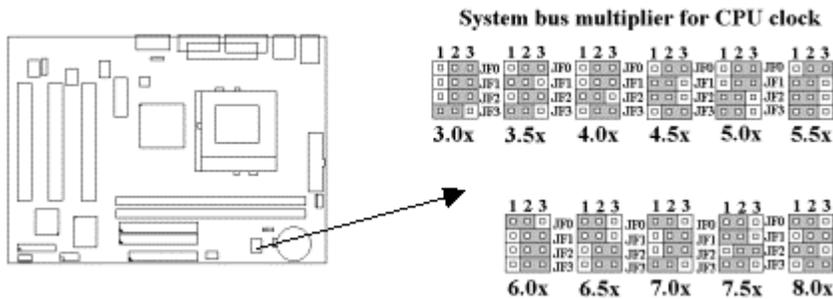


S630MA Quick Installation Chart

For your convenience, this chart lists all the CPUs supported by S630MA and their corresponding jumper setting.

*** The Ratio of some latest CPUs are fixed by Intel, such as Celeron/ Celeron-II/ Pentium-III 366, 400, 566... etc. **You can ignore the four jumpers if you have this CPU on board and it will be auto detected by motherboard.** Please check with the CPU manufacturer or vendor for the CPU Ratio information.

Ratio	JF0	JF1	JF2	JF3
3.0x	2-3	2-3	2-3	1-2
3.5x	2-3	1-2	2-3	1-2
4.0x	2-3	2-3	1-2	2-3
4.5x	2-3	1-2	1-2	2-3
5.0x	2-3	2-3	1-2	1-2
5.5x	2-3	1-2	1-2	1-2
6.0x	1-2	2-3	2-3	2-3
6.5x	1-2	1-2	2-3	2-3
7.0x	1-2	2-3	2-3	1-2
7.5x	1-2	1-2	2-3	1-2
8.0x	1-2	2-3	1-2	2-3



S630MA

Motherboard User's Manual

Product Name: S630MA

Manual Revision: English, 1.0

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Chapter 1. Introduction

1.1 Product Overview

Thank you for purchasing the **S630MA** motherboard. This motherboard uses **SiS 630E** Host Interface Controller, 2D/3D Ultra-AGP with super south single chipset. We have conducted a motherboard compatibility test with a variety of hardware and software, such as CPUs, memory, display cards, CD ROMs, Novell, MS Officeetc and compliance with Year 2000.

We have set high standards on our quality control, with absolute confidence, we believe this product is the wisest choice.

This manual is composed of four sections. The first section is the introduction of this motherboard, and the second section explains the proper procedure to setup the motherboard, the third section provides information on how to setup the CMOS. The last section is the installation of the device drivers & utilities.

1.2 Features

- Support Ultra DMA 66.
- Modem Remote Ring On.
- Support NCR SCSI BIOS.
- Support Hardware Monitor function.
- Support 66/100/133MHz FSB frequency.
- ADI AD1881A Audio CODEC on board
- Support Advanced Configuration Power Interface (ACPI).
- Support Desktop Management Interface (DMI) through BIOS.
- Integrated 2D/3D graphics accelerator with AGP 4X performance.
- RTC Wake up Alarm: Program the date/time to wake up your system.
- Integrated Fast Ethernet Controller with 10/100Mbps and wake up on LAN.
- Both the BIOS and hardware levels of the motherboard meet PC '99 compliant.

1.3 Specifications

CPU :

- Supports Intel Socket 370 Celeron or Pentium III Processor in the **Plastic Pin Grid Array (PPGA)** or Flip-Chip PGA package with 66/100/133MHz Front Side Bus.

Chipset :

- SiS 630E

VGA :

- Integrates the UltraAGP technology and advanced 128-bit graphic display interface.
- AGP v2.0 compliant. Delivers AGP 4x performance and up to 2 GB/s memory bandwidth.
- Integrated 24-bit 270MHz RAMDAC graphics controller.

- Full 2D/3D/DirectX acceleration.
- Supports hardware DVD Accelerator.
- Shared System Memory Area up to 64MB.

LAN :

- Integrated 10/100Mb Fast Ethernet Controller.
- Full Duplex and Half Duplex Mode for both 10 and 100 Mbps.
- Plug and Play Compatible.
- High performance 32bit PCI Bus Master Architecture with integrated direct memory.
- IEEE 802.3 and 802.3u standard compatible.
- IEEE 802.3u auto negotiation and parallel detection for automatic speed selection.
- Power down of 10base-T/100base-Tx sections when not in use.

DIMM :

- Supports 3.3V PC100/133-compliant SDRAM in 2 168-pin banks, each bank consists of 1x168-pin 64-bit DIMM socket, which can support memory sizes of 16/32/64/128/256/512 MB modules.
- System memory Size up to 1GB.

ATX Power :

- Supports Modem remote Ring-On function
- Supports software power off function
- Supports RTC Wake-Up.
- Supports Wake up on LAN.

IDE :

- Dual channel PIO and PCI Bus Master IDE ports support up to 4 EIDE devices for HDD or CD-ROM.
- Supports PIO Mode 4.
- Supports Multiword DMA Mode 0, 1, 2.
- Supports Ultra DMA 33/66 with data transfer rate up to 33/66 MB/Sec.

BIOS :

- 2Mbits Award BIOS v6.00PG with built-in Anti-Virus, DMI, ACPI support, and green function (Plug-and-Play BIOS)
- Supports CD-ROM/HD/SCSI/Floppy/LS120/ZIP and LAN boot up
- Supports NCR SCSI BIOS.

I/O Devices :

- One FDD control port supports two of the 5.25" or 3.5" floppy drives up to 2.88 MB.
- Two high-speed 16550 UART compatible serial ports
- One parallel ports with ECP/ EPP compatibility.
- One PS/2 mouse port
- One PS/2 Keyboard connector

USB Ports :

- Five Universal Serial Bus (USB) ports support up to 127 peripheral devices. (Cable optional)
- Delivers better connectivity and 2*12Mb bandwidth

Sound :

- ADI AD1881A Audio Codec
- AC '97 Rev 2.1 compliant
- 16-bit Stereo Full-Duplex Codex
- High quality Sample Rate Conversion (SRC) from 7kHz to 48kHz in 1Hz increments
- Phat Stereo 3D Stereo Enhancement

- Audio Amp Power Down Signal
- Extended 6-bit Master Volume Control
- DSP 16-bit Serial Port Format, Slot 16 Mode
- Split Power Supplies (3.3V Digital / 5V Analog)

IR Port :

- One IrDA/ASKIR compatible Infrared interface port. (Cable optional)

Expansion Slots:

- Three 32-bit PCI expansion slots
- One Audio Modem Riser (AMR) slot

Operating System :

- Supports Windows 3.x/95/98/2000, Windows NT, MS-DOS V6.22, OS/2, Novell, Unix, SCO UNIX.....

Dimension :

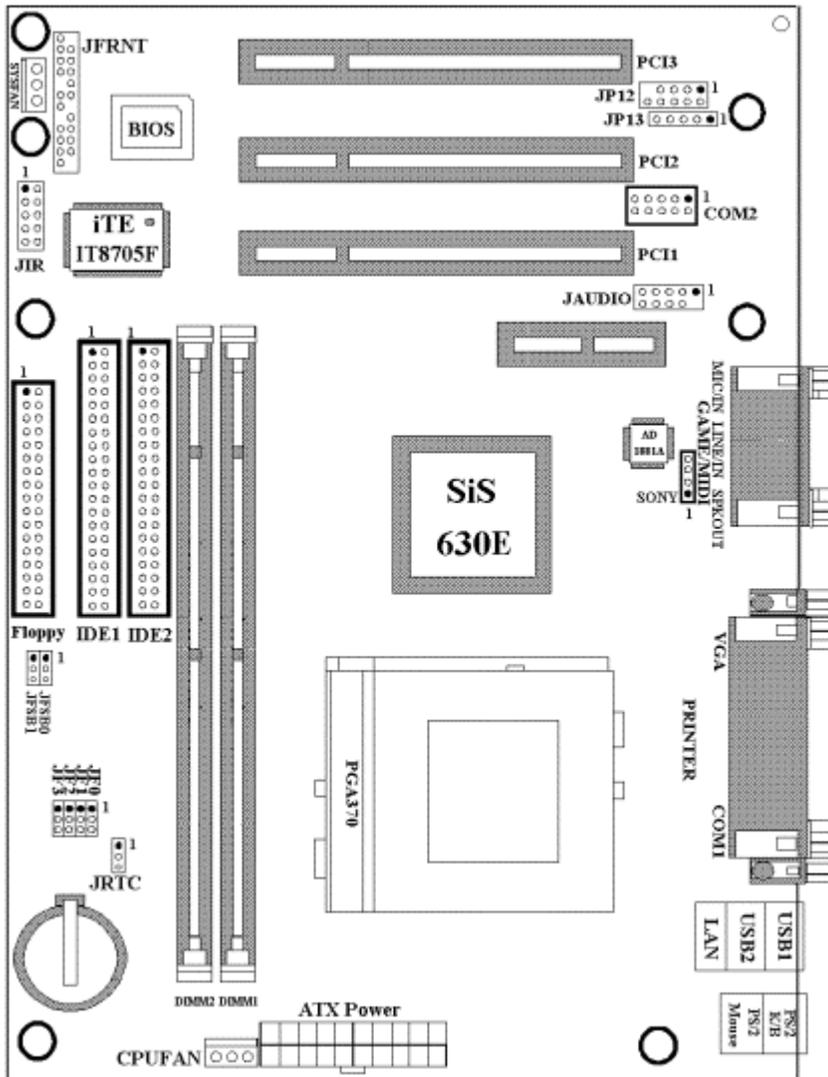
- 234 mm x 170 mm Micro ATX form factor

1.4 Content

The motherboard box contains the following items:

- One Motherboard
- One IDE Ribbon Cable
- One Floppy Ribbon Cable
- One Serial Ribbon Cable
- One Driver CD
- User's Manual & Quick Installation Chart

1.5 MotherBoard Layout



Chapter 2. Hardware Setup

2.1 Installation Procedure

1. Jumper settings
2. Installation of CPU
3. Installation of Memory
4. I/O Connections & Panel Connections

2.1.1 Jumper Settings

In this manual, **(1-2)** represents the first and second pins of the jumper. **(2-3)** represents the second and third pins of the jumper. On the motherboard, you will see two sets of jumpers with different color jumper caps:

Yellow Jumper Caps : Sets the Function of Flash CMOS JRTC

Green Jumper Caps : Sets the type and speed of CPU JF0, JF1, JF2, JF3

Red Jumper Caps : Sets the FSB frequency of CPU JFSB0, JFSB1

WARNING:

- Electronic parts are Static sensitive. To prevent damage to the computer and its parts please take the following measures.
- Work on a surface such as concrete, linoleum or hard wood floor.

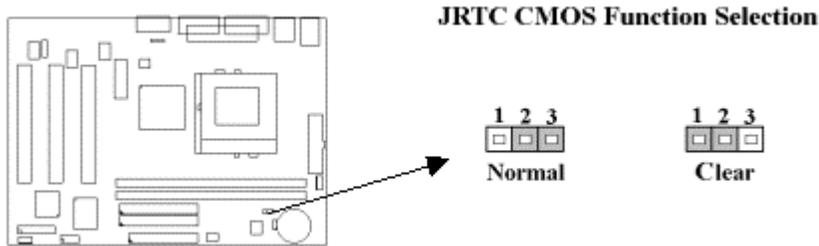
- Ground your self with either a properly installed grounding strap or by touching a major electrical appliance long enough to discharge the static.

2.1.2 Clearing the CMOS (Yellow Jumper Cap)

JRTC: CMOS Function Selection

1-2 : Clear data

2-3 : Normal Operation (Default Setting)

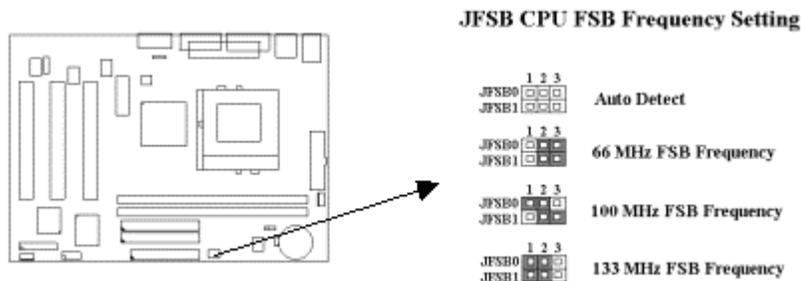


How to Clear the CMOS Setting

1. Turn off the power.
2. Remove ATX power cable from power connector.
3. Remove Yellow Jumper Cap from JRTC (2-3) and put on JRTC (1-2) to remove the CMOS setting.
4. Remove Yellow Jumper Cap from JRTC (1-2) and put on JRTC (2-3).
5. Connect ATX power cable back to power connector.
6. Turn on the power.
7. While the system reboots, press key to set the BIOS setup.

2.1.3 CPU FSB Frequency Setting (Red Jumper Caps)

The JFSB jumper provides FSB frequency settings for the CPU. Auto Detect, 66MHz, 100MHz or 133MHz FSB frequency can be selected with this jumper. The over specification operation is not recommended.



2.1.4 CPU Voltage Setting

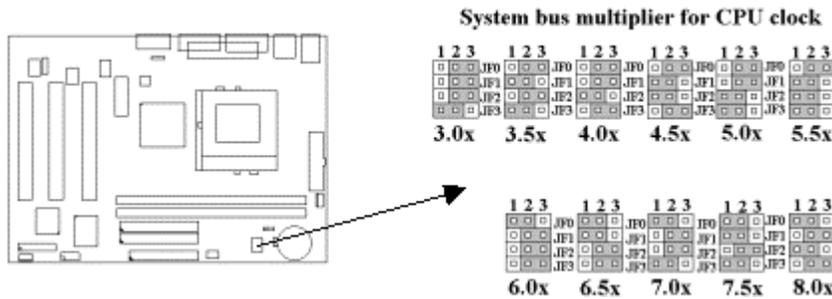
The motherboard supports CPU VID function, the CPU core voltage is automatically detected, the range is from 1.3V to 3.5V for Pentium III CPU and. the range is from 1.3V to 2.0V for Celeron & Socket 370 CPU.

2.1.5 CPU Frequency Selection (Green Jumper Caps)

Ratio	JF0	JF1	JF2	JF3
3.0x	2-3	2-3	2-3	1-2
3.5x	2-3	1-2	2-3	1-2
4.0x	2-3	2-3	1-2	2-3
4.5x	2-3	1-2	1-2	2-3
5.0x	2-3	2-3	1-2	1-2

5.5x	2-3	1-2	1-2	1-2
6.0x	1-2	2-3	2-3	2-3
6.5x	1-2	1-2	2-3	2-3
7.0x	1-2	2-3	2-3	1-2
7.5x	1-2	1-2	2-3	1-2
8.0x	1-2	2-3	1-2	2-3

The Ratio of some latest CPUs are fixed by Intel, such as Celeron/ Celeron-II/ Pentium-III 366, 400, 566... etc. **You can ignore the four jumpers if you have this CPU on board and it will be auto detected by motherboard.** Please check with the CPU manufacturer or vendor for the CPU Ratio information.



2.2 Installation of CPU

Before installing CPU, make sure the power is off. Locate the level bar on the PGA370 ZIF socket. Push level bar away from the socket and pull upward 90 degrees. Insert the CPU into the socket. Make sure the notch of the CPU corresponds with the white dot on the ZIF socket (the corner without pin socket). Do not push in the CPU. Make sure all pins are aligned with the CPU socket. ON the level bar.

2.3 Installation of Memory

This motherboard has 2x168-pin 64-bit Dual Inline Memory Module (DIMM) sockets divided into 2 banks. You can install 3.3V Unbuffered PC100/133-compliant Synchronous DRAM (SDRAM) memory.

Some DIMM memory have SPD (Serial Presence Detect) 8-pin IC on module. It is not recommended the SPD (Serial Presence Detect) DIMM blends and non-SPD DIMM.

2.3.1 Installation of 168-pin DIMM (Dual Inline Memory Module)

1. Before inserting the DIMM, make sure the pin1 of the DIMM matches with the pin1 on the DIMM socket.
2. Insert DIMM into the DIMM sockets at a 90-degree angle and press down.

2.3.2 Removal of 168-pin DIMM

1. Press the holding clips on both sides of the socket outward to release the DIMM.
2. Gently pull the DIMM out of the socket.

2.3.3 Memory Configuration

There is no jumper setting required for the memory size or type. It is automatically detected by the system BIOS, and the total memory size is to add them together.

<i>DIMM Socket</i>	<i>DIMM Modules</i>
DIMM1	PC100/133 SDRAM 16, 32, 64, 128, 256, 512MB
DIMM2	PC100/133 SDRAM 16, 32, 64, 128, 256, 512MB

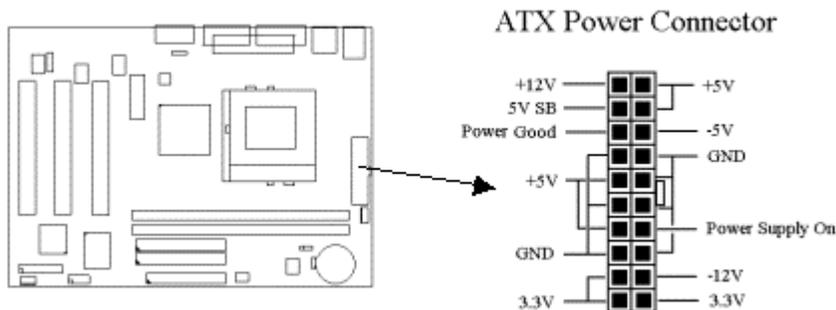
2.4 I/O Connections/Panel Connections

I/O Connections

ATXPWR	ATX Power Connector
CPUFAN	CPU fan connector
SYSFAN	Chassis fan connector
JIR	Infrared Connector (Cable optional)
FLOPPY	Floppy Disk Drive Connector
IDE1, 2	Primary/ Secondary IDE Connectors
MS	PS/2 Mouse Port
KB	PS/2 Keyboard Connector
VGA	VGA output Connector
COM1,COM2	Serial Ports 1 & 2
LPT	Printer Port
USB	USB Connector
LAN	LAN Connector
GP1	Game/MIDI Connectors
LINE_OUT	Line out Connector
LINE_IN	Line in Connector
MIC	Microphone in Connector
SONY	The Connector for IDE/Sony CD-ROM audio in

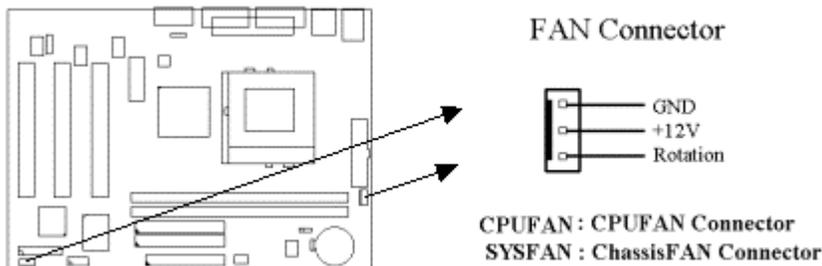
2.4.1 ATX Power Connector (20-pin ATXPWR)

Make sure that the power supply is off before connecting or disconnecting the power cable.



2.4.2 CPU, Chassis Fan Connector (3-pin CPUFAN, SYSFAN)

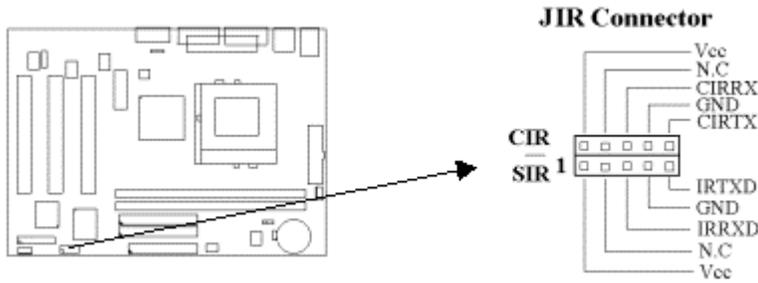
Connect the fan's plug to the board taking into consideration the polarity of the connector.



2.4.3 Infrared Connector (10-pin JIR)

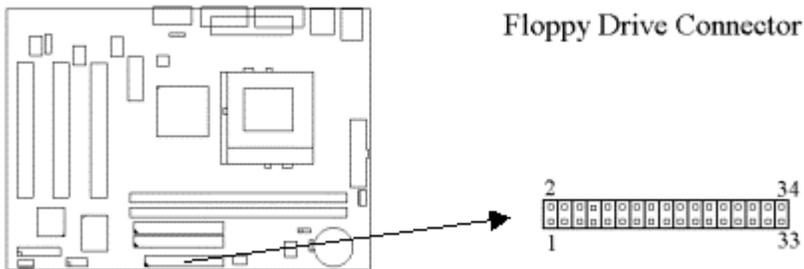
This connector supports the optional wireless transmitting and receiving infrared module, with this module and application software such as Laplink or Win95 Direct Cable Connection, user can transfer files to or from their laptops, notebooks, PDA, PCs and printers. The connector supports IrDA (115.2Kbps, 2 meters) and ASK-IR (56Kbps). An optional consumer infrared (CIR) set connects to the CIR and SIR connectors simultaneously for both wireless transmitting and remote control functions through one external infrared module. Install infrared

module onto Infrared connector and configure the setting through "UART Mode Select" in **Integrated Peripherals** to select whether UART is directed for use with COM2 or Infrared.



2.4.4 Floppy Disk Drive Connector (34-pin FLOPPY)

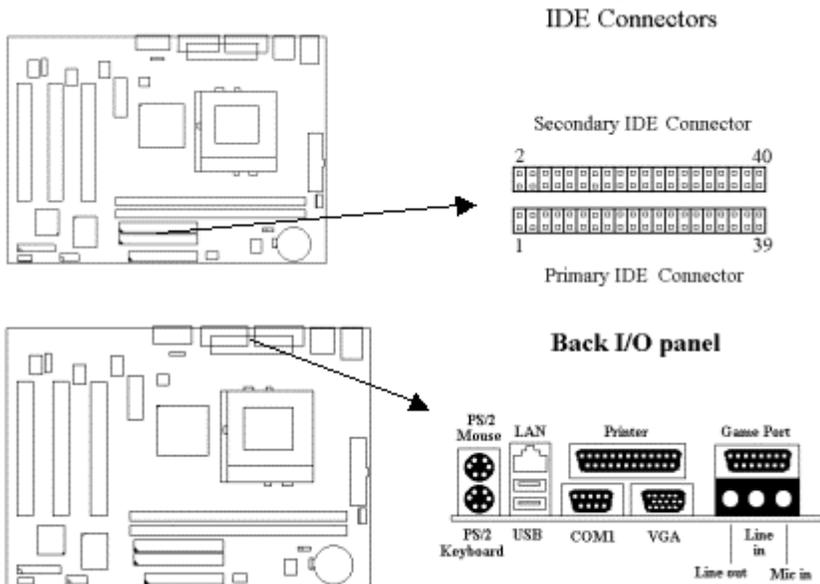
This connector supports the provided floppy disk drive ribbon cable. Orient the red stripe to pin 1



2.4.5 Primary/Secondary IDE Connector (Two 40-pin IDE)

These connectors support the provided IDE hard disk ribbon cable. Connect your first IDE hard disk to master mode of the primary channel. If you have second IDE device to install in your system, connect it as slave mode on the same channel, and the third and fourth device can be connected on secondary channel as master and slave mode respectively.

There are three connectors on the 80-pin IDE ribbon cable. **The blue connector must connect with motherboard's IDE connector** and the other connectors must connect with HDD. In order to get the better performance the Ultra DMA 66 HDD must connect with 80-pin IDE ribbon cable.



2.4.6 PS/2 Mouse Port (6-pin Mini-Din MS)

The system will direct IRQ12 to the PS/2 mouse.

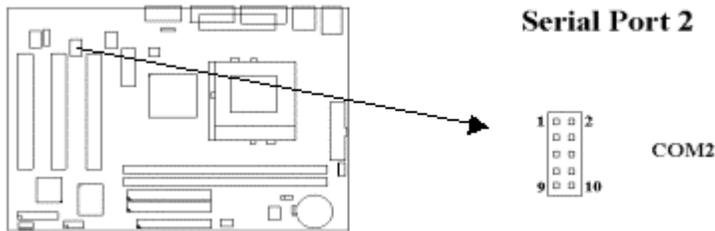
2.4.7 PS/2 Keyboard Connector (6-pin Mini-Din KB)

This connection is for a standard keyboard using a PS/2 plug. You may use a Din to Mini-Din adapter on standard AT keyboards.

2.4.8 VGA Output Connector (15-pin female)

This connector is for output to a VGA-compatible device.

2.4.9 Serial Port (9-pin D-type COM1 & 10-pin COM2)



2.4.10 LAN Connector

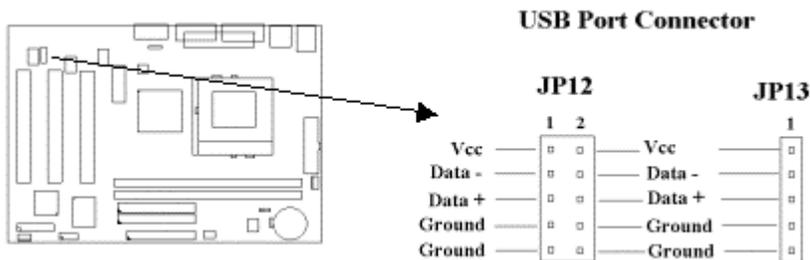
The LAN Connector is used to attach RJ-45 cable. For 100Base-TX, your network cable must be category 5, twisted-pair wiring with RJ-45 connectors. If you plan on running the adapter at 100Mbps, it must be connected to a 100Base-TX hub. For 10Base-T, use category 3, 4 or 5 twisted-pair wiring.

2.4.11 Printer Port (25-pin D-type PRINTER)

You can enable the parallel port and choose the IRQ through the "Onboard Parallel Port" setting in Integrated Peripherals of the CMOS SETUP UTILITY.

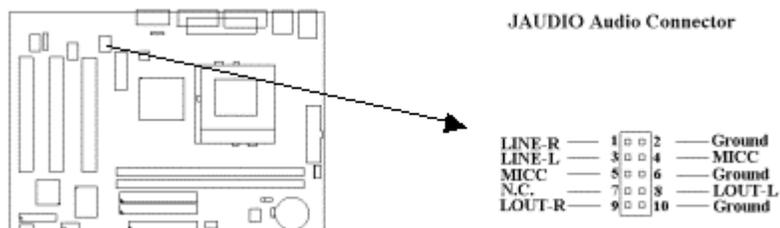
2.4.12 USB Connectors (4-pin USB & 5-pin JP12, JP13)

S630MA provides five USB ports. You can attach USB devices to the USB connector.



2.4.13 Game/MIDI/Line Out/Line In/Microphone In Connector (optional)

The connector is same as audio port of the back I/O panel. The cable is optional.



2.4.14 Line Out Connector

The Line Out phonejack provides the audio outputs for the left and right stereo channels.

2.4.15 Line In Connector

The Line In phonejack is used to attach monaural or stereo devices such as a cassette, Digital Audio Tape, or Minidisc players for playback, mixing, or recording.

2.4.16 Microphone In Connector

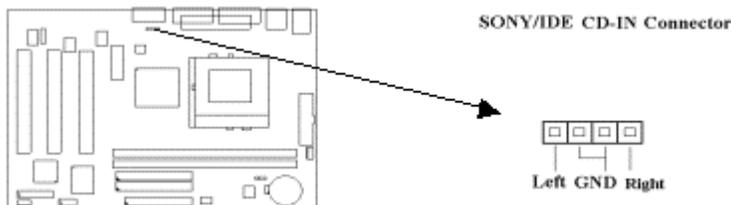
The Microphone In phonejack is used to attach a monaural microphone for live audio input for playback, mixing, or recording.

2.4.17 Game/MIDI Port

The Game/MIDI Port connector is used to attach a joystick for game interaction or to attach an external MIDI device for playback, mixing, or recording.

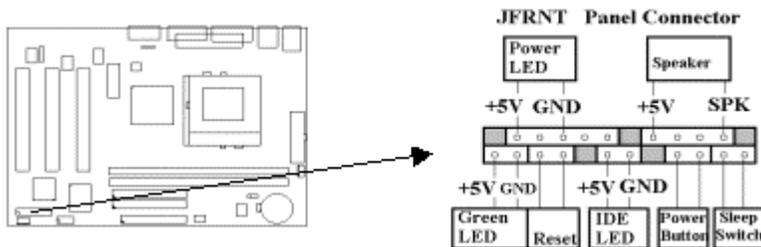
2.4.18 ATAPI IDE/Sony CD-ROM Audio (4-pin SONY)

The ATAPI IDE/Sony CD-ROM Audio connector is used to connect the audio cable from either an ATAPI IDE or Sony CD-ROM drive for playback, mixing, and recording.



2.4.19 Panel Connection (24-pin JFRNT)

WARNING: To avoid the system from failing, turn off the power before connecting any devices to the system.



Chapter 3. BIOS Setup

3.1 CMOS Setup Utility

To activate CMOS Setup, press key immediately after you turn on the system. The following message "Press DEL to enter SETUP" should appear in the lower left hand corner of your screen. When you enter the CMOS Setup Utility, the Main Menu will be displayed (**Figure 3-1**). You can use arrow keys to select your function, press <Enter> key to accept the selection and enter the sub-menu.

Figure 3-1. CMOS Setup Utility Main Screen
CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software

To assign the system time, the format is "hh:mm:ss". The setting is in military time. When entering 2:34pm enter "14:34:00".

3.2.3 Hard Disks Setting

The BIOS supports Dual-Channel PIO and PCI Bus Master IDE ports. Each port supports one master and one slave hard drive. You can use <Enter> or <PageUp> or <PageDown> key to change hard drive type. Incorrect setting may result in boot up error or system hang.

If your hard disk drive is not listed, you can select "Manual" mode to define your own drive manually. We recommend that you select Type "AUTO" for all drives. The BIOS will auto-detect the hard disk drive and CD-ROM drive at the POST stage.

If your hard disk drive is a SCSI device, please select "None" for your hard drive setting.

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

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master	Auto	Menu Level >>
Access Mode	Auto	To auto-detect the
Capacity	8606 MB	HDD's size, head... on
Cylinder	16676	This channel
Head	16	
Precomp	0	
Landing Zone	16675	
Sector	63	

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

3.2.4 Floppy Drives A&B Setting

Select your floppy disk drive type. Options are 360KB (5.25"), 720KB (3.5"), 1.2MB (5.25"), 1.44MB (3.5"), 2.88MB (3.5").

3.2.5 Floppy 3 Mode Support

This is required to support older Japanese floppy drives. Floppy 3 Mode support will allow reading and writing of 1.2MB (as opposed to 1.44MB) on a 3.5-inch diskette.

3.2.6 Video Display Adapter Setting

Select the display adapter type for your system. Options are EGA/VGA, MONO, CGA40 and CGA80.

3.2.7 Halt On

This function allows the system to halt when an error is detected during Power-On Self-Test.

3.3 Advanced BIOS Features Setup

The sub-menu (**Figure 3-3**) includes all AWARD enhanced functions. The correct setting can enhance boot up efficiency. You can assign system speed, setup sequence, typematic and system password setting. You can enter <F1> key for help on highlighted topics. If you want to restore values before the changes you just made, press <F5> key. If you want to restore default value, press <F6> or <F7> key.

Figure 3-3. Advanced BIOS Features Screen
 CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software
 Advanced BIOS Features

Virus Warning	Disabled	Item	Help
CPU Internal Cache	Enabled		
External Cache	Enabled		
CPU L2 Cache ECC Checking	Enabled	Menu	Level >
Processor Number Feature	Disabled		
Quick Power On Self Test	Enabled		
First Boot Device	IDE-0		
Second Boot Device	Floppy		
Third Boot Device	SCSI		
Fourth Boot Device	Disabled		
Swap Floppy Drive	Disabled		
Boot Up Floppy Seek	Disabled		
Boot Up NumLock Status	On		
Gate A20 Option	Fast		
Typematic Rate Setting	Disabled		
X Typematic Rate (Chars/Sec)	6		
X Typematic Delay (Msec)	250		
Security Option	Setup		
OS Select For DRAM > 64MB	Non-OS2		
HDD S.M.A.R.T. Capability	Disabled		
Report No FDD For WIN 95	Yes		
Video BIOS Shadow	Enabled		

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

(Scroll down to see more items , as shown here)

3.3.1 Virus Warning

When enabled, the BIOS will monitor the boot sector and the partition table on the hard drive for any attempt to modify. If an attempt is detected, the BIOS will halt the system and prompt the warning message. Select "Disabled" if you are installing a new operating system.

3.3.2 CPU Internal/External Cache

These options are to enable or disable CPU Internal (L1) Cache, or External (L2) Cache.

3.3.3 CPU L2 Cache ECC Checking

Select "Enabled" to enable CPU L2 Cache ECC Checking.
 Select "Disabled" to disable CPU L2 Cache ECC Checking.

3.3.4 Processor Number Feature

This field will appear only when you are using a Pentium III processor. Each Pentium III processor comes with an individual "processor serial number" which by default is activated. Therefore, when connected to the internet, Pentium III processor transmits the serial number online making it possible to track your online activity. The field provides you the option of disabling this function.

3.3.5 Quick Power On Self Test

Select "Enabled" to speed up time required to complete Power-On Self-Test.

3.3.6 First/Second/Third Boot Device & Boot Other Device

This option allows user to assign boot sequence of the system. Available options are Floppy, HDD, CD-ROM, SCSI, LAN and LS120/ZIP. Set " Boot Other Device" to Enabled if you wish to boot from another

device.

3.3.7 Swap Floppy Drive

When enabled, physical drive A will be assigned to logical drive B, and physical drive B will be assigned to logical drive A.

3.3.8 Boot Up Floppy Seek

The system will detect and verify operation of the floppy drive type.

3.3.9 Boot Up Numlock Status

The option allows the <NumLock> key to be activated after system boot up.

3.3.10 Gate A20 Option

This entry allows you to select how the gate A20 is handled. The gate A20 is a device used to address memory above 1 Mbytes. Initially, the gate A20 was handled via a pin on the keyboard (Normal). Today, while keyboards still provide this support, it is more common, and much faster, for the system chipset (Fast; default) to provide support for gate A20.

3.3.11 Typematic Rate Setting

Select "Enabled" to configure "Typematic Rate" and "Typematic Delay" functions.

3.3.12 Typematic Rate

Use this option to set the rate at which a character keeps repeating while you hold down a key.

3.3.13 Typematic Delay

Select "Enabled" to set the length of delay before key strokes to repeat. Available options are "250", "500", "750", and "1000".

3.3.14 Security Option

You can select whether the password is required every time the system boots or only when you enter the Setup. You can assign "Set Password" in the main CMOS Setup Utility Screen.

3.3.15 OS Select for DRAM > 64MB

If you are using OS/2 operating system and installed memory is larger than 64MB. You need to have the setting in the enable mode.

3.3.16 HDD S.M.A.R.T. Capability

The item allows you to set HDD S.M.A.R.T. Capability function. Configuration options: Enabled and Disabled.

3.3.17 Report No FDD For WIN 95

While the FDD in "STANDARD CMOS SETUP" is set to NONE, set this option to No to release IRQ6 for passing Win95 logo. This option is irrelevant under normal operation.

3.3.18 Video BIOS Shadow

Video shadow copies BIOS code from slower ROM to faster RAM. BIOS can then execute from RAM.

3.4 Advanced Chipset Features Setup

These settings are intended for the Advanced Chipset function on the motherboard. Fine tuning these options, enhances the performance of the system.

Figure 3.4 Advanced Chipset Features Screen
 CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software
 Advanced Chipset Features

		Item Help
> Advanced DRAM Control 1	Press Enter	
> Advanced DRAM Control 2	Press Enter	Menu Level >
System BIOS Cacheable	Enabled	
Video RAM Cacheable	Enabled	
Memory Hole At 15M-16M	Disabled	
AGP Aperture Size	64MB	
Graphic Window WR Combin	Enabled	
Concurrent function (MEM)	Enabled	
Concurrent function (PCI)	Enabled	
PCI Delay Transaction	Enabled	
Memory Parity Check	Disabled	

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

3.4.1 Advanced DRAM Control 1

CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software
 Advanced DRAM Control 1

		Item Help
Auto Configuration	Auto	
SDRAM RAS Active Time	6T	Menu Level >
SDRAM RAS Precharg Time	3T	
RAS to CAS Delay	3T	
Dram Background Command	Delay 1T	
LD-off Dram RD/WR Cycles	Delay 1T	
Write Recovery Time	1T	
VCM REF To ACT/REF Delay	9T	
VCM ACCT - ACT/REF Delay	8T	
Early CKE Delay 1T Cntrl	Normal	
Early CKE Delay Adjust	1ns	

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

3.4.2 Auto Configuration

Auto Configuration installs preset default values for some of the timing parameters for RAM memory. We recommend that you leave these items at the default value Auto.

3.4.3 SDRAM RAS Precharge Time

The RAS Recharge means the timing to inactive RAS and the timing for DRAM to do Recharge before next RAS can be issued.

3.4.4 RAS to CAS Delay

These are timing of SDRAM CAS Latency and RAS to CAS Delay, calculated by clocks. They are important parameters affects SDRAM performance.

3.4.5 The other items in Advanced DRAM Control 1

These items set the timing and wait states for SDRAM memory. We recommend that you leave these items at the default value.

3.4.6 Advanced DRAM Control 2

CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software
Advanced DRAM Control 2

Mem Command Output Time	Delay 1T	Item Help
SDRAM/VCM CAS Latency	SPD	Menu Level >
SDRCLK Control	+2.0 ns	
SDWCLK Control CS#/CKE	+2.0 ns	
SDWCLK Control MA/SRAS	+2.0 ns	
SDWCLK Control DQM/MD	-0.5 ns	
EGMRCLK Control	+3.0 ns	
EGMWCLK Control	+3.0 ns	
AGTL Pull Up Control	Enabled	
AGTL Feed Back Control	Enabled	

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

3.4.7 SDRAM/VCM CAS Latency

This controls the latency between the SDRAM read command and the time that the data actually becomes available.

3.4.8 The other items in Advanced DRAM Control 2

These items set timing parameters for the CPU access. We recommend that you leave these items at the default value.

3.4.9 System BIOS Cacheable

Allows the system BIOS to be cached for faster system performance.

3.4.10 Video RAM Cacheable

This item lets you cache Video RAM A000 and B000.

3.4.11 Memory Hole At 15M-16M

Enabling this feature reserves 15MB to 16MB memory address space to ISA expansion cards that specifically require this setting. This makes the memory from 15MB and up unavailable to the system. Expansion cards can only access memory up to 16MB.

3.4.12 AGP Aperture Size (MB)

Choose 4, 8, 16, 32, 64, 128, 256MB. Memory-mapped, graphics data structures can reside in the Graphics Aperture.

3.4.13 Graphic Window WR Combin

Use this item to enable or disable data combination from buffer then write to memory feature.

3.4.14 Concurrent function (MEM) & (PCI)

Use these items to enable or disable concurrent memory/PCI and CPU action.

3.4.15 PCI Delayed Transaction

If the chipset has an embedded 32-bit write buffer to support delay transaction cycles, you can enable this item to provide compliance with PCI Ver. 2.1 specifications. We recommend that you leave this item at the default value.

3.4.16 Memory Parity Check

This item enables a parity check during boot-up memory testing. Only set this item to enabled if you are using DRAM memory with parity.

3.5 Integrated Peripherals

You can control Input and Output functions from this screen.

Figure 3-5 Integrated Peripherals
CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software
Integrated Peripherals

> SIS 630 OnChip IDE Device	Press Enter	Item Help
> SIS 630 OnChip PCI Device	Press Enter	Menu Level >
> SIS 950 SuperIO Device	Press Enter	
USB Controller	Enabled	
USB Keyboard Support	Disabled	
IDE HDD Block Mode	Enabled	
Init Display First	PCI Slot	
System Share Memory Size	8 MB	

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

3.5.1 SIS 630 OnChip IDE Device

CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software
SIS 630 OnChip IDE Device

Internal PCI/IDE	Both	Item Help
IDE Primary Master PIO	Auto	Menu Level >
IDE Primary Slave PIO	Auto	
IDE Secondary Master PIO	Auto	
IDE Secondary Slave PIO	Auto	
IDE Primary Master UDMA	Auto	
IDE Primary Slave UDMA	Auto	
IDE Secondary Master UDMA	Auto	
IDE Secondary Slave UDMA	Auto	
IDE Burst Mode	Enabled	

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

3.5.2 Internal PCI/IDE

Use this item to enable or disable the PCI IDE channels that are integrated on this motherboard.

3.5.3 IDE Primary & Secondary Master/Slave PIO

These four PIO fields let you set a PIO mode (0-4) for each of four IDE devices. When under "Auto" mode, the system automatically set the best mode for each device

3.5.4 IDE Primary & Secondary Master/Slave UDMA

When set to "Auto" mode, the system will detect if the hard drive supports Ultra DMA mode.

3.5.5 IDE Burst Mode

Use this item to enable a buffer for bus master PCI IDE transfers.

3.5.6 SIS 630 OnChip PCI Device

CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software
SIS 630 OnChip PCI Device

SIS-7018 AC97 AUDIO	Enabled	Item Help
SIS-7013 S/W Modem	Disabled	Menu Level >
SIS-900 10/100M ETHERNET	Enabled	
SIS-900 MAC Address Input	Press Enter	

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

3.5.7 SIS-7018 AC97 AUDIO

This item enables the integrated audio capabilities.

3.5.8 SIS-7013 S/W Modem

This item enables the integrated software modem capabilities.

3.5.9 SIS-900 10/100M ETHERNET

This item enables the integrated Ethernet capabilities.

3.5.10 SIS-900 MAC Address Input

The address was set OK by manufacturer. If the data is lost, system will prompt you to key in the address number. Please follow the address number sticker that on motherboard to key in the number.

3.5.11 SIS 950 SuperIO Device

CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software
SIS 950 SuperIO Device

Onboard FDC Controller	Enabled	Item Help
Onboard Serial Port 1	3F8 / IRQ4	Menu Level >
Onboard Serial Port 2	2F8 / IRQ3	
UART Mode Select	Normal	
X UR2 Duplex Mode	Half	
Onboard Parallel Port	378 / IR7	
Parallel Port Mode	SPP	
X ECP Mode Use DMA	3	
Game Port Address	201	
Midi Port Address	330	
Midi Port IRQ	10	

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

3.5.12 Onboard FDC Controller

Select "Enabled" to activate the on-board FDC
 Select "Disabled" to activate an add-on FDC

3.5.13 Onboard Serial Port 1 & 2

Select an address and corresponding interrupt for the first/second serial port. The default value for the first serial port is "3F8/IRQ4" and the second serial port is "2F8/IRQ3".

3.5.14 UART Mode Select & UR2 Duplex Mode

This item defines the operation of serial port 2. In the Normal setting, serial port 2 is assigned to the external COM2 connector. If you have installed an optional infrared port, you must change the setting of this item to one of the Infrared settings (usually IrDA). These settings will disable the external COM2 serial port connector and assign the resources to the infrared device. If you have selected an IR mode, use the following item *UR2 Duplex Mode* to define if the IR port is full duplex or half duplex.

3.5.15 Onboard Parallel Port

Select address and interrupt for the Parallel port.

3.5.16 Parallel Port Mode

Select an operating mode for the parallel port. Mode options are SPP, EPP, ECP and ECP+EPP.

3.5.17 ECP Mode Use DMA

Select a DMA channel if parallel port is set as ECP or ECP+EPP.

3.5.18 Game Port Address

This field sets the address of the onboard game port connector.

3.5.19 Midi Port Address

This field is used to select the midi port's address. If you have selected the midi port's address, you may select its IRQ in the "Midi Port IRQ".

3.5.20 Midi Port IRQ

This field is used to select the midi port's IRQ.

3.5.21 USB Controller

Select Enabled if your system contains a Universal Serial Bus (USB) controller.

3.5.22 USB Keyboard Support

This item lets you enable or disable the USB keyboard driver within the onboard BIOS.

3.5.23 IDE HDD Block Mode

This feature enhances disk performance by allowing multi-sector data transfers and eliminates the interrupt handling time for each sector.

3.5.24 Init Display First

Select "AGP" or "PCI Slot" for system to detect first when boot-up.

3.5.25 System Share Memory Size

This item defines the amount of system memory that will be shared and uses as video memory.

3.6 Power Management Setup

Power management decreases power usage under the pre-defined standby time range.

Figure 3-6. Power Management Setup Screen
CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software
Power Management Setup

ACPI function	Enabled	Item Help
ACPI Suspend Type	S1 (POS)	Menu Level >
Video Off Option	Susp, Stby -> off	
Video Off Method	V/H SYNC+Blank	
Switch Function	Break/Wake	
MODEM Use IRQ	3	
Power Button Override	Instant Off	
> PM Wake Up Events	Press Enter	

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

3.6.1 ACPI Function

This item allows you to enable or disable the function of Advanced Configuration and Power Interface which offers improved power management .

3.6.2 ACPI Suspend Type

This field is used to select the type of Suspend function.
S1 (POS): Enables the Power On Suspend function.

S3 (STR): Enables the STR function.

3.6.3 Video Off Option

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

Always On	Monitor will remain on during power saving modes.
Suspend --> Off	Monitor blanked when the systems enters the Suspend mode.
Susp,Stby --> Off	Monitor blanked when the system enters either Suspend or Standby modes.
All Modes --> Off	Monitor blanked when the system enters any power saving mode.

3.6.4 Video Off Method

This field defines the video off features. The following options are available: DPMS Supported, Blank Screen, V/H SYNC+Blank. The DPMS (Display Power Management System) features allow the BIOS to control the video display card if it supports the DPMS feature.

3.6.5 Switch Function

This item defines if pressing the power switch will cause the system to wake up from suspend or standby mode.

3.6.6 MODEM Use IRQ

This item tells the Power Management BIOS which IRQ is assigned to the installed MODEM. Option are NA, 3, 4, 5, 7, 9, 10 and 11.

3.6.7 Power Button Override

Under ACPI (advanced configuration and power interface) the system can be turned off mechanically (by the power button) or it can undergo a software power off. If the system has been turned off by software, the system can be resumed by a Alarm wake up signal. This item allows you to define a software power off using the power button. If the value is set to Instant-Off, the power button will automatically cause a software power off. If the value is set to Delay 4 Sec. The power button must be held down for a full four seconds to cause a software power off.

3.6.8 PM Wake Up Events

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

PM Wake Up Events

		Item Help
IRQ [3-7, 9-15], NMI	Enabled	Menu Level >
IRQ 8 Break Suspend	Disabled	
Ring Power Up Control	Disabled	
MACPME Power Up Control	Disabled	
PCIPME Power Up Control	Disabled	
Power Up by Alarm	Disabled	
x Month Alarm	NA	
x Date 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 Value F6 : Fail-Safe Defaults F7 : Optimized Defaults

3.6.11 IRQ [3-7,9-15], NMI

When this item is enabled, any activity through the system interrupt request lines 3-7, 9-15 and the non-masked interrupt can reset power-saving mode timeouts to zero, or resume the system from a power-saving mode.

3.6.12 IRQ 8 Break Suspend

When this item is enabled, any activity through the system interrupt request lines 8 can reset power-saving mode timeouts to zero, or resume the system from a power-saving mode. IRQ 8 is normally used by the system real time clock.

3.6.13 Ring Power Up Control

The option lets you specify enable or disable external Modem Wake Up function. The function of power on through modem when system is off.

Please set the item to "Enabled" then let the system to enter the environment of DOS or Windows 95/98 OS before system is power off. As long as there are any message through the Modem to enter the System during system is power off. The system will enable power on function.

3.6.14 MACPME Power Up Control

This allows you to remotely power up your system through your network by sending a wake-up frame or signal. With this feature, you can remotely upload/download data to/from systems during off-peak hours. Set to Enabled to set this feature and make sure your system has an ATX power supply with at least 720mA +5V standby power.

3.6.15 PCIPME Power Up Control

If this item is set as Enabled, PCI peripherals drive PME (Power Management Event) signal to wake the system from low-power states S1-S5.

3.6.16 Power Up by Alarm

Set this option to enable or disable the RTC Alarm to Wake Up the system which is set at soft Off.

3.6.17 Month Alarm, Date (of Month) Alarm, Time (hh:mm:ss) Alarm

Set these options to specify the RTC Alarm time on Month/Date / Hour / Minute / Second.

3.7 PNP/PCI Configurations Setup

Figure 3.7 PNP/PCI CONFIGURATIONS SETUP

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

PnP / PCI Configurations

Reset Configuration Data	Disabled	Item Help
Resources Controlled By x IRQ Resources	Auto (ESCD) Press Enter	Menu Level >
PCI/VGA Palette Snoop	Disabled	

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

3.7.1 Reset Configuration Data

In case a conflict occurs after you assign the IRQs or after you configure your system, you can enable this function to allow your system to automatically reset your configuration and reassign the IRQs, DMAs, and I/O address.

3.7.2 Resources Controlled By

Default setting is "Auto (ESCD)". This setting allows the BIOS to self detect setting and Plug-and-Play devices during start up. The user can select and configure IRQs under "Manual" mode.

3.7.3 IRQ Resources

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

IRQ Resources

IRQ-3	assigned to	PCI Device	Item Help
IRQ-4	assigned to	PCI Device	Menu Level >
IRQ-5	assigned to	PCI Device	
IRQ-7	assigned to	PCI Device	Legacy ISA for devices
IRQ-9	assigned to	PCI Device	compliant with the
IRQ-10	assigned to	PCI Device	original PC AT bus
IRQ-11	assigned to	PCI Device	Specification, PCI/ISA
IRQ-12	assigned to	PCI Device	PnP for devices
IRQ-14	assigned to	PCI Device	Compliant with the
IRQ-15	assigned to	PCI Device	Plug and Play standard architecture

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

3.7.4 IRQ-xx assigned to

If your ISA card is not PnP compatible and requires a special IRQ to support its function, set the selected IRQ-x assigned to: "Reserved". This setting informs the PnP BIOS to reserve the selected IRQ for the installed ISA card.

3.7.5 PCI/VGA Palette Snoop

Enable this option to correct screen color shifts, when there is a combination of VGA cards, accelerator cards, or MPEG cards present.

3.8 PC Health Status

Figure 3.8 PC Health Status

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

PC Health Status

Vcore	1.60V	Item Help
Vcc25	2.51V	Menu Level >
Vcc3	3.28V	
Vcc	5.02V	
+12V	12.16V	
5VSB	4.99V	
Voltage Battery	3.28V	
CPU Temperature	41°C	
System Temperature	36°C	
CPUFAN Speed	4017 RPM	
ChassisFAN Speed	0 RPM	

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

3.8.1 Vcore, Vcc25, Vcc3, Vcc, +12V, 5VSB & Voltage Battery (xx.xxV)

The onboard hardware monitor is able to detect the voltage output by the voltage regulators. These values refresh upon any key entry. The function is optional.

3.8.2 Current CPU & System Temperature (xx°C)

The onboard hardware monitor is able to detect the temperatures of motherboard and CPU. These values refresh upon any key entry. The function is optional.

3.8.3 CPUFAN & ChassisFAN Speed (xxxxRPM)

The onboard hardware monitor is able to detect chassis fan speed, CPU fan speed in Rotations Per Minute (RPM). These values refresh upon any key entry in the BIOS setup screen.

3.9 Frequency Control

Figure 3.9 Frequency Control
CMOS Setup Utility - Copyright (C) 1984 - 2000 Award Software
Frequency Control

Auto Detect DIMM/PCI Clk	Enabled	Item Help
CPU Clock Ratio Jumpless	By H/W	Menu Level >

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

3.9.1 Auto Detect DIMM/PCI CLK

If you have the EMI issue, set the option as Enabled, it keeps its interference under control.

3.9.2 CPU Clock Ratio Jumpless

Use *CPU Clock Ratio* to set a multiple. The multiple times the system bus must equal the core speed of the installed processor e.g. **3.5 (multiple) x 100 MHz (system bus) = 350 MHz (installed processor clock speed)**. We recommend that you leave the item to there default value By H/W (Hardware defined).

3.10 Load Fail-Safe Defaults

This loads the troubleshooting default values permanently stored in the ROM chips. These settings are not optimal and turn off all high performance features. You should use these values only if you have hardware problems. Highlight this option in the main menu and press <Enter>. The message below will appear.

Load Fail-Safe Defaults (Y/N)?N

If you want to process, type <Y> and press <Enter>. The default settings will be loaded.

3.11 Load Optimized Defaults

This feature loads optimized setting from the BIOS ROM. Use the default values as standard values for your system. Highlight this option in the main menu and press <Enter>. The message below will appear.

Load Optimized Defaults (Y/N)?N

Type <Y> and press <Enter> to load the Setup default values.

3.12 Set Password

You can assign, modify, or cancel password settings. To modify, highlight "Set Password" and press the <Enter> key. The screen will prompt you ("Enter Password:"). Enter your password. The maximum size of the password is 8 characters. System will prompt you to reenter the password to verify. Remember the passwords are case sensitive.

If you want to remove the passwords, either delete passwords or press <Enter> when prompting for new password.

If you want it to require password upon initial system startup and upon entering the CMOS Setup Utility, you will need to change the selection of the (Security Option) under (Advanced BIOS Features) to "System".

If the setting is "Setup", the system will only require the password you activate CMOS Setup Utility.

3.13 Save & Exit Setup

When all the changes have been made, highlight "Save & Exit Setup" and press <Enter>. The message below will appear:

Save to CMOS and Exit (Y/N)? N

Type "Y" and press <Enter>. The modifications you have made will be written into the CMOS memory, and the system will reboot.

3.14 Exit Without Saving

When you do not want to save the changes you have made, highlight "Exit Without Saving" and press <Enter>, The message below will appear:

Quit Without Saving (Y/N)? N

Type "Y" and press <Enter>. The system will reboot.

Chapter 4. Software installation

4.1 Installing the Sound Driver

4.1.1 Windows 95/98

1. Start up Windows 95 or Windows 98.
[If your Windows 95 is older version, please install the USB supplement service pack (usbsupp.exe) files first.
You can get this file from <http://www.microsoft.com>]
2. Insert the CD Driver into the CD drive-enter the \S630MA\SOUND directory on the CD-ROM and double-click **SETUP.EXE**
3. Follow the prompts to complete the installation.
4. You must restart your computer for the installation to complete.
5. If Insert Disk dialog is displayed, please insert the **Windows 95 or 98 CD-ROM** into the CD drive, then click " **OK** " button.
6. You must restart your computer again to take the new setting effect.

4.1.2 Windows 2000/NT 4.0 Installation

1. Insert the CD Driver into the CD drive-enter the \S630MA\SOUND directory on the CD-ROM and double-click **SETUP.EXE**
2. Follow the prompts to complete the installation.
3. You must restart your computer for the installation to complete.

4.2 Installing the LAN Driver

4.2.1 Windows 95/98/2000

1. Insert the CD Driver into the CD drive-enter the \S630MA\LAN directory on the CD-ROM and double-click **SETUP.EXE**
2. Follow the prompts to complete the installation.
3. If Insert Disk dialog is displayed, please insert the **Windows 95 or 98 or 2000 CD-ROM** into the CD drive, then click " **OK** " button.
4. You must restart your computer for the installation to complete.

4.2.2 Windows NT 4.0

1. Install Windows NT 4.0
2. When Windows NT Workstation Setup dialog box is appeared, select "**Wired to the network**" then press "Next" button.
3. Click "**Select from list...**" button then select "**Have Disk...**".
4. Insert CD Driver Disk to CD-ROM drive and specify the correct path, e.g. D:\S630MA\LAN\NT40, then click "**OK**" button.
5. Select one of the following models: "**SiS 0900 PCI Fast Ethernet Adapter**" then click "**OK**".
6. The SIS 900 PCI Fast Ethernet Adapter will be shown on the Network Adapters list. Click "Next" button. (**After the LAN driver was loaded, please re-insert NT 4.0 CD to CD- ROM**)
7. In the dialog box that appears, select the Media Type and enter the Network address for the adapter if necessary (You can click Help for more detailed information about these settings). Click "**OK**" to complete this dialog box (or Cancel to terminate the configuration without completing it).
8. Exit the Network control panel window. Windows NT asks if you wish to reboot. You must reboot before the adapter will function properly.

4.2.3 The other Operation Systems

Please refer to the **README.TXT** file in each directory.

4.3 Installing the Graphics Driver

4.3.1 For Windows 95/98

1. Insert the CD Driver into CD drive - enter the \S630MA\VGA\WIN9X directory on the CD Driver and double-click **SETUP.EXE**.
2. Follow the prompts to complete the installation.
3. You must restart your computer for the installation to complete.

4.3.2 For Windows 2000

1. Insert the CD Driver into CD drive - enter the \S630MA\VGA\WIN2000 directory on the CD Driver and double-click **SETUP.EXE** to install VGA driver.
2. Follow the prompts to complete the installation.
3. You must restart your computer for the installation to complete.
4. Run "**SETUP.EXE**" in the directory of \S630MA\VGA\Win2000\AGP to install AGP driver.
5. You must restart your computer for the installation to complete.

4.3.3 For Windows NT 4.0

1. Start Windows NT4.0 with **Service Pack 4.0 or later version**.
2. Click "**Start**" menu and select **Control Panel** from **Settings** group.
3. Select "**Display**" icon.
4. Select "**Settings**" of Display Properties.
5. Select "**Display Type...**".
6. Select "**Change...**" from the Adapter Type area.

7. Select "**Have Disk...**" of Change Display.
8. Place the CD Driver Disk into CD-ROM Drive.
9. When the "**Install from Disk**" dialog box appears, type the directory storing the drivers and click "**OK**". The directory in CD-Title is at "**D:\S630MA\VGA\WINNT40**".
10. When the "**Change Display**" dialog box appears, click "**OK**".
11. When the "Third-party Drivers" dialog box appears, click "**Yes**".
12. A message will appear stating that the drivers were successfully installed. Click "**OK**". You must now restart Windows NT 4.0.