DVAX4
DVAX2+
6VAX2+
Pentium II/III
Celeron
Twin Processor

VIA 693A ATX MAINBOARD

(VER. 1.x)

USER'S MANUAL

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 4.11 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. It is the ATX form-factor mainboard with both Slot 1 and Socket 370 on the board for various purposes. The VIA 693A and Winbond® I/O chipset are chosen as the core logic of the mainboard to support 66MHz, 100MHz and 133MHz FSB clock. For the wide Varity of CPU. It is designed for 233, 266, 300 , 333, 350, 366, 400, 433, 450, 466, 500, 550, 600MHz and higher speed Pentium™ II , Pentium™ III and Celeron™ processors.

There are four IDE ports on this mainboard and it allows you to connect maximum eight IDE devices. (There are only two IDE ports on the DVAX2+ and 6VAX2+ mainboards). Each IDE interface supports the master/slave connection mode and they support the IDE, EIDE and Ultra DMA (Ultra-ATA) standards. Two of the IDE ports support the ATA/66 protocol and it makes the data transfer rate of the connected IDE device amazingly fast.
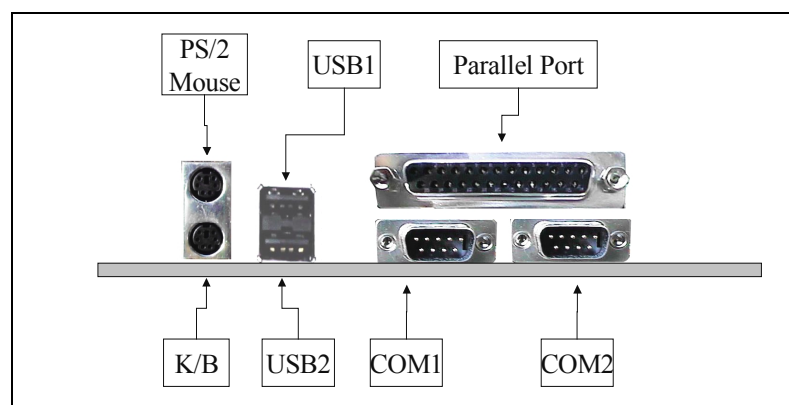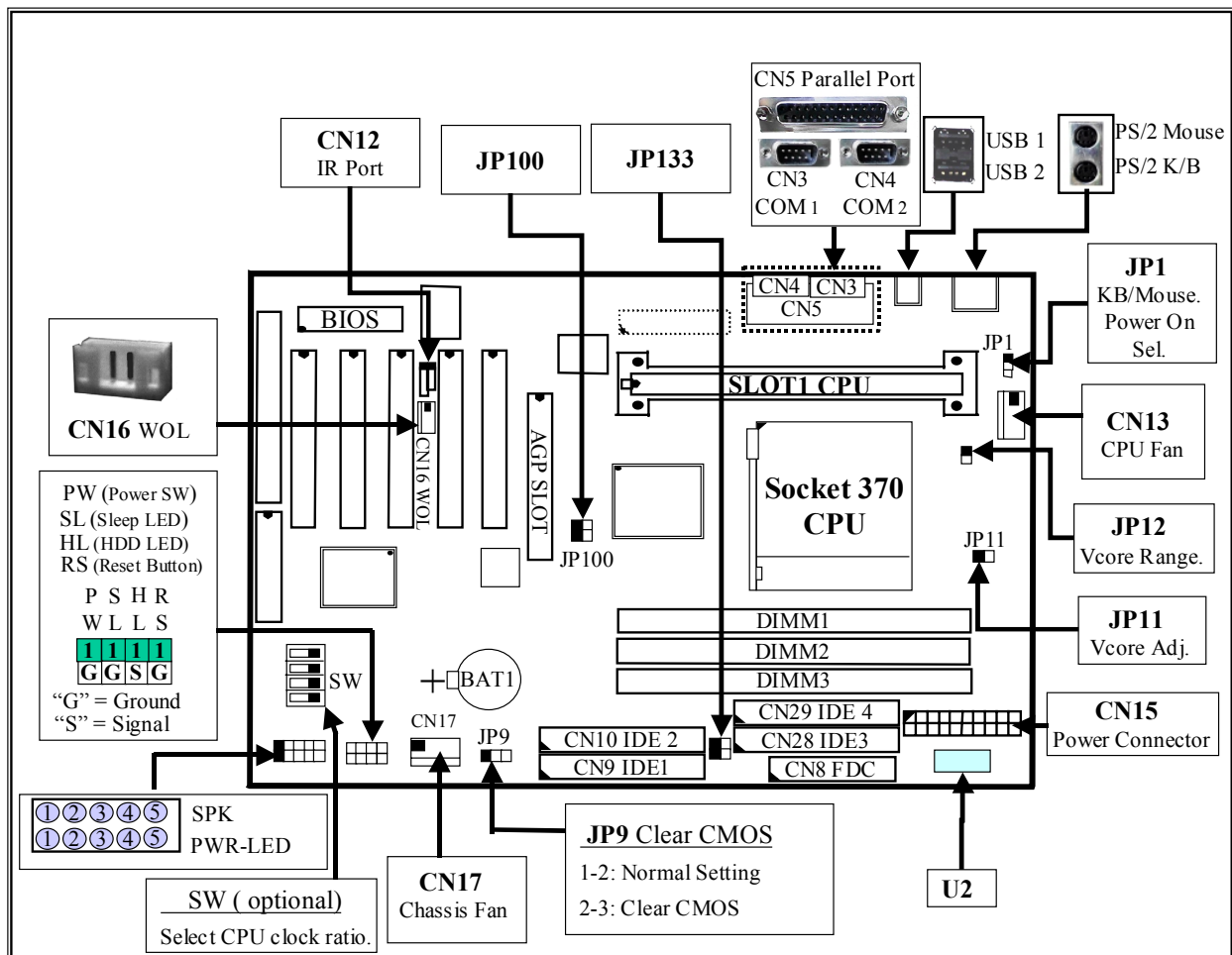
There are THREE different models which you will find from this mainboard. Please refer to the following table for the difference:

MODEL NAME	IDE INTERFACE	CPU INTERFACE
DVAX4	IDE1, IDE2, IDE3, IDE4	SLOT 1 & SOCKET 370
DVAX2+	IDE1, IDE2	SLOT 1 & SOCKET 370
6VAX2+		SOCKET 370

In order to support the popular devices which will be installed in the PC system, there are one Floppy Disk control port, two high speed Serial ports (UARTs), one multi-mode Parallel port, one PS/2™ mouse port, one IR port and two USB ports designed on the mainboard. When you are connecting the devices like PS/2 mouse, external modem, printer, floppy disk drive, USB devices .. etc. You don't have to purchase another interface card. Simply have the related devices connected to the appropriate interface.

Pentium™ II, Pentium™ III and Celeron™ are the 32-bit processors with RISC technology, which offers several key features such as built-in 512K/256K/128K L2 cache, 12-stage super-pipeline architecture, out of order execution … etc. In order to optimize of its capabilities and performances, the 32-bit Operating System (such as Windows® NT and OS/2™) and 32-bit applications are recommended.

1.2 MAINBOARD LAYOUT

CN5 Parallel Port
CN12 IR Port
JP100
JP133
CN3 COM 1
CN4 COM 2
USB 1 USB 2
PS/2 Mouse PS/2 K/B

JP1 KB/Mouse. Power On Sel.

BIOS
CN4 CN3
CN5
SLOT1 CPU
JP1

CN16 WOL
CN16 WOL
AGP SLOT
Socket 370 CPU
CN13 CPU Fan

PW (Power SW)
SL (Sleep LED)
HL (HDD LED)
RS (Reset Button)

P   S   H   R
W   L   L   S
| 1 | 1 | 1 | 1 |
| G | G | S | G |

"G" = Ground
"S" = Signal

JP100

JP11

JP12 Vcore Range.

JP11 Vcore Adj.

DIMM1
DIMM2
DIMM3

SW

BAT1

CN17

JP9

CN10 IDE 2
CN9 IDE1

CN29 IDE 4
CN28 IDE3
CN8 FDC

CN15 Power Connector

SPK
PWR-LED

SW (optional)
Select CPU clock ratio.

CN17 Chassis Fan

JP9 Clear CMOS

1-2: Normal Setting

2-3: Clear CMOS

U2

PS/2 Mouse
USB1
Parallel Port

K/B   USB2   COM1   COM2

IMPORTANT NOTICE:
There are two CPU sockets on the mainboard - the Slot 1 for Pentium II/III and slot type Celeron Processors. The Socket 370 is designed for socket type Pentium III and Celeron Processors. *You can only install one CPU on this mainboard.*

1.3 SPECIFICATIONS

◎ **CPU**
Intel® Pentium™ II, Pentium™ III or Celeron™ (for Slot and Socket type) 233, 266, 300, 333. 350, 366, 400, 433, 450, 466, 500MHz and higher speed processors (6VAX2+ supports only the socket 370 CPU)

◎ **CPU VCC**
Switching Voltage Regulator circuits on board, supports +1.30V DC through +3.5V DC CPU Core Voltage.

◎ **PC SYSTEM CHIPSET**
VIA 693A and VIA 596B

◎ **SUPER I/O CHIPSET**
Winbond® W83977EF-AW

◎ **FRONT SIDE BUS FREQUENCY**
66 MHz, 100MHz and 133MHz selectable.

◎ **MEMORY**
Three 168-pin DIMM sockets, Maximum 384 MB with ECC.

◎ **BIOS**
Award Plug & Play System BIOS. 256KB x 8 Flash ROM

◎ **EXPANSION SLOTS**
AGP Slots   :   One 32-bit AGP Slot (Supports 1x or 2x AGP graphics cards)
ISA Slots   :   One 16-bit ISA slot.
PCI Slots   :   Four or Five 32bit PCI slots.
      (When High Point HPT366 is designed on the board, there will be four PCI slots, because one of the IRQ will be used by the ATA/66 interface.)

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

◎ **USB PORTS**
Two Universal Serial Bus (USB) ports.

◎ **IDE PORTS**
Four Ultra DMA IDE interface are designed on the mainboard. There are two different model which have different IDE interfaces built on the board:

MODEL NAME	IDE INTERFACE
DVAX4	IDE1, IDE2, IDE3, IDE4
DVAX2+/6VAX2+	IDE1, IDE2

◎ **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 is designed on the board (refer to U2 on page 1-2) to monitor hardware healthy status like system voltage, system temperature, and cooling fans. When the hardware monitoring program is installed in the PC system, it will keep monitoring the mainboard status. If there is something which is not working normally, then you will receive a warning message on the screen display so that you can take proper action to prevent your system from damage.

There is the hardware monitoring program in the CD which comes with this mainboard. When you feel like to use the hardware monitoring feature to monitor the mainboard healthy status, please refer section 3-5 for the installation procedure.

◎ **ACPI**
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 210 mm.
2. Height   :   2 1/2 inches with CPU Retention Mechanism.
3. PCB Thickness :   4 layers, 0.05 inches normal.
4. Weight   :   18 ounces.

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 socket 370 coupling board.
- One CD diskette for device driver and utility programs *plus the Virtual Drive*.
- One floppy diskette for Ultra ATA/66 device driver.

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 page 3-11 for detail function description.

☐ **KEYBOARD (PASSWORD OR HOT KEY)**

This mainboard allows you to use your personal password or a combination of hot key to power on your PC system. (***Before you can use this feature, the jumper setting on JP1 must be "Enabled"***). When you have used the BIOS setup program and selected the Password to power on the PC system, the keyboard OnNow function will be activated and this mainboard will keeps scanning the keyboard status waiting for the correct password or hot key input even when the system power is "OFF". Under this circumstance, the only way to power on the PC system will be the correct password or a combination of "hot key". (you can not use the power button on the front panel to power on the PC system.). Please refer to the "Power On Function" setup in Section 4.9.- **" Integrated Peripherals "** for setup details.

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)**

If you have a PS/2™ mouse connected to the system, you may change the setup in the BIOS and use the mouse click to turn on the PC system power. Please refer to **section 4.9**.- **" Power On Function "** 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.

Note: 1. This feature is not available on the COM port mouse (serial mouse).
         2. To use the PS/2 mouse power-on the PC system, JP1 must me "Enabled"

□ **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 BIOS setup program, 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 you will see the input request for the date and time. (you can find the "RTC Alarm Resume" in the "POWER MANAGEMENT SETUP" in Section 4.7), When you have 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.

□ **MODEM RING-IN**
This mainboard supports the Modem Ring-In power on feature. 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*** (COM1 or COM2) on the mainboard. When the mainboard detects the ring-in signal from the serial port, the system power will be turned on instantly

To enable the Modem Ring-In feature, you have to run the BIOS setup utility and enable the "Modem or LAN Resume" option (refer to Section 4-7 - "POWER MANAGEMENT SETUP").

□ **WAKE ON LAN (WOL)**
There is a WOL connector CN16 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 the 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" in the BIOS setup program.

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).

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 devices 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. (please refer to page 1-2 to see the mainboard layout)

3.1 INSTALLATION OF CPU

There are two CPU sockets on the mainboard designed for Pentium ™ II, Pentium ™ III and Celeron™ processors. The CPU sockets on the mainboard are the *Slot 1* and *Socket 370* as shown in the following picture:
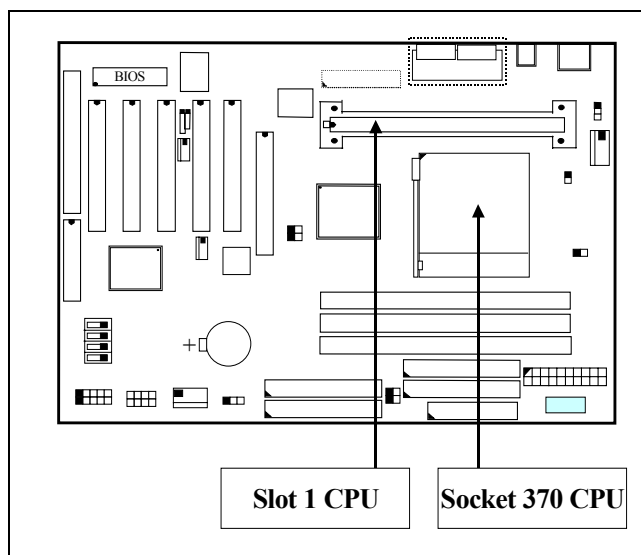
Note: 1. You can install only one CPU on this mainboard.
2. If you are installing the Pentium III CPU onto the socket 370 connector, please have the CPU coupling board shown below (optional) installed on the Slot 1 and it will enhance PC system compatibility. (Without the CPU coupling board, Socket 370 will support Celeron only).
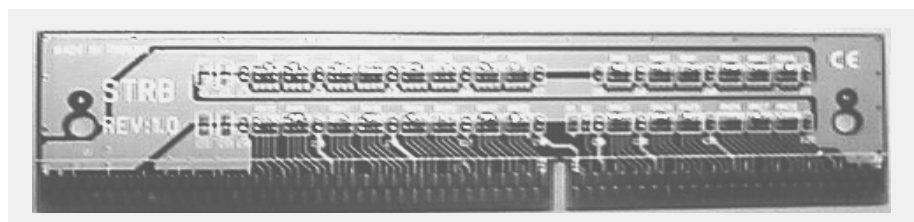

Outlook of the socket 370 CPU coupling board.

When you have installed the 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.

3.2 INSTALLING THE DRAM MODULES

This mainboard has three DIMM sockets designed on the mainboard, all the DIMM sockets on the mainboard support the single side and double side DIMM modules, In order to have a better performance, only the Synchronous (SDRAM) memory is recommended. (Both Symmetrical and Asymmetrical DRAM addressing are supported.),.

When installing SDRAM modules, you don't have to start from DIMM1, you can choose one of the DIMM sockets to install the DIMM module. However, install the SDRAM module from DIMM 1 is still recommended.
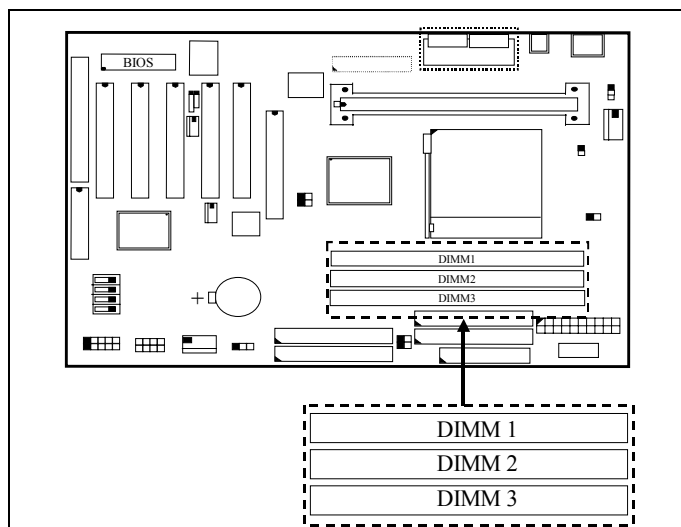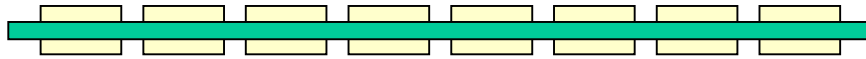

In order to increase of the system performance and the reliability, please refer to the following suggestions when you are installing the DIMM modules :

Installation of DIMM modules:

1. Outlook of DIMM modules:
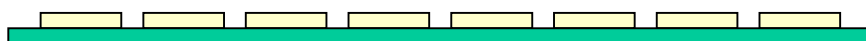
(Single-Side DIMM Module)

(Double-Side DIMM Module)

2. Minimum one DIMM module must be installed on the mainboard.
3. You can use single side or double side DIMM module on this mainboard.
4. Always install DIMM module starting from DIMM 1 socket first, and then DIMM 2 and DIMM 3.
5. If you are installing the CPU with 133MHZ front side bus speed, PC-133 DIMM module is recommended..
6. Maximum memory size for this mainboard: 384MB

The VIA693A chipset supports the ECC feature and it can be used to check the memory sub-system and make sure there is no error during memory read and memory write. Before you can enable the ECC feature in the BIOS setup program, please check the memory module and make sure there is the 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.). Followings are the connectors with its description and the 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
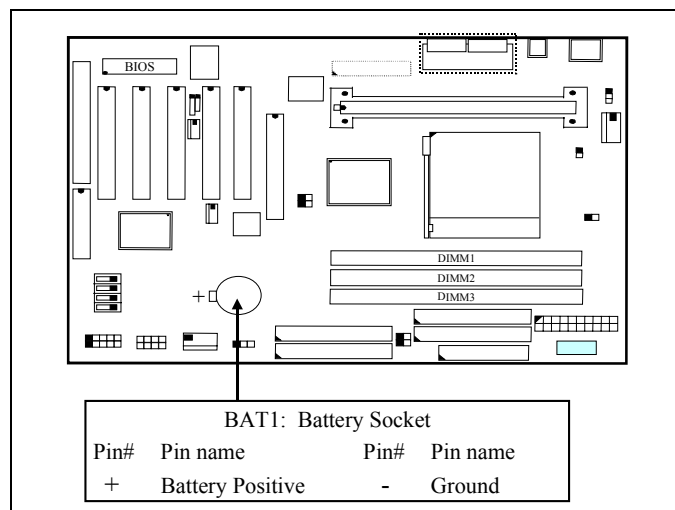
(B) CN1CN2:   PS/2 Mouse and Keyboard Connector

CN2 : PS/2 Mouse Connector

CN1 : PS/2 Keyboard Connector
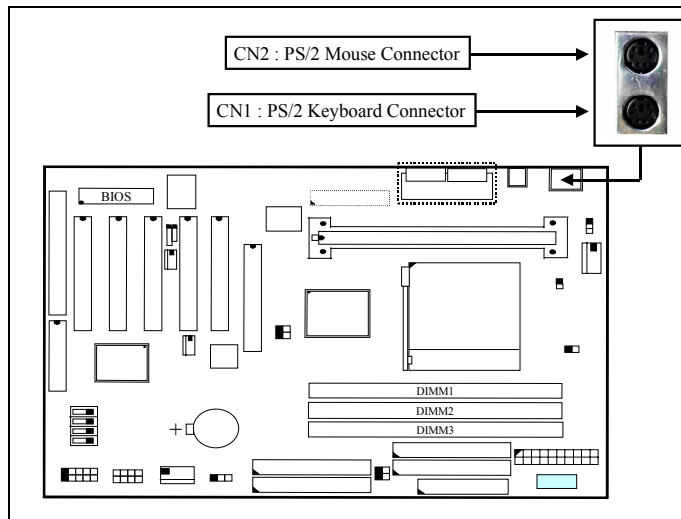
(C) CN3 :   Serial Port COM 1 Connector
(D) CN4 :   Serial Port COM 2 Connector

CN3

COM 1

CN4

COM 2
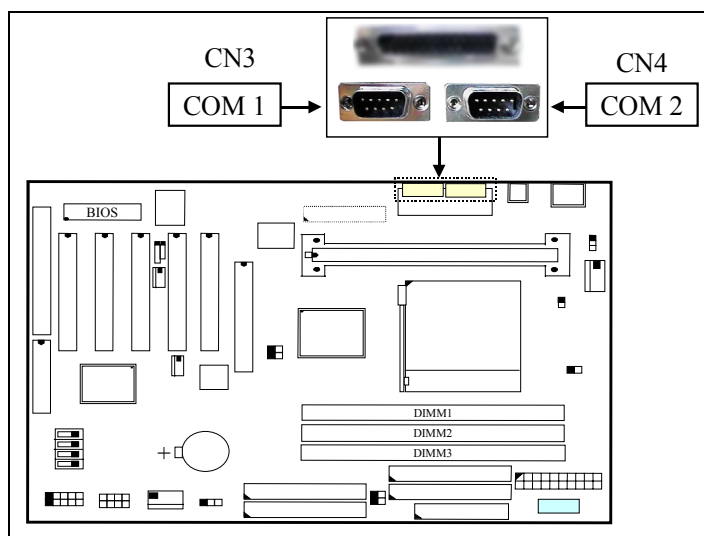
(COM ports viewed from the real panel)

Ping assignment of serial port connector:

1	6	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		

5   9

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

(E) CN5: Parallel Port Connector
The parallel port on the mainboard 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 program
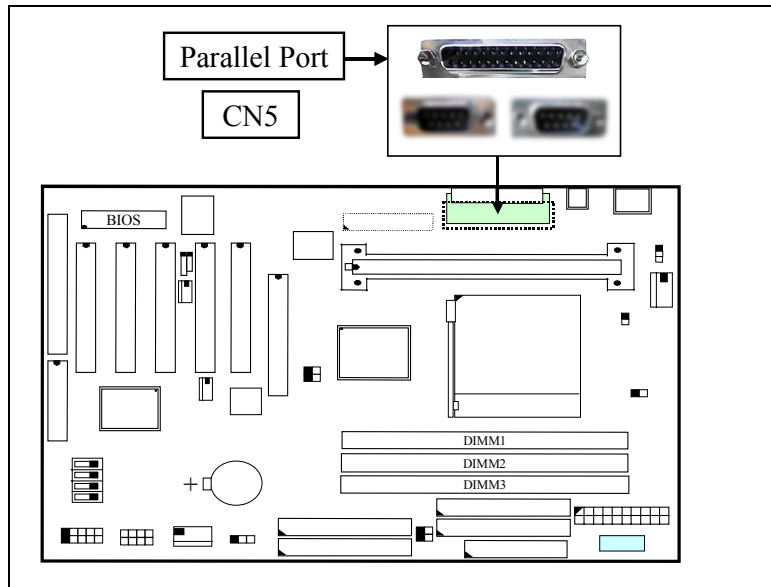
Pin assignment of parallel port:

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		

(F) CN6:   USB Port 1 (Universal Serial Bus) Connector
(G) CN7:   USB Port 2 (Universal Serial Bus) Connector
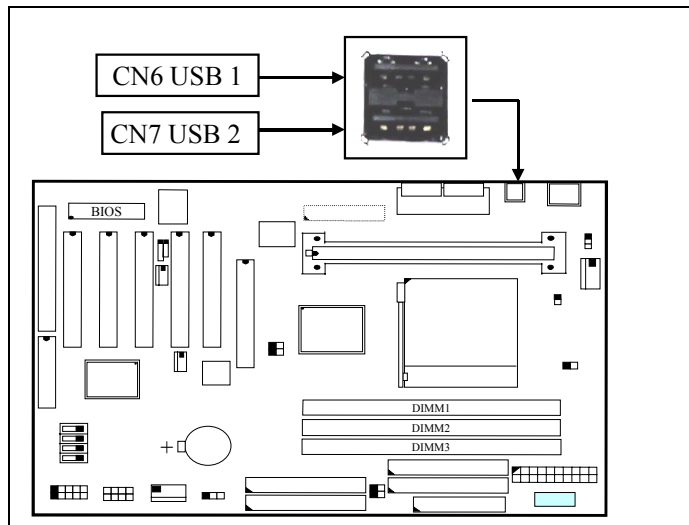
Pin assignment of USB connector:
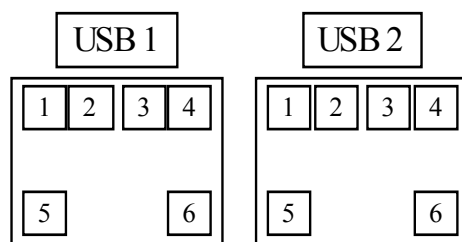
Pin1: +5VDC
Pin2: DATA-
Pin3: DATA+
Pin4: Ground
Pin5: Ground
Pin6: Ground

(H) CN8: Floppy Disk Control Port Connector (Use IRQ6, DMA channel 2)
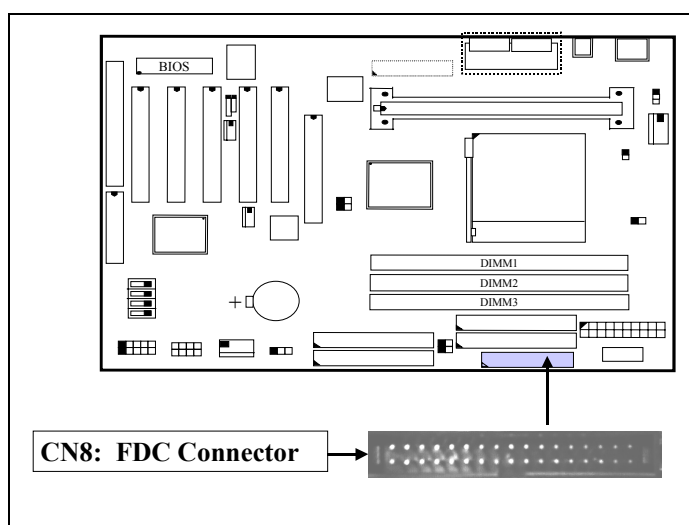
(I)   **CN9 :   IDE 1 Connectors**   (Primary ATA/66 IDE Port: 1F0H, IRQ 14)

(J)   **CN10: IDE 2 Connectors**   (Secondary ATA/66 IDE Port: 170H, IRQ 15)

These two IDE ports are the standard IDE interface on the mainboard and they are ATA/66 and backward compatible.
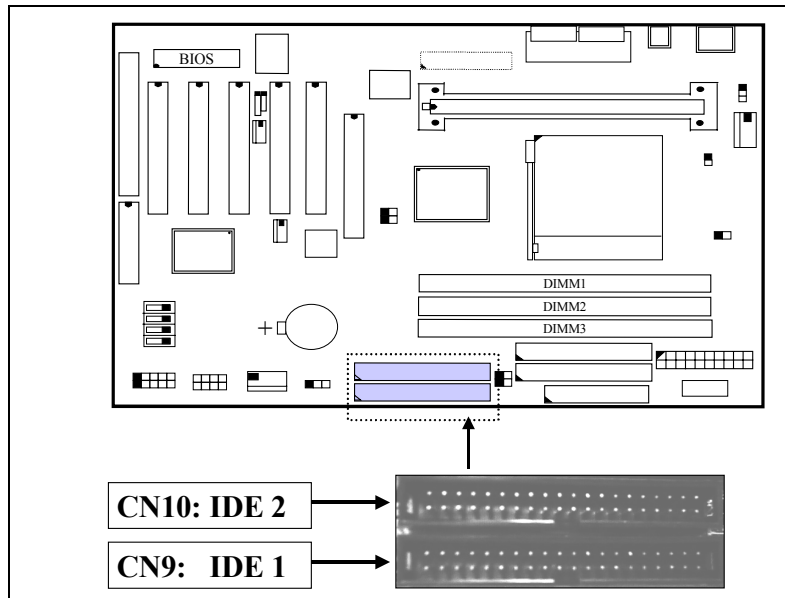
(K) CN12: IR / FIR (Infrared Rays) Connector

Consumer IR Connector   (Consumer IR connector is active only when W83977CTF-AW I/O Chip is installed on position U9)
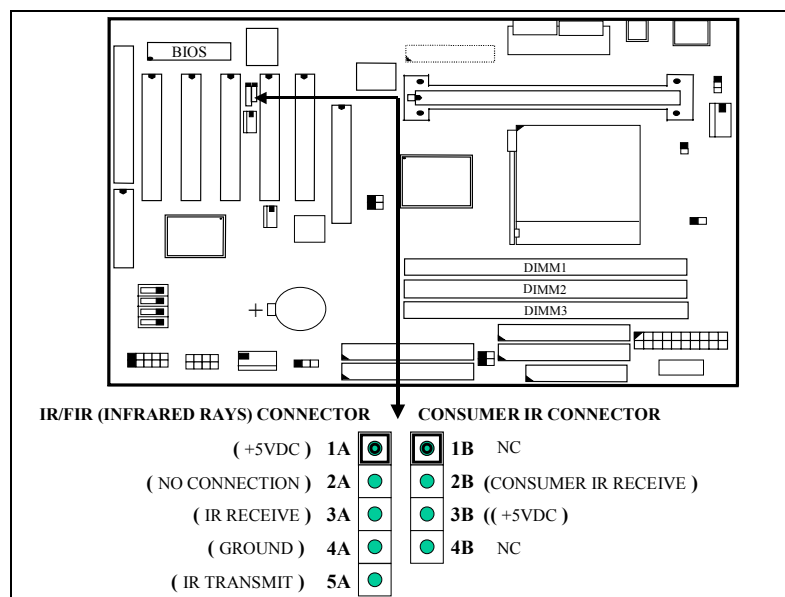
CN 12 IR CONNECTOR (*Consumer IR is optional*)

(L) CN13: CPU Cooling Fan Power Connector

1	○	GND
2	○	+12V
3	○	Fan Signal

CN13
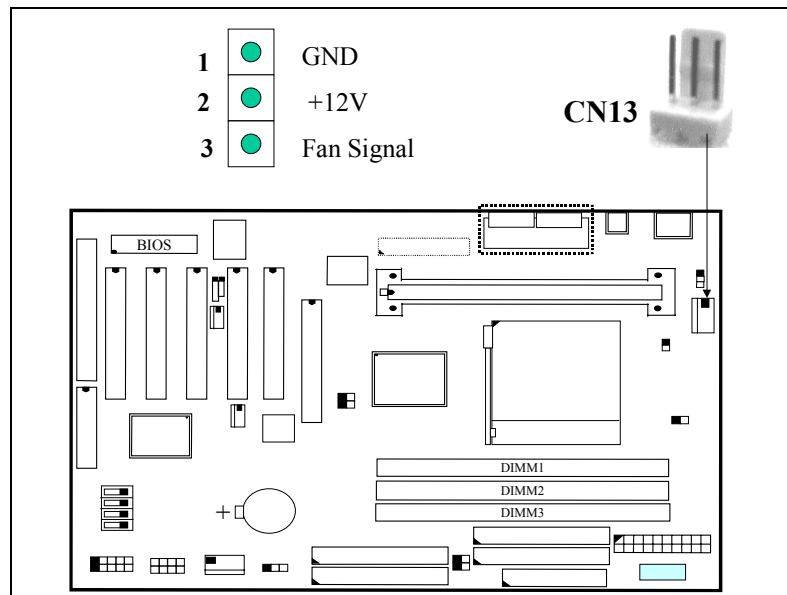
(M) CN15: ATX Power Connector

CN15

ATX Power connector
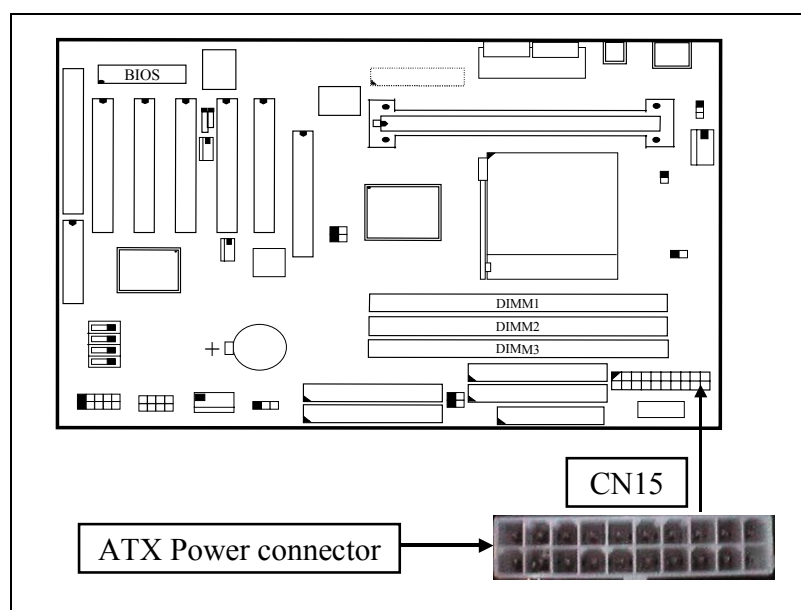
(N) CN16: WOL (Wake On LAN) Connector

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.
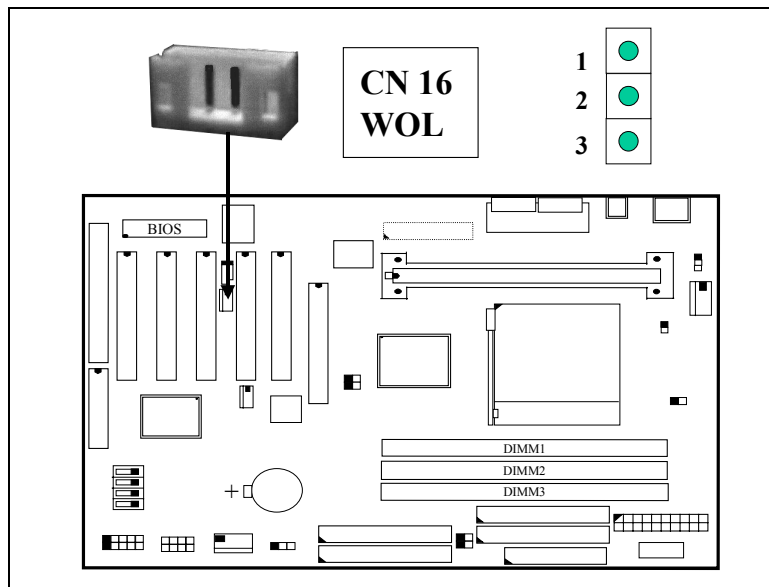
Pin assignment of WOL Connector

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

(O) CN17: Chassis Fan Power Connector

1 **Ground**

2 **+12V DC**

3 **Fan Sense Signal**
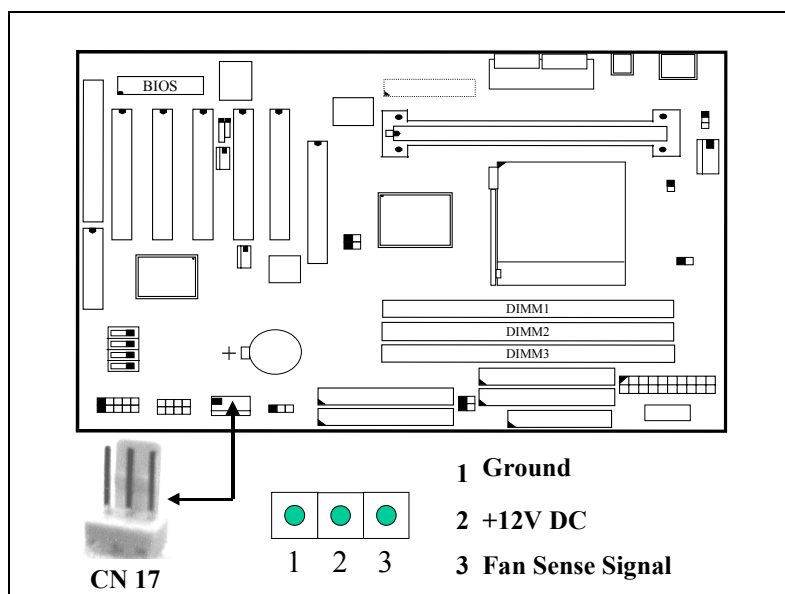
(P) CN28 :IDE 3 Connectors (Primary ATA/66 IDE port) (optional)
(Q) CN29: IDE 4 Connectors (Secondary ATA/66 IDE port) (optional)

CN29: IDE 4

CN 28: IDE 3
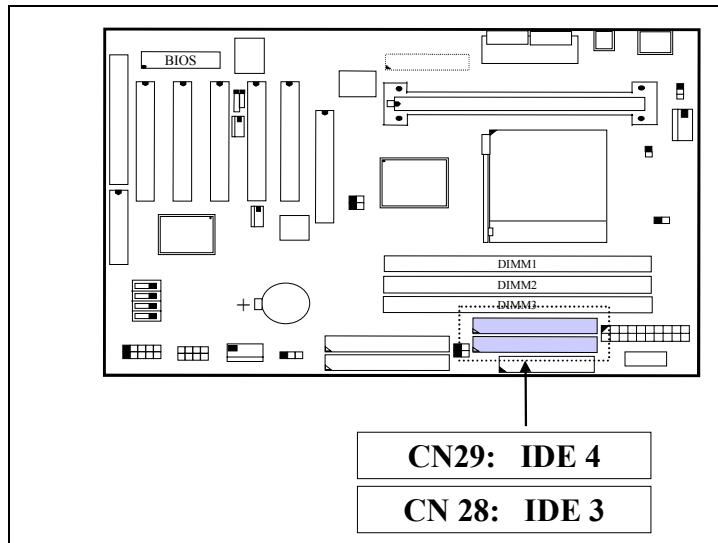
Note: IDE3 and IDE4 are the optional choice for customers.

(R) Push buttons and LED connectors
A series of connectors are designed on the mainboard to connect the push buttons and LED indicators on the front panel. Followings are the details:

PW   SL   HL   RS

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

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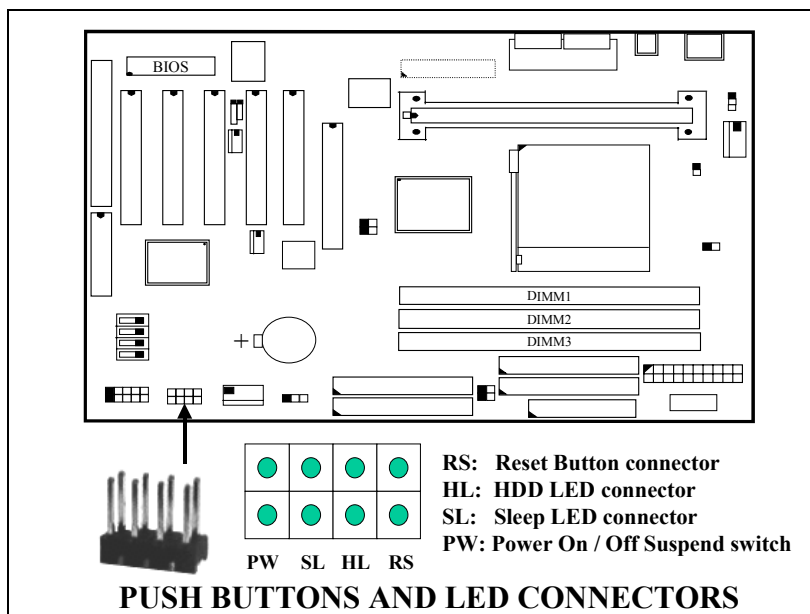
1. **RS**   Reset Button Connector

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

2. **HL** IDE HDD LED Connector
   <u>Pin #</u>   <u>Signal name</u>
      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.
                 <u>Pin #</u>   <u>Signal name</u>
                    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 4.9 for BIOS setup)

   ① **If the setup in CMOS is "Delay 4 Sec.", the function of "PW" will be**:
   A. When system power is "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 4.9 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 4.9 for more details.)

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

(S) Speaker and Key Lock connector:

SPKR & KBLOCK CONNECTORS
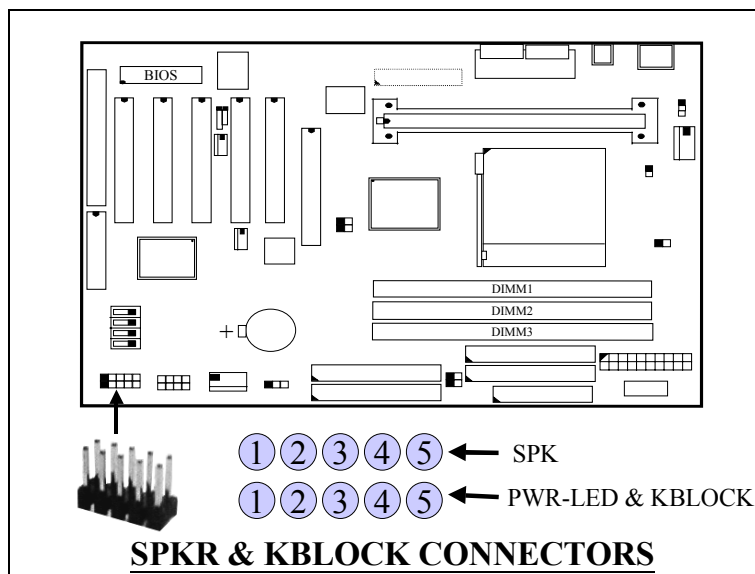
SPK: Speaker connector

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

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

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

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.
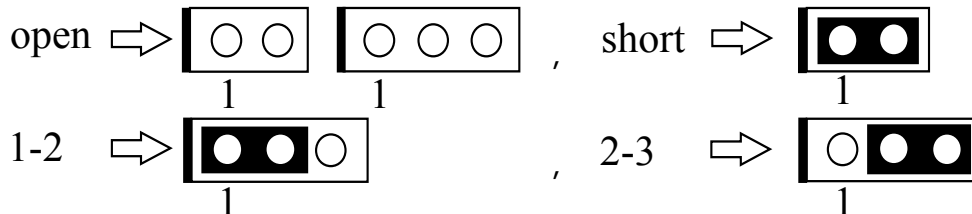
The following jumpers which labeled with "optional" means they are the optional choice for customers and the related components are normally not populated on the mainboard. In order to make the mainboard works properly in your PC system, please make sure all jumper settings are at correct before installing 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 components onto the mainboard.

(A) JP1: Keyboard and PS/2 Mouse OnNow function selection

The Keyboard and PS/2 Mouse OnNow function is designed on the mainboard and you can use keyboard and mouse key clicks to power on the PC system. However, there may have some keyboard and mouse are not compatible with the OnNow function. In this case, please use JP1 to disable the OnNow function.
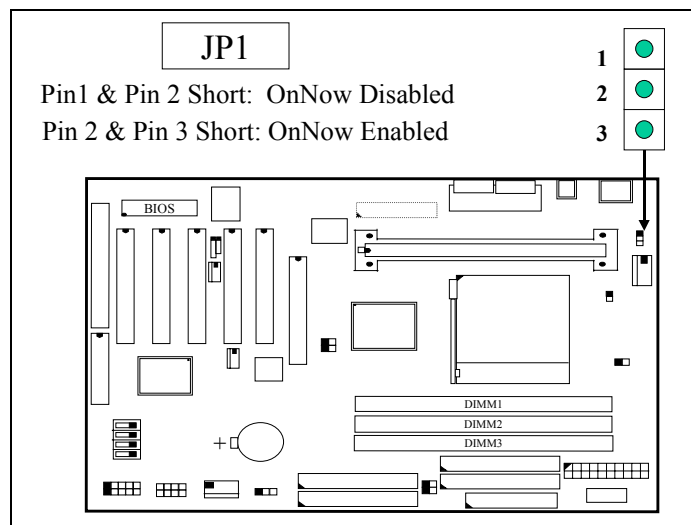
(B) JP9: Clear CMOS Data Button

1   2   3   1   2   3

1-2 Short   **2-3 Short**
Normal Setting   **Clear CMOS**
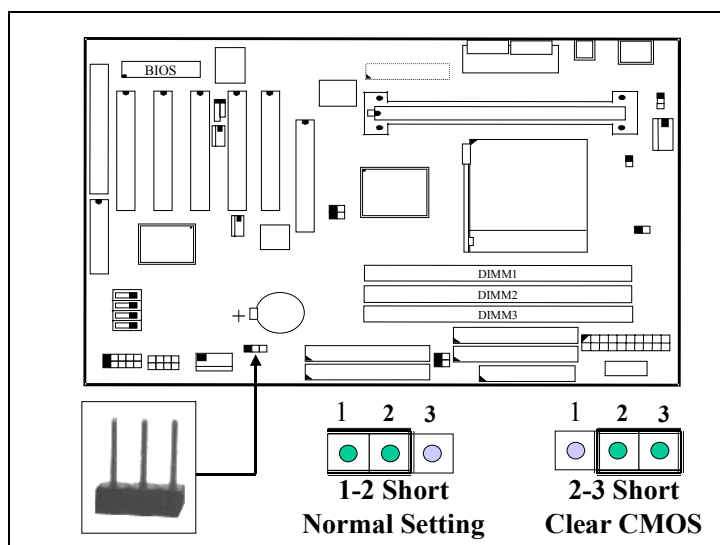
> *Note: JP9 is designed to clear the information which is stored in the CMOS memory. Improper connection on JP9 will cause mainboard failed to work. Please refer to the following steps to clear the CMOS*
> *1. Unplug the AC power cable from the PC system.*
> *2. Put the mini jumper on pin 2-3 of JP9 around 3 to 5 seconds and then return it to the original position (pin 1-2).*
> *3. Re-connect the AC power cable.*

(C) JP11: CPU Voltage Adjustment (Optional)

This mainboard will detect the CPU type and choose the proper CPU voltage. Incase that you feel like to adjust the CPU voltage higher then what is detected by the mainboard. You may use JP11 to adjust the CPU voltage. When "SHORT" is selected, the CPU voltage will be 0.05V higher than normal voltage.

OPEN: Normal Default Setting.

SHORT : CPU Voltage 0.05V increased.

JP11
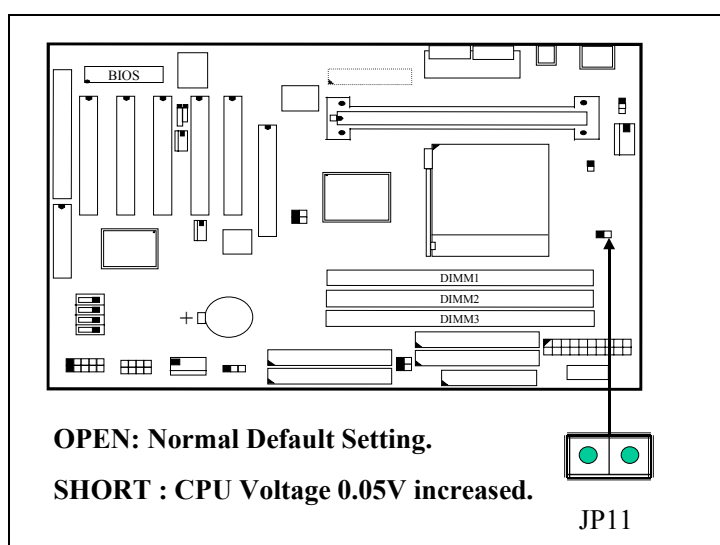
(D) JP12: CPU Voltage Range Selection (Optional)

JP12 is a special design on the mainboard which allows you to select the CPU voltage range (Vcore) to protect the processor from damage by accident.

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.

JP12 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 JP12 will limit the Vcore at 1.3V~2.05V. Please do not change the setting on JP12 unless your CPU needs the voltage higher than 2.05V.

OPEN: Vcore = 1.3V ~ 2.05V

SHORT : Vcore = 1.3V ~ 3.5V.

JP12
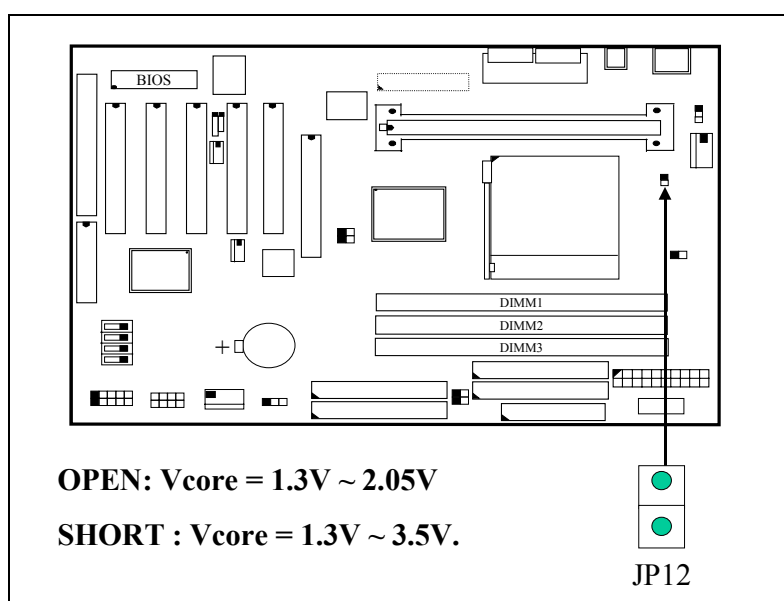
(E) JP100 & JP133: FSB Clock Selection

JP100 and JP133 are designed on the board to select the Front Side Bus (FSB) clock speed for some special purpose. *(Please do not attempt to change this setting unless you are the technician)*. Please refer to the following for functional description..
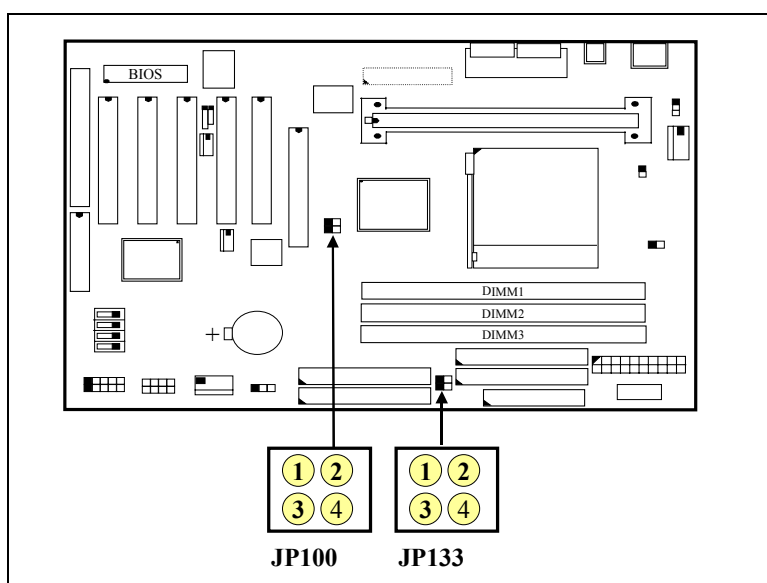
JP100   JP133

FSB	JP100		JP133	
CLOCK	Pin 1 & Pin 2	Pin 3 & Pin 4	Pin 1 & Pin 2	Pin 3 & Pin 4
Auto	Short	Open	Short	Open
66MHz	Open	Short	Open	Short
100MHz	Open	Open	Open	Short
133MHz	Open	Open	Open	Open

Note:
1. JP100 and JP133 will have no function unless "Default" is selected in the " CPU Host PCI/Clock " in the BIOS setup program (refer to Section. 4-6). Please do not to make jumper setting on JP100 and JP133 unless you are the professional technician.

2. When "Default" is selected, you may use JP100 and JP133 to select different speed of CPU FSB clock and force your CPU to use that clock speed instead of letting the system BIOS to select the CPU clock automatically.

(F) SWITCH SETTINGS

There is one "toggle switch" designed on the mainboard to select the CPU clock ratio. Basically, you have to check the specification of your CPU carefully because some of the CPU does not allow you to change its default clock ratio setting. In another word. The switch setting on the mainboard will have no function when you are using the processor whose clock ratio is "locked" inside the CPU.
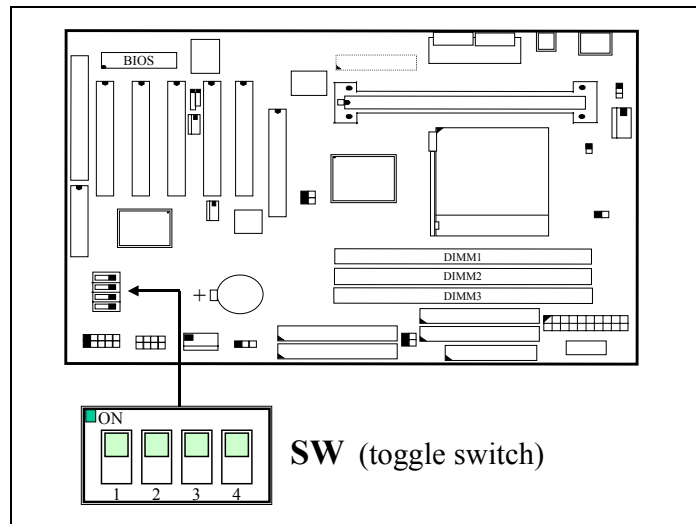
Note: SW setting will have no function when the clock ratio is "locked" in the CPU .

Settings of the toggle switch:

CPU (MHz)	Clock Ratio	SW1	SW2	SW3	SW4
233, 350	3.5X	OFF	OFF	ON	ON
266, 400	4.0X	ON	ON	OFF	ON
300, 450	4.5X	OFF	ON	OFF	ON
333, 500	5.0X	ON	OFF	OFF	ON
366, 550	5.5X	OFF	OFF	OFF	ON
400, 600	6.0X	ON	ON	ON	OFF
433, 650	6.5X	OFF	ON	ON	OFF
466, 700	7.0X	ON	OFF	ON	OFF
500, 750	7.5X	OFF	OFF	ON	OFF
533, 800	8.0X	ON	ON	OFF	OFF

Note: In most case, you don't have to use the switch setting to select the CPU clock ratio because it can be detected by the mainboard automatically.

3.5 INSTALLATION OF DEVICE DRIVERS

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.

A. Install the device drivers for this mainboard:
Before you can start to use this mainboard in your PC system, you will have to install some device driver so that it will work with operation system properly. Please refer to the following procedure to install the device drivers of the mainboard.
Step1. Insert the CD into the CD ROM drive .
Step2.   Select "D:\Driver\Mainboard\VIA\Pentium_II" directory. (Note: "D:" is the device name of your CD ROM drive)
Step3. Run "SETUP.EXE" in this directory and follow the screen display to install the mainboard device driver.

B. Install the device driver for the Hardware Monitoring *(optional)*
(Please note that the Hardware Monitoring is optional on the board)

Step 1. Insert the CD into the CD ROM drive.
Step 2. Select directory "\Driver\mainboard\Hardware Monitoring\W83783S"
Step 3. Run "SETUP.EXE" to install the hardware monitoring program.

IMPORTANT NOTICE:

This mainboard is supported by the Windows 2000 operation system. So you need not to install the device drivers mention above in Step A. Some fatal error may occur to the operation system if you install the device driver.

Please do not install the mainboard device driver when using Windows 2000!

3.6 INSTALLATION OF THE ATA/66 IDE (OPTIONAL)

There are four IDE interfaces designed on this mainboard and it will provide you the maximum flexibility when installing the IDE devices. Two of those IDE ports (CN28 and CN29 are the optional choice for customers) are the optional choice interface and they support the ATA /66 data transfer mode to let your PC system have better performance than other PC systems. In order to tell the operation system that there is the IDE3 and IDE4 installed on the mainboard, please refer to the following procedure to install the related device driver.

> *Note:*
> 1. **The 80-conductor cable is required to support the ATA/66 data transfer mode. If you are using the 40-conductor cable on the IDE interfaces, then the performance may reduced to the regular ATA /33 mode.**
> 2. **Please do not install any SCSI card on the PCI slot 2 to avoid hardware conflicting,**
> 3. **If you are using this mainboard to upgrade your computer and the Windows operation system is already installed in the HDD. Then please have the HDD connected to either IDE 1 or IDE 2 connector when you are installing the device driver. If you have that HDD connected to the ATA/66 IDE interface, then the PC system will be failed to detect the HDD and you will be unable to load the operation system.**
> 4. **When you have installed the Ultra ATA/66 device driver, you may feel free to shift the HDD to IDE3.**

Install the device driver for IDE3 and IDE4:

MS-DOS and Windows 3.1:

The ATA /66 data transfer protocol is supported by the system BIOS and it will support MS-DOS 5.0 (or above) and Windows 3.1 directly without any device driver required (the 80-conductor cable is still required.). However, if you are using the Windows 9X, Windows 2000 and Windows NT operation system, then you have to install the device driver so that the onboard **ATA /66** interfaces will work properly with the IDE devices.

Windows 95:

A. Install the device driver when installing Windows 95
(you may use the 80-conductor cable and have the HDD connected to IDE3)

Step 1. When you have finished the installation of Windows 95 operation
system, restart the PC system.

Step 2. When the Windows operation system is loaded properly, select the
"**Control Panel**" and then double click on the "**System**" icon.

Step 3. Select the "**Device "manager**" and select the "**Other Devices**".
Step 4. Remove the "**PCI Mass Storage Controller**" and then exit "**System**"
and close the "**Control Panel**". (Refer to the following picture)

Step 5. Restart the PC system.

Step 6. Refer to the next procedure "**B. Install the drivers with the existing
Windows 95**" and continue the installation.

B. Install the drivers with the existing Windows 95
(you may use the 80-conductor cable and have the HDD connected to IDE3)

Step 1. If you are using this mainboard to upgrade your PC system, then the
Windows operation system will detect new hard ware when you power
on your PC system. The "**update Device Driver Wizard**" will appear
on the screen indicating that it has found a "**PCI Mass Storage
Controller**".

Step 2. Click on " **Next**" Button to start the installation of the device driver.
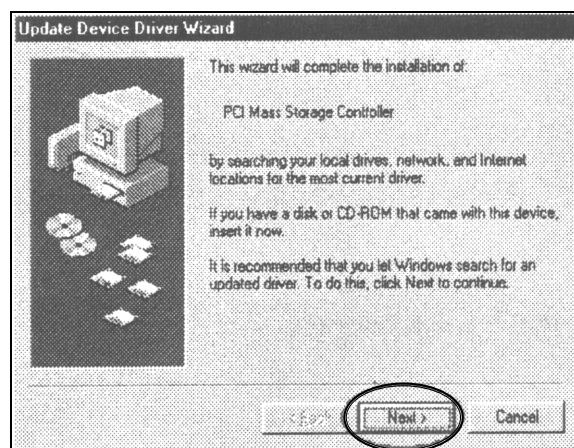
Step 3. Click "**Other Locations**" button.
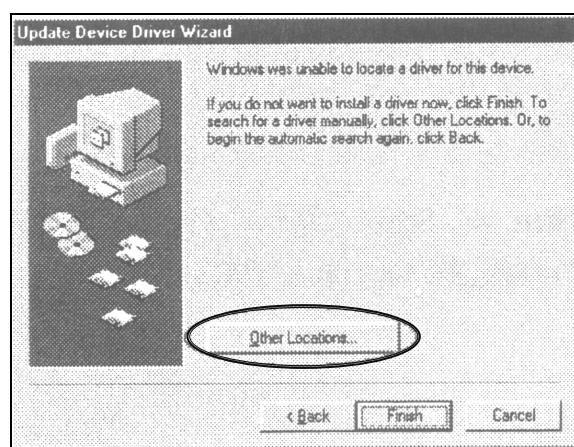
Step 4. Insert the " **Ultra ATA /66 Device Driver**" floppy diskette into the floppy disk drive. (A:) and then click the "**Browse** " button.
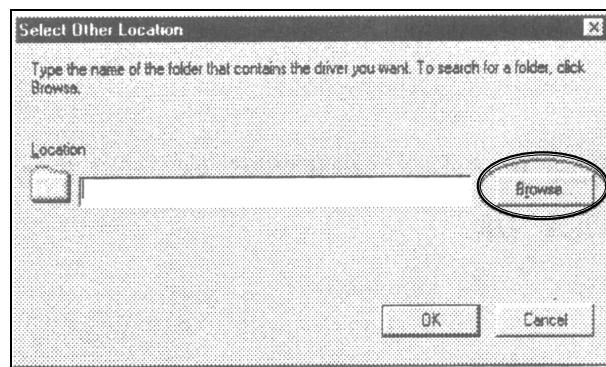
Step 5. Select "**Floppy (A)"** then choose "**Win9X**" folder. And then click the "**OK**" button.
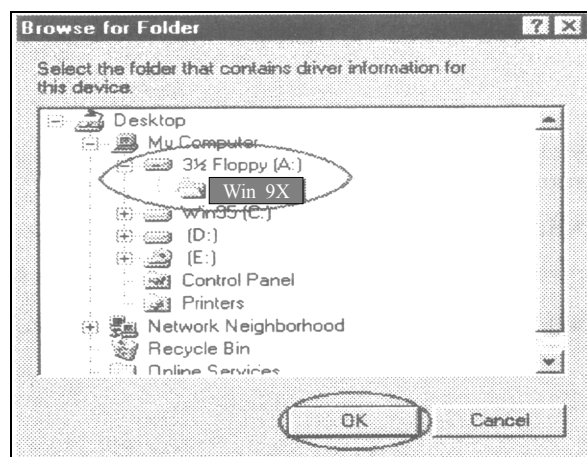
Step 6. When the device driver is installed, click on the "**Finish**" button.
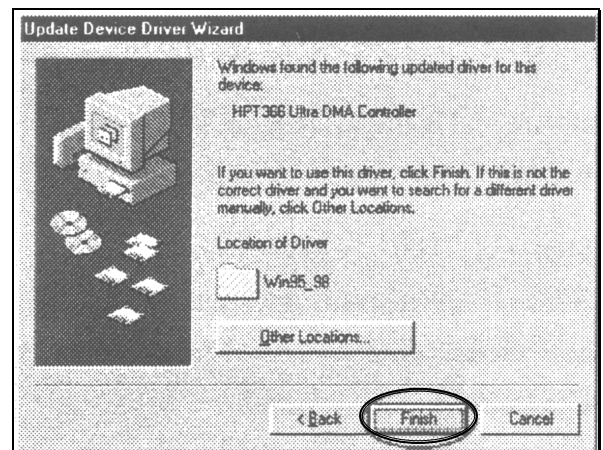
Step 7. Click on the "**Browse** …" button.
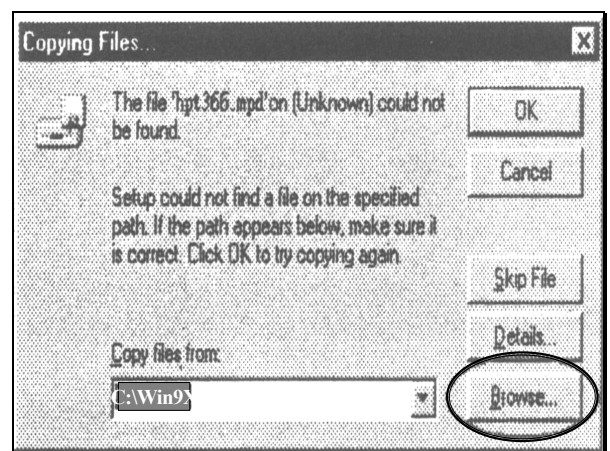
Step 8. Select the "**Win9X**" folder in drive A and then click on the "**OK**" button.
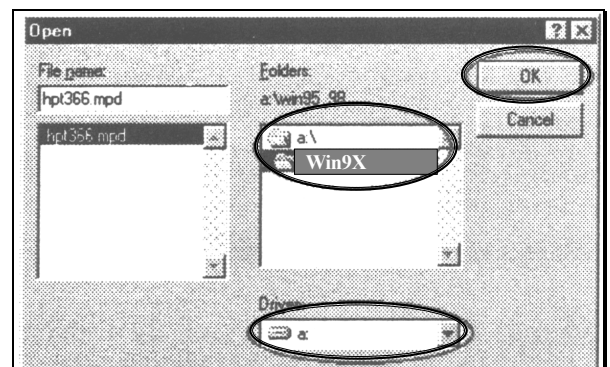
Step 9. When you see "**A:\Win9X**" is selected in the dialog box, click "**OK**" button.
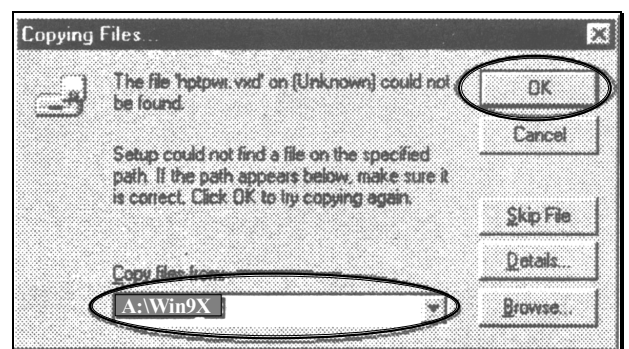
Step 10. Click the "**No**" button to install another "**PCI Mass Storage Controller**".
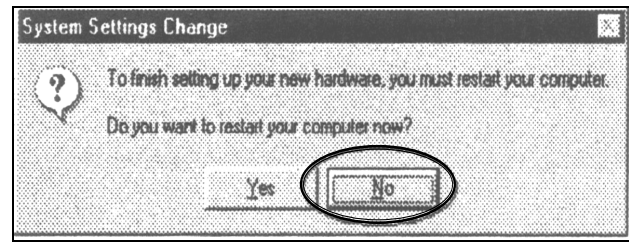
Step 11. When the installation is completed, the system will ask you to restart the computer. Click the "**Yes**" button to restart the computer

Step 12. When the PC system has restarted, select "**Control Panel**" ➔ "**System**" and then select "**Device Manager**" ➔ "**SCSI Controller**". If you can see the device as show in the picture, then the device driver is installed properly..
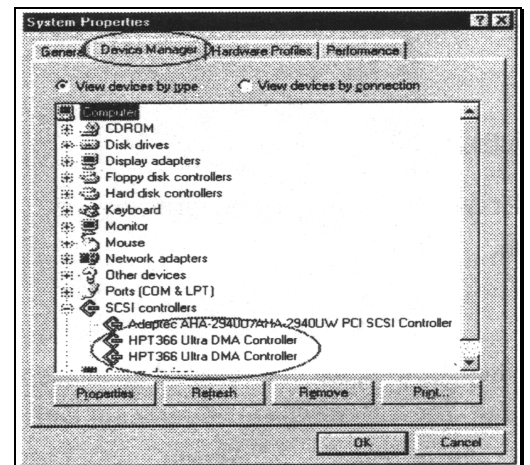
Windows 98:

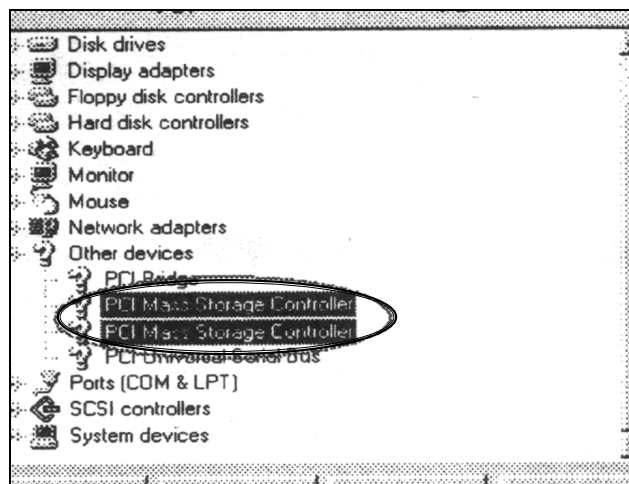**A. Install the device driver when installing Windows 98**
(you may use the 80-conductor cable and have the HDD connected to IDE3)

Step 1. When you have finished the installation of Windows 98 operation system, restart the PC system.

Step 2. When the Windows operation system is loaded properly, select the "**Control Panel**" and then double click on the "System" icon.

Step 3. Select the "**Device "manager**" and select the "**Other Devices**".

Step 4. Remove the "**PCI Mass Storage Controller**" and then exit "**System**" and close the "**Control Panel**"...
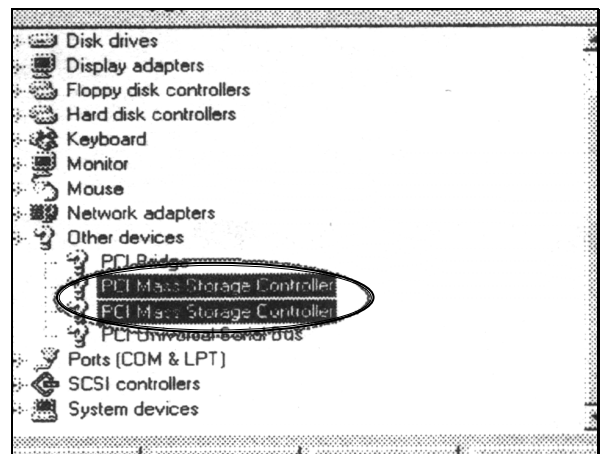
Step 5. Restart the PC system.

Step 6. Refer to the next procedure "**B. Install the drivers with the existing Windows 98**" and continue the installation.

**B. Install the drivers with the existing Windows 98**
(you may use the 80-conductor cable and have the HDD connected to IDE3)

Step 1. If you are using this mainboard to upgrade your PC system, then the Windows operation system will detect new hard ware when you power on your PC system. The "**Add New Hardware Wizard**" will appear on the screen indicating that it has found a "**PCI Mass Storage Controller**". Click "**Next**" button.
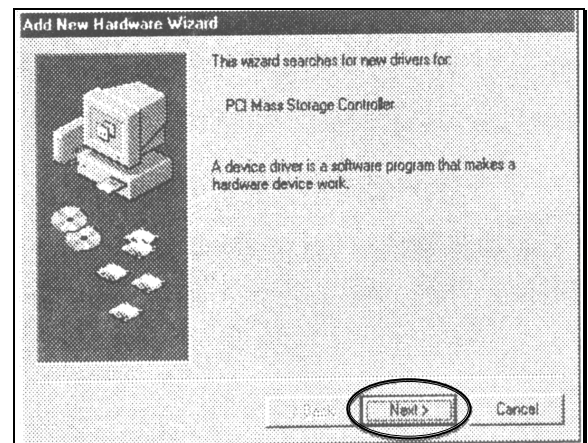
Step 2. Select " **Search for a better driver then the one your device is using now.**" And then click "**Next**".
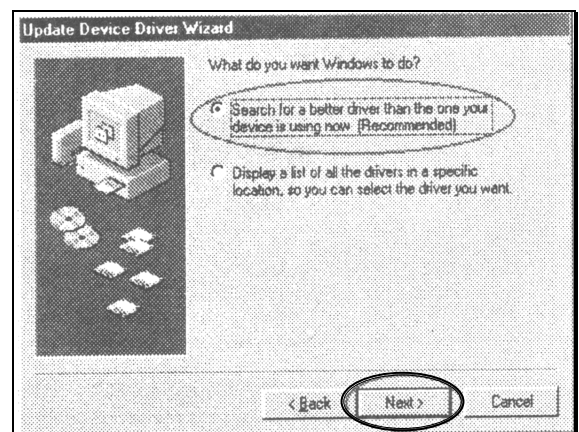
Step 3. Insert the " **Ultra ATA /66 Device Driver**" diskette into the floppy disk drive. (A:) and then click the "**Browse** " button.

Step 4. Select the "**Win9X**" folder in "Drive A". and then click the "**OK**" button..
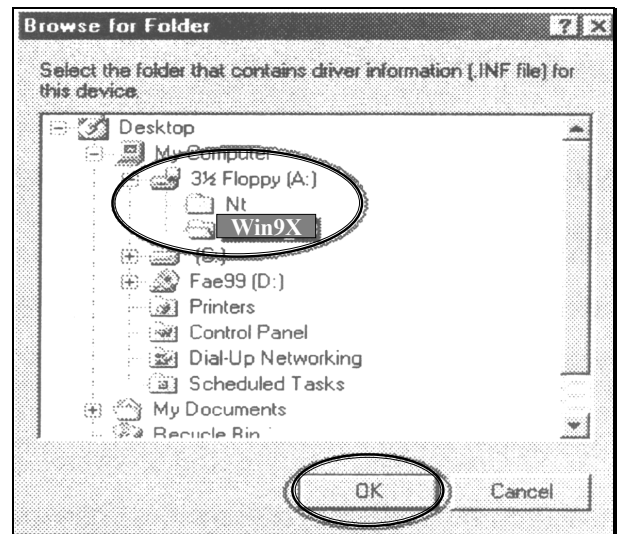
Step 5. Click the "**Next**" buttons and follow the screen instruction to continue the installation.

Step 6. When the installation of the device driver is completed, Click "**Fihish.**" button
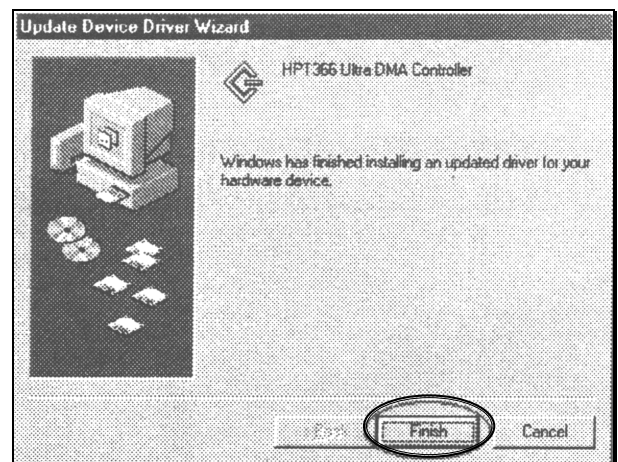
Step 7. click "**No**" to install another "PCI Mass Storage Controller".
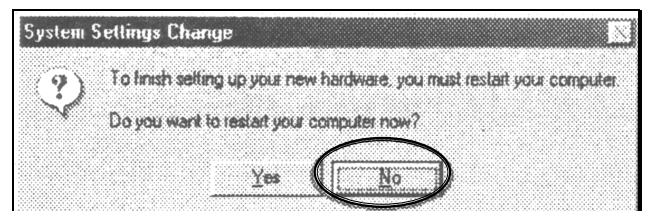
Step 8. When the installation is completed, the PC system will ask you to restart your computer, click "Yes" to restart the PC system.

Step 9. When the PC system has restarted, select "**Control Panel**" ➔ "**System**" and then select "**Device Manager**" ➔ "**SCSI Controller**". If you can see the device as show in the picture, then the device driver is installed properly.
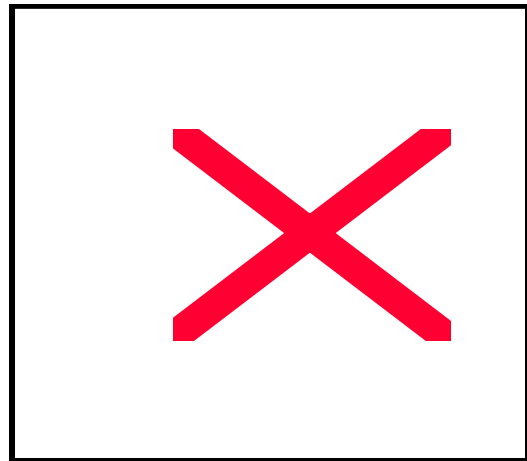
Windows NT 4.0:

When install the Windows operation system, you will have to load the operation system from the CD ROM drive. So please click on the "Del" key during the POST (Power-On-Self-Test) to trigger the BIOS setup program. Select the "BIOS FEATURES SETUP" ➔ "BOOT SEQUENCE" and then select "CDROM,C,A" so that the PC system will load the O/S from the CD ROM drive. (*have the CD ROM drive connected to IDE2 is recommended*)

A. Install the device driver when installing Windows NT
(use the 80-conductor cable and have the HDD connected to IDE3 is recommended.)

Step 1. When Windows NT is installed and it is restarting. you will see "Setup is loading files …" Message displayed at the bottom of the screen, Click the "F6" key.

Step 2. There is the message displayed on the screen indicating Mass Storage Device is detected. (refer to the picture at right" Click the "S" key to install the ATA/66 driver.
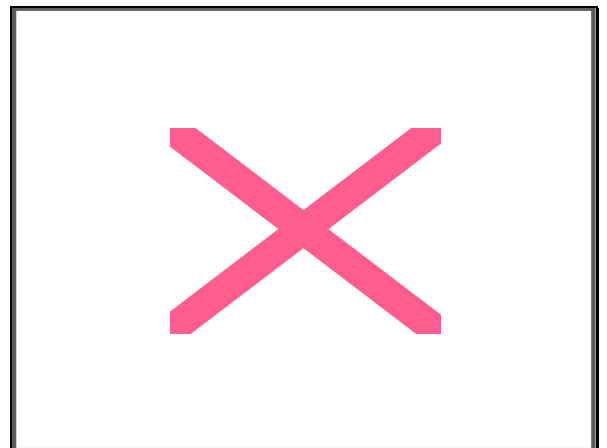
Step 3. Select "**Other, requires disk provided by a hardware manufacturer**" and then click the "**Enter**" key.
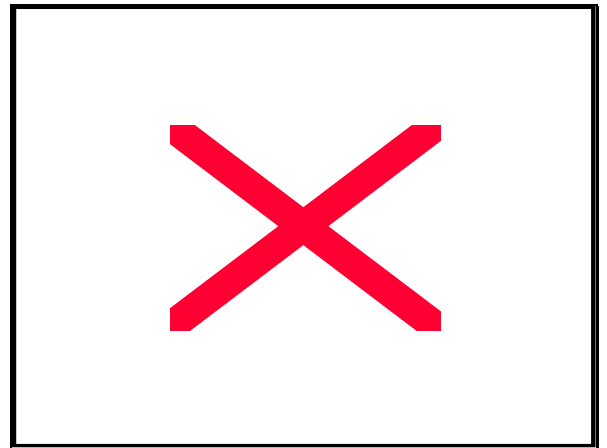


Step 4. Insert the " **Ultra ATA /66 Device Driver**" floppy diskette into the floppy disk drive. (**A:\),** and then click **"Enter"** again.
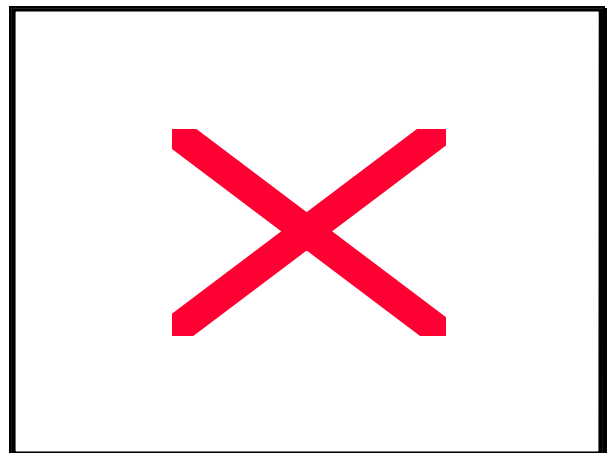
Step 5. Click the " **Enter**" key to continue the installation.

Windows NT Workstation Setup

You have chosen to install a SCSI adapter, CD-ROM drive, or special disk controller provided by a hardware manufacturer.

• To select a mass storage device from the following list use the UP or DOWN ARROW key to move the highlight to the mass storage device you want, and then press ENTER.

• To return to the previous screen without specifying an additional mass storage device for use with Windows NT, press ESC.

Step 6. Windows NT recognizes the High Point ATA/66 device as shown in the picture, Click the "**Enter**" key to continue.
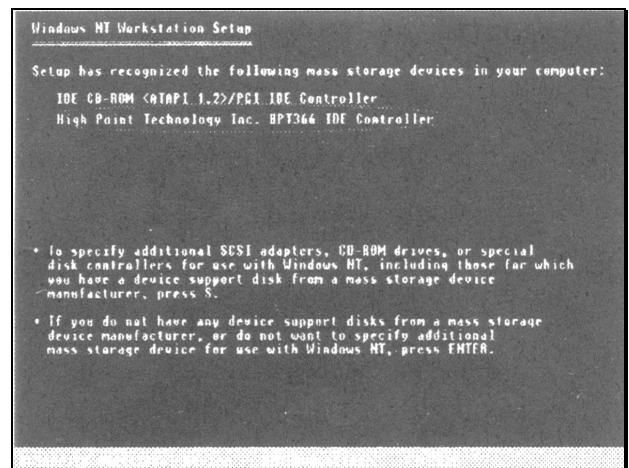
Step 7. When you have configured the HDD and specified the path. NT setup program will ask you to insert the disk into drive A again. Make sure the " **Ultra ATA /66 Device Driver**" diskette is in the floppy disk drive and then click the "**Enter**" to finish the installation.
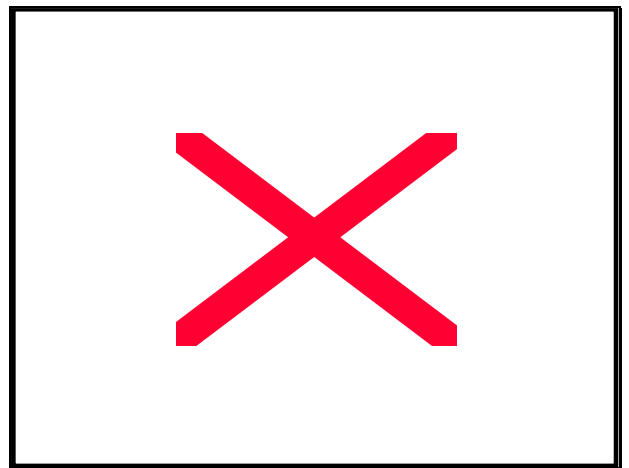
B. Install the drivers with the existing Windows NT
IMPORTANT: Please have the hard disk drive connected to IDE1 to start the Windows NT operation system. If you have the hard disk connected to the ATA/66 IDE ports, the PC system will be failed to detect the hard disk properly and you can not use it to load the operation system.

Step 1. Start the Windows NT operation system and open "**Control Panel**", and then double click on the "**SCSI Adapter**" icon.

Select the SCSI Adapter
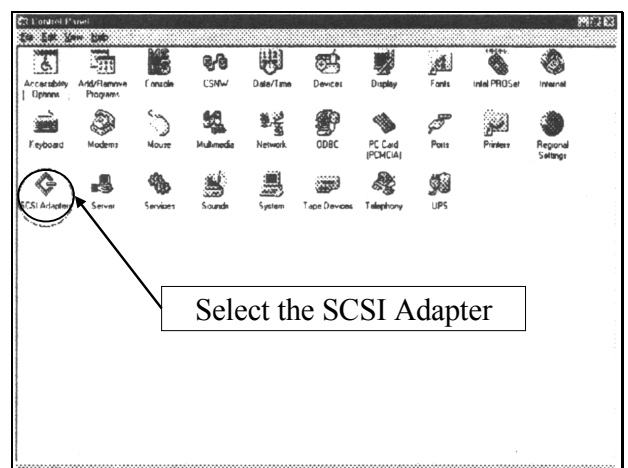
Step 2. Select "**Drivers**", and then click on the "**Add**" button.
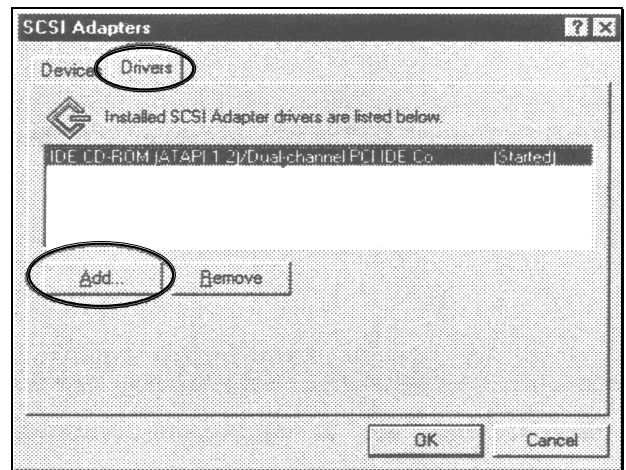
Step 3. Click the "**Have Disk ..**" button.
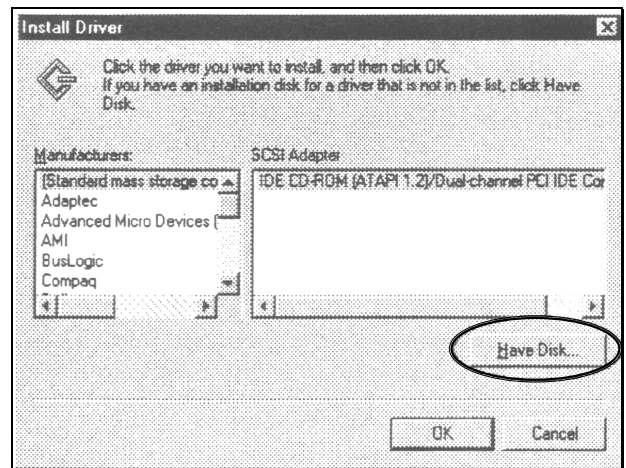
Step 4. Insert the "**Ultra** ATA/66 **Device Driver**" floppy disk into the FDD and then click the "**OK**" button.
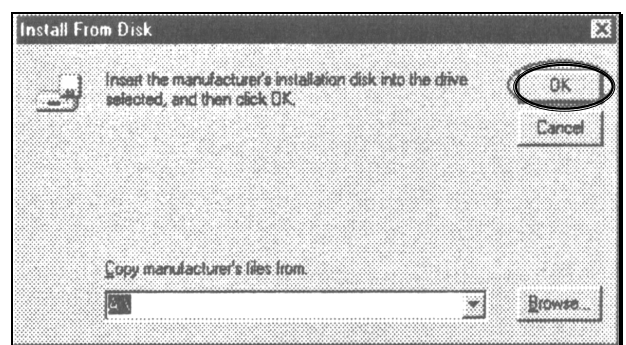
Step5. When you see the High
Point HPT366 Ultra DMA
controller shown in the
window, click the "**OK**"
button.
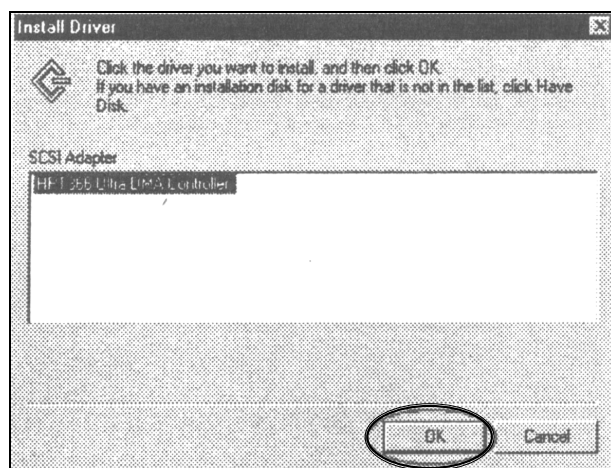
Step6. Key in "A:\" in the dialog
box and then click the
"**Continue**" button.
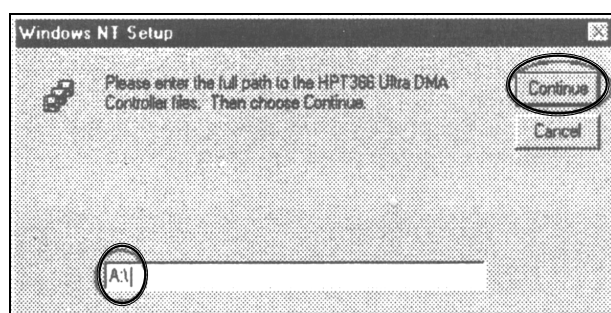
Step7. When the installation is
completed, you will have to
restart the PC system so that
the device driver will be
enabled. Click the "**Yes**"
button to restart the
computer.
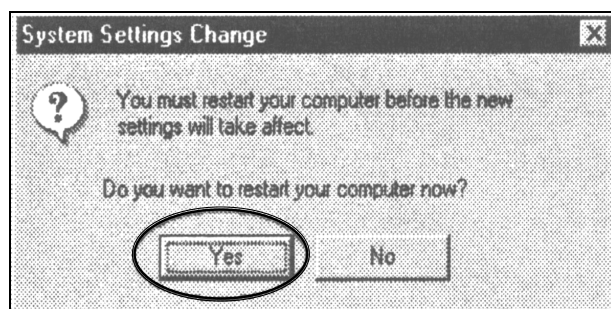
*Note: When you have finished the installation of the device driver, you may feel free
to have the hard disk drive connected to IDE 3 and use it to load the operation
system.*

4. AWARD BIOS SETUP

4.1 GETTING STARTED

When the system is first time powered on or reset by user, the system BIOS will enter the POST routines (Power On Self Test), which will execute a diagnostics and initialize the computer. In case that there is any error or malfunction detected, the BIOS will give a series of beeping sound or display the error message on screen.

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 start the BIOS Setup program, please press the **DEL** key. The STANDARD CMOS SETUP screen as shown in figure Fig. 4-1 will be triggered:

4.2 MAIN MENU

```
                    ROM  PCI / ISA  BIOS  (2A69LGXXX)
                          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 ...                │
 └──────────────────────────────────────────────────────────────────┘
```

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, (only the current page setup will be loaded).
F10	**:**	Save all changes to CMOS RAM from the MAIN MENU

4.4 STANDARD CMOS SETUP

```
                 ROM  PCI / ISA  BIOS  (2A69LGXXX)
                      STANDARD CMOS  SETUP
                      AWARD  SOFTWARE,  INC.
```

Date (mm : dd : yy)   : Mon,   Mar   20 2000
Time (hh : mm : ss   : 16 : 03 : 33

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

Drive A : 1.44M, 3.5 in.
Drive B : None
Floppy 3 Mode Support: Disable
Video : EGA/VGA
Halt On : All Errors

Base Memory : 640 K
Extended Memory : xxxxxx K
Other Memory : xxxxxx K
Total Memory : xxxxxx K

ESC : Quit	↑↓→← : Select Item	PU/PD/+/- : Modify
F1 : Help	(Shift)F2 : Change Color	

MODE :

The BIOS on the mainboard is the updated one and which provides three different modes to support both normal IDE HDD and the one 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 HDD which is above 528MB and does not support LBA mode.
- ➤ Auto   : This mode will auto-detect your IDE driver during boot-up.

Floppy 3 Mode Support: (Default setting: disabled)

This mode is for the Japanese 3.5 inch high capacity floppy disk drive. If you do not have such drive installed in your PC system, please use the default setting.

4.5 BIOS FEATURES SETUP

ROM PCI / ISA BIOS (2A69LGXXX)
BIOS FEATURES SETUP
AWARD SOFTWARE, INC.

Virus Warning	: Disabled	OS Select For DRAM > 64MB	: Non-OS2
CPU Internal Cache	: Enabled	HDD S.M.A.R.T. capability	: Disabled
External Cache	: Enabled	Video BIOS Shadow	: Enabled
CPU L2 Cache ECC Checking	: Enabled	C8000-CBFFF Shadow	: Disabled
Processor Number Feature	: Disabled	CC000-CFFFF Shadow	: Disabled
Quick Power On Self Test	: Enabled	D0000-D3FFF Shadow	: 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		
Gate A20 Option	: Fast		
Memory Parity / ECC Check	: Disabled		
Typematic Rate (Chars/Sec)	: 6	ESC : Quit ↑↓→← : Select Item	
Typematic Delay (Msec)	: 250	F1 : Help PU/PD/+/- : Modify	
Security Option	: Setup	F5 : Old Values (Shift)F2 : Color	
PS/2 mouse function control	: Enable	F7 : Load Setup Defaults	
PCI/VGA Palette Snoop	: Disabled		

Virus Warning :
    Basically, The default setting of this feature is "Disabled". In order to avoid virus intruding 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)
    You can not see this selection option unless you have the Pentium III processor installed on the mainboard. There is the serial code inside every Pentium III processor and it will be accessed by application to show your personal ID. If you don't feel like to give your serial code to other people, select the "Disabled" setting.

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 which is connected to the IDE interfaces..

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.

Security Option : (default setting: Setup)

This selection field allows you to select how to secure the PC system for you. There are two choice selectable - "Setup" and "System". Before you can apply the security option to your PC system, you have to select your own ""Supervisor Password" or "User Password" in the BIOS setup program.

When "Setup" is selected, you will have to input your "Passwords" before you can start the BIOS setup program. When you select "System", you will be unable to load the operation system if you don't key-in your personal "password"

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.

HDD S.M.A.R.T Capability : (default setting: Disabled)

There is the HDD which support the S.M.A.R.T. technology (Self Monitoring Analysis Reporting Technology). If your HDD support the SMART feature, you may enable this item and it will monitor and report the HDD healthy status to you.

4.6 CHIPSET FEATURES SETUP

ROM PCI / ISA BIOS (2A69LGXXX)
CHIPSET FEATURES SETUP
AWARD SOFTWARE, INC.

```
Bank 0/1 DRAM Timing    :SDRAM 8/10ns   Auto Detect DIMM/PCI Clk  : Enabled
Bank 2/3 DRAM Timing    :SDRAM 8/10ns   Spread Spectrum           : Disabled
Bank 4/5 DRAM Timing    :SDRAM 8/10ns   CPU Host PCI/Clock         : Default
EDO RASx# Wait State    : 2
SDRAM Cycle Length      : 3
DRAM Clock              : Host CLK
 Memory Hole            : Disabled
Read Around Write       : Disabled
Concurrent PCI / Host   : Disabled
System  BIOS  Cacheable : Disabled
Video RAM Cacheable     : Disabled
AGP Aperture Size  (MB) : 64
AGP-2X Mode  Time       : Enabled     ESC :  Quit          ↑↓→←  :  Select Item
OnChip USB              : Enabled     F1 :  Help           PU/PD/+/-  :  Modify
USB Keyboard Support    : Disabled    F5 :  Old  Values    (Shift)F2  :  Color
                                      F7    :  Load  Setup  Defaults
```

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.*

BANK0/1, 2/3, 4/5 DRAM Timing:

This item allows you to select the value in this field, depending on whether the board has paged DRAMs or EDO (extended data output) DRAMs.

SDRAM Cycle Length

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing. Do not reset this field from the default value specified by the system designer.

DRAM Clock

This selecting option allows you to control the DRAM speed.

Memory Hole

In order to improve performance, certain space in memory is reserved for ISA cards. This memory must be mapped into the memory space below 16MB. This field allows you to decide the memory mapping.

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.

System BIOS Cacheable

Selecting *Enabled* allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

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 : "Enable")
When "Enabled" is selected, 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: (default setting : "Disable")
When you select "Enabled", the special feature designed in the system chipset will be triggered and reduce the EMI as mentioned above.

CPU Host Clock (CPU/PCI): (default setting : "Default")
This selection field is used to decide the CPU FSB clock. Basically, this mainboard is designed by using VIA 693A chipset and it supports 66MHz, 100MHz and 133MHz 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 toggle switch (SW) setting to select the CPU clock ratio and decide the CPU speed. please refer to page 3-16 and page 3-17 for details of the switch settings.

Beside the "Default" FSB selection, this mainboard also provides the manual option for your choice. You may use the "Page Up" and "Page Down" to select different FSB clock.

> *Note:*
> *1. The higher FSB frequency will surely give you the higher system performance. However, it is not recommended because it may cause the system unstable, especially the component like DRAM, HDD, Add on card is not fast enough.*
>
> *2. Wrong selection of FSB clock may cause the PC system hang up and the system can not boot, In case that it should be happened, use to clear the CMOS and reset the setting.*

4.7 POWER MANAGEMENT SETUP

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

ACPI function	Disabled	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	

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: "Disabled") *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 Ring 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   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		

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)
   Manual : The system BIOS will not refer to the ESCD data to assign IRQ & DMA. Instead, it will refer to the information recorded in this field when Assigning the IRQ & DMA resource. (the system BIOS will always refer to the ESCE data to assign the I/O and memory space resources).

   Auto : The system BIOS will refer to the ESCD segment for all legacy information.

Reset Configuration Data :
 Disabled : The system BIOS will do nothing.
 Enabled : The system BIOS will clear (reset) the ESCD data during "POST". After clearing the ESCD data, the system BIOS will then change this item's value back to "Disabled", otherwise, the ESCD data will become useless.

IRQ# / DMA# assigned to :
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 of the 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 "PCI/ISA PnP" is selected, the related IRQ and DMA will be
PnP   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, 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 arrangement 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.

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 on this mainboard 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.

4.9 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      ║
╚══════════════════════════════════════════════════════════════════╝
```

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.

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.

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.

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.

UART Mode Select : (Default setting : "Normal")

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

Onboard Parallel Port : (Default setting : "378/IRQ7")

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

4.10 LOAD SETUP DEFAULTS

ROM PCI / ISA BIOS (2A69LGXXX)
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
INTEGRATED PERIPHERALS	EXIT WITHOUT SAVING
PNP/PCI CONFIGURATION	
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 (2A69LGXXX)
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
INTEGRATED PERIPHERALS	EXIT WITHOUT SAVING
PNP/PCI CONFIGURATION	
LOAD SETUP DEFAULT	

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 4-9. 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:
   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:
   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 (2A69LGXXX)
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
INTEGRATED PERIPHERALS	EXIT WITHOUT SAVING
PNP/PCI CONFIGURATION	
LOAD SETUP DEFAULT	

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. However, 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" 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 (2A69LGXXX)
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
INTEGRATED PERIPHERALS	EXIT WITHOUT SAVING
PNP/PCI CONFIGURATION	
LOAD SETUP DEFAULTS	

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

There are so many different types of Hard Disk Drive (HDD) in the market and your PC system will not know the HDD type unless you tell it the HDD type. In order to make your PC system know the IDE HDD type, you have to tell the system what kind of HDD is connected to the mainboard by giving a set of HDD parameters. Sometimes it is not easy for users to find the proper parameters for their IDE HDD. In order to help users to find the parameters, the system BIOS provides a convent way – the auto detection of IDE HDD.

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 HDD. If it succeeds, you will see a list of hard disk with its related parameters displayed on the screen. You may press on the "Y" key to confirm the HDD type (or select one of the hard disk type listed on the screen). The system BIOS will "read" the parameters into the CMOS memory and you have completed the IDE HDD setup.

4.14 SAVE & EXIT SETUP

```
                    ROM  PCI / ISA  BIOS  (2A69LGXXX)
                         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            │
│                                  │                                  │
│  INTEGRATED  PERIPHERALS         │  EXIT  WITHOUT  SAVING           │
│                                  │                                  │
│  PNP/PCI  CONFIGURATION          │                                  │
│                                  │                                  │
│  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 (2A69LGXXX)
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	HDD LOW LEVEL FORMAT
INTEGRATED PERIPHERALS	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
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.