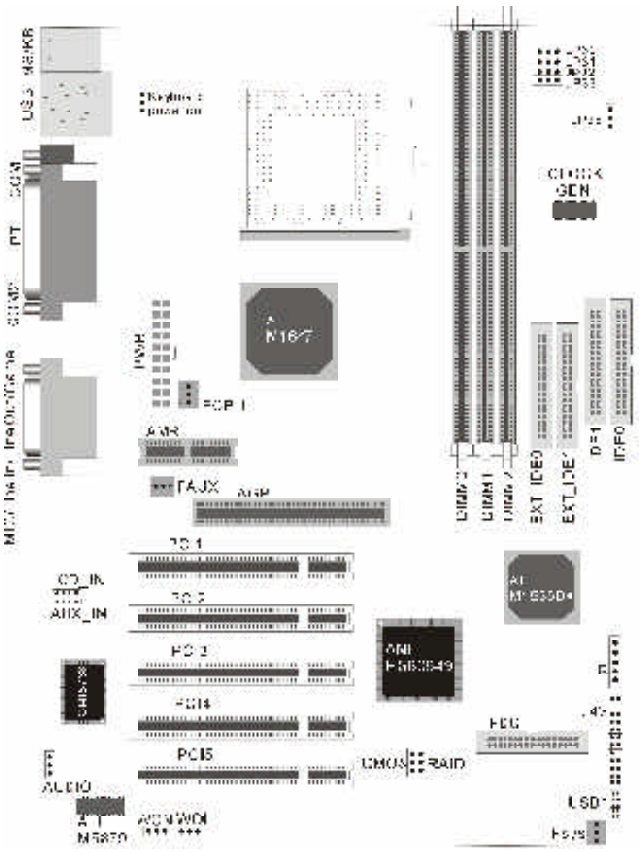
Table of Content

1 Quick Installation

1.1 Layout



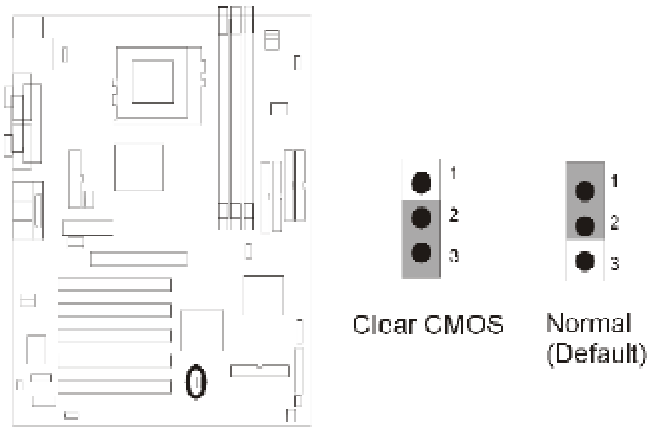
1.2 Item Checklist

[V] The motherboard
[V] Operation manual
[V] ATA/66/100 cable
[V] Floppy cable
[V] Power Installer CD

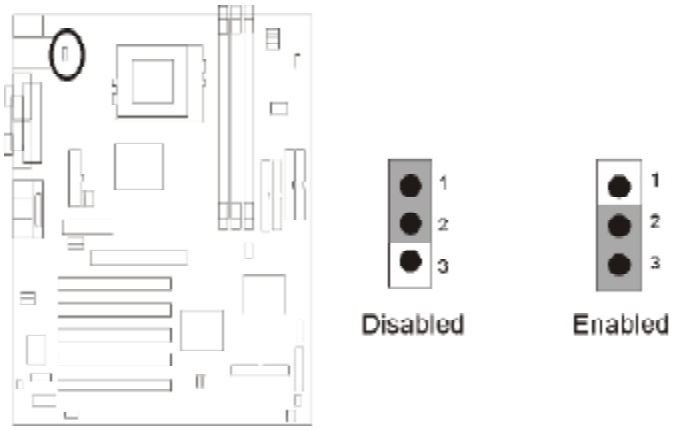
Optional
[ ] USB riser kit
[ ] Thermal Sensor for System
[ ] Display Cache Riser Card
[ ] Infrared port cable
[ ] Display Cache Riser Card
[ ] Optional Module (SPDIF version only)

1.3 Jumpers

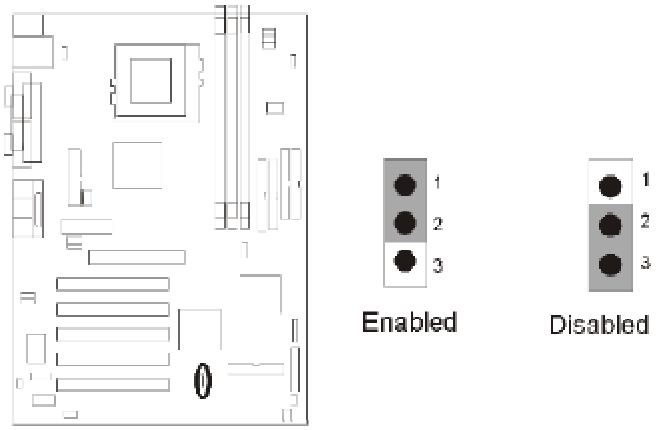
1.3.1 Clear CMOS jumper(CMOS)



1.3.2 Keyboard Power On jumper

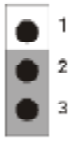


1.3.3 IDE RAID jumper(KA266-R Only)



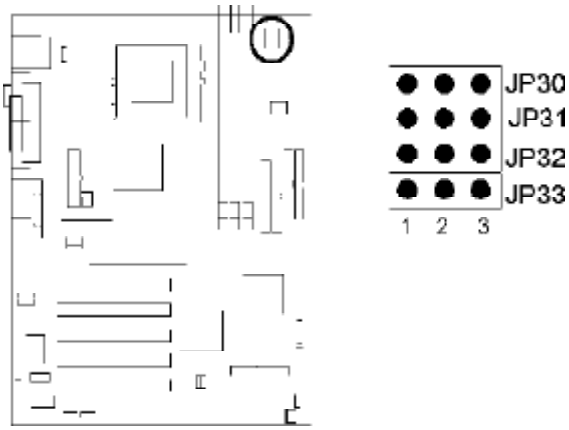
1.3.4 Audio jumper

Enabled



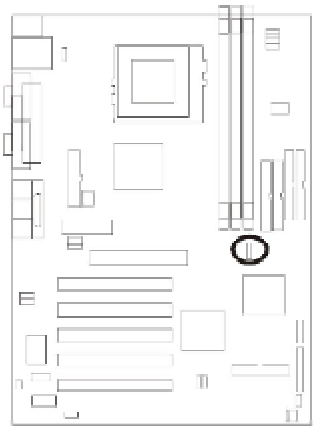
Disabled

1.3.5 Ratio Adjust Jumper



RATIO	JP30	JP31	JP32	JP33
Auto (**Default**)	1-2 ON	1-2 ON	1-2 ON	1-2 ON
X5	2-3 ON	2-3 ON	OFF	2-3 ON
X5.5	OFF	2-3 ON	OFF	2-3 ON
X6	2-3ON	OFF	OFF	2-3 ON
X6.5	OFF	OFF	OFF	2-3 ON
X7	2-3 ON	2-3 ON	2-3 ON	OFF
X7.5	OFF	2-3 ON	2-3 ON	OFF
X8	2-3 ON	OFF	2-3 ON	OFF
X8.5	OFF	OFF	2-3 ON	OFF
X9	2-3 ON	2-3 ON	OFF	OFF
X9.5	OFF	2-3 ON	OFF	OFF
X10	2-3 ON	OFF	OFF	OFF
X10.5	OFF	OFF	OFF	OFF
X11	2-3 ON	2-3 ON	2-3 ON	2-3 ON
X11.5	OFF	2-3 ON	2-3 ON	2-3 ON
X12	2-3 ON	OFF	2-3 ON	2-3 ON
X12.5	OFF	OFF	2-3 ON	2-3 ON

1.3.6 CPU FSB & Memory Speed Setting



OFF(Open) CPU 133/133 Mhz

ON (Short) CPU 100/100 Mhz

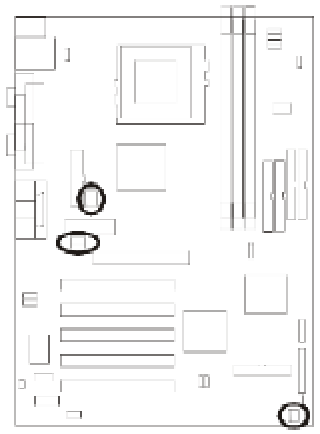
KA266/KA266-R only support synchronous CPU & memory speed.

1.4 Connectors

1.4.1 CPU fan header (J41)

1.4.2 Auxiliary fan header(J39)

1.4.3 System fan header (J40)



FCPU

Pin Assignment
1: GND
2:12V
3: SENSE

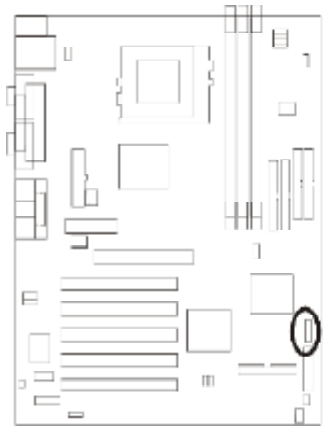
FAUX

Pin Assignment
1: GND
2:12V
3: NC

Fsys

Pin Assignment
1: GND
2:12V
3: SENSE

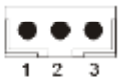
1.4.4 Infrared connector (IR)



Pin Assignment

1:5V
2:NC
3:IRRX
4:GND
5:IRTX

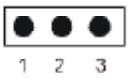
1.4.5 Wake-ON-LAN header



Pin Assignment

1:5VSB
2:GND
3:LAN_WAKE

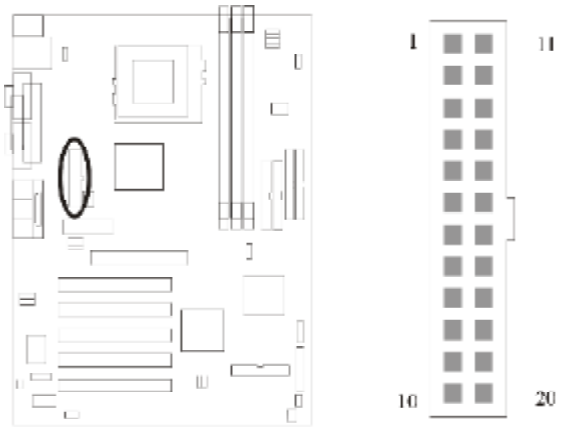
1.4.6 Wake On Moden



Pin Assignment

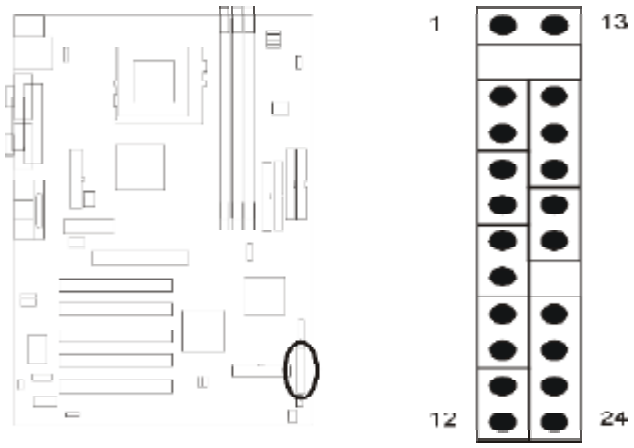
1:5VSB
2:GND
3:Control Pin

1.4.8 ATX power connector (J37)



PIN NO	Definition	PIN NO	Definition
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	GROUND	13	GROUND
4	+5V	14	Power Supply On
5	GROUND	15	GROUND
6	+5V	16	GROUND
7	GROUND	17	GROUND
8	Power Good	18	-5V
9	+5V Standby	19	+5V
10	+12V	20	+5V

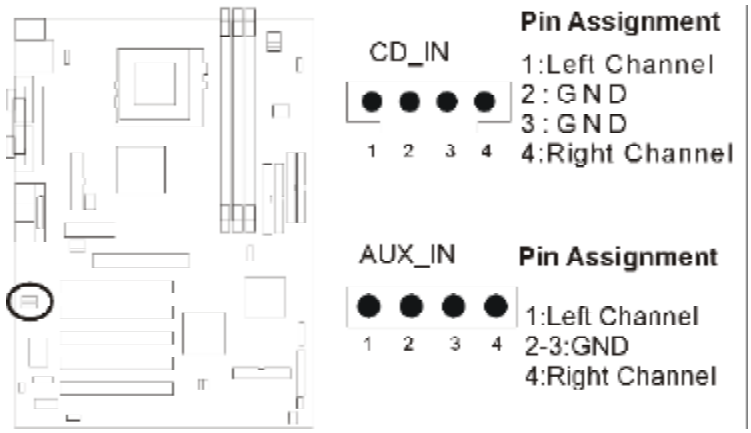
1.4.9 Front panel connector (J43)



Function	PIN NO.	Definition
PWR_ON (Power/Soft-Off)	1, 13	
ACPI (ACPI LED)	3, 4	PIN 3:Anode PIN 4:Cathode
ALED (IDE LED)	7, 8	PIN 7:Anode PIN 8:Cathode
RST (REST)	11, 12	PIN 11:RST PIN 12:GND
PLED (System Power LED)	15, 16, 17	PIN 15:VCC PIN 16:NC PIN 17:GND
SPKR (Speaker)	21, 22, 23, 24	PIN 21:VCC PIN 22:GND PIN 23:NC PIN 24:SPEAK (BUZZ)

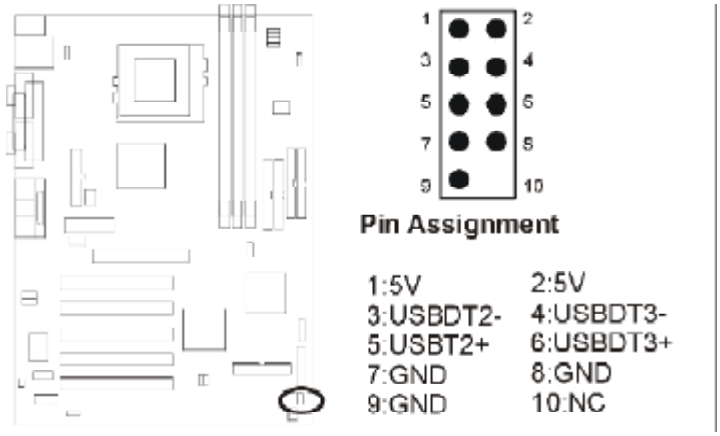
1.4.10 Aux-In connector(Aux_IN)

1.4.11 CD_In connector(CD_IN)

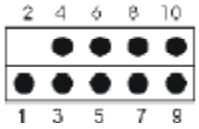


1.4.12 Internal USB connector

The motherboard has two USB ports onboard. The extra two USB support can only functionable with the additional USB riser kit.



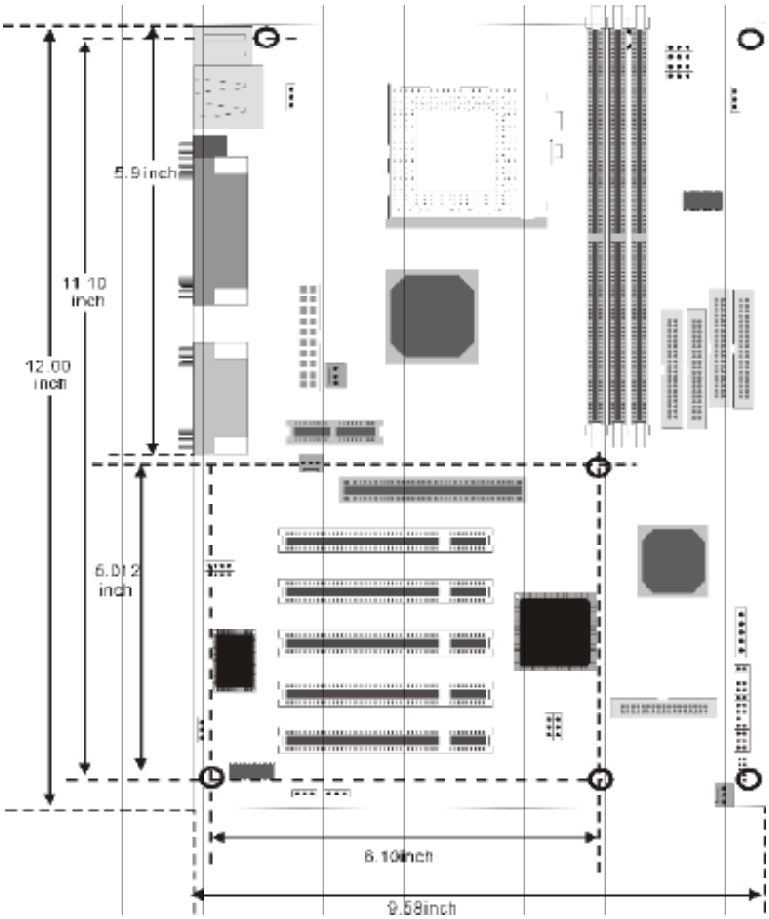
1.4.16 SPDIF connector(Optional)



Pin Assignment

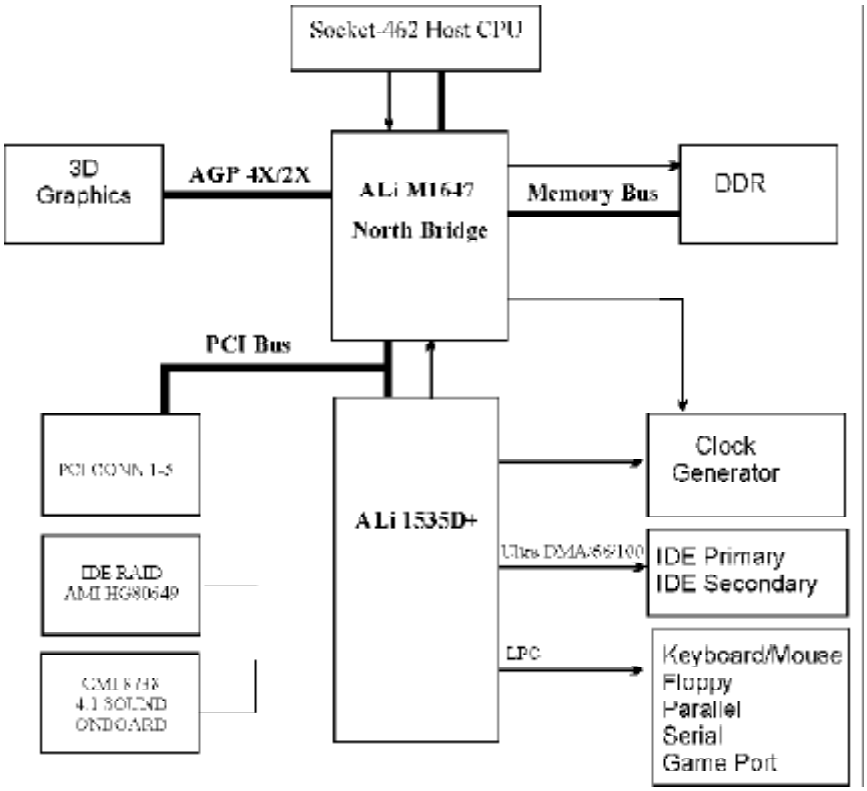
1:+12V	2:NC
3:NC	4:SPDIFO
5:SPDIFI	6:GND
7:NC	8:SPGPIO
9:NC	10:NC

1.5 Form Factor



2 Feature

2.1 BlockDiagram



2.2 Specifications

Processor I/F (Socket A)

Supports 1 processor
Supports 100MHz/133MHz DDR FSB (Front Side Bus)
Supports AMD Athlon (T-Bird) CPU from 650 MHz to 1.2GMHz

CPU Frequency/Voltage Select

Supports CPU Multiplier selection by Jumpers
Supports CPU External Frequency selection by Jumpers/BIOS

Memory

Supports DDR DRAM
Supports 100/133M memory frequency
Supports up to 3GB DRAM

Graphics

Supports AGP2X/AGP4X

General I/O

PCI 2.2 compliance
Supports 32-bit/33MHz PCI interface
Supports PCI Hardware Sound
Supports ATA66/100 IDE interface
Supports Floppy interface
Supports 16550A UART interface

ChipSet

ALi M1647
ALi M1535D+
CMI 8738 Sound chip
AMI MG0649 RAID chip(KA266-R only)

RAID onboard (KA266-R only)

Supports 2 ATA100 channels
Supports RAID Level 0/1/1+0
Supports Win9X/WinNT/Win2K

Sound support

C-Media HW Sound controller on board
Supports Game/MIDI interface
Supports Win9X/WinNT/Win2K/Linux

Expansion Slot, Sockets and Connectors

One Socket A socket
Three DDR sockets
One AGP slot
Five PCI slots
Two IDE RAID connectors

3 Hardware Setup

3.1 Before Installation

For installation, you may need some or all of the following tools:

Medium size flat blade screwdriver

Medium size Phillips head screwdriver

A 3/16 inch nut driver or wrench

Users must follow these guidelines to ensure the motherboard is protected during installation.

1.Make sure your computer is powered-off wheneven work in with inside components

2.The motherboard, like all other electronic equipment, is sensitive to static. Please take the proper precautions when handling it. If possible, ground yourself by touching a metal table or desk. keep the board in its conductive wrapping until it is configured and ready to be installed in your system.

3.Keep all magnets away from both your hard and floppy disk drives, especially magnetic screwdrivers. Keep both floppy and hard disks apart if disassembled.

4.Keep water and liquids away from your computer and its components.

3.2 Install the Processor

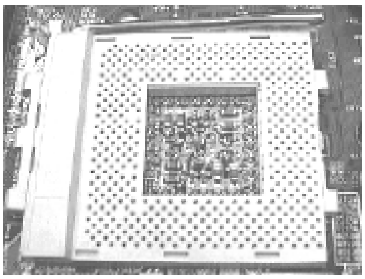
The CPU should have a fan attached to it to prevent overheating. If this is not the case, then purchase a fan before you turn on your system.

Be sure that there is sufficient air circulation across the processors heatsink by regularly checking that your CPU fan is working. Without sufficient circulation, the processor could overheat and damage both the processor and the motherboard. You may install an auxiliary fan, if necessary.

SOCKET462 FOR SOCKET A

Step1:

Locate the ZIF socket and open it by first pulling the lever of socket upward.

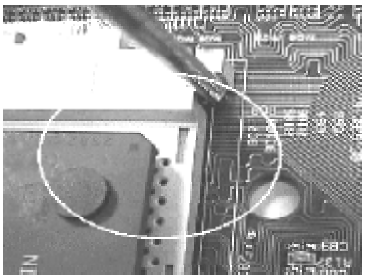


Step2:

Insert the CPU into the socket. Please keep the lever right angle when inserting CPU.

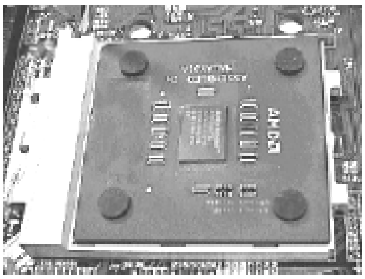
Step3:

When inserting the CPU please note the correct orientation as shown. The notched corner should point toward the end of the lever.



Step4:

Push the lever down to close the socket.



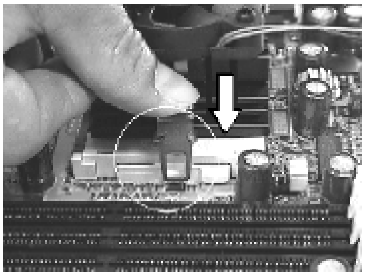
Step 5:

Attach the heatsink onto the CPU.

Be careful not to scrape the motherboard when mounting a clampstyle processor fan or else damage may occur to the motherboard.

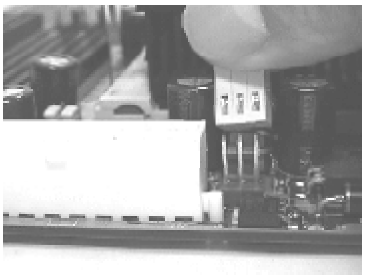
Step6:

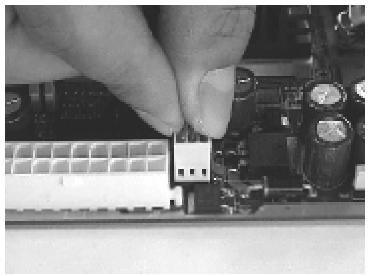
Push the clip of heatsink downward to hock the ear of socket firmly.



Step7:

Finally, attach the fan cable to the CPU fan header FCPU.



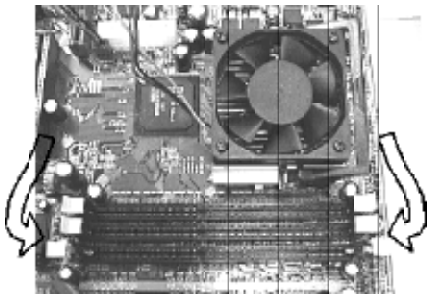


Don't forget to set the correct Bus Frequency and Multiple(frequency multiple setting is available only on unlocked processors) for your Socket 370 processor or else boot-up may not be possible.

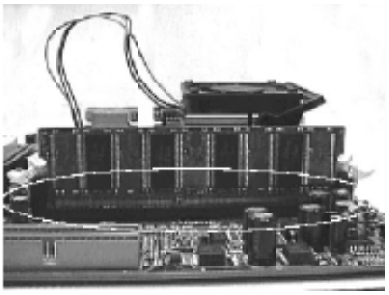
3.4 Install Memory Modules

The motherboard has three Double Data Memory Module (DDR) sockets and supports the maximum memory size up to 3GB. The architecture to provide the best choice for performance vs. stability.

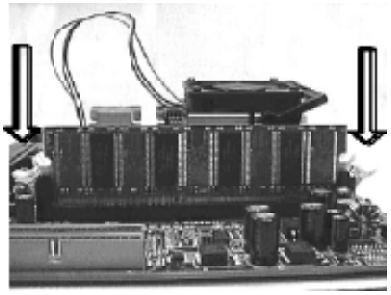
Step 1:Open latches of DIMM socket



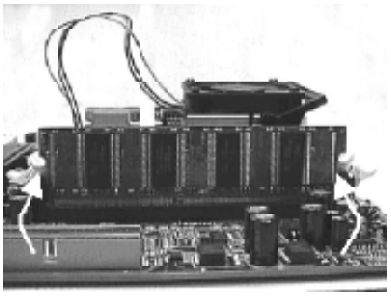
Step 2:Proofread the RAM module to the DIMM Socket.



Step 3:Insert the RAM module into the DIMM socket.



Step 4:Press the latches into the notches of the RAM module.



3.5 ATX Power Supply Connector

3.5.1 Power on procedures

STEP	Description
1	After all connections are made, close thesystem case over.
2	Be sure that all switches are off.
3	Connect the power cord into the power suppply located on the back of your system case.
4	Connect the power coard a power outlet that is equipped with a surge protector.
5	Many of the power supply support 110V/220V by a switch setting. Switch your power supply to the correct supply voltage.
6	Turn on your system in the following order a. The monitor b. The external devices. c. The computer system.

3.5.2 Power off procedures

STEP	Description
1	Exit from all the software applications.
2	shut down your operating system.
3	Switch off power button. If you are using Win 95/98,the power supply should turn off automatically after Windows shut down.
4	Turn off all external devices.
5	Turn off your monitor.

3.6 Back Panel

Function	color	Description
PS2/Mouse	Green	This connector can be used to support a PS/2 mouse
PS2/ keyboard	Purple	This connector can be used to support a PS/2 keyboard.
Universal Serial Bus	Black	This motherboard has two USB ports, any USB-compatible peripherals and/or hub can be connected into either USB port.
Serial port COM1& COM2	Teal	One serial port is ready for a modem or other serial devices
Parellel port	Burgundy	This connector is used for printers, or other parallel devices.
Joystick, Midi and Audio Port	Gold	You may connect joysticks or game pads to this connector for playing games, or connect MIDI devices for playing / editing professional audio. Line Out (Lime color) can be connected to headphones or powered speakers. Line In (Light Blue color) allows audio sources to be recorded by your computer or played through the Line Out connector. Mic (Pink color) allows microphones to be connected for inputting voice.

The PS/2 mouse and PS/2 keyboard can be auto-detected by this motherboard. That means if you plug the PS/2 keyboard into the mouse connector, it still can work without any trouble and vice versa. It is recommended that you turn off the computer before connecting or disconnecting keyboard and/or mouse.

4 BIOS Setup

4.1 BIOS Setup

4.1.1 Upgrade BIOS

The BIOS can be upgraded from a diskette with the Award Flash utility — AWDFLASH.EXE. The BIOS image file, and update utility are available from IWILL's WEB site: ***www.support.net***

If you have any problem, please contact with us in IWILL's web site:www.iwill.net

4.1.2 Enter BIOS setup program

Power-on the system by either pressing the Power-On button, or by using any of the power-on features provided by the motherboard. Then, press the <Del> key after the Power-On Self Test (POST), and before the scanning of IDE devices. Simply look for the message "Press DEL to enter SETUP" displayed at the bottom of the screen during the boot up process. If the message disappears before you've had a chance to respond, you can restart the system by

Turning off the system power then turn it on again, or

Pressing the "RESET" button on the system case, or

Pressing <Ctrl>, <Alt> and <Del> keys simultaneously.

Generally, the BIOS default settings have been carefully chosen by the system manufacturer to provide the absolute maximum performance and reliability. It is very dangerous to change any setting without fll understanding. We strongly recommend that you.
DO NOT update your BIOS if the system works perfectly.
DO NOT change any setting unless you fully understand what it means.

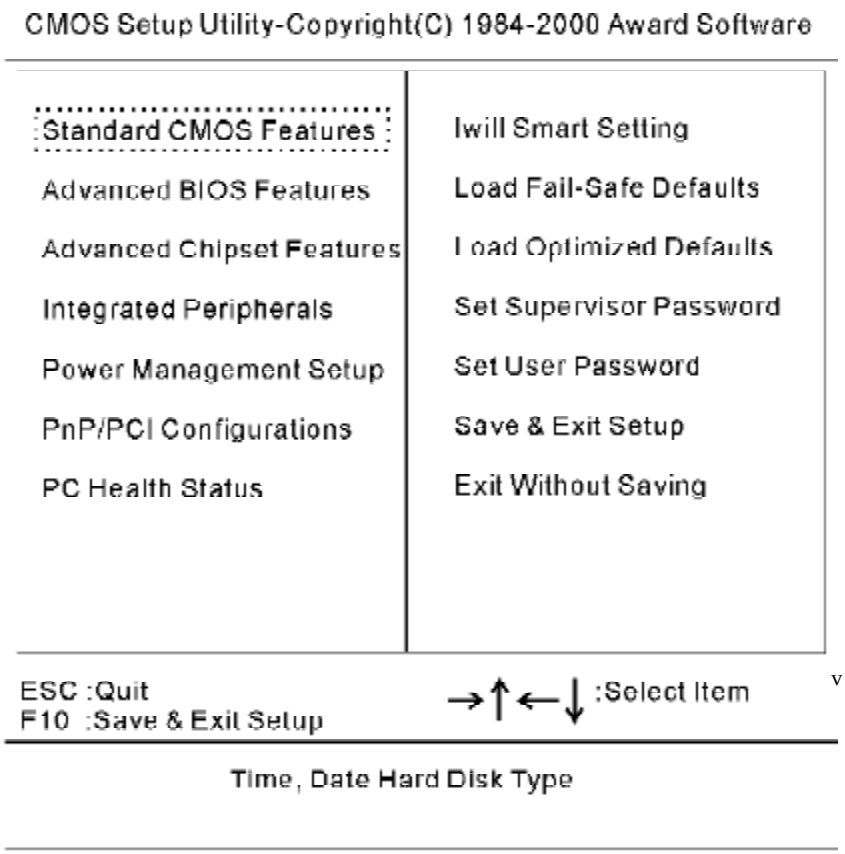
4.1.3 Using BIOS setup program

Up	Move to the previous field
Down	Move to the next field
Left	Move to the field on the left hand side
Right	Move to the field on the right hand side
<Esc>	Quit from setup program without saving changes, ro Exit from current menu page and return to main menu page
<PgDn>or<->	Select the next value for a field
<F1>	General Help
<F2>	Item Help
<F5>	Previous Values
<F6>	Fail-Safe Defaults
<F7>	Optimized Deaults
<F10>	Save the current value and exit setup program

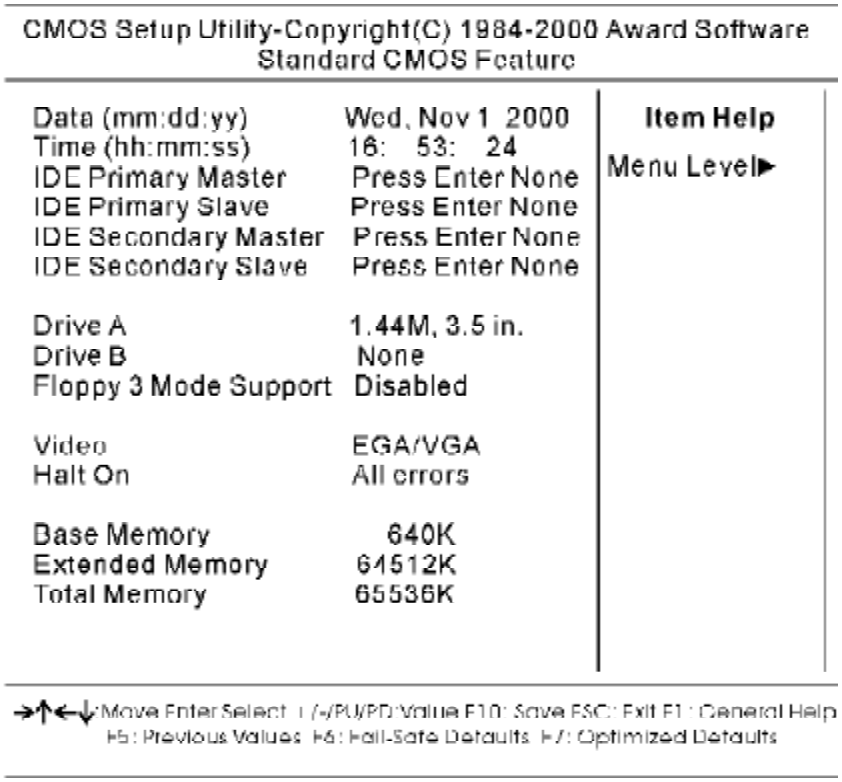
If the system is no longer able to boot after changing the settings, the only way to recover it is to clear the data stored in RTC CMOS. To reset the RTC CMOS data, take the JP1 jumper cap off pins 1-2, place onto pins 2-3, and then place back onto pins 1-2 again. This will return the RTC to the default setting. Then, get into the BIOS setup program , choose Load Fail-Safe Defaults ; Load Optimized Defaults, and select the original manufacturer default settings in your CMOS.

4.2 Main Menu

The main menu allows you to select from several setup pages. Use the arrow keys to select among these pages and press <Enter> key to enter the sub-menu. A brief description of each highlighted selection appears at the bottom of the screen.



4.3 Standard CMOS Features



4.3.1Date

This field specifies the current date. The date format is <month>, <day>, and <year>.

4.4.2 Time

This field specifies the current time. The time format is <hour>, <minute>, and <second>. The time is calculated based on the 24-hour (military-time) clock.

4.3.3 IDE Primary Master / Primary Slave / Secondary Master / Secondary Slave

Press “Enter” to enter next page for detail hard drive setting.

4.3.3.1 IDE HDD Auto-Detection

Auto-Detect the HDDs Capacity, and its parameters, ex: Cylinder, Head and Sector.

4.3.3.2 IDE Primary Master / Primary Slave / Secondary Master / Secondary Slave

This field specifies type of drive that corresponds to the drive installed in your system. If you select User, please specify the correct number of Cylinders, Heads, and Sectors.

Manual	Selecting anual lets ou set the remaining fields on this screen. Selects the type of fixed disk.
Auto **(Default Vaule)**	BIOS automatically fills in the values for the cylinders, heads and sectors fields.
None	Any Disk Drivers are attached.

4.3.3.3 Capacity Auto Display your disk drive size

4.3.3.4 Access MODE

This field specifies the IDE translation mode.

NORMAL	Specifies traditional CHS addressing mode.
LARGE	Specifies extended CHS translation mode
LBA	Specifies LBA translation mode.
AUTO **(Default Vaule)**	BIOS specifies translation method automatically.

4.3.3.5 Cylinders
Set the number of cylinders for this hard disk.
4.3.3.6 Heads
Set the number of read/write heads
4.3.3.7 Precomp
Setting a value of 65535 means no hard disk
4.3.3.8 Sectors
Set the number of sectors per track

4.3.4 Drive A / Drive B

This field specifies the traditional type of floppy drives.

None **(*Drive B default)**	Any Floppy drive is connected
360K, 5.25 in.	Specifies extended CHS translation mode
1.2M, 5.25 in.	A 1.2M floppy drive is connected
720K, 3.5 in.	A 720K floppy drive is connected.
1.44M, 3.5 in. **(*Drive A default)**	A 1.44M floppy drive is connected
2.88M, 3.5 in.	A 2.88M floppy drive is connected

4.3.5 Floppy 3 Mode Support

3 Mode floppy drive is a type of 3.5-inch drive used by NEC PC98 computers. It supports both 1.2M and 1.44M formats using the same drive. This field specifies which drive supports 3 Mode. When a floppy drive is specified to support 3 Mode, the respective drive setting in “Drive A/ Drive B” field will be invalid.

Disabled **(Default Value)**	No 3 Mode drive is connectedd
Drive A	A 3 Mode drive is connected as drive A
Drive B	A 3 Mode drive is connected as drive B
Both	Both drive A and drive B are 3 Mode drives

4.3.6 Video

EGA/VGA **(Default Value)**	Specifies EGA or VGA adapterd
CGA 40	Specifies CGA adapter with 40 column mode
CGA 80	Specifies CGA adapter with 80 column mode
MONO	Specifies Monochrome adapter

4.3.7 Halt On

All Errors **(Default Value)**	Each time the BIOS detects a non-fatal error, the system will stop and display an error message
No Errors	The system will stop for any errors that are detected
All, But Keyboard	The system will stop for any errors except keyboard error
All, But Diskette	The system will stop for any errors except diskette error
All, But Disk/Key	The system will stop for any errors except diskette and key board errors

4.3.8 Base Memory

The POST (Power-On Self Test) determines the amount of base (conventional) memory installed in the system. The value of the base memory is typically 640K. This field has no options.

4.3.9 Extended Memory

The BIOS determines how much extended memory is present during the POST. This is the amount of memory located above 1MB in the processor's memory address map. This field has no options.

4.3.10 Total Memory

Displays the total memory available in the system

4.4 Advanced BIOS Features

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Advanced BIOS Feature

Virus Warning	Disabled	**Item Help**
CPU Internal Cache	Enabled	Menu Level►
External Cache	Enabled	
CPU L2 Cache ECC Checking	Disabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	SCSI	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Enabled	
Boot Up NumLock Status	On	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
Typematic Rate (Chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
OS Select For DRAM >64MB	Non-OS2	
Report No FDD For WIN 95	NO	
Video BIOS Shadow	Enabled	
C8000-CBFFF Shadow	Disabled	v
CC000-CFFFF Shadow	Disabled	
D0000-D3FFF Shadow	Disabled	
D4000-D7FFF Shadow	Disabled	
D8000-DBFFF Shadow	Disabled	
DC000-DFFFF Shadow	Disabled	

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

4.4.1 Virus Warning

When this function is enabled, the BIOS monitor the boot sector and partition table of the hard disk drive for any attempt at modification. If an attempt is made, the BIOS will halt the system and then display an error message. Afterwards, if necessary, you can run an anti-virus program to locate and remove the problem before any damage is done.

Many disk diagnostic programs will attempt to access the boot sector table, which can cause the above warning message. If you run such a program, we recommend that you first disable the Virus Warning function beforehand.

Enable, Disabled **(Default Value)**

4.4.2 CPU Internal Cache

This field configures the CPU internal cache (L1 cache).

Enable **(Default Value)**, Disabled

4.4.3 External Cache

This field configures the system's external cache (L2 cache).

Enable **(Default Value)**, Disabled

4.4.4 CPU L2 Cache ECC Checking

This field specifies whether the CPU L2 cache supports ECC or not.

Enable **(Default Value)**, Disabled

4.4.5 Quick Power On Self Test

This field allows the system to skip certain tests while booting. This will decrease the time needed to boot the system.

Enable **(Default Value)**, Disabled

4.4.6 First / Secound / Third / Other Boot Device

The BIOS attempts to load the operating system from the devices in the sequence selected in these items.

Floppy, LS120, HDD-0, SCSI,RAID100, CD-ROM, HDD-1, HDD-2, HDD-3, ZIP100, USB-FDD, USB-ZIP, USB-CDROM, USB-HDD, LAN, Disabled

4.4.7 Swap Floppy Drive

When enabled, floppy drives A and B will be exchanged without the user physically changing the connection on the cable.

Enable, Disabled **(Default Value)**

4.4.8 Boot Up Floppy Seek

Seeks disk drives during boot up. Disabling speeds boot up.

Enable **(Default Value)**, Disabled

4.4.9 Boot Up NumLock Status

This field determines the configuration of the numeric keypad after system boot up. If On, the keypad uses numbers keys. If Off, the keypad uses arrow keys.

ON **(Default Value),** Off

4.4.10Gate A20 Option

This field configures how the gate A20 is handled. The gate A20 is a device used to address memory above 1 MB. At first, the gate A20 was handled from a pin on the keyboard. While some keyboards still provide this support, it is more common, and much faster, for modern system chipsets to provide support for gate A20.

Fast **(Default Vaule**)	GateA20 signal supported by core logic.
Normal	GateA20 signal supported by keyboard controller.

4.4.11Typematic Rate Setting

This field determines if the typematic rate is to be used. When enabled, the BIOS will report (after a moment) that the key has been depressed repeatedly. When disabled, the BIOS will report only once if a key is held down continuously. This feature is used to accelerate cursor movements using the arrow keys.

Enable, Disabled **(Default Value)**

4.4.12Typematic Rate (Chars/Sec)

When Typematic Rate Setting enabled, this field specifies how many characters will be displayed in one second when a key is held down continuously.

6 **(Default Value)** 8,10, 12,15,20,24,30

4.4.13Typematic Delay (Msec)

When enabled, typematic delay allows you to select the time delay between when the key is first pressed and when the acceleration begins.

250msec **(Default Value)** 500msec, 750msec, 1000msec

4.4.14Security Option

This field configures how the system security is handled. It works conjunction with SETTING SUPERVISOR / USER PASSWORD page to control the security level of the system.

Setup **(Default Value)**	System needs a password to enter BIOS setup program
System	System needs a password to boot

4.4.15OS Select for DRAM >64MB

When enabled, this field allows you to access the memory that is over 64MB under OS/2.

OS2, Non-OS2 **(Default Value)**

4.4.16Report No FDD For WIN 95

For a floppy diskless system that runs Windows 95, this field should be set to Yes**.**

YES, NO **(Default Value)**

4.4.17Video BIOS Shadow

When enabled, the video BIOS will be copied onto the system memory, and the video speed will increase.

Enable**(Default Value)**, Disabled

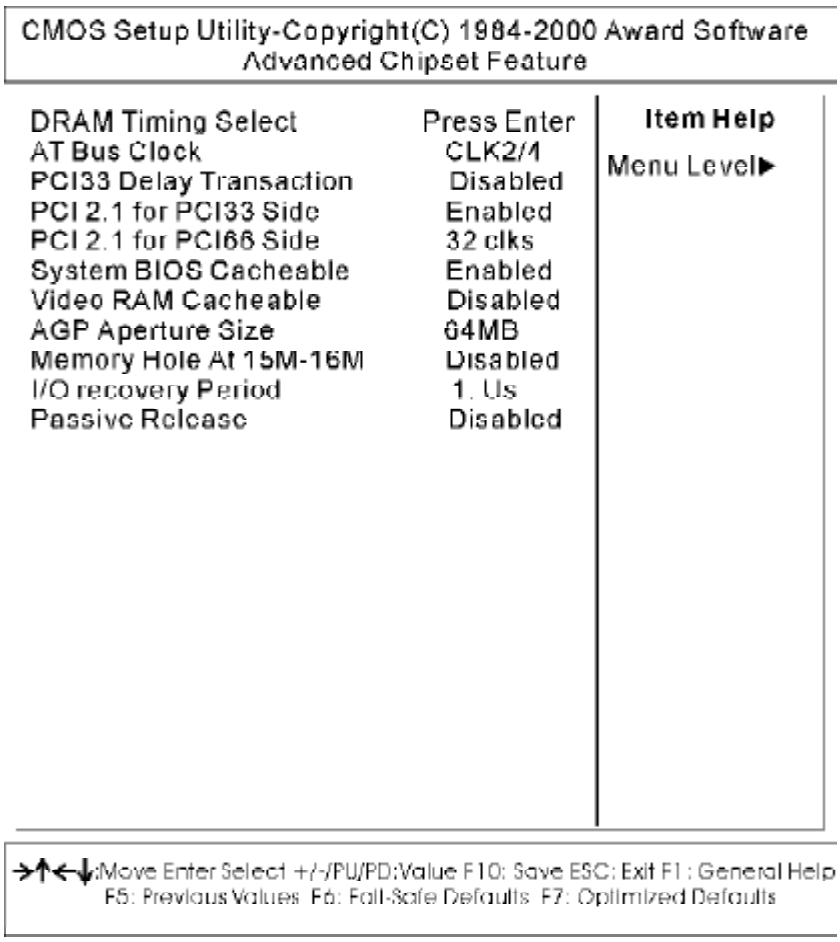
4.4.18C8000-CBFFF / CC000-CFFFF / D0000-D3FFF / D4000-D7FFF / D8000-DBFFF / DC000-DFFFF Shadow

When enabled, the extended ROM data located at the respective address range will be copied onto system memory.

Enable, Disabled **(Default Value)**

4.5 Advanced Chipset Features

This setup page is used to specify advanced features available through the chipset. The default settings have been chosen carefully for most operating conditions. DO NOT change the value of any field in this setup page without full understanding.



4.5.1 DRAM Timing Select

The first chipset settings deal with CPU access to dynamic random access memory (DRAM). The default timings have been carefully chosen and should only be altered if data is being lost. Such a scenario might well occur if your system had mixed speed DRAM chips installed. Longer delays might result, however this preserves the integrity of the data held in the slower memory chips.

4.5.1.1 DDR DRAM CAS Select

Select the number of clock cycles of CAS latency depends on the DRAM timing .

2, 2.5 **(Default Value)**

4.5.1.2 Refresh Queue

Select the depth value of the DRAM refresh queue .

Disabled, Depth2, Depth 4, Depth 8 **(Default Value)**

4.5.1.3 DRAM Performance

Select the performance parameter of the installed DRAM . Do not reset this field from the default value by the system designer unless you install new memory that has a different performance rating than the original DRAMs

Failsafe, slow, Normal **(Default Value)** Fast, Ultra, Ultra2

4.5.1.4 Enhance Page Mode Timer

Select the preset value of the Page Life Timer counter . When disabled , the open pages mode will not be closed even the PLT counter expired .

16clk, 32clk,**(Default Value)** 64clk, 128clk , Disabled

4.5.1.5 Refresh Rate

Select the rating for DRAM refresh control .

Low, Mid **(Default Value)** Hight

4.5.2 AT bus Clock

Select the speed of the AT bus in terms of a fraction of the CPU clock speed , or at the fixed speed of 7.16 MHz .

7.16MHz, CLK2/2, CLK2/3, CLK2/4 **(Default Value),** CLK 2/5, CLK2/6

4.5.3 PCI33 Delay Transaction

The chipset has embedded 32-bit posted write buffer to support delayed transaction cycles . When enable , the system is compliant with PCI specification version 2.2

Disabled **(Default Value)** Enabled

4.5.4 PCI 2.1 for PC133 Side

PCI 2.1 latency compliant mode for Primary Bus .

Enabled **(Default Value)**, Disabled

4.5.5 PCI 2.1 for PC166 Side

PCI 2.1 latency compliant mode for Secondary Bus .

32clks **(Default Value)**, 64 clks, disabled

4.5.6 System BIOS Cacheable

When enabled, accesses to the system BIOS will be cached.

Enable **(Default Value)**, Disabled

4.5.7Video RAM Cacheable

When enabled, access to the Video RAM will be cached.

Enable, Disabled **(Default Value)**

4.5.8 AGP Aperture Size

This field configures the main memory size for AGP graphics data used.

0MB, 1MB, 2MB, 4MB, 8MB, 16MB, 32MB, 64MB **(Default Value**), 128MB, 256MB

4.5.9 Memory Hole At 15-16M

This system memory area can be reserved for ISA adapter ROM. When reserved, this area cannot be cached. Please refer to information regarding the memory requirements of your system peripherals.

Enable, Disabled **(Default Value)**

4.5.10I/O recovery Period

This item allows you to determine the recovery time allowed for I/O.

3u, 2u, 1u **(Default Value)**

4.5.11Passive Release

When enabled, CPU to PCI bus accesses is allowed during passive release. Otherwise, the arbiter only accepts another PCI master access to local DRAM.

Enable, Disabled **(Default Value)**

4.6 Integrated Peripherals

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Integrated Peripherals

On-Chip IDE Channel0	Enabled	**Item Help**
On-Chip IDE Channel1	Enabled	
Primary Master PIO	Auto	Menu Level►
Primary Slave PIO	Auto	
Secondary Master PIO	Auto	
Secondary Slave PIO	Auto	
Primary Master UDMA	Auto	
Primary Slave UDMA	Auto	
Secondary Master UDMA	Auto	
Secondary Slave UDMA	Auto	
Onchip USB Port	Disable	
USB Keyboard Under DOS	Disable	
Init Display First	AGP	
AC97 Audio	Disabled	
AC97 Modem	Disabled	
IDE HDD Block Mode	Enabled	
POWER ON Function		
KB Power ON Password	Enter	
Hot Key Power ON	Ctrl-F1	
Onboard FDC Controller	Enabled	
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	
Onboard Serial Port 3		
UART Mode Select		
RxD, TxD Active	Hi,Lo	
IR Transmission Delay	Half	
Fast IR Mode Use DMA	1	
Onboard Parallel Port		
Parallel Port Mode		
ECP Mode Use DMA	3	

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

4.6.1 On-Chip IDE Channel0/1

This field enables or disables the onboard IDE controller.

Enable **(Default Value),** Disabled

4.6.2 IDE Primary Master / Slave PIO
IDE Secondary Master / Slave PIO

These fields configure the PIO (Programmable Input Output) transfer mode for each IDE devices. The maximum transfer rates of each PIO mode are listing as follow:

PIO Mode 0	3.3 MB/sec
PIO Mode 1	5.2 MB/sec
PIO Mode 2	8.3 MB/sec
PIO Mode 3	11 MB/sec
PIO Mode 4	16.6 MB/sec
Auto**(Default Value)**	Negotiated with device automatically
Mode 0	Use Mode 0 timing to access device
Mode 1	Use Mode 1 timing to access device
Mode 2	Use Mode 2 timing to access device
Mode 3	Use Mode 3 timing to access device
Mode 4	Use Mode 4 timing to access device

4.6.3IDE Primary Master / Slave UDMA
IDE Secondary Master / Slave UDMA

If you select Auto, the IDE controller uses Ultra DMA 33/66 Mode to access Ultra DMA-capable IDE devices. Depend on the resent of negociation with your HDD. The maximum transfer rate of Ultra DMA 66 Mode is 66.6 MB/sec.

Auto , Disabled**(Default Value)**

4.6.4 Onchip USB port

Select Enabled if your system contains USB peripherals.

Enable, Disabled **(Default Value)**

4.6.5USB Keyboard under DOS

Select Enabled if you want to use USB keyboard under DOS

Enable, Disabled **(Default Value)**

4.6.6Init Display First

This item allows you to decide which slot to activate first, either PCI slot or AGP slot.

PCI Slot , AGP **(Default Value)**

4.6.7AC97 Audio/Modem

Auto" allows the motherboard's BIOS to detect whether you are using any AC'97 modem/audio device.If a modem/audio device is detected , the onboard modem/audio controller will be enabled ; if no modem/audio device is detected , the onboard modem/audio controller will be disabled. If you want to use different controller cards to connect modem and audio connector , set these fields to disabled".

Disabled **(Default Value)**, Auto

4.6.8 IDE HDD Block Mode

When enabled, the IDE controller will use the faster block mode to access devices.

Enable,**(Default Value)** Disabled

4.6.9 Power-On Function

This field configures the Power-On mode of the system.

The Power-On button will not function in this mode.

Password	You can assign a password string through KB Power-On Pass word field.
Hot KEY	You can assign a hot key through the Hot Key Power-On field.Pressing this hot key will power- on your system.
Mouse Left / Right	Double - Clicking The PS/2 mouse Left / Right button will power on the system .
Button only **(Default Value)**	Simply power-on your system by pressing the Power-On button on the front panel of your PC case
Keyboard 98	Enables Keyboard 98 function.This founction is good only for users of Keyboard 98.

4.6.10KB Password Power-On

In you wish to use this function, bring the cursor to the field written Enter, then press <Enter>. The computer will display the message, Enter Password". Type your password and press <Enter>. After the message Confirm Password is displayed, re-type your password. The KB Power-On function will be in effect after you save and exit setup.

To disable a password, bring the cursor to the Enter" field again, then press <Enter>. The computer will display the message, Enter Password Press <Enter>. A message will confirm that the password is disabled.

4.6.11 Hot Key Power-On

This field specifies key selection for the Keyboard-Power-On hot key.

Ctrl-F1, Ctrl-F2, Ctrl-F3, Ctrl-F4, Ctrl-F5, Ctrl-F6, Ctrl-F7 Ctrl-F8, Ctrl-F9, Ctrl-F10, Ctrl-F11, Ctrl-F12

4.6.12 Onboard FDC Controller

This field enables or disables the onboard floppy controller.

Enabled **(Default Value)**, Disabled

4.6.13 Onboard Serial Port 1 / 2 / 3

These fields configure the onboard serial ports. There are several port addresses and IRQ channels to select from.

3F8 / IRQ 4 **(Default Vaule)**	Port address 3F8h, IRQ 4
2F8 / IRQ 3	Port address 2F8h, IRQ 3
3E8 / IRQ 4	Port address 3E8h, IRQ 4
2E8 / IRQ 3	Port address 2E8h, IRQ 3
Auto	BIOS assigns port address and IRQ channel automatically.
Disabled.	Disables serial port

4.6.14RxD, TxD Active for IrDA and ASKIR Functions

When setting the field to either IrDA or ASKIR, you

IHi, Lo **(Default Value)** Lo, Hi / Lo / Hi, Hi

4.6.15IR Transmission delay for IrDA and ASKIR functions

When setting the field to either IrDA or ASKIR, you must select whether or not you require a delay between IR transmissions.

Enable, Disabled **(Default Value)**

4.6.16IR Duplex Mode

Full, Half **(Default Value)**

4.6.17Fast IR Mode Use DMA

1**(Default Value)**, 3

4.6.18 Onboard Parallel Port

This field configures the onboard parallel port. There are several port addresses and IRQ channels to select from.

378 / IRQ 7 **(Default Value)**	Port address 378h, IRQ 7
278 / IRQ 5	Port address 278h, IRQ 5
3BC / IRQ 7	Port address 3BCh, IRQ 7
Disabled	Disables parallel port

4.6.19Parallel Port Mode

This field configures the operating mode of an onboard parallel port. Ensure you know the specifications of your parallel port devices before selecting field.

SPP**(Default Value)**, EPP, ECP, ECP+EPP

4.6.20ECP Mode Use DMA

When the Parallel Port Mode field is configured as ECP, ECP+EPP mode, it needs a DMA channel for data transfer. This field specifies the DMA channel for ECP parallel port use.

1	Use DMA channel 1
3**(Default Value)**	Use DMA channel 1

4.7 Power Management Setup

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Power Management Setup

ACPI Suspend Type	S1(POS)	**Item Help**
Power Management	User Define	Menu Level▶
PM Control by APM	No	
MODEM Use IRQ	3	
Video Off In Suspend	Yes	
Video Off Menthod	V/H SYNC+Blank	
PM Timer		
APM HDD Power Down Timer	Disabled	
APM Suspend Timer	Disabled	
PWR-OFF Mode by PWR-BTTN	Instant-Off	
Wake Up by PCI Card	Disabled	
Wake Up by Ring/Alarm	Disabled	
PWR On/Resume by Alarm	Disabled	
Data(of mouth) Alarm	0	
Time(hh : mm : ss) Alarm	0 0 0	
** Rest APM Timer Event **		
IRQ [1] (keyboard)	Enabled	
IRQ [3]	Disabled	
IRQ [4]	Disabled	
IRQ [5]	Disabled	
IRQ [6] (Floppy Disk)	Disabled	
IRQ [7]	Disabled	
IRQ [8] (RTC)	Disabled	
IRQ [9]	Disabled	
IRQ [10]	Disabled	
IRQ [11]	Disabled	
IRQ [12] (Ps2 Mouse)	Enabled	
IRQ [14] (Primary IDE)	Disabled	
IRQ [15] (Secondary IDE)	Disabled	

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

Each power-saving mode has a respective timer. The value of the timer can be assigned or reloaded and it will count down to zero. When the timer equals to zero, the system will be forced into the related suspend or power-saving mode. If any predefined signal or event is detected during the timer counting period, the timer restarts automatically.

4.7.1ACPI Suspend Type

There are several ACPI modes used to save computer's energy.

S1 (POS) **(Default Vaule)**	This is the Power-On-State, the CPU clock runs at slower speed, the system operates at slower speed.
S3 (STR)	This is the Suspend-To-Ram State, all system data will be saved in systems memory and all devices except the memory will shut off. **(Please checking your VGA card, can support the S3 mode.)**

4.7.2 Power Management

This feature allows the user to select the default parameters for the power-saving mode.

Min saving	When idle for one hour, the system entersuspend mode.
Max Saving	When idle for fifteen minutes, the system enters suspend mode.
User Define **(Default Vaule)**	User can specify the time the system enters suspend mode.

4.7.3 PM Control by APM

When enabled, an Advanced Power Management (APM) protocol will be activated to handle the power-saving mode.

NO **(Default Value)**, Yes

4.7.4 MODEM Use IRQ

This determines the IRQ in which the MODEM can use.

NA, 3**(Default Value) ,** 4, 5, 7, 9, 10, 11

4.7.5 Video Off In Suspend

This determines the manner in which the monitor is blanked.

NO, Yes **(Default Value)**

4.7.6 Video off Method

V/H SYNC+Blank **(Default Vaule)**	Turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen	Writes blanks to the video buffer onlye.
DPMS	Initial display power management signaling with DPMS.

4.7.7 APM HDD Power Down Timer

This field specifies the time the system enters HDD power down. It is available only when the Power Management field is set to User Define.

1 Min, 2 Min, 3 Min, 4 Min, 5 Min, 6 Min, 7 Min, 8 Min, 9 Min, 10 Min,11 Min, 12 Min,13 Min, 14 Min, 15 Min, Disable **(Default Value)**

4.7.8 APM Suspend Timer

This field specifies the time the system enters power-saving mode. It is available only when the Power Management field is set to User Define.

1Min, 2Min , 4Min, 8Min,12Min, 20Min,30Min,40Min, 1Hour, Disablet **(Default Value**)

4.7.9 PWR-Off Mode by PWR-BTTN

This field specifies the function of power button.

Instant-Off **(Default Vaule)**	When power button pressed, the system turns off immediately
Delay 4 Sec.	After the power button has been pressed and held for four seconds, the system turns off

4.7.10 Wake up by PCI card

When enabled , you can "wake-up" your system using PCI rev.2.2 card , when a "PME" event occuring .

Enabled, Disabled **(Default Value)**

4.7.11 Wake up by Ring / LAN

When enabled , the system can " power-on" or "wake-up" through LAN (Local Area Network) or an external modem connected to the PC .

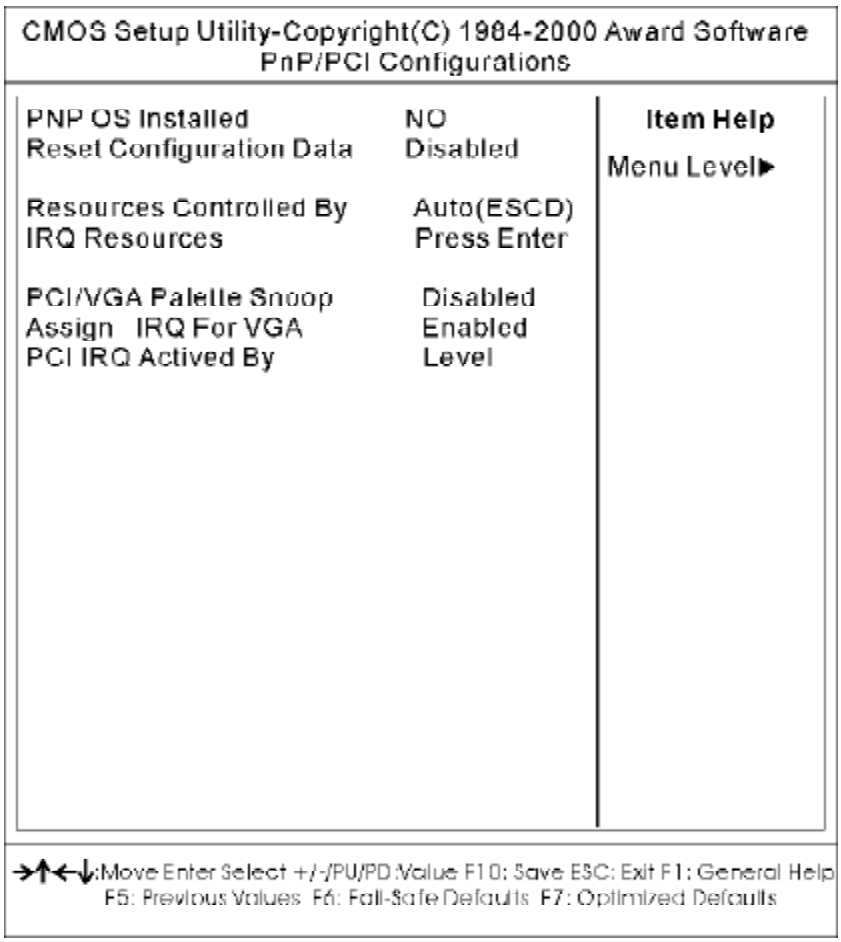
Enabled, Disabled **(Default Value)**

4.7.12 PWROn / Resume by Alarm

When enabled , you can set the date and time to automatically "power-on" or "wkae-up" your PC (similar to an alarm clock) .

Enabled	Sets Date (0-31) and Timer (hr, min, sec) to power-on the PC. When date is set to 0, the Timer is set for every day.
Disabled **(Default Vaule)**	Disables RTC alarm function

4.8 PnP/PCI Configurations



4.8.1 PNP OS Installed

The field specifies whether a Plug and Play operating system is installed.

Yes, No **(Default Value)**

4.8.2 Reset Configuration Data

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

Enabled, Disabled **(Default Value)**

4.8.3 Resources Controlled By

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as WindowsÒ98/95/NT. If you set this field to "manual" choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a "Ø").

Manual	Resources controlled by the user.
Auto(ESCD) **(Default Vaule)**	Resources controlled by BIOS automatically.

4.8.3.1 IRQ Resources

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

4.8.3.1.1IRQ3/4/5/7/9/10/11/12/14/15 assigned to

PCI Device Reserved **(Default Value)**

4.8.4 PCI / VGA Palette Snoop

This field controls the ability of a primary PCI graphics controller to share a common palette with an ISA/VESA video or MPEG card.

Enabled	PCI VGA co-works with ISA MPEG card
Disabled **(Default Vaule)**	All cases except above.

4.8.5 Assign IRQ For VGA

Enabled **(Default Value)**, Disabled

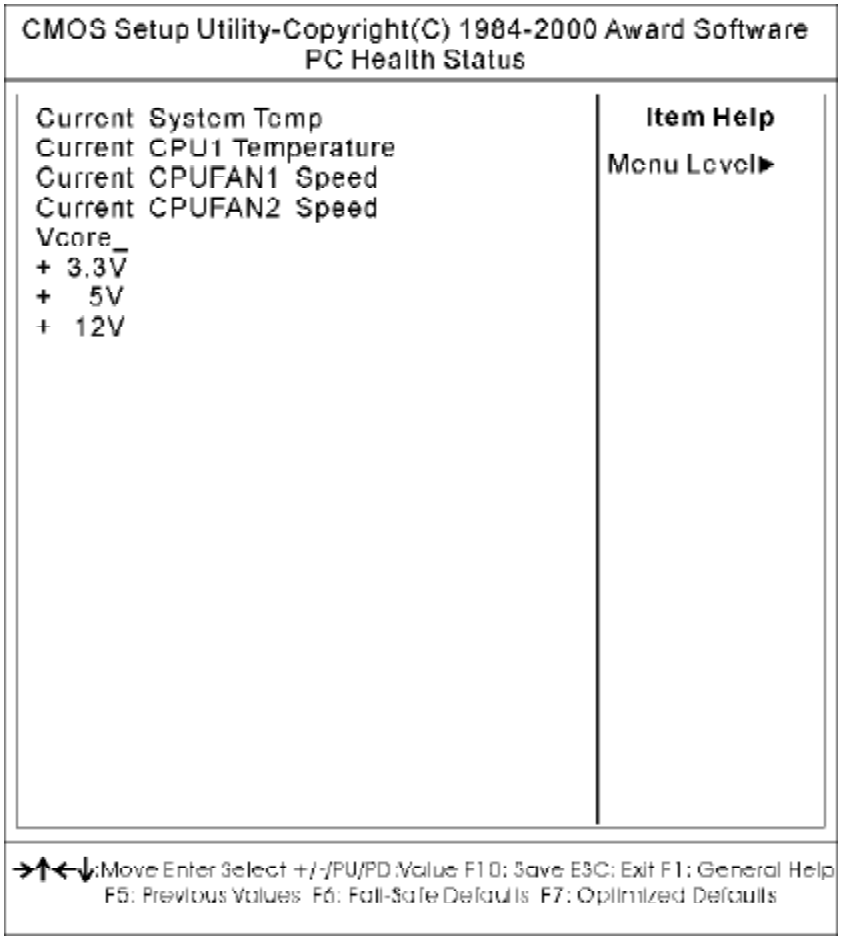
4.8.6 PCI IRQ Actived By

This sets the method by which the PCI bus recognizes that an IRQ service is being requested by a device. Under all circumstances, you should retain the default configuration unless advised otherwise by your system's manufacturer.

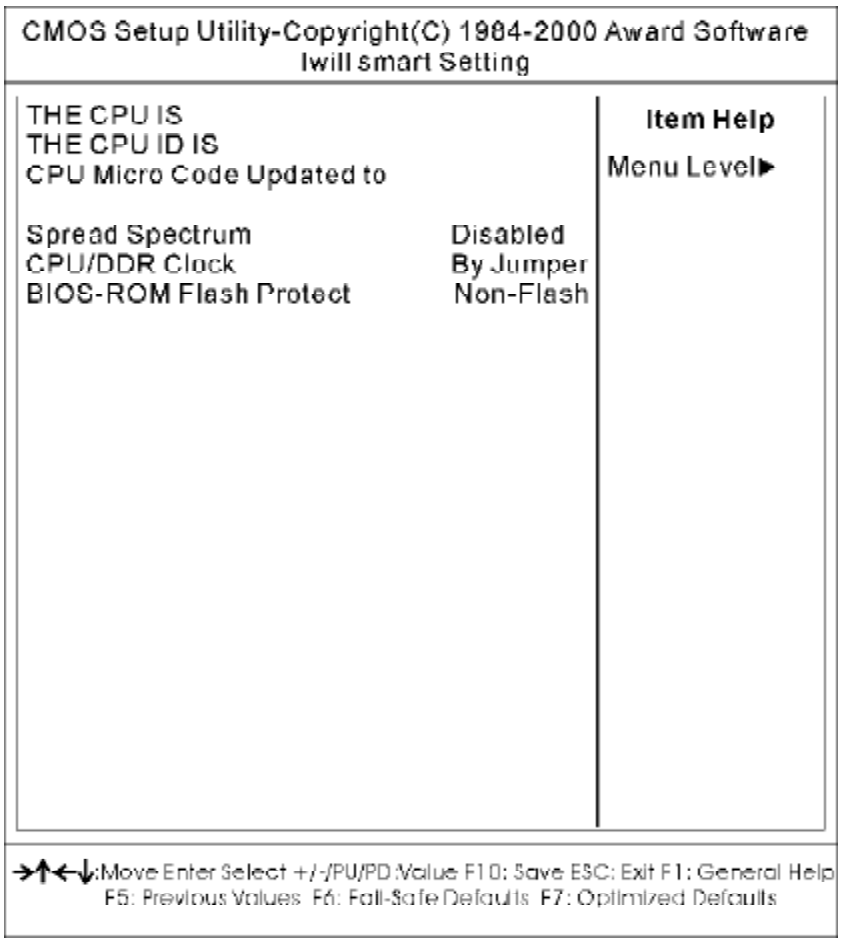
Level **(Default Value),** Edge

4.9 PC Health Status

This page is monitoring your status of computer. On the screen displays CPU/System temperature, FAN speed, and voltages.



4.10 Iwill Smart Setting



Over-clocking is not guaranteed. Users must have substantial knowledge of proper CPU relative to adjusting CPU speeds. Over-clocking should be done only by experienced engineers who conduct tests.

CPU FREQUENCY SETUP

In general, when adjusting the CPU RATIO, you should select a matched bus frequency for both the CPU and the motherboard. The reason is that your CPU can only communicate with its external components at the same speed at which the components operate.

To understand how does CPU works, and how does it related to FSB and multiplier, here is the example:

CPU speed = FSB x Multiplier (CPU Ratio)

800Mhz = 100Mhz x 8

4.10.1Spread Spectrum

This item configures radiation emitted from the system. When enabled, system will release less radiation.

Enabled, Disabled **(Default Value)**

4.10.2CPU/DDR Clock

This field allows user to adjust the CPU external and to show the DRAM clock.

By Jumper	107/ 107MHz	136/ 136MHz
100/ 100MHz	110/ 110MHz	137/ 137MHz
101/ 101MHz	120/ 120MHz	140/ 140MHz
102/ 102MHz	126/ 126MHz	142/ 142MHz
103/ 103MHz	133/ 133MHz	146/ 146MHz
105/ 105MHz		

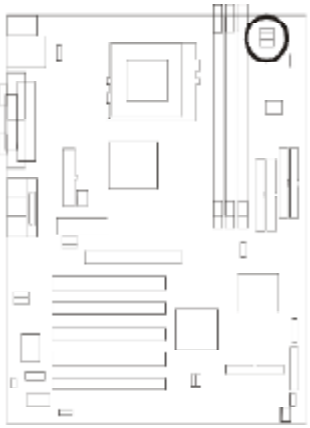
4.10.3BIOS-ROM Flash Protect

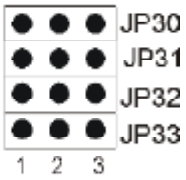
When select"Non flash", the BIOS ROM chip will be protecte to prerent injuring by Virus "please don't select Flashable" until you have to upgrade the latest BIOS

Non flash **(Default Vaule)**, Flashable

How to setup CPU RATIO in IWILL Smart Setting

IWILL provides a triple stepping system bus. It allows user to select various CPU RATIO ranging from 5X~12.5X. This section will describe how does this works.





RATIO	JP30	JP31	JP32	JP33
Auto (**Default**)	1-2 ON	1-2 ON	1-2 ON	1-2 ON
X5	2-3 ON	2-3 ON	OFF	2-3 ON
X5.5	OFF	2-3 ON	OFF	2-3 ON
X6	2-3ON	OFF	OFF	2-3 ON
X6.5	OFF	OFF	OFF	2-3 ON
X7	2-3 ON	2-3 ON	2-3 ON	OFF
X7.5	OFF	2-3 ON	2-3 ON	OFF
X8	2-3 ON	OFF	2-3 ON	OFF
X8.5	OFF	OFF	2-3 ON	OFF
X9	2-3 ON	2-3 ON	OFF	OFF
X9.5	OFF	2-3 ON	OFF	OFF
X10	2-3 ON	OFF	OFF	OFF
X10.5	OFF	OFF	OFF	OFF
X11	2-3 ON	2-3 ON	2-3 ON	2-3 ON
X11.5	OFF	2-3 ON	2-3 ON	2-3 ON
X12	2-3 ON	OFF	2-3 ON	2-3 ON
X12.5	OFF	OFF	2-3 ON	2-3 ON

For example:

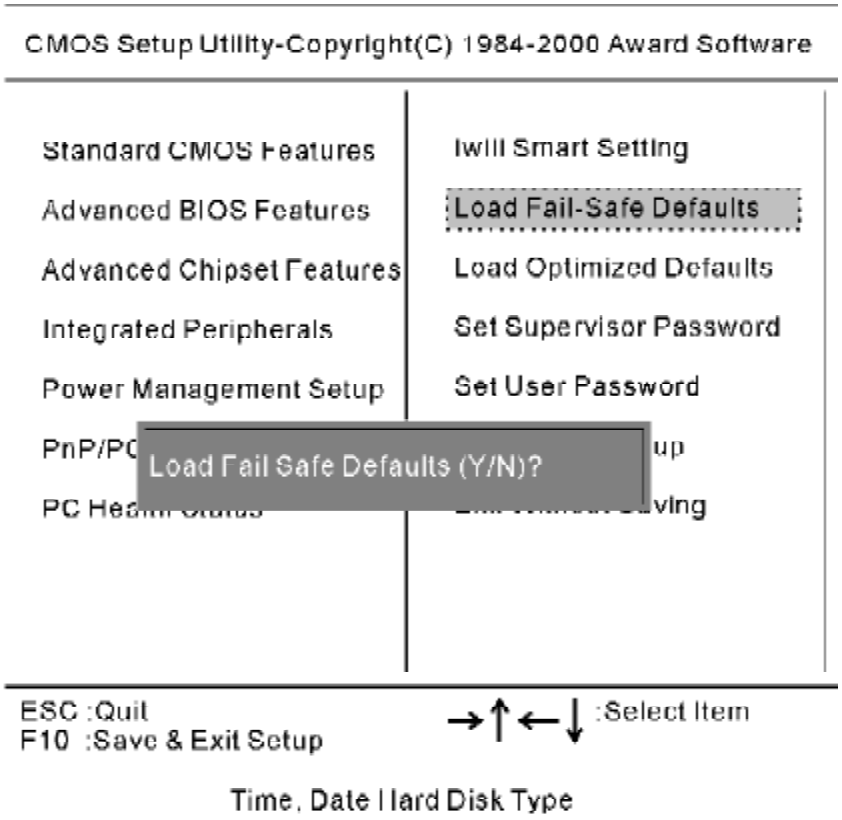
If you purchased a 800 MHz (100Mhz FSB) AMD® Althon CPU, leaves JP32 pin 2-3 On & JP30,31,33 pin OFF. To setup your CPU RATIO by selecting 8X (multiplier)100 (system bus frequency) , which equals 800MHz (your CPU frequency), saves it in before leaving the BIOS setting to complete the CPU frequency setting.

If you purchased a 800 MHz (100Mhz FSB) AMD® Althon CPU, leaves JP30,31,32,33 pin 1-2 On . To setup your CPU RATIO by auto detect multiplierof CPU, which equals 800MHz (your CPU frequency), saves it in before leaving the BIOS setting to complete the CPU frequency setting.

However, the fact is, most of the CPU in the market now comes with multiplier locked. No effect will be taken even the multiplier setting is altered in the IWILL Smart Setting. Furthermore, a higher system bus frequency (FSB) has a much better performance than a slower system bus frequency.

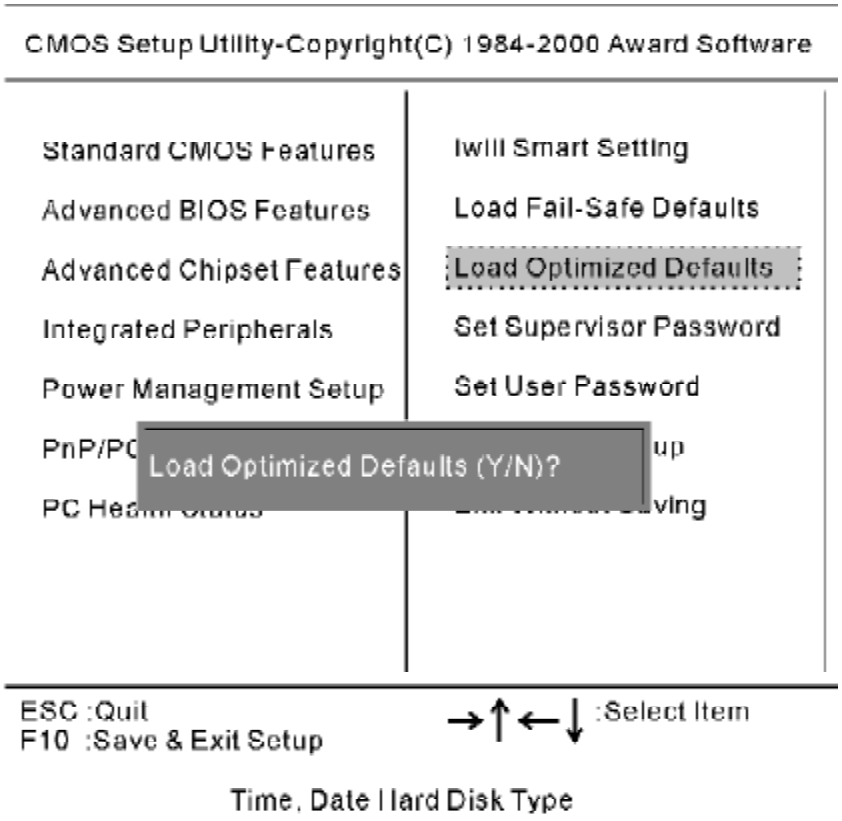
4.11 Load Fail Safe Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to: Pressing **'Y'** loads the BIOS default values for the most stable, minimal-performance system operations.

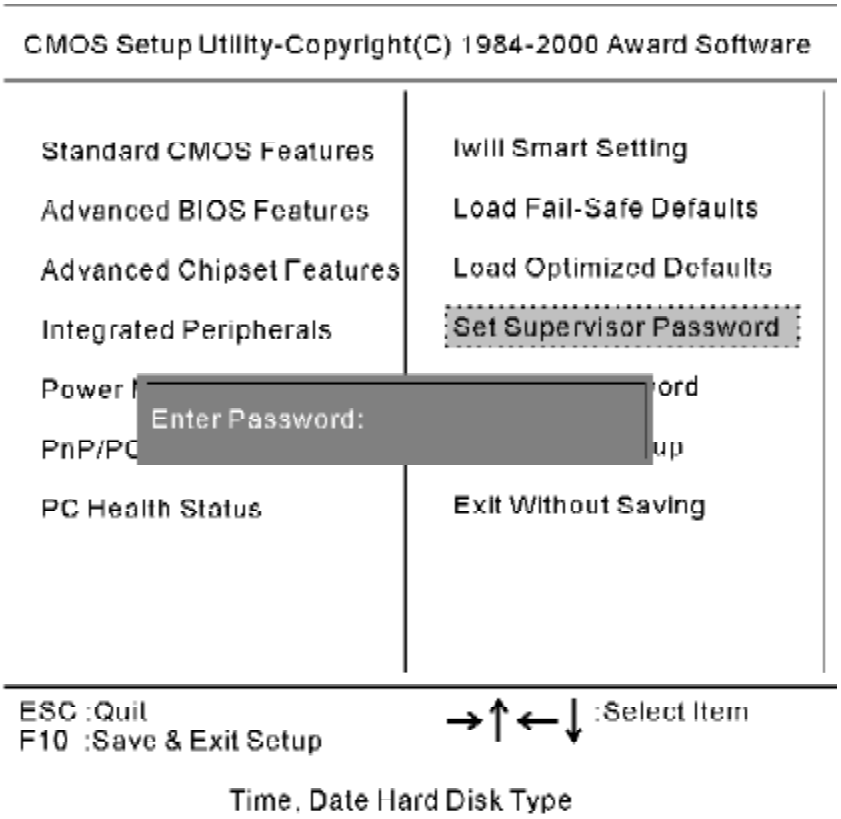


4.12 Load Optimized Defaults

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



4.13 Set Supervisor/ User Password Setting



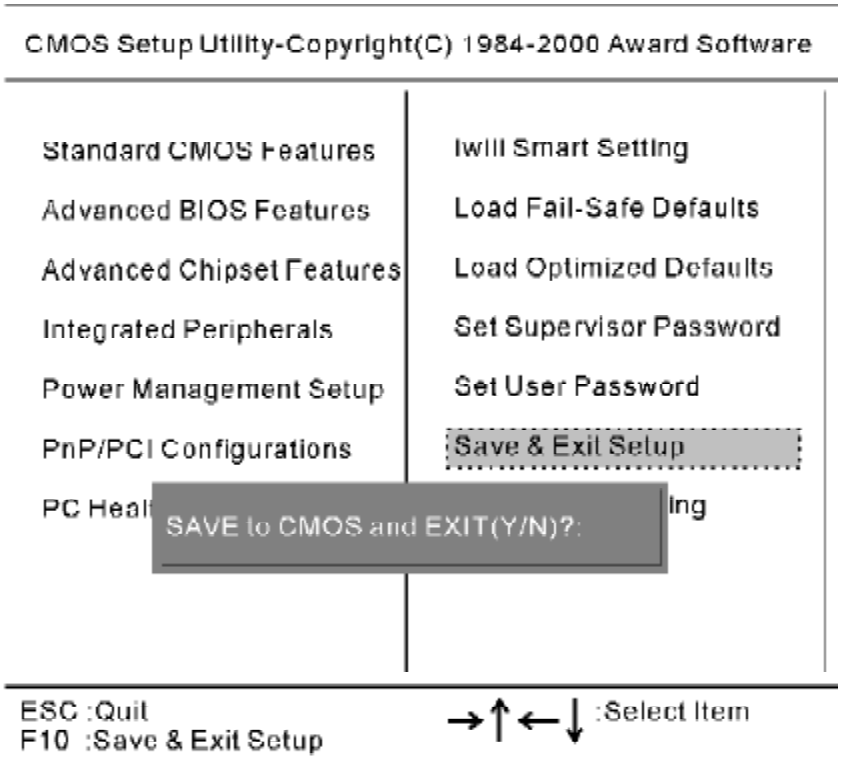
These setup pages are used for password setting. When a password has been enabled and the Security Option field is set as Setup, you will be required to enter the password every time you try to enter BIOS Setup program. This prevents an unauthorized person from changing any part of your system configuration. Additionally, if the Security Option field is set as Boot, the BIOS will request a password every time your system boot. This would prevent unauthorized use of your computer.

In you wish to use this function, bring the cursor to this field, then press <Enter>. The computer will display the message, “Enter Password”. Type your password and press <Enter>. After the message onfirm Password” is displayed, re-type your password. The Supervisor Password function will be in effect after you save and exit setup.

To disable a password, bring the cursor to this field, then press <Enter>. The computer will display the message, “Enter Password”. Press <Enter>. A message will confirm that the password is disabled. Once the password is disabled, the system will boot and you can enter setup program freely.

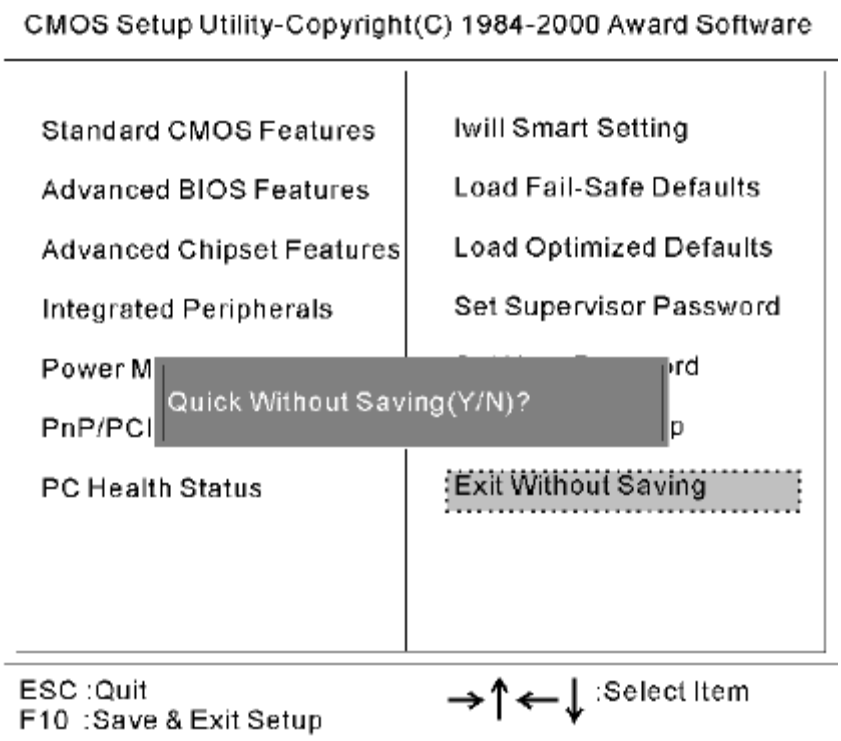
4.14 Save & Exit Setup

Saves current CMOS value and exit BIOS setup program.



4.15 Exit Without Saving

Abandons all CMOS value changes and exits BIOS setup program.



5 On board Audio

The on board 4.1 channel PCI Audio on Iwill motherboards offer a new generation PCI audio solution: it utilizes the state-of-the-art CRL® 3D Audio technology (HRTF 3D positional audio), and supports Microsoft® Direct Sound ® 3D and Aureal®'s A3D® interfaces. Better yet, it supports two / four speakers and DLS based (Down Loadable Sound) wave table music synthesizer which supports the Direct Music®. Besides being legacy audio SB16® compatible and providing professional SPDIF IN/OUT non-distortion digital interface, it also supports MPU-401 interface, etc. We provide line-in/rear speaker jack, microphone jack, audio output jack, SPDIF/OUT header, and 15pin D-SUB multiplexed joystick/ MIDI connector.

Trademark Acknowledgments

Microsoft, Windows, Direct Sound 3D, and Direct Music are trademarks of Microsoft Corporation. Sound Blaster is a trademark of Creative Technology, Ltd. Aureal is a trademark of Aureal Inc. A3D is a registered trademark of Aureal Inc. All other trademarks and registered trademarks mentioned in this manual are the property of their respective holders and are hereby acknowledged.

Information in this manual is subject to change without notice.

5.1 Audio Features

5.1.1 Special Features

32 bit PCI bus master. Full duplex playback and recording, built-in 16 bits CODEC.

HRTF 3D positional audio, supports both Direct Sound 3D® & A3D® interfaces, supports earphones, two and four channel speakers mode.

Support Windows 3.1 / 95 / 98 and Windows NT 4.0.

MPU-401 Game/Midi port and legacy audio SB16 support.

Downloadable Wave Table Synthesizer, supports Direct Music®.

5.1.2 Digital Audio (SPDIF IN/OUT) (SPDIF version only)

Up to 24 bit stereo 44KHz sampling rate voice playback/ recording.

Full duplex playback and recording, 120dB audio quality measured.

Auto detectable SPDIF/IN signal level from 0.5V to 5V.

5.1.3 Stereo Mixer and FM Music Synthesizer

Stereo analog mixing from CD-Audio, Line-in

Stereo digital mixing from Voice, FM/Wave-table, Digital CD-Audio

Mono mixing from MIC and software adjustable volume

OPL3 FM synthesizer (4 operators)

Up to 15 melody sounds and 5 rhythm sounds (20 voices)

5.1.4 Game and Midi Interface

Fully compatible with MPU-401 Midi UART and Sound Blaster Midi mode/ Standard IBM PC joystick/game port

5.2 Driver Installation

5.2.1 DOS Installation

Before beginning the installation, please make sure that your hard disk has sufficient space(min. 4MB). Insert the Power Installer CD into the CD-ROM Drive.

STEP 1	Change directory to PCI audio DOS drivers folder at DOS prompt, and type: ***INSTALL [Enter]***
STEP 2	Type DOS utilities path which you want to install.
STEP 3	Program will expand the file to the path which you've specified.
STEP 4	Install program will add initial drivers.

5.2.2 Win 95/98 Installation

We recommend that you have Microsoft Windows intalled, and remove any exsisting sound drivers from your current system, before you install this PCI sound device driver

STEP 1	Power off your system, install the audio cable, speaker, microphone, and insert the Iwill Power Installer CD into the CD-ROM drive.
STEP 2	Turn on the computer, and enter the Microsoft Windows 95 / 98.
STEP 3	You will see a windows prompt like this: "New Hardware Found PCI Multimedia Audio Device Windows has found new hardware and is installing the software for it", then the dialog box shown. Click "Next" button to go on.
STEP 4	Click on "Other LocationsK" button to specify drivers path.
STEP 5	When CMI8738/C3Dx (SX) PCI Audio Device found, click **Finish**.
STEP 6	Now, system is installing device drivers autiomaticlly, After a while, the system will finish the installation includs the following device drivers. CMI8738/C3DX (SX) PCI Audio Device CMI8738/C3DX (SX) PCIJoystick Device CMI8738/C3DX (SX) PCI Legacy Device
STEP 7	Click **start** key
STEP 8	Select **Run**
STEP 9	Key in the drive and path for Windows application installation program.
STEP 10	Click **OK** to start the installation procedure, and follow the on-screen instructions to finish the installation. When all the application softwares have been installed, please shut down Windows 95/98 system, and reboot your system.

5.2.3 Win 95/98 Un-Installation

In the cases you are experiencing some technical difficulties (the sound device is not function properly). It is suggested that you proceed with the un-install procedure:

STEP 1	Click **start** button.
STEP 2	Select **run** item.
STEP 3	Find UINSTDRV.EXE in driver disk under Win95/98 drivers folder.
STEP 4	Run it.
STEP 5	Follow the on-screen instructions to re-install the hardware.

If you want to completely remove the drivers, you can also run the un-install procedure as described previously, and then reboot the system.

5.2.4 Windows NT4.0 Installation

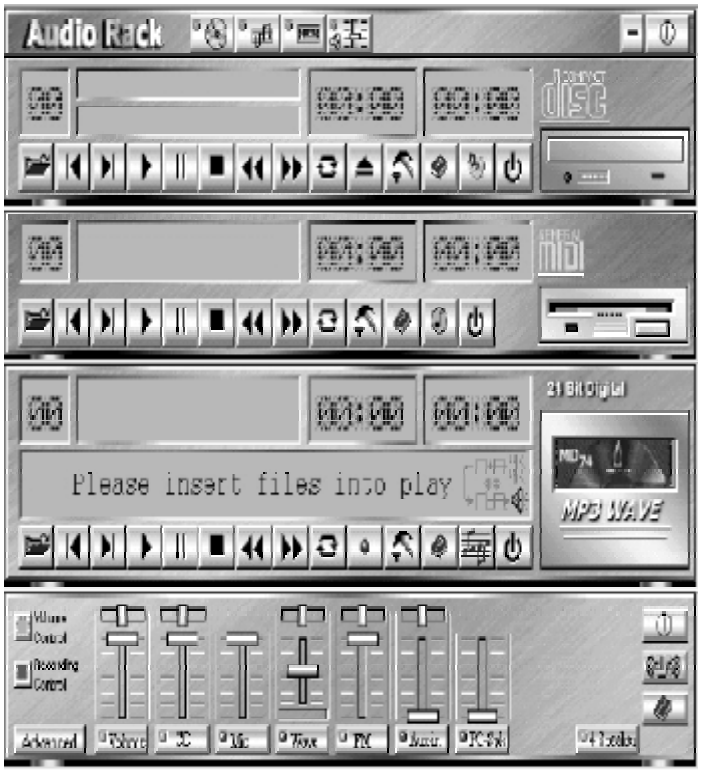
We recommend that you have Microsoft Windows NT intalled, and remove any exsisting sound drivers from your current system, before you install this PCI sound device driver.

STEP 1	Click "Start" button, move the highlight bar to "Setting" item, and select the "Control Panel".
STEP 2	Double-click "Multimedia" icon..
STEP 3	Select "Devices" page, and press "Add" button.
STEP 4	Select "Unlisted or Updated Driver" item in "List of Drivers".
STEP 5	Select "C-Media CM8738" item and press "OK" button.
STEP 6	Select proper I/O value.
STEP 7	Press "OK" button
STEP 8	Restart the system when being asked
STEP 9	Now, you have already installed the PCI Audio Adapter under Microsoft Windows NT4.0 successfully. If you want to install the Windows applications, continue the following steps:
STEP 10	Click start key
STEP 11	Select Run item
STEP 12	key in drive and path for Windows NT application installation program,
STEP 13	Click OK to start the installation procedure, and follow the on-screen instructions to finish the installation. When all of application softwares have been installed shut down the Windows NT system, and then reboot your system.

5.3 The Audio Rack

5.3.1 Introduction

By means of a user-friendly interface (as easy as operating your home stereo system), this PCI audio rack provides you with the control over your PC's audio functions, including the advantage of four speakers mode enable/ disable, and perfect digital sound (SPDIF version ONLY) input / output. control.



5.3.2 About Audio Rack

The Audio Rack is consisted of several major components.

5.3.2.1 Control Center

Controls the display of the PCI Audio Rack's components.

5.3.2.2 MIDI Player

Plays MIDI music files, and allows you to create your personal song playlists, and play the song files.

5.3.2.3 MP3/Wave Player

Records and plays digital audio (mp3/wave) files. Allows you to create wave file playlists, and playback the wave files.

5.3.2.4 CD Player

Plays standard audio CDs. Allows you to create your favorite song playlists.

5.3.2.5 System Mixer

Controls the volume level of your audio inputs and outputs

5.3.3 Showing or Hiding Audio Rack Components

To remove or add a component from the display, click on the component's button on the Control Center's Button Bar or toggle it off.

5.3.4 MIDI Player, Wave Player, and CD Player

CD Player(above, similar to MP3/Wave Player and MIDI Player)

5.3.4.1 Sel (or Trk) field:

If you have multiple selections in your playlist, this shows the number of the current selection or CD track.

5.3.4.2 Current File or Track:

The name of the current MIDI file, wave audio file, or CD track.

5.3.4.3 Total Length field:

Displays the total length of files or tracks in minutes and seconds.

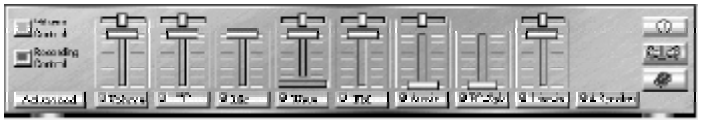
5.3.4.4 Current Time field:

Displays the current time of files or tracks in minutes and seconds when playback or recording.

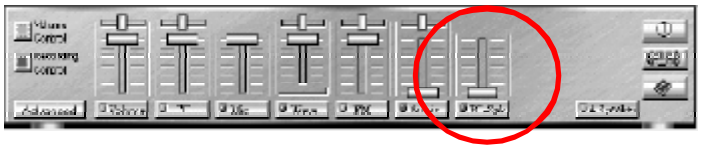
Please refer to the help screen or more detail button function descriptions.
(click on help button on the player)

5.3.5 System Mixer

System Mixer allows you to control all the audio output and input levels. System Mixer displays the volume controls which your audio drivers make available. *The names for these controls may vary.*



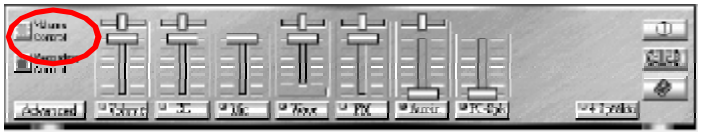
Mixer panel while the four speakers mode is enabled.



Mixer panel while the four speakers mode is disabled.

5.3.5.1 Volume Control:

Clicking on this button shows and allows you to use the output level controls.



5.3.5.2 Recording Control:

Clicking on this button shows and allows you use the input level controls.

5.3.5.3 Input and Output Level Sliders and Buttons:

For each input or output signal type, the control slider controls the loudness whereas the horizontal slider controls the balance between the two speakers. The mute button temporarily stops input or output without changing slider positions.

Control types and names might vary. The common types are listed below:

a Vol:

The master control for all outputs. The strength of an output signal is determined by both the Vol slider and the slider for the individual output. To affect all outputs, move the Vol slider. To change the output of an individual output type, move its slider.

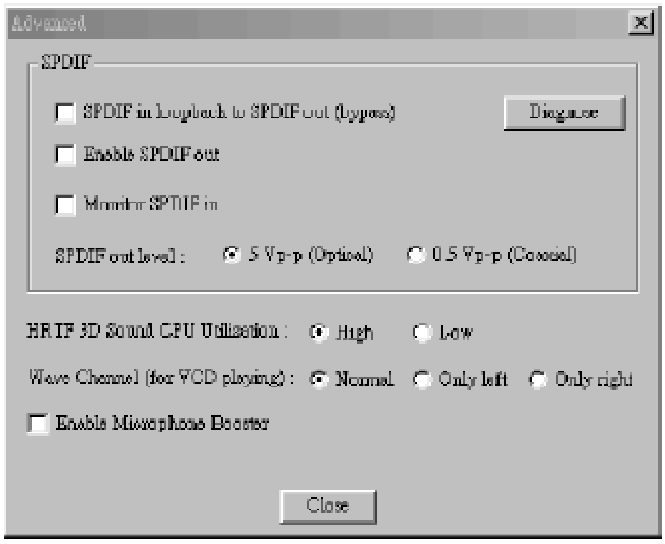
b Line-in/Rear:

Controls the audio hardware's Line In or Line Out levels. Line levels might be for an externally attached cassette player, for instance, while the four speakers mode is enabled, this control becomes the Rear speaker volume control.

c Mic:

Controls the microphone input level.

d Wave:
Controls wave (voice) playback or the recording levels.
e FM:
Controls the FM music playback or the recording level.
f Aux-in:
Controls the Aux-in music play or the recording level.
g PC-SPK:
Controls the external PC speaker input level.
h CD:
Controls the CD drive output level, for CD drives configured to play their audio output through the PCs audio hardware.
i 4SPK:
Turn on or turn off the Rear speakers effect.
j Surround:
Turn on or turn off the 3D surround sound effect.
k SPDIF-in:
Turn on or turn off the SPDIF digital signal input.
(SPDIF version ONLY)
l Advanced:
Check the SPDIF status **(SPDIF version ONLY)**, HRTF 3D sound CPU Utilization, turn on the Microphone Booster.

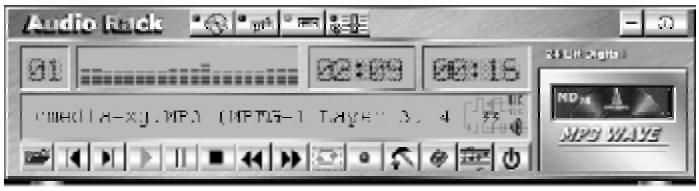


5.3.5.4 Mute Buttons:

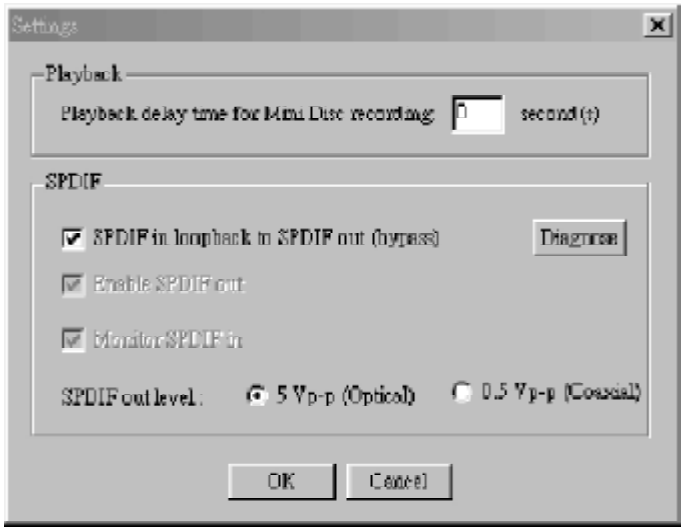
Toggle between muting and enabling the signal. A button with a lit LED is enabled, and when it is not lit, it means it is mute. Several output signals can usually be enabled at once.

5.3.6 MP3 Player

MP3 player can play both wave files and MP3 files.



MP3 player while the loop function enables.



The settings' window when one of the SPDIF functions is enabled. (SPDIF version ONLY)

5.3.7 The 4 Speakers System

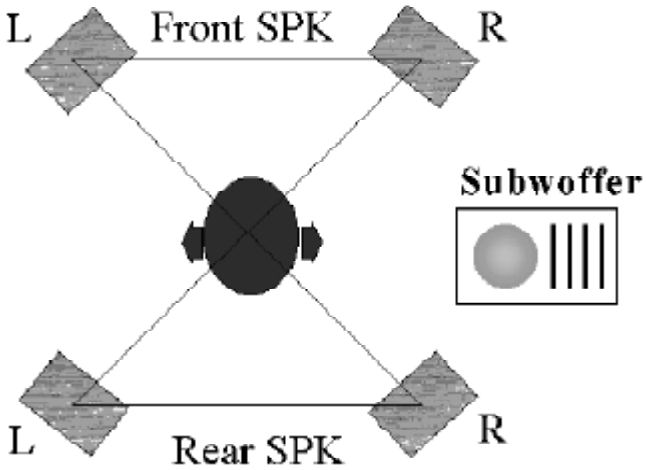
The on board audio on Iwill motherboards provide 2 wave channels (front/rear + subwoffer), known as the 4.1 speakers system. When games or application programs via DirectSound® 3D or A3D® interface locate the sound sources to the listener's back, the two rear speakers will work to enhance the rear audio positional effect, so as to complement the insufficiency of using only two front speakers to emulate the audio effect. The following is the hardware installation and the software setups:

5.3.7.1 The speaker installation.

Connect the front pair speakers to the Line-out jack of the audio adapter, and then connect rear pair speakers to Line-in/Rear jack of the audio adapter.

5.3.7.2The positions of the speakers

Put your speakers the way the following picture suggests, to deliver the best audio result.



5.3.7.3 The mixer setup

There is a 4 speakers option in the volume control of the mixer, and when you enable this option, it means the rear speakers are connected to Line-in/Rear jack. When Line-in/Rear jack is connected to other external Line-in sources, please DO NOT enable this option in order to avoid hardware conflicts. Regarding rear speaker option, you can turn on or turn off the output of the back speakers, and adjust the volume, to have the rear/front speakers have the same volume.

5.3.7.4 The demo

Execute the “Helicopter” demo within the C3D HRTF Positional Audio Demos of this audio adapter. When the helicopter flies behind you, the rear speakers will work.

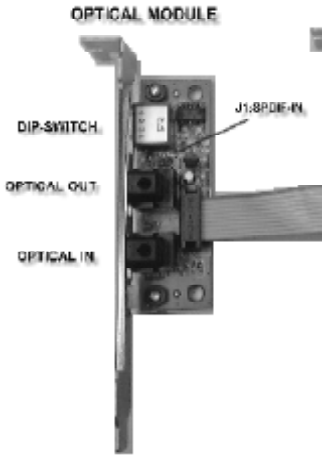
The following sections are for IWILL motherboards with SPDIF feature only.

5.3.8 SPDIF(SPDIF VERSION ONLY)

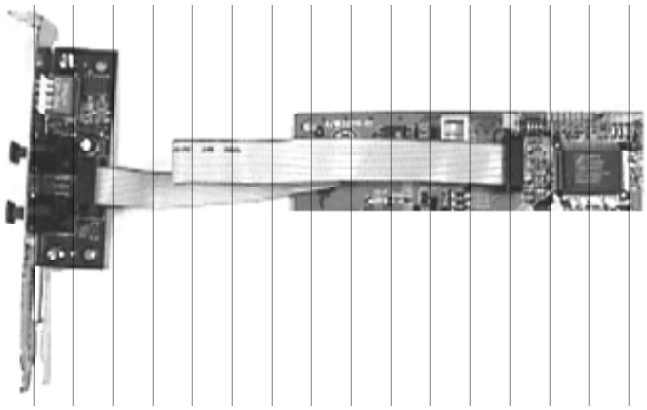
SPDIF is a digital singal in / out put interface that is definded by both SONY® and Philips®. It is commonly used in audio industry now adays.

5.3.9 IWILL Opti-Link(SPDIF VERSION ONLY)

Opti-Link™ is an optical in / out put module that allows users to export and inport audio signal with a superior qulaity.



5.3.10Opt-Link Installation



5.3.11Optical SW Setting

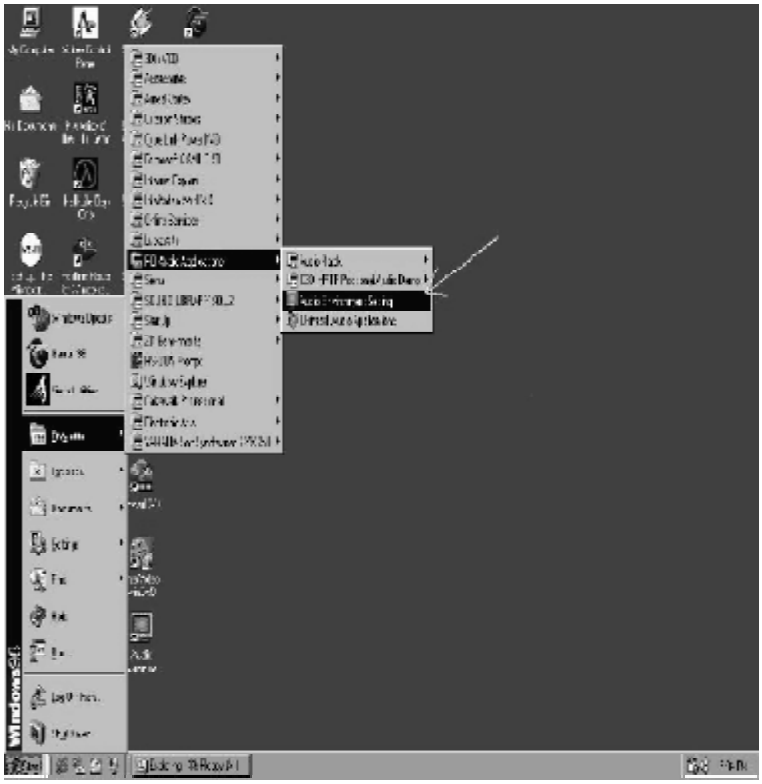
DIP SW	1	2	3	4	FUNCTION
	--	ON	--	--	SIGNAL NOT INVERSE (Default)
	--	OFF	--	--	SIGNAL INVERSE (TRY WITH ANOTHER IF DVD PLAYER)
	--	--	ON	OFF	SIGNAL FROM OPTICAL
	--	--	OFF	ON	SIGNAL FROM COAXIAL OR CD-ROM DIGITAL OUT

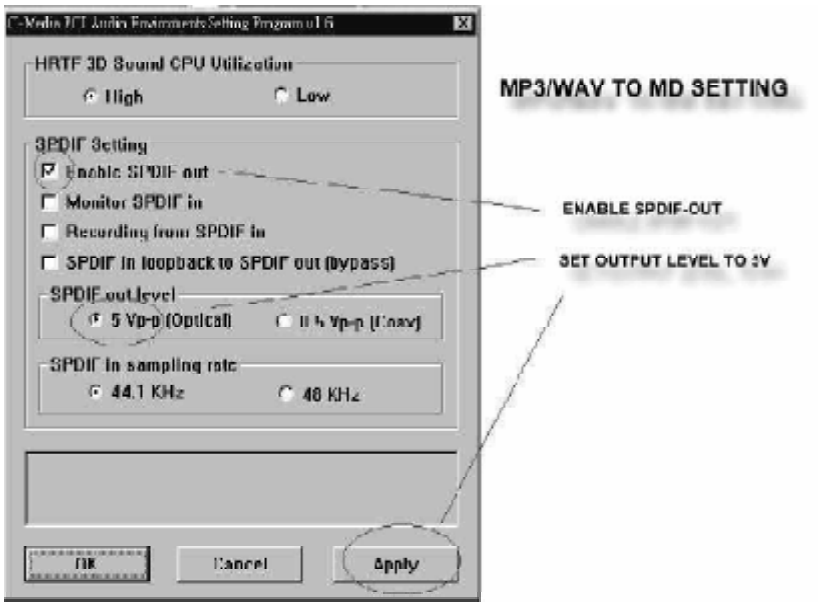
OPTICAL OUT OPTICAL IN

OPTICAL MODULE DIP SWITCH SETTING

5.4 The Application Program Setup(Please install)

STEP 1: When the connection between devices and Opti-Link™ is done, please go to the Start menu and select PCI Audio Applications \ Audio Environment Setting.

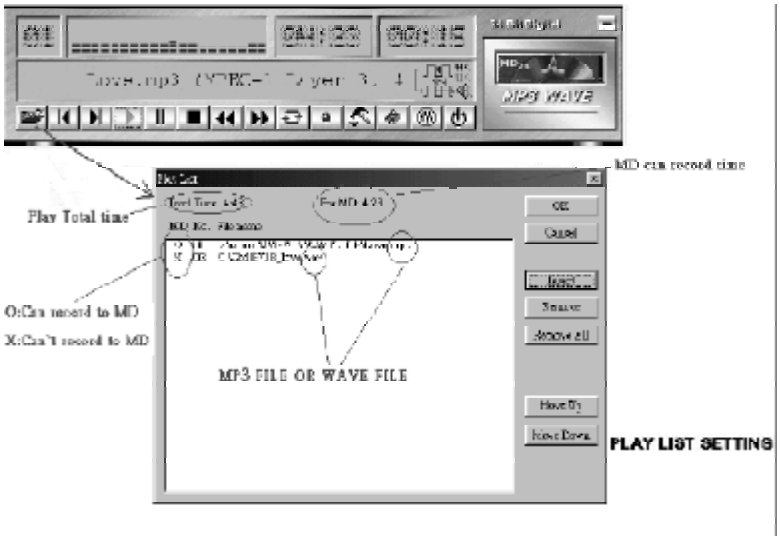


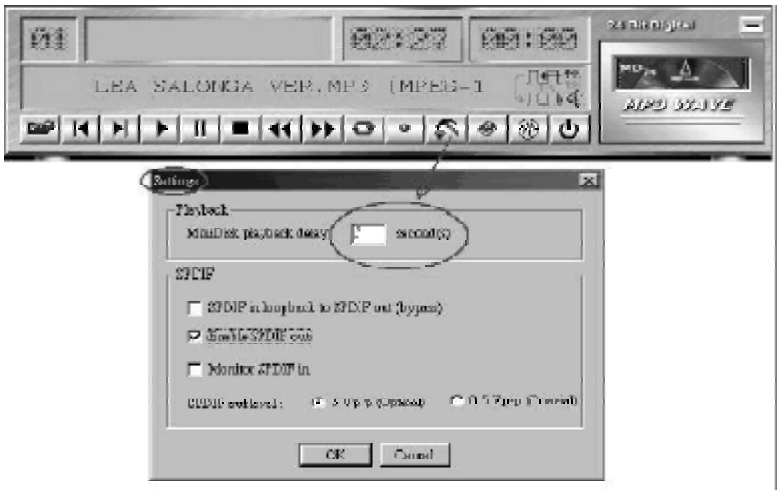


When all the procedures have been completed, there will be an infrared signal coming from the SPDIF/OUT of the optical fiber of the sound card.

Please note that signal beam may cause severe damage to the eyes. For your safety, please point the output end to a piece of white paper to check if thebeam is in function

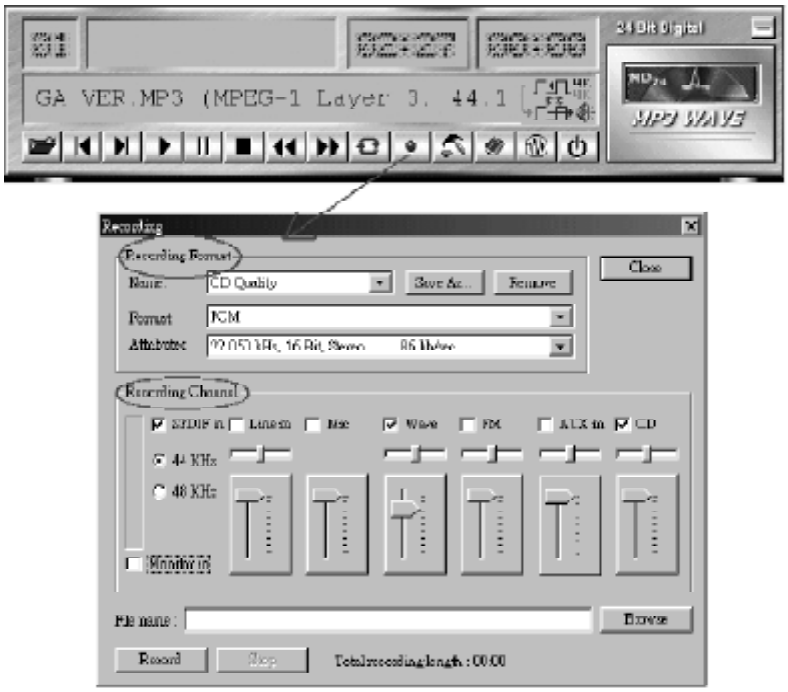
STEP 2: Please connect the output signal to the MD input, then play the music via the MP3 player:





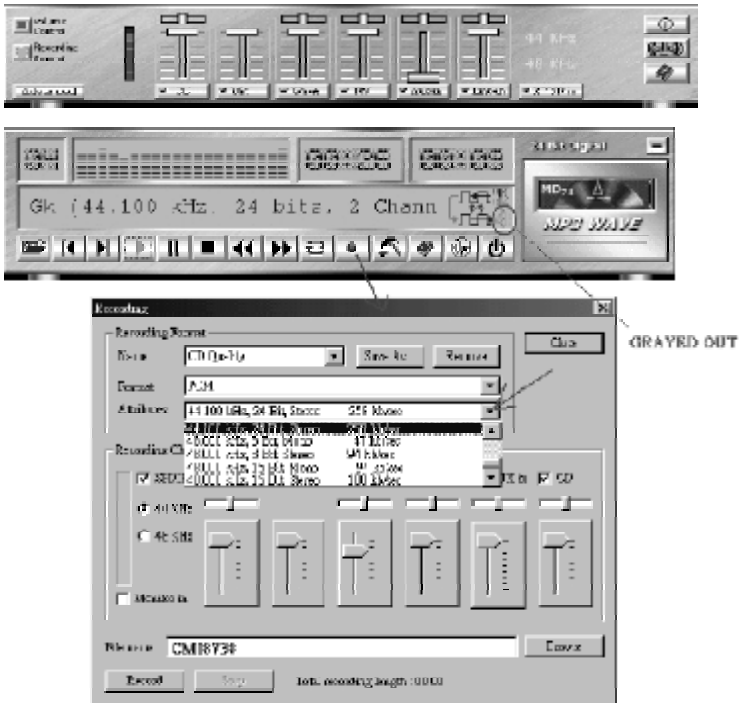
CHANGE DELAY TIME FOR MD AUTO-SYNC MODE

Please note that in playback, if there is no gap longer than three seconds between each track, the MD can not recognize the tracks and will record all of them into one. It is recommended that you set the gap time to 3~5 seconds to meet all type of MD requirements.



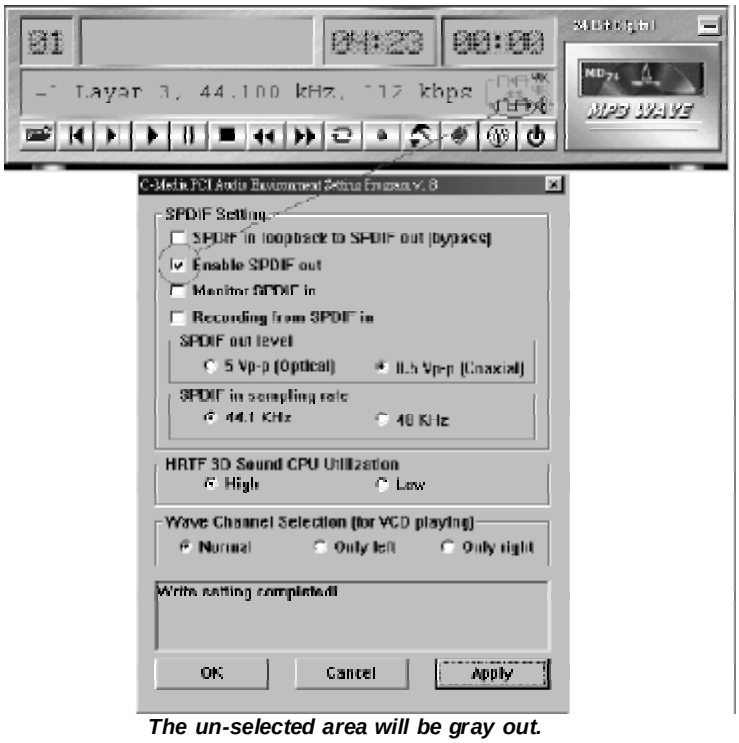
RECORDING FORMAT AND RECORDING CHANNEL SETTING

5.5 About Recording 24bit Audio Setting

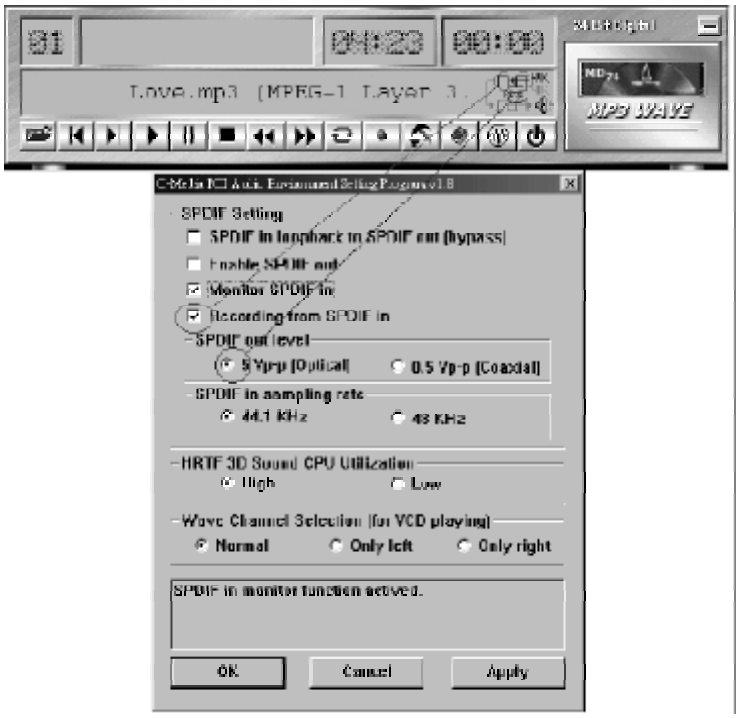


24-bit audio can only be applied to SPDIF IN/OUT mode; It does not apply to other modes such as the four channels or the analog. No sound will be heard while in playback, yet it can be recorded.

The un-selected area will be gray out.

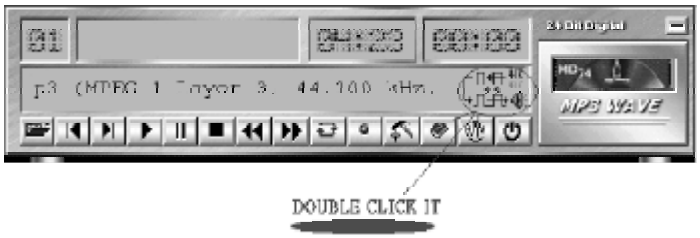


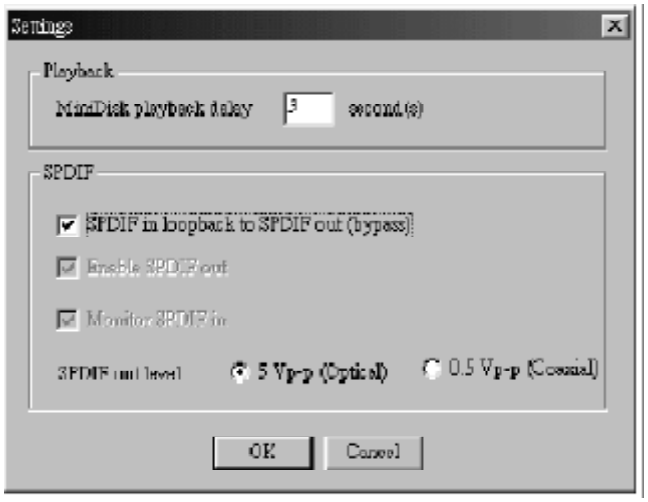
The un-selected area will be gray out.



The un-selected area will be gray out.

You can double-click this circuit icon to have the following setting box. By means of this setting box, you can also complete the above-mentioned setting procedures..





5.6 SPDIF/IN (SPDIF version only)

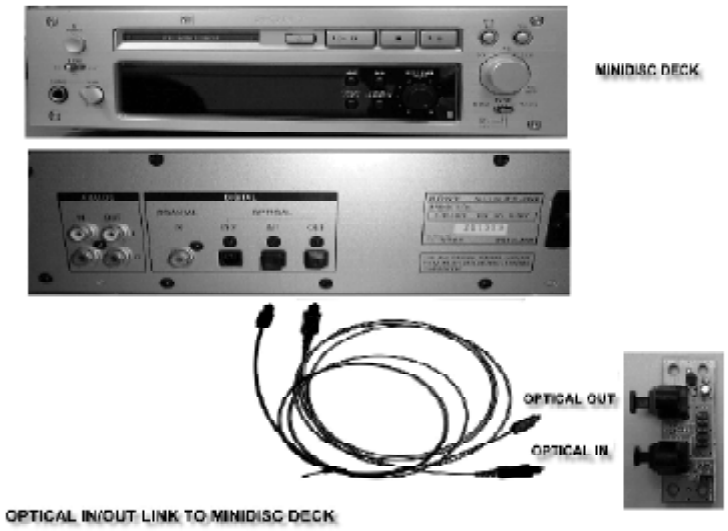
5.6.1 Portable CD / MD Player (output) to Iwill® Opti-Link™ (optical input) Setup.

STEP 1	connecting the Toslink plug to one side of the optcial cable, and than plugs it into the optical out put jack of the oprtable CD player .
STEP 2	Unplug the optical protection plug from the Iwill Opti-Link.
STEP 3	Connects the other side of the optical cable to the Iwill Opti-Link in put optical jack.

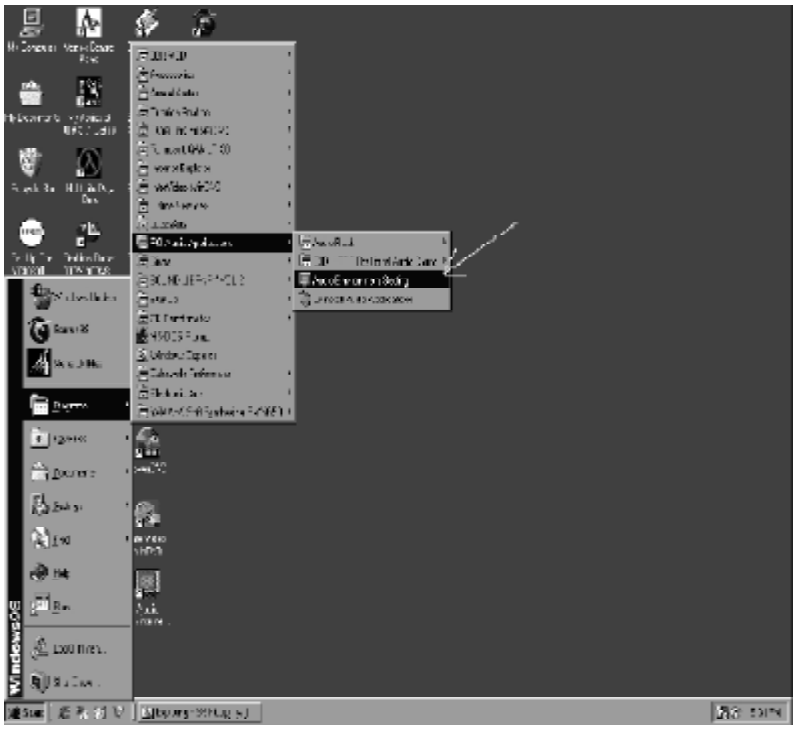
PORTABLE CD PLAYER TO OPTICAL IN

5.6.2 Standard CD / MD Player (output) to Iwill® Opti-Link™ (optical input) Setup.

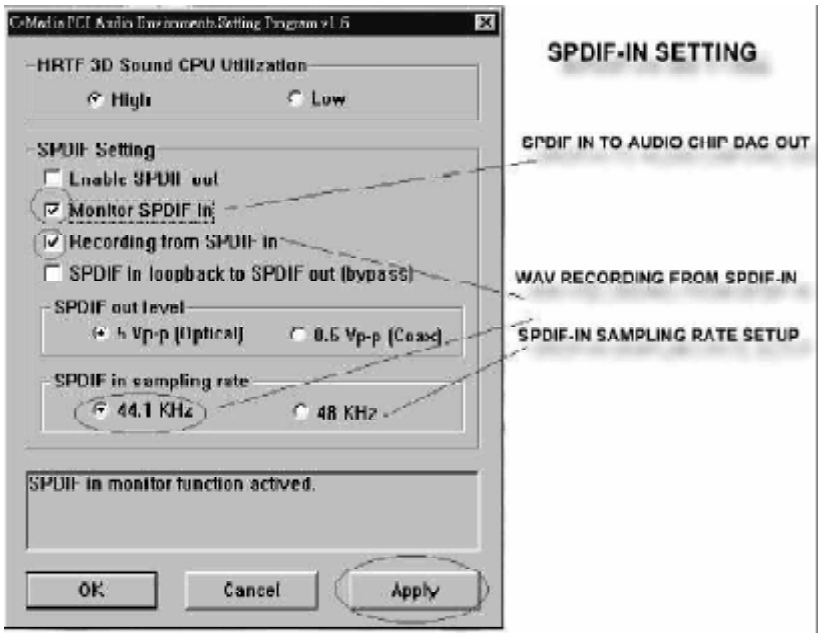
STEP 1	Unplug the optical protection plug from both connecting devices.
STEP 2	connects one side of the optical cable to the CD/MD out put optical jack.
STEP 3	Connects the other side of the optical cable to the Iwill opti-Link in put optical jack.



OPTICAL IN/OUT LINK TO MINIDISC DECK



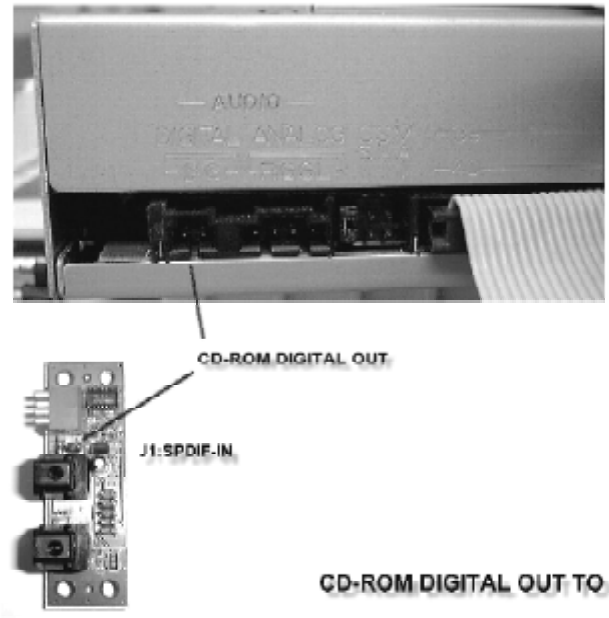
When the connection is done, please go to the Start menu and select PCI Audio Applications\Audio Environment Setting.


C-Media PCI Audio Environment Setting Program v1.6
HRTF 3D Sound CPU Utilization
High
Low
SPDIF Setting
Enable SPDIF out
Monitor SPDIF in
Recording from SPDIF in
SPDIF in loopback to SPDIF out (bypass)
SPDIF out level
0.5 Vp-p (Coax)
SPDIF in sampling rate
44.1 KHz
48 KHz
SPDIF in monitor function actived.
OK
Cancel
Apply
SPDIF-IN SETTING
SPDIF IN TO AUDIO CHIP DAC OUT
WAV RECORDING FROM SPDIF-IN
SPDIF-IN SAMPLING RATE SETUP

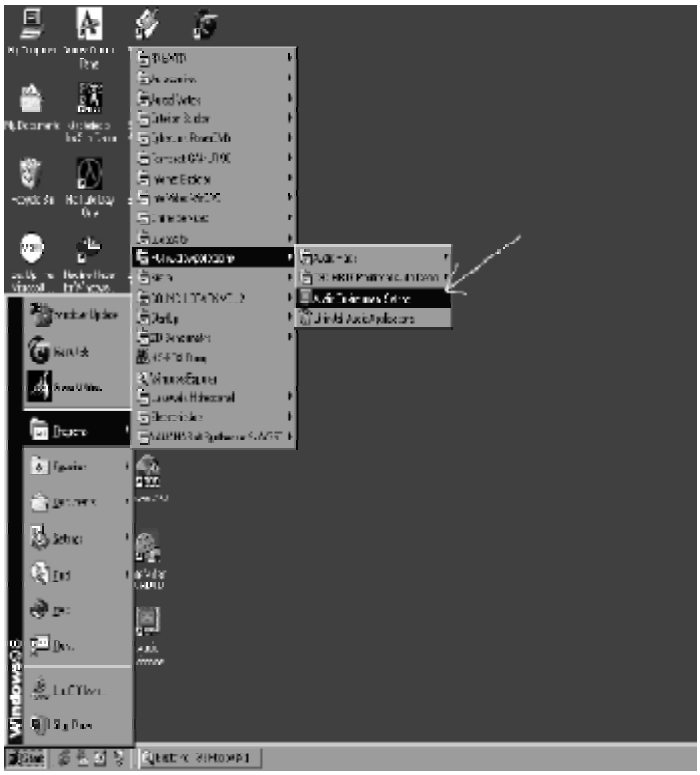
5.7 Loopback (bypass) mode Setup

5.7.1CD-ROM (Digital Output) to Opti-Link™ (SPDIF/IN) Setup

STEP 1	Connects one side of the 2-pin cable (option) to the Digital Out jack at the back of the CD-ROM.
STEP 2	Connects the other side of the 2-pin cable to the J1 SPDIF In header on the Iwill Opti-Link.

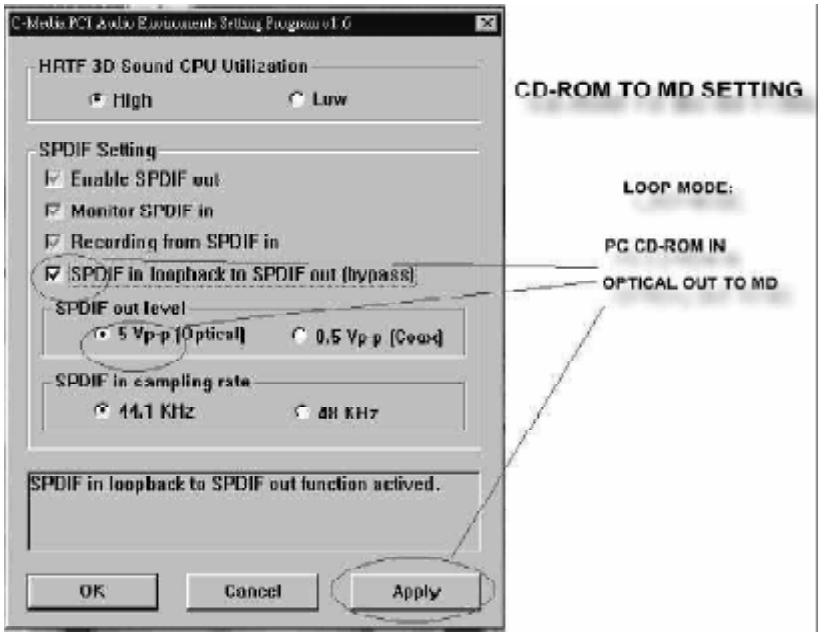


CD-ROM DIGITAL OUT TO SPDIF-IN



When the connection is done, please go to the Start menu and select PCI Audio Applications\Audio Environment Setting.

Please follow these setting procedures.



Now you can insert the CD into the CD ROM drive, then activate Audio Rack? CD player and push the "play" button to do the recording job.

Please note that you have to set the MD in the simultaneous-recording mode in order to achive recording process.

6 Power Installer CD

6.1 Software Installation

The attached Power Installer CD contains all the necessary drivers, utilities. It provides an easy way for users to install the needed drivers without going through a complicated process. The Power Installer CD is able to auto-detect and display the drivers, utilities needed for your motherboard.

6.1.1 What's inside Power Installer CD for this motherboard

Driver	**Software Utility**
ALi AGP Host Driver	*PC Cillion Anti Virus*
Onboard Audio Dirver	*Hardware Monitor Utility*
Award Patch File	*Suspend To Disk Guide*
ALi IDE and Cache Utility	*Adobe Acrobat Reader*
User's Manual	**Make Driver**
	Exit

6.2 How to use the Power installer CD

The Power Installer CD supports the Auto Run program under Windows 98/95/2000 and Windows NT operating systems. All the necessary drivers, utilities and manual for this motherboard will show on the screen.

Power Installer does not support a keyboard at this moment. You must use a mouse to install it.

6.2.1 How to view manual

This Power Installer CD includes detailed information of all manuals for every motherboard manufactured. Please insert the Power Installer CD into the CD-ROM drive; Click the "View Manual" item, and select the product that you want to view.

6.3 How to make driver diskette

6.3.1 Without O.S. installed

This bootable Power Installer CD also allows you to boot up your system, even when the OS has not been installed. During the boot-up process, you can perform Diskette Creator, which will automatically make the driver diskettes you need. Follow the instructions below to make your own device driver floppy diskettes if you have a CD-ROM with IDE interface. If you have already installed SCSI CD-OM, please make sure your SCSI host adapter supports bootable CD-ROM, and then proceed directly to step 8 ,and then finish the procedure.

STEP 1	First, power-on or **boot** your system.
STEP 2	Press <**Del**> key during boot sequence to enter **CMOS Setup Utility**.
STEP 3	Use arrow keys to select **ADVANCED BIOS FEATURES** on the menu, then press **Ente**r.
STEP 4	Select **First Boot Device** and change the default setting to **CDROM** using Page Up /Page Down key.
STEP 5	Press <**Esc**> key to go back to CMOS SETUP Utility menu.
STEP 6	Press <**F10**> to select Save and Exit Setup.
STEP 7	Press **Y** then Enter to complete. Now you are able to boot up the system from the CD-ROM.
STEP 8	Insert the Power Installer CD into the CD-ROM drive and re-start the computer.
STEP 9	The Diskette Creator will now execute automatically for making your own driver disketes.
STEP10	Make the desired driver diskettes according to the instructions displayed on screen.

6.3.2 Windows 98/ME installation

SETP 1	Into system BIOS to load default value and set CPU frequency.
STEP 2	**Enable "Write Cache" and RAID disk configuration in DE RAID BIOS. (If there are IDE hard disk on IDE RAID port)**
STEP 3	Install Windows 98/ME (refer Windows 98/ME installation).
STEP 4	**Install "ALI AGP patch file" from Iwill Power Installer.**
STEP 5	**Install "ALI ATA/100 Device Driver" from Iwill Power Installer.**
STEP 6	Install AGP card driver.
STEP 7	Update IDE RAID driver from "Control Panel/System/Device Manager/SCSI device".
STEP 8	Install on board hardware sound driver from Iwill Power Installer.
STEP 9	Install IDE RAID Utility from Iwill Power Installer.

6.3.3 Windows NT/2000 installation

STEP 1	Into system BIOS to load default value and set CPU frequency.
STEP 2	Set first boot device as "CD ROM" if you want to install Windows in IDE RAID disk.
STEP 3	RAID disk configuration in IDE RAID BIOS. (If there are IDE hard disk on IDE RAID port)
STEP 4	Boot from Iwill Power Installer to make IDE RAID diskette.
STEP 5	Install Windows NT/2000 from CDROM. If Windows not install in RAID disk, please skip to step 11
STEP 6	Press F6 function key when you see following messages on the screen. **"Setup is inspecting your computer's hardware configuration..."**
STEP 7	Press "S" to specify additional SCSI adapters
STEP 8	Select "Other" to load manufacture supplied software driver.
STEP 9	Place the IDE RAID driver for Windows 9X/NT (or for Windows 2000 if your Operating System is Windows 2000) in the Floppy drive.
STEP 10	Press "ENTER" when RAID driver is ready.
STEP 11	Follow all instruction to finish Windows NT installation.
STEP 12	Install ALI AGP Patch file from Iwill Power Installer.
STEP 13	Install AGP card Driver.
STEP 14	Install on board hardware sound driver from Iwill Power Installer.
STEP 15	Install IDE RAID Utility from Iwill Power Installer.

6.4 Install driver

64.1 Howt to install ALi AGP Host Driver

You may just click on the **ALi AGP Host Driver** shown on screen that needs to be installed, then follow the prompts to complete setup.

6.4.2 How to install Onboard Audio Driver

You may just click on the **Onboard Audio Driver** shown on screen that needs to be installed, then follow the prompts to complete setup.

6.4.3 How to install Award Patch File

You may just click on the **Award Patch File** shown on screen that needs to be installed, then follow the prompts to complete setup.

6.4.4 How to Install ALi IDE and Cache Utility

You may just click on the **ALi IDE and Cache Utility** shown on screen that needs to be installed, then follow the prompts to complete setup.

6.5 Install Software Utility

6.5.1 How to use PC-Cillin Anti-Virus program

Simply click on the **PC-Cillin Anti-Virus** shown on screen that be installed, then follow the prompts to complete setup.

65.2 How to use Hardware Monitoring Utility

You may just click on the **Hardware Monitor Utility** shown on screen then follow the prompts to complete setup.

6.5.3 How to use Suspend To Disk Guide

Please follow the steps on the document to complete setup.

6.5.4 How to use Adobe Acrobat Reader

You may just click on the **Adobe Acrobat Reader** shown on screen then follow the prompts to complete setup.