HS-1000

Socket 370 Industrial ATX Motherboard

• CRT • ATA/33/66/100 •
• Audio • COM • Game Port •
• USB • H/W Monitor •

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Edition 1.0, July 12, 2004

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Safety Instructions

Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:

- Do not remove boards or integrated circuits from their anti-static packaging until you are ready to install them.
- Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This helps to discharge any static electricity on your body.
- Wear a wrist-grounding strap, available from most electronic component stores, when handling boards and components. Fasten the ALLIGATOR clip of the strap to the end of the shielded wire lead from a grounded object. Please wear and connect the strap before handle the HS-1000 to ensure harmlessly discharge any static electricity through the strap.
- Please use an anti-static pad when putting down any components or parts or tools outside the computer. You may also use an anti-static bag instead of the pad. Please inquire from your local supplier for additional assistance in finding the necessary anti-static gadgets.

NOTE: *DO NOT TOUCH THE BOARD OR ANY OTHER SENSITIVE COMPONENTS WITHOUT ALL NECESSARY ANTI-STATIC PROTECTION*

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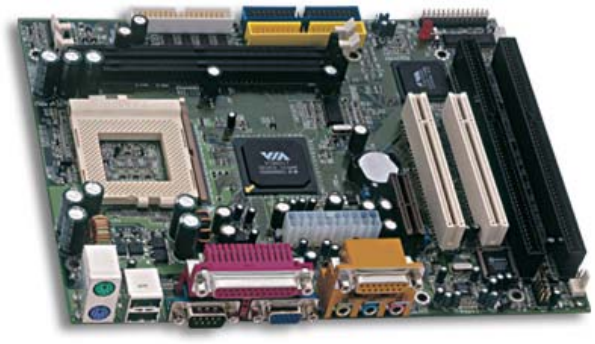
Chapter 1

General Description

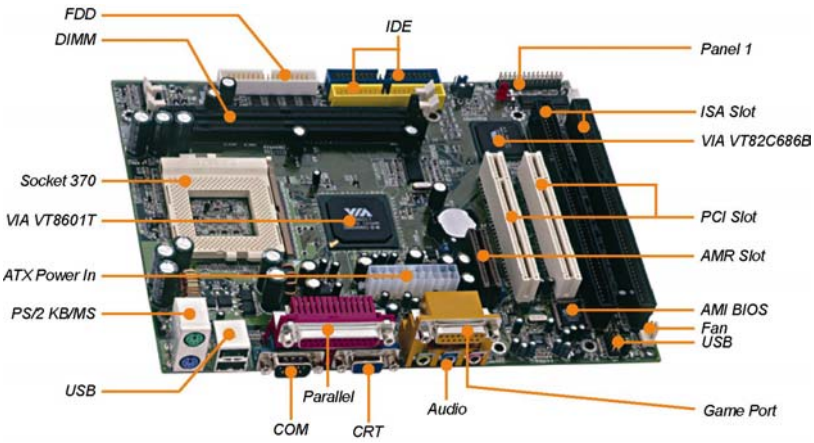


The HS-1000 is a VIA VT8601T chipset-based board designed with Socket 370 for Intel® Celeron™/Coppermine™/Tualtain™ 633MHz~1.3GHz CPU. These features combine and make the HS-1000 an ideal industrial ATX motherboard. Additional features include an enhanced I/O with CRT, audio, and game port interface.

Its onboard ATA/33/66/100 to IDE drive interface architecture allows the HS-1000 to support data transfers of 33, 66 or 100MB/sec. to each IDE drive connection. Designed with the VIA VT8601T core logic chipset, the board supports Socket 370 for Intel® Celeron™/Coppermine™/ Tualtain™ 633MHz~1.3GHz CPU. The VIA VT8601T integrated Trident 3D supporting AGP Bus.

System memory is also sufficient with the two DIMM sockets that can support up to 1GB. Additional onboard connectors include an advanced USB and Game ports providing faster data transmission.

1.1 Major Features



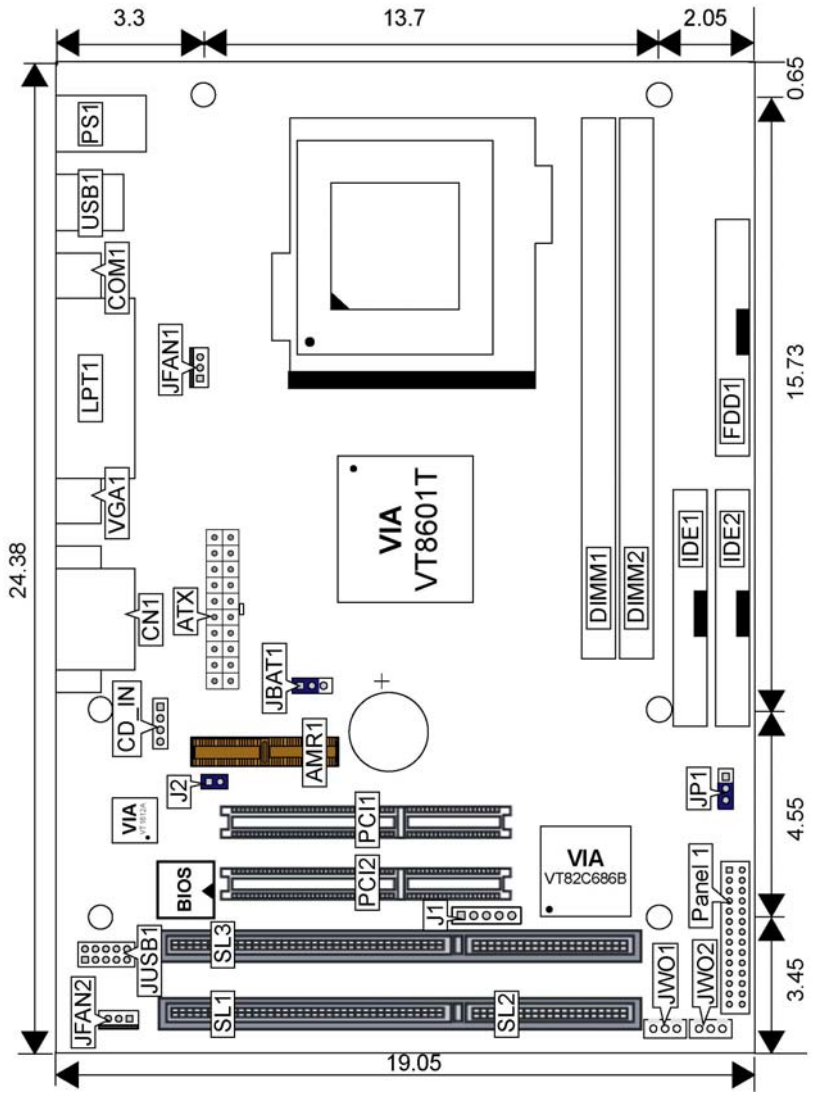
The HS-1000 comes with the following features:

- Socket 370 for Intel® Celeron™/Coppermine™/ Tualtain™ 633MHz~1.3GHz CPU
- Two DIMM sockets with a max. capacity of 1GB
- VIA VT8601T/VT82C686B system chipset
- VIA VT82C686B super I/O chipset
- Supports two PCI, two ISA, one AMR slots
- VIA VT8601T CRT display controller
- AC97 3D audio controller
- Fast PCI ATA/33/66/100 IDE controller
- One COM, one game port, four USB connectors
- Supports Hardware Monitor

1.2 Specifications

- **CPU:** Socket 370 for Intel® Celeron™/Coppermine™/ Tualtain™ 633MHz~1.3GHz CPU
- **Memory:** Two DIMM sockets supporting up to 1GB
- **Chipset:** VIA VT8601T/VT82C686B
- **I/O Chipset:** VIA VT82C686B
- **Slot:** Two PCI, two ISA, and one AMR slots
- **VGA:** VIA VT8601T integrated Trident 3D supporting AGP Bus
- **Audio:** AC97 3D audio controller supporting speaker out
- **IDE:** Four IDE disk drives supporting ATA/33/66/100 and with transfer rates of 33/66/100MB/sec.
- **FDD:** Supports up to two floppy disk drives
- **Parallel:** One enhanced bi-directional parallel port supporting SPP/ECP/EPP
- **Serial Port:** 16C550 UART-compatible RS-232 x 1 serial port with 16-byte FIFO
- **Game Port:** Supports one Joystick game port
- **USB:** Two internal and two external USB connectors
- **Keyboard:** PS/2 6-pin Mini DIN
- **Mouse:** PS/2 6-pin Mini DIN
- **BIOS:** AMI PnP Flash BIOS
- **CMOS:** Battery backup
- **Temperature:** 0~60°C (operating)
- **Hardware Monitor:** VIA VT82C686B
- **Board Size:** 24.4 x 19.1 cm

1.3 Board Dimensions



Chapter 2

Unpacking

2.1 Opening the Delivery Package

The HS-1000 is packed in an anti-static bag. The board has components that are easily damaged by static electricity. Do not remove the anti-static wrapping until proper precautions have been taken. Safety Instructions in front of this manual describe anti-static precautions and procedures.

2.2 Inspection

After unpacking the board, place it on a raised surface and carefully inspect the board for any damage that might have occurred during shipment. Ground the board and exercise extreme care to prevent damage to the board from static electricity.

Integrated circuits will sometimes come out of their sockets during shipment. Examine all integrated circuits, particularly the BIOS, processor, memory modules, ROM-Disk, and keyboard controller chip to ensure that they are firmly seated. The HS-1000 delivery package contains the following items:

- **HS-1000 Board x 1**
- **Utility CD Disk x 1**
- **ATA/100 IDE flat cable x 1**
- **FDD flat cable x 1**
- **Jumper Bag x 1**
- **User's Manual**

It is recommended that you keep all the parts of the delivery package intact and store them in a safe/dry place for any unforeseen event requiring the return shipment of the product. In case you discover any missing and/or damaged items from the list of items, please contact your dealer immediately.

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Chapter 3

Hardware Installation

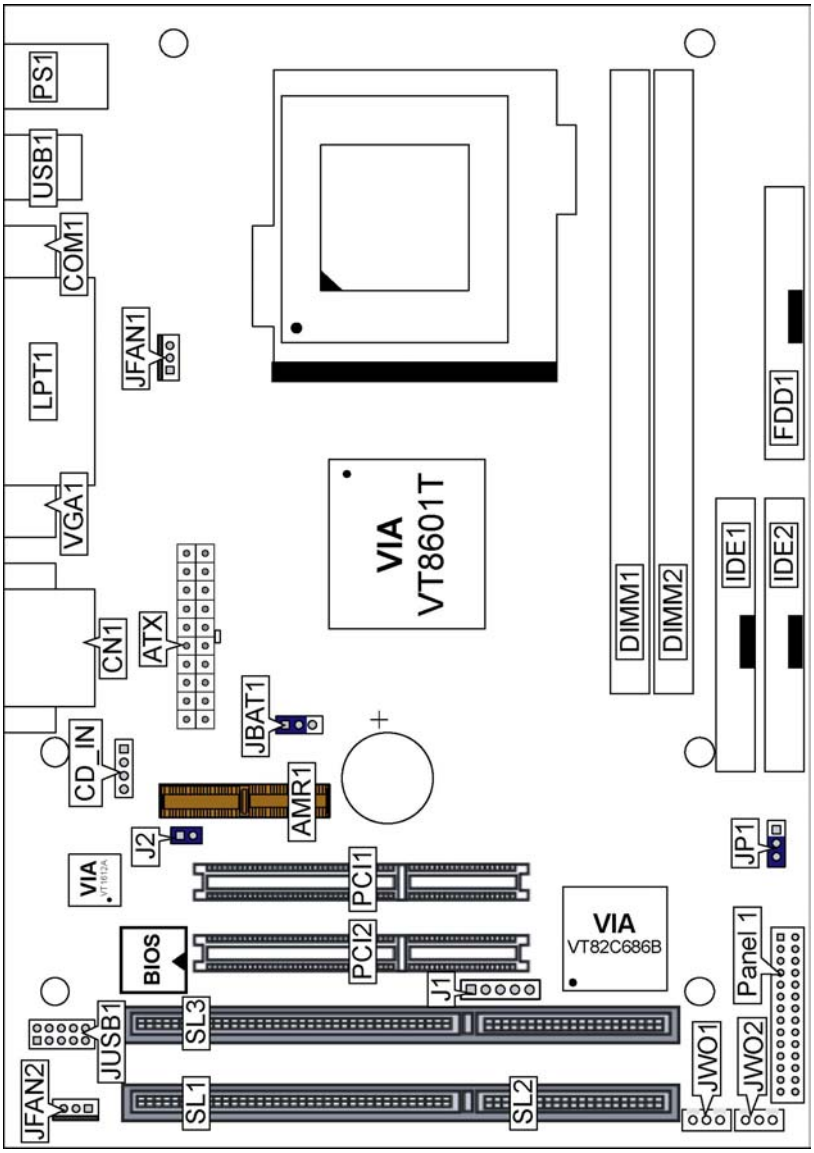
This chapter provides the information on how to install the hardware using the HS-1000. This chapter also contains information related to jumper settings of switch selection etc.

3.1 Before Installation

After confirming your package contents, you are now ready to install your hardware. The following are important reminders and steps to take before you begin with your installation process.

1. Make sure that all jumper settings match their default settings and CMOS setup correctly. Refer to the sections on this chapter for the default settings of each jumper.
2. Go through the connections of all external devices and make sure that they are installed properly and configured correctly within the CMOS setup. Refer to the sections on this chapter for the detailed information on the connectors.
3. Keep the manual and diskette in good condition for future reference and use.

3.2 Board Layout



3.3 Jumper List

Jumper	Definition	Setting	Page
J2	Use CODEC or AMR Slot Select: *CODEC*	Short	19
JBAT1	Clear CMOS: *Normal Operation*	Short 1-2	10
JP1	Power Down by Hardware or Software: *Software*	Short 1-2	----

3.4 Connector List

Connector	Definition	Page
AMR1	AMR Slot	----
ATX	20-pin ATX Power Connector	16
CD_IN	CD-ROM Analog Input Connector	19
CN1	Game Port	19
CN1A	Line In Connector	19
CN1B	MIC In Connector	19
CN1C	Line Out Connector	19
COM1	COM 1 Connector (DB9)	14
DIMM1/DIMM2	168-pin DIMM Sockets	10
FDD1	Floppy Connector	13
IDE1/IDE2	Primary/Secondary IDE Connectors	11
J1	IrDA Connector	15
JFAN1/JFAN2	Fan Power Connectors	16
JUSB1	Internal USB Connector	16
JWOL1	Wake On LAN Connector	14
JWOM1	Wake On Modem Connector	14
LPT1	Parallel Connector	15
Panel1	Front Panel Connector	18
PS1	PS/2 6-pin Mini DIN Keyboard Connector	17
PS2	PS/2 6-pin Mini DIN Mouse Connector	17
PCI1/PCI2	PCI Slots	----
SL1/SL3	ISA Slots	----
USB1	External USB Connector	16
VGA1	15-pin VGA Connector	10

3.5 Configuring the CPU

The HS-1000 offers the convenience in CPU installation with its auto-detect feature. After installing a new microprocessor onboard, the HS-1000 automatically identifies the frequency of the installed microprocessor chip.

3.6 System Memory

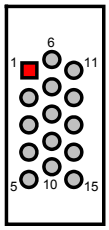
The HS-1000 provides two DIMM sockets at locations *DIMM1* and *DIMM2*. The maximum capacity of the onboard memory is 1GB.

3.7 VGA Controller

The HS-1000 has an onboard VGA controller. The HS-1000 provides one connection method of a VGA device. *VGA1* offers a single standard CRT connector (DB15).

- **VGA1: 15-pin CRT Connector**

PIN	Description	PIN	Description
1	Red	2	Green
3	Blue	4	N/C
5	GND	6	GND
7	GND	8	GND
9	N/C	10	GND
11	N/C	12	SDA
13	HSYNC	14	VSYNC
15	SCL		



3.8 CMOS Data Clear

The HS-1000 has a clear CMOS jumper on JBAT1.

- **JBAT1: Clear CMOS**

Options	Settings
Normal Operation (default)	Short 1-2
Clear CMOS	Short 2-3

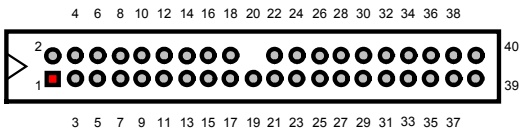
NOTE: *Before you turn on the power of your system, please set JBAT1 to short 1-2 for Normal Operation.*

3.9 PCI E-IDE Drive Connector

IDE1 and *IDE2* are standard 40-pin connector daisy-chain driver connectors serve the PCI E-IDE drive provisions onboard the HS-1000. A maximum of four ATA/33/66/100 IDE drives can connect to the HS-1000 via *IDE1* and *IDE2*.

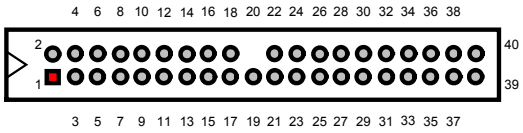
- **IDE1: Primary IDE Connector**

PIN	Description	PIN	Description
1	RESET	2	GND
3	PDATA 7	4	PDATA 8
5	PDATA 6	6	PDATA 9
7	PDATA 5	8	PDATA 10
9	PDATA 4	10	PDATA 11
11	PDATA 3	12	PDATA 12
13	PDATA 2	14	PDATA 13
15	PDATA 1	16	PDATA 14
17	PDATA 0	18	PDATA 15
19	GND	20	N/C
21	PDDREQ	22	GND
23	PIOW#	24	GND
25	PIOR#	26	GND
27	PIORDY	28	PR1PD1-
29	RPDACK-	30	GND
31	INTERRUPT	32	N/C
33	RPDA1-	34	PATA66
35	RPDA0-	36	RPDA2-
37	RPCS1-	38	RPCS3-
39	HDD ACTIVE	40	GND



- **IDE2: Secondary IDE Connector**

PIN	Description	PIN	Description
1	RESET	2	GND
3	SDATA 7	4	SDATA 8
5	SDATA 6	6	SDATA 9
7	SDATA 5	8	SDATA 10
9	SDATA 4	10	SDATA 11
11	SDATA 3	12	SDATA 12
13	SDATA 2	14	SDATA 13
15	SDATA 1	16	SDATA 14
17	SDATA 0	18	SDATA 15
19	GND	20	N/C
21	SDDREQ	22	GND
23	SIOW#	24	GND
25	SIOR#	26	GND
27	SIORDY	28	SR1PD1-
29	SPDACK-	30	GND
31	INTERRUPT	32	N/C
33	RSDA1-	34	PATB66
35	RSDA0-	36	RSDA2-
37	RSCS1-	38	RSCS3-
39	HDD ACTIVE	40	GND

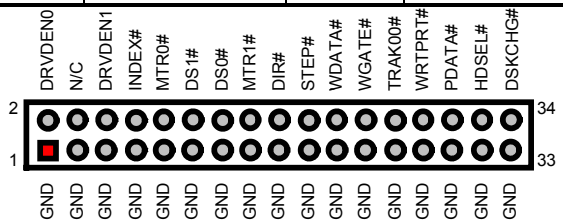


3.10 Floppy Disk Drive Connector

The HS-1000 uses a standard 34-pin header connector, *FDD1*, for floppy disk drive connection. A total of two FDD drives may be connected to *FDD1* at any given time.

- **FDD1: FDD Connector**

PIN	Description	PIN	Description
1	GND	2	DRVDEN0
3	GND	4	N/C
5	GND	6	DRVDEN1
7	GND	8	INDEX#
9	GND	10	MTR0#
11	GND	12	DS1#
13	GND	14	DS0#
15	GND	16	MTR1#
17	GND	18	DIR#
19	GND	20	STEP#
21	GND	22	WDATA#
23	GND	24	WGATE#
25	GND	26	TRAK00#
27	GND	28	WRTPRT#
29	GND	30	RDATA#
31	GND	32	HDSEL#
33	GND	34	DSKCHG#

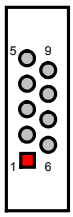


3.11 Serial Port Connectors

The HS-1000 offers one NS16C550 compatible UARTs with Read/Receive 16-byte FIFO serial port and one external DB9 connector.

- **COM1: COM1 Connector (DB9)**

PIN	Description	PIN	Description
1	DCD	2	DSR
3	RXD	4	RTX
5	TXD	6	CTX
7	DTR	8	RI
9	GND		



- **JWOL1: Wake On LAN Connector**

PIN	Description
1	5VSB
2	GND
3	Wake On LAN

- **JWOM1: Wake On Modem Connector**

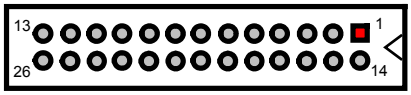
PIN	Description
1	5VSB
2	GND
3	Wake On Modem

3.12 Parallel Connector

LPT1 is a standard 26-pin flat cable connector deigned to accommodate parallel port connection onboard the HS-1000.

- **LPT1: Parallel Connector**

PIN	Description	PIN	Description
1	Strobe	14	Auto Form Feed
2	DATA 0	15	ERROR#
3	DATA 1	16	Initialize
4	DATA 2	17	Printer Select LN#
5	DATA 3	18	GND
6	DATA 4	19	GND
7	DATA 5	20	GND
8	DATA 6	21	GND
9	DATA 7	22	GND
10	Acknowledge	23	GND
11	Busy	24	GND
12	Paper Empty	25	GND
13	Printer Select	26	GND

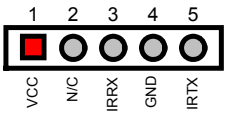


3.13 IrDA Connector

J1 is a 5-pin internal IR communication connector for connection of an IrDA device.

- **J1: IrDA Connector**

PIN	Description
1	VCC
2	N/C
3	IRRX
4	GND
5	IRTX

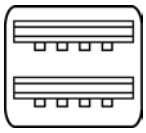


3.14 USB Connector

The HS-1000 provides one 8-pin connector, at locations *JUSB1* and two external connectors, at location *USB1*, for four USB connections to the HS-1000.

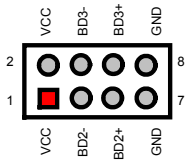
- **USB1: External USB Connector**

PIN	Description	PIN	Description
1	VCC	2	VCC
3	BD0-	4	BD1-
5	BD0+	6	BD1+
7	GND	8	GND



- **JUSB1: Internal USB Connector**

PIN	Description	PIN	Description
1	VCC	2	VCC
3	BD2-	4	BD3-
5	BD2+	6	BD3+
7	GND	8	GND

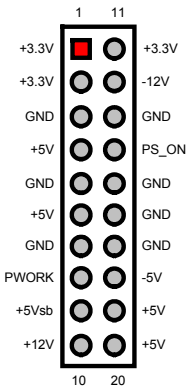


3.15 Power Connectors

HS-1000 provides one 20-pin ATX power connector at *ATX.*

- **ATX: 20-pin ATX Power Connector**

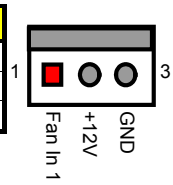
PIN	Description	PIN	Description
1	+3.3V	11	+3.3V
2	+3.3V	12	-12V
3	GND	13	GND
4	+5V	14	PS_ON
5	GND	15	GND
6	+5V	16	GND
7	GND	17	GND
8	PWORK	18	-5V
9	+5Vsb	19	+5V
10	+12V	20	+5V



Connector *JFAN1* and *JFAN2* onboard HS-1000 are 3-pin fan power output connectors.

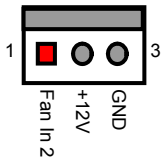
- **JFN1: Fan Power Connector**

PIN	Description
1	Fan In 1
2	+12V
3	GND



- **JFN2: Fan Power Connector**

PIN	Description
1	Fan In 2
2	+12V
3	GND

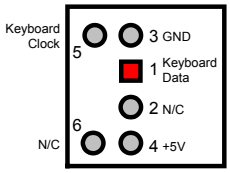


3.16 Keyboard and Mouse Connectors

The HS-1000 offers two possibilities for keyboard connections. The connections are via *KB1* for an external PS/2 type keyboard or via *CN1* for an internal 5-pin cable converter to an AT keyboard.

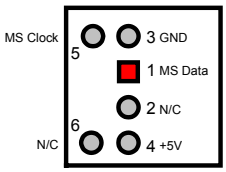
- **PS1: PS/2 6-pin Mini DIN Keyboard Connector**

PIN	Description
1	Keyboard Data
2	N/C
3	GND
4	+5V
5	Keyboard Clock
6	N/C



- **PS2: PS/2 6-pin Mini Din Mouse Connector**

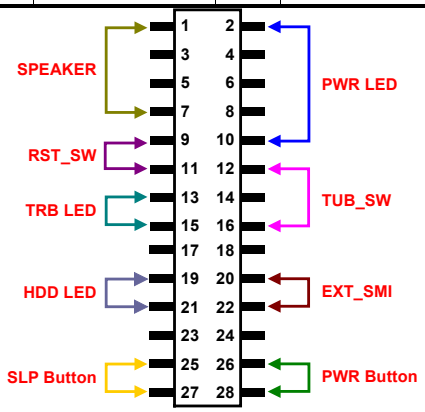
PIN	Description
1	Mouse Data
2	N/C
3	GND
4	+5V
5	Mouse Clock
6	N/C



3.17 System Front Panel

- **Panel1: System Front Panel Connector**

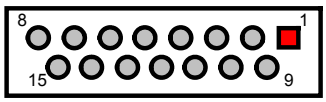
PIN	Description	PIN	Description
1	VCC	2	GND
3	GND	4	N/C
5	N/C	6	GND
7	Speaker	8	N/C
9	GND	10	330Ω Pull +5V
11	Reset Switch	12	GND
13	330Ω Pull Up	14	330Ω Pull Up
15	GND	16	VCC
17	N/C	18	N/C
19	330Ω Pull +5V	20	EXT SMI
21	HDD LED	22	GND
23	N/C	24	N/C
25	Sleep Button	26	Power Button
27	GND	28	GND



3.18 Game Port

- **CN1: Game Port Connector**

PIN	Description	PIN	Description
1	VCC	9	VCC
2	JAB1	10	JBB1
3	JACX	11	JBCX
4	GND	12	MSO
5	GND	13	JBCY
6	JACY	14	JBB2
7	JAB2	15	MSI
8	VCC		

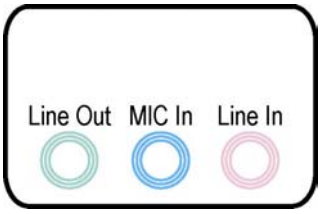


3.19 Audio Connectors

The HS-1000 has an onboard AC97 3D audio interface. The following tables list the pin assignments of the CD-ROM Analog Input, the Line In and the MIC In / Line Out connectors.

- **CD_IN: CD-ROM Analog Input Connector**

PIN	Description
1	CDL
2	GND
3	GND
4	CDR



- **CN1A: Line In Connector (RED)**

PIN	Description
1	LINE_R
2	GND
3	GND
4	LINE_L

- **CN1B: MIC In Connector (BLUE)**

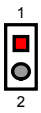
PIN	Description
1	GND
2	MIC In

- **CN1C: Line Out Connector (GREEN)**

PIN	Description
1	LOL
2	N/C
3	LOW
4	GND

- **J2: Use CODEC or AMR Slot Select**

Options	Settings
Onboard CODEC (default)	Short
AMR Slot	Open



Chapter 4

AMI BIOS Setup

The HS-1000 uses AMI BIOS for the system configuration. The AMI BIOS setup program is designed to provide the maximum flexibility in configuring the system by offering various options that could be selected for end-user requirements. This chapter is written to assist you in the proper usage of these features.

4.1 Starting Setup

The AMI BIOS is immediately activated when you first power on the computer. The BIOS reads the system information contained in the CMOS and begins the process of checking out the system and configuring it. When it finishes, the BIOS will seek an operating system on one of the disks and then launch and turn control over to the operating system.

While the BIOS is in control, the Setup program can be activated in one of two ways:

1. By pressing <Del> immediately after switching the system on, or
2. By pressing the <Del> key when the following message appears briefly at the bottom of the screen during the POST (Power On Self Test).

Press DEL to enter SETUP.

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

PRESS F1 TO CONTINUE, DEL TO ENTER SETUP

4.2 Using Setup

In general, you use the arrow keys to highlight items, press <Enter> to select, use the <PageUp> and <PageDown> keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate in the Setup program using the keyboard.

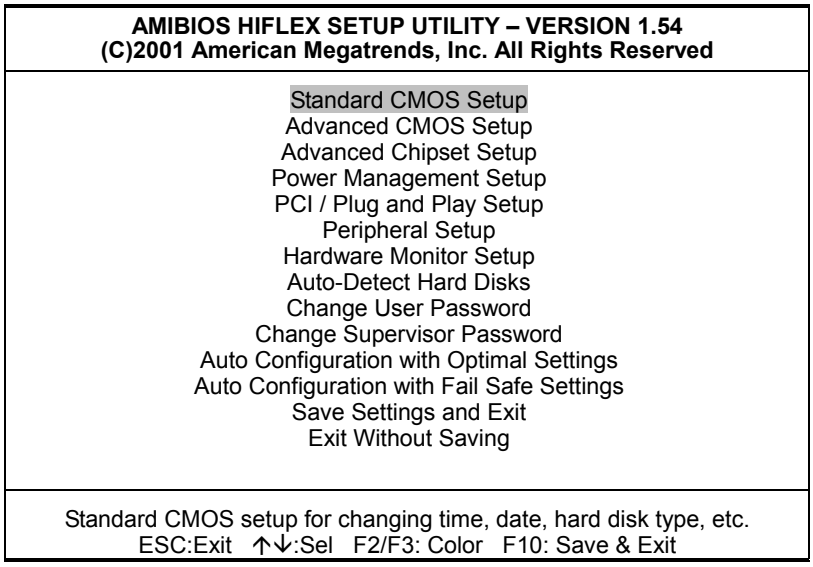
Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item in the left hand
Right arrow	Move to the item in the right hand
Esc key	Main Menu -- Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu -- Exit current page and return to Main Menu
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
+ key	Increase the numeric value or make changes
- key	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
(Shift)F2 key	Change color from total 16 colors. F2 to select color forward, (Shift) F2 to select color backward
F3 key	Calendar, only for Status Page Setup Menu
F4 key	Reserved
F5 key	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
F6 key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 key	Load the default
F8 key	Reserved
F9 key	Reserved
F10 key	Save all the CMOS changes, only for Main Menu

4.2.1 Getting Help

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

4.3 Main Menu

Once you enter the AMI BIOS CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to enter the sub-menu.



NOTE: *A brief description of the highlighted choice appears at the bottom of the screen.*

4.4 Standard CMOS Setup

The Standard Setup is used for the basic hardware system configuration. The main function is for Data/Time and Floppy/Hard Disk Drive settings. Please refer to the following screen for the setup. When the IDE hard disk drive you are using is larger than 528MB, you must set the HDD mode to **LBA** mode. Please use the IDE Setup Utility in BIOS SETUP to install the HDD correctly.

```
          AMIBIOS SETUP – STANDARD CMOS SETUP
      (C)2001 American Megatrends, Inc. All Rights Reserved

Date  (mm/dd/yyyy)  : Thu Jan 03, 2002          Base Memory :  0 KB
Time  (hh/mm/ss)    : 19:04:12                  Extd Memory :  0 MB

Floppy Drive A:        1.44MB, 3.5"
Floppy Drive B:        Not Installed

                                                          LBA  Blk  PIO  32Bit
              Type       Size       Cyln  Head  WPcom  Sec  Mode Mode Mode Mode
Pri Master  : Auto
Pri Slave   : Auto
Sec Master  : Auto
Sec Slave   : Auto

Boot Sector Virus Protection :   Disabled

Month:   Jan - Dec                                  ESC:Exit      ↑↓:Sel
  Day:    01 - 30                                   PgUp/PgDn: Modify
 Year:  1980 - 2099                                 F1:Help   F2/F3:Color
```

4.5 Advanced CMOS Setup

This section allows you to configure your system for the basic operation. You have the opportunity to select the system's default speed, boot-up sequence, keyboard operation, shadowing and security.

AMIBIOS SETUP – STANDARD CMOS SETUP
(C)2001 American Megatrends, Inc. All Rights Reserved

Quick Boot	Enabled	Available Options:
Pri Master ARMD Emulated as	Auto	▸ Disabled
Slave ARMD Emulated as	Auto	Enabled
Sec Master ARMD Emulated as	Auto	
Slave ARME Emulated as	Auto	
1st Boot Device	Floppy	
2nd Boot Device	IDE-0	
3rd Boot Device	CD-ROM	
Try Other Boot Devices	Yes	
S.M.A.R.T. for Hard Disks	Disabled	
BootUp Num-Lock	On	
Floppy Drive Swap	Disabled	
Floppy Drive Seek	Disabled	
PS/2 Mouse Support	Enabled	
Primary Display	VGA/EGA	
Password Check	Setup	
Boot To OS/2	No	
Wait For 'F1' If Error	Enabled	
Hit 'DEL' Message Display	Enabled	
CPU MicroCode Updation	Enabled	
CPU Serial Number	Enabled	
L1 Cache	Enabled	
L2 Cache	Enabled	
System BIOS Cacheable	Enabled	
C000,32k Shadow	Cached	
C800,16k Shadow	Disabled	
CC00,16k Shadow	Disabled	
D000,16k Shadow	Disabled	
D400,16k Shadow	Disabled	ESC:Exit ↑↓:Sel
D800,16k Shadow	Disabled	PgUp/PgDn: Modify
DC00,16k Shadow	Disabled	F1:Help F2/F3:Color

4.6 Advanced Chipset Setup

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and the access to the system memory resources, such as DRAM and the external cache. It also coordinates the communications between the conventional ISA and PCI buses. It must be stated that these items should never be altered. The default settings have been chosen because they provide the best operating conditions for your system. You might consider and make any changes only if you discover that the data has been lost while using your system.

AMIBIOS SETUP – ADVANCED CHIPSET SETUP (C)2001 American Megatrends, Inc. All Rights Reserved		
******** DRAM Timing ********		Available Options:
Configure SDRAM Timing by SPD	Enabled	▸ Disabled
DRAM Frequency	Auto	Enabled
SDRAM CAS# Latency	3	
DRAM Bank Interleave	Enabled	
Memory Hole	Disabled	
AGP Mode	4x	
AGP Read Synchronization	Enabled	
AGP Fast Write	Disabled	
AGP Aperture Size	64MB	
AGP Master 1 W/S Write	Disabled	
AGP Master 1 W/S Read	Disabled	
Search for MDA Resources	Yes	
PCI Delay Transaction	Enabled	
ISA Bus Clock	PCI CLK/4	
USB Controller	All USB Port	
USB Device Legacy Support	Disabled	
Port 64/60 Emulation	Disabled	ESC:Exit ↑↓:Sel PgUp/PgDn: Modify F1:Help F2/F3:Color

4.7 Power Management Setup

The Power Management Setup allows user to configure the system for saving energy in a most effective way while operating in a manner consistent with his own style of computer use.

AMIBIOS SETUP – POWER MANAGEMENT SETUP
(C)2001 American Megatrends, Inc. All Rights Reserved

ACPI Aware O/S	Yes	▲	Available Options:
ACPI Standby State	Auto		▸ No
USB Device Wakeup From S3-S5	Disabled		Yes
Re-Call VGA BIOS at S3 Resuming	Enabled		
Power Management / APM	Enabled		
Video Power Down Mode	Suspend		
Hard Disk Power Down Mode	Standby		
Standby Time Out (Minute)	Disabled		
Suspend Time Out (Minute)	Disabled		
Throttle Slow Clock Ratio	50%~56.25%		
Display Activity	Ignore		
IRQ3	Monitor		
IRQ4	Monitor		
IRQ5	Ignore		
IRQ7	Monitor		
IRQ9	Ignore		
IRQ10	Ignore		
IRQ11	Ignore		
IRQ12	Ignore		
IRQ13	Ignore		
IRQ14	Monitor		
IRQ15	Ignore		
System Thermal	Disabled		
Thermal Active Temperature	65°C / 149°F		
Thermal Slow Clock Ratio	50%~56.25%		
Power Button Function	On / Off		
Restore on AC / Power Loss	Last State		
Resume On Ring	Disabled		
Resume On LAN	Disabled		
Resume On PME#	Disabled		
Resume On KBC	Disabled		
Wake-Up Key	N/A		
Wake-Up Password	N/A		
Resume On PS/2 Mouse	Disabled		
Resume On RTC Alarm	Disabled		
RTC Alarm Date	15		
RTC Alarm Hour	12		ESC:Exit ↑↓:Sel
RTC Alarm Minute	30		PgUp/PgDn: Modify
RTC Alarm Second	30	▼	F1:Help F2/F3:Color

4.8 PCI / Plug and Play Setup

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

AMIBIOS SETUP – PCI / PLUG AND PLAY SETUP (C)2001 American Megatrends, Inc. All Rights Reserved		
Plug and Play Aware O/S	No	Available Options:
Clear NVRAM	No	▸ No
OnChip VGA Frame Buffer Size	8MB	
PCI Latency Timer (PCI Clocks)	32	Yes
Primary Graphics Adapter	PCI	
PCI IDE Bus Master	Enabled	
OffBoard PCI IDE Card	Auto	
Primary IRQ	Disabled	
Secondary IRQ	Disabled	
PCI Slot1 IRQ Priority	Auto	
PCI Slot2 IRQ Priority	Auto	
PCI Slot3 IRQ Priority	Auto	
PCI Slot4 IRQ Priority	Auto	
DMA Channel 0	PnP	
DMA Channel 1	PnP	
DMA Channel 3	PnP	
DMA Channel 5	PnP	
DMA Channel 6	PnP	
DMA Channel 7	PnP	
IRQ3	PCI/PnP	
IRQ4	PCI/PnP	
IRQ5	PCI/PnP	
IRQ7	PCI/PnP	
IRQ9	PCI/PnP	
IRQ10	PCI/PnP	
IRQ11	PCI/PnP	ESC:Exit ↑↓:Sel
IRQ14	PCI/PnP	PgUp/PgDn: Modify
IRQ15	PCI/PnP	F1:Help F2/F3:Color

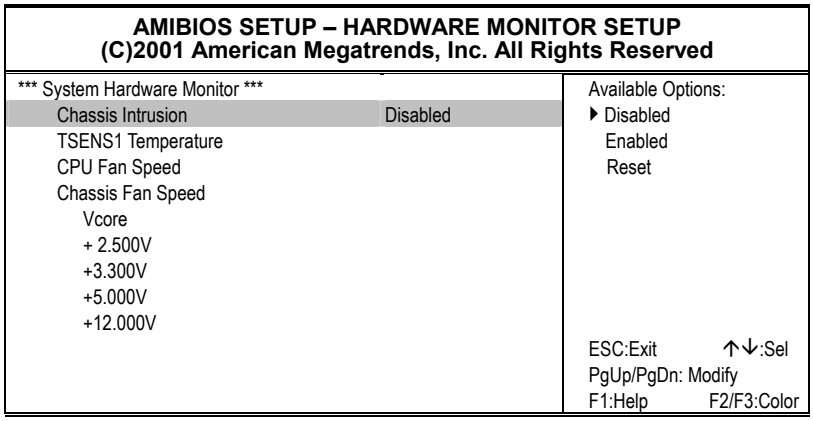
4.9 Peripheral Setup

The IDE hard drive controllers can support up to two separate hard drives. These drives have a master/slave relationship that is determined by the cabling configuration used to attach them to the controller. Your system supports two IDE controllers--a primary and a secondary--so you can install up to four separate hard disks.

PIO means Programmed Input/Output. Rather than having the BIOS issue a series of commands to affect the transfer to or from the disk drive, PIO allows the BIOS to tell the controller what it wants and then let the controller and the CPU perform the complete task by them. This is much simpler and more efficient (also faster).

AMIBIOS SETUP – PERIPHERAL SETUP (C)2001 American Megatrends, Inc. All Rights Reserved		
OnBoard FDC	Auto	Available Options:
OnBoard Prarllel Port	Auto	▸ Disabled
Parallel Port Mode	Normal	Primary
EPP Version	N/A	Secondary
Parallel Port DMA Channel	N/A	Both
Parallel Port IRQ	Auto	
OnBoard IDE	Both	
OnBoard AC'97 Audio	Enabled	
OnBoard Legacy Audio	Enabled	
Sound Blaster	Disabled	
SB I/O Base Address	200h-22Fh	
SB IRQ Select	5	
SB DMA Select	1	
Mpu-401	Disabled	
Mpu-401 I/O Address	330h-333h	ESC:Exit ↑↓:Sel
FM Port (388-38Bh)	Disabled	PgUp/PgDn: Modify
Game Port (200h-207h)	Enabled	F1:Help F2/F3:Color

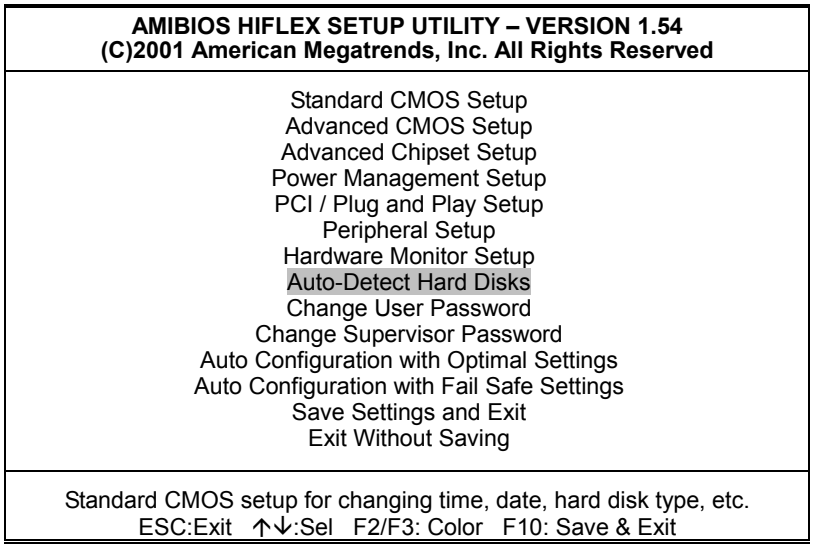
4.10 Hardware Monitor Setup



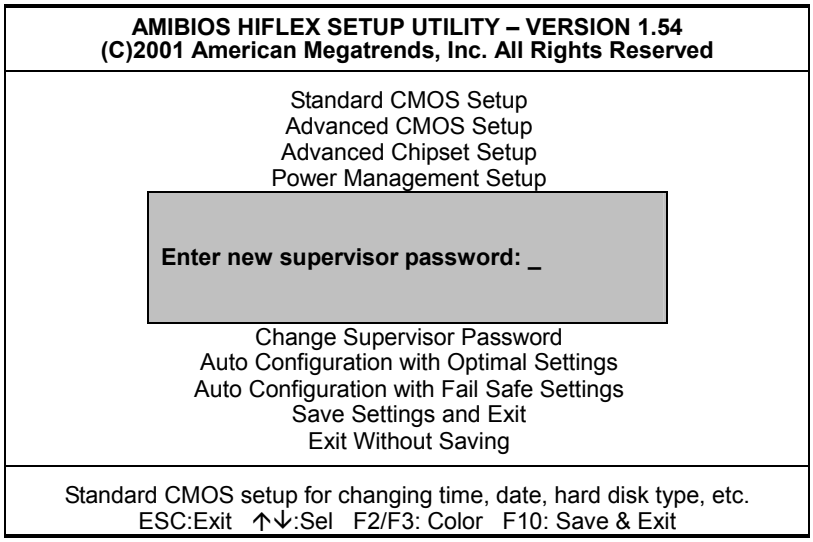
4.11 Auto-Detect Hard Disks

This option detects the parameters of an IDE hard disk drive, and automatically enters them into the Standard CMOS Setup screen.

Up to four IDE drives can be detected, with parameters for each appearing in sequence inside a box. To accept the displayed entries, press the "Y" key; to skip to the next drive, press the "N" key. If you accept the values, the parameters will appear listed beside the drive letter on the screen.



4.12 Change Supervisor/User Password



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

- **supervisor password:** can enter and change the options of the setup menus.
- **user password:** just can only enter but do not have the right to change the options of the setup menus.

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD:

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

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

PASSWORD DISABLED.

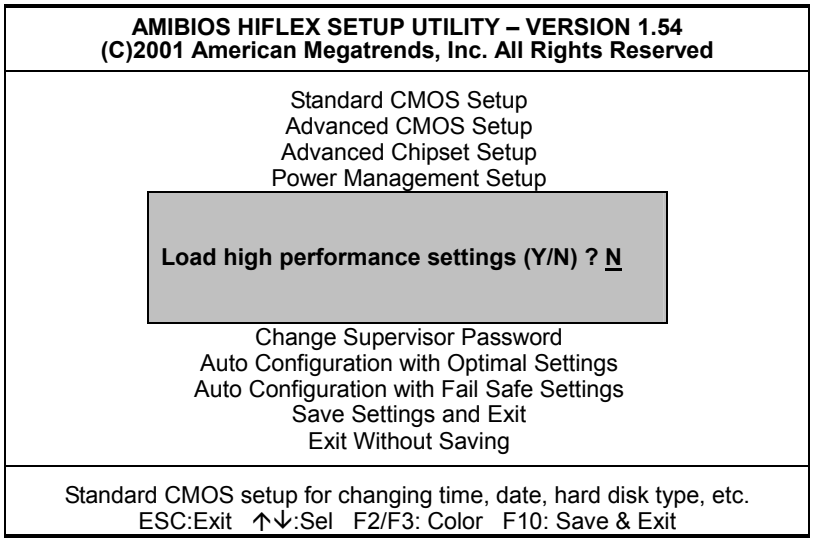
When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

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

You determine when the password is required within the BIOS Features Setup Menu and its Security option (see Section 3). If the Security option is set to “System”, the password will be required both at boot and at entry to Setup. If set to “Setup”, prompting only occurs when trying to enter Setup.

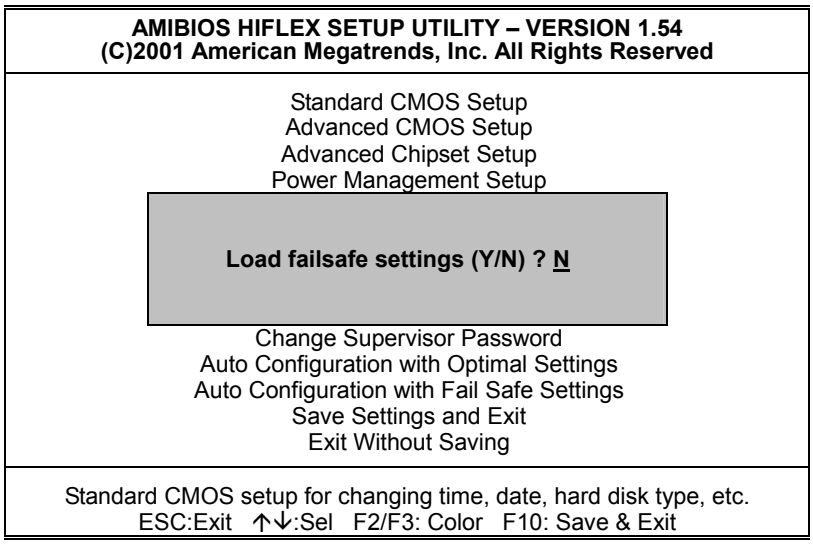
4.13 Auto Configuration with Optimal Settings

When you press <Enter> on this item you will get a confirmation dialog box with a message shown below. This option allows you to load/restore the BIOS default values permanently stored in the BIOS ROM. Pressing ‘Y’ loads the BIOS default values for the most stable, minimal-performance system operations.



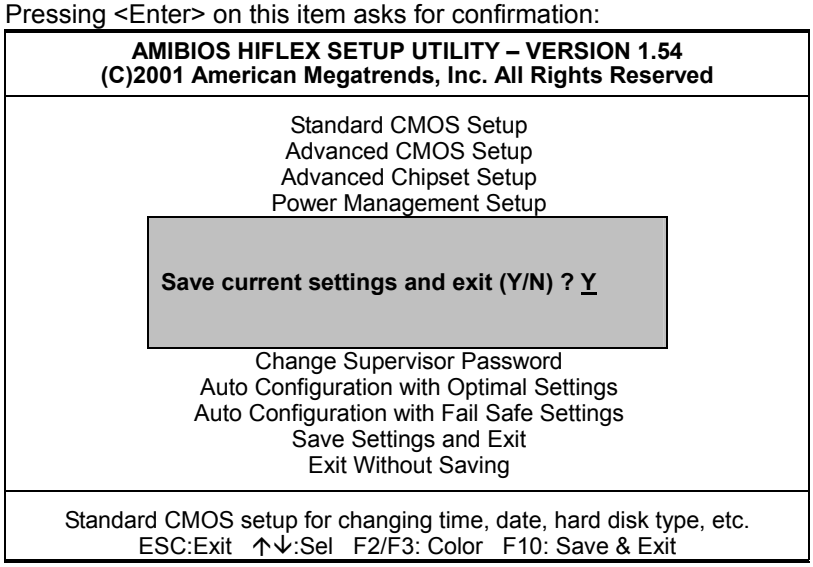
4.14 Auto Configuration with Fail Safe Settings

When you press <Enter> on this item you get a confirmation dialog box with a message similar to the figure below. This option allows you to load/restore the default values to your system configuration, optimizing and enabling all high performance features. Pressing 'Y' loads the default values that are factory settings for optimal performance system operations.



4.15 Save Settings and Exit

Pressing <Enter> on this item asks for confirmation:



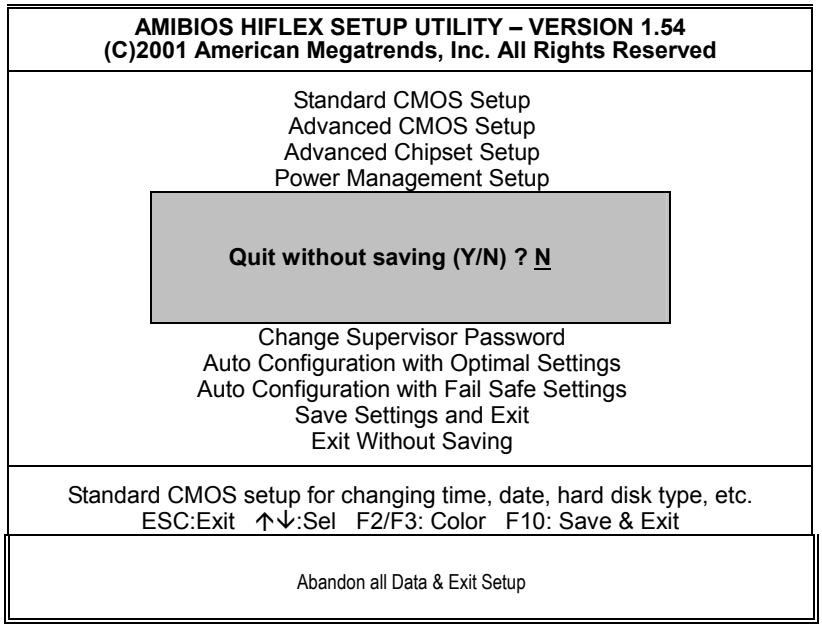
Pressing “Y” stores the selections made in the menus in CMOS – a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

4.16 Exit Without Saving

Pressing <Enter> on this item asks for confirmation:

Quit without saving (Y/N)? Y

This allows you to exit Setup without storing in CMOS any change. The previous selections remain in effect. This exits the Setup utility and restarts your computer.



Chapter 5

Software Utilities

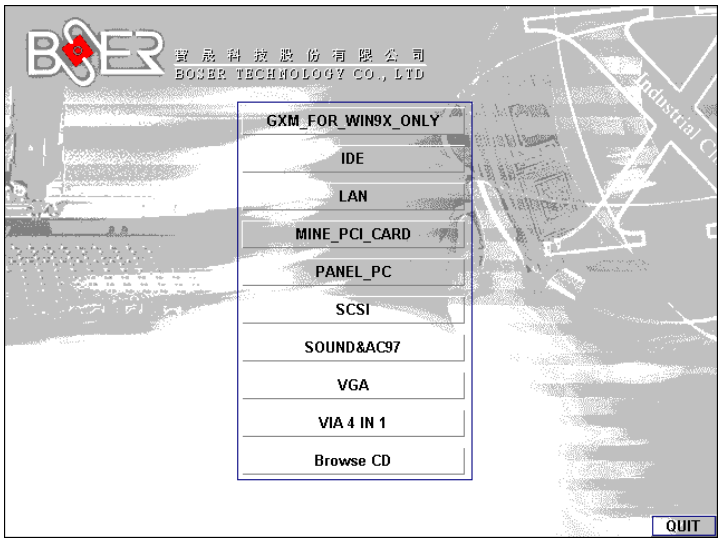
This chapter contains the detailed information of IDE, VGA, Audio and LAN driver installation procedures.

5.1 IDE and Audio Driver Installation

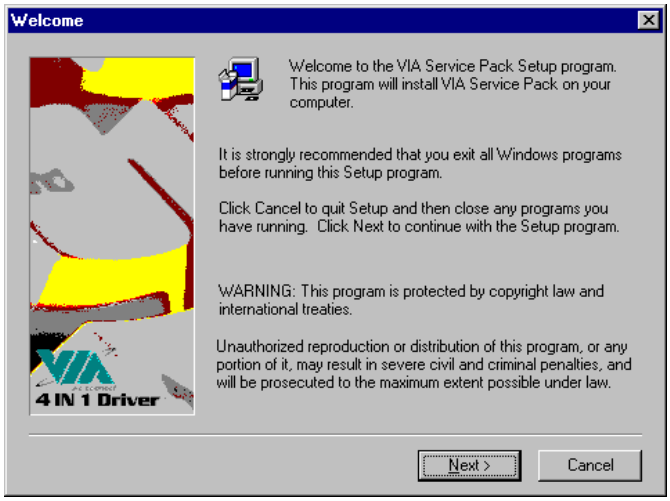
The utility disk that came with the delivery package contains an auto-run program that invokes the installation programs for the IDE, VGA and Audio drivers. The following describes the installation procedures of each driver.

5.1.1 VIA VT82C686B AGP Bus Driver Installation

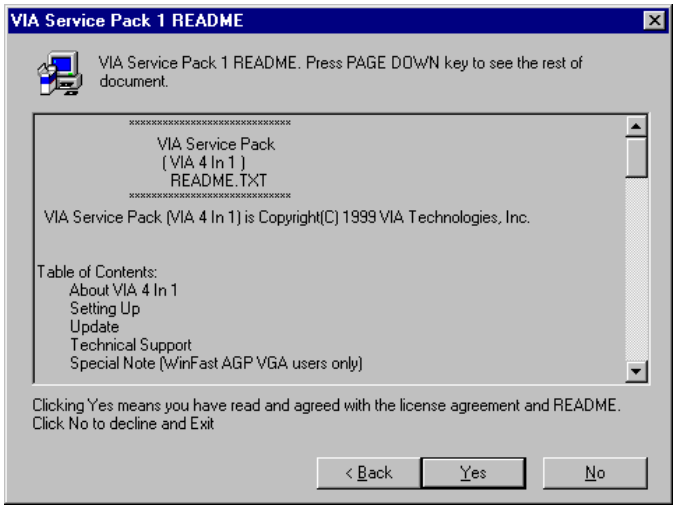
1. Insert Utility CD Disk to your CD ROM. The main menu will pop up as shown below.



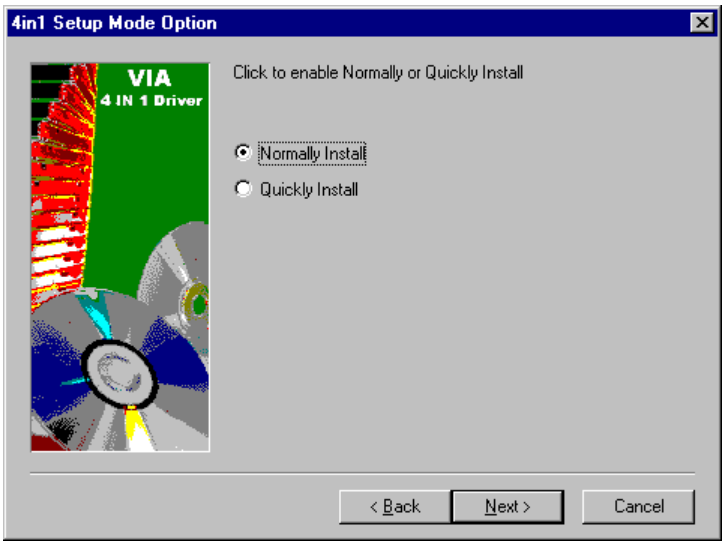
2. Press “VIA 4 IN 1” and to go Setup.
3. Once the Welcome screen appears on the screen, make sure to close any applications running and then click on the Next button.



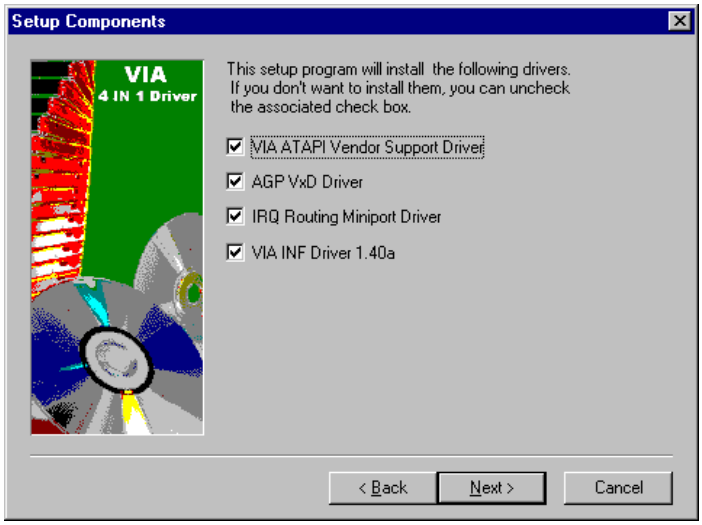
4. When the Readme window pops on the screen, you may read the whole document including the license agreement or just press Yes to skip through and continue installation.



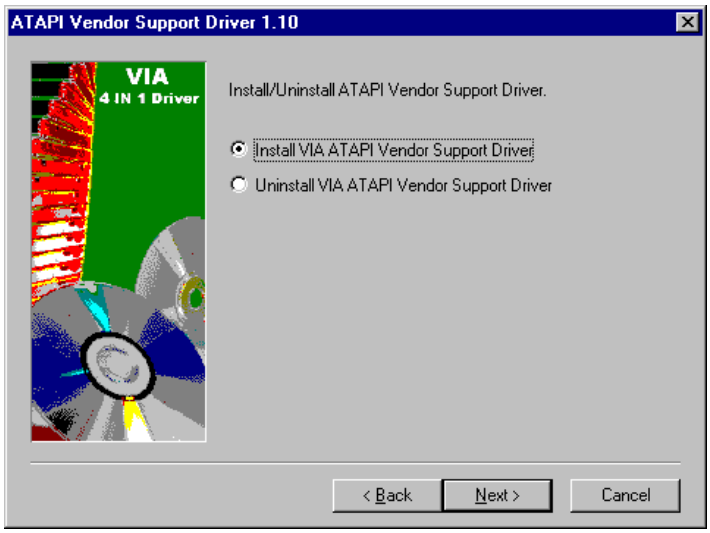
5. The 4 in 1 Setup dialog is now displayed. Select on Normally Install and then click on Next.



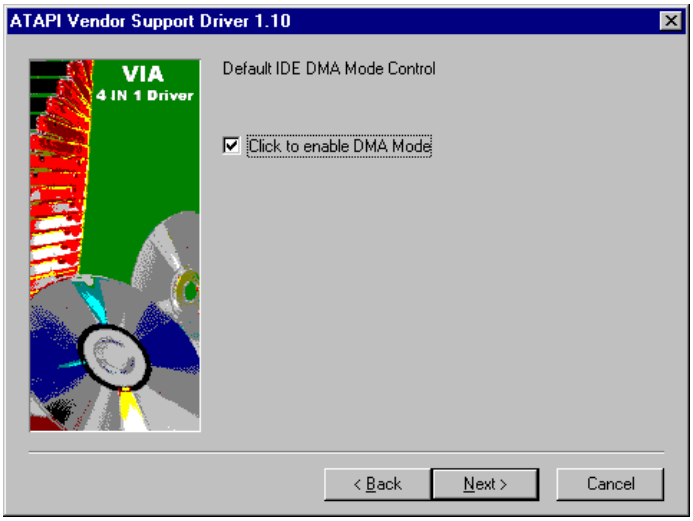
6. The next window lists all components detected in your system and asks you to select the ones requiring drivers. Tick on all items then proceed by clicking on the Next button below the screen.



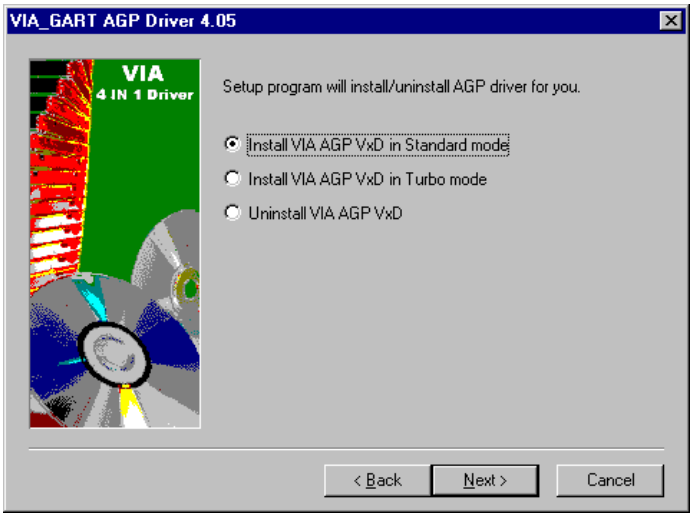
7. The program starts to install the ATAPI driver when you click the Next button on the screen below.



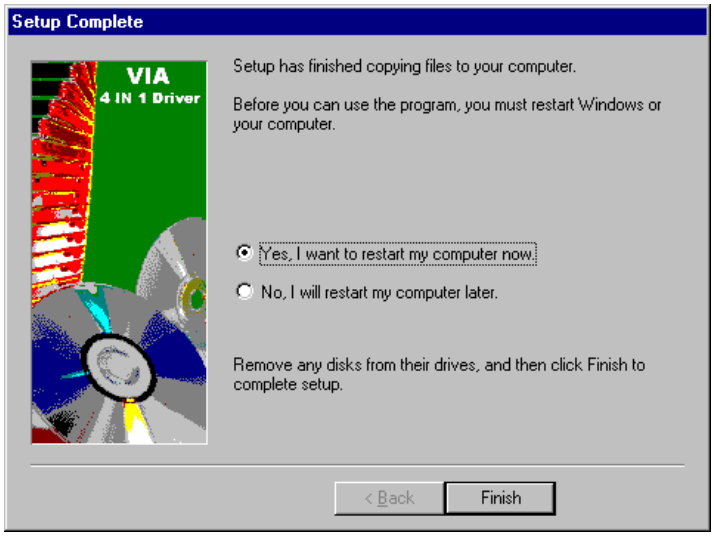
8. When the ATAPI driver is completely installed. The utility then displays your DMA mode status and allows you to enable it. Tick on the box and press on the Next button to continue.



9. The following screen then gives you the choice of installing the AGP driver in standard o turbo mode. Select on the Standard Mode and then click on Next to proceed.

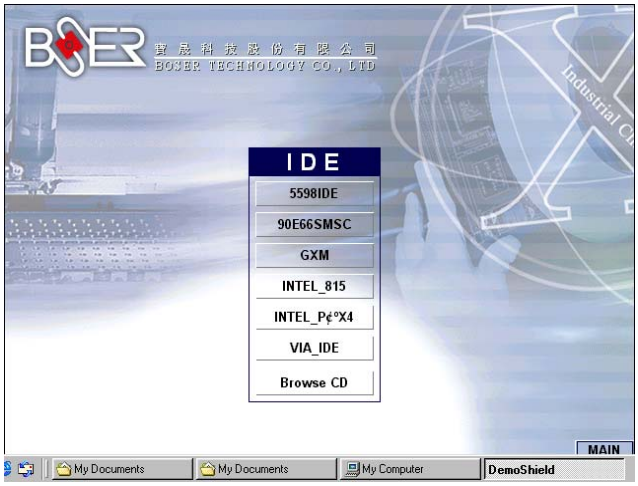


10. Installation of the AGP driver is now complete. Once the screen below appears, select on restarting your computer to activate all drivers/settings completed.

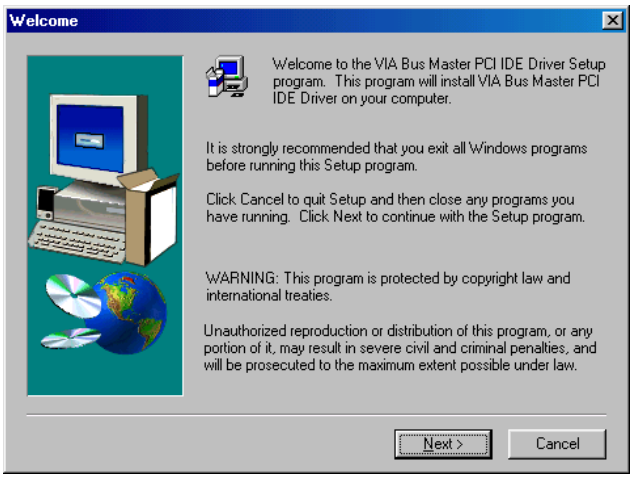


5.1.2 VIA IDE Tool Installation

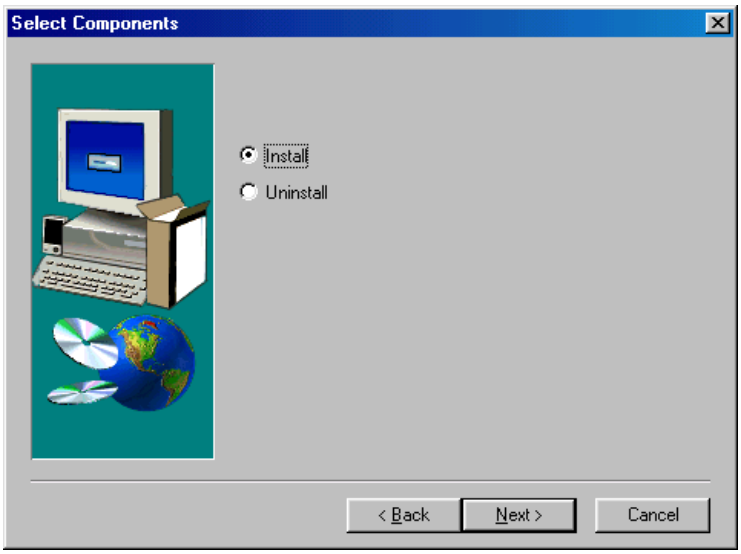
1. With the Utility CD Disk still in your CD ROM drive, open the File Manager and then select the CD-ROM drive. As soon as the system reads the disk, the following screen will appear on your display. Click on VIA_IDE from the main menu to start installing the VIA ID Tool.



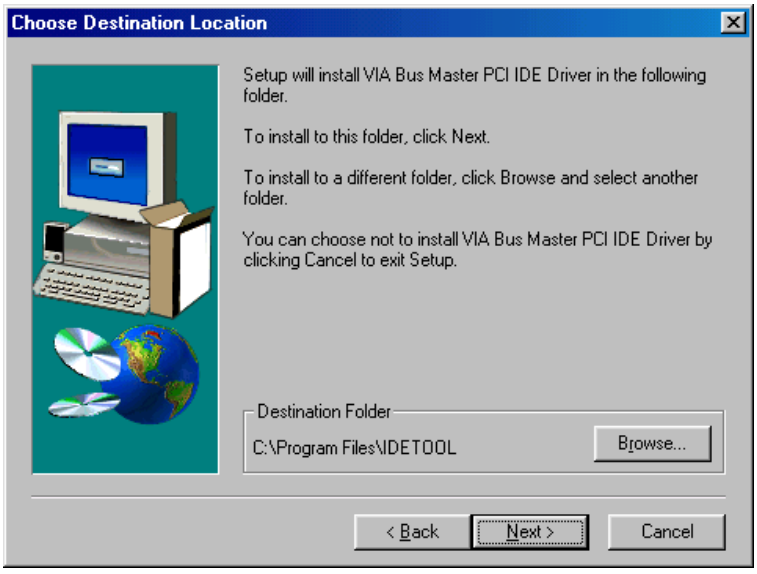
2. Once the Welcome screen appears on the screen, make sure to close applications that are running and then click the Next button.



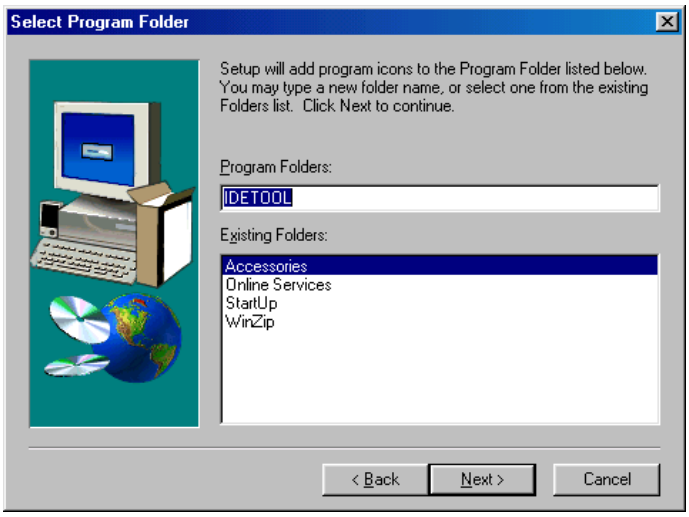
3. The Select Components dialog box is now displayed. Select on Install and then click on Next.



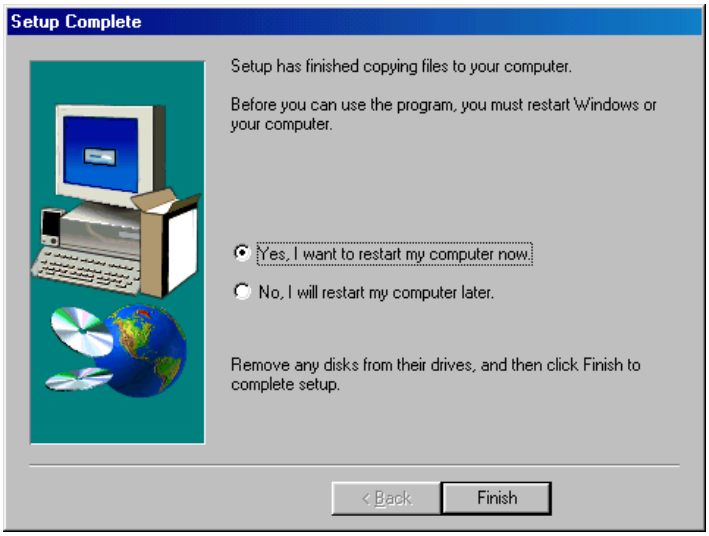
4. Choose the folder to where the program will install the driver. Select the default folder (C:\Program Files\IDETOOL) and then click on Next to proceed.



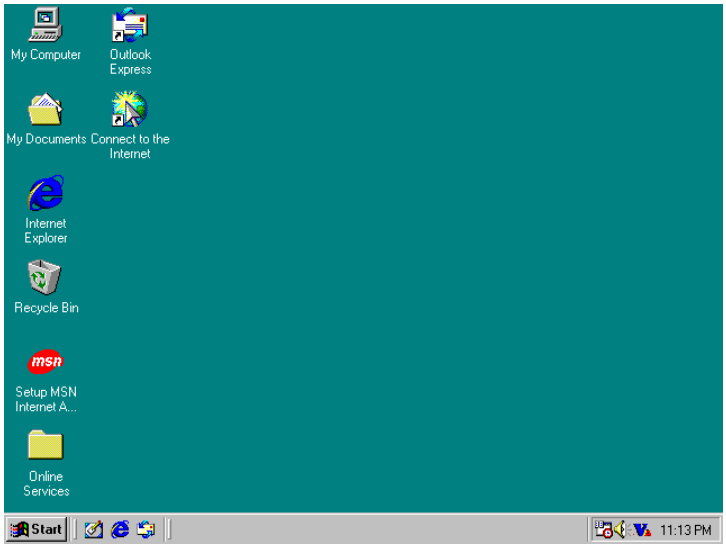
5. The program will now create an icon for the IDETOOL. Simply press Next to continue with the installation.



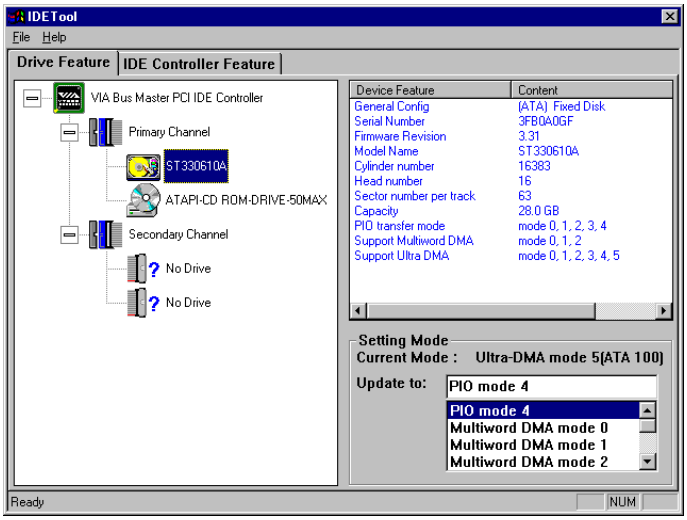
6. The program now installs and transfers the files to your system. After it finishes, you will be prompted to restart your system. We recommend you to reboot your computer to allow the new settings to take effect. Click on the Finish button to reboot.



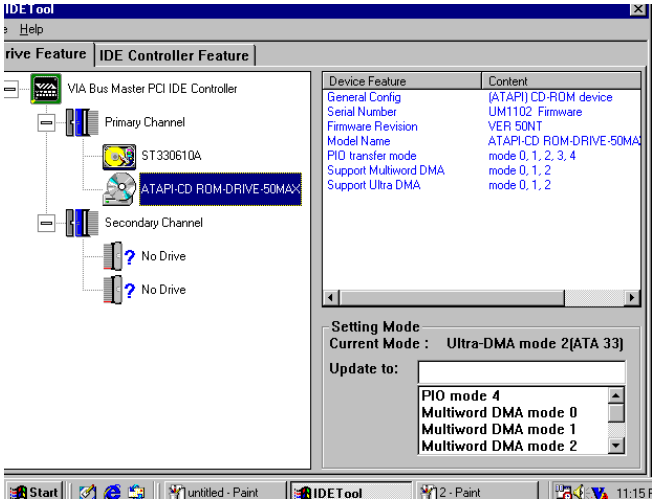
7. Once the system enters the main Windows screen, it will display a new icon along the right hand task bar. This icon represents the IDE Tool quick launch program.



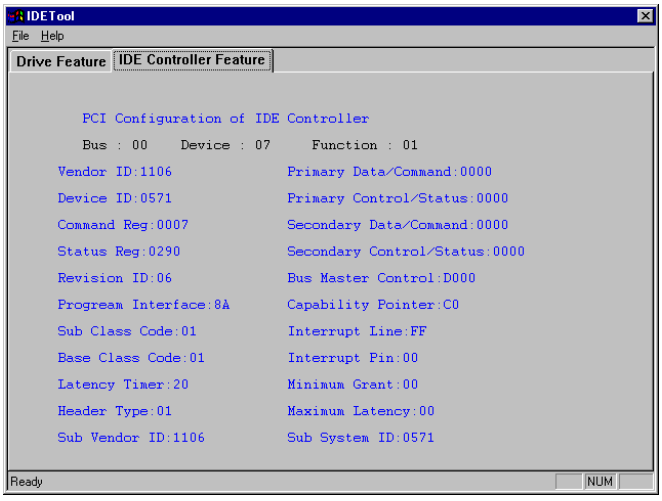
8. Double-clicking on this new task bar icon will launch the IDE Tool's Drive Feature dialog box, as shown below.



9. The Drive Feature dialog box has 2 columns of information. The left column lets you to view the hardware installed on your system. When you select any hardware, the right column displays the device's information and specifications. You may also update the settings of your devices from the right column.

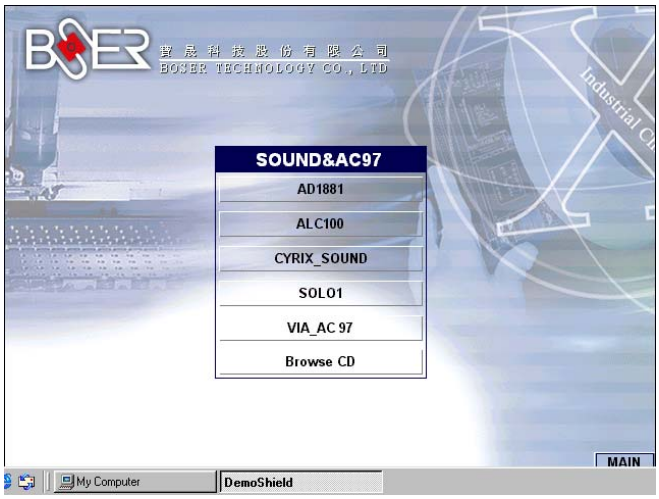


10. Once you select the IDE Controller Feature from the IDE Tool dialog box, a list of read-only information related to the system's IDE controller is shown.

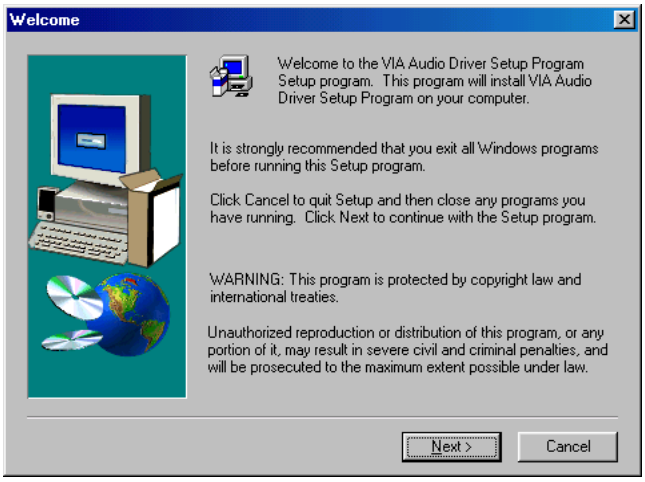


5.1.3 Audio Driver Installation

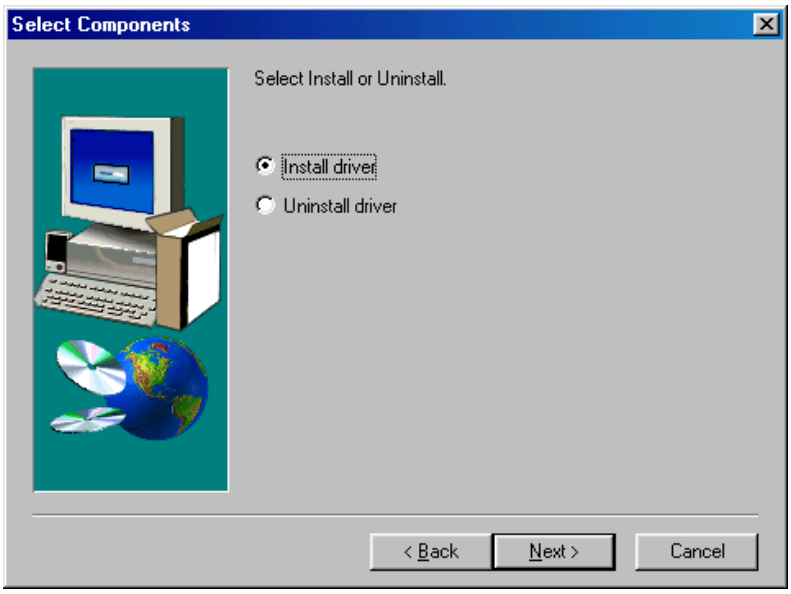
1. With the Utility CD Disk still in your CD ROM drive, open the File Manager and then select the CD-ROM drive. As soon as the system reads the disk, the VGA Menu screen below will appear on your display. Click on VIA_AC97 from the main menu.



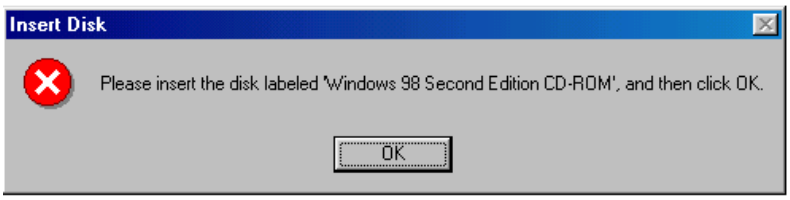
2. Once the Welcome screen appears on the screen, make sure to close applications that are running and then click the Next button.



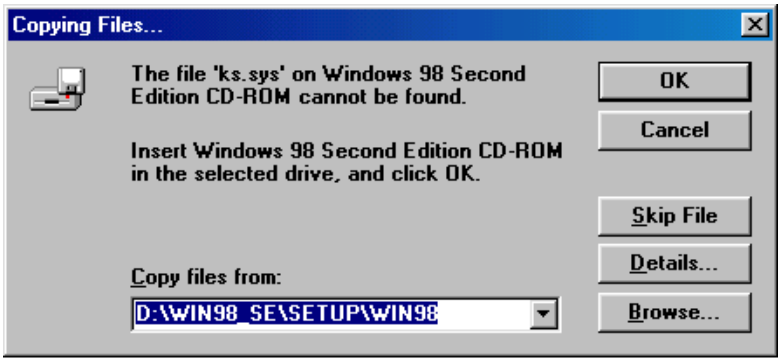
3. The Select Components dialog box is now displayed. Select on Install driver and then click on Next.



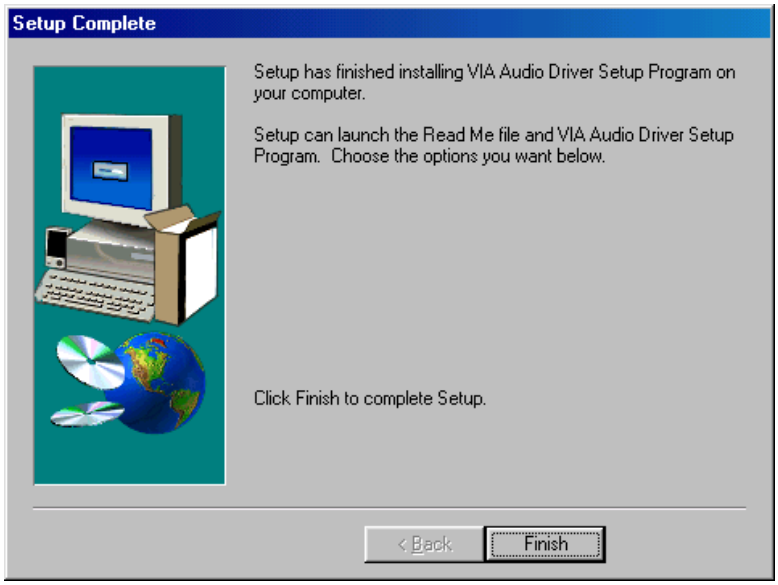
4. The program will now require the Windows installation disk for proper hardware installation. Insert the CD and then click on Next.



5. When the display below appears on your screen, Setup is already installing and copying the related files onto your hard drive. Click on the Next button to proceed.



6. After the audio driver installation finishes, select the Finish button to complete the installation process.



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