports two serial ports, 16550 UART.
- Supports one Infrared transmission (IR). (optional)
- Supports PS/2 Mouse.
- Supports 360KB, 720KB, 1.2MB, 1.44MB and 2.88MB floppy disk drivers.

Universal Serial Bus

- Supports two Universal Serial Bus (U.S.B.) Ports.
- Supports 48 MHz USB.

Dimension(ATX form-factor)

- 26.5 cm X 19.3 cm (W x L)

PROBLEM

Screen message says "Invalid Configuration" or "CMOS Failure."

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Incorrect information entered into the configuration (setup) program.	Check the configuration program. Replace any incorrect information.	Review system's equipment. Make sure correct information is in setup.

PROBLEM

Screen is blank.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
No power to monitor.		Check the power connectors to monitor and to system. Make sure monitor is connected to display card, change I/O address on network card if applicable
Monitor not connected to computer.		See instructions above.
Network card I/O address conflict.		See instructions above.

Introduction

System Overview

The board incorporates system board, ISA I/O and PCI IDE in one board that provides all the PC solutions. The mainboard is a Pentium II™ micro processor based PC/AT system, supports single processors with ISA Bus, PCI Local Bus and AGP Bus to upgrade your system performance. It is ideal for multi-tasking and fully supports MS-DOS, Windows, Windows NT, Novell, OS/2, Windows95/98, UNIX, SCO UNIX etc. This manual also explains how to install the mainboard for operation, and how to setup your CMOS configuration with BIOS setup program.

PROBLEM

Keyboard failure.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Keyboard is disconnected.		Reconnect keyboard. Check keys again, if no improvement replace keyboard.

PROBLEM

No color on screen.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Faulty Monitor.		If possible, connect monitor to another system. If no color replace monitor.
CMOS incorrectly set up.		Call technical support.

Chapter1

System Board

Chapter2

Serial and Parallel Ports

Chapter3

Troubleshooting

PROBLEM

C: drive failure.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
SETUP program does not have correct information.		Boot from drive A: using DOS system disk. Input correct information to SETUP program.
Hard Drive cable not connected properly.		Check Hard Drive cable.

PROBLEM

Cannot boot system after installing second hard drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Master/Slave jumpers not set correctly.		Set Master/Slave jumpers correctly.
Hard Drives not compatible / different manufacturers.		Run SETUP program and select correct drive types. Call Drive manufacturers for compatibility with other drives.

4. Connect the tester on an experienced radio/A technician for help which the receiver is connected.
5. Connect the edinburgh into and outlet on a circuit different from that to
5. Increase the separation between the edinburgh and receiver
 1. Receiver \ Reposition the receiving antenna

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

FCC Rules. It is the responsibility of the user to provide and use these accessories. These accessories are designed to be used in order to ensure compliance with

4. Shielded power cord (Provided by manufacturer)
 3. Shielded video cable (Can be obtained from multiple retail outlets)
 2. Shielded audio cable (Can be obtained from multiple retail outlets)
 1. Shielded serial cable (Can be obtained from multiple retail outlets)
- Follow:
- a. Class B digital device: the accessories associated with this edinburgh are as Accessories: This device has been tested and found to comply with the limits of may cause undesired operation
- (5) this device must satisfy any interference received, including interference that following two conditions: (1) this device may not cause harmful interference, and This device complies with Part 15 of the FCC Rules. Operation is subject to the

Statement
Federal Communications Commission (F.C.C.)