VIA BX

ATX PENTIUM II/III

MAINBOARD

USER'S MANUAL

(Ver 3.x)

PT-6VBP

ATX PENTIUM II

MAINBOARD

USER'S MANUAL

(Ver 3.x)

TABLE OF CONTENTS

SOMETHING IMPORTANT !

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

☆ LOAD SETUP DEFAULTS
"LOAD SETUP DEFAULTS" is the function which will have the BIOS default settings loaded into the CMOS memory, these default settings are the best-case values which will optimize system performance and increase system stability This function will be necessitated when you receive this mainboard, or when the system CMOS data is corrupted. Please refer to the Section 4.8 for the procedures.

☆ DISCHARAGE CMOS DATA
Whenever you want to discharge the CMOS data or open the system chassis, Make sure to disconnect the AC power first because there is always the 5V standby voltage connected to the ATX form-factor mainboard. Without disconnecting the AC power connector from the PC system, the mainboard can be damaged by any improper action .

☆ WAKE ON LAN
In order to support the Wake On LAN feature, the system requires a special SPS (Switching Power Supply), Such power supply must be able to provide at least 700 mA of driving capability on the "5V standby" voltage. Please refer to the Section 3.3 for pin assignment.

☆ WARNING !
The "Static Electricity" may cause damage to the components on the mainboard, In order to avoid the damage to the mainboard accidentally, please discharge all static electricity from your body before touching this mainboard.

☆ NOTICE
Information presented in this manual has been carefully checked for reliability; however, no responsibility is assumed for inaccuracies. The information contained in this manual is subject to change without notice.

1. INTRODUCTION

1.1 OVERVIEW

This mainboard is a high performance personal computer mainboard with 100MHz ultra high front side bus frequency designed for Pentium™ II, Pentium™ III and Celeron™ processors. It is an ATX form-factor mainboard with A.G.P. (Accelerated Graphics Port) and PCI Local Bus on board, Designed based on the VIA VT82C692 or VT82C693 system chipset and Winbond® I/O chipset, Basically, the only difference between VT82C692 and VT82C693 is the chipset pin assignment. This mainboard is designed for both VT82C692 and VT82C693 chipset so you will see one of these two chipsets insatlled on the mainboard.
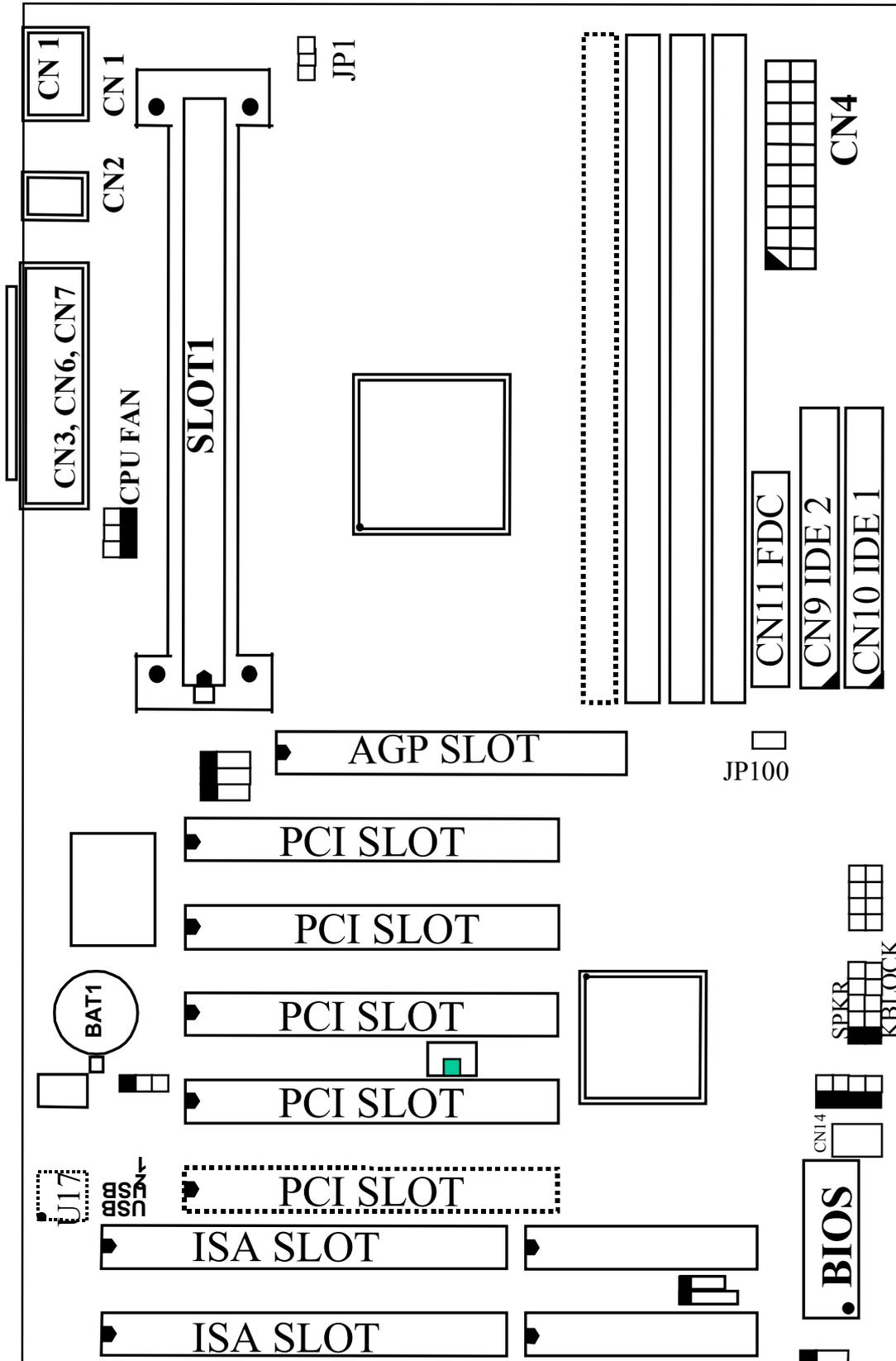
There are two channel "PIO" and "Ultra DMA/33 Bus Master" mode PCI IDE ports, one Floppy Disk control port, two high speed Serial ports (UARTs) and one multi-mode Parallel port and supports PS/2™ mouse, IR and USB ports. It is designed for 233MHz, 266MHz, 300 MHz, 333MHz , 350MHz, 400MHz, 450MHz, 500MHz and 550MHz high performance processors (S.E.C. Cartridge) for high-end and true GREEN-PC computer systems.

The Pentium™ II, Pentium™ III and Celeron™ Processors are the 64-bit processors with RISC technology, which offers several key features such as built-in L2 cache (256KB/512KB), 12-stage super-pipeline architecture, out of order execution .... etc. In order to optimize its capabilities and performances, the 32-bit Operating System (such as Windows® NT and OS/2™) and 32-bit applications are recommended.

The Accelerated Graphics Port (A.G.P.) on the mainboard is designed for AGP 3D video display card. Unlike PCI-based display cards, the AGP technology provides lightning data throughput to fully facilitate the 3-Dimensional and multimedia graphics display. The data transfer rate on AGP can be up to 133Mhz and which is much faster than the traditional 33MHz PCI VGA card.

The AGP is a new video display technology and it requires device driver or new Operating System to enable this accelerated graphic feature. Windows® 98 supports AGP directly but Windows® 95 still need the appropriate device drivers to support AGP feature. Please check your AGP card and you will find the device driver. Read the installation guide of AGP card carefully and install the related device driver when necessary.

1.2   MAINBOARD LAYOUT

CN 1

CN 1

JP1

CN2

CN4

CN3, CN6, CN7

CPU FAN

SLOT1

CN11 FDC

CN9 IDE 2

CN10 IDE 1

AGP SLOT

JP100

PCI SLOT

PCI SLOT

BAT1

PCI SLOT

PCI SLOT

SPKR

KBLOCK

CN14

U17

USB1

USB2

PCI SLOT

ISA SLOT

BIOS

ISA SLOT

1.3   SPECIFICATIONS

◎ **CPU**
   Intel® Pentium™ II, Pentium™ III and Celeron™ processors.
   233, 266, 300, 333. 350, 400,433, 450, 466, 500 and up to 550MHz.

◎ **CPU VCC**
   Switching Voltage Regulators on board, supports +1.80V DC through +3.5V DC
   CPU Core Voltage.
   Note :   The CPU Core Voltage will be Detected and adjusted automatically by the
   VID-pin on the CPU, so there is no jumper setting required..

◎ **WORD SIZE**
   Data Path   :   8-bit, 16-bit, 32-bit, 64-bit
   Address Path   :   32-bit

◎ **PC SYSTEM CHIPSET**
   VIA VT82C692 or VT82C693 Chipset

◎ **SUPER I/O CHIPSET**
   Winbond® W83977TF-AW

◎ **FRONT SIDE BUS FREQUENCY**
   66 MHz and 100MHz selectable.

◎ **MEMORY**
   DRAM : Three 168-pin DIMM sockets are designed onboard which support 8, 16,
   32,64 or 128MB 3.3V SDRAM DIMM module. Maximum memory size can be up
   to 384 MB with Parity / ECC (Error Checking and Correcting) supported.

   CACHE: 512KB pipelined burst SRAM built-in Pentium™ II processor. 0KB or
   128KB SRAM in Celeron™ processor.

◎ **BIOS**
   AWARD System BIOS. 256KB x 8 Flash ROM
   (Supports Plug & Play, ACPI, DMI and Green functions).

◎ **EXPANSION SLOTS**
   AGP Slots   :   32-bit x 1   (Supports 1x or 2x AGP graphics cards)
   PCI Slots   :   32-bit x 5   (All Master/Slave, PCI 2.1 Compliant)
   ISA Slots   :   16-bit x 2   (One of the slot is PCI/ISA shared)

◎ **WOL PORTS**

One WOL connector supports Wake-On-LAN (WOL up-designed)

◎ **USB PORTS**

Two Universal Serial Bus (USB) ports.

◎ **IDE PORTS**

Two channels of Ultra DMA/33 Bus Master IDE ports, which will support up to 4 IDE devices like IDE hard disk, ATAPI CD-ROM and LS-120/ZIP-100 devices. The IDE ports can be programmed to support PIO Mode 4, DMA mode 2 and Ultra DMA/33.

◎ **SUPER I/O PORTS**

1. Two high speed NS16C550 compatible serial ports (UARTs).
2. One parallel port, supports SPP/EPP/ECP mode.
3. One Floppy Disk Control port.

◎ **IR PORT**

One HPSIR and ASKIR compatible IR transmission connector (5-pin).
One Consumer IR transmission connector (4-pin, optional).

◎ **MOUSE AND KEYBOARD**

One PS/2™ mouse connector, One PS/2™ keyboard connector.

◎ **HARDWARE MONITORING** *(optional)*

Winbond W83783S (U17) is designed on the board to monitor hardware healthy status like system voltage, system temperature, and cooling fans. For example, when CPU temperature is too high, you will hear a series of beeping alarm and then the system board will slow down the CPU speed (throttling speed) so that you can take proper action to prevent your system from damage. When you hear the beeping alarm, be sure to turn the power off immediately and check on the cooling fans (especially the CPU cooling fan) to see whether it is working properly or not. If you don't know how to handle it, send the PC system to your dealer for technical support.

This mainboard includes the hardware monitoring program and you can use it to monitor the system healthy status. When you find there is the Winbond W83783S installed on the board, you can run the hardware monitoring program which comes in the CD disc and then it will monitor the system healthy status all the time.

◎ **ACPI (optional)**

Advanced Configuration and Power Interface (ACPI) function is strongly recommended by PC'98 because it will let you have many additional features and that will make your PC system becomes very friendly and convenient. Followings are the ACPI features designed on the board:

1. On Now: power on the system by panel-switch, Keyboard, PS/2™ Mouse, Modem ring-in, RTC alarm or LAN signal
2. Power off (Soft-off) by OS or Panel-switch.
3. Resuming of PC system. (such as Modem ring-in, RTC alarm, ... etc.)
4. Supports Full-On/Doze/Standby/Suspend operating modes.

◎ **DIMENSION**

1. Width & Length : 305 mm x 190 mm.
2. Height : 2 1/2 inches with CPU Retention Mechanism.
3. PCB Thickness : 4 layers, 0.05 inches normal.
4. Weight : 18 ounces.

ENVIRONMENT LIMIT

1. Operating Temperature : 10   to 40   . (50   to 104   )
2. Required Airflow : 50 linear feet per minute across CPU.
3. Storage Temperature : - 40   to 70   . (- 40   to 158   )
4. Humidity : 0 to 90% non-condensing.
5. Altitude : 0 to 10,000 feet.

2. INSTALLATION

2.1   UNPACKING

The mainboard contains the following components. Please inspect the following contents and confirm that everything is there in the package. If anything is missing or damaged, call your supplier for instructions before proceeding.

- This mainboard.
- One USER'S MANUAL.
- One Cable set for IDE and Floppy devices.
- One Pentium™ II Processor Retention Mechanism (RM).
- One CD diskette for device driver and utility programs.

This mainboard contains electrostatic sensitive components and it can be easily damaged by static electricity. So please leave it sealed in the original packing until when installing.

A grounded anti-static mat is recommended when unpacking and installation. Please also attached an anti static wristband to your wrist and have it grounded to the same point as the anti-static mat.

After the opening of the mainboard carton, please observe the mainboard carefully to make sure there is no shipping and handling damage before you can start to install the PC system.

Having finished all the procedures above, you are now ready to install the mainboard to the chassis. Please make sure that the chassis is the ATX type so that the mounting hole will match with this mainboard.

2.2 AMAZING WAYS TO POWER ON THE PC SYSTEM

When the mainboard has been installed successfully, there are several ways to power on the system. Please read the following description for all the details.

POWER BUTTON

   The power button can be programmed by COMS setup program and it has different features. Please refer to 3-11 and page 3-12 for detail function description.

   Note: This power button can not be used to power-on the PC system if the ”Password“ is selected to power on your system. (please refer to Section 4.8 for the “INTEGRATED PERIPHERALS“ in the CMOS setup.) However, you can always use the power button to turn off the power.

☐ **KEYBOARD (Password or Hot Key) (*Optional)*
   This mainboard allows you to enter your personal password or a combination of hot key and you can use it to power on your PC system. When JP1 is enabled (please see section 3-14), this mainboard will keep scanning the keyboard status when the system power is off, waiting for the correct password or hot key input to turn on the system power (the stand-by 5V is still working and the power LED on the keyboard is still active). Without the correct password or hot key, no one else can turn on the PC system (neither by the power button). So the PC system is secured for you. (Please refer to Section 4.8 for the BIOS setup.)

   When the "Password" and "Hot KEY" is selected, you will have to reboot the PC system to activate the setting, when you see the POST (Power On Self Test) is completed, the setting is changed and stored in the CMOS memory. Having finished the procedure, you may turn the power off and then you can use the keyboard to power-on the PC system afterward.

   In case that you forget the "Password" or "Hot Key", disconnect the AC power for 30-60 seconds then re-connect the AC power to the PC system, the power button will be activated again and you can use the power button to turn on the system. Input your personal password again in the BIOS setup program, and then you may use the new password to power-on the PC system afterward.

☐ **PS/2™ MOUSE (Left or right mouse button)** *Optional*

When you are tired of pressing on the power button or keying in the password to turn on the PC system, there is another extremely convenient way for you.

When you have a PS/2™ mouse connected to the system, you can use the mouse click to turn on the PC system power. Please refer to section 4.8 for the BIOS setting

To use the mouse key to turn on the PC system power, the mouse click must be done quickly and continually. Basically, 2-5 quick clicks on the mouse key (left key or right key) will turn the power immediately.

In order to activate the mouse key feature, you will have to reboot the PC system after the BIOS setting and wait until the POST (Power On Self Test) is completed. Having finished the procedure, you may use the mouse key to power-on the PC system afterward..

Note: 1. This function will be disabled when the setting on JP1 is "disabled"
    2. This feature is not available on the COM port mouse(serial mouse).

☐ **RTC ALARM**

PC system can be waked up by the RTC setting in the CMOS. You can set the alarming date and time in the RTC memory, When RTC alarms, the PC system will be triggered and wakes up automatically.

Enable the "RTC Alarm Resume" selection in the BIOS setup utility, and then input the accurate date and time in following fields. (the feature of "RTC Alarm Resume" is mentioned in the "POWER MANAGEMENT SETUP", please refer to Section 4.7), Having stored the RTC alarm setting, the PC system will be turned on automatically according to the date and time which is recorded in the CMOS memory.

Same as the above, you have to reboot the PC system and wait for the POST (Power On Self Test) is completed to enable the RTC alarm.

☐ MODEM RING-IN

Everyone knows that a PC system can be used as a fax machine to send or receive fax messages. But most people still use fax machine to receive their messages because it is not practical to have the system powered on all day long waiting for the incoming messages. Now the problem can be solved by using this mainboard. This mainboard can be triggered by a modem ring-in signal. When you have a *external* modem installed, you can leave the PC system power off. Whenever there is the incoming message, the PC system will be triggered by the ring-in signal and wake up automatically to receive the message for you. From now on, you can tell your PC system to receive the fax message for you.

In order to use the ring-in signal to wake up your PC system, you will have to use the *EXTERNAL MODEM* and have it connected to one of the *SERIAL PORTS* (COMA or COM B). When the system power is off, this mainboard will continue to detect the serial port status. When it detects the ring-in signal from the serial port, the system power will be turned on and start to receive the incoming messages automatically. (you need to have the software like Award Zero-Volt Data-Suspend Utility so that you can use the fax utility to receive the incoming fax message).

To enable the Modem Ring-In feature, you have to run the BIOS setup utility and enable the "Resume by Ring or LAN" option (it is located in the "POWER MANAGEMENT SETUP", please refer to Section 4.7 for the settings). Having completed the BIOS setup, you have to reboot the PC system so that BIOS can verify the setting. (the "DMI pool data" will be verified by the BIOS when loading the operating system). Simply speaking, shut down the PC system and then re-start the system. The modem ring-in feature will be enabled when the operation system has been loaded.

*Note: **This function is not available when using the internal MODEM card**.*

☐ **WAKE ON LAN (WOL)**

There is a WOL connector CN12 (see page 3-9) on the mainboard which is designed to connect to the signal from a LAN card which supports the Wake On LAN feature. When such LAN card is installed, you may turn on the PC system from your remote server and monitor the PC status.

To enable this feature, you will have to use the BIOS setup utility to enable the "Modem or LAN Resume" (it is located at "POWER MANAGEMENT SETUP", please refer to Section 4.7 for the settings). Having completed the BIOS setup, you have to reboot the PC system so that BIOS can verify the setting. (the "DMI pool data" will be verified by the BIOS when loading the operating system). Simply speaking, reboot the PC system, the Wake On LAN feature will be enabled when the operation system has been loaded

Note: This function will be disabled if you turn off the power before the system can verify the DMI pool data.

2.3 POWER OFF THE PC SYSTEM

There are two ways to power off the system. They are "Shut Down by Power Button" and " Shut Down by OS". (such as Windows® 95 and Windows® 98, you can choose the **Shut Down** from the file menu and the system will be powered off immediately).

2.4 SOFTWARE INSTALLATION

When you have installed Windows operation system, you may find the question mark on your USB device in the device manager. In this case, you have to install the USBSUPP.EXE which you will find in your Windows CD. When you have finished the installation of USBSUPP, you will see the question mark still exist because Windows can not detect the change automatically. Please use your mouse to point on the question mark then select "remove" and then restart the PC system. When the operation system is loaded again, the question mark will be disappeared.

There is a CD which comes with the mainboard. The CD contains the device drivers which is necessary when installing the mainboard. Please refer to the following procedures to install the device drivers.

Install the mainboard driver:

Before you can use this mainboard in your PC system, you will have to install some device driver so that it will work with Windows properly. The device driver which you have to installed includes **IDE driver**, **PCI bridge and AGP driver** …etc. Please refer to the README.TXT and the following steps to install the device driver:

Step 1. Insert the CD diskette into the CD ROM drive. (D:)

Step 2. Change the directory to "D:\Driver\mainboard\VIA\Pentium II "
        ("D:" is the device name of your CD ROM drive)

Step 3. Run SETUP.EXE and follow the screen display to complete the setup.

3. HARDWARE SETUP

Before you can start to install this mainboard, some hardware settings is required to make sure it will work perfectly with the component which you are going to install in your PC system. To configure the mainboard is a simple task, only a few jumpers, connectors, cables and sockets needs to be selected and configured. (For the locations of each component please refer to page 1.2 " mainboard layout"

3.1 INSTALLATION OF CPU

When you have installed the Pentium™ II, Pentium™ III or Celeron™ processor onto the mainboard, it will detect the CPU type and decide the CPU voltage automatically. So you don't have to make any jumper setting to select the CPU voltage. All you have to do is use JP5, JP6, JP7 and JP8 to select the CPU clock ratio.

The socket where we are going to plug in the CPU is the slot type connector (J1). This slot is designed for Pentium ™ II, Pentium™ III or Celeron™ processors and we call such new CPU socket – the *SLOT 1*.

Basically, Slot 1 is a new architecture and it is totally different to the traditional Pentium CPU socket (Socket 7). Because the Slot 1 is a revolutionary new architecture and the installation of such processors will need some additional skill.

There are two types of Pentium ™ II, Pentium™ III CPU - the boxed type processor and OEM type processor. Although these two different packages has the same processor inside, but and they have different accessories. So the installation procedure will be slightly different when installing different type of CPU.

The boxed type Pentium II, PentiumIII processors are for retail purpose and it can be purchased from the retail store. As for the OEM package processor, it is for OEM customers like system integrators to build the PC systems. Sometimes, users will find the OEM package Pentium II, Pentium IIIprocessor sold in the retail store. When you are purchasing the processor, please check with the CPU

dealer and find the appropriate information to install the processor.

Basically, the core logic of boxed Pentium II, Pentium III processor and OEM processor are identical, The major difference between these two processors is the boxed CPU has the head sink, cooling fan and heat sink supporter in the package, while the OEM package doesn't. As for the Celeron™ processor, it will need the different mechanism to hold the CPU, please check with your CPU supplier for the require materials.

3.2 INSTALLING THE DRAM MODULES

The VIA Apollo BX chipset integrates a main memory controller that supports a 64-bit DRAM interface. The DRAM controller supports the following features:

1. **DRAM type: Synchronous (SDRAM) DRAM.**
2. **Memory size: 8MB to 384MB.**
3. **Memory modules supported: Single and double density 3.3V DIMMs.**

This mainboard supports three 168-pin DIMM sockets (DIMM1, DIMM2, and DIMM3), each DIMM can be single-bank or double-bank, 8MB up to 384MB of local memory can be populated on the board. The Synchronous (SDRAM) memory is recommended because it will give a better performance.,.
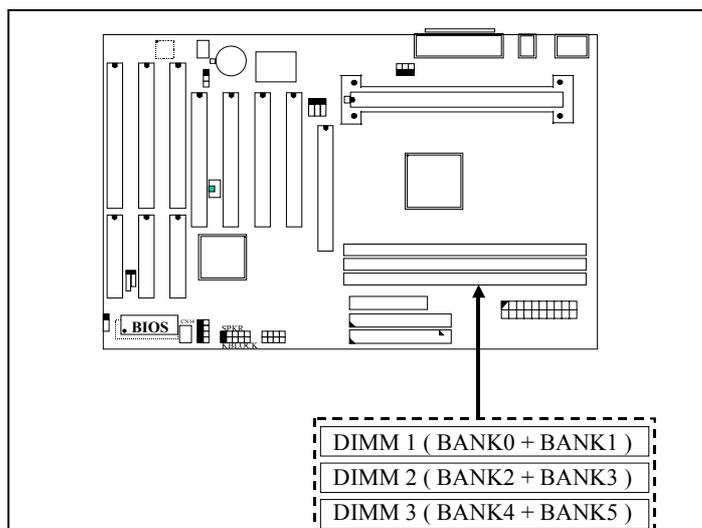

Picture of DRAM subsystem

In the DRAM subsystem, the ECC feature can be used in the DRAM sub-system and make sure there is no error during the data transmission (please refer to Section 4.6 for the BIOS setting, the default status is Non-ECC selected.) Before you enable the ECC checking feature, please make sure that all DIMM modules have the true *parity bit*.

3.3   CONNECTORS

The connectors on the mainboard are either the pin header type or D-type connectors, they are used to connect the accessories or peripheral devices (such as power, mouse, printer,...etc.). Following is the connectors with its description and pin assignment which is designed on the mainboard.

(A) BAT1:   **Battery Socket** (Use the 3 Volts Lithium battery : CR2032)

BAT1: Battery Socket

Pin#	Pin name	Pin#	Pin name
+	Battery Positive	-	Ground
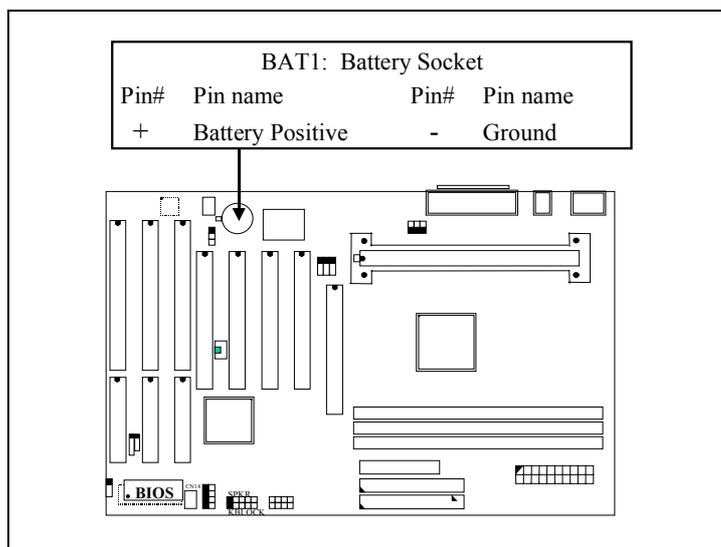
(B) CN1: PS/2 Mouse and Keyboard Connector
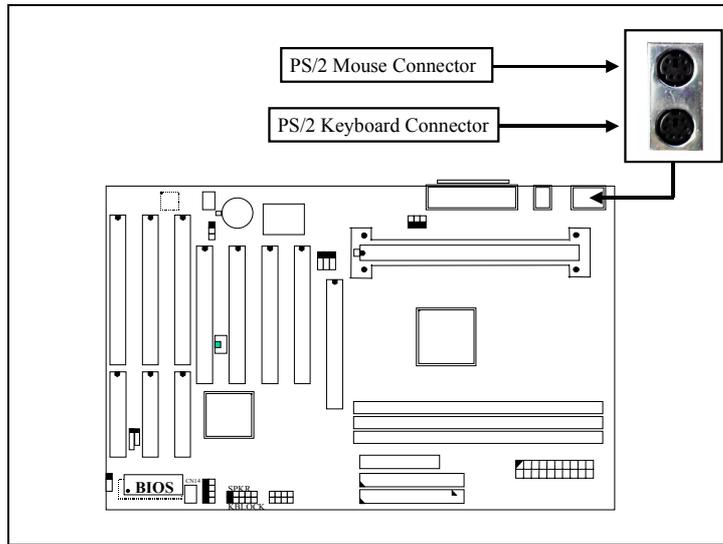
Pin assignment of PS/2 mouse connector:

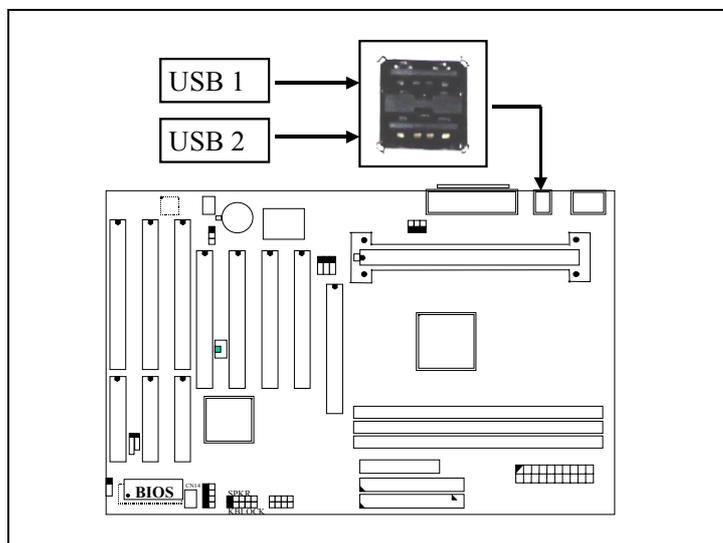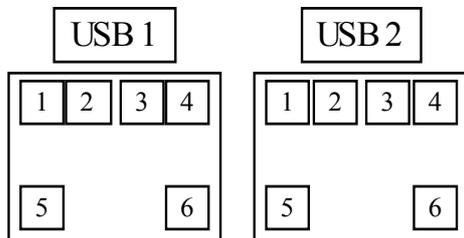| Pin #	Signal name	Pin #	Signal name	Pin #	Signal name
1	Mouse Data	3	Ground	5	Mouse Clock
2	No Connection	4	+ 5V DC	6	No Connection

Pin assignment of keyboard connector

Pin #	Signal name	Pin #	Signal name	Pin #	Signal name
1	Keyboard Data	3	Ground	5	Keyboard Clock
2	No Connection	4	+ 5V DC	6	No Connection

(C) CN2: USB Port (Universal Serial Bus) Connector

Pin assignment of USB connector:

USB 1					USB 2			
1	2	3	4		1	2	3	4
5			6		5			6

```
Pin1: +5VDC
Pin2: DATA-
Pin3: DATA+
Pin4: Ground
Pin5: Ground
Pin6: Ground
```

(D)   CN3 & CN7 :   COM A & COM B connector
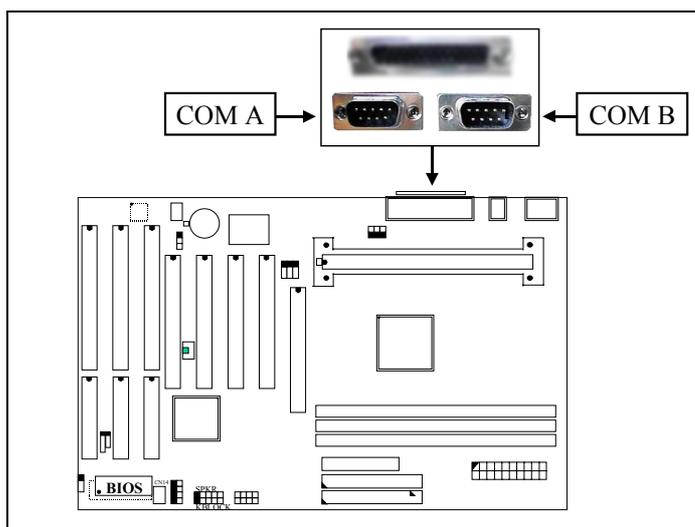
Ping assignment of serial port connector:

Pin #	Signal name		Pin #	Signal name
1	DCD (Data Carrier Detect)		6	DSR (Data Set Ready)
2	RD (Received Data)		7	RTS (Request To Send)
3	TD (Transmit Data)		8	CTS (Clear To Send)
4	DTR (Data Terminal Ready)		9	RI (Ring Indicator)
5	Ground			

I/O address 3F8H/2F8H/3E8H/2E8H, IRQ3/IRQ4, selected by CMOS setup.

(E)   CN4:   ATX Power Connector

ATX Power connector
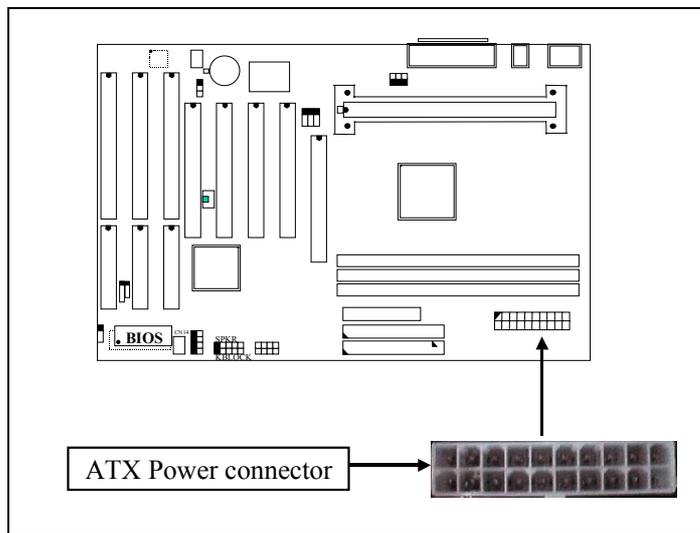
Pin assignment of ATX power connector

11 1	Pin #	Signal name	Pin #	Signal name
	11	+ 3.3V DC	1	+ 3.3V DC
	12	- 12V DC	2	+ 3.3V DC
	13	Ground	3	Ground
	14	PS-ON	4	+ 5V DC
	15	Ground	5	Ground
	16	Ground	6	+ 5V DC
	17	Ground	7	Ground
	18	- 5V DC	8	PW-OK
	19	+ 5V DC	9	+ 5V SB
	20	+ 5V DC	10	+ 12V DC
20 10				

(F) CN6: Parallel Port Connector

(Supports SPP/EPP/ECP modes, IRQ7 or IRQ5 is selectable, ECP mode will use either DMA channel 3 or channel 1 which can be selected by the CMOS setup probram)
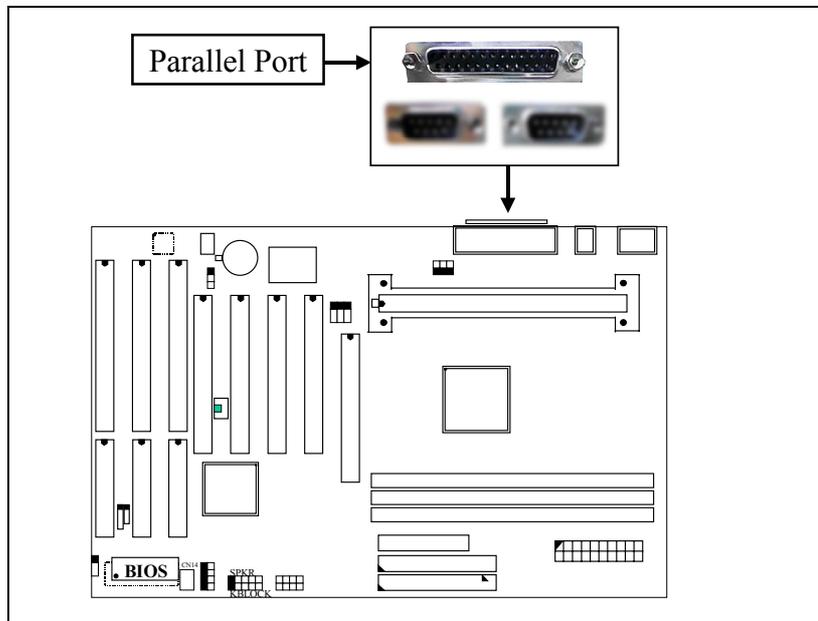
Pin assignment of parallel port:

Pin #	Signal name	Pin #	Signal name
1	STROBE	14	AUTO FEED
2	Data Bit 0	15	ERROR
3	Data Bit 1	16	INIT
4	Data Bit 2	17	SLCT IN
5	Data Bit 3	18	Ground
6	Data Bit 4	19	Ground
7	Data Bit 5	20	Ground
8	Data Bit 6	21	Ground
9	Data Bit 7	22	Ground
10	ACK	23	Ground
11	BUSY	24	Ground
12	PE	25	Ground
13	SLCT		

(G) CN8: CPU Cooling Fan Power Connector

GND   +12V   Fan Sense Signal

CN8

1   2   3
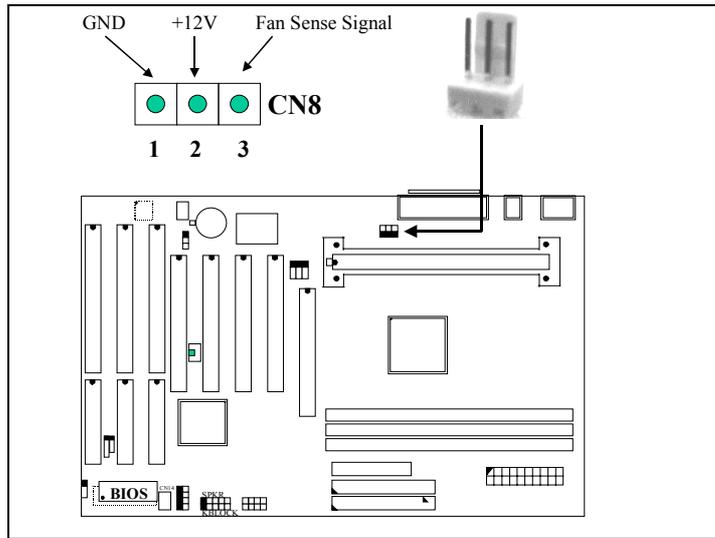
(H) CN9, CN10:   IDE Connectors
    Primary IDE Port: 1F0H, IRQ 14
    Secondary IDE Port: 170H, IRQ 15

CN9: IDE 2

CN10: IDE 1
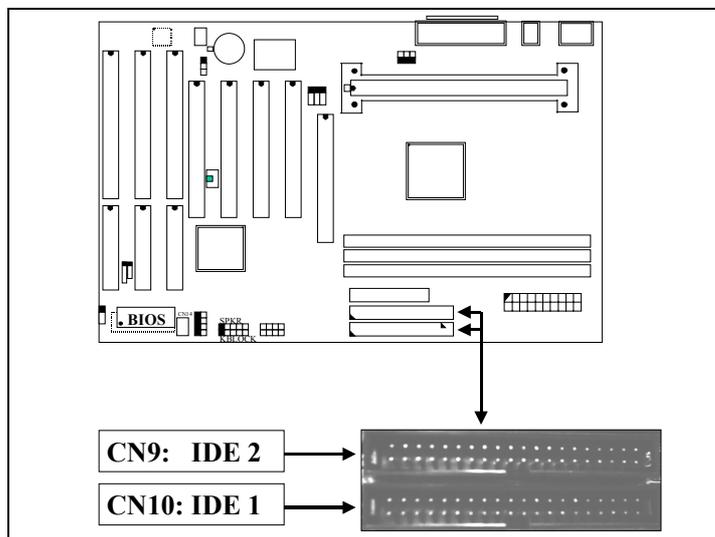
(I) CN11: Floppy Disk Control Port Connector (Using IRQ6, DMA channel 2)

CN11: FDC Connector
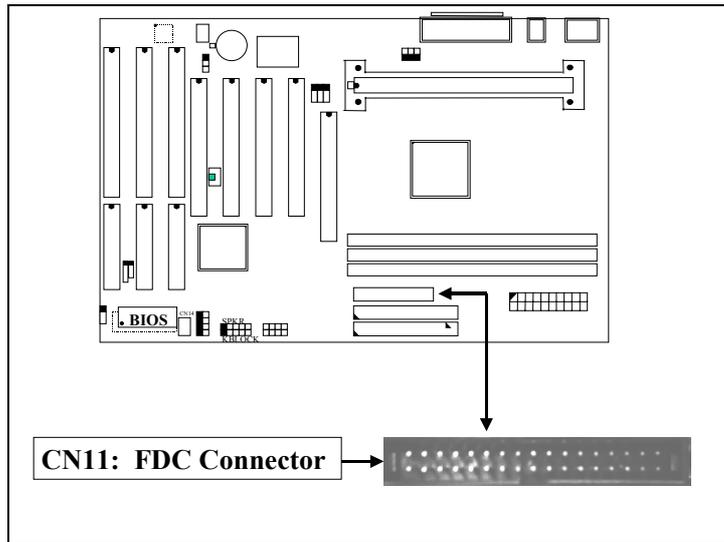
(J) CN12: WOL (Wake On LAN) Connector

In order to use the WOL LAN card to trigger the power of the PC system, the switching power supply must be able to provide at least 700mA current driving ability on the "5V standby" voltage.

CN 12
WOL   1   2   3
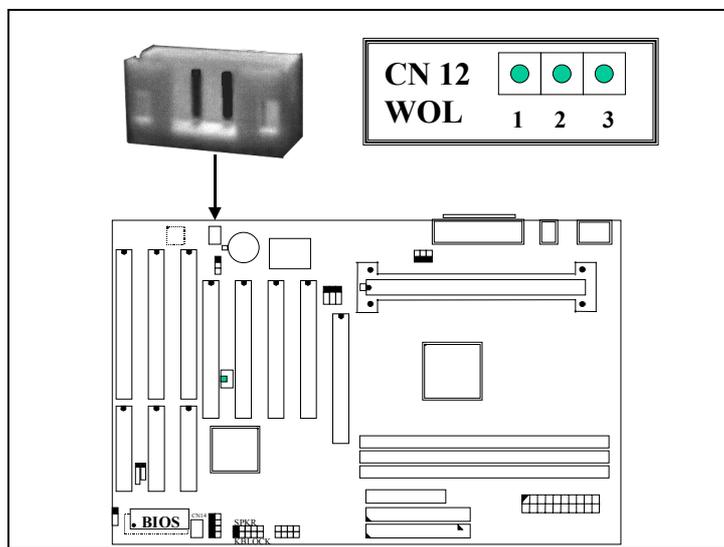
Pin assignment of WOL Connector

1	2	3	Pin #	Signal name	Pin #	Signal name	Pin #	Signal name
			1	5V standby	2	Ground	3	WOL Signal

(K) CN14: Chassis Fan Power Connector (optional)

(this connector is available only when Winbond W83781D is installed on board)

1	⬤	**Ground**
2	⬤	**+12V DC**
3	⬤	**Fan Sense Signal**

CN 14 Chassis Fan Power Connector
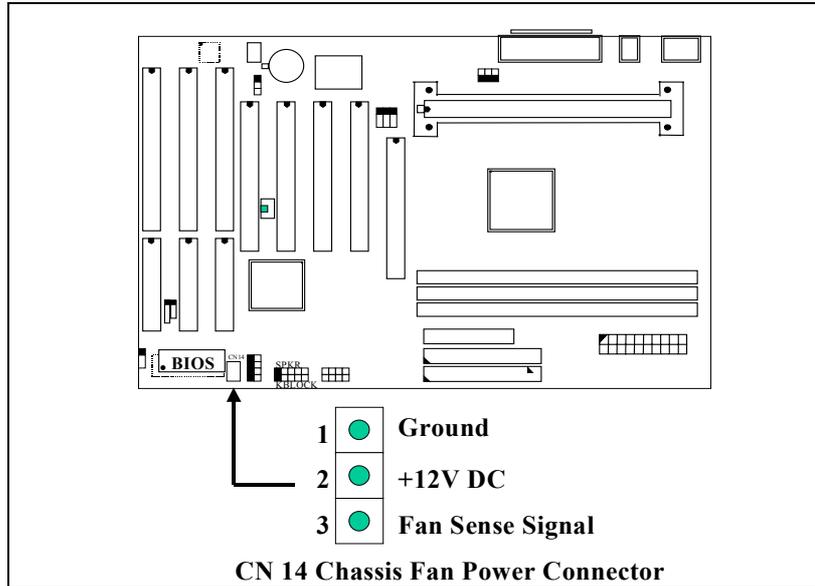
(L) CN15: IR / FIR (Infrared Rays) Connector

      Consumer IR Connector (Consumer IR connector is active only when W83977CTF-AW I/O Chip is installed on position U11)

IR/FIR (INFRARED RAYS) CONNECTOR   **CONSUMER IR CONNECTOR**

(+5VDC)	1A	◉	◉	1B	(+5VDC)
(NO CONNECTION)	2A	⬤	⬤	2B	(IR TRANSMIT)
(IR RECEIVE)	3A	⬤	⬤	3B	(CONSUMER IR RECEIVE)
(GROUND)	4A	⬤	⬤	4B	(GROUND)
(IR TRANSMIT)	5A	⬤			
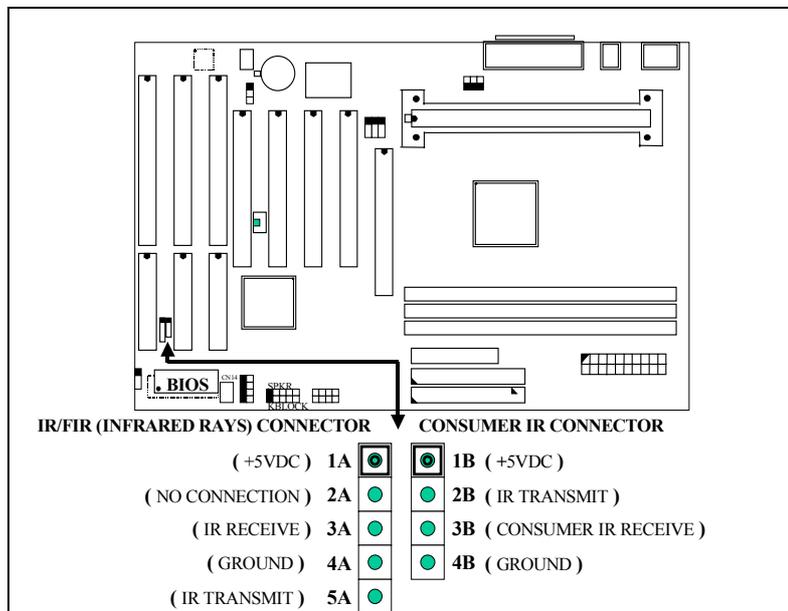
(M) Push buttons and LED connectors

A series of connectors are designed on the board to connect the push buttons and LED indicators. Followings are the details:

RS: Reset Button connector
HL: HDD LED connector
SL: Sleep LED connector
PW: Power On / Off Suspend switch

PW SL HL RS

PUSH BUTTONS AND LED CONNECTORS
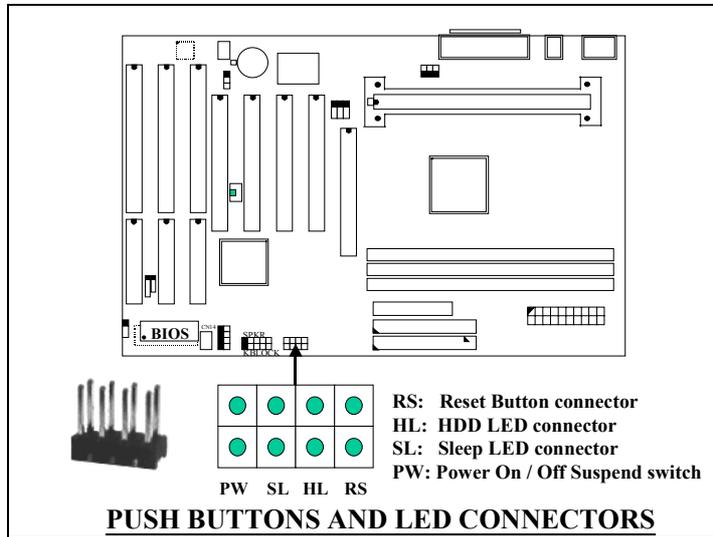
1. **RS**   Reset Button Connector

Pin #	Signal name	Pin1&2	Function
1	Reset Control	Open	No action
2	Ground	Short	System Reset

2. **HL**   IDE HDD LED Connector

Pin #	Signal name
1	+ 5V DC Pull-up
2	HDD Active Signal

3. **SL**   Sleep LED Connector

This LED will be lightened when the AC power is connected and the system is power off, darkened when the AC power is disconnected or the system is powered on.

Pin #	Signal name
1	Signal Pin
2	Ground

4. **PW**   Power On / Off and External Suspend Switch Connector
             According to the setup in CMOS, the PW connector has two functions. It
             can be the Power Switch or Suspend Switch of your PC system.
             (please refer to Section- 4.7 and section 4.8 for BIOS setup)

    ①   **If the setup in CMOS is "Delay 4 Sec.", the function of "PW" will be**:
        A. When system is power off :
            Press this switch, the system will power on. (when "password" is
            selected in the CMOS setup program, you will be unable to use the PW
            button to turn on the power of the PC system, please see Section 2.2
            and Section 4.8 for more details.)

        B. When system power is on :
            a. The system is in Full-ON mode :
                a-1. Click on this switch (less than 4 seconds), the system will be
                     turned into Suspend mode. (turn into the GREEN mode)
                a-2. Press and hold this switch for more than 4 seconds, the system
                     will be powered off.

            b. When the system is in Suspend mode :
                b-1. Click on this switch (less than 4 seconds), the system will
                     return to Full-ON mode.
                b-2. Press and hold this switch more than 4 seconds, the system will
                     be powered off.

    ②   **The setup in CMOS is "Instant-off":**
        A. When system power is off :
            Click on this switch, the system will be powered on. (when
            "password" is selected in the CMOS setup program, you will be
            unable to use the PW button to power on the PC system, please see
            Section 2.2 and Section 4.8 for more details.)

        B. When system power is on :
            Click on this switch, the system will be powered off instantly.

(N)   Speaker and Key Lock connector:

SPKR & KBLOCK CONNECTORS
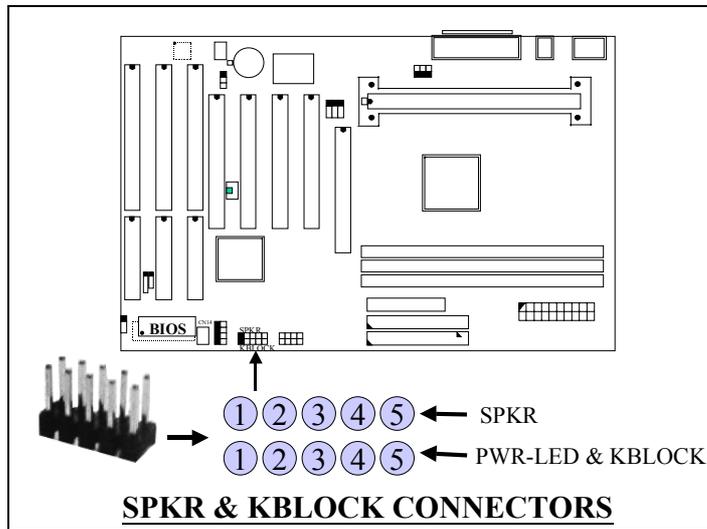
(a)   SPKR: Speaker connector

Pin #	Signal name
1	+ 5V DC
2	No Connection
3	No Connection
4	Speaker Data Signal
5	No Connection

(b)   PWR-LED & KBLOCK: Front Panel Power LED and Key-Lock Connector

Pin #	Signal name
1	Pullup (+ 5V DC for Power LED)
2	No Connection
3	Ground
4	Keyboard Lock
5	Ground

3.4 JUMPERS

This section will discuss the jumper setting on the mainboard. In order to let you have better idea of the jumper setting, please see below for the explanation of jumper settings before you start this section.
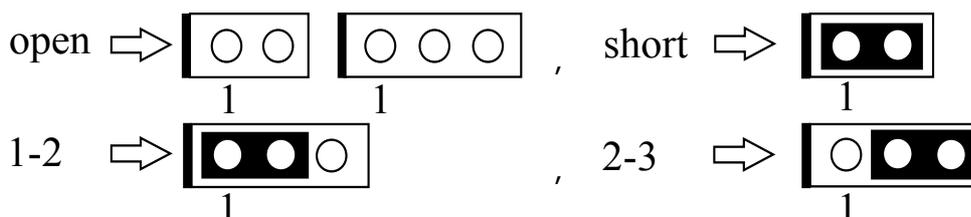
The jumpers in the following sections which labeled with "optional" means they are the optional choice and the related components are normally not populated on the mainboard. In order to make the mainboard works properly in your PC system, please make sure all jumper settings are at correct before installing this mainboard.

A jumper is a set of two, three or more jumper pins which allows users to make different system configuration by putting the plastic connector plug (mini-jumper) on it. The jumper setting is necessary when installing different devices onto the mainboard.

(A) JP1: K/B & Mouse OnNow Selection

This jumper allows you to Enable / Disable the Keyboard OnNow function. When enabled, you may use keyboard or PS/2 mouse key click to power on the PC system:

Pin1 & Pin2 Short: OnNow Disabled   JP11

Pin 2 & Pin3 Short: OnNow Enabled   JP11
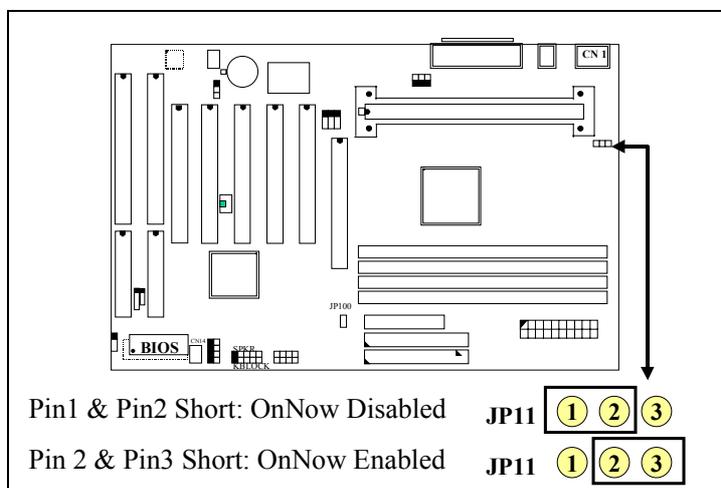
(B) JP4:   Clear CMOS Data Button

Normal Setting   Clear CMOS
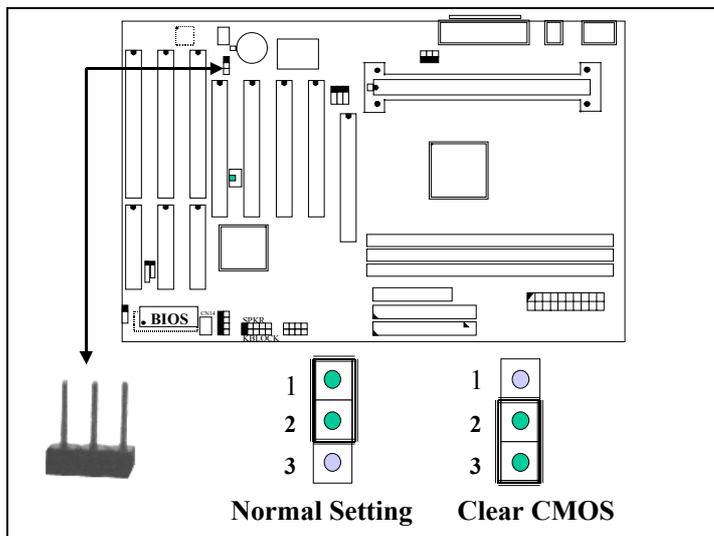
> *Note: Improper BIOS setting may cause hang-up to the PC system, Should it be*
> *happened, you can use JP4 to clear the information which is stored in the*
> *CMOS memory and get the PC system back to normal. Improper*
> *connection may cause permanent damage to the mainboard. Please refer*
> *to the following steps to clear the CMOS*
> *1. Unplug the AC power cable from the PC system.*
> *2. Put the mini jumper on pin 2-3 of JP4 around 3 to 5 seconds and then*
> *   return it to the original position (pin 1-2).*
> *3. Re-connect the AC power cable.*

(C) JP5-JP8:   CPU Speed Selection

JP 5
JP 6
JP 7
JP 8
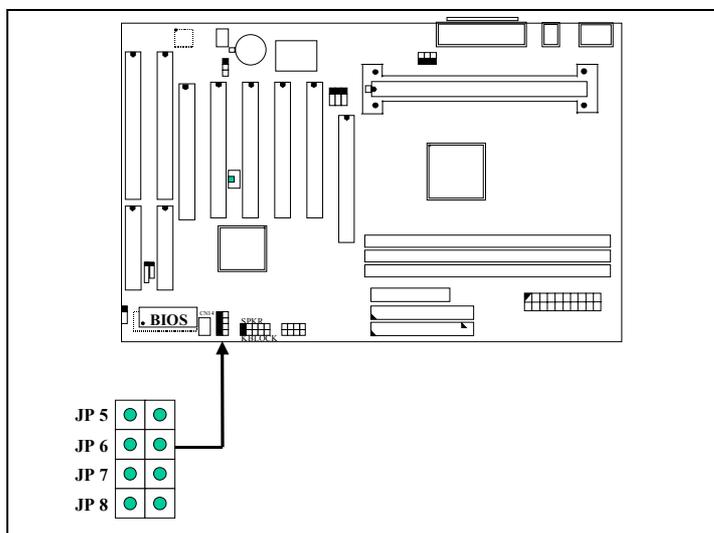
JP5, JP6 JP7 and JP8 allow you to select CPU clock ratio. .

CPU (MHz)	Ratio	JP5	JP6	JP6	JP8
233, 350	3.5X	OPEN	OPEN	SHORT	SHORT
266, 400	4.0X	SHORT	SHORT	OPEN	SHORT
300, 450	4.5X	OPEN	SHORT	OPEN	SHORT
333, 500	5.0X	SHORT	OPEN	OPEN	SHORT
366, 550	5.5X	OPEN	OPEN	OPEN	SHORT
400, 600	6.0X	SHORT	SHORT	SHORT	OPEN
433, 650	6.5X	OPEN	SHORT	SHORT	OPEN
466, 700	7.0X	SHORT	OPEN	SHORT	OPEN
500, 750	7.5X	OPEN	OPEN	SHORT	OPEN
533, 800	8.0X	SHORT	SHORT	OPEN	OPEN

HOW TO MAKE JUMPER SETTING PROPERLY: .

Basically, there are two parameters which will decide the CPU speed - the Front Side Bus (FSB) speed and CPU clock ratio. When you have installed the processor onto the mainboard, the system BIOS will detect the CPU type and decide the FSB speed automatically (please refer to **section 4-6**.). As for the clock ratio, it is selected by the jumper setting on JP5, JP6 and JP7.

In other word, FSB will be used to decide what type of processor is installed on the mainboard. JP5~JP7 will be used to decide the system speed*. (the clock ratio is fixed in some CPU and you don't have to make any jumper setting to select the clock ratio)* The following formula is the simple rule to calculate your CPU frequency:

FSB Clock x Clock Ratio = CPU Frequency

SELECTION OF FSB CLOCK (please refer to section 4.6)

Different processors may have the different FSB clock. When you have installed the processor onto the mainboard, the system BIOS will detect the type of the processor and decide the proper FSB clock automatically. (you may use the BIOS setup program to select different FSB clock) Please refer to the data sheet which comes with the CPU or contact your CPU dealer for the details of FSB clock.

HOW TO SELECT THE CPU CLOCK RATIO:
Please modify the formula mentioned mentioned in previous page and we will get:

CPU Frequency ÷ FSB Clock = Clock Ratio

Now we can use the formula above to calculate the CPU clock ratio. Please refer to the following illustration for the calculation:

For example, if you are installing the 450MHz Pentium™ II processor onto the mainboard. You may look into the data sheet which comes with the processor or the information in the previous page and you will see the FSB clock is 100MHz.

Now you may introduce these parameters into the formula and get:

450MHz(CPU Frequency) ÷ **100MHz** (FSB Clock) = **4.5X** (Clock Ratio)

According to the example above, you can see that it is very easy to calculate the CPU clock ratio when you have the information of your information of CPU frequency and its FSB speed. In order to let you have a better picture of the calculation, the procedures are summarized as following:

1. Check the data sheet for your CPU frequency.

2. Check the data sheet and get the FSB clock of your CPU.

3. Use the following formula to calculate the CPU clock ratio.

CPU Frequency ÷ FSB Clock = Clock Ratio

(D) JP10: CPU Voltage Range Selection (Optional)

JP10 is a special design on the mainboard which allows you to select the CPU voltage range (Vcore) for the Pentium II/III processors.

The voltage regulator on the mainboard will generate 1.3V ~ 3.5V DC to support different processors. Basically, Most Pentium II mainboards will use the VID signal (VID0~VID4) from the processor to decide the proper CPU voltage (Vcore). In case that there is the poor connection between Slot 1 connector and CPU, or uninstall the CPU from the mainboard while the system power is "ON". Under such circumstance, mainboard may receive wrong VID signal and send wrong Vcore to the CPU. Unfortunately, wrong Vcore may destroy the CPU.

JP10 is designed to control the Vcore within the safe range so that it won't make any damage to the CPU because of wrong VID signal.

Since most Pentium II/III processors require the Vcore below 2.05V except few Pentium II processors. So the default setting of JP10 will limit the Vcore at 1.3V~2.05V. Please do not change the setting on JP10 unless your CPU needs the voltage higher than 2.05V.

OPEN: Vcore = 1.3V ~ 2.05V

SHORT : Vcore = 1.3V ~ 3.5V.
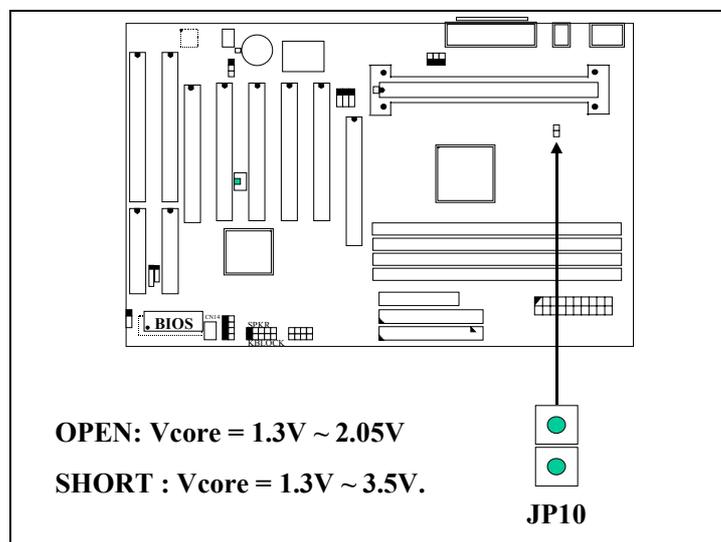
JP10

(E) JP100: Over Clock Selection

JP100 is designed on the board for some special purpose. When enabled (OPEN), the FSB clock will be forced to 100MHz.

JP100

1-2: Auto Detect *(Default)*
2-3   66MHz
OPEN: 100MHz
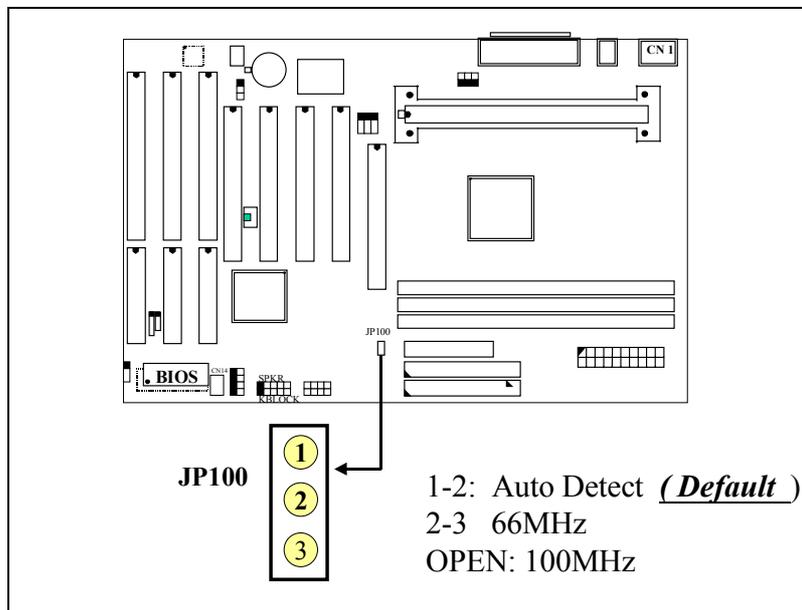
(Please do not attempt to change this setting unless you are the technician)

4.   AWARD BIOS SETUP

4.1 GETTING STARTED

When you turn on the system powered or reset the system, the system BIOS will execute the Power On Self Test routines (POST),. In case that there is any error or malfunction detected during POST, the BIOS will give a series of beeping sound or display the error message on screen.

When the system is normal, the screen display as shown in *Fig. 4-1* will be displayed :
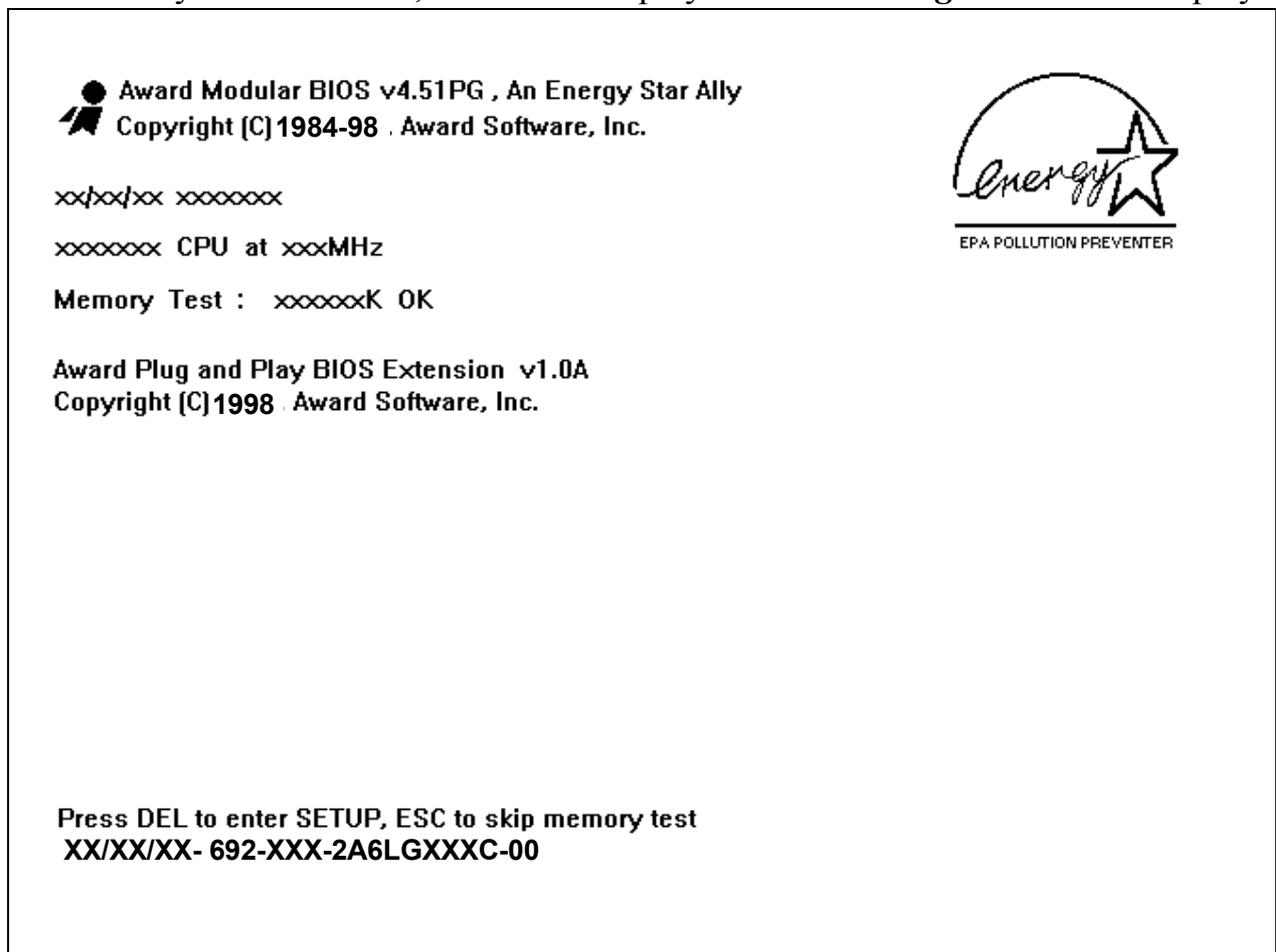
Fig. 4-1 Initial Power-On screen display.

During the power on self testing (POST), the following message appears at the lower left corner of the screen:

" Press **DEL** to enter SETUP "

To execute the Award® BIOS CMOS Setup program, please press the **DEL** key. The STANDARD CMOS SETUP screen as shown in figure Fig. 4-2 will be triggered:

4.2 MAIN MENU

ROM PCI / ISA BIOS (2A6LGXXX)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	SUPERVISOR PASSWORD
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
INTEGRATED PERIPHERALS	
LOAD SETUP DEFAULTS	

ESC : Quit   : Select Item
F10 : Save & Exit Setup   (Shift)F2 : Change Color

Time, Date, Hard Disk Type ...

Fig. 4-2 CMOS SETUP MAIN MENU screen.

4.3 CONTROL KEYS

Listed below is the explanation of the keys displayed at the bottom of the screens which will be used in the CMOS SETUP program :

Arrow Keys   **:** Use the arrow keys to move the cursor to the desired item.
Enter   **:** Select the desired item.
F1   **:** Display the help screen for the selected feature.
(Shift)F2   **:** To change the screen color, total 16 colors.
ESC   **:** Exit to the previous screen.
PgUp(-)/PgDn(+) : To modify or change the content of the highlighted item.
F5   **:** Retrieves the previous value from CMOS data, (only the current page setup will be retrieved).
F7   **:** Loads the SETUP default values from BIOS default table
F10   **:** Save all changes to CMOS RAM from the MAIN MENU

You can select the item displayed on the screen to enter different setup screen and configure the mainboard features. The following sections show the setup screens which you will find in the CMOS SETUP routine. Each screen contains the selection options and its default settings. At the bottom of some screen, you may find the description of all function key which can be used to change the settings.

4.4 STANDARD CMOS SETUP

```
               ROM  PCI / ISA  BIOS  (2A6LGXXX)
                    STANDARD CMOS  SETUP
                    AWARD  SOFTWARE,  INC.
```

Date (mm : dd : yy) : Mon,   `Oct.` 10 1998
Time (hh : mm : ss   : 16 : 03 : 33

HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	Auto	0	0	0	0	0	0	Auto
Primary Slave	None	0	0	0	0	0	0	------
Secondary Master	Auto	0	0	0	0	0	0	Auto
Secondary Slave	None	0	0	0	0	0	0	------

```
Drive  A  :  1.44M,   3.5  in.
Drive  B  :  None                          Base  Memory :   640 K
Floppy 3 Mode Support: Disable       Extended  Memory :  xxxxxx K
Video     :  EGA/VGA                     Other  Memory :  xxxxxx K
Halt  On  :  All  Errors                  Total  Memory : xxxxxx K
```

```
ESC :  Quit                  : Select  Item       PU/PD/+/-  :  Modify
F1 :  Help                (Shift)F2 :  Change  Color
```

Fig. 4-3 STANDARD CMOS SETUP screen.

MODE :
  The BIOS on the mainboard provides three different modes to support both normal size IDE hard disk drive and the hard disk drive which is above 528MB:

  NORMAL : For IDE hard disk drives which is smaller than 528MB.
  LBA   : For IDE hard disk drive which is above 528MB (ideally, it can be as big as 8.4GB) that use Logic Block Addressing (LBA) mode.
  Large   : For IDE hard disk drive which is above 528MB and does not support LBA mode. *(Note : "large mode" may not be fully supported by all operation systems. It is suggested to for MS-DOS but such hard disk drive is not very popular nowadays.)*
  Auto   : This mode will auto-detect your IDE driver during boot-up
(*Note* **:   *Some certain operation systems (such as SCO®-UNIX™), only "NORMAL mode" is allowed when installation.)***

Floppy 3 Mode Support: (Default setting: disabled)
  This mode is for the Japanese 3.5 inch high capacity floppy disk drive. If you have such drive installed in your PC system, please select enable, otherwise, use the default setting.

4.5 BIOS FEATURES SETUP

ROM PCI / ISA BIOS (2A6LGXXX)
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
Processor Number Feature	: Enabled	D4000-D7FFF Shadow	: Disabled
Quick Power On Self Test	: Enabled	D8000-DBFFF Shadow	: Disabled
Boot Sequence	: A,C,SCSI	DC000-DFFFF Shadow	: Disabled
Swap Floppy Drive	: Disabled		
Boot Up Floppy Seek	: Enabled		
Boot Up NumLock Status	: On		
IDE HDD Block Mode	: Enabled		
Gate A20 Option	: Normal		
Memory Parity / ECC Check	: Disabled		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup		
PS/2 mouse function control	: Enabled	ESC : Quit : Select Item	
PCI/VGA Palette Snoop	: Disabled	F1 : Help PU/PD/+/- : Modify	
OS Select For DRAM > 64MB	: Non-OS2	F5 : Old Values (Shift)F2 : Color	
	:	F7 : Load Setup Defaults	

Fig. 4-4 BIOS FEATURES SETUP screen.

Virus Warning :
  In order to avoid virus infection happens on your PC system, this mainboard provides
  the virus warning features in the BIOS. During and after the operation system is
  loaded, any attempt to write to the boot sector or partition table on the IDE hard disk
  drive will trigger this feature and give you some warning messages on the screen and
  then halt the system. When you find the message on your screen, please run the anti-
  virus program to see whether your system is infected by a virus or not.

Enabled : A warning message will be displayed on the screen when ***something***
        attempts to access the boot sector or hard disk partition table.

Disabled : No warning message will appear on the screen when ***anything*** attempts to
        access the boot sector or hard disk partition table.

CPU Internal Cache / External Cache : (default setting: Enabled)

These fields allow you to turn on or turn off the Level 1 and Level 2 cache that built-in Pentium™ II or Celeron™ processors.

CPU L2 Cache ECC Checking: (default setting: Enabled)
This option will enable or disable the ECC checking on the CPU L2 cache. The ECC checking will ensure the accuracy of the data stored on the L2 cache.

Processor Number Feature: (default setting: Disabled)
This selection option is valid only when Pentium III processor is installed on the mainboard. There is the serial number in each Pentium III processor and that will be use as an ID of your computer. When enabled, the ID can be accessed by some certain software program as your personal information.

Quick Power on Self Test: (default setting: Enabled)
The Quick Power On Self Test will skip some test and speed up the boot process. If you find the system is working normally, you can always enable this feature so that you don't have to wait too long on the POST.

Boot Sequence : (default setting: A,C,SCSI))
This field allows you to use some other device to load the operating system. The options available are "A,C,SCSI", "C,A,SCSI", "C,CDROM,A", "CDROM,C,A", "D,A,SCSI", "E,A,SCSI", "F,A,SCSI", "SCSI,A,C", "SCSI,C,A", "C only" and "LS/ZIP,C".

When you select to load the OS from "CDROM,C,A" or "LS/ZIP,C", you must select the "HARD DISK TYPE and MODE" properly, the "Auto" selection is recommended so that you can use CDROM or LS/ZIP device to load the OS into your system. (You can find these items in the "STANDARD CMOS SETUP")

Swap Floppy Drive : (default setting: Disabled)
When enable this option, the device name of the floppy drives will be swapped, For example, drive A will be treated as drive B, and drive B as Drive A.

PS/2 mouse function control : (default setting: Enabled)
   This mainboard built-in a PS/2™ mouse port, In case that you prefer to connect your mouse to the serial port instead of using the PS/2™ mouse, you may choose "Disable" in this field so that the IRQ12 can be released for the other devices; If you are using the PS/2™ mouse, leave this field "Enabled".

PCI/VGA Palette Snoop : (default setting: Disabled)
   Some display cards are non-standard VGA card (such as graphics accelerator or MPEG Card) which may not display color properly on your screen. "Enable" the setting in this field may correct this problem. Please leave it "Disabled" as the default setting shown above if you are using the normal display card.

OS Select For DRAM > 64MB : (default setting: Non-OS/2)
   When you are using the "OS/2™" operating system and the system memory is more than 64MB, you will have to select the setting to "OS2", otherwise, leave this on the default setting "Non-OS2" for all other operating systems.

Video BIOS Shadow: (default setting: Enabled)
   When enabled, the Video BIOS will be duplicated to the reserved area of system memory and increase the video display performance. The selection fields below are designed for the same purpose. When you select "Disabled", the related BIOS will not be copied into the "Shadow memory"

4.6 CHIPSET FEATURES SETUP

```
ROM  PCI / ISA  BIOS  (2A6LGXXX)
CHIPSET  FEATURES  SETUP
AWARD  SOFTWARE,  INC.
```

Bank 0/1 DRAM Timing	:SDRAM 10ns	Auto Detect DIMM/PCI Clk : Enabled
Bank 2/3 DRAM Timing	:SDRAM 10ns	Spread Spectrum Modulated : Disabled
Bank 2/3 DRAM Timing	:SDRAM 10ns	CPU Host/PCI Clock : Default
SDRAM Cycle Length	: 3	
DRAM Clock	: CPU CLK	
Memory Hole	: Disabled	
Read Around write	: Disabled	
Concurrent PCI/Host	: Disabled	
Video RAM Cacheable	: Disabled	
AGP Aperture Size (MB)	: 64	
AGP – 2X Mode	: Enabled	
OnChip USB	: Enabled	
USB Keyboard Support	: Disabled	ESC : Quit : Select Item
		F1 : Help PU/PD/+/- : Modify
		F5 : Old Values (Shift)F2 : Color
		F7 : Load Setup Defaults

Fig. 4-5 CHIPSET FEATURES SETUP screen.

WARNING : The selection fields on this screen are provided for the professional technician who can modify the Chipset features to meet some specific requirement. If you do not have the related technical background, do not attempt to make any change except the following items.

Bank 0/1, 2/3, 4/5 DRAM Timing: (Default Setting: "SDRAM 10ns)

The DRAM timing of Bank 0/1, 2/3, 4/5, 6/7 in this field is set by the system board manufacturer, depending on whether the board has fast paged DRAMs or EDO (extended data output) DRAMs.

The Choice: Normal, Medium, Fast, Turbo, FP/EDO 60ns, FP/EDO 70ns.

SDRAM Cycle Length : (default setting : "3")
This field sets the CAS latency timing. The Cycle Length in this field is used to define the CAS latency. The CAS latency is one of the most important parameter in the memory subsystem because it will decide the system performance. Basically, the default setting "3" is the suggest parameter for this mainboard. You may also select "2" to make the system faster, Before you can make this selection, please make sure that your SDRAM is fast enough otherwise your PC system will be unstable.

Memory Hole : (default setting : "Disabled")
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 16 MB.

Enabled	Memory hole supported.
Disabled	Memory hole not supported.

Read Around Write : (default setting : "Disabled")
DRAM optimization feature: If a memory read is addressed to a location whose latest write is being held in a buffer before being written to memory, the read is satisfied through the buffer contents, and the read is not sent to the DRAM,

Concurrent PCI/Host : (default setting : "Disabled")
When disable, CPU bus will be occupied during the entire PCI operation period.

Video RAM Cacheable: (default setting : "Disabled")
Select Enabled allows caching of the video RAM , resulting in better system performance. However, if any program writes to this memory area, a system error may result.

Enabled	Video RAM access cached
Disabled	Video RAM access not cached

AGP Aperture Size (MB) : (default setting: 64MB)
Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.   .

AGP-2X: (Default setting: "Enabled")
Enable this field will make the board support 2X AGP card. If you select "Disable", then onle 1X AGP card will be supported by this mainboard.

OnChip USB: (Default setting: "Enabled")
There are two USB port on the mainboard. If you want to install another USB interface card on the mainboard and connect the USB devices to it. Then you will have to "Disable" this field and make the onboard USB port inactive.

USB Keyboard Support: (Default setting: "Disabled")
If you are going to use the USB keyboard in the PC system..please Enable the selection field, otherwise, leave it "Disabled"

Auto Detect DIMM/PCI Clk: (Default setting: "Enabled")
When you select "Enabled", the mainboard will detect the presence of devices on DIMM and PCI slots. When there is no device presented, the clock on the related DIMM and PCI slot will be disabled to reduce the electro magnetic interference (EMI).

Spread Spectrum Modulated: (Default setting: "Disabled")
When you select "Enabled", the special feature designed in the Apollo chipset will be triggered and reduce the EMI as mentioned above.

CPU Host/ PCI Clock: (Default setting: "Default")

This selection field is used to decide the CPU FSB and PCI clock. Basically, this mainboard is designed by using the VIA Apollo chipset and it supports both the 100MHz and 66MHz FSB frequency. When you select "default" setting, the system BIOS will detect the CPU type and decide the FSB clock automatically. You may also use this field to select different FSB clock and force your CPU to run at higher speed. (be sure to make sure your system devices are fast enough before you can change to such setting)

When you have decided the FSB clock, you will have to use JP5, JP6 and JP7 to select the CPU clock ratio to decide the CPU speed. please refer to Section 3.4 for details of the jumper settings..

Beside the standard FSB selection, this mainboard also provides the manual option for your choice. For example, you may select 103, 112 or 133MHz as your FSB clock when you are using the 100MHz FSB processor. When you have installed the 66MHz FSB processor, the selection available will be 66, 75 and 83 MHz. When you select different FSB clock, the PCI clock will be changed at the same time. Please see the following for details:

66MHz Processors	100MHz Processors:
Host/PCI: 68/34 Mhz	Host/PCI: 103/34 Mhz
Host/PCI: 75/37 Mhz	Host/PCI: 112/33 Mhz
Host/PCI: 83/41 Mhz	Host/PCI: 133/44 Mhz

IMPORTANT: As you may have noticed,the higher FSB frequency will surely give you the higher system performance. However, the PCI clock also increased at the same time. If the peripherial is not fast enough, your PC system will become very unstable when you change the Host clock. it is not recommended because it may cause the system unstable,

4.7 POWER MANAGEMENT SETUP

ROM PCI / ISA BIOS (2A6LGXXX)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

ACPI function	Enabled (optional)	Primary INTR : ON	
Power Management	:User Define	IRQ3 (COM 2)	: Primary
PM Control by APM	: Yes	IRQ4 (COM 1)	: Primary
Video Off After	: Suspend	IRQ5 (COM 2)	: Primary
Video Off Method	: Blank Screen	IRQ6 (Floppy Disk)	: Primary
MODEM Use IRQ	: 3	IRQ7 (LPT 1)	: Primary
Soft-off by PWRBTN	: Instant-off	IRQ8 (RTC Alarm)	: Disabled
HDD Power Down	: Disable	IRQ9 (IRQ2 Redir)	: Secondary
Doze Mode	: Disable	IRQ10 (Reserved)	: Secondary
Suspend Mode	: Disable	IRQ11 (Reserved)	: Secondary
** PM Events **		IRQ12 (PS/2 Mouse)	: Primary
VGA	: OFF	IRQ13 (Coprocessor)	: Primary
LPT & COM	: LPT / COM.	IRQ14 (Hard Disk)	: Primary
HDD & FDD	: ON	IRQ15 (Reserved)	: Disabled
DMA / Master	OFF		
Modem or LAN Resume	: Disabled	ESC : Quit : Select Item	
RTC Alarm Resume	: Disabled	F1 : Help PU/PD/+/- : Modify	
		F5 : Old Values (Shift)F2 : Color	
		F7 : Load Setup Defaults	

Fig. 4-6 POWER MANAGEMENT SETUP screen.

WARNING : The selection fields on this screen are provided for the professional technician who can modify the Chipset features to meet some specific requirement. If you do not have the related technical background, do not attempt to make any change except the following items.

ACPI function : (Default setting: "Enabled") *ACPI is optional on the board*
The ACPI (Advanced Configuration Power Interface) is the special feature provided on the board, When enabled, it will provide you several way save the system power energy.

Power Management : (Default setting: "User Define")
This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

         1. HDD Power Down
         2. Doze Mode
         3. Suspend Mode

There are three selections for Power Management, please refer to the following for the feature description.

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'S**. 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. and disable.

PM control by APM: (Default setting: Yes)
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 after: (Default setting: Suspend)
There are three different modes selectable in this field to decide how to blank the video:

Suspend :   Then video display will be off when suspend mode.
Always ON: The video display is always on despite of the power saving modes.
All Mode off: The video display is will be off when power saving mode is active.

Video Off Method: (Default setting: Blank screen)

When you are using the Green Monitor with your PC system, there are three modes selectable in this field to save the power energy

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

Modem Use IRQ: (Default setting: 3)

This mainboard has the ACPI feature designed on the board and it will "wakeup" automatically when it detects the incoming modem Ring-in signal. Before you can use the Ring-in signal to wakeup your PC system, you have to install the "**External**" modem to your PC system and tell the PC system which serial port connects to the modem by selecting the IRQ in this field. (officially, COM A uses IRQ4, and COMB uses IRQ3).

Soft-Off by PWRBTN: (Default Instant - off)

This selection field allows you to define the power button on your font panel. There are to selections – "Instant – Off" and "Delay 4 sec".: Please refer to Chapter 3 for detail function description.

HDD Power Down: (Default setting: Disable)

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

Doze Mode: (Default setting: Disable)

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

Suspend Mode: (Default setting: Disable)

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

The Choice: Instant-Off, Delay 4 Sec.

** PM Events: **

PM events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything which occurs to a device which is configured as *On*, even when the system is in a power down mode.

VGA: (Default setting: "OFF")
When set to *On* (default), any event occurring at a VGA port will awaken a system which has been powered down.

LPT & COM: (Default setting: "LPT/COM".)
When set to *On* (default), any event occurring at a COM(serial)/LPT (printer) port will awaken a system which has been powered down.

HDD & FDD: (Default setting: "ON".)
When set to *On* (default), any event occurring at a hard or floppy drive port will awaken a system which has been powered down.

DMA/master: (Default setting: "OFF".)
When set to *On* (default), any event occurring at will awaken a system which has been powered down.

Modem or LAN Resume: (Default setting: "Disabled".)
When set to *Enabled* , any event occurring to the Modem Ring will awaken a system which has been powered down.

RTC Alarm Resume: (Default setting : "Disabled")
When *Enabled,* your can set the date and time at which the RTC (real-time clock) alarm awakens the system from powered down mode.
.

Primary INTR: (Default setting: "ON".)

When select the *"On"* setting (default), any event occurring at will awaken a system which is in Suspend mode.

The following is a list of IRQ's, **I**nterrupt **ReQ**uests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

When set *On*, activity will neither prevent the system from going into a power management mode nor awaken it.

- **IRQ3 (COM 2)**
- **IRQ4 (COM 1)**
- **IRQ5 (LPT 2)**
- **IRQ6 (Floppy Disk)**
- **IRQ7 (LPT 1)**
- **IRQ8 (RTC Alarm)**
- **IRQ9 (IRQ2 Redir)**
- **IRQ10 (Reserved)**
- **IRQ11 (Reserved)**
- **IRQ12 (PS / 2 Mouse)**
- **IRQ13 (Coprocessor)**
- **IRQ14 (Reserved)**
- **IRQ15 (Reserved)**

4.8 INTEGRATED PERIPHERALS

ROM PCI / ISA BIOS (2A6LGXXX)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

OnChip IDE Channel0	: Enabled	UART Mode Select	: Normal
OnChip IDE Channel1	: Enabled		
IDE Prefetch Mode	: Enabled	Onboard Parallel Port	: 378/IRQ7
Primary Master PIO	: Auto	Parallel Port Mode	: SPP
Primary Slave PIO	: Auto		
Secondary Master PIO	: Auto		
Secondary Slave PIO	: Auto		
Primary Master UDMA	: Auto		
Primary Slave UDMA	: Auto		
Secondary Master UDMA	: Auto		
Secondary Slave UDMA	: Auto		
Init Display First	: PCI Slot		
POWER ON Function	: Button Only		
KBC input Clock	: 8MHz	ESC : Quit : Select Item	
Onboard FDC Controller	: Enabled	F1 : Help PU/PD/+/- : Modify	
Onboard serial Port 1	: 3F8/IRQ4	F5 : Old Values (Shift)F2 : Color	
Onboard serial Port 2	: 2F8/IRQ3	F7 : Load Setup Defaults	

Fig. 4-7 INTEGRATED PERIPHERALS setup screen.

WARNING: The selection fields on this screen are provided for the professional technician who can modify the Chipset features to meet some specific requirement. If you do not have the related technical background, don't attempt to make any change except the following items.

OnChip IDE Channel0/1: (Default setting : Disabled)
The chipset contains a PCI IDE interface with support for two IDE channels. Select *"Enabled"* to activate the first and/or second IDE interface. Select *Disabled* to deactivate an interface, if you install a primary and/or secondary add-in IDE interface.
The choice: Enabled, Disabled

IDE Primary/Secondary Master/Slave PIO: (Default setting : Auto)
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: (Default setting : Auto)
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.

Init Display First: (Default setting : Disabled)
When you have both the AGP and PCI VGA card installed in the system, you can use this field to decide the display priority.

       AGP Slot: the display will be active on the AGP adapter.
       PCI Slot: The display will be active on the PCI VGA adapter

POWER ON Function : (Default setting : "BUTTON ONLY")
This mainboard provides several flexible and convenient ways to power on the PC system. They are the "BUTTON ONLY", "Password", "Hot KEY", "Mouse Left" and "Mouse Right", please refer to Section 2.2 for details of each feature.

To change the way to power on your PC system, move the selection bar to "**POWER ON Function** "and use the arrow keys to select the option which you prefer to have.

When you want to use the password to power on your PC system, you may enter up to four alphanumeric characters in this field. When you have entered the password and press the "Enter" key, reconfirm the password one more time to complete password setup.

If you press the "Enter" key twice, without keying in any alphanumeric character, the password will be disabled.

KBC input clock: (Default setting : "8MHz")
This selection field allows you to select the clock frequency to the keyboard controller on the mainboard.

Onboard FDC Controller: (Default setting : "Enabled")
This should be enabled if your system has a floppy disk drive (FDD) installed on the system board and you wish to use it. However, if you add a higher performance controller, you will need to disable this feature.

Onboard serial Port 1/2 : (Default setting : "3F8/IRQ4, 2F8/IRQ3")
This item allows you to determine access onboard serial port 1/port 2 controller with which I/O address.

The Choice: 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto

UART Mode Select : (Default setting : "Normal")
This item allows you to determine which Infra Red (IR) function of onboard I/O chip.
The Choice: Standard, ASKIR, HPSIR

Onboard Parallel Port : (Default setting : "378/IRQ7")
Select a logical LPT port name and matching address for the physical parallel port.
The choice: 378H/IRQ7, 278H/IRQ5, 3BCH/IRQ7, Disabled

4.9   PNP/PCI CONFIGURATION

ROM PCI / ISA BIOS (2A6LGXXX)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.

PNP OS Installed	: No	CPU to PCI Write Buffer	: Enabled
Resources Controlled By	: Manual	PCI Dynamic Bursting	: Enabled
Reset Configuration Data	: Disabled	PCI Master 0 WS Write	: Enabled
		PCI Delay Transaction	: Enabled
IRQ-3 assigned to	: PCI/ISA PnP	PCI#2 Access #1 Retry	: Disabled
IRQ-4 assigned to	: PCI/ISA PnP	AGP Master 1 WS Write	: Enabled
IRQ-5 assigned to	: PCI/ISA PnP	AGP Master 1 WS Read	: Disabled
IRQ-7 assigned to	: PCI/ISA PnP		
IRQ-9 assigned to	: PCI/ISA PnP		
IRQ-10 assigned to	: PCI/ISA PnP	Assign IRQ for USB	: Enabled
IRQ-11 assigned to	: PCI/ISA PnP	Assign IRQ for VGA	: Disabled
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	ESC : Quit : Select Item
DMA-3 assigned to	: PCI/ISA PnP	F1 : Help PU/PD/+/- : Modify
DMA-5 assigned to	: PCI/ISA PnP	F5 : Old Values (Shift)F2 : Color
DMA-6 assigned to	: PCI/ISA PnP	F7 : Load Setup Defaults
DMA-7 assigned to	: PCI/ISA PnP	

Fig. 4-8 PNP/PCI CONFIGURATION setup screen.

WARNING :   *The selection fields on this screen are provided for the professional technician who can modify the Chipset features to meet some specific requirement. If you do not have the related technical background, do not attempt to make any change.*

PNP OS Installed : (Default setting is "No")
The setting in this field tells the system BIOS whether your operating system (OS) is a PnP OS (such as Windows® 95 and Windows® 98) or not. The PnP OS will use the system resources record stored in the ESCD segment to arrange the system environment..

Resources Controlled by : (Default setting: Manual)

The Award Plug and Play BIOS can automatically configure all the 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.
The choice: *Auto* and Manual..

Reset Configuration Data : (Default setting: "Disabled")

Normally, you 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 cannot boot.

IRQ# / DMA# assigned to : (Default setting: "PCI/ISA PnP")

There are only 15 IRQs and 8 DMAs available on the mainboard and most of them are assigned for some specific purposes. Sometimes, user may feel like to have some more IRQ and DMA in order to install the new add on cards. In this case, you may use this field to assign some certain IRQ and DMA to "PCI/ISA PnP" so that the new add on card will find the free IRQ or DMA available for it.

Legacy :   The system BIOS will skip and never assign the specified IRQ/DMA
ISA   resource to PCI or ISA PnP devices and the IRQ and DMA can only be sued by their specified Legacy ISA cards.

PCI/ISA :   When the "PCI/ISA PnP" is been selected, the related IRQ and DMA
PnP   will be released and they can be used by other PCI or ISA devices.
Whenever there is the new PCI or ISA devices plugged onto the mainboard, the system BIOS will detect it and assign a free IRQ or DMA for the new devices.

.Note: Most IRQ and DMA have its own purpose and they can not be assigned to "PCI/ISA PnP". For example, IRQ14 and IRQ15 is used by the onboard IDE device. If you change the setting on IRQ14 and IRQ15, you will be unable to connect the hard disk drive or CD ROM drive to the IDE interface on the mainboard. So please make sure to check the IRQ and DMA assignment in your system before you proceed to do the setting. For instance, if you do not have the printer (IRQ7) or PS/2™ mouse (IRQ12) connected to your PC system, you may assign IRQ7 and IRQ12 to "PCI/ISA PnP" so that you can have more IRQs available for new add on cards.

CPU to PCI Write Buffer: (Default setting: "Enabled")

When enabled, up to four Dwords of data can be written to the PCI bus without interrupting the CPU. When disabled, no write buffer is used and the CPU read cycle will <u>not</u> be completed until the PCI bus signals that it is ready to receive the data..

PCI Dynamic Bursting: (Default setting: "Enabled")

When *Enabled,* every write transaction goes to the write buffer. Burstable transactions then burst on the PCI bus and non-burstable transactions don't.

PCI Master 0WS Write: (Default setting: "Enabled")

When *Enabled,* writes to the PCI bus are executed with zero wait states.

PCI Delay Transaction: (Default setting: "Enabled")

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

PCI#2 Access #1 Retry: (Default setting: "Disabled")

This item allows you enable/disable the PCI #2 Access #1 Retry.

AGP Master 1 WS Write: (Default setting: "Enabled")

This implements a single delay when writing to the AGP Bus. By default, two-wait states are used by the system, allowing for greater stability.

AGP Master 1 WS Read: (Default setting: "Disabled")

This implements a single delay when reading to the AGP Bus. By default, two-wait states are used by the system, allowing for greater stability.

PCI IRQ Actived By: (Default setting: "Level")

This sets the method by which the PCI bus recognizes that an IRQ service is being requested by a device. Under all circumstances, you should retain the default configuration unless advised otherwise by your system's manufacturer.

Assign IRQ For VGA/USB: (Default setting: "Enabled")

The system's IRQ signals are limited and sometimes you may feel like to some more IRQ signals for your add-on cards. The system BIOS allows you to disable the IRQ which is supposed to be connected to VGA and USB ports. When you have choose to disable the IRQ on VGA or USB port, the IRQ on the related IRQ will be released and becomes available for other devices.

Before you can proceed with the change, please make sure that there is no USB and VGA device which will use the IRQ signal. Otherwise, your PC system will become abnormal and the devices connected to these ports may not be working at all.

It is very simple to tell the difference. If you are going to disable the IRQ on the USB port, check whether is any device connected to the USB port. If you can not find any device, you may feel free to disable the IRQ on the USB port and have the IRQ used by other device.

IMPORTANT: When install Windows98, it will check the USB port. According to VIA suggested, you CAN NOT assign USB IRQ to other device. Please always leave Assign IRQ for USB "Enabled" when you're installing Windows98 operation system

As for VGA adapter, it will be a little difficult. You may try to find whether your VGA card requires the IRQ signal or not. If you can not find the information from the user's manual of your VGA card. You may use the following information to make your choice:

1. Most VGA cards do not need to have the IRQ signal.
2. If you can not find the feature connector on your VGA card, than it is quite possible that your VGA card does not need the IRQ signal.
3. If your VGA card has the feature connector on the VGA card but it has nothing connected to it. In this case, you still may have the IRQ disabled.
4. If you have another add on card like video capture card which is connected to the feature connector on the VGA card, In this case, you can not disable the IRQ signal because the IRQ signal will be connected to the video capture card.

4.10   LOAD SETUP DEFAULTS

ROM PCI / ISA BIOS (2A6LGXXX)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	SUPERVISOR PASSWORD
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
INTEGRATED PERIPHERALS	
LOAD SETUP DEFAULTS	

ESC : Quit   : Select Item
F10 : Save & Exit Setup   (Shift)F2 : Change Color
Time, Date, Hard Disk Type ...

If you lost the CMOS data or you don't know how to complete the setup procedure, you may use this option to load the SETUP default values from the BIOS default table. It is easy to load the default value, simply highlight the "LOAD SETUP DEFAULTS" field and then press the "Enter" key, when you see the "LOAD SETUP DEFAULTS (Y/N)" displayed on the screen, response to it with "Y" and then press the "Enter" key. the SETUP default values will be loaded. Basically, the SETUP default settings are the best-case values that will optimize system stability.

In case that the CMOS data is corrupted, the SETUP DEFAULTS settings will be loaded automatically when you press the "Del" key and enter the main setup screen. So you may select "SAVE & EXIT SETUP" to leave setup program and the system is loaded with the default settings.

4.11   SUPERVISOR PASSWORD

ROM PCI / ISA BIOS (2A6LGXXX)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	SUPERVISOR PASSWORD
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
INTEGRATED PERIPHERALS	
LOAD SETUP DEFAULTS	

ESC : Quit   : Select Item
F10 : Save & Exit Setup   (Shift)F2 : Change Color
Time, Date, Hard Disk Type ...

The password entry in this field is different to the "Power On Function" mentioned in Section 2-2 and Section 4-8. Those password settings are used to power on your PC system, However, the "SUPERVISOR PASSWORD" will be used to check the authority when power-on the PC system. The Supervisor Password will have different function according to the "Security Option" setup in Section 4.5:

When "Setup" is selected in Security Option: (see section 4-5)
If you want to change the BIOS setting, you will have to key-in the Supervisor Password so that you can start the BIOS setup program and change the system setting..

When "System" is selected in Security Option: (see section 4-5)
When turn on the PC system, it will request you to enter the Password. Without the correct password, the PC system will stop and the operation system will not be loaded.

4.12   USER PASSWORD

ROM PCI / ISA BIOS (2A6LGXXX)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	SUPERVISOR PASSWORD
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
INTEGRATED PERIPHERALS	
LOAD SETUP DEFAULTS	

ESC : Quit   : Select Item
F10 : Save & Exit Setup   (Shift)F2 : Change Color
                          Time, Date, Hard Disk Type ...

The User Password can be used to check the user's authority. Howerver, this password entry is somewhat different to the "SUPERVISOR PASSWORD" mentioned in previous page. The User Password will have different function according to the "Supervisor Password" in previous page and the "Security Option" setup in Section 4.5:

A. When there is the password stored in the "SUPERVISOR PASSWORD"
   1. When "Setup" is selected in Security Option:
      Users can use the "User Password" to log into the BIOS setup program, but they can only select "User Password", "SAVE & EXIT SETUP" and "EXIT WITHOUT SAVING". (Use the Supervisor Password to log into the PC system, you will have the complete right to change all settings in the BIOS setup program)

   2. When "System" is selected in Security Option:
      When turn on the PC system, it will request you to enter the Password. Without the correct password, the PC system will stop and the operation system will not be loaded.

B. When there is no password stored in the "SUPERVISOR PASSWORD"

  1. When "Setup" is selected in Security Option:

   Users can use the "User Password" to log into the BIOS setup program, and they can make all the change in the BIOS setup program.

  2. When "System" is selected in Security Option:

   When turn on the PC system, it will request you to enter the Password. Without the correct password, the PC system will stop and the operation system will not be loaded.

4.13 IDE HDD AUTO DETECTION

ROM PCI / ISA BIOS (2A6LGXXX)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	SUPERVISOR PASSWORD
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
INTEGRATED PERIPHERALS	
LOAD SETUP DEFAULTS	

ESC : Quit   : Select Item
F10 : Save & Exit Setup   (Shift)F2 : Change Color
               Time, Date, Hard Disk Type ...

In order to make the IDE hard disk known to the system, you need to tell the system what kind of hard disk is connected to the mainboard by giving a set of hard disk parameters. Sometimes it is not easy for users to find the proper parameters for their IDE hard disk drive. In order to help users to find the parameters, the system BIOS provides a convent way – the auto detection of IDE hard disk drive.

To run the auto detection program is extremely easy. Move the selection bar to "IDE HDD AUTO DETECTION" and then press "Enter", the system BIOS take over the job and try to detect the type of IDE hard disk. If it succeeds, you will see a list of hard disk with its related parameters. You may press on the "Y" key (or select one of the hard disk type listed on the screen). The system BIOS will transfer the parameters to the corresponding fields in the STANDARD CMOS SETUP menu and you have completed the IDE hard disk setup.

4.14 SAVE & EXIT SETUP

ROM PCI / ISA BIOS (2A6LGXXX)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	SUPERVISOR PASSWORD
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
INTEGRATED PERIPHERALS	
LOAD SETUP DEFAULTS	

ESC : Quit   : Select Item
F10 : Save & Exit Setup   (Shift)F2 : Change Color
Time, Date, Hard Disk Type ...

This option will save all setup values to CMOS RAM & EXIT SETUP routine, by moving the selection bar to "SAVE & EXIT SETUP" and pressing "Enter" key, then types "Y" and "Enter" key, the values will be saved and all the information will be stored in the CMOS memory, and then the setup program will be terminated and the system will start to reboot.

4.15   EXIT WITHOUT SAVING

```
              ROM  PCI / ISA  BIOS  (2A6LGXXX)
                    CMOS  SETUP  UTILITY
                   AWARD  SOFTWARE,  INC.
┌──────────────────────────────────┬──────────────────────────────┐
│                                  │                              │
│   STANDARD CMOS  SETUP           │   SUPERVISOR  PASSWORD       │
│                                  │                              │
│   BIOS  FEATURES  SETUP          │   USER  PASSWORD             │
│                                  │                              │
│   CHIPSET  FEATURES  SETUP       │   IDE  HDD  AUTO  DETECTION  │
│                                  │                              │
│   POWER  MANAGEMENT  SETUP       │    SAVE  &  EXIT  SETUP      │
│                                  │                              │
│   PNP/PCI  CONFIGURATION         │   EXIT  WITHOUT  SAVING      │
│                                  │                              │
│   INTEGRATED  PERIPHERALS        │                              │
│                                  │                              │
│   LOAD  SETUP  DEFAULTS          │                              │
│                                  │                              │
├──────────────────────────────────┴──────────────────────────────┤
│  ESC : Quit                                    : Select  Item   │
│  F10  : Save  &  Exit  Setup        (Shift)F2 : Change  Color   │
│                  Time,  Date,  Hard Disk  Type ...               │
│                                                                  │
└──────────────────────────────────────────────────────────────────┘
```

This item exit the setup routine without saving any changed values to CMOS RAM, When you do not want to save your change to the CMOS memory, you may choose to run this option and the setting what you made in the BIOS setup routine will be given away.

Move the selection bar to "EXIT WITHOUT SAVING" and click on the "Enter" key, then you will be asked to confirm the action to exit, press the "Y" and "Enter" key, the setup program will be terminated and the system will start to reboot.