

Magic 586
Socket-7/Pentium[®] Mainboard

User's Manual

Model	: Magic 586
Manual version	: English, version 1.0
Release Date	: March 12, 1999

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FCC & DOC Compliance

Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- ✧ This device may not cause harmful interference, and
- ✧ This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ✧ Re-orient or relocate the receiving antenna.
- ✧ Increase the separation between the equipment and the receiver.
- ✧ Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- ✧ Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- ✧ Consult the dealer or an experienced radio/TV technician for help.

Warning! The use of shielded cables for the connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this authority to operate this equipment.

CONTENTS

SECTION 1: PRODUCT INFORMATION

1-1	Manual Features.....	1-1
1-2	Package Check List.....	1-1
1-3	Mainboard Specifications.....	1-2
1-4	Mainboard Layout	1-4

SECTION 2: HARDWARE INSTALLATION

2-1	Jumper Settings.....	2-1
2-1.1	CMOS Clear Setting	2-1
2-1.2	CPU Type Setting	2-2
	- CPU Voltage	2-2
	- CPU Clock Ratio	2-3
	- CPU Clock Frequency.....	2-4
	- SDRAM Clock Select.....	2-5
	- Burst Type	2-5
2-2	Connectors	2-7
2-2.1	Panel Connector.....	2-7
2-2.2	AT Power Connector.....	2-8
2-2.3	ATX Power Connector.....	2-8
2-2.4	Fan Connectors.....	2-9
2-2.5	PS/2 Mouse Connector.....	2-9

2-2.6	Keyboard Connector.....	2-10
2-2.7	Serial Device (COM1/COM2) Connector.....	2-10
2-2.8	Printer Connector.....	2-11
2-2.9	Floppy Drive Connector.....	2-11
2-2.10	IDE Hard Disk and CD-ROM Connector.....	2-12
2-2.11	IrDA Connector.	2-13
2-2.12	USB Device Connector.....	2-13
2-2.13	Wake on LAN Connector	2-14
2-3	System Memory Installation	2-14
2-3.1	Type	2-15
2-3.2	Speed	2-15
2-3.3	Buffered and Non-buffered	2-15
2-3.4	2-clock and 4-clock	2-16
2-3.5	Parity and Non-parity.....	2-16
2-3.6	Memory Auto detection by BIOS	2-16
2-3.7	Suggested SDRAM combination	2-16
2-4	Game/Audio Connector	2-17

SECTION 3: CMOS SETUP UTILITY

3-1	BIOS Setup Main Menu.....	3-1
3-2	Standard CMOS Setup.....	3-2
3-3	BIOS Features Setup.....	3-4
3-4	Chipset Features Setup.....	3-8
3-5	Power Management Setup.....	3-12
3-6	PNP/PCI Configuration.....	3-17

3-7	Load Setup Defaults.....	3-22
3-8	Load BIOS Defaults.....	3-22
3-9	Integrated Peripherals.....	3-23
3-10	Password Setting.....	3-27
3-11	IDE HDD Auto Detection.....	3-28
3-12	Save & Exit Setup.....	3-28
3-13	Exit with Saving.....	3-28

SECTION 4: SOFTWARE UTILITY

4-1	BIOS Flash/Upgrade Procedures.....	4-1
4-2	VIA Chipset Driver Utility.....	4-2
4-3	VIA Audio Driver Utility	4-3

SECTION 1.

PRODUCT INFORMATION

Thanks for purchasing **Magic 586** socket-7 mainboard.

This user's manual contains all the information and features that show you how to use the **Magic 586** mainboard. Please take a moment to familiarize yourself with the design and organization of this manual.

1-1 Manual Features

This manual is divided into the following four sections:

Section 1: Product Information

A brief overview of what comes in the mainboard package, the mainboard layout and the specification it appears.

Section 2: Hardware Installation

Tell you the usage of the mainboard jumpers and the connectors.

Section 3: CMOS Setup Utility

A summary of the mainboard CMOS (BIOS) Setting.

Section 4: BIOS/Software Utility

Introduction of some useful mainboard BIOS/Software utility.

1-2 Package Check List

This mainboard package contains the following items. Please inspect the package contents and confirm that everything is there. If anything is missing or damaged, call your vendor for instructions before operating.

I. PRODUCT INFORMATION

The package includes:

- One Magic 586 Mainboard
- One Floppy Interface Cable
- One IDE Interface Cable
- Audio Cable
- One Motherboard Resource CD
- One User's Manual

1-2 Mainboard Specifications

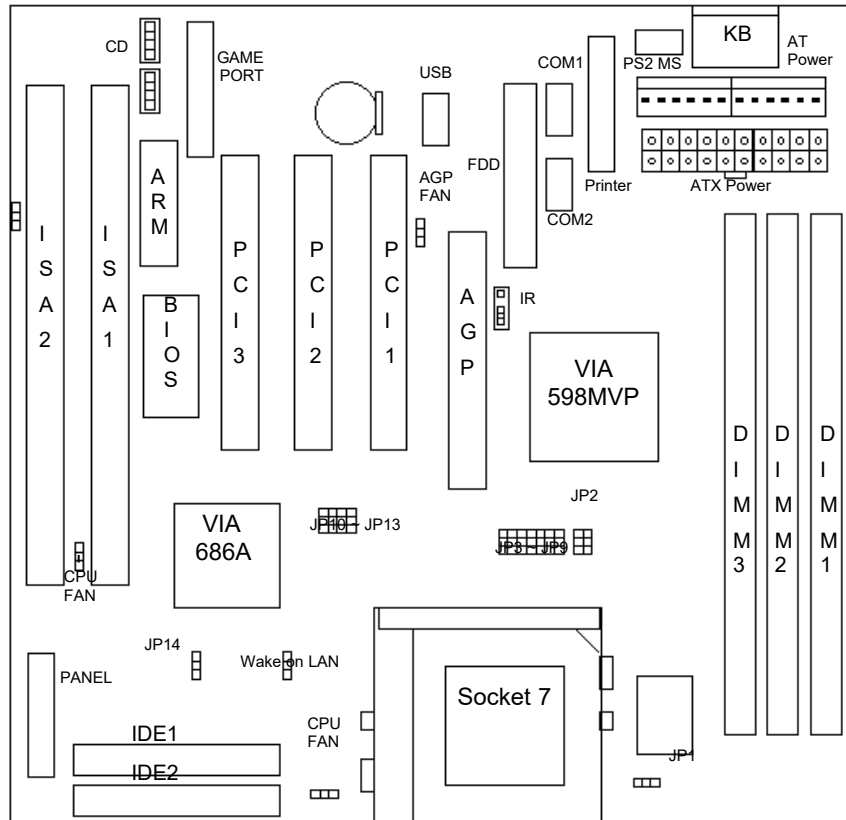
Form Factor	<ul style="list-style-type: none">● Baby AT form factor , 22 cm x 22.5 cm
CPU	<ul style="list-style-type: none">● Supports Pentium / Socket-7, external bus speed up to 100MHZ
System Memory	<ul style="list-style-type: none">● DIMM 168-pin x 3 , supports SDRAM up to 768MB● Supports 64M-bit DRAM / SDRAM technology● 512K/1MB L2 cache
Chipset	<ul style="list-style-type: none">● VIA MVP3 VT82C598MVP + MVP4 VT82C686A chipset for socket-7 CPU
Expansion Slots	<ul style="list-style-type: none">● 1 x AGP bus / 2 x ISA bus / 3 x PCI bus with bus master mode● 1 x AMR connector for AC97 modem card
Serial Port	<ul style="list-style-type: none">● Two serial ports UART 16C550 compatible● Supports HPSIR or ASKIR infrared interface
Parallel Port	<ul style="list-style-type: none">● One parallel port supports : SPP (standard parallel port), EPP(enhanced parallel port) and ECP(extended capabilities port)
Floppy Interface	<ul style="list-style-type: none">● Supports drives inches/format as:<ul style="list-style-type: none">- 3.5 inches—720KB/1.44MB/2.88MB- 5.25 inches—360KB/1.2MB
IDE Interface	<ul style="list-style-type: none">● Dual PCI IDE interface support up to 4 x IDE HDD or CDROM

I. PRODUCT INFORMATION

	<ul style="list-style-type: none"> ● Supports PIO mode 4 , DMA mode 2 & Ultra DMA 33
USB Interface (optional)	<ul style="list-style-type: none"> ● Two USB ports supported ● USB legacy keyboard function supported
PS/2 Mouse	<ul style="list-style-type: none"> ● PS/2 mouse supported by connector onboard
Keyboard	<ul style="list-style-type: none"> ● AT compatible keyboard ● MINI-DIN PS/2 keyboard connector (optional)
RTC and Battery	<ul style="list-style-type: none"> ● RTC build in chipset ● Lithium (CR-2032) battery
Wake Up Function	<ul style="list-style-type: none"> ● Modem ring wake up / LAN wake up / RTC alarm wake up
Synchronous Switching Regulator	<ul style="list-style-type: none"> ● High efficient synchronous switching regulator for CPU core voltage ● Supports over-voltage / over-current protection function
Power connector	<ul style="list-style-type: none"> ● Supports AT(12-pin) power connector ● Supports ATX(20-pin) power connector
BIOS	<ul style="list-style-type: none"> ● Award BIOS ● Year 2000 Compliance ● PCI 2.1/ PNP BIOS v1.0a / APM v1.2 / DMI v2.0 compliance ● Supports ACPI (Advanced Configuration and Power Interface) and OS Directed Power Management ● Anti-Virus protection supported ● Floppy drive swapping function supported ● Supports SOFT power
Sound	<ul style="list-style-type: none"> ● AC97 audio & game / MIDI ports
LED Indicator Connectors	<ul style="list-style-type: none"> ● System power LED connector ● HDD activity LED connector ● System Suspend LED connector

1-4 Mainboard Layout

I. PRODUCT INFORMATION



Jumpers

1. **JP1** L2 Cache Burst Type
2. **JP2** CPU Clock Ratio
3. **JP3, JP4** SDRAM Clock Select
4. **JP5, JP6, JP7, JP8, JP9** CPU Bus Clock
5. **JP10, JP11, JP12,** CPU Vcore Voltage

I. PRODUCT INFORMATION

- JP13
6. JP14 Clear CMOS

Expansion Sockets

1. **Socket 7** CPU Socket
2. **DIMM 1** Support 168-pin DIMM Memory
3. **DIMM 2** Support 168-pin DIMM Memory
4. **DIMM 3** Support 168-pin DIMM Memory

Expansion Slots

1. **ISA Slot 1 & Slot 2** 16-bit ISA Bus Expansion Slot
2. **PCI Slot 1 to Slot 3** 32-bit PCI Bus Expansion Slot
3. **ARM** ARM Expansion Slot for AC97 Devices

Connectors

1. **AT KB** AT Keyboard Connector
2. **PS/2 Mouse** PS/2 Mouse Connector
3. **COM1/COM2** Serial Port 1 / Serial Port 2
4. **PRINTER** Printer (Parallel) Port Connector
5. **AT POWER** AT Power Connector
6. **ATX POWER** ATX Power Connector
7. **AGPFAN** AGP Fan Connector
8. **CPUFAN** CPU Fan Connector
9. **CHAFAN** Chassis Fan Connector
10. **Floppy** Floppy Drive Connector
11. **Primary IDE** Primary IDE Connector
12. **Secondary IDE** Secondary IDE Connector
13. **GAME PORT** Game/Audio Connector
14. **CD** Audio CD-IN Connector
15. **IR** Infrared Port Connector
16. **USB** Universal Serial Bus Port 1 and Port 2
17. **Wake on LAN** LAN Wake Up Connector
18. **Panel:**

I. PRODUCT INFORMATION

- **PWR LED** Baby-AT Power LED Connector
- **KBLCK** Keyboard Lock Switch Connector
- **SLP** Suspend Switch Connector
- **SPEAKER** Chassis Speaker Connector
- **HDD LED** HDD LED Connector
- **RESET** Reset Switch Connector
- **GRN LED** Green LED Connector

SECTION 2.

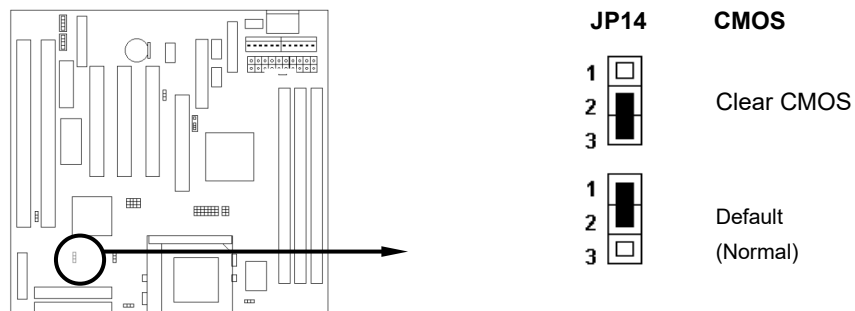
HARDWARE INSTALLATION

This section gives you a step-by-step procedure on how to install your system. Follow each section accordingly.

2-1 Jumper Settings

Please refer the following figures for the locations of the jumpers on the mainboard.

2-1.1 CMOS Clear Setting



To clear CMOS, please follow the steps below:

1. Power off the system and unplug the chassis AC power cord.
2. Short JP14 at pin 2-3 for few seconds.
3. Set JP14 back to its Normal position at pin 1-2.
4. Plug the AC power cord to the chassis.

II.HARDWARE INSTALLATION

5. Power on the system and load the BIOS setup default.

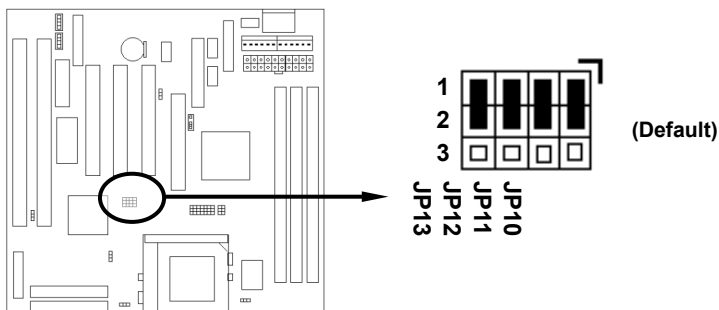
II.HARDWARE INSTALLATION

2-1.2 CPU Type Setting

This mainboard supports socket-7 Pentium series CPU. Install your CPU type with the following jumper settings.

- **CPU Voltage:**

JP10, JP11, JP12, JP13 are used to select the CPU Voltage.



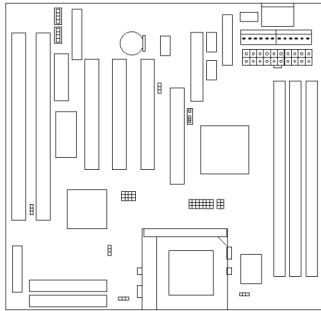
CPU Voltage	JP10	JP11	JP12	JP13	CPU Type
3.5V	2-3	1-2	2-3	2-3	AMD-K5
3.4V	1-2	1-2	2-3	2-3	INTEL P54C
3.3V	2-3	2-3	2-3	2-3	IDT C6
3.2V	1-2	2-3	2-3	2-3	AMD-K6 233
3.1V	2-3	1-2	1-2	2-3	
3.0V	1-2	1-2	1-2	2-3	
2.9V	2-3	2-3	1-2	2-3	AMD K6-166/200 / Cyrix M2
2.8V	1-2	2-3	1-2	2-3	Intel P55C / Cyrix 6x86L
2.7V	2-3	1-2	2-3	1-2	

II.HARDWARE INSTALLATION

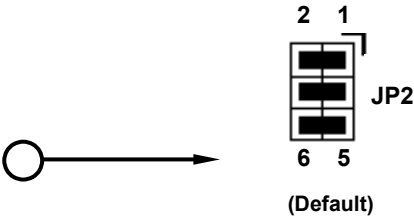
2.6V	1-2	1-2	2-3	1-2	
2.5V	2-3	2-3	2-3	1-2	
2.4V	1-2	2-3	2-3	1-2	AMD-K6-III
2.3V	2-3	1-2	1-2	1-2	
2.2V	1-2	1-2	1-2	1-2	AMD-K6-II
2.1V	2-3	2-3	1-2	1-2	
2.0V	1-2	2-3	1-2	1-2	

- **CPU Clock Ratio:**

JP2 is used to select the CPU clock ratio.



II.HARDWARE INSTALLATION

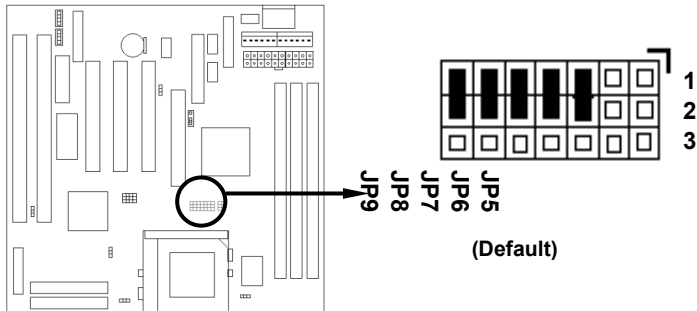


Ratio	JP2
1.5x / 3.5x	ALL OPEN
2.0x	5-6
2.5x / 1.75x	3-4, 5-6
3.0x	3-4
4.0x	1-2, 5-6
4.5x	1-2, 3-4, 5-6
5.0x	1-2, 3-4
5.5x	1-2

II.HARDWARE INSTALLATION

CPU Clock Frequency:

JP5, JP6, JP7, JP8, JP9 are used to select the CPU clock frequency.

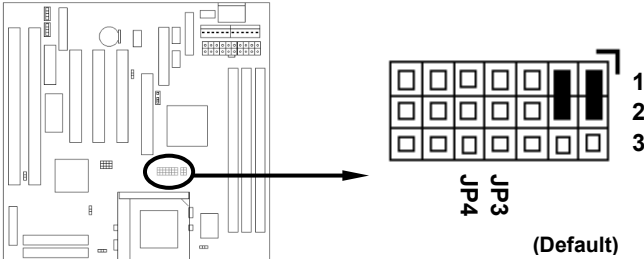


CPU Clock Frequency	PCI Clock Frequency	AGP Clock Frequency	JP5	JP6	JP7	JP8	JP9
100.2MHz	33.30MHz	66.6MHz	2-3	1-2	2-3	2-3	1-2
95.25MHz	31.75MHz	63.5MHz	2-3	1-2	2-3	2-3	2-3
83.3MHz	33.30MHz	66.6MHz	2-3	2-3	1-2	2-3	1-2
133.3MHz	44.30MHz	88.7MHz	2-3	1-2	1-2	2-3	2-3
75MHz	37.50MHz	75.0MHz	1-2	1-2	2-3	1-2	1-2
124MHz	41.30MHz	82.7MHz	2-3	1-2	2-3	1-2	2-3
66.8MHz	33.40MHz	66.8MHz	1-2	1-2	1-2	1-2	1-2
112MHz	37.30MHz	74.7MHz	2-3	1-2	1-2	1-2	2-3

II.HARDWARE INSTALLATION

- **SDRAM Clock Select:**

JP3, JP4 are used to select the SDRAM clock.

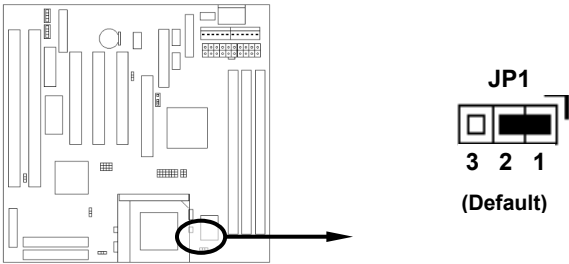


JP3	JP4	SDRAM Clock Select
1-2	1-2	DRAM Run CPU Clock
2-3	2-3	DRAM Run AGP Clock

II.HARDWARE INSTALLATION

- Burst Type:**

JP1 is used to select the CPU Burst Type.



JP1	Burst Type
1-2	Interleave Burst
2-3	Linear Burst

II.HARDWARE INSTALLATION

Below is a reference of different CPU currently supported by this mainboard.

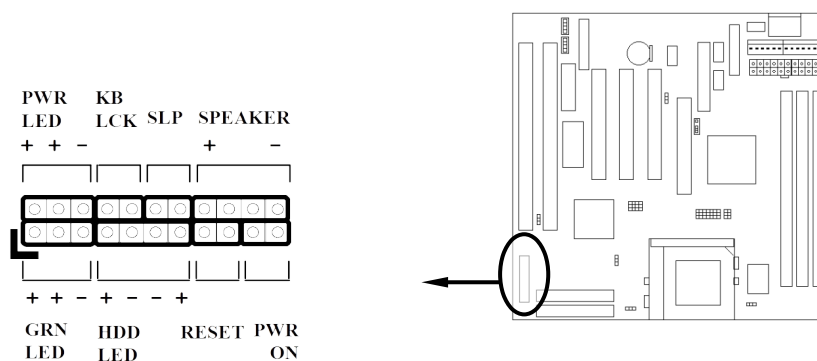
System Frequency (MHz)	CPU Clock Ratio	CPU Clock Frequency
100 (Intel P54C-100; AMD K5-100&133)	1.5x	66MHz
116 (AMD K5-166)	1.75x	66MHz
133 (Intel P54C-133;Cyrix P166+)	2x	66MHz
150 (Cyrix P200&M2-200;C6-150)	2x	66MHz
166 (Intel P54C&55C-166;Cyrix M2-200; AMD K6-166)	2.5x	66MHz
200 (Intel P54C&55C-200;AMD K6-200;Cyrix M2-233; IDT C6-200)	3x	66MHz
225 (IDT C6-225;Cyrix M2-300)	3x	75MHz
233 (Intel P55C-233; AMD K6-233;Cyrix M2-300)	3.5x	66MHz
263 (Cyrix M2-333)	3.5x	75MHz
266 (AMD K6-266;Cyrix M2-333)	4x	66MHz
300 (AMD K6-II 300)	4x	75MHz
333	5x	66MHz
375 (AMD K6-II 350)	5x	75MHz
400 (AMD K6-III 400)	4x	100MHz

II.HARDWARE INSTALLATION

2-2 Connectors

2-2.1 Panel Connector

The Panel Connector is a 22-pin onboard connector. Connect the Power LED, Keyboard Lock Switch, Suspend Switch, Speaker, Green LED, HDD LED, and Reset Switch to the corresponding pins as shown in the below figure.

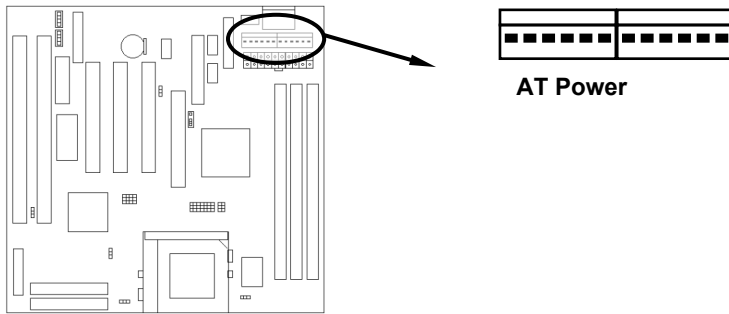


- **PWR LED** Power LED Connector (3 pins)
- **KBLCK** Keyboard Lock Switch Connector (2 pins)
- **SLP** Suspend Switch Connector (2 pins)
- **SPEAKER** Chassis Speaker Connector (4 pins)
- **GRN LED** Green Status LED Connector (3 pins)
- **HDD LED** HDD LED Connector (4 pins)
- **RESET** Reset Switch Connector (2 pins)

II.HARDWARE INSTALLATION

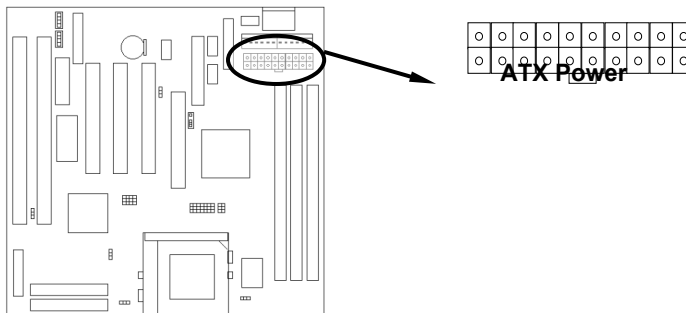
2-2.2 AT Power Connector

Connect the 12-pin AT power supply cable to this power connector. Make sure the right plug-in direction and the power supply is off before connecting or disconnecting the power cable.



2-2.3 ATX Power Connector

Connect the 20-pin ATX power supply cable to this power connector. Make sure the right plug-in direction and the power supply is off before connecting or disconnecting the power cable.



II.HARDWARE INSTALLATION

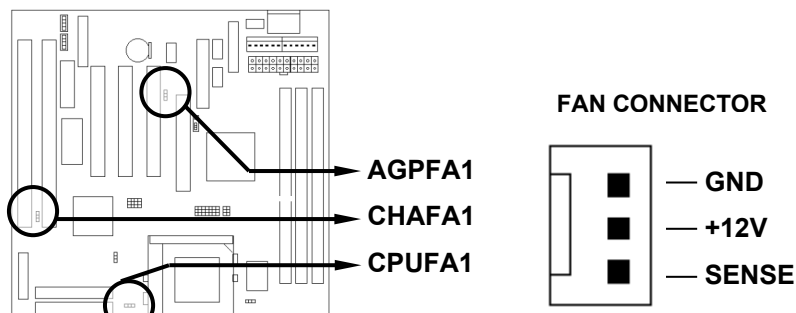
Magic 586 User's Manual

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II.HARDWARE INSTALLATION

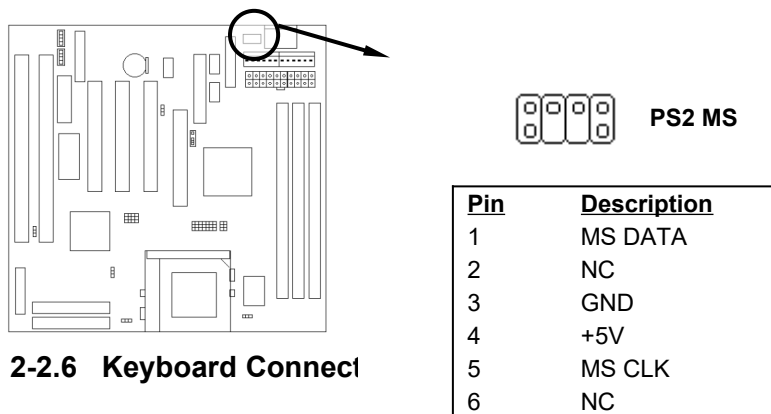
2-2.4 Fan Connectors

Connect the CPU, Chassis & AGP Fan cables to the 3-pin fan connectors shown below. The fan connectors are marked as **AGPFA1**, **CHAF A1** & **AGPFA1** on the mainboard.



2-2.5 PS/2 Mouse Connector

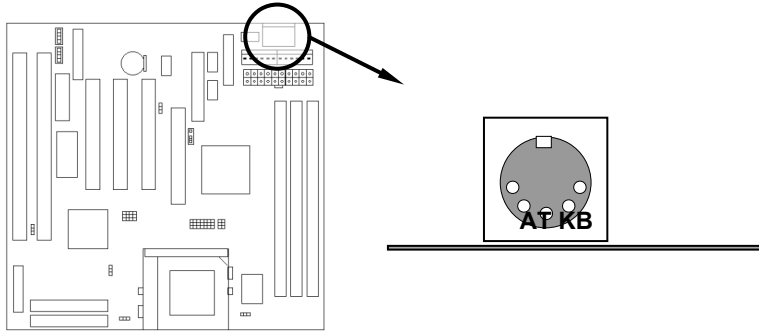
Connect the PS/2 mouse to the onboard 6-pin Mini-Din connector marked as **PS2 MS**.



2-2.6 Keyboard Connect

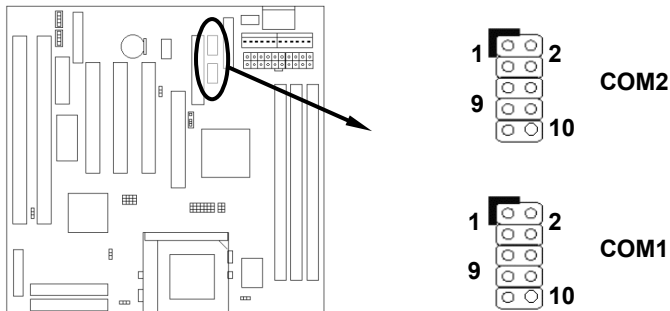
II.HARDWARE INSTALLATION

Connect the AT keyboard to the onboard keyboard connector marked as **AT KB.**



2-2.7 Serial Device(COM1/COM2) Connectors

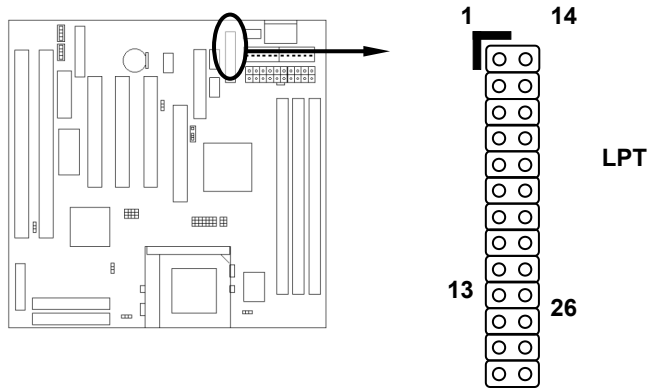
Connect your serial device(s) to the onboard 9-pin serial connectors marked as **COM1** and **COM2**.



2-2.8 Printer Connector

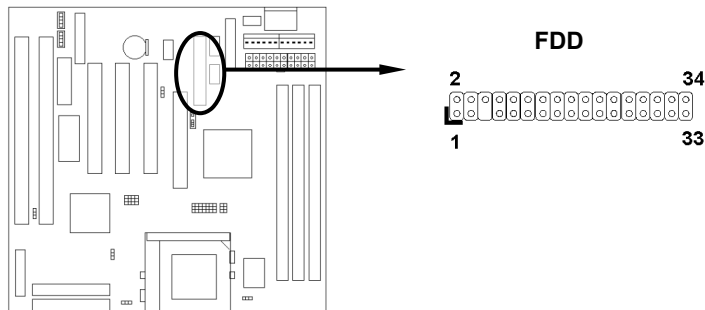
II.HARDWARE INSTALLATION

Connect your local printer to the onboard 25-pin printer connector marked as **LPT**.



2-2.9 Floppy Drive Connector

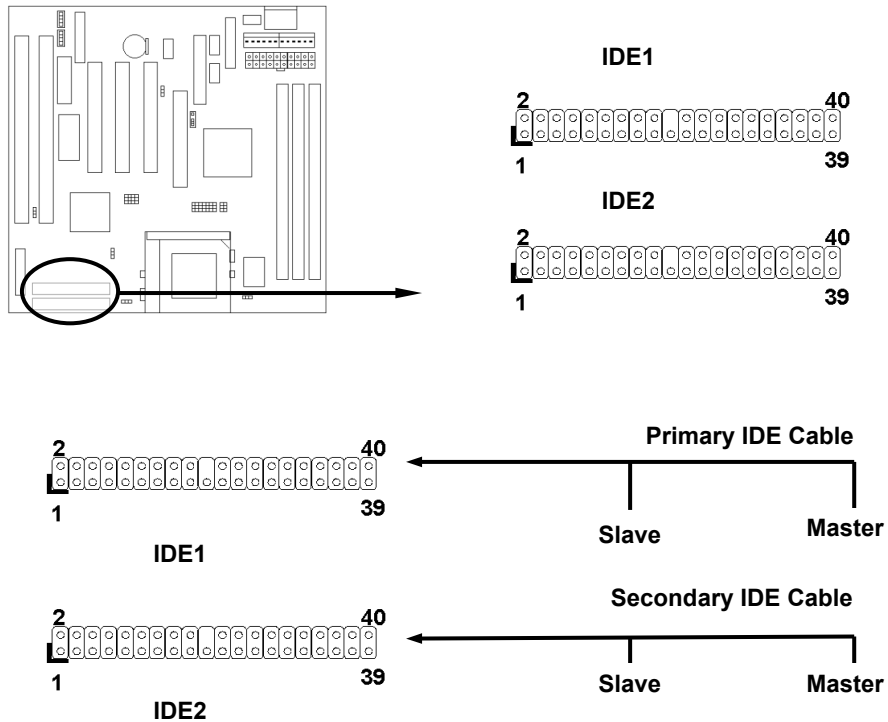
Connect the floppy drive cable to the onboard 34-pin floppy drive connector marked as **FDD**.



2-2.10 IDE Hard Disk and CD-ROM Connector

II.HARDWARE INSTALLATION

Connect your IDE devices to the onboard 40-pin IDE connectors marked as **IDE1** and **IDE2**.

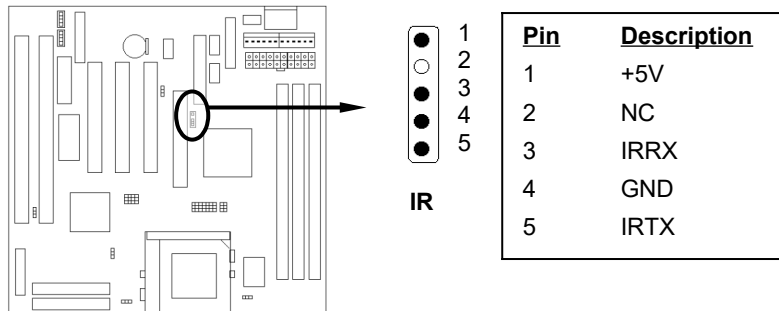


It is suggested that you connect the IDE devices to your IDE cables as the figure shown above. Each IDE channel, either Primary or Secondary, supports two IDE devices which must be set differently to master mode and slave mode. (Refer to your hard disk and CD-ROM user's manual for detailed settings of IDE master and slave mode.)

2-2.11 IrDA Connector

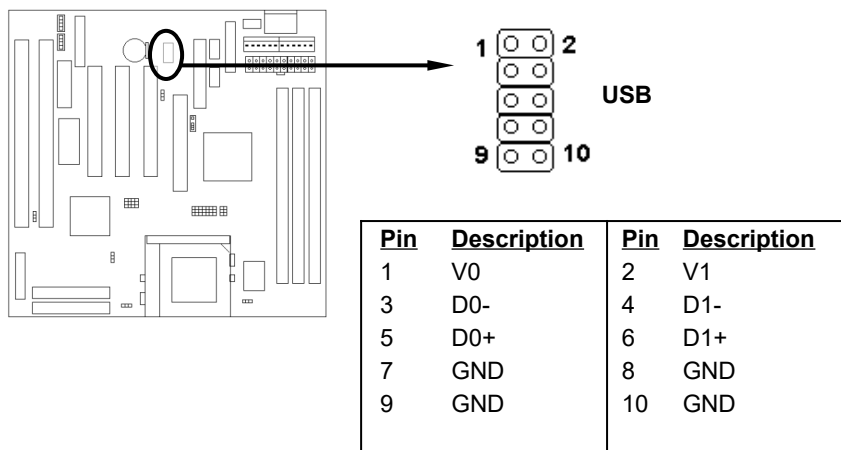
II. HARDWARE INSTALLATION

Connect your IR device to the onboard IrDA connector marked as **IR**.



2-2.12 USB Device Connector

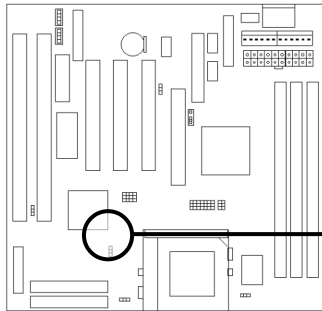
Connect your USB device(s) to the onboard USB connector marked as **USB**.



2-2.13 Wake on LAN Co

This mainboard supports wake up on LAN function. To use this function, you need a **Wake on LAN** supported network card and software.

II.HARDWARE INSTALLATION

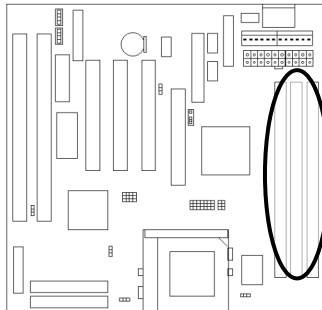


Wake on LAN

<u>Pin</u>	<u>Description</u>
1	+5V Standby
2	GND
3	Signal

2-3 System Memory Installation

There are 3 pcs 168-pin **DIMM** (Dual Inline Memory Module) sockets on the mainboard which support SDRAM and EDO DRAM memory.



There are 3 168-pin DIMM sockets (DIMM1, DIMM2 & DIMM3) that allow you to install system memory maximum up to 768MB SDRAM.

II.HARDWARE INSTALLATION

2-3.1 Type

This mainboard supports SDRAM DIMM and EDO DIMM.

2-3.2 Speed

For SDRAM, the memory speed normally marked as: -15, -12, -10, -8, -7.

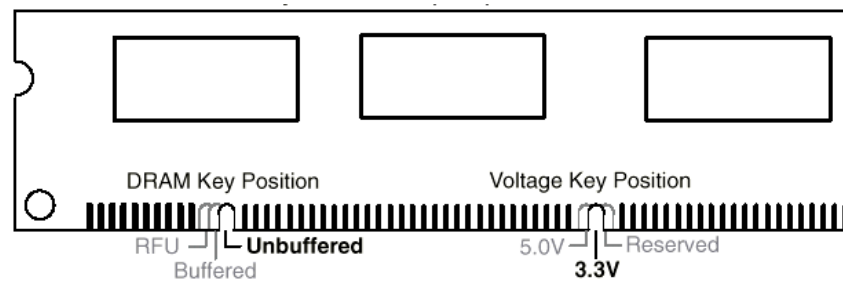
The meaning is,

- 15 = 15ns, and the maximum clock is 66MHz
- 12 = 12ns, and the maximum clock is 83MHz
- 10 = 10ns, and the maximum clock is 100MHz
- 8 = 8ns, and the maximum clock is 125MHz
- 7 = 7ns, and the maximum clock is 142MHz

For EDO, the access time can be 50ns, 60ns & 70ns.

2-3.3 Buffered and Non-buffered

Only the non-buffered DIMM can be used in this mainboard. The difference between buffered and non-buffered DIMM can be identified by the notch position shown below.



II.HARDWARE INSTALLATION

2-3.4 2-clock and 4-clock signal

Both 2-clock and 4-clock SDRAM DIMM supported by this mainboard.

2-3.5 Parity and Non-parity

This mainboard supports 64 bit Non-parity and 72 bit Parity DIMM modules.

2-3.6 Memory Auto detection by BIOS

This mainboard BIOS can automatically detect the DIMM memory size and type, so you do not need to adjust any hardware or software settings.

2-3.7 Suggested Memory combination

This mainboard supports the following SDRAM / EDO combination.

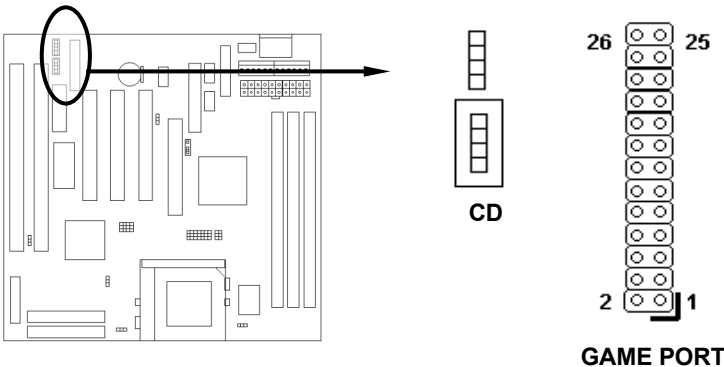
DIMM Location	DIMM Size
DIMM1	8, 16, 32, 64, 128, 256MB
DIMM 2	8, 16, 32, 64, 128, 256MB
DIMM 3	8, 16, 32, 64, 128, 256MB

Total Memory Size = DIMM1 + DIMM2 + DIMM3

II.HARDWARE INSTALLATION

2-4 Game/Audio Connector

Connect the audio cable to the onboard Game/Audio connector marked as **GAME PORT**. The onboard CD-IN connector marked as **CD** is for CD-ROM audio.

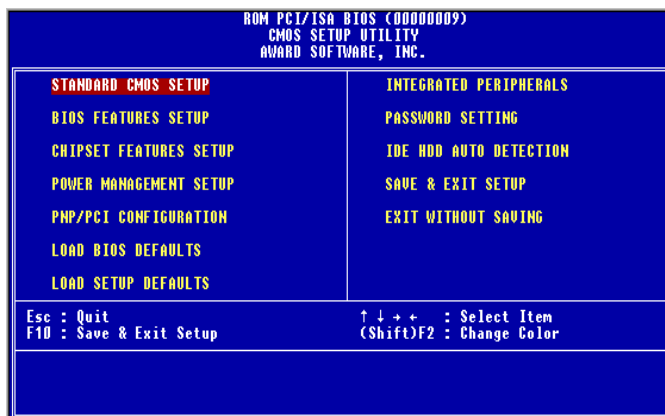


SECTION 3.

CMOS SETUP UTILITY

3-1 BIOS Setup Main Menu

This section tells you how to configure the system by changing BIOS setup options. To enter the BIOS Setup Utility, press **DEL** key during POST (Power-On Self Test). The BIOS Setup Main Menu will appear as shown below.



The main menu displays a table of items which defines basic information about your system. Below are the keyboard function keys you can use under the menu.

Menu function keys:

ESC

To close the BIOS Setup Utility.

↑ ↓ ← →

To move around the screen. An item is highlighted if it is selected.

F1

To displays information about the highlighted item

III. CMOS SETUP UTILITY

you selected.

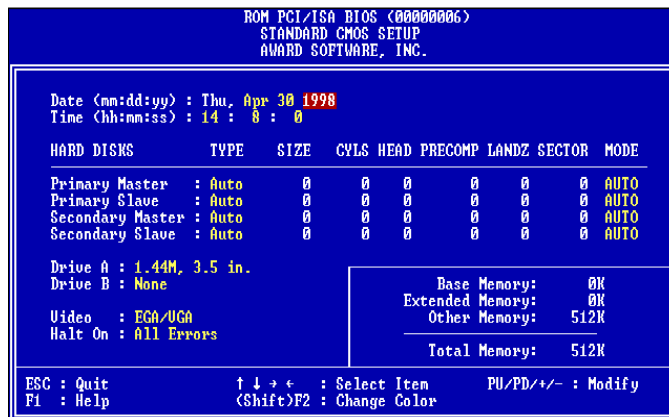
SHIFT + **F2** To Change the color scheme.

F10 To save the changes before exit the BIOS Setup Utility.

ENTER To select or enter a submenu.

3-2 Standard CMOS Setup

This "Standard CMOS Setup" sets the basic system settings such as the date, time, and the hard disk type, Video display type and error handling. Use the arrows keys **↑** **↓** **←** **→** to highlight an item and use **Page Up** / **Page Down** or **+** **-** to set the value for each item.



> Date

To set the date, highlight the date area. Press **+** / **-** or **Page Up** / **Page Down** to set the current date. The date format is month: **Jan.** ~ **Dec.**, date: **1** ~ **31**, and year: **1994** ~ **2079**.

III. CMOS SETUP UTILITY

➤ Time

To set the time, highlight the time area. Press **+** / **-** or **Page Up** / **Page Down** to set the current time. The time format is hour: **00 ~ 23**, minute: **00 ~ 59**, and second: **00 ~ 59**.

➤ Hard Disks → Primary Master / Slave

➤ Hard Disks → Secondary Master / Slave

TYPE: This item lets you set your system IDE hard disk type. Select Auto to let BIOS automatically detect the installed hard disk when system boot up. Select User if you prefer manually enter the hard disk type. The available parameters are SIZE(HDD Size), CYLS(No. of Cylinder), HEAD(No. of Head), PRECOMP(Pre-compensation), LANDZ(Landing Zone), SECTOR(No. of Sector) and MODE(HDD Mode). Select None if there is no hard disk connected to the system. **Default: Auto**

- Auto
- User
- None

MODE: Select NORMAL for IDE HDD smaller than 528MB. Select LBA for IDE HDD over than 528MB and support LBA(Logical Block Addressing) mode. Select LARGE for IDE HDD over than 528MB and do not support LBA mode. **Note:** We recommend that you set both IDE HDD TYPE and MODE to AUTO to let BIOS automatically detect the hard disk drives for you. **Default: Auto**

- AUTO
- NORMAL
- LBA
- LARGE

➤ Floppy → Drive A / B

Drive A / B: Select the floppy drive type installed in your system. The available options for Drive A and Drive B are: 360KB 5.25", 1.2MB 5.25", 720KB 3.5", 1.44MB 3.5", 2.88MB 3.5" and None. **Default: Drive A => 1.44MB 3.5"**
Drive B => None

- None
- 360KB 5.25"
- 1.2MB 5.25"
- 720KB 3.5"
- 1.44MB 3.5"
- 2.88MB 3.5"

➤ Video

III. CMOS SETUP UTILITY

Video:

- EGA/VGA
- CGA40
- CGA80
- Mono

Select the video display card type installed in your system. The available types are: EGA/VGA, CGA 40, CGA 80 and Mono.

Default: EGA/VGA

➤ **Halt On**

Halt On:

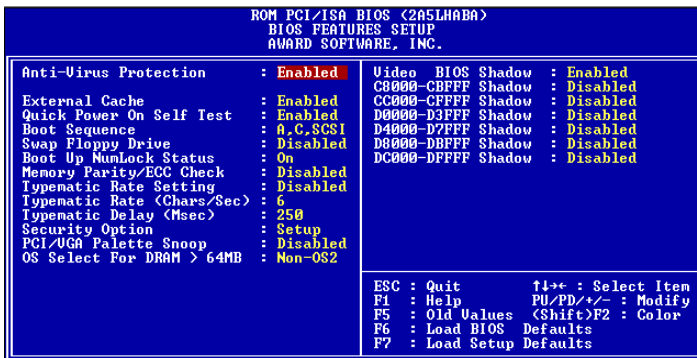
- All Errors
- No Errors
- All, But Keyboard
- All, But Diskette
- All, But Disk/Key

This item defines the operation of the system POST(Power On Self Test). You can use this item to select which kind of errors will cause the system to halt during POST.

Default: All Errors

3-3 BIOS Features Setup

This "BIOS Features Setup" option allows you to setup and improve your system features and performance.



Anti-Virus Protection:

When this item is enabled, BIOS will automatically load Anti-Virus program that will prevent your system being

III. CMOS SETUP UTILITY

- Enabled infected by Boot Viruses.
- Disabled **Default: Enabled**

➤ External Cache

- External Cache:** This item controls Enable/Disable the external L2 cache.
- Enabled **Default: Enabled**
 - Disabled

➤ Quick Power On Self Test

- Quick Power On Self Test:** This item can be used to start operating system quickly by skip some normal POST checking items.
- Enable **Default: Enabled**
 - Disabled

➤ Boot Sequence

- Boot Sequence:** This item defines where the system will look for an operating system, and the order of priority. The boot up search sequence shown as left.
- A,C,SCSI **Default: A, C, SCSI**
 - C,A,SCSI
 - C,CDROM,A
 - CDROM,C,A
 - D,A,SCSI
 - E,A,SCSI
 - F,A,SCSI
 - SCSI,A,C
 - SCSI,C,A
 - C only
 - LS/ZIP,C B

➤ Swap Floppy Drive

- Swap Floppy Drive:** If you have two floppy drives in your system, This item allows you to swap around the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A.
- Enabled **Default: Disabled**
 - Disabled

III. CMOS SETUP UTILITY

➤ **Boot Up NumLock Status**

Boot Up NumLock Status: This item defines if the keyboard **NumLock** key is active when your system is started.

- On **Default: On**
- Off

➤ **Memory Parity/ECC Check**

Memory Parity/ECC Check: To Enable or Disable the BIOS memory parity/ECC check function.

- Enabled **Default: Enabled**
- Disabled

➤ **Typematic Rate Setting**

Typematic Rate Setting: To Enable or Disable the speed of keyboard to send repeat keystrokes.

- Enabled **Default: Disabled**
- Disabled

➤ **Typematic Rate (Chars/Sec)**

Typematic Rate: This item provides typematic rate setting, which allows you to control the repeated keystrokes speed.

- 6 **Default: 6**
- 8
- 10
- 12
- 15
- 20
- 24
- 30

➤ **Typematic Delay (Msec)**

Typematic Delay: This item provides typematic delay setting, which allows you control the delay time between the first and the second keystroke.

- 250 **Default: 250**
- 500
- 750
- 1000

III. CMOS SETUP UTILITY

➤ Security Option

- Security Option:** The "Setup" option is for password request in entering BIOS setup.
- Setup
- System The "System" option is for password request in entering setup and system boot up. **Default: Setup**

➤ PCI/VGA Palette Snoop

- PCI/VGA Palette Snoop:** Set this item to Enabled to reduce display problem when both PCI VGA and some graphic accelerator devices such as MPEG/Video capture cards are installed in your system. **Default: Disabled**
- Enabled
- Disabled

➤ OS Select for DRAM > 64MB

- OS Select for DRAM > 64MB:** This item is to patch that OS/2 can not report correct memory size for more than 64 MB. Set it to OS/2 if you have an OS/2 installed and have over 64MB system memory. **Default: Non-OS/2**
- OS/2
- Non-OS/2

➤ Video BIOS Shadow

- Video BIOS Shadow:** This item defines if you leave default setting, video BIOS memory will be copied from ROM into DRAM area to enhance system performance as DRAM access time is faster than ROM. **Default: Enabled**
- Enabled
- Disabled

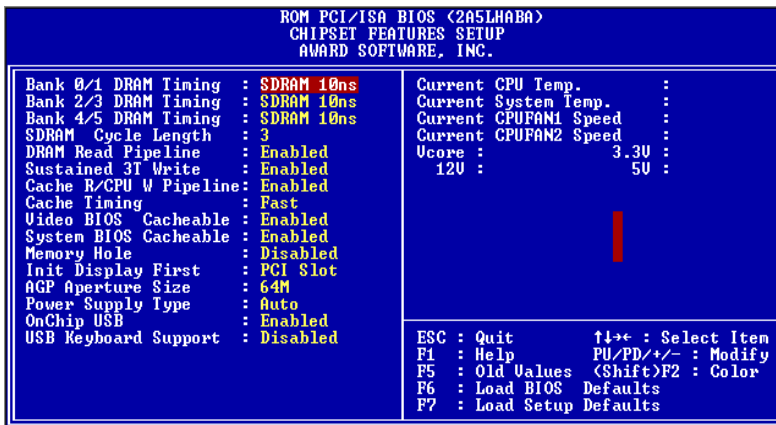
➤ C8000-CBFFF Shadow to DC000-DFFFF Shadow

- C8000-CBFFF to DC000-DFFFF Shadow:** Set Enabled if you know the address that your add-on card ROM used to shadow them. If the item is Enabled, BIOS will copy the selected area from ROM to RAM to increase system performance. **Default: Disabled**
- Enabled
- Disabled

III. CMOS SETUP UTILITY

3-4 Chipset Features Setup

This option display a table of items which define timing parameters of the mainboard components including the graphic system, memory, and the system logic. In general rule, you should leave the items on this page at the default values unless you are familiar with the technical specifications of your hardware. If you change the values, you may introduce fatal errors or recurring instability into your system.



- Medium
- Fast
- Turbo

➤ SDRAM Cycle Length

SDRAM Cycle Length:

This item defines SDRAM Cycle Length.

- 2

Default: 3

III. CMOS SETUP UTILITY

- 3

➤ DRAM Read Pipeline

DRAM Read Pipeline: This item allows you enable or disable DRAM Read Pipeline.
- Disabled
- Enabled **Default: Enabled**

➤ Sustained 3T Write

Sustained 3T Write: This item allows you enable or disable Sustained 3T Write.
- Enabled
- Disabled **Default: Enabled**

➤ Cache R/CPU W Pipeline

Cache R/CPU W Pipeline: This item enables or disables Cache R/CPU W Pipeline.
- Enabled
- Disabled **Default: Enabled**

➤ Cache Timing

Cache Timing: This item allows you set the L2 Cache Timing.
- Fast
- Fastest **Default: Fast**

➤ Video BIOS Cacheable

Video BIOS Cacheable: This item allows the video BIOS to be cached for faster video performance.
- Enabled
- Disabled **Default: Enabled**

III. CMOS SETUP UTILITY

➤ System BIOS Cacheable

System BIOS Cacheable:

- Enabled
- Disabled

This item allows the system BIOS to be cached for faster system performance.

Default: Enabled

➤ Memory Hole

Memory Hole:

- 15M–16M
- Disabled

This item can be used to reserve memory space for some ISA cards that require it.

Default: Disabled

➤ Init Display First

Init Display First:

- PCI Slot
- AGP

This item allows you select whether PCI Slot or AGP device will be initialed first for display.

Default: PCI Slot

➤ AGP Aperture Size

AGP Aperture Size (MB):

- 4M
- 8M
- 16M
- 32M
- 64M
- 128M

This item defines the effective memory size of the AGP Aperture.

Default: 64M

➤ Power Supply Type

Power Supply Type:

- ATX
- P8&P9

This item allows you set your system power supply type. Select ATX for ATX power supply and P8&P9 for AT power supply.

Default: Auto

III. CMOS SETUP UTILITY

- Auto

Note: The following BIOS items can be functioning only when the system using ATX power supply and ATX power supply type is selected in this item.

\ **CMOS Setup \ Power Management **

- Wake Up On LAN/Ring
- RTC Alarm Resume
- Soft-Off by PWRBTN

➤ **OnChip USB**

OnChip USB:

- Enabled
- Disabled

This item allows you to enable or disable the mainboard USB function.

Default: Enabled

➤ **USB Keyboard Support**

USB Keyboard Support:

- Enabled
- Disabled

This item is displayed only when you enable the "OnChip USB" item.

When you set this item to Enabled, the BIOS simulates USB keyboard in legacy mode, which means during POST or under operating system, you can use a USB keyboard without loading USB driver.

Note you can not use both USB driver and USB legacy keyboard at the same time. Set disabled if you have USB driver in the operating system.

Default: Disabled

- **Current CPU Temp. / Current System Temp.**
- **Current CPUFAN1 Speed / Current CPUFAN2 Speed**
- **Vcore / 3.3V / 5V / 12V**

These items are the hardware monitor indicators for displaying the current CPU/System temperature, CPU Fan Speed, and System voltage status.

III. CMOS SETUP UTILITY

3-5 Power Management Setup

```

ROM PCI/ISA BIOS (2A5LHABA)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management      : User Define
PM Control by APM    : Yes
Video Off Method     : U/H SYNC+Blank
Video Off After      : Suspend
MODEM Use IRQ        : 3
Doze Mode            : Disable
Suspend Mode         : Disable
HDD Power Down       : Disable
Soft-Off by PWRBTN   : Instant-Off
** PM Events **
UGA                  : OFF
LPT & COM            : LPT/COM
HDD & FDD            : ON
DMA/master           : OFF
RTC Alarm Resume     : Disabled

Wake Up On LAN/Ring : Disabled

Primary INTR : ON
IRQ3 (COM2)  : Primary
IRQ4 (COM1)  : Primary
IRQ5 (LPT2)  : Primary
IRQ6 (FDD)   : Primary
IRQ7 (LPT1)  : Primary
IRQ8 (Alarm) : Disabled
IRQ9 (Rsv)   : Secondary
IRQ10 (Rsv)  : Secondary
IRQ11 (Rsv)  : Secondary
IRQ12 (PS/2) : Primary
IRQ13 (CoPro): Primary
IRQ14 (HDD)  : Primary
IRQ15 (Rsv)  : Disabled

ESC : Quit          F10 : Select Item
F1  : Help          PU/PD/+/- : Modify
F5  : Old Values   <Shift>F2 : Color
F6  : Load BIOS Defaults
F7  : Load Setup Defaults
  
```

power
n of the
vanced

Configuration and Power Interface).

Note that the following items will be invisible and not functioning when the system using P8&P9 AT power supply.

- Wake Up On LAN/Ring, RTC Alarm Resume, Soft-Off by PWRBTN

➤ Power Management

Power Management: This item allows you to set the default parameters of power-saving modes. Set to Disable to disable power management function. Set to User Define to define your own parameters.

- Max Saving
- Mix Saving
- User Define

Default: User Define

Mode	Doze	Suspend
Min Saving	1 hour	1 hour
Max Saving	10 sec	10 sec

➤ PM Controlled by APM

III. CMOS SETUP UTILITY

PM Controlled by APM: Set to Yes to transfer power management control to APM (Advanced Power Management) and enhance power saving function.
- Yes
- No **Default: Yes**

➤ Video Off Method

Video Off Method: To select the method to turn off the video monitor for power saving mode.
- V/H SYNC+Blank **Default: V/H SYNC+Blank**
- DPMS Support
- Blank Screen

➤ Video Off After

Video Off After: To select at which power saving mode, the video monitor will be turned off.
- Suspend **Default: Suspend**
- Doze
- NA

➤ Modem Use IRQ

Modem Use IRQ: To select the IRQ which will be used by system modem.
- 3 **Default: 3**
- 4
- 5
- 7
- 9
- 10
- 11
- NA

➤ Doze Mode

Doze Mode: This item lets you set the timer after which the system enters into Doze mode. The system event is detected by monitoring the IRQ signals or other I/O events.
- Disabled
- 10 Sec

III. CMOS SETUP UTILITY

- 20 Sec
-
- 1 Hour

Default: Disabled

➤ **Suspend Mode**

Suspend Mode:

- Disabled
- 10 Sec
- 20 Sec
-
- 1 Hour

This item lets you set the timer after which the system enters into Suspend mode. The system activity is detected by monitoring the IRQ signals or other I/O events.

Default: Disabled

➤ **HDD Power Down**

HDD Power Down:

- Disabled
- 1 Min
-
- 15 Min

This item allows you specify the IDE HDD idle time before the device enters the power saving mode.

Default: Disabled

➤ **Soft-Off by PWRBTN**

Soft-Off by PWRBTN:

- Instant-Off
- Delay 4 Sec

When set to "Delay 4 Sec", the power switch on the front panel can be used to control power On/Suspend/Off.

<u>Press switch</u>	<u>System status</u>
Less than 4 seconds	Suspend mode
Longer than 4 seconds	Power off

When set to "Instant-Off", the power switch is only used to control On/Off, no Suspend mode function.

Default: Enabled

➤ **PM Events → VGA**

VGA:

- Off
- On

This item allows you enable or disable the detection of VGA activities for power saving mode.

Default: Off

III. CMOS SETUP UTILITY

➤ PM Events → LPT & COM

LPT & COM:

- LPT
- COM
- LPT/COM
- None

This item allows you enable or disable the detection of LPT & COM activities for power saving mode.

Default: LPT/COM

➤ PM Events → HDD & FDD

HDD & FDD:

- Off
- On

This item allows you enable or disable the detection of HDD & FDD activities for power saving mode.

Default: On

➤ PM Events → DMA/master

DMA/master:

- Off
- On

This item allows you enable or disable the detection of DMA/master activities for power saving mode.

Default: Off

➤ PM Events → RTC Alarm Resume

RTC Alarm Resume:

- Enabled
- Disabled

To enable or disable the RTC Wake Up function.

Default: Disabled

➤ PM Events → Date (of Month)

Date (of Month):

- 0
- 1
-
- 31

This item displayed only when you enable the RTC Alarm Resume item.

You can use this item to specify the date you want to wake up the system. For Example, if you set to 18, the system will wake up on the 18th day of every month. If set to 0, the system will wake up on the specified time every day.

III. CMOS SETUP UTILITY

➤ **PM Events → Timer (hh:mm:ss)**

Timer (hh:mm:ss):

- hh:mm:ss

This item is displayed only when you enable the RTC Alarm Resume item. You can use this item to specify the time you want to wake up the system.

➤ **PM Events → Wake Up On LAN/Ring**

Wake Up On LAN/Ring:

- Enabled
- Disabled

To enable or disable Modem or LAN Wake Up function.

Default: Disabled

➤ **PM Events → Primary INTR**

Primary INTR:

- On
- Off

Use this item to enable or disable the detection of IRQ3 ~ IRQ15 events for power saving mode.

Default: On

➤ **PM Events → IRQ3 (COM2), IRQ4 (COM1), IRQ5 (LPT2), IRQ6 (Floppy), IRQ7 (LPT1), IRQ8 (Alarm), IRQ9 (Reserved), IRQ10 (Reserved), IRQ11 (Reserved), IRQ12 (PS/2 Mouse), IRQ13 (Coprocessor), IRQ14 (Hard Disk), IRQ15 (Reserved)**

IRQ3 ~ IRQ15:

- Primary
- Secondary
- Disabled

Select Primary or Disabled to enable or disable the detection of the specified IRQ for power saving mode. Select Secondary to wake up the system for 2ms after detecting the specified IRQ and then return to power saving mode.

Default: IRQ3 ~ IRQ7, IRQ12 ~ IRQ14 => Primary

IRQ9 ~IRQ11 => Secondary

IRQ8, IRQ15 => Disabled

III. CMOS SETUP UTILITY

3-6 PNP/PCI Configuration Setup

This option display a table of items that configures how PNP (Plug and Play) and PCI expansion cards operates in your system.

```
ROM PCI/ISA BIOS (251HABA)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.

PNP OS Installed      : No
Resources Controlled By : Manual
Reset Configuration Data : Disabled

IRQ-3 assigned to : PCI/ISA PnP
IRQ-4 assigned to : PCI/ISA PnP
IRQ-5 assigned to : Legacy ISA
IRQ-7 assigned to : PCI/ISA PnP
IRQ-9 assigned to : PCI/ISA PnP
IRQ-10 assigned to : PCI/ISA PnP
IRQ-11 assigned to : PCI/ISA PnP
IRQ-12 assigned to : PCI/ISA PnP
IRQ-14 assigned to : PCI/ISA PnP
IRQ-15 assigned to : PCI/ISA PnP
DMA-0 assigned to : PCI/ISA PnP
DMA-1 assigned to : Legacy ISA
DMA-3 assigned to : PCI/ISA PnP
DMA-5 assigned to : PCI/ISA PnP
DMA-6 assigned to : PCI/ISA PnP
DMA-7 assigned to : PCI/ISA PnP

CPU to PCI Write Buffer: Enabled
PCI Dynamic Bursting  : Enabled
PCI Master 0 WS Write : Enabled
PCI Delay Transaction : Enabled
PCI#2 Access #1 Retry : Disabled
AGP Master 1 WS Write : Enabled
AGP Master 1 WS Read  : Disabled

Assign IRQ For USB   : Enabled
Assign IRQ For VGA   : Enabled

ESC : Quit          f10* : Select Item
F1  : Help          PU/PD/+- : Modify
F5  : Old Values   <Shift>F2 : Color
F6  : Load BIOS Defaults
F7  : Load Setup Defaults
```

➤ PnP OS Installed

PnP OS Installed:

- Yes
- No

Normally, BIOS will allocate the PnP resources during POST (Power-On Self Test). Set this item to Yes if you have a PnP operating system such as Windows 95, BIOS will bypass PNP device initial except of boot device (VGA/IDE or SCSI) and PNP operating system will do these PNP devices resource allocation. If this item is set to No, BIOS will handle all PNP devices.

Default: No

➤ Resources Controlled By

Resources Controlled by:

- Auto
- Manual

Basically, BIOS will allocate the IRQ/DMA resources automatically for these PNP/PCI and onboard devices. The exception might be encountered when legacy ISA devices are installed, which occupies resources that

III. CMOS SETUP UTILITY

BIOS can not know. Therefore, this option is for BIOS to know in advance that IRQ/DMA is occupied by legacy ISA devices if Manual is selected.

Default: Manual

➤ **Reset Configuration Data**

Reset Configuration Data:

- Enabled
- Disabled

When this item is set to Enabled, BIOS will turn it Disabled again in the next boot up. This item is for clearing ESCD data. The only reason to clear is the data losing the confidence. The engineering test is a good reason to change the default setting.

Default: Disabled

➤ **IRQ3, IRQ4, IRQ5, IRQ7, IRQ9, IRQ10, IRQ11, IRQ12, IRQ14, IRQ15**

IRQ 3-5, 7, 9-12, 14-15:

- Legacy ISA
- PCI/ISA PnP

Set the selected IRQ to Legacy ISA if your ISA card is not PnP compatible card and requires a special IRQ to make it function.

These options provide IRQ resources allocation for Legacy ISA or PCI/ISA PnP card.

Default: IRQ 5 => Legacy ISA

IRQ 3-4, 7, 9-12, 14-15 => PCI/ISA PnP

➤ **DMA 0, DMA 1, DMA 3, DMA 5, DMA 6, DMA 7**

DMA 0,1,3,5-7:

- Legacy ISA
- PCI/ISA PnP

Set the selected DMA channel to Legacy ISA if your ISA card is not PnP compatible card and requires a special DMA channel to make it function.

Default: DMA 1 => Legacy ISA

DMA 0, 3, 5-7 => PCI/ISA PnP

➤ **CPU to PCI Write Buffer**

CPU to PCI Write Buffer:

To enable or disable CPU to PCI Write Buffer.

Default: Enabled

III. CMOS SETUP UTILITY

- Enabled
- Disabled

➤ PCI Dynamic Bursting

PCI Dynamic To enable or disable PCI Dynamic Bursting.

Bursting:

- Enabled
- Disabled

Default: Enabled

➤ PCI Master 0 WS Write

PCI Master 0 WS To enable or disable PCI Master 0 WS Write.

Write:

- Enabled
- Disabled

Default: Enabled

➤ PCI Delay Transaction

PCI Delay To enable or disable PCI Delay Transaction.

Transaction:

- Enabled
- Disabled

Default: Enabled

➤ PCI#2 Access #1 Retry

PCI#2 Access #1 To enable or disable PCI#2 Access #1 Retry.

Retry:

- Enabled
- Disabled

Default: Disabled

➤ AGP Master 1 WS Write

AGP Master 1 WS To enable or disable AGP Master 1 WS Write.

Write:

- Enabled
- Disabled

Default: Enabled

III. CMOS SETUP UTILITY

➤ **AGP Master 1 WS Read**

AGP Master 1 WS To enable or disable AGP Master 1 WS Read.

Read:

Default: Disabled

- Enabled
- Disabled

➤ **Assign IRQ For USB**

Assign IRQ For USB: To enable or disable assign IRQ for USB.

- Enabled
- Disabled

Default: Disabled

➤ **Assign IRQ For AGP**

Assign IRQ For AGP: To enable or disable assign IRQ for AGP.

- Enabled
- Disabled

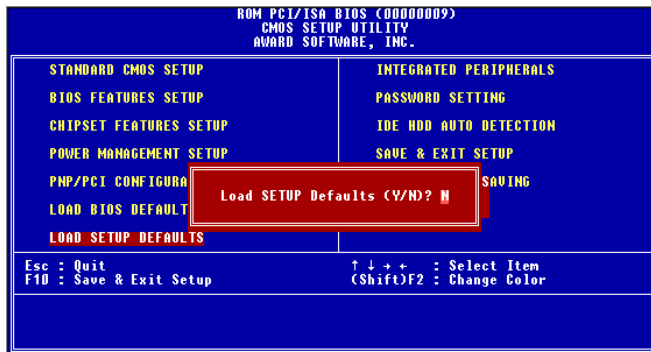
Default: Disabled

III. CMOS SETUP UTILITY

3.7 Load Setup Defaults

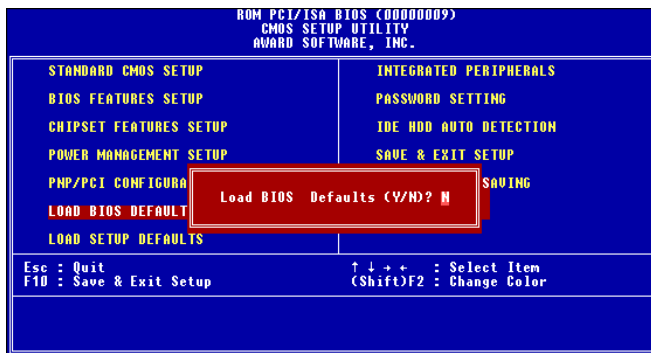
This option allows you load BIOS optimized settings for maximum system performance.

To load Setup Default, press Y key to confirm the operation when you see the above display.



3-8 Load BIOS Defaults

This option provides the minimum requirements for your system to operate. Load the BIOS default values if your system has unstable problem with the setup default value.



III. CMOS SETUP UTILITY

3-9 Integrated Peripherals

This option allows you to configure the I/O features.

ROM PCI/ISA BIOS (2A5LHABA) INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.	
OnChip IDE Channel0 : Enabled	Onboard Parallel Mode : Normal
OnChip IDE Channel1 : Enabled	OnChip Modem : Disabled
IDE Prefetch Mode : Enabled	OnChip Sound : Enabled
IDE HDD Block Mode : Enabled	Onboard Legacy Audio : Enabled
Primary Master PIO : Auto	Sound Blaster : Enabled
Primary Slave PIO : Auto	SB IRQ Select : IRQ 5
Secondary Master PIO : Auto	SB I/O Base : 220H
Secondary Slave PIO : Auto	SB DRQ Select : DMA 1
Primary Master UDMA : Auto	MPU-401 : Enabled
Primary Slave UDMA : Auto	MPU-401 I/O Base : 330H
Secondary Master UDMA : Auto	FM Port (388H-38BH) : Enabled
Secondary Slave UDMA : Auto	Game Port (200H-207H) : Enabled
Flash/Upgrade BIOS : Enabled	
Onboard FDD Controller : Enabled	
Onboard Serial Port 1 : Auto	ESC : Quit ↑↓←→ : Select Item
Onboard Serial Port 2 : Auto	F1 : Help PU/PD/+/- : Modify
UART 2 Mode : Standard	F5 : Old Values (Shift)F2 : Color
Onboard Parallel Port : 378/IRQ7	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

➤ OnChip IDE Channel 0/1

OnChip IDE Channel 0/1:

To enable or disable the IDE device connected to the First/Second IDE connector.

- Enabled
- Disabled

Default: Enabled

➤ IDE Prefetch Mode

IDE Prefetch Mode:

This item allows you to enable or disable IDE Prefetch Mode.

- Enabled
- Disabled

Default: Enabled

➤ IDE HDD Block Mode

IDE HDD Block Mode:

This BIOS supports the enhanced IDE specification and allow multiple sectors access in a time when

III. CMOS SETUP UTILITY

- Enabled read/write. If set this item to disabled, IDE runs in
- Disabled single sector access. **Default: Enabled**

- **Primary Master/Slave PIO**
- **Secondary Master/Slave PIO**

Primary/Secondary Master/Slave PIO: Set these items to Auto to auto-detect the HDD speed. The PIO mode specifies the data transfer rate of HDD.

	IDE HDD Mode	Transfer Rate
- Auto	Mode 0	3.3MB/s
- Mode 1	Mode 1	5.2MB/s
- Mode 2	Mode 2	8.3MB/s
- Mode 3	Mode 3	11.1MB/s
- Mode 4	Mode 4	16.6MB/s.

Set to slower mode if your hard disk performance becomes unstable. **Default: Auto**

- **Primary Master/Slave UDMA**
- **Secondary Master/Slave UDMA**

Primary/Secondary Master/Slave UDMA: These items allows you to set the Ultra DMA/33 mode supported by the IDE hard disk drive installed in your system.

- Auto
- Disabled **Default: Auto**

- **Flash/Upgrade BIOS**

Flash/Upgrade BIOS: This item allows you to protect your mainboard BIOS being flashed/upgraded by MAXFLASH.EXE flash utility if you set this item disabled.

- Enabled
- Disabled

You can specify the BIOS password to avoid that someone can change your setting.

Default: Enabled

- **Onboard FDC Controller**

Onboard FDC Controller: To enable or disable the onboard floppy disk controller. Set to disabled if you want to use a

III. CMOS SETUP UTILITY

- Enabled separate floppy disk controller card.
- Disabled **Default: Enabled**

➤ Onboard Serial Port 1 / Port 2

Onboard Serial Port 1 & 2: This item allows you to select the I/O port and IRQ used by the onboard serial ports.

- Auto **Default: Onboard Serial Port 1=> 3F8/IRQ4**
- 3F8/IRQ4 **Onboard Serial Port 2=> 2F8/IRQ3**
- 2F8/IRQ3
- 3E8/IRQ4
- 2E8/IRQ3
- Disabled

➤ UART 2 Mode

UART 2 Mode: This item is selectable only when the onboard serial port 2 is enabled. The available mode selections for the serial port 2 are Standard, HPSIR, and ASKIR.

- Standard **Standard:** Configures serial port as normal mode.
- HPSIR **HPSIR:** Set to this setting if there is an infrared device connected on the onboard IrDA connector. The maximum baud rate of this setting is: 115K baud.
- ASKIR **ASKIR:** Set to this setting if there is an infrared device connected on the onboard IrDA connector. The maximum baud rate of this setting is: 19.2K baud.

Default: Standard

➤ IR Function Duplex

IR Function Duplex: This item is selectable only when the onboard serial port 2 is enabled and the HPSIR or ASKIR is selected under UART 2 Mode item.

- Half
 - Full
- This item allows you to select the value required by the IR device connected to the IR port. Full-duplex mode permits simultaneous two-direction

III. CMOS SETUP UTILITY

transmission. Half-duplex mode permits transmission in one direction only at a time.

Default: Half

➤ Onboard Parallel Port

Onboard Parallel Port:

- 3BC/IRQ7
- 378/IRQ7
- 278/IRQ7
- Disabled

This item controls the onboard parallel port address and interrupt.

Default: 378/IRQ7

➤ Parallel Port Mode

Parallel Port Mode:

- Normal
- EPP
- ECP
- ECP + EPP

This item allows you to set the parallel port mode.

1. **Normal => SPP (Standard Parallel Port):** IBM AT and PS/2 compatible mode
2. **EPP (Enhanced Parallel Port):** To enhances the parallel port by directly write/read data to/from parallel port without latch.
3. **ECP (Extended Parallel Port):** ECP supports DMA and RLE (Run Length Encoded) compression and decompression.

Default: SPP

➤ ECP Mode Use DMA

ECP Mode Use DMA:

- 3
- 1

This item displayed when select the ECP mode above for the parallel port. You can set the DMA channel of ECP mode.

Default: 3

III. CMOS SETUP UTILITY

3-10 Password Setting

Password prevents unauthorized use of your computer. If you set a password, the system prompts for the correct password before boot or access to Setup, the steps as follows,

1. Highlight the item Password Setting on the main menu and press ENTER.
2. The password dialog box will appear.
3. If you are installing a new password, carefully type in the password. Press ENTER after you have typed in the password. If you are deleting a password that is already installed just press ENTER when the password dialog box appears.
4. The system will ask you to confirm the new password by asking you to type it in a second time. Carefully type the password again and press ENTER, or just press ENTER if you are deleting a password that is already installed.
5. If you typed the password correctly, the password will be installed.

[Note]

If you forget your password, or you want to cancel your password, you can do the steps as the following,

(1) Password forgotten:

- i> Turn off the system
- ii> Short JP1 at Pin 2-3 for a few seconds to clear CMOS.
- iii> Set the JP1 back to Pin 1-2.
- iv> Power on the system.

(2) Clear Password:

Clear your password by key-in the password you installed before, then go to PASSWORD SETTING to press ENTER twice.

III. CMOS SETUP UTILITY

3-11 IDE HDD Auto Detection

This item automatically detects and installs any hard disk drives installed on the primary and secondary IDE channel. Most modern drives can be detected. If you are using a very old drive that can't be detected, you can install it manually using the Standard CMOS Setup option. Setup will check for two devices on the primary IDE channel and then two devices on the secondary IDE channel. At each device, the system will flash an N in the dialog box. Press Enter to skip the device and proceed to the next device. Press Y, then Enter to tell the system to accept the BIOS auto-detected device type.

3-12 Save & Exit Setup

Highlight this item and press ENTER to save the changes that you have made in the setup utility and exit the setup program. When the *Save and Exit* dialog box appears, press Y to save and exit, or press N to return to the setup main menu.

3-13 Exit without Saving

Use this option to exit Setup Utility without saving the CMOS value changes.

SECTION 4.

SOFTWARE UTILITY

4-1 BIOS Flash/Upgrade Procedures

To upgrade your mainboard BIOS, please follow the steps below:

1. Get the newest version BIOS to fit your mainboard model from your mainboard distributor.

! Boot up your system without loading config.sys and autoexec.bat !

2. For Win95/98 system, press F8 before Win95/98 boot-up, and select "Safe mode command prompt only".

For Non-Win95/98 system, boot-up the system into DOS prompt with a bootable floppy disk.

3. Run A:\> or C:\> bxa120.exe

(Assuming model is BXA, execution file is bxa120.exe, and your floppy drive is drive A and hard disk drive is drive C)

4. After loading the new BIOS code, the utility will prompt you to save original BIOS code into your HDD or floppy. Please press "Y" to store it as "BIOS.OLD".

5. After the old BIOS has been successfully saved, press "Y" to upgrade BIOS.

!!! DO NOT TURN OFF THE POWER DURING THE FLASHING PROCESS.!!!

6. After the flashing process, reboot the system by turn off the power.

7. Press "DEL" key to enter BIOS setup during POST. Reload the "BIOS SETUP DEFAULT" and reconfigure the other items as your previous setting.

8. Then save and exit.

IV.SOFTWARE UTILITY

4-2 VIA Chipset Driver Utility

This mainboard has five sets of VIA chipset drivers as below. All drivers can be found under the directory \IDE\VIA in the bundled CD title. Please follow the installation instruction in the bundled CD to install all these necessary drivers.

Drivers Overview:

- VIA Bus Master IDE Driver
 - Microsoft Windows 95/Windows 98
 - Microsoft Windows NT
- VIA AGP Driver
 - Microsoft Windows 95/Windows 98
- VIA IRQ Routing Driver
 - Microsoft Windows 95/Windows 98

For all VIA chipsets using VT82C586A or VT82C586B south-bridge chipsets.

- VIA USB Filter Driver

This driver adds support for more USB devices to the VT82C586B and VT82C596
- PCI Bridge Patch

This patch allows Win95/98 to recognize the VIA chipset in the system device manager.

IV.SFTWARE UTILITY

4-3 VIA Audio Driver Utility

This mainboard has three sets of audio drivers for different operation system. All drivers can be found under the directory \AUDIO\VIA in the bundle CD title.

Drivers Overview:

- Microsoft Windows DOS
- Microsoft Windows 95
- Microsoft Windows 98

SECTION 5.

Audio Driver/Utility

This mainboard has four sets of audio drivers for different operation system. All drivers can be found in the bundle CD title.

Drivers Overview:

- Microsoft Windows 95/Windows 98
- Microsoft Windows NT 3.50/3.51/4.00
- Microsoft Windows 3.1
- OS/2 2.1/3.0

5-1 Windows 95/98 Driver Installation

5-1.1 Driver files location:

Windows 95/98 audio driver for English version: \Audio\win95

Windows 95/98 audio driver for Chinese version: \Audio\multi_\Chinese

Windows 95/98 audio driver for French version: \Audio\multi_\French

Windows 95/98 audio driver for Germany version: \Audio\multi_\German

Windows 95/98 audio driver for Japan version: \Audio\multi_\Japanese

Windows 95/98 audio driver for Spanish version: \Audio\multi_\Spanish

Windows 95/98 audio driver for Korea version: \Audio\multi_\Korean

Windows 95/98 audio driver for Italian version: \Audio\multi_\Italian

V. AUDIO DRIVER & UTILITY

5-1.2 Procedure:



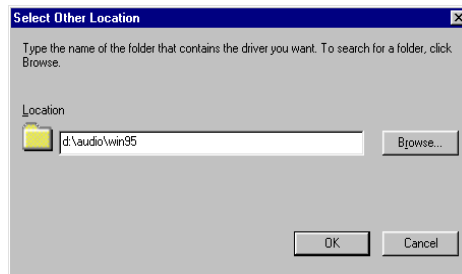
1. Update Device Driver Wizard

When windows 95/98 boot up, the "Update Device Driver Wizard" will appear. Please select "Next" to complete the Audio driver installation.



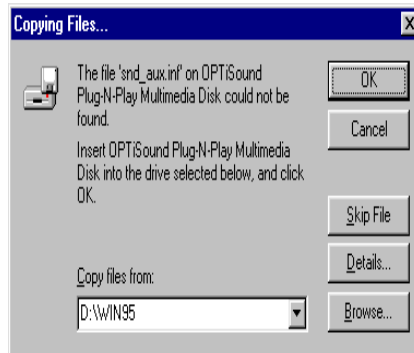
2. Select Location

If Windows can not find the proper driver location, please select "Other Locations.." for the right driver location.



Type in the driver location: D:\audio\win95 (assuming your CD-ROM disc drive is in drive D), then select **OK**.

V. AUDIO DRIVER & UTILITY

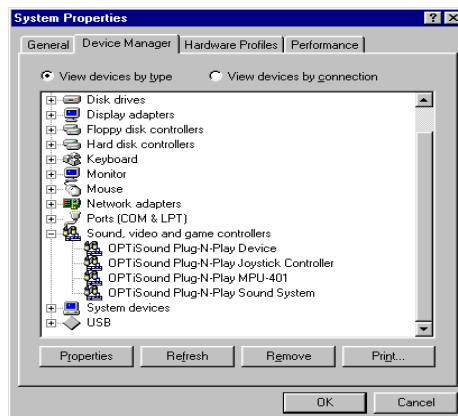


3.Copy Files From:

Windows 95 will then ask you confirm the driver location, please type in D:\audio\win95 (assuming your CD-ROM disc drive is in drive D).

After Windows 95 has finished copying all necessary files, please select **Yes** to restart your computer.

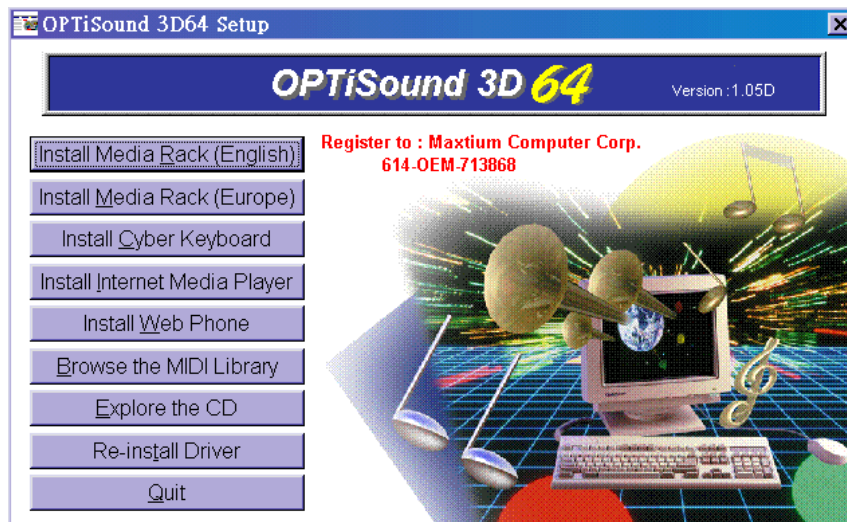
After finishing the driver installation, the following sound devices will be added under Win95 Device Manager.



V. AUDIO DRIVER & UTILITY

5-1.3 Install Utility:

Insert the Super586 installation CD. The Super586 Install Shell will appear. If it does not appear, run D:\setup.exe. You will be presented with a list of install options. Below screen will appear if select OPTi sound Utility Installation.



5-2 Windows NT Driver Installation

5-2.1 Drivers Files Location

Windows NT audio driver: \Audiowin_nt

V. AUDIO DRIVER & UTILITY

5-2.2 Procedure:

1. Click **Start** → **Setting** → **Control Panel**
2. Double Click **Multimedia** Icon
3. Click **Device** → **Add**
4. Select **Unlisted or Updated Driver** then click **ok**.
5. Input Driver Path <CD-ROM Drive>:\Audio\win_nt
6. Select **OPTi 82c933** then click **ok**.
7. Restart your System , Driver Installation Finished.

5-3 DOS/Windows 3.1 Driver Installation

5-3.1 Drivers Files Location

Windows 3.1 audio driver: \Audio\win_nt

5-3.2 Procedure:

Run<CD-ROM Drive>:\Audio\dos_w31\setup.exe

5-4 OS/2 Driver Installation

5-4.1 Drivers Files Location

Windows 3.1 audio driver: \Audio\OS2

5-4.2 Procedure:

Run<CD-ROM Drive>:\Audio\os2\minstall.exe