
630AF

USER'S MANUAL

M/B For Socket 370 Pentium® III Processor

NO. G03-630AFR2A

Release date: FEB 2001

**** Year 2000 compliant ****

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Manual Revision Information

Reversion	Revision History	Date
2.0	Second Edition	Feb 2001

Item Checklist

- Motherboard
- Cable for IDE/Floppy
- CD for motherboard utilities
- Cable for USB Port 3/4 (Option)
- Cable for COM2
- User's Manual

Intel® Processor Family

Thermal Solutions

As processor technology pushes to faster speeds and higher performance, thermal management becomes increasingly crucial when building computer systems. Maintaining the proper thermal environment is key to reliable, long-term system operation. The overall goal in providing the proper thermal environment is keeping the processor below its specified maximum case temperature. Heatsinks induce improved processor heat dissipation through increased surface area and concentrated airflow from attached fans. In addition, interface materials allow effective transfers of heat from the processor to the heatsink. For optimum heat transfer, Intel recommends the use of thermal grease and mounting clips to attach the heatsink to the processor.

When selecting a thermal solution for your system, please refer to the website below for collection of heatsinks evaluated and recommended by Intel for use with Intel processors.

Vendor list for heatsink and fan of **Pentium® !!! processor**, please visit :

<http://developer.intel.com/design/Pentiumiii/components/index.htm>

Vendor list for heatsink and fan of **Intel®Celeron™ processor**, please visit :

<http://developer.intel.com/design/celeron/components/index.htm>

Chapter 1

Introduction of 630AF Motherboard

1-1 Feature of motherboard

The 630AF motherboard is design for use Intel's new generation Pentium processors, which utilize the Socket 370 design supports Pentium®III/Celeron FC-PGA/PPGA processors, and the memory size expandable to 1.5GB.

This motherboard use the newest SiS 630S chipset provides a high performance/low cost solution for socket 370 series CPUs based system, by integrating a high performance North Bridge, advanced hardware 2D/3D GUI engine and Super-South Bridge. Moreover, by integrating the Ultra AGP technology and advanced 128-bit graphic display interface along with on-board VGA memory selectable from 2MB to 64MB, SiS 630S delivers AGP 4X performance and up to 2GB/s memory bandwidth, which capable of provides powerful hardware decoding DVD accelerator to improve the DVD playback performance. For those wanting even greater graphic performance, an AGP 4X slot is included on the board to support a 4X VGA display card.

This motherboard provides AC'97 compliant interface that comprises digital audio engine with 3D-hardware accelerator, on-chip sample rate converter. This motherboard also provides dual USB host controller with four USB Ports that deliver better connectivity for 2x12MB bandwidth. The built-in Fast PCI IDE controller supports Ultra DMA 100 function up to 100MB/s for data transfer rate. In addition, 630AF provides hardware monitor functions that will monitoring and protect your computer.

This motherboard provides high performance & meets future specification demand. It is really wise choice for your computer.

1-2 Specification

Spec	Description
Design	* ATX form factor 4 layers PCB size: 30.5x21.0cm

Chipset	* SiS 630S Chipset
Clock Generator	* Support 66/100/133MHz system Bus Clock (CPU Bus Clock) Support 100/133 MHz system memory clock Support 33MHz PCI Bus clock
CPU Socket	* Support Pentium® III 500~1GHz processor * Support Celeron™ 300~800MHz processor * Support 66, 100 and 133MHz CPU Bus clock * Reserves support for future Intel Pentium® III processors * Support Cyrix MIII processor
Memory Socket	* 168-pin DIMM socket x3 * PC-100/PC-133 SDRAM * Expandable to 1.5GB * Support 3.3V SDRAM DIMM
Expansion Slot	* 32-bit PCI slot x4, 2.2 Specification Compliant * AMR slot x1, AGP slot x1
Integrate VGA	* 3D graphic acceleration * VGA Memory Selectable by BIOS from 2MB to 64MB
Integrate IDE	* 2 channel of Bus Master IDE port supporting ULTRA DMA 33/66/100MB/s mode devices
Audio	* AC'97 Digital Audio controller integrated * AC'97 Audio CODEC on board * Audio driver and utility included
BIOS	* Award 2MB Flash ROM
Multi I/O	* PS/2 keyboard and PS/2 mouse connectors * Floppy disk drive connector x1 * Parallel port x1 * Serial port x2 * USB connector x2 * USB headers x2 (connecting cable option) * Audio connector (Line-in, Line-out, MIC & Game Port)

1-3 Performance List

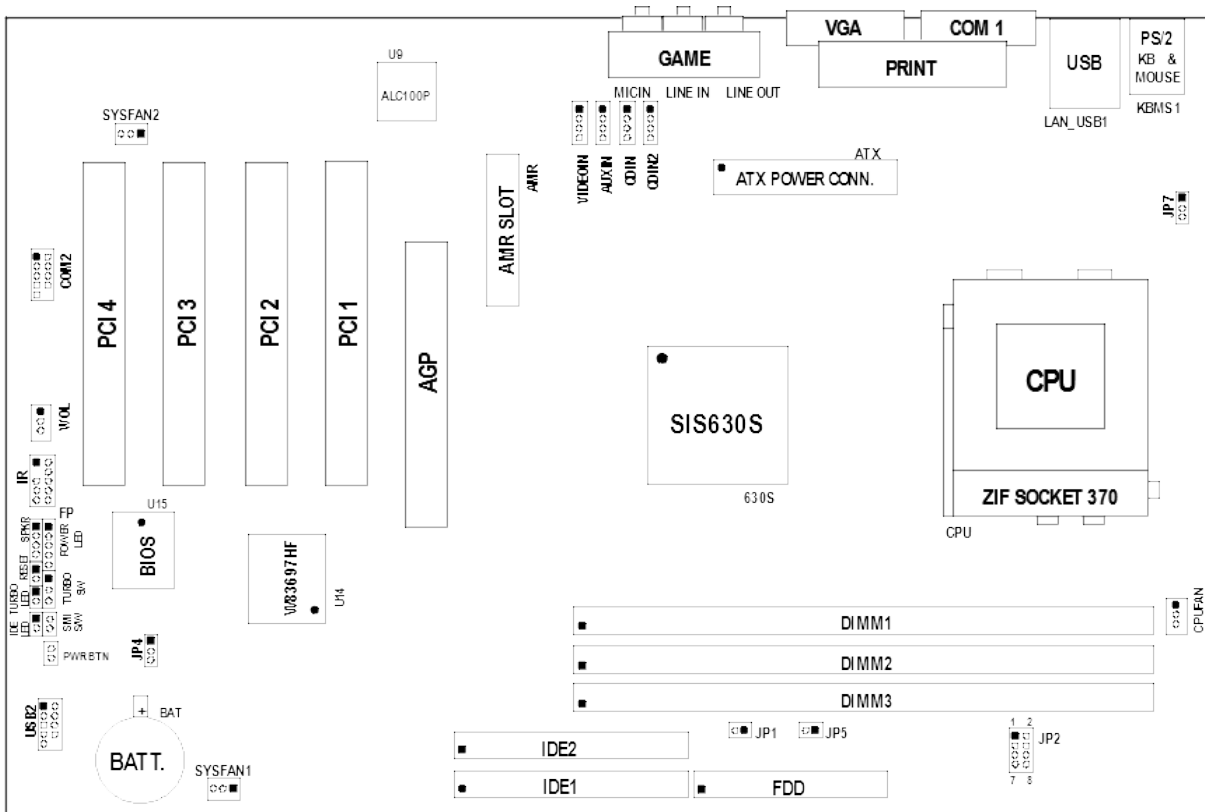
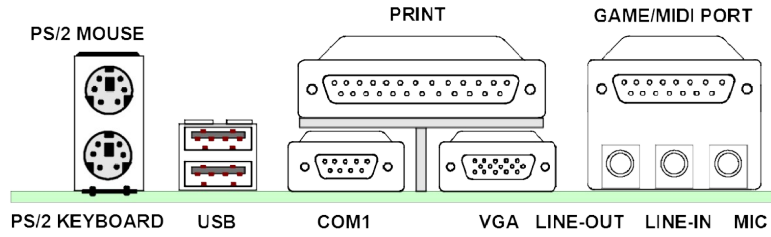
The following performance data list is the testing result of some popular benchmark testing programs. These data are just referred by users, and there is no responsibility for different testing data values gotten by users (the different Hardware & Software configuration will result in different benchmark testing results.)

CPU: Intel PIII® 866MHz FC-PGA package
DRAM: 128M SDRAM x2 (Hyundai GM 72V66841ET75)
VGA Expansion Card: On Board VGA (Driver V1.05)
Hard Disk Driver: Quantum Fireball KX20A11
BIOS: Award Optimal default
OS: Win 98SE

Performance Test Report

	Share 8M	Share 16M	Share 32M
3D Mark 99	2406	2424	2411
3D Mark 2000	1129	1143	1147
3D Winbench 99 V1.2	630	649	563
3D Winbench 2000	22.8	26.3	28.3
Final Reality	5.58	5.66	5.57
Winstone 99 V1.3	30.4	30.1	30.6
Winstone 2000	34.2	34	32.7
Winbench 99 :			
CPU Mark 99	71	70.1	70
FPU Winmark 99	4430	4410	4390
Business Disk Winmark99	4730	4710	4660
Hi-end Disk Winmark99	16900	16900	16800
Business Graphic Winmark	241	240	239
Hi-end Graphic Winmark	792	793	769
SYS Mark 2000 : SISMark 2000 Rating (Internet Content Creation / Office Productivity)			
Suites	163 (164/163)	162 (163/162)	163 (163/162)
Offical	162 (165/160)	162 (164/160)	162 (164/160)
SISOFT Sandra 2000 :			
CPU MIPS	2274	2263	2260
FPU MFLOPS	1126	1120	1119
CPU / Memory MB/S	279	277	278
FPU / Memory MB/S	311	310	310
QUAKE3 :			
DEMO1 FPS	27.7	27.8	28.1
DEMO2 FPS	26.9	27.1	27.3

1-4 Layout Diagram & Jumper Setting



Jumpers

Jumper	Name	Description	Page
JP2	CPU & SDRAM Frequency Setting	3-pin Block	p.8
JP7	Keyboard Power ON Function Setting	3-pin Block	p.8
JP4	CMOS RAM Clear	3-pin Block	p.9

Connectors

Connector	Name	Description	Page
ATX	ATX Power Connector	20-pin Block	p.16
KBMS1	PS/2 Mouse & PS/2 Keyboard Connector	6-pin Female	p.16
LAN_USB1	USB Port Connector	2x4-pin Connector	p.16
PRINT	Parallel Port Connector	25-pin Female	p.17
VGA	VGA Port Connector	15-pin Female	p.17
GAME	Audio/Game Connector	3 phone jack + 15-pin Connector	p.17
COM1	Serial Port COM1 Connector	9-pin Connector	p.17
FDD	Floppy Driver Connector	34-pin Block	p.18
IDE1	Primary IDE Connector	40-pin Block	p.18
IDE2	Secondary IDE Connector	40-pin Block	p.18

Headers

Header	Name	Description	Page
COM2	COM2 Headers	10-pin Block	p.19
USB2	USB Port Headers	10-pin Block	p.19
HDLED	IDE activity LED	2-pin Block	p.19
TBLED	Turbo LED switch	2-pin Block	p.19
RESET	Reset switch lead	2-pin Block	p.19
KEYLOCK	Keyboard lock switch	2-pin Block	p.20
SPKR	Speaker connector	4-pin Block	p.20
PWR LED	Power LED	2-pin Block	p.20
PWR	Power switch	2-pin Block	p.20
WOL	Wake On-LAN Headers	3-pin Block	p.20
CPUFAN, SYSFAN1, SYSFAN2	FAN Headers	3-pin Block	p.20
IR, CIR	IR infrared module Headers	10-pin Block	p.21
CDIN, CDIN2	CD Audio-In Headers	4-pin Block	p.21
AUXIN	AUX-IN Audio Input Header	4-pin Block	p.21

Expansion Sockets

Socket/Slot	Name	Description	Page
ZIF Socket 370	CPU Socket	370-pin FC-PGA/PPGA CPU Socket	p.11
DIMM1, DIMM2, DIMM3	DIMM Module Socket	168-pin DIMM SDRAM Module Expansion Socket	p.13
PCI1, PCI2, PCI3, PCI4	PCI Slot	32-bit PCI Local Bus Expansion slots	p.15
AMR	AMR Slot	Modem Riser Card slot	
AGP	AGP Slot	Slot for AGP Card	

Chapter 2

Hardware installation

2-1 Hardware installation Steps

Before using your computer, you had better complete the following steps:

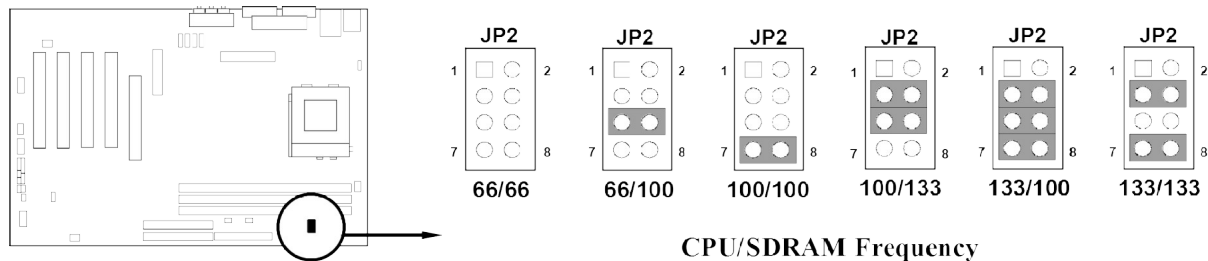
1. Check motherboard setting
2. Install CPU
3. Install Memory
4. Install Expansion cards
5. Connect Ribbon cables, Panel wires, and power supply
6. Setup BIOS
7. Install software driver & utility

2-2 Checking Motherboard's Jumper Setting

1. CPU & SDRAM Clock Setting (8-pin): JP2

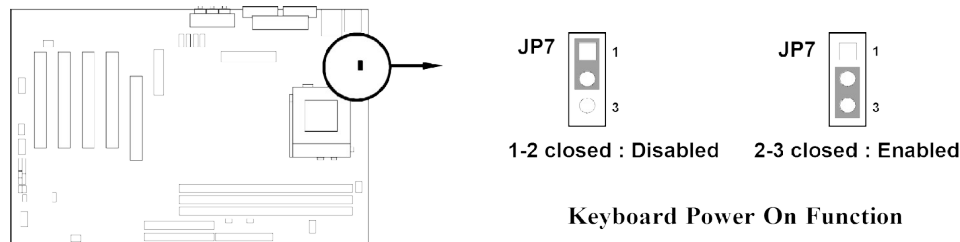
The motherboard's CPU & SDRAM memory clock adjusted through jumper JP2. Table as below:

CPU/SDRAM (MHz)	1-2	3-4	5-6	7-8
66/66	OFF	OFF	OFF	OFF
66/100	OFF	OFF	ON	OFF
100/100	OFF	OFF	OFF	ON
100/133	OFF	ON	ON	OFF
133/100	OFF	ON	ON	ON
133/133	OFF	ON	OFF	ON



2. Keyboard Power On Function Setting (3-pin): JP7

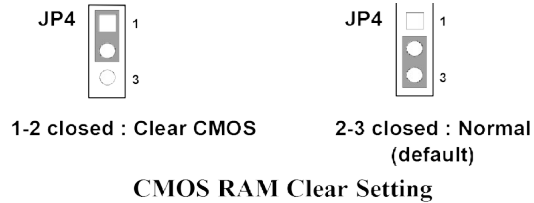
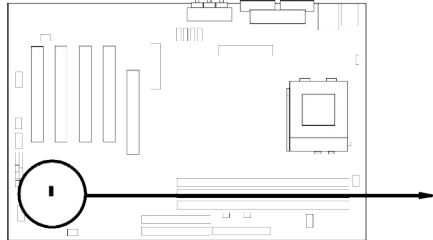
This allows you to disable the keyboard power on function. Set the jumper to enabled or disabled if you wish to use your keyboard (by pressing <>) to power on your computer. This feature requires an ATX power supply that can supply at least 300mA on the +5VSB lead. The default is set to disabled.



3. CMOS RAM Clear (3-pin): JP4

A battery must be used to retain the motherboard configuration in CMOS RAM short 2-3 pins of JP4 to store the CMOS data.

Note: *You can clear CMOS by shorting 1-2 pin, while the system is off. Then return to 2-3 pin position. Avoid clearing the CMOS while the system is on, it will damage the motherboard always unplug the power cord from the wall socket.*



2-3 Install CPU

2-3-1 About Pentium® III & Celeron™ 370-pin CPU

This motherboard supports both Pentium III & Celeron 370 pins CPU.

Recognize of CPU

The way to recognize the specification of CPU from the packing Pentium III 370 pins FC-PGA

On the surface of the CPU as shown on the right picture, under the word of “PENTIUM III” the code is:

RB 80526 P2 866 256

RB : FC-PGA packing

P2 : P2-133MHz front side bus frequency
PY-100MHz front side bus frequency

866 : CPU internal frequency, where here is 866MHz

256 : the size of L2 cache, where here is 256K



Celeron FC-PGA

On the surface of the CPU as shown on the right picture, under the word of “Celeron” the code is:

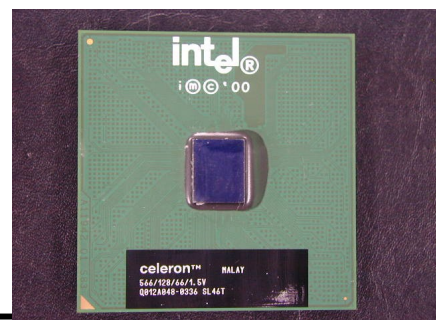
566/128/66/1.5V

566 : CPU internal frequency, where here is 566MHz

128 : the size of L2 cache, where here is 128K

66 : front side bus frequency, where here is 66MHz

1.5V : the voltage for the CPU



2-3-2 Setting CPU Bus Clock & Memory Clock Jumper

Setting the front side bus frequency and SDRAM frequency

The motherboard uses jumper JP2 for the front side bus frequency and SDRAM frequency setting as shown from the table below:

CPU/SDRAM (MHz)	1-2	3-4	5-6	7-8
66/66	OFF	OFF	OFF	OFF
66/100	OFF	OFF	ON	OFF
100/100	OFF	OFF	OFF	ON
100/133	OFF	ON	ON	OFF
133/100	OFF	ON	ON	ON
133/133	OFF	ON	OFF	ON

Example: Using a Pentium® III 866 CPU with front side bus frequency of 133MHz and PC-133 SDRAM module, the setting of JP2 are 1-2 OFF, 3-4 ON, 5-6 OFF, 7-8 ON for CPU BUS CLOCK to be 133MHz and SDRAM CLOCK to be 133MHz.

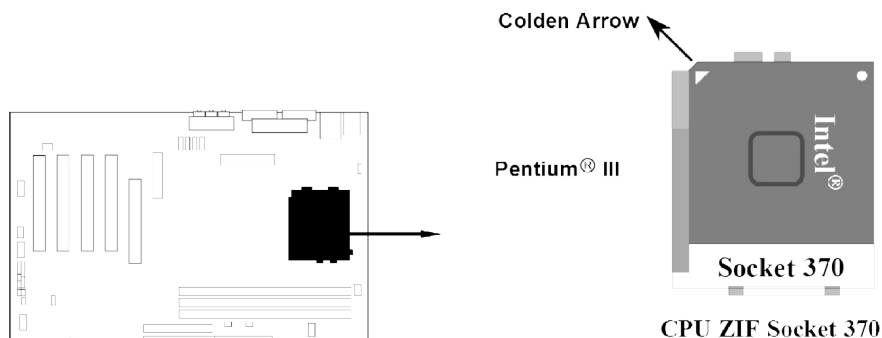
For experience user looking for over clocking, please refer to sec 2-3-4

2-3-3 Install CPU

This motherboard provides a ZIF socket 370. The CPU that comes with the motherboard should have a cooling FAN attached to prevent overheating. If this is not the case, then purchase a correct cooling FAN before you turn on your system.

WARNING! Be sure that there is sufficient air circulation across the processor's heatsink and CPU cooling FAN is working correctly, otherwise it may cause the processor and motherboard overheat and damage, you may install an auxiliary cooling FAN, if necessary.

To install a CPU, first turn off your system and remove its cover. Locate the ZIF socket and open it by first pulling the level sideways away from the socket then upward to a 90-degree angle. Insert the CPU with the correct orientation as shown below. The notched corner should point toward the end of the level. Because the CPU has a corner pin for two of the four corners, the CPU will only fit in the orientation as shown.



When you put the CPU into the ZIF socket. No forces require to insert of the CPU, then press the level to locate position slightly without any extra force.

2-3-4 Over clock Running

WARNING! This section is for experienced motherboard installer only. Over clocking can result in system instability or even shortening life of the processor.

After setting the Jumper JP2 you can choose over clock running by BIOS CMOS SETUP UTILITY. When you entered CMOS SETUP UTILITY, choose “Miscellaneous Control” you will see the screen as below then.

1. You can choose the situation you want to try.

CPU/SDRAM (MHz)	1-2	3-4	5-6	7-8
66/66	OFF	OFF	OFF	OFF
66/100	OFF	OFF	ON	OFF
100/100	OFF	OFF	OFF	ON
100/133	OFF	ON	ON	OFF
133/100	OFF	ON	ON	ON
133/133	OFF	ON	OFF	ON
150/150	ON	ON	OFF	ON

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software
Miscellaneous Control

Cyrix III Clock Ratio	NA/x12	Item Help
Auto Detect DIMM/PCI Clk	Enabled	
Spread Spectrum	Disabled	
Clock Control	By Hardware	Menu Level >
** Current Host Clock is 133 MHz **		
x Host clock at next boot is 66 MHz		This item is for
** Current DRAM Clock is 133 MHz **		CyrixIII CPU Ratio

<pre>x DRAM clock at next boot is 66 MHz CPU Clock Ratio x 3.0</pre>	<pre>adjust If you select option "NA/x12", default HW setting is used for CyrrixIII. x12 is used If Samuel12 is plugged.</pre>
<pre>↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults</pre>	

Please Refer to Miscellaneous Control under BIOS to setting Host Clock by BIOS SETUP.

NOTE! The BIOS allows you select Bus Frequency from 66MHz to 166MHz, the wrong setting will cause system can not starting, when it happen you have to clear CMOS and adjust correct setting for your CPU. Again we don't suggest user running over clock.

2-3-5 Glossary:

Chipset (or core logic) - two or more integrated circuits which control the interfaces between the system processor, RAM, I/O devices, and adapter cards.

Processor slot/socket - the slot or socket used to mount the system processor on the motherboard.

Slot (AGP, PCI, ISA, RAM) - the slots used to mount adapter cards and system RAM.

AGP - Accelerated Graphics Port - a high speed interface for video cards; runs at 1X (66MHz), 2X (133MHz), or 4X (266MHz).

PCI - Peripheral Component Interconnect - a high speed interface for video cards, sound cards, network interface cards, and modems; runs at 33MHz.

ISA - Industry Standard Architecture - a relatively low speed interface primarily used for sound cards and modems; runs at approx. 8MHz.

Serial Port - a low speed interface typically used for mouse and external modems.

Parallel Port - a low speed interface typically used for printers.

PS/2 - a low speed interface used for mouse and keyboards.

USB - Universal Serial Bus - a medium speed interface typically used for mouse, keyboards, scanners, scanners, and some digital cameras.

Sound (interface) - the interface between the sound card or integrated sound connectors and speakers, mic, game controllers, and MIDI sound devices.

LAN (interface) - Local Area Network - the interface to your local area network.

BIOS (Basic Input/Output System) - the program logic used to boot up a computer and establish the relationship between the various components.

Driver - software, which defines the characteristics of a device for use by another device or

other software.

Processor - the "central processing unit" (CPU); the principal integrated circuit used for doing the "computing" in "personal computer"

Front Side Bus Frequency

The working frequency of the motherboard, which is generated by the clock generator for CPU, DRAM and PCI BUS.

CPU Internal Frequency

The frequency of CPU, which is also the actual working frequency of CPU.

Bus Frequency Ratio

The ratio of the working frequency, multiply Front Side Bus Frequency with Bus Frequency Ratio will form the CPU Internal Frequency.

CPU L2 Cache

The flash memory inside the CPU, normally Pentium III CPU has 256K or above, while Celeron CPU will have 128K.

2-4 Install Memory

This motherboard provides **three** 168-pin DUAL INLINE MEMORY MODULES (DIMM) sites for memory expansion available from minimum memory size of 16MB to maximum memory size of 1.5GB SDRAM.

Valid Memory Configurations

Bank	168-Pin DIMM		Total Memory
Bank 0, 1 (DIMM1)	SDRAM 32, 64, 128, 256, 512MB	X 1	16MB~512MB
Bank 2, 3 (DIMM2)	SDRAM 32, 64, 128, 256, 512MB	X 1	16MB~512MB
Bank 4, 5 (DIMM3)	SDRAM 32, 64, 128, 256, 512MB	X 1	16MB~512MB
Total	System Memory (Max. 1.5GB)		16MB~1.5GB

Generally, installing SDRAM modules to your motherboard is very easy, you can refer to figure 2-4 to see what a 168-Pin PC100 & PC133 SDRAM module looks like.

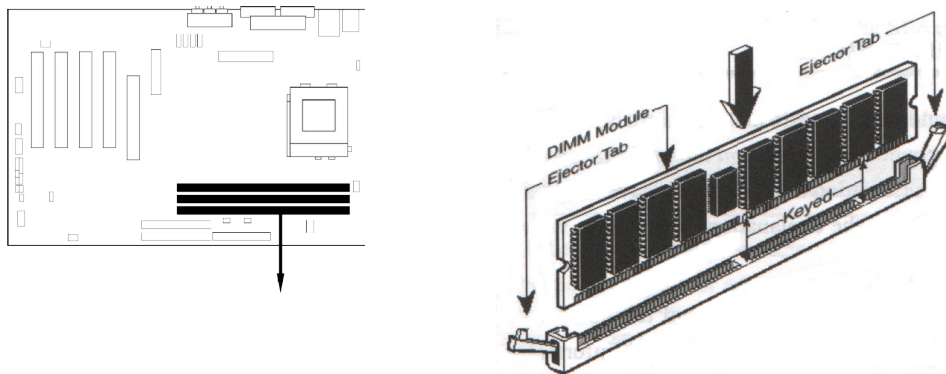


Figure 2-4



NOTE! When you install DIMM module fully into the DIMM socket the eject tab should be locked into the DIMM module very firmly and fit into its indentation on both sides.

WARNING! For the SDRAM CLOCK is set at 133MHz, use only PC133-compliant DIMMs. When this motherboard operate at 133Mhz, most system will not even boot if non-compliant modules are used because of the strict timing issues, if your DIMM are not PC133-compliant, set the SDRAM clock to 100MHz to ensure system stability.

2-5 Expansion Cards

WARNING! Turn off your power when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both your motherboard and expansion cards.

2-5-1 Procedure for Expansion Card Installation

1. Read the documentation for your expansion card and make any necessary hardware or software setting for your expansion card such as jumpers.
2. Remove your computer's cover and the bracket plate on the slot you intend to use.
3. Align the card's connectors and press firmly.
4. Secure the card on the slot with the screen you remove above.
5. Replace the computer system's cover.
6. Set up the BIOS if necessary.
7. Install the necessary software driver for your expansion card.

2-5-2 Assigning IRQs For Expansion Card

Some expansion cards need an IRQ to operate. Generally, an IRQ must exclusively assign to one use. In a standard design, there are 16 IRQs available but most of them are already in use.

Standard Interrupt Assignments

IRQ	Priority	Standard function
0	1	System Timer
1	2	Keyboard Controller
2	N/A	Programmable Interrupt
3 *	11	Communications Port (COM2)
4 *	12	Communications Port (COM1)
5 *	13	Sound Card (sometimes LPT2)

6	14	Floppy Disk Controller
7 *	15	Printer Port (LPT1)
8	3	System CMOS/Real Time Clock
9 *	4	ACPI Mode when enabled
10 *	5	IRQ Holder for PCI Steering
11 *	6	IRQ Holder for PCI Steering
12 *	7	PS/2 Compatible Mouse Port
13	8	Numeric Data Processor
14 *	9	Primary IDE Channel
15 *	10	Secondary IDE Channel

* These IRQs are usually available for ISA or PCI devices.

2-5-3 Interrupt Request Table For This Motherboard

Interrupt request are shared as shown the table below:

	INT A	INT B	INT C	INT D
PCI slot 1	—	Not Shared	—	—
PCI slot 2	—	—	Not Shared	—
PCI slot 3	—	—	—	Shared
PCI slot 4	Shared	—	—	—
Onboard VGA	Shared * 1	—	—	—
AGP slot 4	Shared	—	—	—
Onboard USB	—	—	—	Shared
LAN	—	—	—	Shared

* 1 : Depend on JP5. When JP5 is “ON”, onboard VGA is routed to “INTA”.

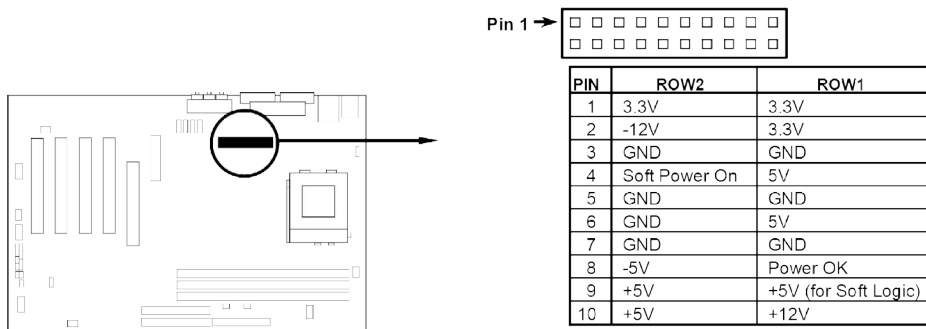
IMPORTANT! If using PCI cards on shared slots, make sure that the drivers support “Shared IRQ” or that the cards don’t need IRQ assignments. Conflicts will arise between the two PCI groups that will make the system unstable or cards inoperable.

2-6 Connectors, Headers

2-6-1 Connectors

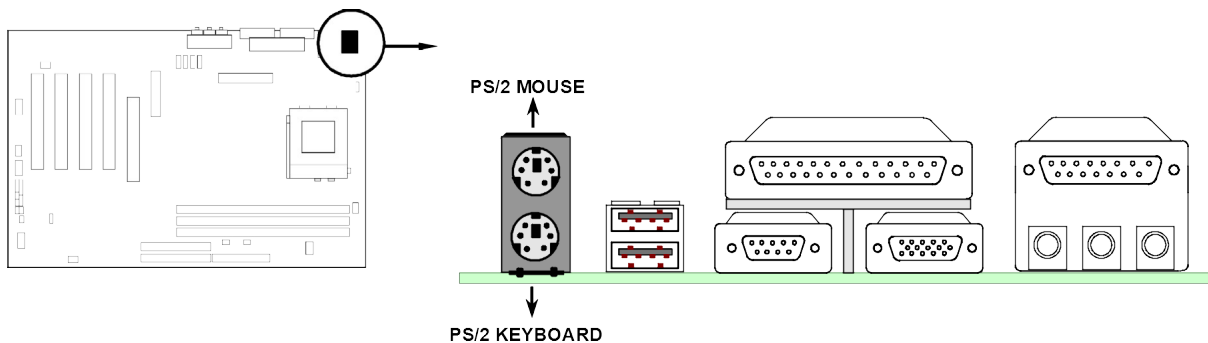
(1) Power Connector: ATX (20-pin block)

ATX Power Supply connector. This is a new defined 20-pins connector that usually comes with ATX case. The ATX Power Supply allows to use soft power on momentary switch that connect from the front panel switch to 2-pins Power On jumper pole on the motherboard. When the power switch on the back of the ATX power supply turned on, the full power will not come into the system board until the front panel switch is momentarily pressed. Press this switch again will turn off the power to the system board.



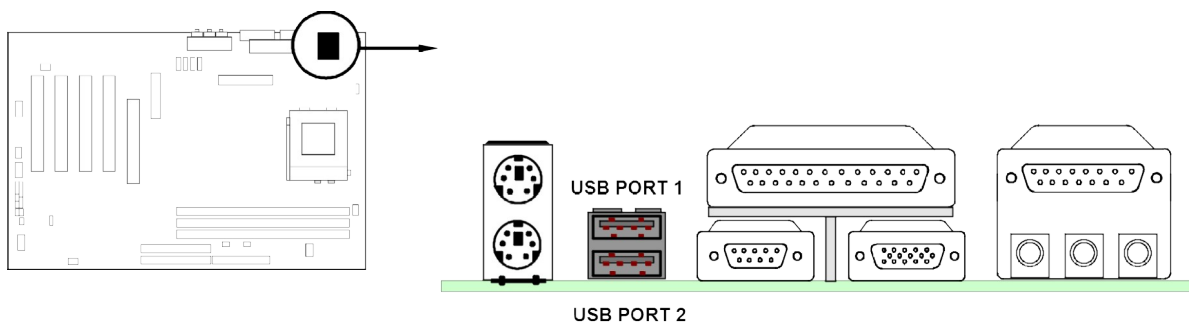
(2) PS/2 Mouse & PS/2 Keyboard Connector: KBMS1

The connectors for PS/2 keyboard and PS/2 Mouse.



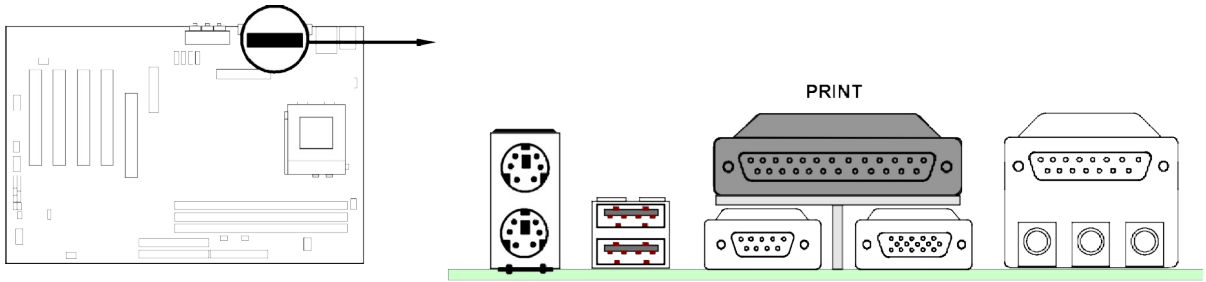
(3) USB Port connector: LAN_USB1

The connectors are 4-pins connector that connects USB devices to the system board.

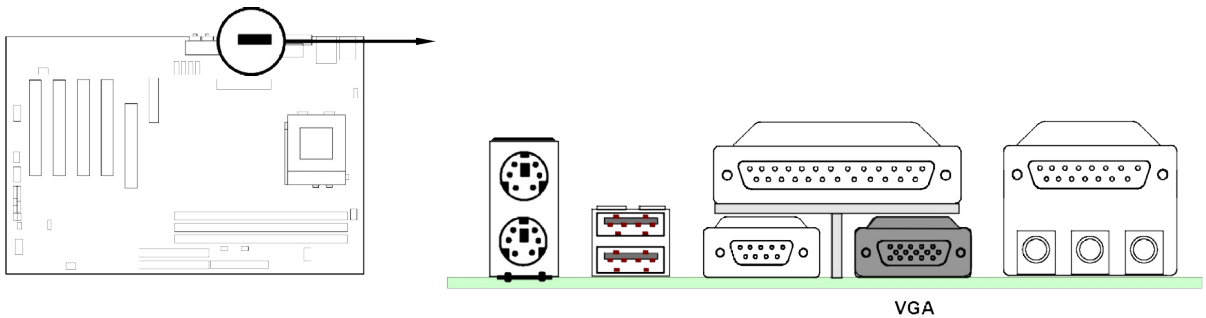


(4) Parallel Port Connector (25-pin female): PRINT

Parallel Port connector is a 25-pin D-Subminiature Receptacle connector. The On-board Parallel Port can be disabled through the BIOS SETUP. Please refer to Chapter 3 “INTEGRATED PERIPHERALS SETUP” section for more detail information.



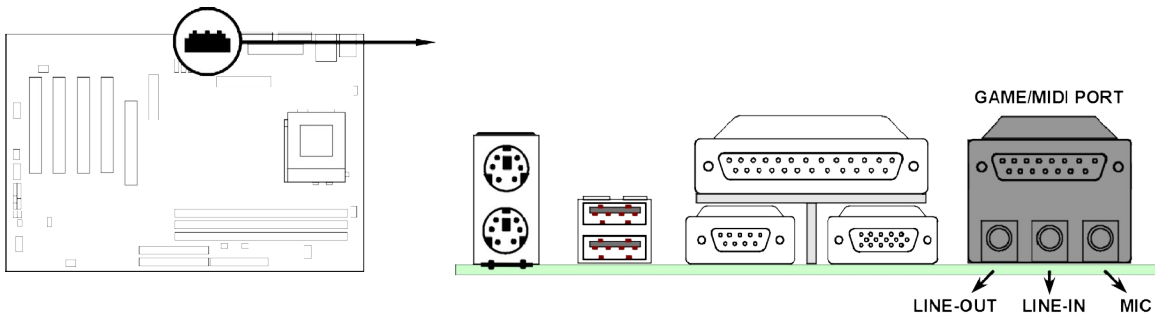
(5) VGA Connector (15-pin female): VGA



(6) Audio and Game Connector: GAME

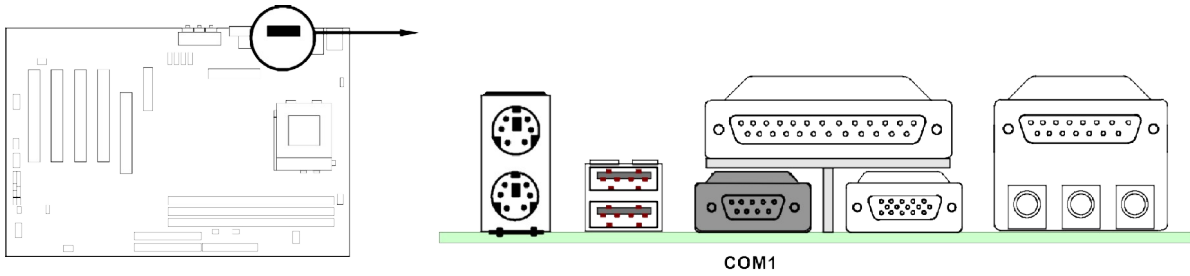
This Connector has 3 phone jacks for LINE-OUT, LINE-IN, MIC and a 15-pin D-Subminiature Receptacle Connector for joystick/MIDI Device.

- Line-out :** Audio output to speaker
- Line-in :** Audio input to sound chip
- MIC :** Microphone Connector
- Game/MIDI :** For joystick or MIDI Device



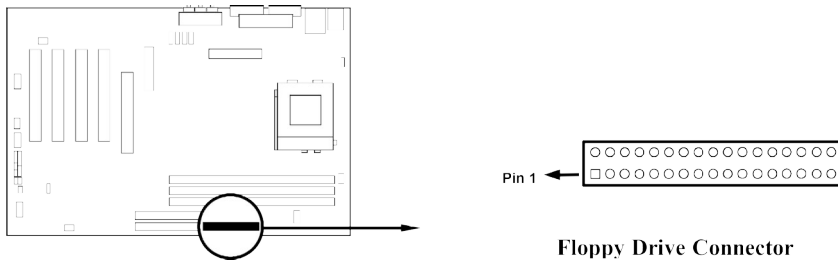
(7) Serial Port COM1: COM1

COM1 is the 9-pin D-Subminiature mail connector. The On-board serial port can be disabled through BIOS SETUP. Please refer to Chapter 3 “INTEGRATED PERIPHERALS SETUP” section for more detail information.



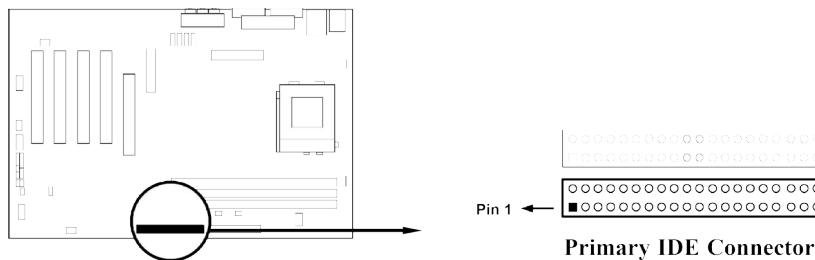
(8) Floppy drive Connector (34-pin block): FDD

This connector supports the provided floppy drive ribbon cable. After connecting the single plug end to motherboard, connect the two plugs at other end to the floppy drives.



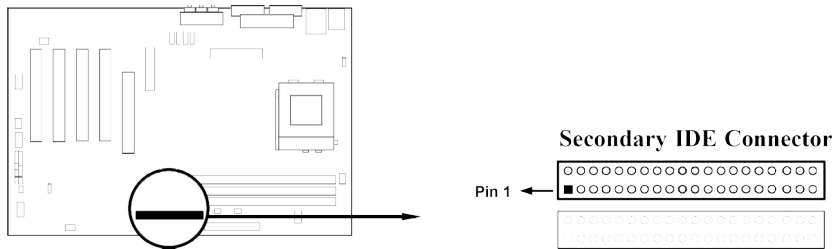
(9) Primary IDE Connector (40-pin block): IDE1

This connector supports the provided IDE hard disk ribbon cable. After connecting the single plug end to motherboard, connect the two plugs at other end to your hard disk(s). If you install two hard disks, you must configure the second drive to Slave mode by setting its jumpers accordingly. Please refer to the documentation of your hard disk for the jumper settings.



(10) Secondary IDE Connector (40-pin block): IDE2

This connector connects to the next set of Master and Slave hard disks. Follow the same procedure described for the primary IDE connector. You may also configure two hard disks to be both Masters using one ribbon cable on the primary IDE connector and another ribbon cable on the secondary IDE connector.

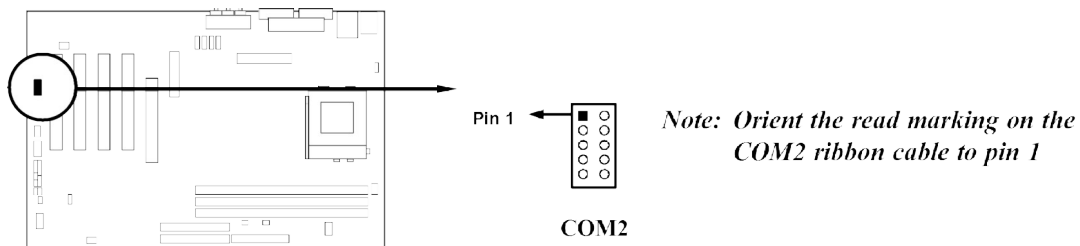


- Two hard disks can be connected to each connector. The first HDD is referred to as the “Master” and the second HDD is referred to as the “Slave”.
- For performance issues, we strongly suggest you don’t install a CD-ROM or DVD-ROM drive on the same IDE channel as a hard disk. Otherwise, the system performance on this channel may drop.

2-6-2 Headers

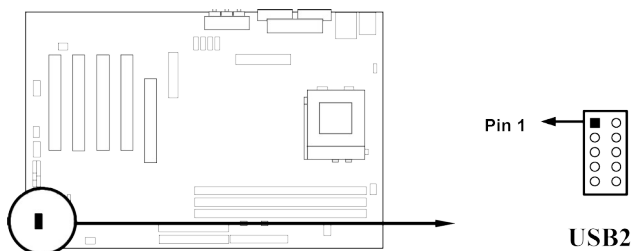
(1) COM2 Headers (10-pin block): COM2

This board has another serial port COM2, it come with cable providing serial port COM2.



(2) USB Port Headers (10-pin block): USB2

These headers are used for connecting the additional USB port plug. By attaching an option USB cable, your can be provided with two additional USB plugs affixed to the back panel.



(3) IDE Activity LED: IDELED

This connector connects to the hard disk activity indicator light on the case.

(4) Turbo LED switch: TURBO LED

Since the motherboard’s turbo function is always on. The turbo LED will remain constantly on while the system power is on. You may wish to connect the Power LED from the system case to this lead. See the figure below.

(5) Reset switch lead: RESET

This 2-pin connector connects to the case-mounted reset switch for rebooting your computer without having to turn off your power switch. This is a preferred method of rebooting in order to prolong the life of the system's power supply. See the figure below.

(6) Keyboard lock switch: KEYLOCK

This 2-pin connector connects to the case-mounted key switch for locking the keyboard for security purposes.

(7) Speaker connector: SPKR

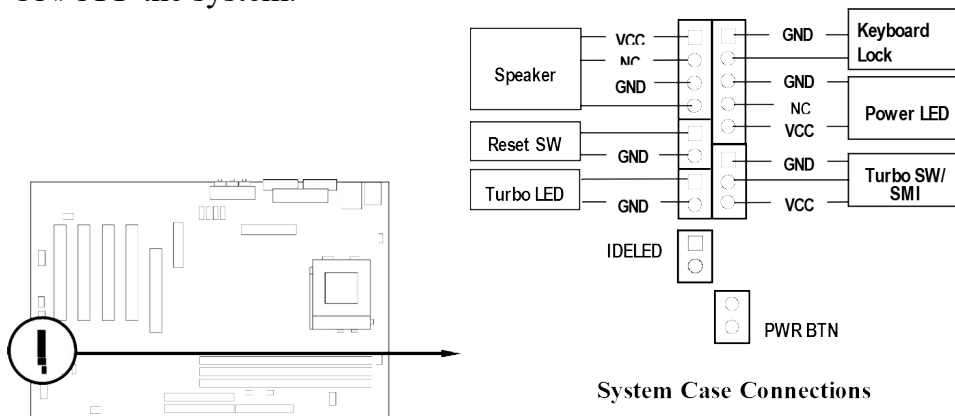
This 4-pin connector connects to the case-mounted speaker. See the figure below.

(8) Power LED: POWER LED

The Power LED is light on while the system power is on. Connect the Power LED from the system case to this pin.

(9) Power switch: PWR BTN

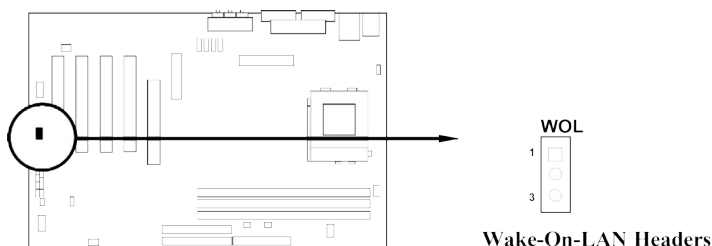
This 2-pin connector connects to the case-mounted power switch to power ON/OFF the system.



(10) Wake On-LAN Headers (3-pin): WOL

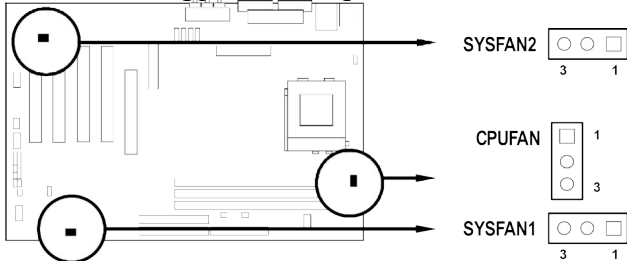
This connector connects to a LAN card with a WAKE ON-LAN output. This connector power up the system when a wake up signal is received through the LAN card.

NOTE: This feature requires that Wake On LAN or Ring In Wake up is enabled.



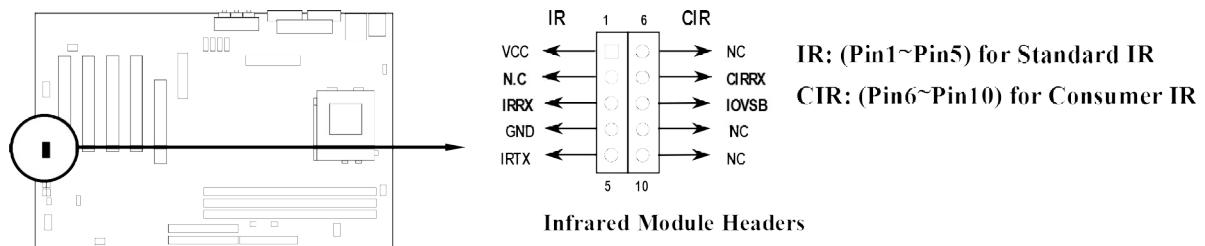
(11) FAN Speed Headers (3-pin): CPUFAN, SYSFAN1, SYSFAN2

These connectors support cooling fans of 350mA (4.2 Watts) or less, depending on the fan manufacturer, the wire and plug may be different. The red wire should be positive, while the black should be ground. Connect the fan's plug to the board taking into consideration the polarity of connector. Only CPUFAN and SYSFAN1 support FAN speed detect.



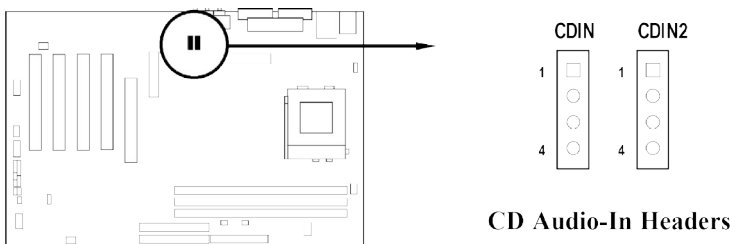
(12) IR infrared module Headers (10-pin): IR, CIR

This connector supports the optional wireless transmitting and receiving infrared module. You must configure the setting through the BIOS setup to use the IR function.

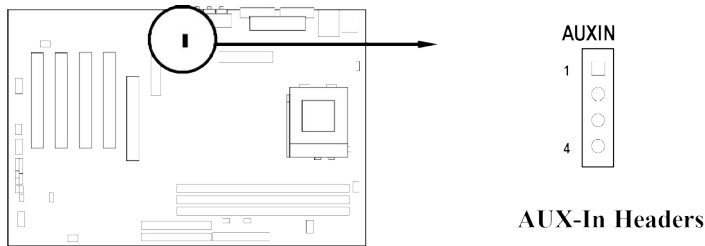


(13) CD Audio-In Headers (4-pin): CDIN, CDIN2

CDIN and CDIN2 are the connectors for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.



(14) AUX-In Headers (4-pin): AUXIN



2-7 Starting Up Your Computer

1. After all connection are made, close your computer case cover.
2. Be sure all the switch are off, and check that the power supply input voltage is set to proper position, usually in-put voltage is 220V~240V or 110V~120V depending on your country's voltage used.
3. Connect the power supply cord into the power supply located on the back of your system case according to your system user's manual.
4. Turn on your peripheral as following order:
 - a. Your monitor.
 - b. Other external peripheral (Printer, Scanner, External Modem etc...)
 - c. Your system power. For ATX power supplies, you need to turn on the power supply and press the ATX power switch on the front side of the case.
5. The power LED on the front panel of the system case will light. The LED on the monitor may light up or switch between orange and green after the system is on. If it complies with green standards or if it is has a power standby feature. The system will then run power-on test. While the test are running, the BIOS will alarm beeps or additional message will appear on the screen.

If you do not see any thing within 30 seconds from the time you turn on the power. The system may have failed on power-on test. Recheck your jumper settings and connections or call your retailer for assistance.

Beep	Meaning
One short beep when displaying logo	No error during POST
Long beeps in an endless loop	No DRAM install or detected
One long beep followed by three short beeps	Video card not found or video card memory bad
High frequency beeps when system	CPU overheated

is working	System running at a lower frequency
------------	-------------------------------------

6. During power-on, press <Delete> key to enter BIOS setup. Follow the instructions in BIOS SETUP.
7. **Power off your computer:** You must first exit or shut down your operating system before switch off the power switch. For ATX power supply, you can press ATX power switching after exiting or shutting down your operating system. If you use Windows 9X, click “Start” button, click “Shut down” and then click “Shut down the computer?” The power supply should turn off after windows shut down.

Chapter 3

Introducing BIOS

The BIOS is a program located on a Flash Memory on the motherboard. This program is a bridge between motherboard and operating system. When you start the computer, the BIOS program gain control. The BIOS first operates an auto-diagnostic test called POST (power on self test) for all the necessary hardware, it detects the entire hardware device and configures the parameters of the hardware synchronization. Only when these tasks are completed done it gives up control of the computer to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate, it is the key factor for system stability, and in ensuring that your system performance as its best.

In the BIOS Setup main menu of Figure 3-1, you can see several options. We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press <Esc> to quit the BIOS Setup.
- Press ↑↓←→ (up, down, left, right) to choose, in the main menu, the option you want to confirm or to modify.
- Press <F10> when you have completed the setup of BIOS parameters to save these parameters and to exit the BIOS Setup menu.
- Press Page Up/Page Down or +/- keys when you want to modify the BIOS parameters for the active option.

3-1 Entering Setup

Power on the computer and by pressing immediately allows you to enter Setup.

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

Press <F1> to continue, <Ctrl-Alt-Esc> or to enter Setup

3-2 Getting Help

Main Menu

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

Status Page Setup Menu/Option Page Setup Menu

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

3-3 The Main Menu

Once you enter Award BIOS CMOS Setup Utility, the Main Menu (Figure 3-1) will appear on the screen. The Main Menu allows you to select from fourteen setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software

Standard CMOS Features	Miscellaneous Control
Advanced BIOS Features	Load optimized Defaults
Advanced Chipset Features	Load Standard Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
Esc : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	
Time, Date, Hard Disk Type...	

Figure 3-1

Standard CMOS Features

Use this Menu for basic system configurations.

Advanced BIOS Features

Use this menu to set the Advanced Features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system's performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals.

Power Management Setup

Use this menu to specify your settings for power management.

PnP/PCI configurations

This entry appears if your system supports PnP/PCI.

PC Health Status

This entry shows your PC health status.

Miscellaneous Control

Use this menu to specify your settings for Miscellaneous Control.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory settings for optimal performances system operations.

Load Standard Defaults

Use this menu to load the BIOS default values for the minimal/stable performance system operation.

Set Supervisor/User Password

Use this menu to set User and Supervisor Passwords.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Saving

Abandon all CMOS value changes and exit setup.

3-4 Standard CMOS Features

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

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software		
Standard CMOS Features		
Date (mm:dd:yy)	Time (hh:mm:ss)	Item Help
Tue, Dec, 19 2000	14 : 22 : 18	
> IDE Primary Master	Press Enter None	Menu Level > Change the day, month, year and century
> IDE Primary Slave	Press Enter None	
> IDE Secondary Master	Press Enter None	
> IDE Secondary Slave	Press Enter None	
Drive A	1.44M, 3.25 in.	
Drive B	None	
Video	EGA/VGA	
Halt On	All,But Keyboard	
Base Memory	640K	
Extended Memory	56320K	
Total Memory	57344K	
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

Date

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

Day Day of the week, from Sun to Sat, determined by BIOS. Read-only.

Month The month from Jan. through Dec.

Date The date from 1 to 31 can be keyed by numeric function keys.

Year The year depends on the year of the BIOS.

Time

The time format is <hour><minute><second>.

Primary Master/Primary Slave

Secondary Master/Secondary Slave

Press PgUp/<+> or PgDn/<-> to select Manual, None, Auto type. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use Manual to define your own drive type manually.

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

If the controller of HDD interface is SCSI, the selection shall be "None".

If the controller of HDD interface is CD-ROM, the selection shall be “None”

Access Mode The settings are Auto Normal, Large, and LBA.

Cylinder number of cylinders

Head number of heads

Precomp write precomp

Landing Zone landing zone

Sector number of sectors

3-5 Advanced BIOS Features

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software
Advanced BIOS Features

		Item Help
Virus Warning	Disabled	Menu Level > Allows you to choose The VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep
CPU Internal Cache	Enabled	
External Cache	Enabled	
CPU L2 Cache ECC Checking	Disabled	
Processor Number Feature	Disabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	LS120	
Fourth Boot Device	Disabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Enabled	
Boot Up NumLock Status	Off	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM > 64MB	Non-OS2	
HDD S.M.A.R.T Capability	Disabled	
Report No FDD For WIN 95	No	
Video BIOS Shadow	Enabled	
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

Virus Warning

Allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.

Disabled (default) No warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Enabled Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector of hard disk partition table.

CPU Internal Cache

The default value is Enabled.

Enabled (default) Enable cache
Disabled Disable cache

Note: The internal cache is built in the processor.

External Cache

Choose Enabled or Disabled. This option enables the Level 2 cache memory.

CPU L2 Cache ECC Checking

Choose Enabled or Disabled. This option enables the Level 2 cache memory ECC (error check correction).

Processor Number Feature

This option is for Pentium® III processor. During Enabled, this will check the CPU Serial number. Disabled this option if you don't want the system to know the Serial number.

Quick Power On Self-Test

This category speeds up Power On Self Test (POST) after you power on the computer. If this is set to Enabled. BIOS will shorten or skip some check items during POST.

Enabled (default) Enable quick POST
Disabled Normal POST

First/Second/Third/Fourth Boot Device

The BIOS attempts to load the operating system from the devices in the sequence selected in these items. The settings are Floppy, LS/ZIP, HDD-0/HDD-1/HDD-3, SCSI, CDROM, LAN and Disabled.

Swap Floppy Drive

Switches the floppy disk drives between being designated as A and B. Default is Disabled.

Boot Up Floppy Seek

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks while 760K, 1.2M and 1.44M are all 80 tracks.

Boot Up NumLock Status

The default value is On.

On (default) Keypad is numeric keys.
Off Keypad is arrow keys.

Gate A20 Option

Normal The A20 signal is controlled by keyboard controller or chipset hardware.
Fast (default) The A20 signal is controlled by port 92 or chipset specific method.

Typematic Rate Setting

Keystrokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected. The settings are: Enabled/Disabled.

Typematic Rate (Chars/Sec)

Sets the number of times a second to repeat a keystroke when you hold the key down. The settings are: 6, 8, 10, 12, 15, 20, 24, and 30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke. The settings are 250, 500, 750, and 1000.

Security Option

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

- System** The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
- Setup (default)** The system will boot, but access to Setup will be denied if the correct password is not entered prompt.

OS Select For DRAM > 64MB

Allows OS2[®] to be used with >64MB or DRAM. Settings are Non-OS/2 (default) and OS2. Set to OS/2 if using more than 64MB and running OS/2[®].

Report No FDD For Win 95

Whether report no FDD for Win 95 or not. The settings are: Yes, No.

3-6 Advanced Chipset Features

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

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software
Advanced Chipset Features

		Item Help
Advanced DRAM Control 1	Press Enter	
System BIOS Cacheable	Enabled	
Video RAM Cacheable	Enabled	
Memory Hole at 15M-16M	Disabled	
AGP Aperture Size	64MB	
Memory Parity Check	Disabled	
Fast Write Capability	Disabled	
AGP 4X Capability	Enabled	
Graphic Window WR Combin	Enabled	
Concurrent function(MEM)	Enabled	
Concurrent function(PCI)	Enabled	
CPU Pipeline Control	Enabled	
PCI Delay Transaction	Disabled	
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

Advanced DRAM Control 1

Please refer to section 3-6-1

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. The settings are: Enabled and Disabled.

Video RAM Cacheable

Select Enabled allows caching of the video BIOS, resulting in better system performance. However, if any program writes to this memory area, a system error may result. The settings are: Enabled and Disabled.

Memory Hole at 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements. The settings are: Enabled and Disabled.

PCI Delay Transaction

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. The settings are: Enabled and Disabled.

Memory Parity Check

This function provides parity check of memory. The choice is either Disabled or Enabled.

3-6-1 Advanced DRAM Control

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software

Advanced DRAM Control 1

Auto Configuration	Optimized	Item Help
SDRAM RAS Active Time	7T	Menu Level >>
SDRAM RAS Precharg Time	2T	
RAS to CAS Delay	3T	
Dram Background Command	Normal	
LD-Off Dram RD/WR Cycles	Delay 1T	
Write Recovery Time	2T	
Early CKE Delay 1T Cntrl	Normal	
Early CKE Delay Adjust	8ns	
Mem Command Output Time	Normal	
SDRAM CAS Latency	3T	
MD Driving Rate	Weak	

↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help

F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

3-7 Integrated Peripherals

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Integrated Peripherals

> OnChip IDE Function	Press Enter	Item Help
> OnChip Device Function	Press Enter	
> Winbond SuperIO Device	Press Enter	
Init Display First	PCI Slot	Menu Level >
System Share Memory Size	8 MB	
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

OnChip IDE Function

Please refer to section 3-7-1

OnChip Device Function

Please refer to section 3-7-2

Winbond SuperIO Device

Please refer to section 3-7-3

Init Display First

This item allows you to decide to activate whether PCI Slot or AGP or On Board first. The settings are: PCI Slot.

3-7-1 OnChip IDE Function

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OnChip IDE Function

Internal PCI/IDE	Both	Item Help
Primary Master PIO	Auto	Menu Level >>
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	
IDE Burst Mode	Enabled	
IDE HDD Block Mode	Enabled	
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

Internal PCI/IDE

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Both to activate each channel separately. The settings are: Both, IDE0, IDE1.

Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device. The settings are: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33 and Ultra DMA/66, select Auto to enable BIOS support. The settings are: Auto, Disabled.

IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic

detection of the optimal number of block read/writes per sector the drive can support. The settings are: Enabled, Disabled.

3-7-2 OnChip Device Function

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software

OnChip Device Function

AC97 Sound Device	Enabled	Item Help
Game Port Address	201	
Midi Port Address	330	Menu Level >>
Midi Port IRQ	10	
AMR Modem DEVICE	Enabled	
USB Controller	Enabled	
USB Keyboard Support	Disabled	
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

AC97 Sound Device

This item allows you to decide to enable/disable the chipset family to support AC97 Audio. The settings are: Enabled, Disabled.

Game Port Address/Midi Port Address

This will determine which Address the Game Port/Midi Port will use.

AMR Modem DEVICE

This item allows you to decide to enable/disable the chipset family to support AC97 Modem. The settings are: Auto, Disabled.

USB Controller

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have a USB peripherals. The settings are: Enabled, Disabled.

USB Keyboard Support

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard. The settings are: Enabled, Disabled.

3-7-3 Winbond SuperIO Device

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software

Winbond SuperIO Device

Onboard FDC Controller	Enabled	Item Help
Onboard Serial Port 1	3F8/IRQ4	

Onboard Serial Port 2	2F8/IRQ3	Menu Level >>
UART 2 Mode	Normal	
RxD,TxD Active	Hi,Hi	
IR Transmission Delay	Enabled	
IR Duplex Mode	Half	
Use IR Pins	IR-Rx2Tx2	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	SPP	
EPP Mode Select	EPP1.7	
ECP Mode Use DMA	3	
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install add-on FDC or the system has no floppy drive, select Disabled in this field. The settings are: Enabled and Disabled.

Onboard Serial Port 1/Port 2

Select an address and corresponding interrupt for the first and the second serial ports. The settings are: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

UART 2 Mode

This item allows you to determine which InfraRed(IR) function of the onboard I/O chip, this functions uses.

Onboard Parallel Port

There is a built-in parallel port on the on-board Super I/O chipset that Provides Standard, ECP, and EPP features. It has the following option:

Disabled

- (3BCH/IRQ7)/ Line Printer port 0
- (278H/IRQ5)/ Line Printer port 2
- (378H/IRQ7) Line Printer port 1

Parallel Port Mode

- SPP : Standard Parallel Port
- EPP : Enhanced Parallel Port
- ECP : Extended Capability Port

SPP/EPP/ECP/ECP+EPP

To operate the onboard parallel port as Standard Parallel Port only, choose “SPP.” To operate the onboard parallel port in the EPP modes simultaneously, choose “EPP.” By choosing “ECP”, the onboard parallel port will operate in ECP mode only. Choosing “ECP+EPP” will allow the onboard parallel port to support both the ECP and EPP modes simultaneously. The ECP mode has to use the DMA channel, so choose the onboard parallel port with the ECP feature. After selecting it, the following message will appear: “ECP Mode Use DMA” at this time, the user can choose between DMA channels 3 to 1. The onboard parallel port is EPP Spec. compliant, so after the user chooses the onboard parallel port with the EPP function, the following message will be displayed on the

screen: "EPP Mode Select." At this time either EPP 1.7 spec. or EPP 1.9 spec. can be chosen.

3-8 Power Management Setup

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

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software

Power Management Setup

ACPI Function	<u>Enabled</u>	Item Help
Video Off Option	Susp, Stby -> off	
Video Off Method	V/H SYNC+Blank	
Switch Function	Break/Wake	Menu Level >
MODEM Use IRQ	3	
Hot key Function As	Disabled	
HDD Off After	Disabled	
Power Button Function	Instant-Off	
> PM Wake Up Events	Press Enter	
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

ACPI Function

This item allows you to Enabled/Disabled the Advanced Configuration and Power Management (ACPI). The settings are Enabled and Disabled.

Video Off Option

This determines the manner in which the monitor is blanked. The choice are Suspend → off, All Modes → Off, and Always On.

Video Off Method

This determines the manner in which the monitor is blanked.

- DPMS (default)** Initial display power management signaling.
- Blank Screen** This option only writes blanks to the video buffer.
- 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.

Modem Use IRQ

This determines the IRQ in which the MODEM can use.
The settings are: 3, 4, 5, 7, 9, 10, 11, NA.

Power Button Function

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state. The settings are: Delay 4 Sec, Instant-Off.

PM Wake-Up Events

Please refer to section 3-8-1

3-8-1 PM Wake up Events

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software

PM Wake Up Events

IRQ [3-7,9-15],NMI	Enabled	Item Help
IRQ 8 Break Suspend	Disabled	
Ring Power Up Control	Disabled	
PCIPME Power Up Control	Disabled	Menu Level >>
KB Power ON Password	Enter	
Power Up by Alarm	Disabled	
x Month Alarm	NA	
x Day of Month Alarm	0	
x Time (hh:mm:ss) Alarm	0 : 0 : 0	

↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Optimized Defaults F7:Standard Defaults

Ring Power Up Control

During Disabled, the system will ignore any incoming call from the modem. During Enabled, the system will boot up if there's an incoming call from the modem.

PCIPME Power Up Control

This will enable the system to wake up by PCI device Power Management function. The settings are: Enabled and Disabled.

KB Power ON Password

This item can setting Power On Password, if you Enabled keyboard Power On function then you can Power On system by key-in the password which you setting.

Power Up by Alarm

This function is for setting date and time for your computer to boot up. During Disabled, you cannot use this function. During Enabled, choose the Date and Time Alarm:

Date(of month) Alarm

You can choose which month the system will boot up. Set to 0, to boot every day.

Time(hh:mm:ss) Alarm

You can choose what hour, minute and second the system will boot up.

Note: If you have change the setting, you must let the system boot up until it goes to the operating system, before this function will work.

3-9 PnP/PCI Configuration Setup

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

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software
PnP/PCI Configurations

Reset Configuration Data	Disabled	Item Help
Resources Controlled By	Manual	Menu Level > Default is Disabled. Select Enabled to Reset Extended System Configuration Data (ESCD) when you exit Setup if you have Installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot
> IRQ Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

Reset Configuration Data

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

Resource Controlled By

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows®95/98. If you set this field to “manual” choose specific resources by going into each of the sub menu that follows this

field (a sub menu is preceded by a “>”).

The settings are: Auto(ESCD), Manual.

IRQ Resources

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

Please refer to section 3-9-1

PCI/VGA Palette Snoop

Leave this field at *Disabled*. The settings are Enabled, Disabled.

3-9-1 IRQ Resources

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software
IRQ Resources

IRQ-3 assigned to	PCI Device	Item Help
IRQ-4 assigned to	PCI Device	Menu Level > Default is Disabled. Select Enabled to Reset Extended System Configuration Data (ESCD) when you exit Setup if you have Installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot
IRQ-5 assigned to	PCI Device	
IRQ-7 assigned to	PCI Device	
IRQ-9 assigned to	PCI Device	
IRQ-10 assigned to	PCI Device	
IRQ-11 assigned to	PCI Device	
IRQ-12 assigned to	PCI Device	
IRQ-14 assigned to	PCI Device	
IRQ-15 assigned to	PCI Device	
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults		

3-10 PC Health Status

This section shows the Status of you CPU, Fan, Warning for overall system status. This is only available if there is Hardware Monitor onboard.

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software
PC Health Status

CPU Warning Temperature	Disabled	Item Help
Shutdown Temperature	Disabled	Menu Level >
Show PC Health in Post	Enabled	
Current System Temp.	28°C/82°F	
Current CPU Temperature	29°C/84°F	
Current CPUFAN Speed	4687 RPM	
Current SYSFAN Speed	0 RPM	
Vcore	1.69V	
Vcc3.3	3.31V	
+ 5V	5.00V	
+12V	+ 12.02V	
-12V	- 12.16V	

5VSB (V)	5.45V
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults	

Show PC Health in Post

During Enabled, it displays information list below. The choice is either Enabled or Disabled

Current CPU Temperature/Current System Temp/Current CPUFAN, SYSFAN Speed/Vcore/ Vcc/3.3V/+5V/+12V/-12V/5VSB(V)

This will show the CPU/System voltage chart and CPUFAN, SYSFAN1 Speed.

3-11 Miscellaneous Control

This section is for setting CPU Frequency Control.

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software
Miscellaneous Control

Cyrix III Clock Ratio NA/x12 Auto Detect DIMM/PCI Clk Enabled Spread Spectrum Disabled Clock Control By Hardware ** Current Host Clock is 133 MHz ** x Host clock at next boot is 66 MHz ** Current DRAM Clock is 133 MHz ** x DRAM clock at next boot is 66 MHz CPU Clock Ratio x 3.0	Item Help Menu Level > This item is for CyrixIII CPU Ratio adjust If you select option "NA/x12", default HW setting is used for CyrixIII. x12 is used If Samuel2 is plugged.
↑ ↓ → ← Move Enter:Select Item +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Optimized Defaults F7:Standard Defaults	

Cyrix III Clock Ratio

This item allows you to set Cyrix III Clock Ratio. The settings are Default, X3.5, X3, X4, X4.5, X5, X5.5, X6.

Auto Detect DIMM/PCI Clk

This item allows you to enable/disable auto detect DIMM/PCI Clock.

The settings are: Enabled, Disabled.

Clock Control

This item allows you to set Host Clock By hardware or By software. When setting by hardware the Host Clock Frequency depend on JP2 setting, when setting By software you can select the frequency in "Host clock at next boot" item.

- **Host clock at next boot is**

This item allows you select Host clock step by step increase 1MHz from 66MHz to 166MHz.

- **DRAM clock at next boot is**

-
-
1. When Host clock setting between 66MHz to 99MHz the DRAM clock can setting Synchronous from 66MHz to 99MHz or Asynchronous from 100MHz to 132MHz.
 2. When Host clock setting between 100MHz to 120MHz the DRAM clock can setting Synchronous from 100MHz to 120MHz, or Asynchronous from 133MHz to 160MHz.
 3. When Host clock setting between 121MHz to 149MHz the DRAM clock can setting Synchronous from 121MHz to 149MHz or Asynchronous from 90MHz to 111MHz.
 4. When Host clock setting between 150MHz to 166MHz the DRAM clock can setting Synchronous from 121MHz to 149MHz or Asynchronous 100MHz to 110MHz.

3-12 Load Standard/Optimized Defaults

Load Standard Defaults

When you press <Enter> on this item, you get confirmation dialog box with a message similar to:

Load Standard Defaults (Y/N)? N

Pressing <Y> loads the BIOS default values for the most stable, minimal-performance system operations.

Load Optimized Defaults

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N)? N

Pressing <Y> loads the default values that are factory settings for optimal performance system operations.

3-13 Set Supervisor/User Password

You can set either supervisor or user password, or both of them. The differences are:

Supervisor password: Can enter and change the options of the setup menus.

User password: Can only enter but do not have the right to change the options of the setup menus. When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable a password, just press <Enter> when you are prompted to enter the password. A message will confirm that the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED.

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

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

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

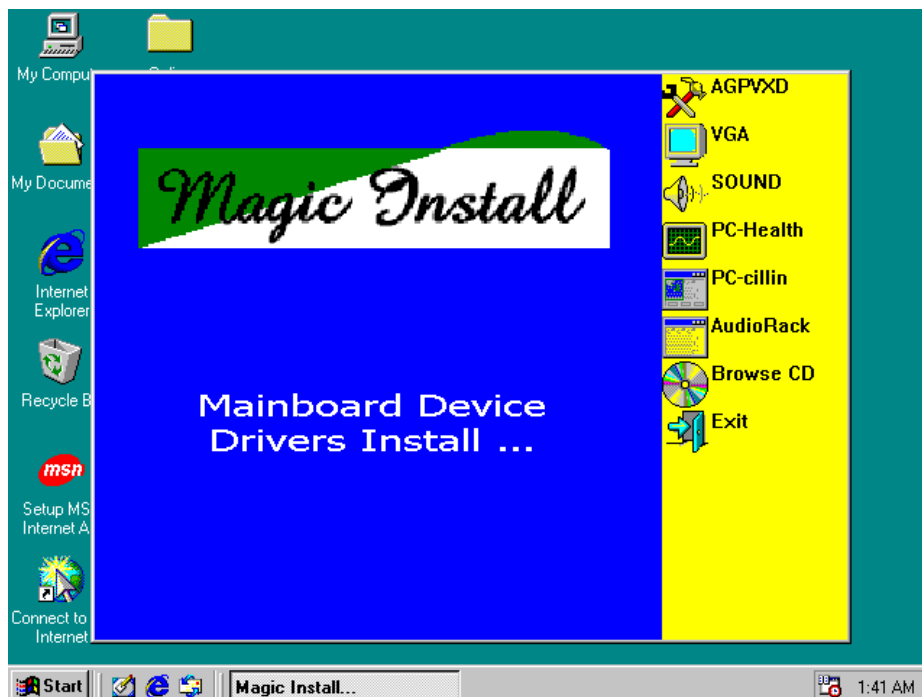
Chapter 4

DRIVER & FREE PROGRAM INSTALLATION

Check your package and there is A MAGIC INSTALL CD included. This CD consists of all DRIVERS you need and some free application programs and utility programs. In addition, this CD also include an auto detect software which can tell you which hardware is installed, and which DRIVERS needed so that your system can function properly. We call this auto detect software MAGIC INSTALL.

MAGIC INSTALL supports WINDOWS 95/98/98SE/NT4.0/2000

Insert CD into your CD-ROM drive and the MAGIC INSTALL Menu should appear as below. If the menu does not appear, double-click MY COMPUTER / double-click CD-ROM drive or click START / click RUN / type X:\SETUP.EXE (assuming X is your CD-ROM drive).



From MAGIC INSTALL MENU you may make 8 selections:

1. AGPVXD Install AGPVXD file when use External AGP card
2. VGA Install SiS 630 On-chip VGA driver

- | | |
|--------------|---|
| 3. SOUND | Install On-chip AC'97 Audio driver |
| 4. PC-HEALTH | Install Winbond Hardware Doctor Monitoring Software |
| 5. PC-CILLIN | Install PC-CILLIN2000 Anti-virus program |
| 6. AUDIORACK | Install Sound Application software |
| 7. BROWSE CD | To browse the contents of the CD |
| 8. EXIT | To exit from Magic Install menu |

4-1 AGPVXD Install SiS 630 AGPVXD Driver

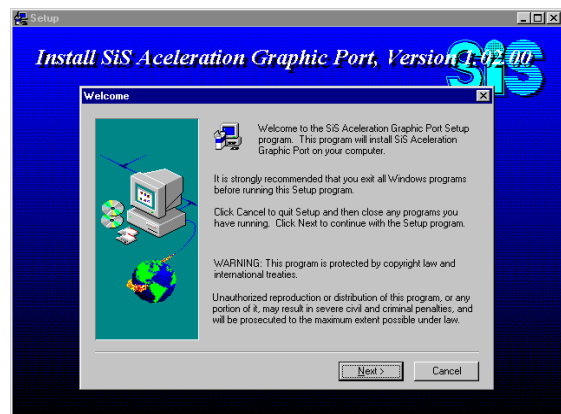
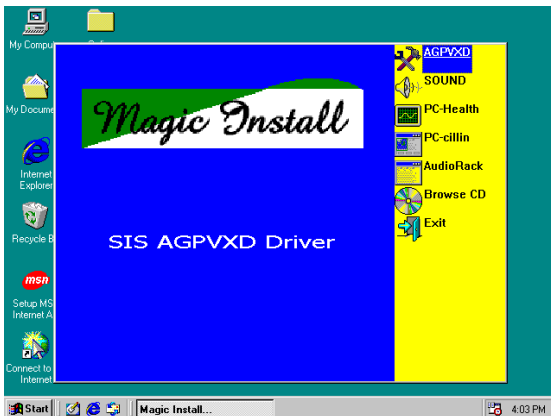
The AGPVXD Driver Is Only For AGP Slot VGA CARD User, On Board VGA User No Require.

The path of the file:

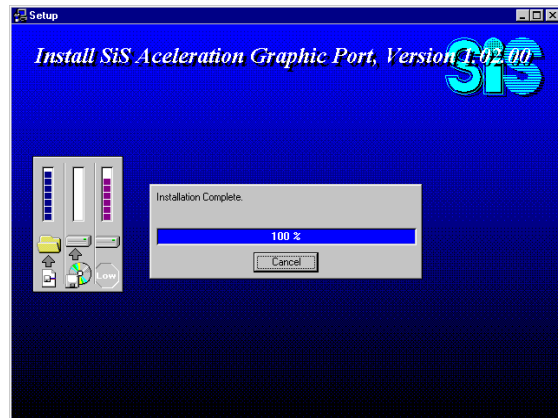
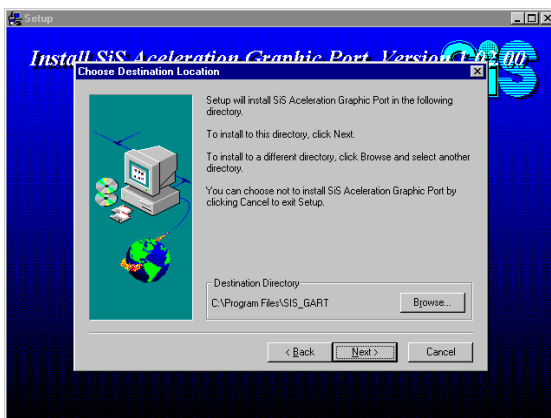
for WINDOWS 9X is X:\SIS630\AGPVXD\WIN9X\SETUP.EXE
(including WIN95/98/ 98SE/ME)

for WINDOWS 2000 is X:\SIS630\AGPVXD\WIN2000\SETUP.EXE

For WINDOWS 95/98/98SE/ME/2000



1. Click AGPVXD when Magic Install MENU appears
2. Click Next when SiS Acceleration Graphic Port appears



3. Click NEXT or choose BROWSE to change
4. After Setup complete please select restart

the path For the file to be stored

my computer now and click Finish to complete setup

4-2 VGA Install SiS 630 VGA Driver

The path of the file:

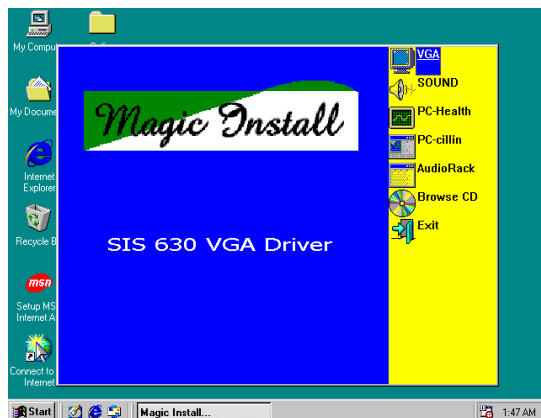
for WINDOWS 9X is X:\SIS630\VGA\WIN9X\SETUP.EXE (including WIN95/98/98SE/ME)

for WIN95NT4.0 is X:\SIS630\VGA\WINNT40

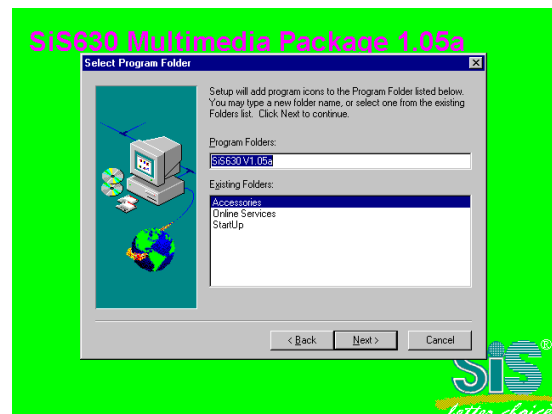
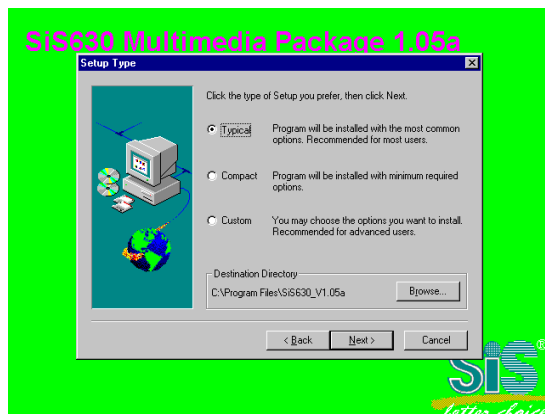
for WINDOWS 2000 is X:\SIS630\VGA\WIN2000\SETUP.EXE

for LINUX is X:\SIS630\LINUX

A. For WINDOWS 95/98/98SE/ME/2000



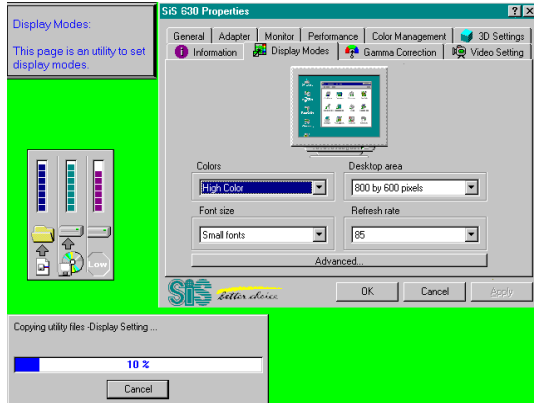
1. Click VGA when Magic Install MENU appears
2. Click Next when SiS630 Multimedia Package appears



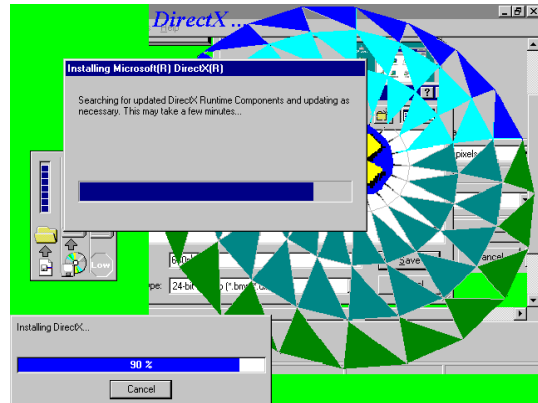
3. Multimedia Package support three types
4. System will add program icons to the

of Setup: Typical, Compact, Custom
Please choice Typical and Click Next to
continue step

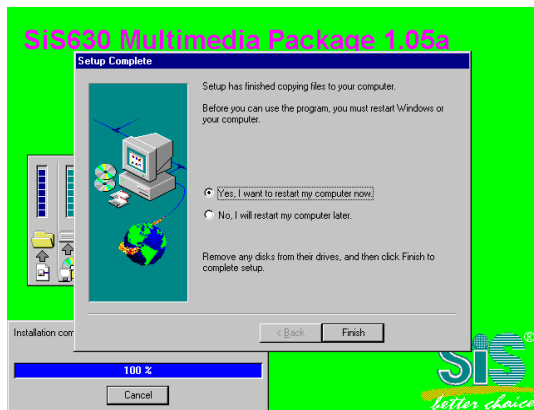
Program Folder listed. Click Next to
continue, and after “Start Copying Files”
window appears click Next



5. System starting install VGA driver



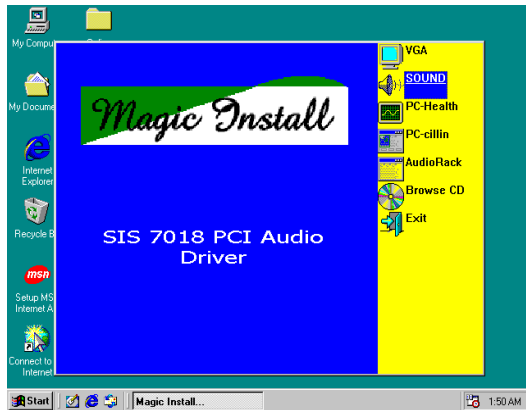
6. Install Microsoft Direct X



7. After Setup complete please select restart
my computer now and click Finish to
complete setup

4-3 SOUND Install SiS 7018 AC'97 Audio Driver and Application Software

The path of the file is X:\SIS630\SOUND\SETUP.EXE
(Support WINDOWS 95/98/98SE/ME/NT4.0/2000)



1. Click SOUND when Magic Install Menu window appears



2. Click Next when SiS PCI Audio Driver Setup window appears



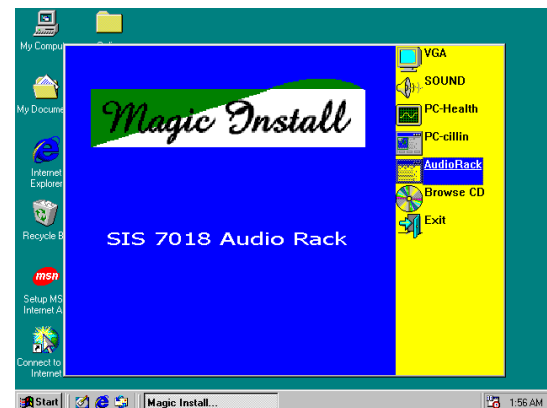
3. Click Next to install the driver in Program Files Folder



4. Select restart my computer now and click Finish to complete setup



5. After restart computer the system will auto detect SiS 7018 Audio Driver and install it to system



6. Click Audio Rack when Magic Install Menu appears

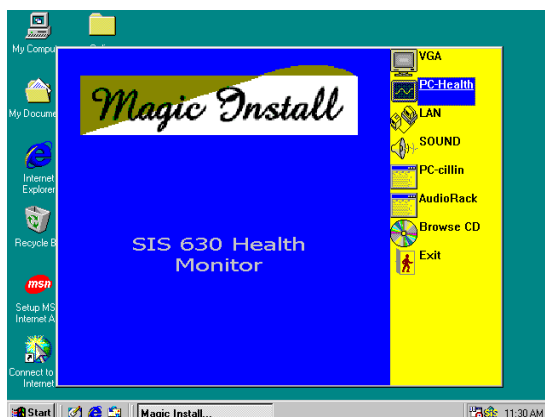


7. Run Programs → Audio Rack will show next screen

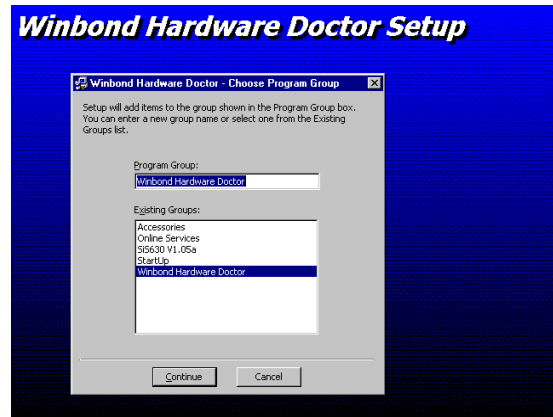
4-4 PC-HEALTH Winbond Hardware Doctor Monitoring Software

The path of the file is X:\SIS630\HEALTH-W\SETUP.EXE
(Only support WINDOWS 95/98/98SE/ME)

In Windows 95/98 Winbond Hardware Doctor Monitoring Software needs some system files to copy in Utility that's why it needs install PC-HEALTH twice to complete setup.

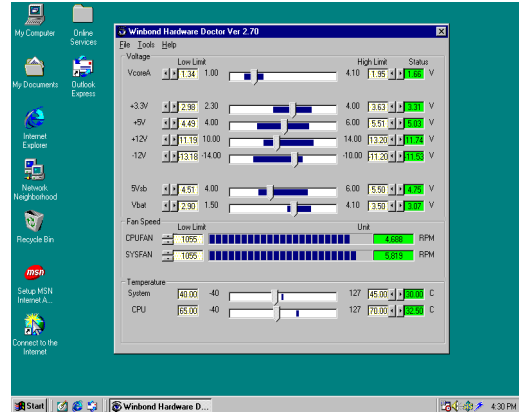


1. Click PC-Health when Magic Install Menu appears
2. Click OK when Winbond Hardware Doctor Setup Window appears



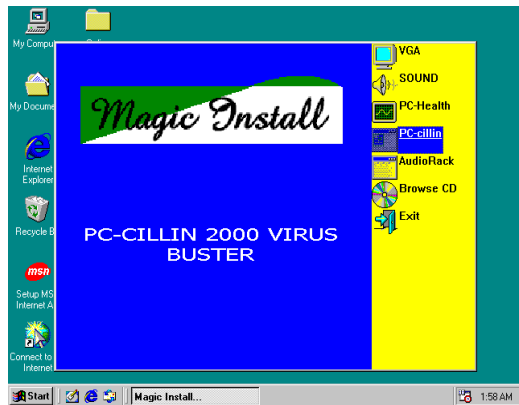
3. Click the Button to start installation
4. Select Program Group name or enter a new group name, click continue to setup and click OK after setup complete

4-4-1 How To Utilize PC-HEALTH



1. Click Program → Winbond Hardware Doctor → Hardware Doctor the Winbond Hardware Doctor will appears
You can remove the Utility in Control Panel → Add/Remove Program icon
2. After executing Winbond Hardware Doctor it supports system voltage, Fan speed and CPU/SYSTEM Temperature. Because this is a On-time Monitoring program therefore the value will change after it detected, if the value is over default setting the system will have warning picture and beeps

4-5 PC-CILLIN Install PC-CILLIN 2000 Anti-virus Software and Application program



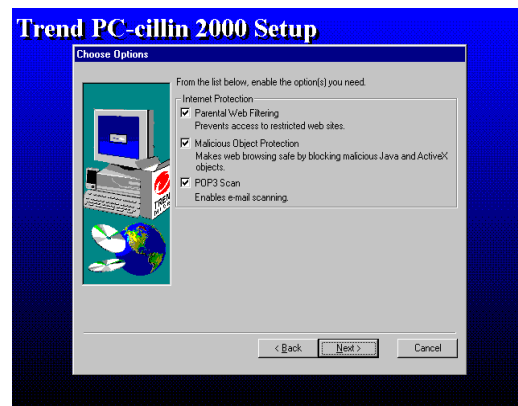
1. Click PC-CILLIN when MAGIC INSTALL MENU Appears



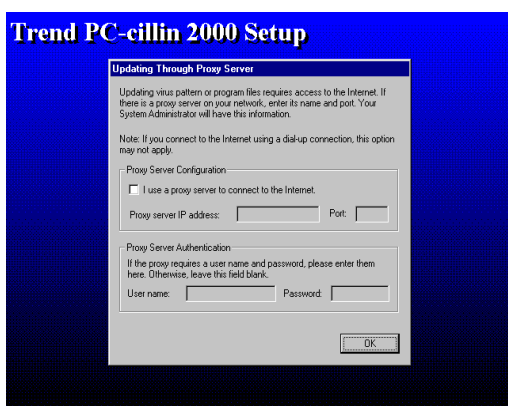
2. Click NEXT when PC-CILIN 2000 SETUP APPEARS. Then click YES when the announcement of copywrite appears. Software is starting to detect HD for virus



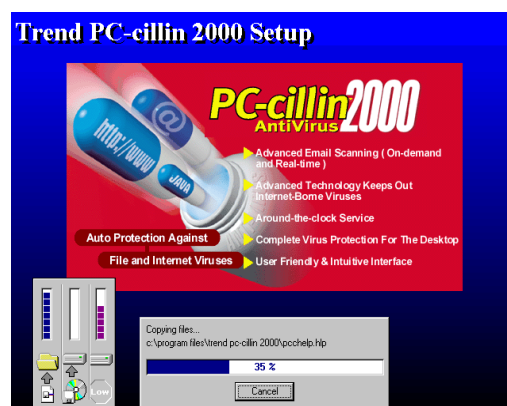
3. Click NEXT and Enter User Information, Click NEXT or choose BROWSE to change the path For the file to be stored



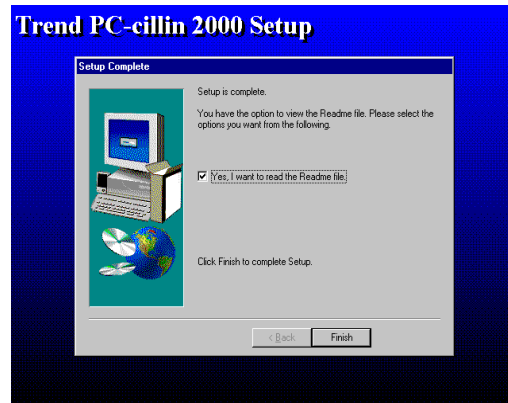
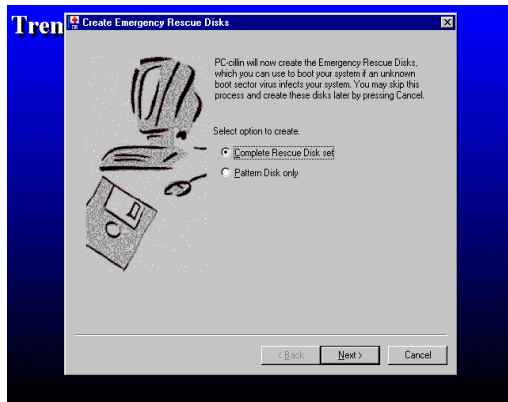
4. Click NEXT and Choose all Internet Protection



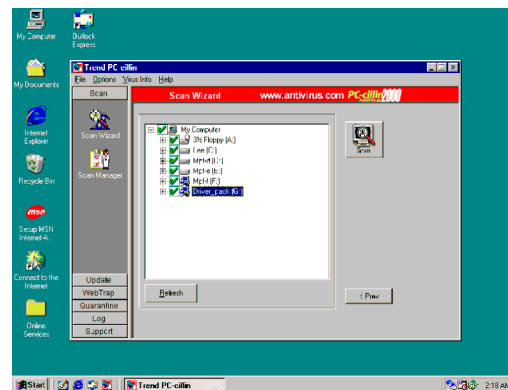
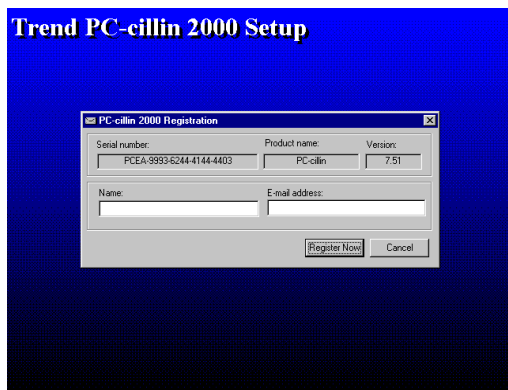
5. Click OK and If You Have Proxy Server, Enter Your Setting.



6. Click NEXT when Start Copy Files, Start to install the software.



7. If you want to make a rescue disc, insert a 1.44 MB disc
8. Setup Complete and click Finish



9. Enter Your name and E-mail address Register PC-cillin 2000 or Click Cancel Register Later
10. After install PC-cillin 2000 complete we recommend select update item to download newest virus code and setting Auto refresh virus code

4-6 How To Disable On Board Sound Function

Please key in “DEL” key after power on to enter BIOS SETUP screen and choose Integrate Peripherals → On-Chip Device Function → AC97 Audio item to disabled all on board Sound function by Page Down key.

4-7 HOW TO UPDATE BIOS

- STEP 1.** Prepare a boot disc. (you may make one by click START click RUN type SYS A: click OK)
- STEP 2.** Copy utility program to your boot disc. You may copy from DRIVER CD X:\FLASH\AWDFLASH.EXE or download from our web site.

STEP 3. Copy latest BIOS for 630AF from our web site to your boot disc.

STEP 4. Insert your boot disc into A:,

start the computer, type “Awdflash A:\630AFxxx.BIN /SN/PY/CC/R”

630AFxxx.BIN is the file name of latest BIOS it can be 630AFA03.BIN or 630AFB02.BIN

SN means don't save existing BIOS data

PY means renew existing BIOS data

CC means clear existing CMOS data

R means restart computer

STEP 5. Push ENTER and the BIOS will be updated, computer will be restarted automatically