
Contents

Chapter 1-Overview.....	2
1-1 Specifications.....	2
1-2 Precautions.....	3
1-3 Package Checklist.....	4
Chapter 2-Hardware Setup.....	5
2-1 Mainboard Layout.....	5
2-2 Configuration : Rear Panel Connector.....	6
2-3 Setting the System Jumper.....	7
2-4 CPU Installation.....	11
2-5 Installation the System RAM Modules.....	15
Chapter 3-Award BIOS Setup.....	17
3-1 Standard CMOS Setup.....	18
3-2 BIOS Features Setup.....	19
3-3 Super/User Password Setting.....	24
3-4 Chipset Features Setup.....	25
3-5 Power Management Setup.....	29
3-6 PNP/PCI Configuration Setup.....	33
3-7 Load BIOS Defaults.....	35
3-8 Load Setup Defaults.....	35
3-9 Integrated Peripherals.....	36
3-10 Save & Exit Setup.....	38
3-11 Exit Without Save.....	38

CHAPTER 1—OVERVIEW

Thank you for purchasing the **6ILA(C)**. The **6ILA(C)** is a high-performance Pentium II mainboard based on Intel's 82440LX chipset with a ATX PCI/ISA form factor. This chipset supports many new architecture features such as the high speed AGP graphic port, SDRAM, Ultra DMA/33, and Bus master IDE. It also has onboard support for 1 FDD Port, 2 RS-232 serial ports, 1 parallel printer port, 2 USB port connectors, 1 PS/2 mouse, 1PS/2 keyboard, and an IrDa port with an optional transceiver/receiver cable. In addition, The 6ILA provides one AGP slot, three ISA slots, and four PCI slots, as well as 2Mbit Flash EEPROM BIOS reserved for new functions.

The **6ILA(C)** implements the most advanced technology on the market such as user-friendly jumper-less configuration, BIOS monitoring of fan speed, voltage and system environment temperature(optional), and LAN card, PS2 mouse, and keyboard wake up options.

1-1 Specifications

◆ **Processor**

Intel Pentium II Processor Slot 1 with Internal clock 233-333 MHz

◆ **Chipset**

Intel 82440LX AGPset

◆ **Expansion Slots**

1x32 bit AGP slot

4x32 bit bus mastering PCI slots

3x16 bit ISA slots

◆ **System Memory**

Three 168-pin DIMM memory slots (4/8/16/32/64/128MB module)

Supports maximum 384MB with SDRAM

◆ **On Board I/O**

1 FDD Port (Supports LS-120, 3 mode, 1.2/1.44/2.88MB FDD)

2 RS-232 Serial Ports (16550 UART compatible)

1 Parallel Printer Port (SPP/EPP/ECP mode)

2 USB Port Connectors

1 PS/2 Mouse, 1 PS/2 Keyboard

IrDa Port with Optional Transceiver/Receiver Cable

- ◆ **On Board PCI IDE**
Dual Ultra DMA/33 Bus Mastering ATA IDE Ports Support Greater than 8.4GB HDD, ATAPI IDE CD-ROM & LS-120
- ◆ **Wake-On-Lan**
WOL Header Onboard
- ◆ **BIOS**
AWARD PCI BIOS with Green, Plug and Play Features
Supports Multi-boot from E-IDE/SCSI/CD-ROM/FDD
1 or 2 Mbit Flash EEPROM
- ◆ **BIOS Monitoring System**
Fan speed, Voltage and System Environment Temperature monitoring(optional)
- ◆ **Other Features**
PC 97 Compliance
LDCM (LANdesk Client Manager) Utility Optional
Support VRM 8.2
PS2 Mouse Wake up Optional
Keyboard Wake up Optional
- ◆ **Board Size**
4-layer PCB, 19cm x 30.5cm, ATX Form Factor

1-2 Precautions

Please make sure to ground yourself prior to handling the mainboard or other system components as electrostatic discharge can easily damage components.

Take extra care when handling the mainboard in air-conditioned or dry environments, including these four precautions to protect the mainboard from electrostatic discharge:

Do not remove the conductive grid packaging until you are prepared to install the mainboard or other system components.

Ground yourself before removing any system component from its protective conductive grid packaging. To ground yourself, grasp the expansion slot covers or other unpainted portions of the computer chassis.

Frequently ground yourself while working, or use a grounding strap.

Handle the mainboard by the edges and avoid touching its components.

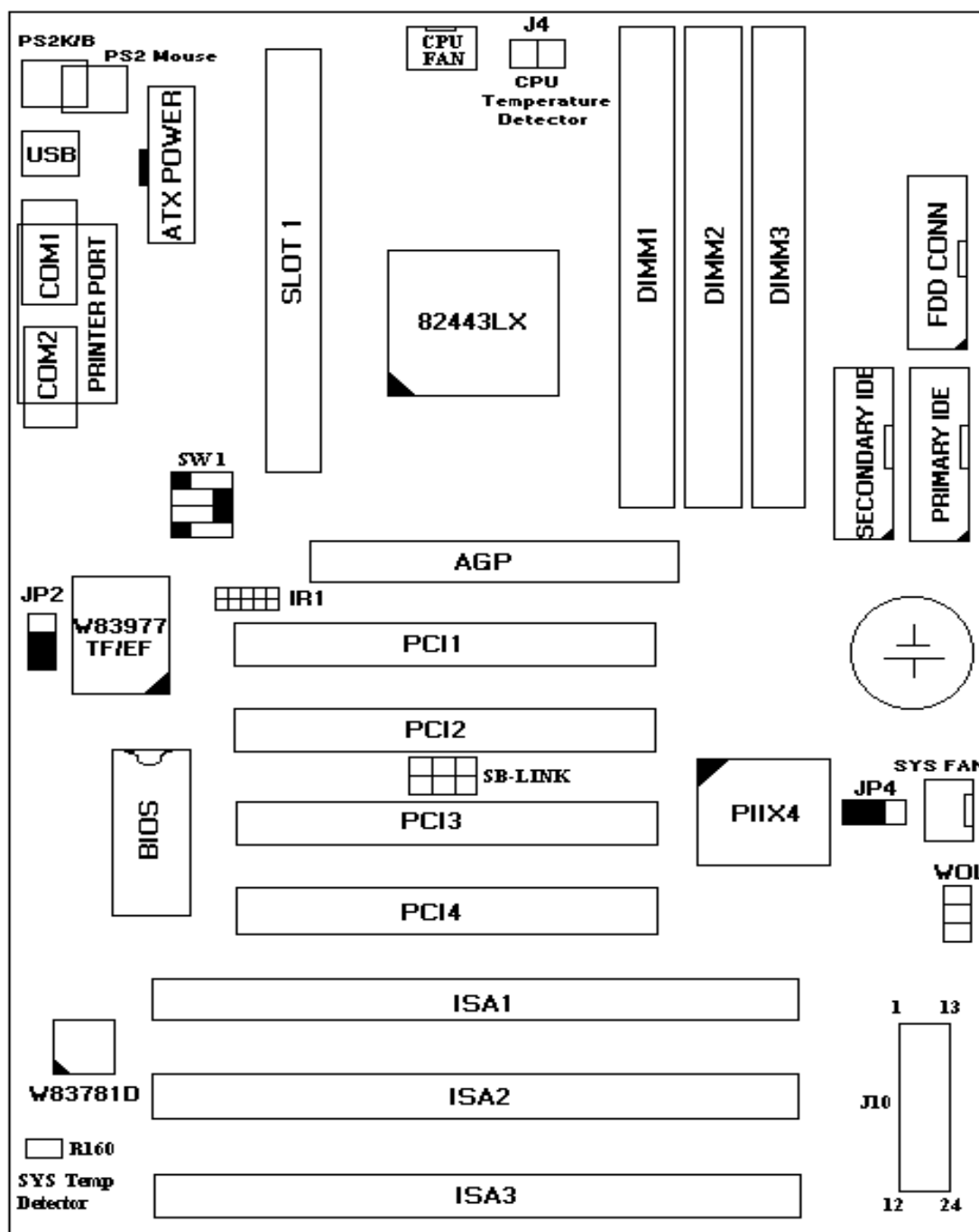
1-3 Package Checklist

Please check that your package contains all the items listed below. If there are any missing or damaged items, please contact your vendor.

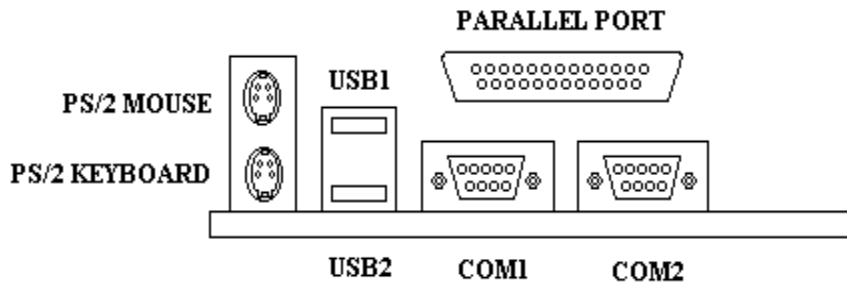
- ✓ 6ILA or 6ILC mainboard
- ✓ User's manual
- ✓ One Driver / Utility CD
- ✓ One retention module for CPU (may already be installed)
- ✓ One HDD/FDD cable
- ✓ Temperature sensor wire (optional)

Chapter 2 – Hardware Setup

2-1 Mainboard Layout



2-2 Configuration: Rear Panel Connector



Rear Panel Connector

2-3 Setting the System Jumper

Jumpers are used to select the operation modes for your system. Choose your jumper settings according to the following figures and tables.

Jumper Settings:

(1) ATX Power Supply Connector: J2

(Please insert the ATX power supply plug into this header)

(2) Keyboard & PS/2 Mouse Power On: JP2

JP2	Keyboard & PS/2 Wake up
1-2	Disable (Default)
2-3	Enable

If JP2 is set to "Disable (1-2)", the system can only be turned on using the power button.

When Keyboard & PS/2 wake up is enabled, the 6ILA mainboard's built-in JP2 offers four easy and convenient ways to power up the system. Users may turn on the system via the keyboard, by typing a password or hot key, with the PS/2 mouse, by double-clicking the left or right mouse buttons, or by using the power button.

* Keyboard Power On Password:

This function is available for ATX power only. The user can select the following power on options to turn on the system. Password: when the user selects this option, the opening prompt will read "Enter Password:", after the user types a desired password, "Confirm Password:", will be displayed, the user should then type the same password to confirm its validity. After any powering down, the user must type the correct password to turn on the system.

* Hot Key Power On:

When the user selects this option, Hot Key Power On will be displayed: Ctrl-F1 allows the user to select a Hot Key. After the system is turned off, the user types in the Hot Key to power up the system.

* Mouse Left, Mouse Right:

This option will power up the system by double clicking either the left or right mouse button.

Note: Do not move your mouse between the first click and the second click.

*** Power Button Only:**

Only the power button can power the system.

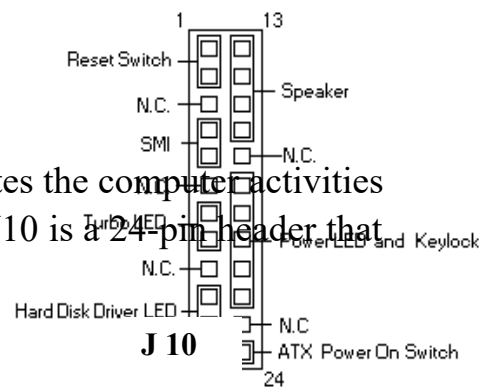
(3) CMOS Clear: JP4

Normal	1-2	Default
Clear CMOS	2-3	

(4) CPU Temperature Detector: J4

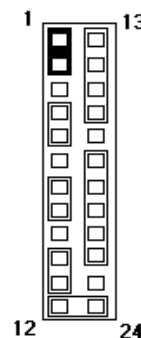
(5) Front Bezel Connector: J10

The control panel on the front bezel of the case indicates the computer activities and includes switches to change the activities' status. J10 is a 24-pin header that provides interfaces for the following functions.



*** Reset Switch: Pins 1 & 2**

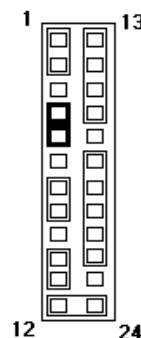
The reset switch enables the user to reset the system without turning the main power switch off and then on. Orientation is not required when making a connection to this header.



*** SMI/Hardware Switch: Pins 4 & 5**

This connector supports the "Green Switch" on the control panel, which, when pressed, will immediately force the system board into the power-saving mode.

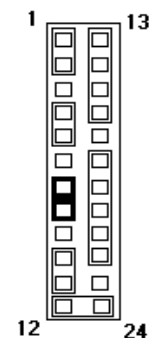
J10 Pin #	Signal Name
4	Sleep
5	Ground



* **Turbo LED Connector: Pins 7 & 8**

There is no turbo/det turbo function on the mainboard. The Turbo LED on the control panel will always be On when attached to this connector.

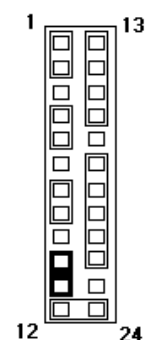
J10 Pin #	Signal Name
7	5V
8	Ground



* **Hard Disk Drive LED Connector: Pins 10 & 11**

This connector connects the hard drive activity LED on the control panel. This LED flashes when the HDD is being accessed.

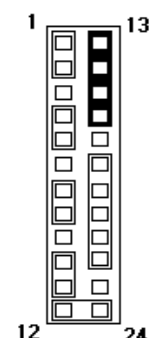
J10 Pin #	Signal Name
10	HDLED
11	+5V



* **Speaker: Pins 13, 14, 15, & 16**

The connector provides an interface to a speaker for audio output. An 8-ohm speaker is recommended.

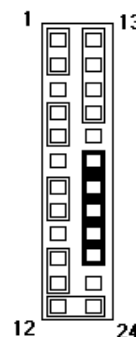
J10 Pin #	Signal Name
13	+5V
14	Ground
15	No connect
16	Speaker out



*** Power LED and Keylock: Pins 18, 19, 20, 21, & 22**

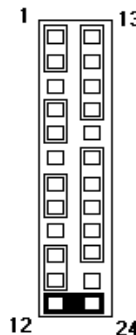
The power LED displays the status of the main power switch. When the keylock switch is closed, it will disable the keyboard function.

J10 Pin #	Signal Name
18	Power LED
19	No connect
20	Ground
21	Keylock
22	Ground



*** Power Button: Pins 12 & 24**

This connects to the “Power Button” on the mainboard. When switched once, it causes the mainboard to power on. When switched again, it causes the mainboard to power down.

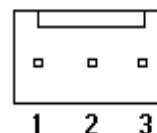


(6) Other Connector Functions:

(A) Chassis Fan Power Connector: CPU Fan and System Fan

The CPU Fan and System Fan both use a 3-pin header connector on the mainboard. The fan must be a 12V fan.

CPU & System Fan	Signal Name
1	Ground
2	+12V
3	Sense

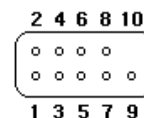


CPU Fan & System Fan

(B) IrDA/ASK IR Connector: IR1

PIN	1	2	3	4	5
Signal Name	+5V	NC	FIRRX (Fast IR)	CIRRX (Consumer IR)	IRRX (Standard IR)

PIN	6	7	8	9	10
Signal Name	5VSB	GND	NC	IRTX	NC



IR1

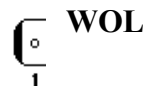
				(Standard IR)	
--	--	--	--	---------------	--

(C) CPU Temperature Detector: JP3 (Optional)

Insert one end of the temperature sensor wire into JP3 and the other end into the Slot 1 CPU heat sink.

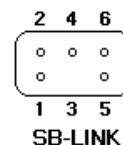
(D) Wake on LAN connector

PIN	1	2	3
Signal Name	+5V SB	NC	RING



(D) SB-Link

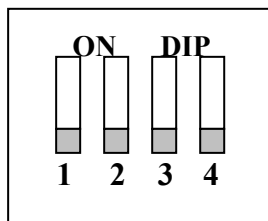
PIN	1	2	3	4	5	6
Signal Name	GNT#	DGND	NC	REQ#	DGND	SERIRQ



2-4 CPU Installation

The 6ILA(C) supports both INTEL Pentium II and Celeron CPU cartridges.

The 6ILA(C) mainboard has a built-in VID (Voltage Identify) function to auto detect CPU voltages. Hence you do not have to set the CPU voltage setting.



SW1

SW1 is used to select the Frequency multiplier.

*DIP Switch, (i.e.: OFF, OFF, OFF, OFF)

ON: switch to the 'ON' position.

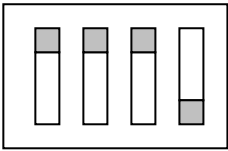
OFF: switch to the 'OFF' position.

1. CPU Setting

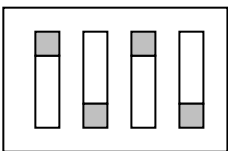
* Intel Pentium II 233MHz

Internal CPU Clock	233MHz
Ext. x Frq.	66 x 3.5
SW1	<p>ON</p> <p>OFF</p>

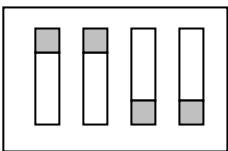
* Intel Pentium II 266MHz

<i>Internal CPU Clock</i>	266MHz
<i>Ext. x Frq.</i>	66 x 4.0
<i>SW1</i>	<p>ON</p>  <p>OFF</p>

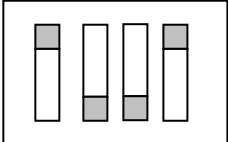
* Intel Pentium II 300MHz

<i>Internal CPU Clock</i>	300MHz
<i>Ext. x Frq.</i>	66 x 4.5
<i>SW1</i>	<p>ON</p>  <p>OFF</p>

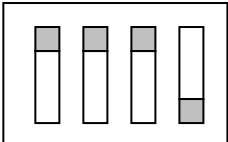
*Intel Pentium II 333MHz

<i>Internal CPU Clock</i>	333MHz
<i>Ext. x Frq.</i>	66 x 5.0
<i>SW1</i>	<p>ON</p>  <p>OFF</p>

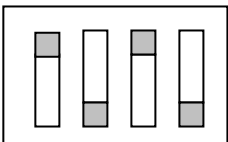
* Celeron 233MHz

<i>Internal CPU Clock</i>	233MHz
<i>Ext. x Frq.</i>	66 x 3.5
<i>SW1</i>	<p>ON</p>  <p>OFF</p> <p>1 2 3 4</p>

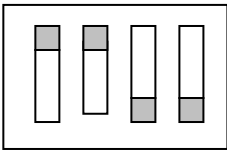
* Celeron 266MHz

<i>Internal CPU Clock</i>	266MHz
<i>Ext. x Frq.</i>	66 x 4.0
<i>SW1</i>	<p>ON</p>  <p>OFF</p> <p>1 2 3 4</p>

* Celeron 300MHz

<i>Internal CPU Clock</i>	300MHz
<i>Ext. x Frq.</i>	66 x 4.5
<i>SW1</i>	<p>ON</p>  <p>OFF</p> <p>1 2 3 4</p>

* Celeron 333MHz

Internal CPU Clock	333MHz
Ext. x Frq.	66 x 5.0
SW1	ON  OFF

2. CPU Core/Bus Freq. Ratio

SW1	1	2	3	4
1.5x	OFF	OFF	ON	OFF
2x	OFF	OFF	OFF	OFF
2.5x	ON	OFF	ON	ON
3.0x	ON	ON	OFF	ON
3.5x	ON	OFF	OFF	ON
4.0x	ON	ON	ON	OFF
4.5x	ON	OFF	ON	OFF
5.0x	ON	ON	OFF	OFF
5.5x	ON	OFF	OFF	OFF
6.0x	OFF	ON	ON	ON
6.5x	OFF	OFF	ON	ON
7x	OFF	ON	OFF	ON
7.5x	OFF	OFF	OFF	ON
8x	OFF	ON	ON	OFF

2-5 Installation the System RAM Modules

The 6ILA(C) mainboard provides three onboard DIMM sockets that support different settings for the system memory. The following figures and tables provide some examples of possible memory combinations.

1. System Memory Configuration

DIMM	1	2	3
Bank	0	1	2
RAM Type	EDO/SDRAM	EDO/SDRAM	EDO/SDRAM
Single RAM Module Size (MB)	8/16/32 64/128	8/16/32 64/128	8/16/32 64/128

2. 168Pin DIMM (3.3V) SDRAM or EDO DRAM

Bank0 (DIMM1)	Bank1 (DIMM2)	Bank2 (DIMM3)	Total Memory
8MB	-----	-----	8MB
16MB	-----	-----	16MB
32MB	-----	-----	32MB
64MB	-----	-----	64MB
128MB	-----	-----	128MB
8MB	8MB	-----	16MB
16MB	8MB	-----	24MB
32MB	8MB	-----	40MB
64MB	8MB	-----	72MB
128MB	8MB	-----	136MB
8MB	8MB	8MB	24MB
16MB	8MB	8MB	32MB
32MB	8MB	8MB	48MB
64MB	8MB	8MB	80MB
128MB	8MB	8MB	144MB
16MB	16MB	-----	32MB
32MB	16MB	-----	48MB
64MB	16MB	-----	80MB
128MB	16MB	-----	144MB

16MB	16MB	8MB	40MB
32MB	16MB	8MB	56MB
64MB	16MB	8MB	88MB

Continue

Bank0 (DIMM1)	Bank1 (DIMM2)	Bank2 (DIMM3)	Total Memory
128MB	16MB	8MB	152MB
16MB	16MB	16MB	48MB
32MB	16MB	16MB	64MB
64MB	16MB	16MB	96MB
128MB	16MB	16MB	160MB
32MB	32MB	-----	64MB
64MB	32MB	-----	96MB
128MB	32MB	-----	160MB
32MB	32MB	8MB	72MB
64MB	32MB	8MB	104MB
128MB	32MB	8MB	168MB
32MB	32MB	16MB	80MB
64MB	32MB	16MB	112MB
128MB	32MB	16MB	176MB
32MB	32MB	32MB	96MB
64MB	32MB	32MB	128MB
128MB	32MB	32MB	192MB
64MB	64MB	-----	128MB
128MB	64MB	-----	192MB
64MB	64MB	8MB	136MB
128MB	64MB	8MB	200MB
64MB	64MB	16MB	144MB
128MB	64MB	16MB	208MB
64MB	64MB	32MB	160MB
128MB	64MB	32MB	224MB
64MB	64MB	64MB	192MB
128MB	64MB	64MB	256MB
128MB	128MB	8MB	264MB
128MB	128MB	16MB	272MB

128MB	128MB	32MB	288MB
128MB	128MB	64MB	320MB
128MB	128MB	128MB	384MB

Chapter 3-Award BIOS Setup

Power on the system and the screen will display:

Hit to enter Setup

Hit the key and the screen will display the main Setup screen.

The Main Menu allows you to choose from several setup functions and two exit choices. Use the arrow keys to select the appropriate choice and press <Enter> to accept and enter a sub-menu.

Main Menu

ROM PCI/ISA BIOS (2A69JCS9)
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 BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
Esc : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color

Time, Date, Hard Disk Type...

3-1 Standard CMOS Setup

The “**STANDARD CMOS SETUP**” allows you to configure the system settings such as the current date and time, type of hard disk installed, floppy type, and display type. Use the arrow keys to highlight a choice and then use the <PgUp> or <PgDn> keys to select the value you want for each option.

ROM PCI/ISA BIOS (2A69JCS9)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Fri, Aug 14 1998								
Time (hh:mm:ss) : 11 : 9 : 4								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
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 : 1.44M, 3.5 in.					Base Memory: 640K Extended Memory: 31744K Other Memory: 384K Total Memory: 32768K			
Drive B : None								
Video : EGA/VGA								
Halt On : All, But Keyboard								
ESC : Quit			↑ ↓ → ← : Select Item			PU/PD/+/- : Modify		
F1 : Help			(Shift)F2 : Change					
Color								

3-2 BIOS Features Setup

This section allows you to configure your system for basic operation. You can select the system default speed, boot-up sequence, keyboard operation, shadowing and security.

ROM PCI/ISA BIOS (2A69JCS9)
 BIOS FEATURES SETUP
 AWARD SOFTWARE, INC.

Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000-CFFFF Shadow	: Disabled
CPU L2 Cache ECC Checking	: Enabled	D0000-D3FFF Shadow	: Disabled
Quick Power On Self Test	: Disabled	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		
Boot Up System Speed	: High		
Gate A20 Option	: Fast		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup		
PS/2 mouse function control	: Enabled		
PCI/VGA Palette Snoop	: Disabled		
Assign IRQ For VGA	: Enabled		
OS Select For DRAM > 64MB	: Non-OS2		
		ESC : Quit	↑ ↓ → ← : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values (Shift)	F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

Virus Warning

When this option is enabled, the Award BIOS will monitor the boot sector and partition table of the hard disk drive for any attempted modification. If an attempt is made, the BIOS will halt the system and the error message below will appear. Afterwards, if necessary, you will be able to run an anti-virus program to locate and remove the problem before any damage is done.

<p>! WARNING !</p> <p>Disk boot sector is going to be modified</p> <p>Type "Y" to accept writing or "N" to abort</p> <p>Award Software, Inc.</p>

Enabled	Activates automatically when the system boots up and displays a warning message if anything attempts to access the boot sector or the hard disk partition table.
Disabled	No warning message will appear from attempts to access the boot sector or the hard disk partition table.

NOTE: Many disk diagnostic programs, which attempt to access the boot sector table, can trigger the display of the above warning message. If you are running such a program, we recommend that you disable the Virus Protection beforehand.

CPU Internal Cache/External Cache

Cache use can speed up the memory access. However, optimal settings depend on the CPU/chipset design. The default value is Enabled.

Enabled	Enables the cache
Disabled	Disables the cache

Quick Power On Self Test

This category speeds up the Power On Self-Test (POST) after you power up the computer. If it is set to Enabled, BIOS will shorten or skip the checking of some items during POST.

Enabled	Enables quick POST
Disabled	Normal POST

Boot Sequence

This category determines which drive to search first for the disk operating system (i.e., DOS). The default value is A, C and SCSI.

C, A, SCSI	System searches first for hard disk drive, then floppy disk drive, then SCSI.
A,C, SCSI	System searches first for floppy disk drive, then hard disk drive, then SCSI.
CDROM, C, A	System searches first for CDROM drive, then hard disk drive, then floppy disk drive.
C, CDROM, A	System searches first for hard disk drive, then CDROM drive, then floppy disk drive.
SCSI, A, C	System searches first for SCSI drive, then floppy disk drive, then hard disk drive.

Swap Floppy Drive

This option enables/disables the boot up sequence from B to A drive.

Boot Up Floppy Seek

During POST, BIOS will determine whether the floppy disk drive installed has 40 or 80 tracks. A 360K type has 40 tracks while 760K, 1.2M and 1.44M all have 80 tracks.

Enabled	BIOS scans the floppy disk drive to determine whether it has 40 or 80 tracks. Note that BIOS cannot differentiate between 720K, 1.2M or 1.44M drive types, as they all have 80 tracks.
Disabled	BIOS does not scan for the type of floppy disk drive by track number. Note that there is no warning message if the drive installed is 360K.

Boot Up NumLock Status

This allows you to determine the default state of the numeric keypad. The default, setting is NumLock on.

On	NumLock ON
Off	NumLock OFF

Gate A20 Option

This entry allows you to select how the gate A20 is handled. The gate A20 is a device used to address memory above 1 Mbyte. In older models, the gate A20 was handled via a pin on the keyboard. Currently, while keyboards still provide this support, it is more common, and much faster, for the system chipset to provide support for gate A20.

Normal	Keyboard
Fast	Chipset

Typematic Rate Setting

This determines whether the typematic rate is used. When disabled, continually holding down a key on your keyboard generates only one keying instance. In other words, the BIOS will only report that the key is down. When the typematic rate is enabled, the BIOS will report as before, but it will then wait a moment, and, if the key is still down, it will begin to report that the key has been depressed repeatedly. For example, this feature can be use to accelerate cursor movements with the arrow keys.

Enabled	Enables the typematic rate
Disabled	Disables the typematic rate

Typematic Rate (Chars/Sec)

When the typematic rate is enabled, this field allows you select the rate at which keystrokes are repeated automatically.

6	6 characters per second
8	8 characters per second
10	10 characters per second

12	12 characters per second
15	15 characters per second
20	20 characters per second
24	24 characters per second
30	30 characters per second

Typematic Delay (Msec)

When the typematic rate is enabled, this field allows you to select the delay between when the key was first depressed and when repetition begins.

250	250 msec
500	500 msec
750	750 msec
1000	1000 msec

Security Option

This option allows you to limit access to the system and Setup, or just to Setup.

System	The system does not boot, and access to Setup is denied if the correct password is not entered at the prompt.
Setup	The system does boot, but access to Setup is denied if the correct password is not entered at the prompt.

Note: To disable the security feature, select PASSWORD SETTING on the Main Menu; you will be asked to enter a password. Type no characters; just press <Enter> to disable the security feature. Once the security feature is disabled, the system will boot and you can enter Setup freely.

OS Select for DRAM > 64

This option allows you to access memory over 64MB in OS/2.

Choices: Non-OS2, OS2.

PCI / VGA Palette Snoop

Determines whether MPEG ISA/VESA VGA cards can work with PCI/VGA or not.

Enabled	When PCI/VGA works with MPEG ISA/VESA VGA Cards.
Disabled	When PCI/VGA does not work with MPEG ISA/VESA VGA Cards.

Video BIOS Shadow

Determines whether the video BIOS is copied to RAM. This option depends on the system's chipset design. Video Shadow will increase the video speed.

Enabled	Video shadow is enabled
Disabled	Video shadow is disabled

C8000 - CBFFF Shadow/DC000 - DFFFF Shadow

This choice determines whether optional ROM is copied to RAM. An example of such optional ROM would be the support of on-board SCSI.

Enabled	Optional shadow is enabled
Disabled	Optional shadow is disabled

3-3 Supervisor/User Password Setting

Passwords can be set for user and/or supervisor. The differences are:

The supervisor password allows entry to and alteration of the options in the setup menus. The user password allows entry to but not alteration of the options in the setup menus.

When you select this function, the following message will appear at the center of the screen.

ENTER PASSWORD:

Type the desired password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from the 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 initially disable the password function, just press <Enter> when you are prompted to enter the password. A message will confirm that the password has been disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents any unauthorized user from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent any unauthorized use of your computer.

You determine when the password is required, enter the BIOS Features Setup Menu and its Security option. If the Security option is set to “**System**”, the password will be required both at boot and at entry to Setup. If set to “**Setup**”, the prompting only occurs when trying to enter Setup.

3-4 Chipset Features Setup

ROM PCI/ISA BIOS (2A69JCS9)

CHIPSET FEATURES SETUP

AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	SDRAM CAS Latency Time	: 3
DRAM Speed Selection	: 60ns	Auto Detect DIMM/PCI Clk	: Enabled
MA Wait State	: Slow	Spread Spectrum Modulated	: Disabled
EDO RAS# To CAS# Delay	: 3	CPU Warning Temperature	: Disabled
EDO RAS# Precharge Time	: 3	Current System Temp.	: 25°C / 77°F
EDO DRAM Read Burst	: x333	Current CPU Temp.	: 0°C / 32°F
EDO DRAM Write Burst	: x222	Current CPUFAN Speed	: 5487 RPM
DRAM Data Integrity Mode	: Non-ECC	Current SYSFAN Speed	: 0 RPM
CPU-To-PCI IDE Posting	: Enabled	IN0(V) : 2.03 V	IN1(V) : 1.39 V
System BIOS Cacheable	: Disabled	IN2(V) : 3.31 V	+5 V : 4.91 V
Video BIOS Cacheable	: Disabled	+12 V : 12.09 V	-12 V : -11.53 V
Video RAM Cacheable	: Disabled	-5 V : -5.21 V	
8 Bit I/O Recovery Time	: 1		
16 Bit I/O Recovery Time	: 1		
Memory Hole At 15M-16M	: Disabled		
Passive Release	: Enabled	ESC : Quit	↑ ↓ → ← : Select Item
Delayed Transaction	: Disabled	F1 : Help	PU/PD/+/- : Modify
AGP Aperture Size (MB)	: 64	F5 : Old Values (Shift)	F2 : Color
SDRAM RAS-to-CAS Delay	: Slow	F6 : Load BIOS Defaults	
SDRAM RAS Precharge Time	: Slow	F7 : Load Setup Defaults	

This section describes features of the Intel 440LX PCIsset. If your system contains a different chipset, this section will bear little resemblance to what you see on your screen.

ADVANCED OPTIONS. The parameters in this screen are for system designers, service personnel, and technically competent users only. Do not reset these values unless you understand the consequences of your changes.

NOTE: This chapter describes all fields offered by Award Software in this screen. Your system board designer may omit or modify some fields.

1. Auto Configuration

Auto Configuration selects predetermined optimal values of chipset parameters. When Disabled, chipset parameters revert to setup information stored in CMOS. Many fields in this screen are not available when Auto Configuration is Enabled.

Choices: Enabled, Disabled.

DRAM Speed Selection

The DRAM timing is controlled by the DRAM Timing Registers. The timings programmed into this register are dependent on the system design. Slower rates may be required in certain system designs to support loose layouts or slower memory.

60ns	DRAM Timing Type.
70ns	DRAM Timing Type.

MA Wait State

This item allows you to select the MA Wait State.

Choices: Fast, Slow.

EDO RAS# To CAS# Delay

This sets the relative delay between the row and column address strobes from DRAM (EDO).

The Choice: 2, 3.

EDO RAS# Precharge Time

This defines the length of time Row Address Strobe from DRAM (EDO) is allowed to precharge.

Choices: 3, 4.

EDO DRAM Read Burst

This sets the timing for burst mode reads from DRAM (EDO). Burst read and write requests are generated by the CPU in four separate parts. The lower the timing numbers, the faster the system will address memory.

x222	Read DRAM (EDO) timings are 2-2-2
x333	Read DRAM (EDO) timings are 3-3-3

EDO DRAM Write Burst

This sets the timing for burst mode writes from DRAM (EDO). Burst read and write requests are generated by the CPU in four separate parts. The lower the timing numbers, the faster the system will address memory.

x222	Read DRAM timings are 2-2-2-2
x333	Read DRAM timings are 3-3-3-3

DRAM ECC/PARITY Select

Select parity, ECC, or Disabled, depending on the type of DRAM installed in your system.

Choices: ECC, Parity, Disabled.

CPU-To-PCI IDE Posting

Select Enabled to post write cycles from the CPU to the PCI IDE interface. IDE accesses are posted in the CPU to PCI buffers, for cycle optimization.

Choices: Enabled, Disabled.

2. Cache Features

System BIOS Cacheable

Selecting Enabled allows caching of the system BIOS ROM at F000h-FFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

Enabled	BIOS access cached
Disabled	BIOS access not cached

Video BIOS Cacheable

Selecting Enabled allows caching of the video BIOS ROM at C0000h to C7FFFh, resulting in better video performance. However, if any program writes to this memory area, a system error may result.

Enabled	Video BIOS access cached
Disabled	Video BIOS access not cached

3. PCI and IDE Configuration

8 Bit I/O Recovery Time

The recovery time is the length of time, measured in CPU clocks, which the system will pause after the completion of an input/output request. Because the CPU is operating so much faster than the input/output bus, the CPU must be delayed to allow for the completion of the I/O.

This item allows you to determine the recovery time allowed for 8-bit I/O. Choices are NA, or from 1 to 8 CPU clocks.

16-Bit I/O Recovery Time

This item allows you to determine the recovery time allowed for 16 bit I/O. Choices are NA, or from 1 to 4 CPU clocks.

Memory Hole At 15M-16M

In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory space below 16MB.

Enabled	Memory hole supported.
Disabled	Memory hole not supported

Passive Release

When Enabled, CPU to PCI bus accesses are allowed during passive release. Otherwise, the arbiter only accepts another PCI master access to local DRAM.

Choices: Enabled, Disabled.

Delayed Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transaction cycles. Select Enabled to support compliance with PCI specification version 2.1.

Choices: Enabled, Disabled.

3-5 Power Management Setup

The Power Management Setup allows you to configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.

ROM PCI/ISA BIOS (2A69JCS9)

POWER MANAGEMENT SETUP

AWARD SOFTWARE, INC.

Power Management	: Disabled	** Reload Global Timer Events **
PM Control by APM	: Yes	IRQ[3-7, 9-15],NMI: Enabled
Video Off Method	: V/H	Primary IDE 0 : Disabled
SYNC+Blank		Primary IDE 1 : Disabled
Video Off After	: Standby	Secondary IDE 0 : Disabled
MODEM Use IRQ	: 3	Secondary IDE 1 : Disabled
Doze Mode	: Disabled	Floppy Disk : Disabled
Standby Mode	: Disabled	Serial Port : Enabled
Suspend Mode	: Disabled	Parallel Port : Disabled
HDD Power Down	: Disabled	
Throttle Duty Cycle	: 62.5%	
VGA Active Monitor	: Disabled	
Soft-Off by PWR-BTTN	: Instant-off	
CPUFAN Off In Suspend	: Enabled	
Resume by Ring	: Disabled	
IRQ 8 Break Suspend	: Disabled	
		ESC : Quit ↑ ↓ → ← : Select Item
		F1 : Help PU/PD/+/- : Modify
		F5 : Old Values (Shift)F2 : Color
		F6 : Load BIOS Defaults
		F7 : Load Setup Defaults

Power Management

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

- * Doze Mode
- * Standby Mode
- * Suspend Mode
- * HDD Power Down

There are four selections for Power Management, three of which have fixed mode settings.

Disable (default)	No power management. Disables all four modes.
Min. Power Saving	Minimum power management. Doze Mode = 1 hr. Standby Mode = 1 hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.
Max. Power Saving	Maximum power management – ONLY AVAILABLE FOR SL CPU – Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., and HDD Power Down = 1 min.
User Defined	Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min., or disabled.

PM Control APM

When enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU internal clock. If the Max. Power Saving is not enabled, this will be preset to *No*.

Video Off Method

This determines the manner in which the monitor screen is turned blank.

V/H SYNC+Blank	This selection causes the system to turn off the vertical and horizontal synchronization ports and writes blanks to the video buffer.
Blank Screen	This option only writes blanks to the video buffer.
DPMS	Initial display power management signaling.

Video Off After

When enabled, this feature allows the VGA adapter to operate in a power saving mode.

N/A.	Monitor will remain on during power saving modes.
------	---

Suspend	Monitor blanked when the system enters the Suspend mode.
Standby	Monitor blanked when the system enters Standby mode.
Doze	Monitor blanked when the system enters any power saving mode.

1. PM Timers

The following four modes are Green PC power saving functions which are only user configurable when *User Defined* Power Management has been selected. See above for available selections.

Doze Mode

When enabled and after the set time of system inactivity, the CPU clock will run at a slower speed while all other devices still operate at full speed.

Standby Mode

When enabled and after the set time of system inactivity, the fixed disk drive and the video are shut off while all other devices still operate at full speed.

Suspend Mode

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.

HDD Power Down

When enabled and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

Throttle Duty Cycle

When the system enters Doze mode, the CPU clock runs only part of the time. You may select the percent of time that the clock runs.

Choices: 12.5%, 25.0%, 37.5%, 50.0%, 62.5%, 75.0%

ZZ Active in Suspend

When Enabled, the ZZ signal is active during Suspend mode.

Choices: Enabled, Disabled.

VGA Active Monitor

When Enabled, any video activity restarts the global timer from Standby mode.

Choices: Enabled, Disabled.

2. Break Event From Suspend

IRQ 8 Clock Event

You can Enable or Disable monitoring of IRQ 8 (the Real Time Clock) to awaken the system from Suspend mode.

Choices: Enabled, Disabled.

3. Reload Global Timer Events

When Enabled, an event occurring on each device listed below restarts the global time from Standby mode.

- * IRQ[3 - 7, 9 -15], NMI
- * Primary IED 0
- * Primary IDE 1
- * Secondary IDE 0
- * Secondary IDE 1
- * Floppy Disk
- * Serial Port
- * Parallel Port

3-6 PNP/PCI Configuration Setup

This section describes configuring the PCI bus system. PCI, or **P**ersonal **C**omputer **I**nterconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings

ROM PCI/ISA BIOS (2A69JCS9)

PNP/PCI CONFIGURATION

AWARD SOFTWARE, INC.

PNP OS Installed : No	PCI IDE IRQ Map To : ISA
Resources Controlled By : Manual	
Reset Configuration Data : Disabled	
IRQ-3 assigned to : PCI/ISA PnP	Used MEM base addr : N/A
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	ESC : Quit ↑ ↓ → ← : Select Item
DMA-1 assigned to : PCI/ISA PnP	F1 : Help PU/PD/+/- : Modify
DMA-3 assigned to : PCI/ISA PnP	F5 : Old Values (Shift)F2 : Color
DMA-5 assigned to : PCI/ISA PnP	F6 : Load BIOS Defaults
DMA-6 assigned to : PCI/ISA PnP	F7 : Load Setup Defaults
DMA-7 assigned to : PCI/ISA PnP	

PNP OS Installed

Select Yes if the system-operating environment is Plug-and-Play aware (e.g., Windows 95).

Choices: Yes and No

Resource Controlled by

The Award Plug and Play BIOS can automatically configure all boot and Plug and Play-compatible devices. If you select Auto, all the interrupt request (IRQ) and DMA assignment fields disappear, as the BIOS automatically assigns them.

Choices: Auto and Manual.

Reset Configuration Data

Normally, you should leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot.

Choices: Enabled and Disabled.

IRQ n Assigned to

When resources are controlled manually, assign each system interrupt as one of the following types, depending on the type of device using the interrupt:

Legacy ISA Devices compliant with the original PC AT bus specification, requiring a specific interrupt (such as IRQ4 for serial port 1).

PCI/ISA PnP Devices compliant with the Plug and Play standard, whether designed for PCI or ISA bus architecture.

DMA n Assigned to

When resources are controlled manually, assign each system DMA channel as one of the following types, depending on the type of devices using the interrupt:

Legacy ISA Devices compliant with the original PC AT bus specification, requiring a specific DMA channel.

PCI/ISA PnP Devices compliant with the Plug and Play standard, whether designed for PCI or ISA bus architecture.

PCI IDE IRQ Map to

This field lets you select PCI IDE IRQ mapping or PC AT (ISA) interrupts. If your system does not have one or two PCI IDE connectors on the system board, select values according to the type of IDE interface(s) installed in your system (PCI or ISA). Standard ISA interrupts for IDE channels are IRQ14 for primary and IRQ15 for secondary.

Choices: PCI-SLOT1, PCI-SLOT2, PCI-SLOT3, PCI-SLOT4, ISA, PCI-AUTO

Primary/Secondary IDE INT#

Each PCI peripheral connection is capable of activating up to four interrupts: INT# A, INT# B, INT# C and INT# D. By default, a PCI connection is assigned INT#A. Assigning INT# B has no meaning unless the peripheral device requires two interrupt services rather than just one. Because the PCI IDE interface in the chipset has two channels, it requires two interrupt services. The primary and secondary IDE INT# fields default to values appropriate for two PCI IDE channels, with the primary PCI IDE channel having a lower interrupt than the secondary.

Used MEM base addr

Select a base address for the memory area used by any peripheral that requires high memory.

Choices: C800, CC00, D000, D400, D800, DC00, N/A.

Used MEM Length

Select a length for the memory area specified in the previous field. This field does not appear if no base address is specified.

Choices: 8K, 16K, 32K, 64K.

3-7 Load BIOS Defaults

The BIOS defaults have been set by the manufacturer and represent settings that provide the minimum requirements for your system to operate.

3-8 Load Setup Defaults

The chipset defaults are settings that provide for maximum system performance. While Award has designed the custom BIOS to maximize performance, the manufacturer has the right to change these defaults to meet their needs.

3-9 Integrated Peripherals

ROM PCI/ISA BIOS (2A69JCS9)
 INTEGRATED PERIPHERALS
 AWARD SOFTWARE, INC.

IDE HDD Block Mode	: Enabled	Onboard Serial Port2	: 2F8/IRQ3
IDE Primary Master PIO	: Auto	UART Mode Select	: Normal
IDE Primary Slave PIO	: Auto		
IDE Secondary Master PIO	: Auto	Onboard Parallel Port	: 378/IRQ7
IDE Secondary Slave PIO	: Auto	Parallel Port Mode	: SPP
IDE Primary Master UDMA	: Auto		
IDE Primary Slave UDMA	: Auto		
IDE Secondary Master UDMA	: Auto		
IDE Secondary Slave UDMA	: Auto		
On-Chip Primary PCI IDE	: Enabled		
On-Chip Secondary PCI IDE	: Enabled		
USB Keyboard Support	: Disabled		
Init Display First	: PCI Slot		
Power ON Function	: BUTTON		
ONLY			
KBC input clock	: 8 MHz	ESC : Quit	↑ ↓ → ← : Select
Onboard FDC Controller	: Enabled	Item	
Onboard Serial Port 1	: 3F8/IRQ4	F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values (Shift)	F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

IDE HDD Block Mode

This allows your hard disk controller to use the fast block mode to transfer data to and from your hard disk drive (HDD).

Enabled	IDE controller uses block mode.
Disabled	IDE controller uses standard mode.

IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

IDE Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, select Auto to enable BIOS support.

Choices: Auto, Disabled

On-Chip Primary/Secondary PCI IDE

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select enabled to activate each channel separately.

Onboard FDD Controller

This should be enabled if your system has a floppy disk drive (FDD) installed on the system board and you wish to use it. Even when so equipped, the adding of a higher performance controller will require the disabling this feature.

Choices: Enabled, Disabled.

Onboard Serial Port 1/Port 2

This item allows you to determine the I/O address of the onboard serial port 1/port2 controller.

Choices: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled.

UART 2 Mode

This item allows you to determine the Infra-Red (IR) function of the onboard I/O chip.

Choices: Standard, ASKIR, HPSIR.

IR Function Duplex

Select the value required by the IR device connected to the IR port. Full-duplex mode permits simultaneous two-direction transmission. Half-duplex mode permits transmission in one direction at a time.

Choices: Half, Full.

RxD, TxD Active

This item allows you to determine the activity of RxD, TxD.

Choices: i, Hi", o, Lo" o, Hi" i, Lo".

Onboard Parallel Port

Select a logical LPT port name and matching address for the physical parallel (printer) port.

Choices: 378/IRQ7, 278/IRQ5, 3BCH / IRQ7, Disabled.

Onboard Parallel Mode

Select an operating mode for the onboard parallel port. Select Compatible or Extended unless you are certain both your hardware and software support EPP or ECP mode.

Choices: ECP/EPP, ECP, EPP/SPP, SPP,.

ECP Mode Use DMA

Select a DMA channel for the port.

Choices: 3,1.

Parallel Port EPP Type

Select EPP port type 1.7 or 1.9.

Choices: EPP1.7, EPP1.9.

3-10 Save & Exit Setup

Saves the CMOS value changes to CMOS and exits setup.

3-11 Exit Without Save

Cancels all the CMOS value changes and exits setup.