635CS/635CN
USER'S MANUAL

M/B For Socket 370 Pentium® III Processor

** Year 2001 compliant **

TABLE OF CONTENT

USER'S NOTICE

COPYRIGHT OF THIS MANUAL BELONGS TO THE MANUFACTURER. NO PART OF THIS MANUAL, INCLUDING THE PRODUCTS AND SOFTWARE DESCRIBED IN IT MAY BE REPRODUCED, TRANSMITTED OR TRANSLATED INTO ANY LANGUAGE IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION OF THE MANUFACTURER.

THIS MANUAL CONTAINS ALL INFORMATION REQUIRED TO USE 635CS/635CN MOTHER-BOARD AND WE DO ASSURE THIS MANUAL MEETS USER'S REQUIREMENT BUT WILL CHANGE, CORRECT ANY TIME WITHOUT NOTICE. MANUFACTURER PROVIDES THIS MANUAL "AS IS" WITHOUT WARRANTY OF ANY KIND, AND WILL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTIAL OR CONSEQUENTIAL DAMAGES (INCLUDING DAMANGES FOR LOSS OF PROFIT, LOSS OF BUSINESS, LOSS OF USE OF DATA, INTERRUPTION OF BUSINESS AND THE LIKE).

PRODUCTS AND CORPORATE NAMES APPEARING IN THIS MANUAL MAY OR MAY NOT BE REGISTERED TRADEMARKS OR COPYRIGHTS OF THEIR RESPECTIVE COMPANIES, AND THEY ARE USED ONLY FOR IDENTIFICATION OR EXPLANATION AND TO THE OWNER'S BENEFIT, WITHOUT INTENT TO INFRINGE.

Manual Revision Information

Reversion	Revision History	Date
1.0	First Release	July 2001

Item Checklist

☑   635CS/635CN

☑   Cable for IDE/Floppy

☑   CD for motherboard utilities

    Cable for USB Port 3/4 (Option)

☑   635CS/635CN 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 635CS/635CN Motherboard

1-1 Feature of motherboard

The 635CS/635CN motherboard is design for use Intel's new generation Pentium processors, which utilize the Socket 370 design supports Pentium®III/Tualatin /Celeron FC-PGA processors, and the memory size expandable to 1GB.

This motherboard use the newest SiS 635 chipset provides a high performance/low cost solution for socket 370 series CPUs based system, by integrating a high performance North Bridge, Super-South Bridge and AGP4X Slot.

The 635CS/635CN provided either 2 pcs SDRAM Module socket support PC133 /PC100 SDRAM or 2 pcs DDR (Double Data Rate) SDRAM Module socket support PC2100/PC1600 DDR SDRAM Module for increase system performance (Do not using DIMM & DDR Module in combination at same time). System memory size expandable to 1.0G Bytes.

This motherboard provides 10/100Mb Fast Ethernet interface **(Only for 635CS)** for Office requirement and offers 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 in 2x12Mb bandwidth. The built-in Fast PCI IDE controller supports Ultra DMA 33/66/100 function up to 100MB/s for data transfer rate. In addition, 635CS/635CN provide hardware monitor function 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	∗ Micro ATX form factor 4 layers PCB size: 24.3 x 24.4.cm
Chipset	∗ SiS 635 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™ 466~950MHz processor ∗ Support 66, 100 and 133MHz CPU Bus clock ∗ Reserves support for future Intel Pentium® III processors
Memory Socket	∗ 168-pin DIMM Socket x2 support PC-100/PC-133 SDRAM ∗ 184-pin DDR SDRAM Module Socket x2 support PC2100/PC1600 DDR SDRAM ∗ Expandable to 1GB ∗ Support 3.3V SDRAM Module, 2.5V DDR DRAM Module
Expansion Slot	∗ 32-bit PCI slot x3, 2.2 Specification Compliant ∗ CNR slot x1 for Communication Riser card ∗ AGP slot x1
Integrate IDE	∗ 2 channel of Bus Master IDE port supporting ULTRA DMA 33/66/100 MB/s mode devices
Integrate LAN (Only for 635CS)	∗ Fast Ethernet Controller 10/100 Mbps transfer rate
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/Tualatin 933MHz FC-PGA package

DRAM: 128M SDRAM x2 (Hyundai GM 72V66841ET75)

128M DDR SDRAM x2 (Samsung K4H280838B-TCB0)

VGA Expansion Card: Geforce 256 (1024x768 Hi-color) Driver V3.68

Hard Disk Driver: IBM DTAL-305040 (ATA 100)

BIOS: Award Optimal default

OS: Win 98SE

Performance Test Report

	Pentium III 866MHz SDRAM (133/133)	Pentium III 866MHz DDR (133/133)	Tualatin 933MHz DDR (133/133)
3D Mark 99	5923	5911	5957
3D Mark 2000	4714	4712	4806
3D Mark 2001	1934	1949	1967
3D Winbench 99 V1.2	897	899	900
3D Winbench 2000	94	94.1	94.8
Final Reality	5.99	5.96	7.76
Winstone 99 V1.3	31.5	31.6	32.3
Content Creation Winstone 2000	33.9	33.9	36.9
Content Creation Winstone 2001	39.8	40.4	42.8
Business Winstone 2001	34.9	34.8	37.5
Winbench 99 :			
CPU Mark 99	75.7	75.8	83
FPU Winmark 99	4550	4550	5090
Business Disk Winmark99	4520	4500	4580
Hi-end Disk Winmark99	17200	16800	17200
Business Graphic Winmark	379	379	414
Hi-end Graphic Winmark	1010	1010	1090
SYS Mark 2000 : SISMark 2000 Rating (Internet Content Creation / Office Productivity)			
Suites	170 (171/169)	170 (171/169)	183 (189/179)
Official	168 (170/167)	170 (170/170)	184 (189/180)
SISOFT Sandra 2001 :			
Dhrystone ALU MIPS	2333	2333	2605
Whetstone FPU MFLOPS	1157	1157	1242
Int ALU/RAM MB/S	245	367	447

Float FPU/RAM	MB/S	407	464	479
QUAKE3 DEMO1	FPS	109.7	109.4	117.6
DEMO2	FPS	104.7	104.3	112.5

1-4 Layout Diagram & Jumper Setting
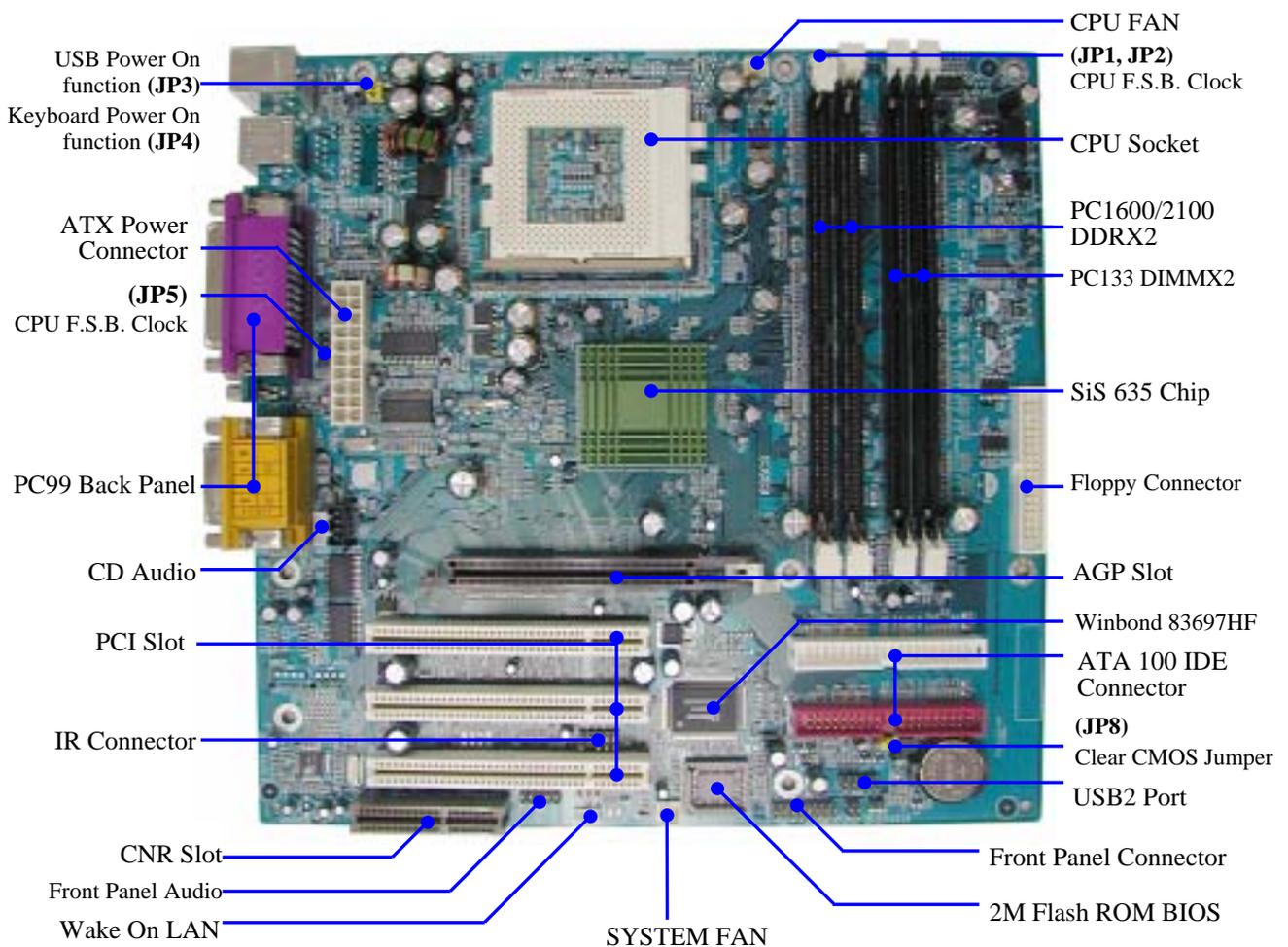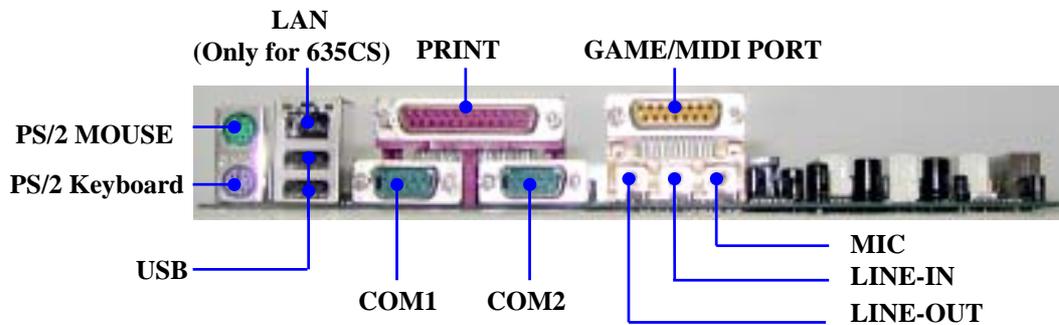
Jumpers

Jumper	Name	Description	Page
JP1, JP2 JP5	CPU Front Side Bus Frequency Setting	1x2-pin Block 2x4-pin Block	p.8
JP3	USB Power ON Function Setting	3-pin Block	p.9
JP4	Keyboard Power ON Function Setting	3-pin Block	p.9
JP8	CMOS RAM Clear	3-pin Block	p.9

Connectors

Connector	Name	Description	Page
U11	ATX Power Connector	20-pin Block	p.16
KBMS1	PS/2 Mouse & PS/2 Keyboard Connector	6-pin Female	p.17
USB1	USB Port Connector	2x4-pin Connector	p.17
LAN1 **(Only for 635CS)**	LAN Port Connector	RJ45 Connector	p.17
PARALL	Parallel Port Connector	25-pin Female	p.17
GAME	Audio/Game Connector	3 phone jack+ 15-pin Connector	p.17
COM1/COM2	Serial Port COM1 Connector	9-pin Connector	p.17
FDD	Floppy Driver Connector	34-pin Block	p.18
IDE1/IDE2	Primary/Secondary IDE Connector	40-pin Block	p.18

Headers

Header	Name	Description	Page
USB2	USB Port Headers	10-pin Block	p.19
IDE LED	IDE activity LED	2-pin Block	p.19
TURBO LED	Turbo LED switch	2-pin Block	p.19
RESET	Reset switch lead	2-pin Block	p.19
SPKR	Speaker connector	4-pin Block	p.19
POWER LED	Power LED	2-pin Block	p.19
TWR BTN	Power switch	2-pin Block	p.19
WOL	Wake On-LAN Headers	3-pin Block	p.20
CPUFAN, SYSFAN	FAN Speed Headers	3-pin Block	p.20
IR	IR infrared module Headers	10-pin Block	p.21
CDIN1, CDIN2	CD Audio-In Headers	4-pin Block	p.21
AUDIO	Front Panel Audio Headers	9-pin Block	p.21

Expansion Sockets

Socket/Slot	Name	Description	Page
ZIF Socket 370	CPU Socket	370-pin FC-PGA/PPGA CPU Socket	p.12
SDRAM1, SDRAM2	SDRAM Module Socket	168-pin DIMM SDRAM Module Expansion Socket	p.14
DDR1, DDR2	DDR SDRAM Module Socket	184-pin DDR SDRAM Module Socket	p.14
PCI_1, PCI_2,	PCI Slot	32-bit PCI Local Bus Expansion Slots	p.15

PCI_3			
AGP	AGP Slot	AGP Expansion Slot	p.16
CNR	CNR Slot	Communication Riser card Slot	

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 : JP1, JP2, JP5**
   The motherboard's CPU & SDRAM memory clock adjusted through jumper JP1, JP2, JP5. Table as below:

CPU/SDRAM (MHz)	JP5				JP1	JP2
	1-2	3-4	5-6	7-8		
AUTO	OFF	OFF	OFF	OFF	ON	ON
66M	OFF	OFF	OFF	OFF	OFF	OFF
100M	OFF	OFF	OFF	ON	OFF	OFF
133M	OFF	OFF	ON	ON	OFF	OFF

CPU/SDRAM Clock Setting
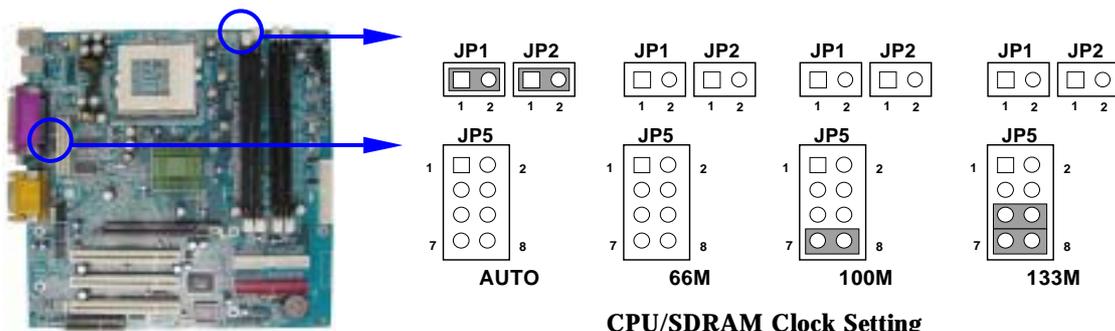
2. USB Power On Function Setting (3-pin): JP3

This allows you to disable the USB power on function. Set the jumper to enabled or disabled if you wish to use your USB Device 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 disable

JP3

1-2 closed : Disabled

JP3
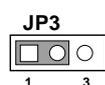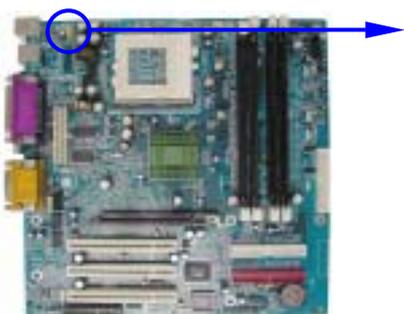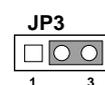
2-3 closed : Enabled

USB Power On Function Setting

3. Keyboard Power On Function Setting (3-pin): JP4

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 disable.

JP4

1-2 closed   Disabled

JP4
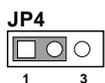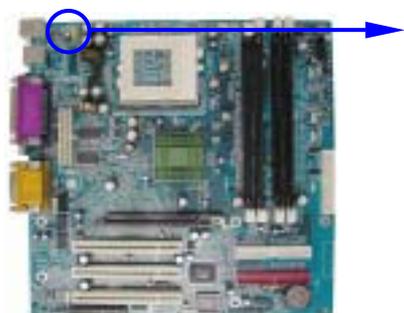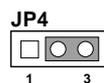
2-3 closed   Enabled

Keyboard Power On Function Setting

4. CMOS RAM Clear (3-pin): JP8

A battery must be used to retain the motherboard configuration in CMOS RAM short 2-3 pins of JP8 to store the CMOS data.

To clear the CMOS, follow the procedure below:
1. Turn off the system and unplug the AC power
2. Remove ATX power cable from ATX power connector
3. Locate JP8 and short pins 1-2 for a few seconds
4. Return JP8 to its normal setting by shorting pins 2-3
5. Connect ATX power cable back to ATX power connector

Note: When should clear CMOS

1. Troubleshooting
2. Forget password
3. After over clocking system boot fail

JP8   □○○

1   3

JP8   □○○

1   3

1-2 closed Clear CMOS   **2-3 closed Normal**
(default)

CMOS RAM Clear Setting
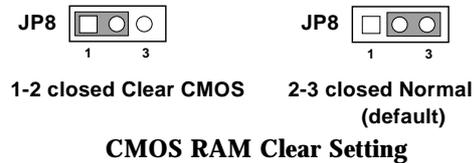
2-3 Install CPU

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

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

Glossary:

Chipset (or core logic) - two or more integrated circuits which control the interfaces between the system processor, RAM, I/O devises, 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 - **A**ccelerated **G**raphics **P**ort - a high speed interface for video cards; runs at 1X (66MHz), 2X (133MHz), or 4X (266MHz).

PCI - **P**eripheral **C**omponent **I**nterconnect - a high speed interface for video cards, sound cards, network interface cards, and modems; runs at 33MHz.

ISA - **I**ndustry **S**tandard **A**rchitecture - 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 - **U**niversal **S**erial **B**us - 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) - **L**ocal **A**rea **N**etwork - the interface to your local area network.

BIOS (**B**asic **I**nput/**O**utput **S**ystem) - 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.

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 Jumper

Setting the front side bus frequency
The motherboard uses jumper JP5 for the front side bus frequency setting as shown from the table below:

CPU/SDRAM (MHz)	JP5				JP1	JP2
	1-2	3-4	5-6	7-8		
AUTO	OFF	OFF	OFF	OFF	ON	ON
66M	OFF	OFF	OFF	OFF	OFF	OFF
100M	OFF	OFF	OFF	ON	OFF	OFF
133M	OFF	OFF	ON	ON	OFF	OFF

Example: *Using a Pentium® III 866 CPU with front side bus frequency of 133MHz and PC-133 SDRAM module, the setting of JP5 are 1-2 open, 3-4 open, 5-6 closed, 7-8 closed 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.

Pentium® III

Intel®

Socket 370

Colden Arrow

CPU ZIF Socket 370
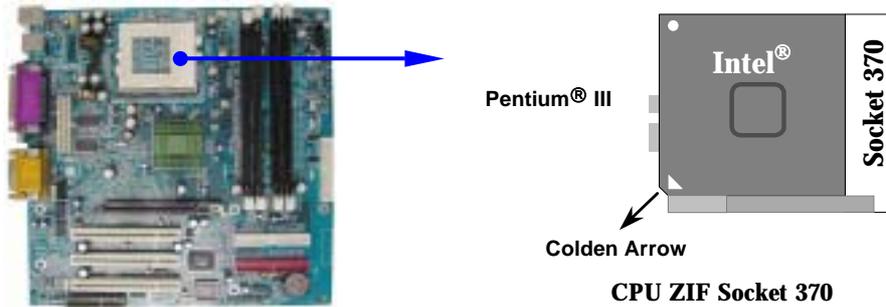
When you put the CPU into the ZIF socket. No force require to insert of the CPU, then press the level to Locate position slightly without any extra force.

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 JP5 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)	JP5				JP1	JP2
	1-2	3-4	5-6	7-8		
AUTO	OFF	OFF	OFF	OFF	ON	ON
66M	OFF	OFF	OFF	OFF	OFF	OFF
100M	OFF	OFF	OFF	ON	OFF	OFF
133M	OFF	OFF	ON	ON	OFF	OFF

```
        CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
                          Miscellaneous Control

  ┌─────────────────────────────────────────────────────────┐
  │ Auto Detect DIMM/PCI Clk      Enabled                     │
  │ Spread Spe┌ CPU Host/DRAM Clock ──────┐   Item Help       │
  │           │ Default              [  ] │                   │
  │           │ 66/66/33MHz    ..... [  ] │                   │
  │           │ 66/100/33MHz   ..... [  ] │                   │
  │           │ 100/100/33MHz  ..... [  ] │                   │
  │           │ 101/101/34MHz  ..... [  ] │                   │
  │           │ 103/103/34MHz  ..... [  ] │                   │
  │           │ 110/110/33MHz  ..... [  ] │                   │
  │           │ 112/112/34MYz  ..... [  ] │                   │
  │           │ 115/115/34MHz  ..... [  ] │                   │
  │           │ 100/133/33MHz  ..... [  ] │                   │
  │           │ 133/100/33MHz  ..... [  ] │                   │
  │           │ 133/133/33MHz  ..... [  ] │                   │
  │           │ 135/101/34MHz  ..... [  ] │                   │
  │           │ 137/103/34MHz  ..... [  ] │                   │
  │           │ 140/140/35MHz  ..... [  ] │                   │
  │           └ ↑↓:Move  ENTER:Accept  ESC:Abort ┘            │
```

```
         Auto Detect DIMM/PCI Clk          Enabled
         Spread Spe    CPU Host/DRAM Clock              Item Help
         CPU Host/D    Default              [   ]
         CPU Clock     66/66/33MHz      ..... [   ]
                       66/100/33MHz     ..... [   ]        Menu Level  >
                       100/100/33MHz    ..... [   ]
                       101/101/34MHz    ..... [   ]     CyrixIII CPU Ratio
                       103/103/34MHz    ..... [   ]     Adjust
                       110/110/33MHz    ..... [   ]
                       112/112/34MYz    ..... [   ]
                       115/115/34MHz    ..... [   ]
                       100/133/33MHz    ..... [   ]
                       133/100/33MHz    ..... [   ]
                       133/133/33MHz    ..... [   ]
                       135/101/34MHz    ..... [   ]
                       137/103/34MHz    ..... [   ]
                       140/140/35MHz    ..... [   ]
                      ↑↓:Move   ENTER:Accept   ESC:Abort

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

NOTE!	The BIOS allows you select Bus Frequency from 66MHz to 133MHz, 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.

2-4 Install Memory

This motherboard provides two 168-pin DUAL INLINE MEMORY MODULES (DIMM) sites and two Double Data Rate (DDR) SDRAM Module Socket for memory expansion available from minimum memory size of 32MB to maximum memory size of 1GB SDRAM, and only can install either 168-pin SDRAM Module, or 184-pin DDR Module at the same time.

Valid Memory Configurations

Bank	168-Pin DIMM		Total Memory
Bank 0, 1 (DIMM1/DDR1)	SDRAM 32, 64, 128, 256, 512MB DDR SDRAM 64, 128, 256, 512MB	X 1	32MB~512MB
Bank 2, 3 (DIMM2/DDR2)	SDRAM 32, 64, 128, 256, 512MB DDR SDRAM 64, 128, 256, 512MB	X 1	32MB~512MB
Total	System Memory (Max. 1GB)		32MB~1GB

Generally, installing SDRAM modules to your motherboard is very easy, you can refer to figure 2-4 to see what a 184-pin PC2100/PC1600 DDR SDRAM module looks like.
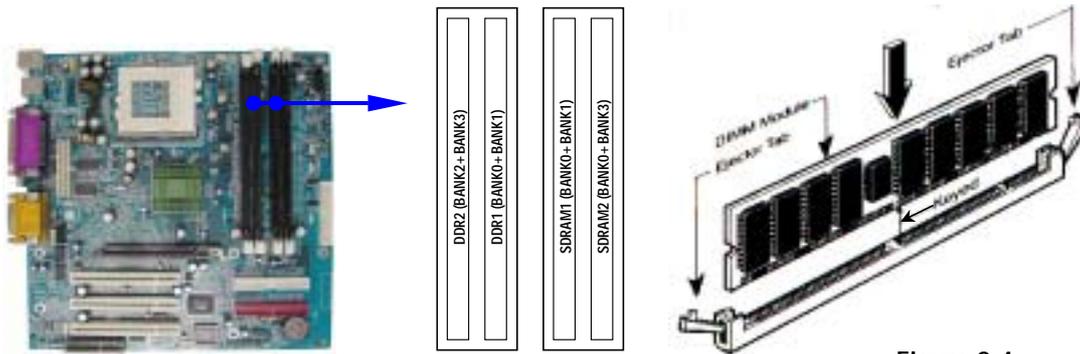
Figure 2-4

> **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 indention on both sides.

> **WARNING!** For the SDRAM CLOCK is set at 133MHz, use only PC133 /PC2100-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/PC2100-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	—	Shared	—	—
PCI slot 2	—	—	Shared	—
PCI slot 3	—	—	—	Shared
Onboard VGA	—	—	—	—
AC97/MC97	—	Shared	—	—
Onboard USB	—	—	—	Shared
Onboard USB 2	—	—	—	Shared
LAN **(for 635CS Only)**	—	—	Shared	—

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.

2-5-4 AGP Slot

This motherboard provides an AGP Slot, support the 1X/2X/4X AGP VGA card.

AGP SLOT
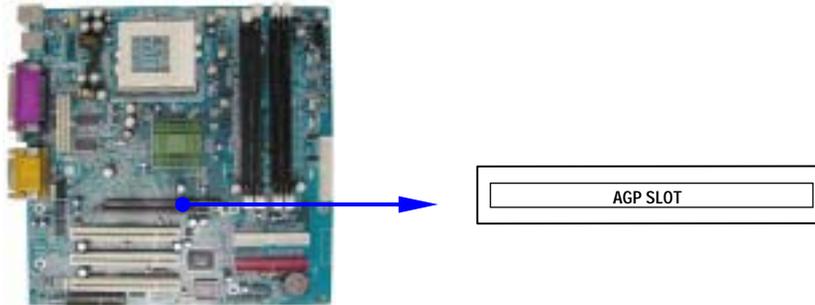
2-6 Connectors, Headers

2-6-1 Connectors

(1) Power Connector (20-pin block): U11
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.

PIN	ROW2	ROW1
1	3.3V	3.3V
2	-12V	3.3V
3	GND	GND
4	Soft Power On	5V
5	GND	GND
6	GND	5V
7	GND	GND
8	-5V	Power OK
9	+5V	+5V (for Soft Logic)
10	+5V	+12V

Pin 1
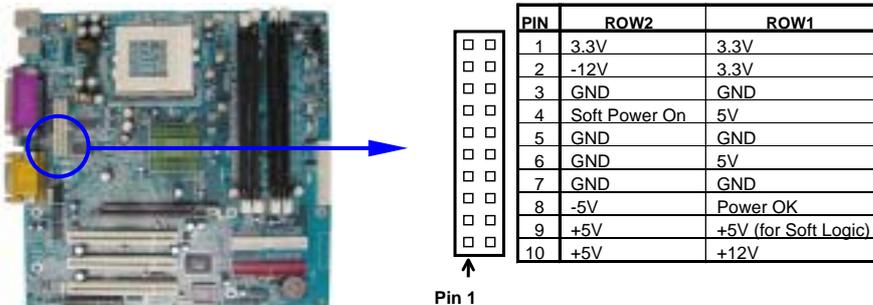
(2) PS/2 Mouse & PS/2 Keyboard Connector: KBMS1
The connectors for PS/2 keyboard and PS/2 Mouse.

(3) USB Port connector: USB1
The connectors are 4-pins connector that connect USB devices to the system board.

(4) LAN Port connector: LAN1 (Only for 635CS)
This connector is standard RJ45 connector for Network connector.

(5) Parallel Port Connector (25-pin female): PARALL

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.

(7)   Audio and Game Connector : GAME
This Connector are 3 phone Jack 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

(8)   Serial Port COM1: COM1/COM2
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.
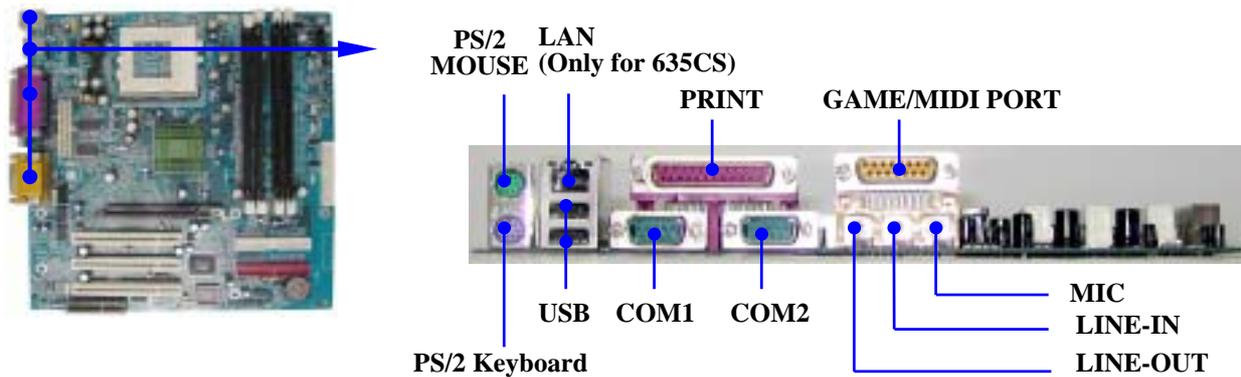
(9)   Floppy drive Connector (34-pin block): FDD
This connector supports the provided floppy drive ribbon cable. After connecting the single plug end to motherboard, connect the two plugs at other end to the floppy drives.

Floppy Drive Connector
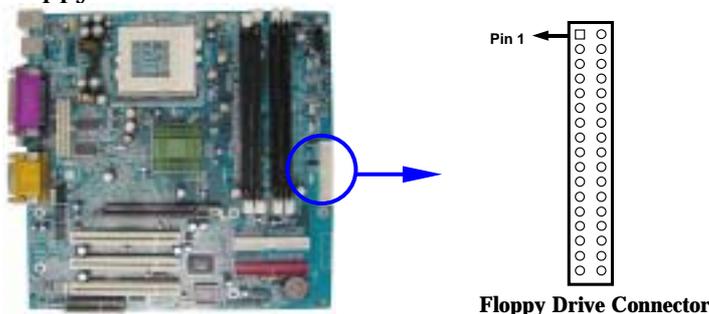
(10) Primary IDE Connector (40-pin block): IDE1
This connector supports the provided IDE hard disk ribbon cable. After connecting the single plug end to motherboard, connect the two plugs at other end to your hard disk(s). If you install two hard disks, you must configure the

second drive to Slave mode by setting its jumpers accordingly. Please refer to the documentation of your hard disk for the jumper settings.

Primary IDE Connector
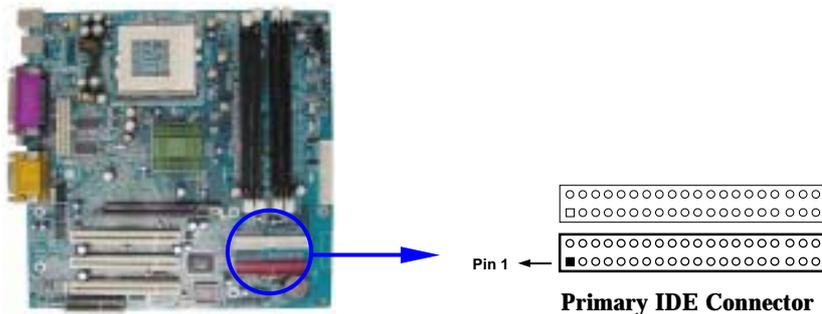
(11) Secondary IDE Connector (40-pin block): IDE2

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.

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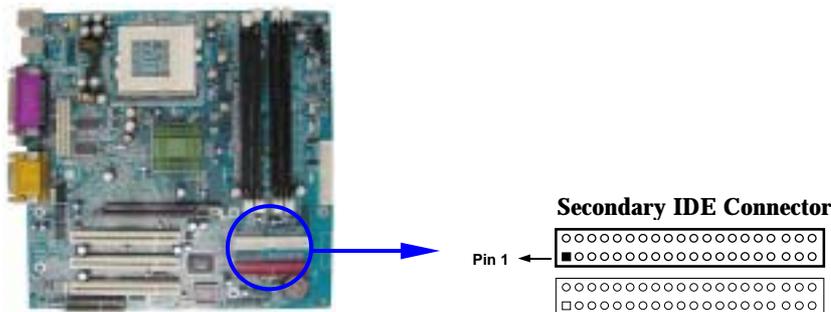
- Two hard disks can be connected to each connector. The first HDD is referred to as the "Master" and the second HDD is referred to as the "Slave".
- For performance issues, we strongly suggest you don't install a CD-ROM or DVD-ROM drive on the same IDE channel as a hard disk. Otherwise, the system performance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

2-6-2 Headers

(1) 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.
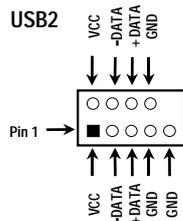
USB Port Connector

(2) IDE Activity LED: IDE LED
This connector connects to the hard disk activity indicator light on the case.

(3) 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.

(4) 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 lift of the system's power supply. See the figure below.

(5) Speaker connector: SPKR
This 4-pin connector connects to the case-mounted speaker. See the figure below.

(6) 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.

(7) Power switch: TWR BTN
This 2-pin connector connects to the case-mounted power switch to power ON/OFF the system.
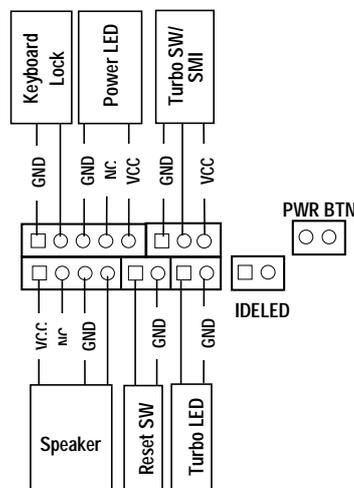
System Case Connections

(8) **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.

Wake-On-LAN Headers
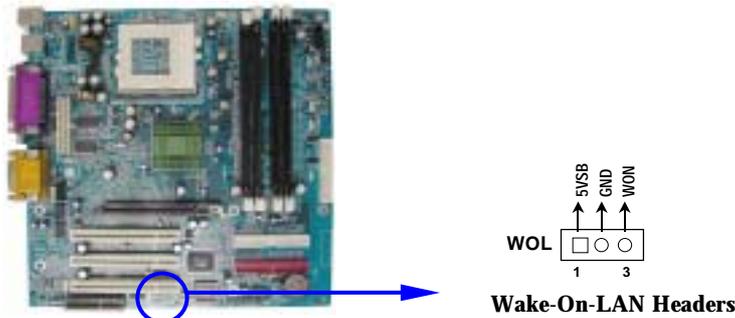
(9) **FAN Speed Headers (3-pin): CPUFAN, SYSFAN**

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.
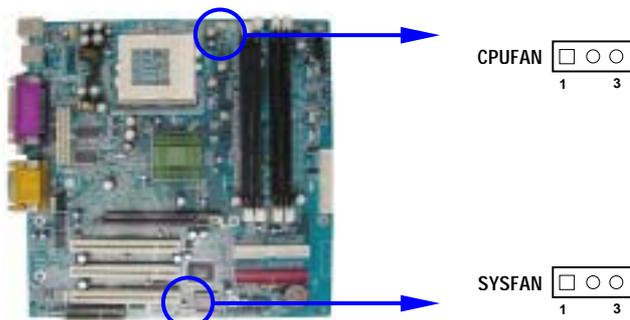
(10) **IR infrared module Headers (10-pin): IR**

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.

CIR: (Pin6~Pin10) for Consumer IR
IR: (Pin1~Pin5) for Standard IR

Infrared Module Headers
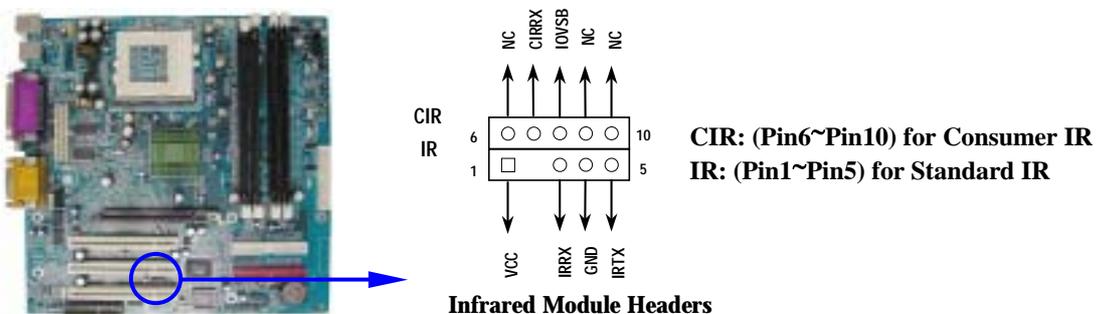
(11) **CD Audio-In Headers (4-pin): CDIN1, CDIN2**

CDIN1 and CDIN2 are the connectors for CD-Audio Input signal. Please connect it to CD-ROM CD-Audio output connector.

CD Audio-In Headers
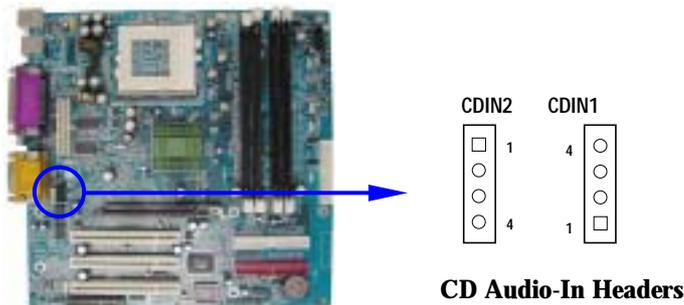
(12) Front Panel Line-In, Line-Out, MIC Headers: AUDIO

Line-In/Out, MIC Headers
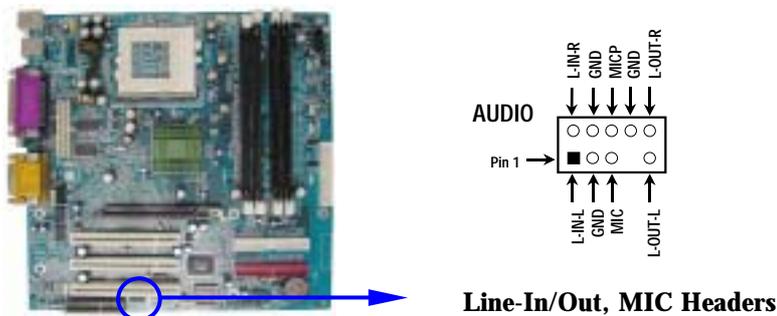
2-7 Starting Up Your Computer

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 is working	CPU overheated 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 < Del> 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 < Del> 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) 1984-2001 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 frequency/voltage 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) 1984-2001 Award Software
                         Standard CMOS Features
┌──────────────────────────────────────────────┬────────────────────┐
║   Date (mm:dd:yy)          Mon, Jul, 16 2001  │                    ║
║   Time (hh:mm:ss)          14 : 51 : 26       │     Item Help      ║
║                                               └────────────────────┘
```

```
   > IDE Primary Master        Press Enter None          ┌─────────────────────────┐
   > IDE Primary Slave         Press Enter None          │  Menu Level >           │
   > IDE Secondary Master      Press Enter None          │                         │
   > IDE Secondary Slave       Press Enter None          │  Change the day, month, │
                                                         │  year and century       │
     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 +/-/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) 1984-2001 Award Software
                               Advanced BIOS Features

   ┌─────────────────────────────────────────────────┬──────────────────────┐
   │  Anti-Virus Protection      Disabled            │                      │
   │  Recovery Genius            Enabled             │     Item Help        │
   │  PhoenixNet Support         Disabled            │                      │
   │  CPU L1 Cache               Enabled             ├──────────────────────┤
   │  CPU L2 Cache               Enabled             │  Menu Level >        │
   │  CPU L2 Cache ECC Checking   Disabled           │                      │
   │  Processor Number Feature   Enabled             │  Allows you to choose│
   │  Quick Power On Self Test   Enabled             │  The VIRUS warning   │
   │  First Boot Device          Floppy             │  feature for IDE Hard│
   │  Second Boot Device         HDD-0              │  Disk boot sector    │
   │  Third Boot Device          LS120              │  protection. If this │
   │  Fourth Boot Device         Disabled            │  function is enabled │
   │  Swap Floppy Drive          Disabled            │  and someone attempt │
   │  Boot Up Floppy Seek        Enabled             │  to write data into  │
   │  Boot Up NumLock Status     Off                │  this area, BIOS will│
   │  Gate A20 Option            Fast               │  show a warning      │
   │  Typematic Rate Setting     Disabled            │  message on screen   │
   │  Typematic Rate (Chars/Sec)  6                 │  and alarm beep      │
   │  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 Win95    No                 │                      │
   │  Video BIOS Shadow          Enabled             │                      │
   ├─────────────────────────────────────────────────┴──────────────────────┤
   │      Move Enter:Select +/-/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 is 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) 1984-2001 Award Software
                          Advanced Chipset Features
┌─────────────────────────────────────────────────────────────────────────┐
│    DRAM Timing Settings      Press Enter        │                         │
│    AGP Function Settings     Press Enter        │       Item Help         │
│    Memory Parity Check       Disabled           ├─────────────────────────┤
│    System BIOS Cacheable     Enabled            │                         │
│    Video RAM Cacheable       Enabled            │    Menu Level >         │
│    Memory Hole at 15M-16M    Disabled           │                         │
│                                                 │                         │
│                                                 │                         │
│                                                 │                         │
│                                                 │                         │
│                                                 │                         │
│                                                 │                         │
├─────────────────────────────────────────────────┴─────────────────────────┤
│      Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help  │
│     F5:Previous Values   F6:Optimized Defaults    F7:Standard Defaults     │
└───────────────────────────────────────────────────────────────────────────┘
```

DRAM Timing Settings

Please refer to section 3-6-1

AGP Function Settings

Please refer to section 3-6-2

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.

Memory Parity Check

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

3-6-1 DRAM Timing Settings

```
                CMOS Setup Utility – Copyright(C) 1984-2001 Award Software
                              DRAM Timing Settings
┌────────────────────────────────────────────────────────────────────────────┐
│    Auto Configuration        Auto              │                             │
│    CAS Latency               3T                │         Item Help           │
│    RAS Active Time           5T                │                             │
│    RAS Precharge Time        3T                ├─────────────────────────────┤
│    RAS to CAS Delay          4T                │     Menu Level >>           │
│                                                │                             │
│                                                │                             │
│                                                │                             │
│                                                │                             │
│                                                │                             │
│                                                │                             │
├────────────────────────────────────────────────────────────────────────────┤
│       Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help   │
│     F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults        │
└────────────────────────────────────────────────────────────────────────────┘
```

3-6-2 AGP Function Settings

```
               CMOS Setup Utility – Copyright(C) 1984-2001 Award Software
                              AGP Function Settings

     AGP Transfer Mode          Auto                         Item Help
     AGP Fast Write             Disabled
     AGP Aperture Size          64MB
     AGP Aperture Write Combining Enabled          Menu Level >>
     AGP Driving Control        Auto
   X AGP Driving Value          88




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

3-7 Integrated Peripherals

```
               CMOS Setup Utility – Copyright(C) 1984-2001 Award Software
                              Integrated Peripherals

     > OnChip IDE Function        Press Enter                Item Help
     > OnChip Device Function     Press Enter
     > Onboard SuperIO Device     Press Enter
       Init Display First         PCI Slot            Menu Level >




              Move Enter:Select +/-/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
Onboard 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 VGA first. The settings are: PCI Slot, AGP Slot.

3-7-1   OnChip IDE Function

```
            CMOS Setup Utility – Copyright(C) 1984-2001 Award Software
                             OnChip IDE Function
  ┌──────────────────────────────────────────────┬────────────────────────┐
  │  Internal PCI/IDE            Both             │                        │
  │  Primary Master    PIO       Auto            │       Item Help        │
  │  Primary Slave     PIO       Auto            │                        │
  │  Secondary Master PIO        Auto            ├────────────────────────┤
  │  Secondary Slave  PIO        Auto            │                        │
  │  Primary Master    UDMA      Auto            │    Menu Level >>       │
  │  Primary Slave     UDMA      Auto            │                        │
  │  Secondary Master UDMA       Auto            │                        │
  │  Secondary Slave  UDMA       Auto            │                        │
  │  IDE Burst Mode              Enabled         │                        │
  │  IDE HDD Block Mode          Enabled         │                        │
  │  IDE Prefetch Mode           Enabled         │                        │
  │  Delay For HDD (Secs)        0               │                        │
  │                                              │                        │
  │                                              │                        │
  ├──────────────────────────────────────────────┴────────────────────────┤
  │      Move Enter:Select +/-/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) 1984-2001 Award Software
                         OnChip Device Function
┌─────────────────────────────────────────────────┬───────────────────────────┐
│  AC97 Audio Device            Enabled            │                           │
│  Game Port Address            201                │         Item Help         │
│  Midi Port Address            330                │                           │
│  Midi Port IRQ                10                 │                           │
│  AMR Modem DEVICE             Enabled            │      Menu Level >>        │
│  ETHERNET Function            Enabled            │                           │
│  ETHERNET Address ID input    Press Enter        │ ← (Only for 635CS)        │
│  Current Mac address is 003018-000001            │                           │
│  USB Controller               Enabled            │                           │
│  USB Keyboard Support         Disabled           │                           │
│                                                  │                           │
│                                                  │                           │
│                                                  │                           │
├─────────────────────────────────────────────────┴───────────────────────────┤
│       Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help    │
│         F5:Previous Values   F6:Optimized Defaults   F7:Standard Defaults      │
└──────────────────────────────────────────────────────────────────────────────┘
```

AC97 Audio 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.
AC97 **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.

ETHERNET Address ID Input *(Only for 635CS)*
This item allows you to setting the Mac address from 030018-000001 to 003018-999999.

3-7-3 Onboard SuperIO Device

```
           CMOS Setup Utility – Copyright(C) 1984-2001 Award Software
                            Onboard SuperIO Device

    Onboard FDD Controller      Enabled
    Onboard Serial Port 1       3F8/IRQ4              Item Help
    Onboard Serial Port 2       2F8/IRQ3
    UART 2 Mode                 Normal
    RxD,TxD Active              Hi,Hi           Menu Level >>
    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 +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help
          F5:Previous Values   F6:Optimized Defaults    F7:Standard Defaults
```

Onboard FDD Controller

Select Enabled if your system has a floppy disk controller (FDD) 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) 1984-2001 Award Software
                               Power Management Setup
┌──────────────────────────────────────────────────┬──────────────────────────┐
│   ACPI  Function              Enabled             │        Item Help         │
│   ACPI Suspend Type           S1(POS)             │                          │
│   Video Off Option            Always off          ├──────────────────────────┤
│   Video Off Method            V/H SYNC+Blank       │                          │
│   MODEM Use IRQ               3                    │   Menu Level >           │
│   Hot key Function As         Power Off           │                          │
│   Power Button Function       Instant-Off         │                          │
│ > PM Wake Up Events           Press Enter         │                          │
│                                                    │                          │
│                                                    │                          │
│                                                    │                          │
│                                                    │                          │
│                                                    │                          │
├──────────────────────────────────────────────────┴──────────────────────────┤
│       Move Enter:Select +/-/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 $\rightarrow$ off, All Modes $\rightarrow$ 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) 1984-2001 Award Software
                                  PM Wake Up Events
┌─────────────────────────────────────────────────────────────────────────────┐
│    IRQ [3-7,9-15],NMI              Enabled          │                        │
│    IRQ 8 Break Suspend             Disabled         │      Item Help         │
│    Ring   Power Up Control         Disabled         │                        │
│    MACPME 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 +/-/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.

MACPME Power Up Control
During Disabled, the system will ignore any incoming call from the EtherNet controller. During Enabled, the system will boot up if there's an incoming call from the EtherNet controller.

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 **P**ersonal **C**omputer **I**nterconnect, 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) 1984-2001 Award Software
                            PnP/PCI Configurations
┌──────────────────────────────────────────────────────────────────────────┐
│   Reset Configuration Data      Disabled                                   │
│                                                     Item Help              │
│                                                                            │
│   Resources Controlled By       Manual                                     │
│ > IRQ Resources                 Press Enter                                │
│                                                     Menu Level >           │
│   PCI/VGA Palette Snoop          Disabled                                  │
│   Assign IRQ For VGA             Enabled           Default is Disabled.    │
│   Assign IRQ For USB             Enabled           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             │
│                                                                            │
│        Move Enter:Select +/-/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) 1984-2001 Award Software

                                IRQ Resources
 ┌───────────────────────────────────────────────────┬─────────────────────────┐
 │  IRQ-3  assigned to          PCI Device            │                         │
 │  IRQ-4  assigned to          PCI Device            │        Item Help        │
 │  IRQ-5  assigned to          PCI Device            ├─────────────────────────┤
 │  IRQ-7  assigned to          PCI Device            │                         │
 │  IRQ-9  assigned to          PCI Device            │   Menu Level >          │
 │  IRQ-10 assigned to          PCI Device            │                         │
 │  IRQ-11 assigned to          PCI Device            │   Default is Disabled.  │
 │  IRQ-12 assigned to          PCI Device            │   Select Enabled to     │
 │  IRQ-14 assigned to          PCI Device            │   Reset Extended System │
 │  IRQ-15 assigned to          PCI Device            │   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           │
 │                                                    │                         │
 │                                                    │                         │
 ├───────────────────────────────────────────────────┴─────────────────────────┤
 │       Move Enter:Select +/-/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) 1984-2001 Award Software
                                 PC Health Status
┌─────────────────────────────────────────────────────┬──────────────────────┐
│   CPU Warning Temperature        Disabled            │      Item Help       │
│   Shutdown Temperature           Disabled            │                      │
│   Show PC Health in Post         Enabled             ├──────────────────────┤
│   Current System Temp.           28ºC/82ºF           │   Menu Level >       │
│   Current CPU Temperature        29ºC/84ºF           │                      │
│   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 +/-/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/FAN/System voltage chart and FAN Speed.

3-11 Miscellaneous Control

This section is for setting CPU Frequency Control.

```
              CMOS Setup Utility – Copyright(C) 1984-2001 Award Software
                              Miscellaneous Control
┌─────────────────────────────────────────────────────┬────────────────────────┐
│  Auto Detect DIMM/PCI Clk        Enabled             │       Item Help        │
│  Spread Spectrum                 Disabled            ├────────────────────────┤
│  CPU Host/DRAM/PCI Clock         Default             │                        │
│  CPU Clock Ratio Jumpless        By H/W              │  Menu Level >          │
│                                                      │                        │
│                                                      │  CyrixIII CPU Ratio    │
│                                                      │  Adjust                │
│                                                      │                        │
│                                                      │                        │
│                                                      │                        │
│                                                      │                        │
├──────────────────────────────────────────────────────┴───────────────────────┤
│        Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit  F1:General Help    │
│       F5:Previous Values    F6:Optimized Defaults   F7:Standard Defaults       │
└───────────────────────────────────────────────────────────────────────────────┘
```

Auto Detect DIMM/PCI Clk

This item allows you to enable/disable auto detect DIMM/PCI Clock.
The settings are: Enabled, Disabled.

CPU Host/DRAM/PCI Clock

This item allows you to set the CPU Host/DRAM/PCI Clock
The choice are: Default, 66/66/33Mhz, 66/100/33Mhz, 100/100/33MHz, 101/101/34MHz,
                103/103/34MHz, 110/110//33MHz, 112/112/34MHz, 115/115/34MHz,
                100/133/33MHz, 133/100/33MHz, 133/133/33MHz, 135/101/34MHz,
                137/103/34MHz, 140/140/35MHz.

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 10 selections:

1. AGPVXD   Install AGPVXD file when use External AGP card
2. SOUND   install AC97 Audio CODEC Installing driver
3. LAN   Install PCI Fast Ethernet driver **(Only for 635CS)**
4. PC-HEALTH   Install Winbond Hardware Doctor Monitoring Software
5. MAGIC BIOS   install BIOS Live Update Utility
6. DIRECTX8   install Microsoft DirectX 8.0 driver
7. PC-CILLIN   Install PC-CILLIN 2000 Anti-virus program
8. LANLED   install SiS 900 LAN State Utility
9. BROWSE CD   to browse the contents of the CD
10. EXIT   To exit from Magic Install menu

4-1 AGPVXD　　　Install SiS AGPVXD Driver

The AGPVXD Driver is Only For AGP Slot VGA CARD User, before install AGP card driver please install this AGPVXD driver first.

The path of the file:
for WINDOWS 9X is X:\SIS635\AGPVXD\WIN9X\SETUP.EXE
**　　(including WIN95/98/98SE/ME)**
for WINDOWS 2000 is X:\SIS635\AGPVXD\WIN2000\SETUP.EXE

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

1. Click AGPVXD when Magic Install MENU appears
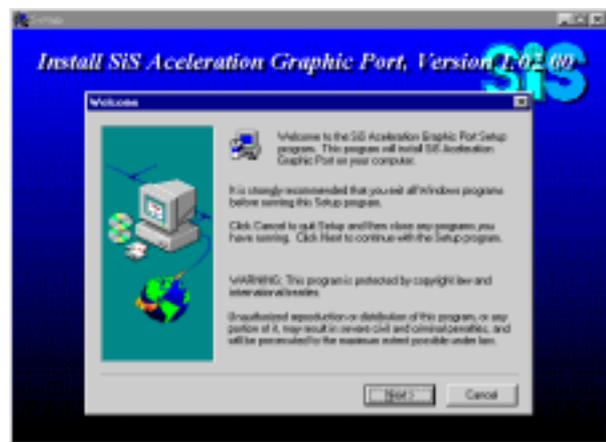
2. Click Next when SiS Aceleration Graphic Port appears
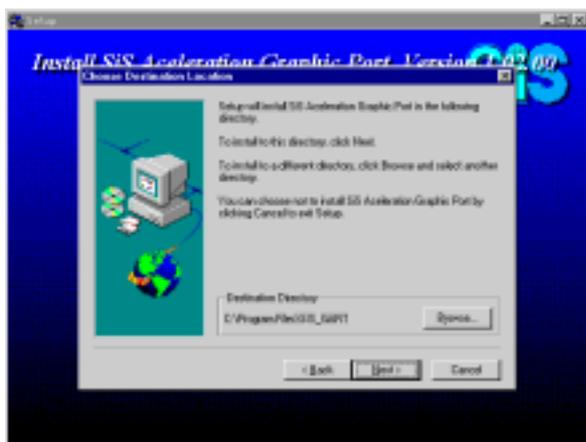
3. Click NEXT or choose BROWSE to change the path For the file to be stored
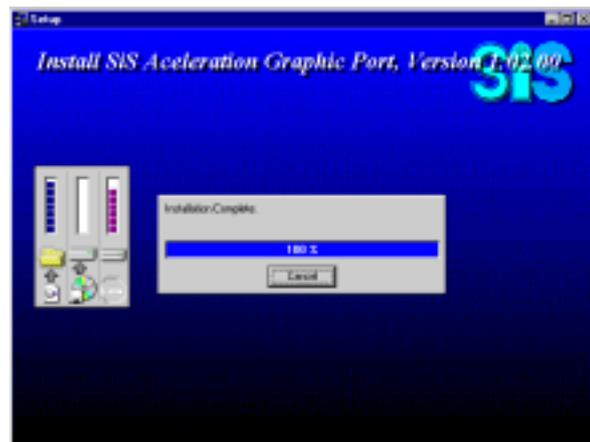
4. After Setup complete please select restart my computer now and click Finish to complete setup

4-2 SOUND AC97 sound driver and the program install for editing/playback
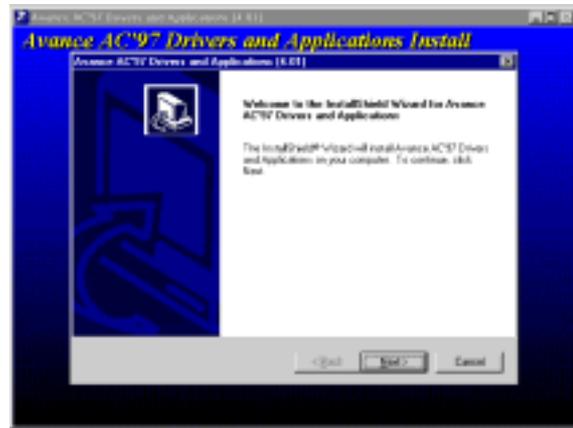
1. Click SOUND when MAGIC INSTALL MENU appears

2. Then auto detect operation system language edition, click OK, start to install DRIVER
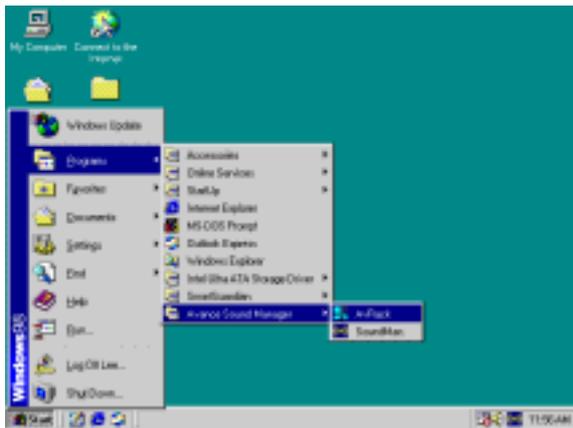
3. When ask Remove old device driver, Click OK

4. Click Finish and Restart Windows
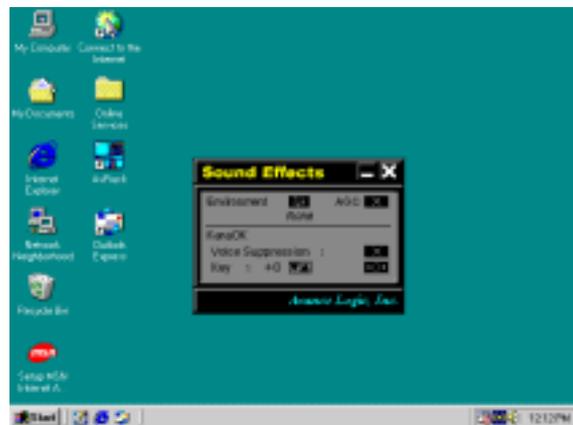
NOTE: **MAGIC INSTALL will auto detect file path:**
X:\SIS635\SOUND\SETUP.EXE (for WINDOWS 95/98/98SE/ME/NT4.0/2000)

4-3 LAN (Only for 635CS) Install SiS 900 PCI Fast Ethernet Driver

The path of the file:
for WINDOWS 9X/2000 is X:\SIS635\LANDRV\SETUP.EXE
(Including WINDOWS 95/98/98SE/98ME/2000)
for WINDOWS NT4.0 is X:\SIS635\LANDRV\NT40

WINDOWS 95/98/98SE/98ME/2000 Setup

1. Click LAN when Magic Install Menu appears

2. Click NEXT when SiS PCI LAN Driver Setup appears

3. Choice restart my computer now to finish setting up LAN Card, click Finish to complete setup

4. After restart computer you can check in control Panel\System Device Manager\ Network adapters to make sure LAN card Driver setup completely Click NEXT when SiS PCI LAN Driver Setup appears

4-4 PC-HEALTH Winbond Hardware Doctor Monitoring Software

The path of the file is X:\SIS635\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　MAGIC BIOS　Install BIOS Live Update Utility
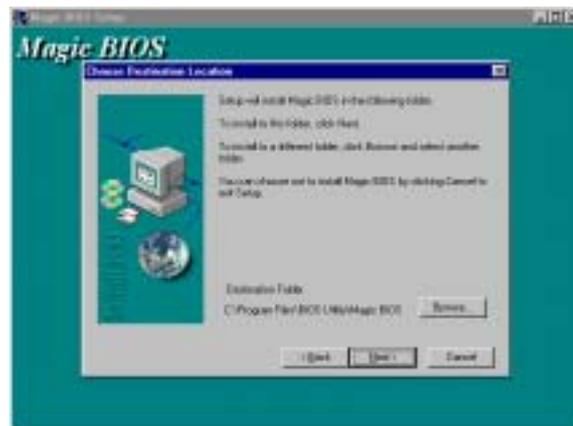
1. Click Magic BIOS when Magic Install MENU appears

2. Click Next to install the Magic BIOS in Destination Folder
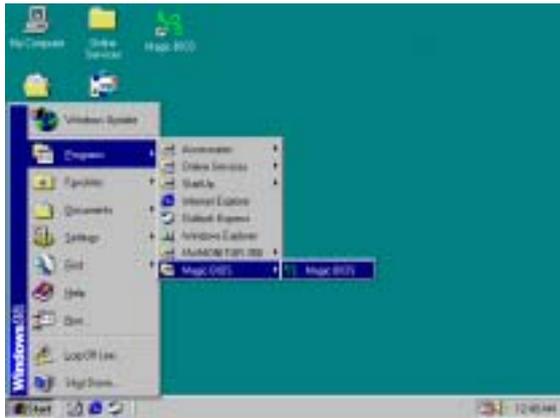
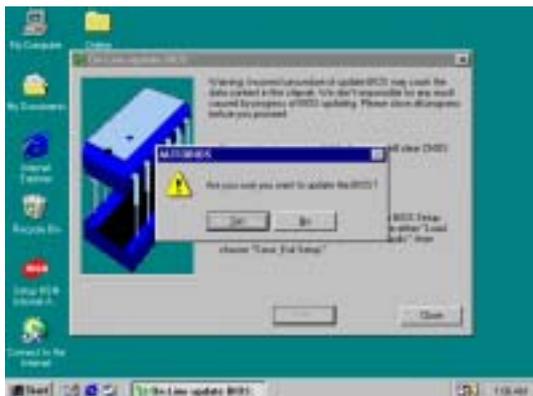3. After finish Setup you will have a Magic BIOS icon in your screen

4. Double click the Magic BIOS icon you will have this picture, choose from internet you can upgrade BIOS On-line
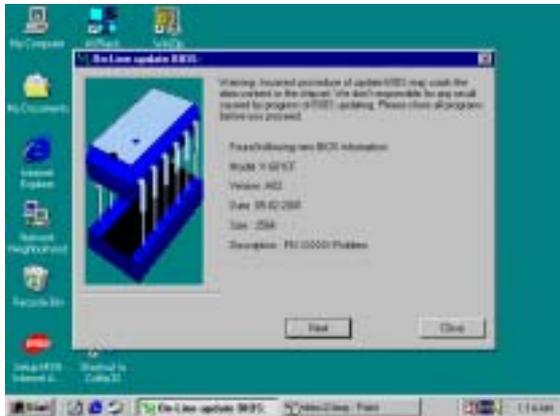
5. When On-line update BIOS the program will auto-check your BIOS version
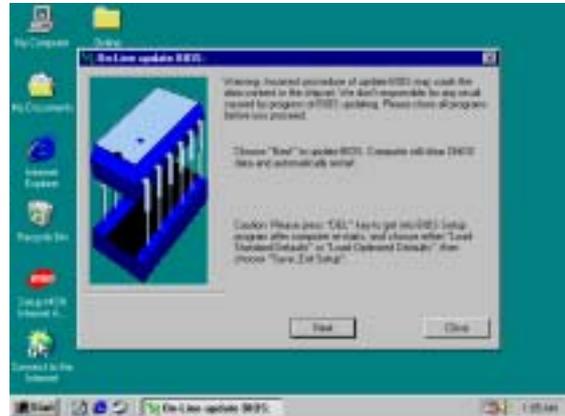
6. Click Next if you need update BIOS, after upgrade BIOS, the system will clear CMOS and automatically restart

7. Click Yes if you want to update the BIOS otherwise choose No to exit

8. When System programming BIOS don't turn off power, after finish update BIOS, the system will clear CMOS and automatically Restart

9. When choose From Local Driver to update BIOS, you must have the correct BIOS file in your Local Driver

10. Choose the correct BIOS file to update BIOS

# 4-6 PC-CILLIN Install PC-CILLIN 2000 Anti-virus 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
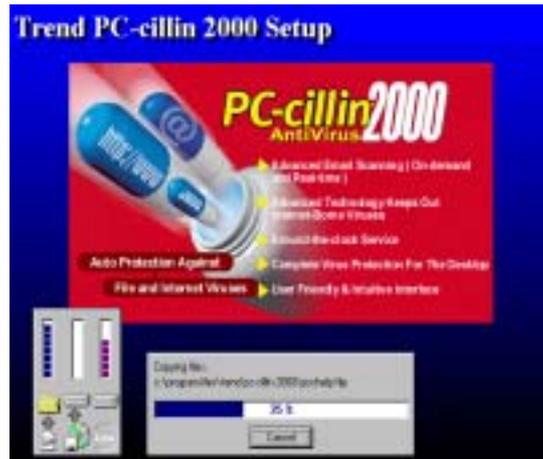
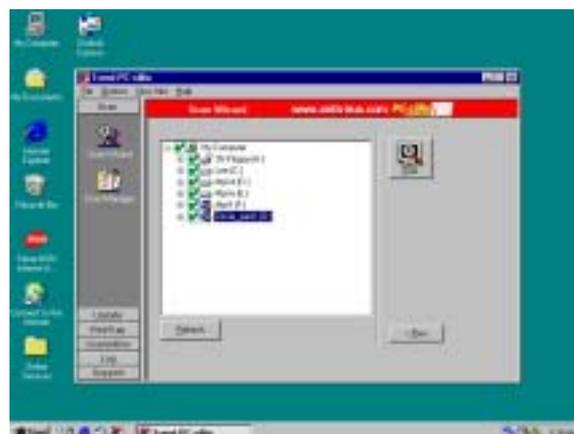6. Click NEXT when Start Copy Files, Start to install the software

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

4-7　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.

4-8　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 635CS/635CN from our web site to your boot disc.

STEP 4. Insert your boot disc into A:,

start the computer, type "Awdflash A:\635CSxxx.BIN /SN/PY/CC/R"

635CSxxx.BIN is the file name of latest BIOS it can be 635CSA03.BIN or 635CSB02.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