This publication, including all photographs, illustrations and software, is protected under international copyright laws, with all rights reserved. Neither this manual, nor any of the material contained herein, may be reproduced without the express written consent of the manufacturer.

The information in this document is subject to change without notice. The manufacturer makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. Further, the manufacturer reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation of the manufacturer to notify any person of such revision or changes.

Trademarks

IBM, VGA, OS/2, and PS/2 are registered trademarks of International Business Machines.

Intel, Pentium, Pentium-II, Pentium-III, MMX, and Celeron are registered trademarks of Intel Corporation.

Microsoft, MS-DOS and Windows 95/98/NT/2000 are registered trademarks of Microsoft Corporation.

Sound Blaster is a trademark of Creative Technology Ltd.

PC-cillin and ChipAwayVirus are trademarks of Trend Micro Inc.

AMI is a trademark of America Megatrends Inc.

A3D is a registered trademark of Aureal Inc.

Gamut is a registered trademark of Formosoft International Inc.

SuperVoice is a registered trademark of Pacific Image Communications Inc.

MediaRing Talk is a registered trademark of MediaRing Inc.

3Deep is a registered trademark of E-Color Inc.

Other names used in this publication may be trademarks and are acknowledged.

Table of Contents

Chapter 1

Introduction

This mainboard has a **slot-1** processor socket for an **Intel processor cartridge**, and it also has a **socket-370** for an **Intel PPGA (Plastic Pin Grid Array) Celeron** processor. You can install either one of these processors according to the power and performance requirements that you need from your system. *Note that you cannot install two processors on this mainboard.*

Slot-1 processors include the **SEPP (Single Edge Processor Package) Celeron, the Pentium-II, and the Pentium-III.** Clock rates run as high as **600 MHz**. Socket-370 processors are the **PPGA Celeron** which runs at clock rates up to **533 MHz**. The mainboard supports a system bus of **66 MHz** or **100 MHz**.

The mainboard uses the BXcel chipset which is highly integrated and includes a built-in **PCI 3D Sound System**. A **V.90 Fax/Modem DAA module** is also shipped with the mainboard. In addition, the mainboard has a full set of **I/O Ports** including two serial ports, a parallel port, one PS/2 port and two USB ports.

This mainboard has all the features you need to develop a powerful multimedia workstation with built-in communications. The board is **baby-AT sized** and has power connectors for **ATX** and **AT** power supply units.

Key Features

This key features of this mainboard include:

Slot-1 Processor Support
♦ **Pentium-III** support for 450 MHz to 600 MHz clock rates
♦ **Pentium-II** support for 233 MHz to 450 MHz clock rates
♦ **SEPP Celeron** support for 266 MHz to 433 MHz clock rates
♦ Support for 66 MHz and 100 MHz FSB (Front Side Bus)

Socket-370 Processor Support
♦ The **PPGA Celeron** provides Pentium-II performance with integrated level 1 and level 2 cache memory
♦ PPGA Celerons run from 300 MHz to 533 MHz.
♦ Supports a 66 MHz front side system bus

Memory Support
♦ Three DIMM slots for SDRAM/EDO/FPM 168-pin memory modules
♦ Support for 66 MHz & 100 MHz memory bus
♦ Maximum installed memory can be 3 x 256 MB = 768 MB.

Expansion Slots
♦ One AGP Slot
♦ Three 32-bit PCI slots
♦ One 8/16-bit ISA slot

Onboard IDE channels
♦ Primary and Secondary PCI IDE channels
♦ Support for PIO (programmable input/output) modes
♦ Support for Bus mastering and UltraDMA 33 modes

Power Supply and Power Management
♦ Dual connector for either AT or ATX power supply
♦ Support for Green PC standard, suspend switch
♦ Support Wake on Modem and Wake on Alarm

Sound System

♦ Meets PC98 audio specification
♦ Full duplex playback and recording with built-in 16-bit CODEC
♦ HRTF 3D professional audio supports both Direct Sound 3D® and A3D® compatible interface plus support for **4-channel speakers**
♦ Drivers support DOS/Windows 95/98/2000/NT 4.0
♦ Built-in 32 ohm earphone buffer and 3D surround
♦ Provides MPU-401 Game/MIDI port and legacy Sound Blaster 16 support
♦ Downloadable Wave-table Synthesizer supports Direct Music®
♦ Stereo Mixer supports analog mixing from CD-Audio, Line-In

Onboard I/O Ports

♦ Floppy disk drive port with 1Mb/s transfer rate
♦ Two serial ports with 16550-compatible fast UART
♦ One parallel port with support for ECP and EPP
♦ Two USB ports, one PS/2 mouse port and one infrared port (optional)

Hardware Monitoring

♦ Built-in hardware monitoring for CPU/system temperatures, fan speeds and mainboard voltages

Fax/Modem DAA Module

♦ **56 Kbps Fax/Modem DAA module**
♦ Supports V.90, V.34, V.32bis, V.32, V.22bis, V.22
♦ Supports Auto Fallback and MNP 5, V.42bis data compression with 115200 compatible Virtual UART
♦ Requires 16 MB RAM and WIN 95/98/NT

3

Onboard Flash ROM

♦ Supports plug and play configuration of peripheral devices and expansion cards
♦ Built-in virus protection using **Trend's ChipAwayVirus** which ensures that the entire boot process is virus protected.

Bundled Software

♦ **PC-Cillin2000** provides automatic virus protection under Windows 95/98/NT/2000
♦ **SuperVoice** is Fax/Modem software with support for data and voice transmission
♦ **MediaRing Talk** is an internet telephone application.
♦ **Gamut2000** is an audio application that includes MP3 encoding/decoding
♦ **3Deep** delivers the precise imagery and displays accurate color in your monitor
♦ **WordPerfect Suite 8** is a windows version office application (optional)

Dimensions

♦ Baby-AT form factor (22cm x 24cm)

4

Package Contents

Attention: This mainboard series includes two different models. They are M726MRT (Modem Ready) and M726T (without Modem).
Please contact your local supplier for your purchase model.
Each model will support different specification, list as below:

Model	Specification
M726MRT	Support a Fax/Modem DAA module
M726T	---

Your mainboard package ships with the following items:
- ❑ Mainboard
- ❑ This User's guide
- ❑ 1 UDMA/66 IDE cable
- ❑ 1 Floppy diskette drive cable
- ❑ Audio ports and Game/MIDI port extension bracket
- ❑ Serial ports extension bracket
- ❑ Parallel port extension bracket
- ❑ Support software CD-ROM

Optional Accessories
You can purchase the following optional accessories for this mainboard.
- ❑ ATX Form Card (2 USB ports, IR port & PS/2 port)

Static Electricity Precautions

1. Components on this mainboard can be damaged by static electricity. Take the following precautions when unpacking the mainboard and installing it in a system.
2. Keep the mainboard, and other components, in their original static-proof packaging until you are ready to install them.
3. During an installation, wear a grounded wrist strap if possible. If you don't have a wrist strap, frequently discharge any static electricity by touching the bare metal of the system chassis.
4. Handle the mainboard carefully by the edges. Avoid touching the components unless it is absolutely necessary. During the installation lay the mainboard on top of the static-proof packaging with the component side facing upwards.
5. Inspect the mainboard for any damage caused during transit. Ensure that all the components that are plugged into sockets are correctly seated.
6. If you suspect that the mainboard has been damaged, do not apply power to the system. Contact your mainboard vendor and report the damage.

Chapter 2

Mainboard Installation

To install this mainboard into your system, follow the procedures in this chapter:

- ❑ Identify the mainboard components
- ❑ Install the correct processor
- ❑ Install one or more memory modules
- ❑ Verify that any jumpers or switches are at the correct setting
- ❑ Install the mainboard in the system chassis
- ❑ Install any extension cables to the mainboard headers
- ❑ Install any other devices and make the appropriate connections to the mainboard headers.

Note: Before installing the mainboard, you must ensure that the Clear CMOS jumper JP4 is set to the Normal setting. See this chapter for information locating JP4 and changing the jumper setting.

Note: Please do not use the AC power cord to connect the system case to a power outlet until you have completely installed the mainboard and components. In some circumstances, the power management of the system might damage components and create unsafe conditions by allowing power to flow before the installation is complete.

Mainboard Components

Use the diagram below to identify the major components on your mainboard.

Note: *Any jumpers on your mainboard that do not appear in this illustration are for testing only.*

Install the Processor

This mainboard has a Slot-1 that can be installed with any Slot-1 processor cartridge including the Pentium-III, Pentium-II, and the SEPP Celeron. It also has a Socket-370 that can be installed with the Celeron processor which is shipped in a PPGA (Plastic Pin Grid Array) package. **To ensure reliability, ensure that your PPGA Celeron processor has a heatsink/cooling fan assembly.**

You cannot install a PPGA and a Slot-1 processor cartridge together. Take care that you do not try to install a Socket-7 processor into the Socket-370. A Socket-7 processor such as the Pentium-MMX, or the AMD K5/K6 does not fit in the socket-370. The following table lists the processors that are currently supported by this mainboard. New processors may be a released after this manual is printed.

Processor Cartridge	Clock Rate MHz	Processor Socket	System Bus MHz
Pentium-III	600	Slot-1	100
Pentium-III	550	Slot-1	100
Pentium-III	500	Slot-1	100
Pentium-III	450	Slot-1	100
Pentium-II	450	Slot-1	100
Pentium-II	400	Slot-1	100
Pentium-II	350	Slot-1	100
Pentium-II	333	Slot-1	66
Pentium-II	300	Slot-1	66
Pentium-II	266	Slot-1	66
Pentium-II	233	Slot-1	66
SEPP Celeron	433	Slot-1	66
SEPP Celeron	400	Slot-1	66
SEPP Celeron	366	Slot-1	66
SEPP Celeron	333	Slot-1	66
SEPP Celeron	300A	Slot-1	66
SEPP Celeron	300	Slot-1	66
SEPP Celeron	266	Slot-1	66
PPGA Celeron	533	Socket-370	66
PPGA Celeron	500	Socket-370	66
PPGA Celeron	466	Socket-370	66
PPGA Celeron	433	Socket-370	66
PPGA Celeron	400	Socket-370	66
PPGA Celeron	366	Socket-370	66
PPGA Celeron	333	Socket-370	66
PPGA Celeron	300	Socket-370	66

Installing a Slot-1 Processor Cartridge

1. Locate Slot-1, and FAN1 on the mainboard.

FAN1

Slot-1 with pre-installed cartridge holder. The upright arms are folded down for shipping.
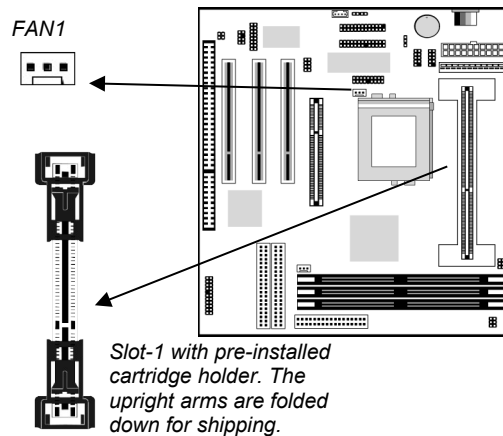
2. The Slot-1 is installed with a cartridge holder. The upright struts of the cartridge holder are folded down for shipping. Pull the struts upwards so that they are in the upright position.
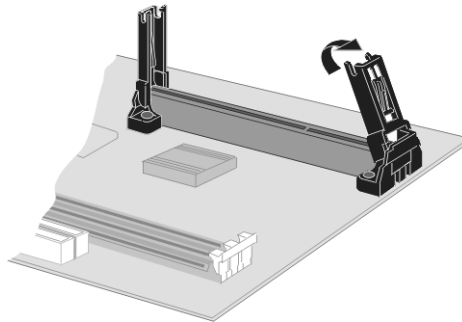
3. Insert the processor cartridge into the cartridge holder. Follow the instructions given with your processor cartridge. The edge connector on the cartridge has a notch so that it only fits into the Slot-1 in the correct way.
4. Locate the cooling fan power supply FAN1. Connect the cable from the processor cartridge cooling fan to FAN1.
5. Use JP7 and JP2 to configure the correct processor speed. See following section for Setting the CPU Speed.

Installing a Socket-370 Processor

The Celeron processor installs into the ZIF (Zero Insertion Force) Socket-370 on the mainboard.

1. Locate the Socket-370, and FAN1. Pull the locking lever out from the socket and swing it to the upright position.

Socket-370

FAN1
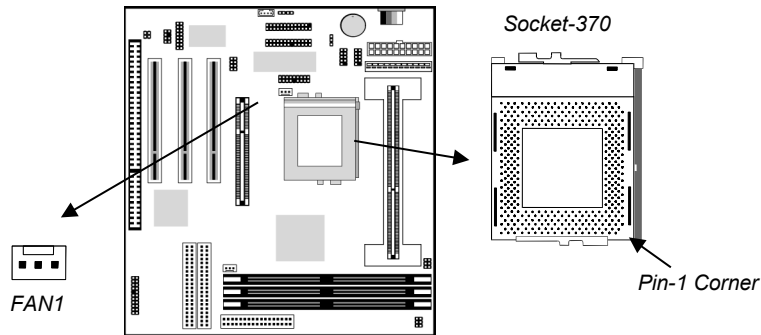
Pin-1 Corner

2. On the Celeron processor, identify the pin-1 corner by noting that it has a slight bevel.
3. On the Socket-370, identify the pin-1 corner. The pin-1 corner is on the same side as the locking lever, closest to the top of the lever when it is in the locked position.
4. Match the pin-1 corners and insert the Celeron processor into the socket. No force is required and the processor should drop into place freely.
5. Swing the locking lever down and hook it under the catch on the side of the socket. This locks the Celeron processor in the socket.
6. If the Celeron processor is installed with a cooling fan assembly, connect the cable from the fan to the CPU fan power connector FAN1.

Setting the CPU Speed Jumpers

There are two jumpers to set the CPU speed, JP7-Bus Frequency selector and JP2-CPU Multiplier selector. The multiplier x the bus frequency must equal the speed of your CPU, e.g. 100 MHz (system bus) x 3.5 (multiplier) = 350 MHz (speed of installed CPU).

11
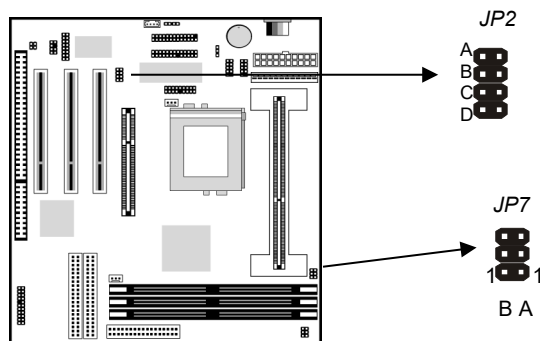
Jumper JP7: Bus Frequency Selector

This jumper consists of two sets of 3-pin jumpers JP7B and JP7A. Use JP7 to select the following system bus frequency.

Function	JP7B Setting	JP7A Setting
66 MHz	Short Pins 1-2	Short Pins 2-3
75 MHz	Short Pins 2-3	Short Pins 2-3
100 MHz	Short Pins 1-2	Short Pins 1-2
112 MHz	Short Pins 2-3	Short Pins 1-2

Jumper JP2: CPU Multiplier Selector

This jumper consists of four sets of 2-pin jumpers JP2A, JP2B, JP2C and JP2D. Use JP2 to select the following multiplier.

Function	JP2A	JP2B	JP2C	JP2D
2.0 x	Short	Short	Short	Short
2.5 x	Open	Short	Short	Short
3.0 x	Short	Short	Open	Short
3.5 x	Open	Short	Open	Short
4.0 x	Short	Short	Short	Open
4.5 x	Open	Short	Short	Open
5.0 x	Short	Short	Open	Open
5.5 x	Open	Short	Open	Open
6.0 x	Short	Open	Short	Short
6.5 x	Open	Open	Short	Short
7.0 x	Short	Open	Open	Short
7.5 x	Open	Open	Open	Short
8.0 x	Short	Open	Short	Open

Install Memory

The mainboard has three DIMM slots which can be installed with memory modules. You must install at least one memory module in order to use the mainboard.
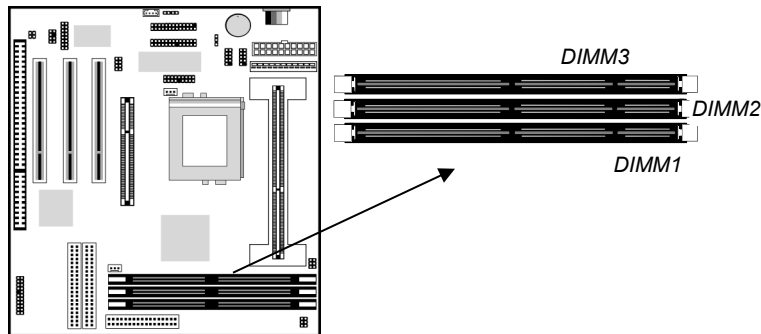
For this mainboard, you must use 168-pin, memory modules installed with SDRAM/EDO/FP memory chips. The board supports 3.3V memory and also 5V memory. You can select the memory voltage by using the jumper JP8. See the next section for information on using JP8.
If you are using a processor cartridge that runs on a 100 MHz system bus, you must use memory that operates on a 100 MHz memory bus (PC-100 memory). If you are using a processor cartridge that runs on a 66 MHz system bus, you can use memory that operates on a 66 MHz memory bus. You can install any size of memory module from 16 MB up to 256 MB, so the maximum memory size is 3 x 256 MB = 768 MB.

The edge connectors on the memory modules have cut outs, which coincide with struts in the DIMM slots, so the memory modules can only be installed in the correct way.

On the DIMM slot, pull the locking latches at either end of the slots outwards. Position the memory module correctly and insert it into the DIMM slot. Press the module down into the slot so that the locking latches lever inwards and lock the module in place.

13

Set the Jumpers

Jumpers are sets of pins that can be connected together with jumper caps. The jumper caps change the way the mainboard operates by changing the electronic circuits on the mainboard. If a jumper cap connects two pins, we say the pins are SHORT. If a jumper cap is removed from two pins, the pins are OPEN.
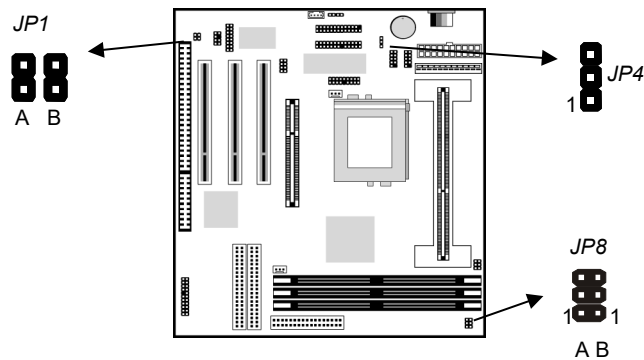
Jumper JP1: Fax/Modem & Audio System Enable/disable

This jumper consists of two sets of 2-pin jumpers JP1A and JP1B. Use JP1A to enable or disable the onboard sound system. Use JP1B to enable or disable the onboard Fax/Modem.

JP1A: Function	Jumper Setting
Disable Audio System	Short Pins 1-2
Enable Audio System	Open Pins 1-2
JP1B: Function	**Jumper Setting**
Disable Fax/Modem	Short Pins 1-2
Enable Fax/Modem	Open Pins 1-2

Note: If you use JP1A to disable the onboard sound system, the Fax/Modem is also disabled, even if you have set JP1B to the Enable Fax/Modem setting.

14

Jumper JP4: Clear CMOS Memory

Use this jumper to clear the contents of the CMOS memory. You may need to clear the CMOS memory if the settings in the setup utility are incorrect and prevent your mainboard from operating. To clear the CMOS memory, disconnect all the power cables from the mainboard and then move the jumper cap into the CLEAR setting for a few seconds.

Function	Jumper Setting
Normal Operation	Short Pins 2-3
Clear CMOS Memory	Short Pins 1-2

Jumper JP8: DIMM Voltage Selector

This jumper has two columns of three pins. Set the two jumper caps on the pins 1-2 to select a voltage of 5V volts for the memory module DIMM slots. Set the two jumper caps to pins 2-3 to select a voltage of 3.3V for the DIMM slots.

Function	Left Column Setting	Right Column Setting
5V DIMM	Short Pins 1-2	Short Pins 1-2
3.3V DIMM	Short Pins 2-3	Short Pins 2-3

Install the Mainboard

Install the mainboard into the system chassis. This mainboard is baby AT-sized and the I/O ports are provided on extension brackets. In addition the mainboard can operate using an AT power supply unit or an ATX power supply unit. This means that you have a wide choice of cases that can be used by this mainboard.

Install the mainboard into the unit case. Follow the instructions provided by the case manufacturer using the screws and mounting points provided in the chassis.
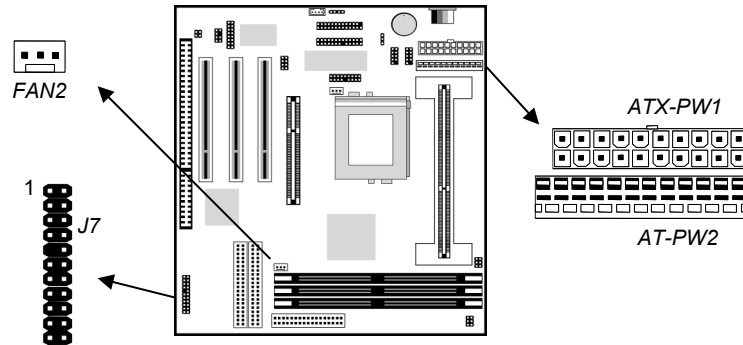
Connect the power cable from the power supply unit to the power connector on the mainboard. If you are using an AT power unit, connect it to the AT power connector PW2. If you are using an ATX power unit connect it to the ATX power connector PW1.

If the case that you are using has a chassis cooling fan, connect the power cable from the fan to the onboard chassis cooling fan power supply FAN2.

Connect the case switches and indicator LEDs to the bank of switch and LED connectors J7. See the illustration below for a guide to the pin functions of the J7 case connector.
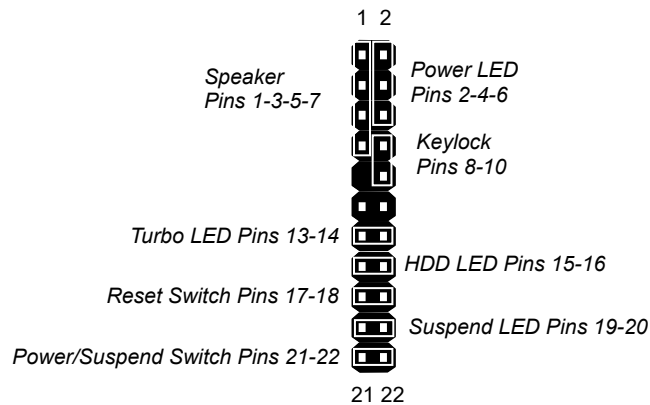
Install the Extension Brackets

The extension brackets are used to transmit features on the mainboard to external connectors that can be fixed to the system chassis. Follow the steps below to install the extension brackets.

Note: All the ribbon cables used on the extension brackets carry a red stripe on the pin-1 side of the cable.

Audio Ports and Game/MIDI Port Extension Bracket
This bracket provides three audio jacks for stereo line in, stereo line out and microphone. In addition it has a 15-pin D-connector which can be used by either a joystick or a MIDI device.
If you are using a four channel speaker system, channel one and two are output through the Stereo Line-out, and the rear speaker channels three and four are output through Stereo Line-in.

1. On the mainboard, locate the J4 audio header for this bracket.

J4-Audio Header

Stereo Line-in /Rear speaker channels 3-4
Microphone
Stereo Line-out /Speaker channels 1-2
Game/MIDI

Audio Ports & Game/MIDI Extension Bracket
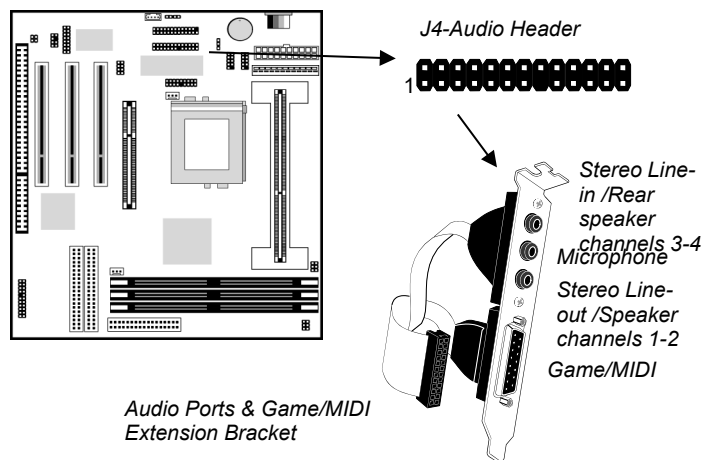
2. Plug the cable from the bracket into the J4 audio header.
3. In the system chassis, remove a blanking plate from one of the expansion slots and install the extension bracket in the slot. Use the screw that held the blanking plate in place to secure the extension bracket.

17

Serial Ports Extension Bracket

This bracket has two serial ports; COM1 (9-pins) and COM2 (25pins).

1. On the mainboard, locate the two headers COM1 and COM2 for this bracket.
2. Plug the two cables from the bracket into the appropriate COM1 and COM2 headers.

3. In the system chassis, remove a blanking plate from one of the expansion slots and install the extension bracket in the slot. Use the screw that held the blanking plate in place to secure the extension bracket.

Parallel Port Extension Bracket

This bracket has one parallel port LPT1.

PRN1

Parallel port LPT1

Parallel Port Extension Bracket
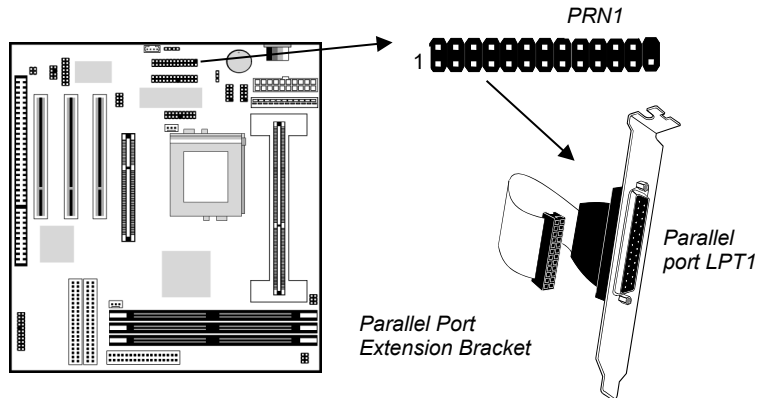
1. On the mainboard, locate the parallel port headers PRN1 for this bracket.
2. Plug the cable from the bracket into the PRN1 header.
3. In the system chassis, remove a blanking plate from one of the expansion slots and install the extension bracket in the slot. Use the screw that held the blanking plate in place to secure the extension bracket.

Fax/Modem DAA Module

The Fax/Modem DAA module plugs directly into the mainboard adjacent to an expansion slot in the system chassis. When you remove the blanking plate from the system chassis, you can access the LINE and TEL RJ11 phone jacks on the metal edge of the Fax/Modem DAA module.

J3-MODEM Header

GND 1	2 MCLK
GND 3	4 FRA-SY
GND 5	6 SCLK
AUX 3V 7	8 RIN-WAK
HOOK 9	10 GPIO
RIN 11	12 SDO
AUX 5V 13	14 SDI
MUTE 15	16 RST

19
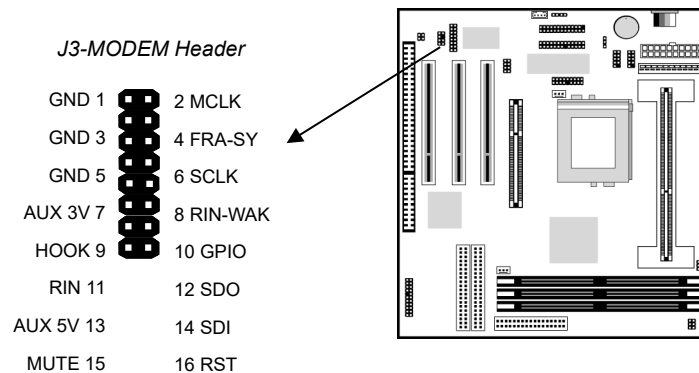
1. Locate the J3 modem header on the mainboard.
2. Plug the Fax/Modem DAA module into the J3 modem header.
3. Remove the blanking plate adjacent to the Fax/Modem DAA module.

Line & Tel RJ11 phone jacks

Modem DAA Module

Modem Header
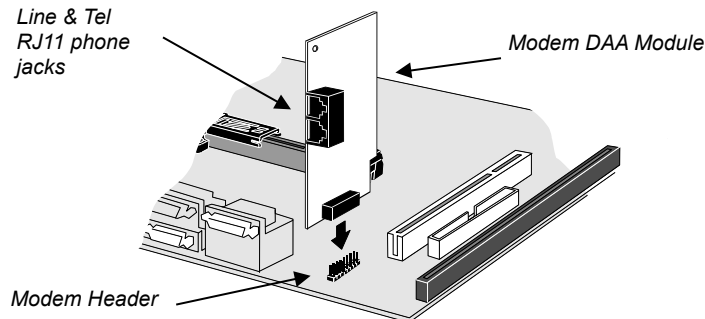
Optional Extension Brackets

For this mainboard, you can also obtain an ATX Form Card and an SPDIF digital audio extension bracket. Install these brackets by following the steps below.

ATX Form Card
This ATX Form Card provides a mini-DIN port for infrared, one mini-DIN port for a PS/2 mouse. In addition it has two USB (Universal Serial Bus) ports.

J5-ATX Header

1

Infrared Port

PS/2 Mouse Port

USB Ports

ATX Form Card

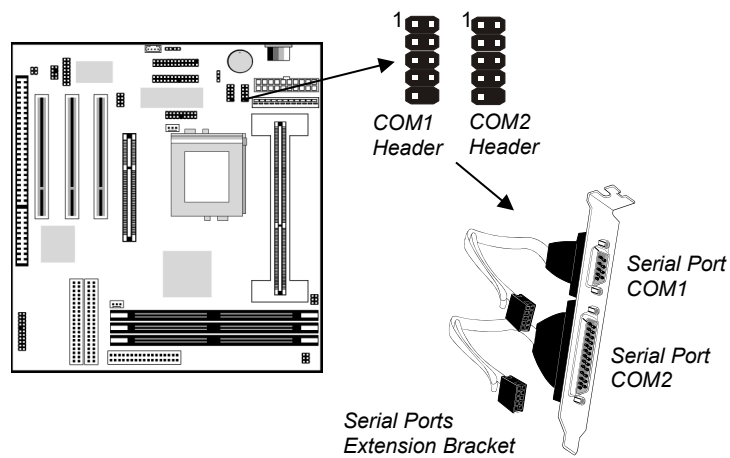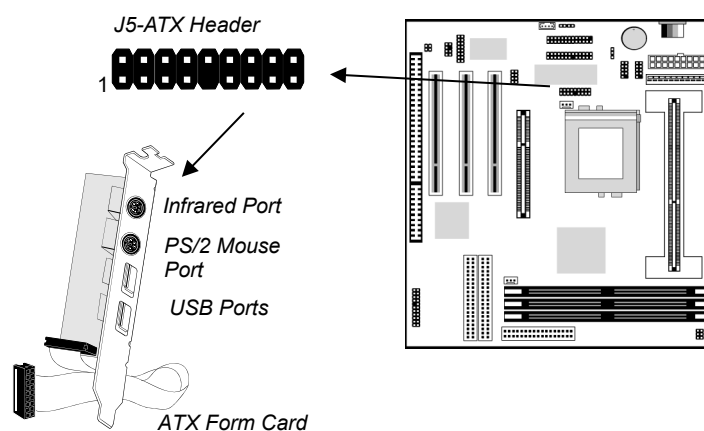1. On the mainboard, locate the J5 ATX header for this bracket.
2. Plug the cable from the bracket into the J5 ATX header.
3. In the system chassis, remove a blanking plate from one of the expansion slots and install the extension bracket in the slot. Use the screw that held the blanking plate in place to secure the extension bracket.

Install Other Devices

Install and connect any other devices in the system following the steps below.

Floppy Disk Drive

The mainboard ships with a floppy disk drive cable that can support one or two drives. Drives can be 3.5" or 5.25" wide, with capacities of 360K, 720K, 1.2MB, 1.44MB, or 2.88MB.

Install your drives and supply power from the system power unit. Use the cable provided to connect the drives to the floppy disk drive header FDC1.
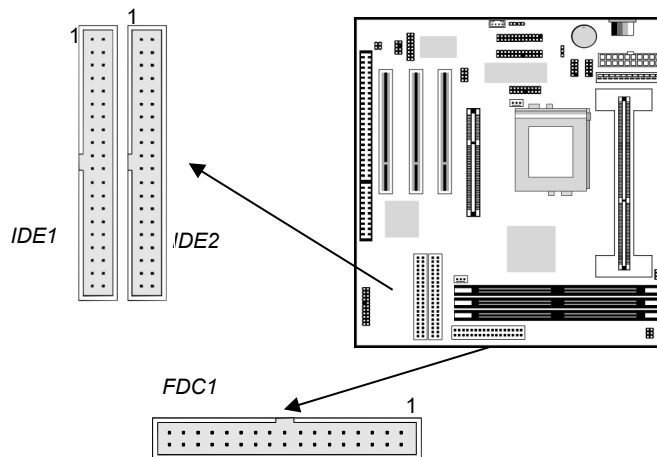
IDE Devices

IDE devices include hard disk drives, high-density diskette drives, and CD-ROM/DVD drives.

The mainboard ships with an IDE cable that can support one or two IDE devices. If you connect two devices to a single cable, you must configure one of the drives as Master and one of the drives as Slave. The documentation of the IDE device will tell you how to configure for Master or Slave.

Install the device(s) and supply power from the system power unit. Use the cable provided to connect the device(s) to the Primary IDE channel connector IDE1 on the mainboard.
If you want to install more IDE devices, you can purchase a second IDE cable and connect one or two devices to the Secondary IDE channel connector IDE2 on the mainboard. If you have two devices on the cable, one must be Master and one must be Slave.

Internal Sound Connections

If you have installed a CD-ROM drive or a DVD drive, you can connect the sound output of the drive to the built-in sound system. You can connect the analog audio output to the analog connectors CD1 or CD2.
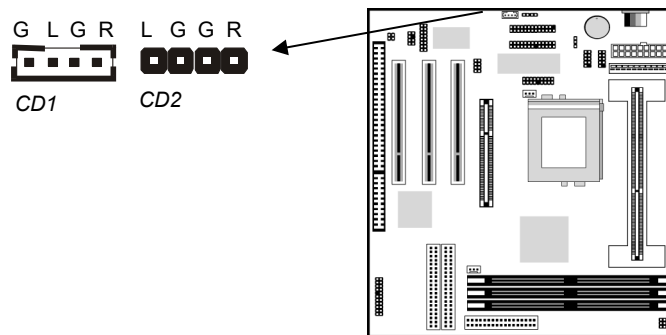
On the mainboard, locate the two 4-pin connectors for CD1 and CD2. The illustration shows the ground pins (G) and the pins for the left (L) and right (R) audio channels. There are two kinds of connector because different brands of CD-ROM/DVD drives have different kinds of cable connectors on their audio output cable. Connect the cable to the appropriate connector.

Expansion Slots

This mainboard has one AGP slot, three 32-bit PCI expansion slots, and one 8/16-bit ISA slot. The first PCI slot (PCI1) is shared with the ISA slot (ISA1). This means that you can use either one of these slots but you cannot use both slots at the same time.
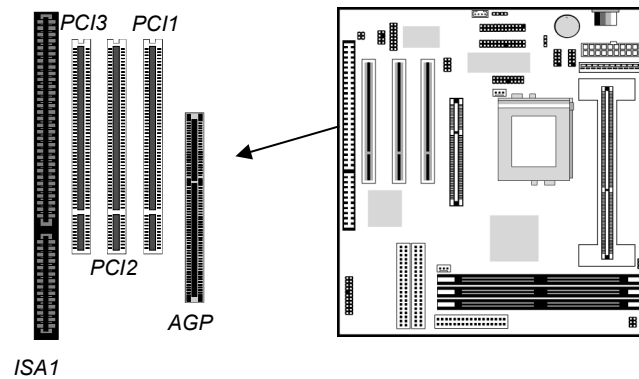
Follow the steps below to install an add-in card into one of the slots.

1. Determine which slot you need to use. The table below shows the functions of the slots.

AGP	AGP stands for Accelerated Graphics Port. Use this slot to install a graphics adapter which has an AGP edge connector.
PCI	PCI stands for Peripheral Components Interconnect. Use this slot to install current add-in cards which have a 32-bit PCI edge connector.
ISA	ISA stands for Industry Standard Architecture. Use this slot to install older, legacy add-in cards which have an 8/16-bit ISA edge connector.

2. Locate the ISA or PCI or AGP slot on the mainboard.
3. Remove the blanking plate from the appropriate expansion slot on the system chassis.
4. Install the edge connector of the expansion card into the slot and press it quite firmly down so that it is seated correctly.
5. Secure the bracket of the card into the expansion slot in the system chassis using the screw that held the blanking plate in place.

24

Chapter 3

BIOS Setup

Introduction

The BIOS setup utility stores information about your computer such as the date and time, the kind of hardware you have installed, and so on. Your computer uses this information to initialize all the components at boot up time, and make sure that everything runs smoothly.

If the information in the setup utility is incorrect, it may cause your system to malfunction. It can even stop your computer from booting properly. If this happens, you can use the clear CMOS jumper to clear the CMOS memory area that is used to store the setup information, or you can hold down the **End** key while you reboot your computer, Holding down the **End** key also clears the setup information.

You can run the setup utility and manually make changes to the setup utility. You might need to do this to configure some of the hardware that you add to the mainboard, such as the CPU, the memory, disk drive, etc.

Running the Setup Utility

Each time your computer starts, before the operating system is booted, a message appears on the screen that prompts "*Hit <DEL> if you want to run SETUP*". When you see this message, press the **Delete** key and the Mainmenu page of the setup utility appears on your monitor.

```
            AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.19
           (C)1998 American Megatrends, Inc. All Rights Reserved
   ┌────────────────────────────────┬────────────────────────────────┐
   │ Standard CMOS Setup            │  Peripheral Setup              │
   │                                │                                │
   │ Advanced CMOS Setup            │  HardWare Monitor Status       │
   │                                │                                │
   │ Advanced Chipset Setup         │  Change Supervisor Password    │
   │                                │                                │
   │ Power Management Setup         │  Auto-Detect Hard Disks        │
   │                                │                                │
   │ PCI / Plug and Play Setup      │  Save Settings and Exit        │
   │                                │                                │
   │ Load Optimal Settings          │  Exit Without Saving           │
   │                                │                                │
   │ Load Best Performance Settings │                                │
   ├────────────────────────────────┴────────────────────────────────┤
   │ ESC: Quit    ↑↓←→: Select Item    (Shift)F2: Change Color   F5: Old Values │
   │ F6: Optimal values        F7: Best performance values      F10: Save&Exit │
   │                                                                   │
   │    Standard CMOS setup for changing time, date, hard disk type, etc. │
   └───────────────────────────────────────────────────────────────────┘
```

You can use the cursor arrow keys to highlight any of the options on the Mainmenu page. Press **Enter** to select the highlighted option. To leave the setup utility, press the **Escape** key. Hold down the **Shift** key and press **F2** to cycle through the optional color schemes of the setup utility.

Some of the options on the Mainmenu page lead to tables of items with installed values. In these pages, use the cursor arrow keys to highlight the items, and then use the **PgUp** and **PgDn** keys to cycle through the alternate values for each of the items. Other options on the Mainmenu page lead to dialog boxes which require you to answer Yes or No by hitting the **Y** or **N** keys.

If you have already made changes to the setup utility, press **F10** to save those changes and exit the utility. Press **F5** to reset the changes to the original values. Press **F6** to install the setup utility with a set of default values. Press **F7** to install the setup utility with a set of high-performance values.

26

Standard CMOS Setup Page

Use this page to set basic information such as the date and time, the IDE devices, and the diskette drives.

```
                 AMIBIOS SETUP - STANDARD CMOS SETUP
              (C)1998 American Megatrends, Inc. All Rights Reserved

Date (mm/dd/yyyy): Wed May 05,1999
Time (hh/mm/ss)  : 14:26:53
                                                   LBA  Blk  PIO  32Bit
              Type           Size  Cyln  Head WPcom Sec Mode Mode Mode Mode
Pri Master : Not Installed
Pri Slave  : Not Installed
Sec Master : Not Installed
Sec Slave  : Not Installed

Floppy Drive A:  Not Installed           Base Memory : 0 Kb
Floppy Drive B:  Not Installed          Other Memory : 384 Kb
                                     Extended Memory : 0 Mb
                                        Total Memory : 1 Mb

Month:  Jan - Dec                              ESC : Exit
  Day:   01 - 31                               ↑↓  : Select Item
  Year: 1901 - 2099                        PU/PD/+/- : Modify
                                           (Shift)F2 : Color
```

Date & Time	Use these items to install your system with the correct date and time
Pri Master **Pri Slave** **Sec Master** **Sec Slave**	Use these items to configure devices on the primary and secondary IDE channels. To configure a hard disk drive, choose *Auto*. If the *Auto* setting fails to find a hard disk drive, set it to *User*, and then fill in the hard disk characteristics (Size, Cyls, etc.) manually. If you have a CD-ROM drive, select the setting *CDROM*. If you have an ATAPI device with removable media (e.g. a ZIP drive or an LS-120) select *FLOPTICAL.*
Floppy Drive A **Floppy Drive B**	Use these items to set the size and capacity of the floppy diskette drive(s) installed in the system.

Advanced COMS Setup Page

Use this page to set more advanced information about your system. Take some care with this page. Making changes can affect the operation of your computer.

```
                AMIBIOS SETUP - ADVANCED CMOS SETUP
          (C)1998 American Megatrends, Inc. All Rights Reserved

Quick Boot                Enabled    D800,16k Shadow        Disabled
1st Boot Device           IDE-0      DC00,16k Shadow        Disabled
2nd Boot Device           Floppy
3rd Boot Device           CDROM
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 Over 64MB    No
Internal Cache            Enabled
System BIOS Cacheable     Enabled
C000,32k Shadow           Enabled
C800,16k Shadow           Disabled   ESC : Quit        ↑↓←→ : Select Item
CC00,16k Shadow           Disabled   F1  : Help        PU/PD/+/- : Modify
D000,16k Shadow           Disabled   F5  : Old Values  (Shift)F2 : Color
D400,16k Shadow           Disabled   F6  : Load BIOS Defaults
                                     F7  : Load Setup Defaults
```

Quick Boot	If you enable this item, the system starts up more quickly be elimination some of the power on test routines.
1st Boot Device **2nd Boot Device** **3rd Boot Device**	Use these three items to determine the order and priority that your computer follows to load an operating system at start-up time.
Try Other Boot Device	If you enable this item, the system will also search for other boot devices if it fails to find an operating system from the first three locations.
S.M.A.R.T. for Hard Disks	Enable this item if your hard disk(s) supports SMART (Self-Monitoring, Analysis and Reporting Technology).
BootUp Num-Lock	This items determines if the Num Lock key is active or inactive at system start-up time.
Floppy Drive Swap	If you have two diskette drives installed and you enable this item, drive A becomes drive B and drive B becomes drive A.

Floppy Drive Seek	If you enable this item, your system will check the diskette drives at start up time. Disable this item unless you are using an old 360K diskette drive.
PS/2 Mouse Support	Set this item to auto so that it will automatically detect if you are using a mouse with a PS/2 interface.
Primary Display	Use this item to determine the display devices for the primary display of your computer.
Password Check	If you have installed a password on your system, use this item to determine if the password is required to enter the setup utility (*Setup*) or required at start-up time and to enter the setup utility (*Always*).
Boot to OS/2 Over 64MB	Enable this item if you are booting the OS/2 operating system and you have more than 64MB of memory installed.
Internal Cache	Leave this item enabled since all the processors that can be installed on this board have internal cache memory.
System BIOS Cacheable	If you enable this item, a segment of the system BIOS will be cached to main memory for faster execution.
C000, 32k Shadow	If you enable this item, 32k of the video BIOS is cached to main memory for faster execution.
XXXX, 16k Shadow	These items allow 16k segments of the BIOS of other devices to be cached to main memory for faster execution.

Advanced Chipset Setup Page

This page lets you set some of the timing parameters for the system.

```
                  AMIBIOS SETUP - ADVANCED CHIPSET SETUP
              (C)1998 American Megatrends, Inc. All Rights Reserved

Trend ChipAway Virus        Enabled
Bank 1 SDRAM\EDO\FPM        Normal
Bank 2 SDRAM\EDO\FPM        Normal
Bank 3 SDRAM\EDO\FPM        Normal
SDRAM CAS# Latency          3
RAS# to CAS# delay          3
DRAM Integrity Mode         Non-ECC
AGP Aperture Size           64MB
USWC Memory Gap Size        Auto
AT Bus Clock                PCICLK/4
ISA Line Buffer             Disabled
Delay Transaction           Disabled
OnBoard USB Function        Disabled
USB Function for DOS        Disabled

                                    ESC : Quit          ↑↓←→ : Select Item
                                    F1  : Help          PU/PD/+/- : Modify
                                    F5  : Old Values   (Shift)F2 : Color
                                    F6  : Load BIOS Defaults
                                    F7  : Load Setup Defaults
```

Trend ChipAway Virus	This mainboard has built-in virus protection in the firmware. Use this item to enable or disable the built-in virus protection.
Bank X SDRAM /DEO/FPM	The three items which define the timing for DRAM memory are pre-installed with fixed values and you cannot change them.
SDRAM CAS# Latency	This item determines the operation of the main memory CAS (Column Address Strobe). We recommend that you leave this item at the default value.
RAS to CAS Delay	This item sets delay timing for RAS (Row Address Strobe) to CAS (Column Address Strobe). We recommend that you leave this item at the default value.
DRAM Integrity Mode	Use this item to define the kind of error correction supported by the memory that you have installed.
AGP Aperture Size	This item defines an aperture for the graphics. Leave this item at the default value 64 MB.

30

USWC Memory Gap Size	This item sets the memory gap size for USWC (Un-cacheable Speculative Write Combining) mode.
AT Bus Clock	This item sets the clock speed for the AT ISA bus.
ISA Line Buffer	Use this item to enable or disable the line buffer for the ISA bus.
Delay Transaction	This item can be enabled if the system has an embedded 32-bit write buffer to support delay transaction cycles. Leave this item at the default value.
OnBoard USB Function	Enable this item if you plan on using the USB (Universal Serial Bus) ports integrated on this mainboard.
USB Function for DOS	Enable this item if you plan on using the USB ports while working in the DOS environment.

Power Management Setup Page

This page sets some of the parameters for the system power management operation.

```
              AMIBIOS SETUP - POWER MANAGEMENT SETUP
         (C)1998 American Megatrends, Inc. All Rights Reserved

Power Management/APM       Disabled    Ring Resume From Soft Off Disabled
Green Monitor Power State Stand By     RTC Alarm From Soft Off    Disabled
Video Power Down Mode      Suspend     RTC Alarm Date             15
Hard Disk Power Down Mode Disabled     RTC Alarm Hour             12
Standby Time Out           Disabled    RTC Alarm Minute           30
Suspend Time Out           Disabled    RTC Alarm Second           30
Modem Use IRQ              N/A

  * System event monitor by
Monitor Parallel port      Yes
Monitor Serial port        Yes
Monitor Floppy             Yes
Monitor VGA                No
Monitor Audio              No
Monitor Pri-HDD            No
Monitor Sec-HDD            No         ESC : Quit        ↑↓←→ : Select Item
                                      F1  : Help        PU/PD/+/- : Modify
Power Button Function      Suspend    F5  : Old Values  (Shift)F2 : Color
Restore on AC/Power Loss   Power on   F6  : Load BIOS Defaults
                                      F7  : Load Setup Defaults
```

Note: Some of the power management routines are not functional if you have connected the mainboard to an AT power supply, rather than an ATX power supply.

31

Power Management/APM	Use this item to enable or disable the power management routines. If you enable the power management, you can use the items below to set the power management operation.
Green Monitor Power State	This item defines which power-saving mode is required to trigger the power management operations of a green monitor.
Video Power Down Mode	This item defines which power-saving mode is required to power down the monitor.
Hard Disk Power Down Mode	This item defines which power-saving mode is required to power down the hard disk drive.
Standby Time Out (Minute)	This sets the timeout for standby mode in minutes. If the time selected passes without any system activity, the computer will enter the power-saving standby mode.
Suspend Time Out (Minute)	This sets the timeout for suspend mode in minutes. If the time selected passes without any system activity, the computer will enter the power-saving suspend mode.
Modem Use IRQ	This sets an interrupt request line to assign to the modem. We recommend that you set this value to N/A.
Monitor items	If you set these items to monitor, any activity on the devices will reset the timers for the power-saving timeouts.
Power Button Function	This item allows you to define a software power off using the power button. If the value is set to Soft Off, the power button will automatically cause a software power off. If the value is set to Suspend, the power button will automatically cause the power-saving suspend mode.
Restore on AC/Power Loss	Use this item to set a system power state when power restores after sudden AC power loss.
Ring Resume From Soft Off	If you enable this item, incoming calls to the fax/modem can resume the system from a power-saving mode or a software power down.
RTC Alarm Resume From Soft Off	If you enable this item you can set an alarm on the system realtime clock that will resume the system from a power-saving mode or a software power down.

32

RTC Alarm Date / Hour / Minute / Second	If you have enabled the RTC Alarm Power on, use these items to set the time and date of the alarm.

PCI / Plug and Play Setup Page

This page sets some of the parameters for devices installed on the system PCI bus, and devices that use the system plug and play capability.

```
           AMIBIOS SETUP - PCI / PLUG AND PLAY SETUP
        (C)1998 American Megatrends, Inc. All Rights Reserved

Plug and Play Aware O/S   Yes        IRQ9              PCI/PnP
Primary Graphics Adapter  AGP        IRQ10             PCI/PnP
PCI VGA Palette Snoop     Disabled   IRQ11             PCI/PnP
Assign IRQ for VGA        No         IRQ14             PCI/PnP
OffBoard PCI IDE Card     Auto       IRQ15             PCI/PnP
Pri. OffBoard PCI IDE IRQ Disabled
Sec. OffBoard PCI IDE IRQ Disabled
PCI Slot 1 IRQ Priority   Auto
PCI Slot 2 IRQ Priority   Auto
PCI Slot 3 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       ESC : Quit       ↑↓↔ : Select Item
IRQ3                      PCI/PnP   F1  : Help       PU/PD/+/- : Modify
IRQ4                      PCI/PnP   F5  : Old Values  (Shift)F2 : Color
IRQ5                      PCI/PnP   F6  : Load BIOS Defaults
IRQ7                      PCI/PnP   F7  : Load Setup Defaults
```

Plug and Play Aware O/S	Enable this item if you are using an O/S that supports Plug and Play such as Windows 95/98.
Primary Graphics Adapter	Use this item to define if your primary graphics adapter is installed in a PCI slot or on an AGP bus.
PCI VGA Palette Snoop	When this item is enabled, multiple VGA devices operating on different buses can handle data from the CPU on each set of palette registers on every video device.
Assign IRQ for VGA	If this item is enabled, an IRQ will be assigned to the VGA graphics system. We recommend that you set this value to No.
Offboard PCI IDE Card	If you are using an IDE interface add-in card, use this item to define which PCI slot the card is installed in. Leave this item at Auto for automatic detection.

33

Pri. / Sec. Offboard PCI IDE IRQ	If you are using an IDE interface add-in card, use these items to assign an IRQ to the primary and secondary IDE channels.
PCI Slot 1/2/3 IRQ Priority	You may install expansion cards in the PCI slots that require the use of an Interrupt Request Line. Use these three items to determine which slot has priority when the plug and play OS/BIOS is dynamically allocating IRQs to competing demands from the expansion cards.
DMA Channel X	If you set this to PnP, the system will dynamically allocate DMA channels as they are required. If you set a DMA channel to ISA/EISA, it will be reserved for a non-plug and play ISA or EISA device.
IRQ X	If you set this to PCI/PnP, the system will dynamically allocate IRQs as they are required. If you set an IRQ to ISA/EISA, it will be reserved for a non-plug and play ISA or EISA device.

Load Optimal Settings

If you select this item and press **Enter** a dialog box appears. If you press **Y**, and then **Enter**, the setup utility is loaded with a set of optimal default values. The optimal default values are not very demanding and they should allow your system to function with most kinds of hardware and memory chips.

Load Best Performance Settings

If you select this item and press **Enter** a dialog box appears. If you press **Y**, and then **Enter**, the setup utility is loaded with a set of best-performance default values. The optimal default values are quite demanding and your system might not function properly if you are using slower memory chips or other kinds of low-performance components.

Peripheral Setup Page

This page sets some of the parameters for peripheral devices installed on the system.

```
                   AMIBIOS SETUP - PERIPHERAL SETUP
             (C)1998 American Megatrends, Inc. All Rights Reserved

 OnBoard FDC                Enabled
 OnBoard Serial Port1       3F8h/COM1
 OnBoard Serial Port2       2F8h/COM2
 OnBoard Ir Port            Disabled
   Ir Port Mode             N/A
   Ir Port IRQ              N/A
   Ir Port DMA              N/A
   Ir Tran. Module Type     N/A
   Ir Half-Duplex Time-Out  N/A
 OnBoard Parallel Port      378h
   Parallel Port Mode       Normal
      EPP Version           N/A
   Parallel Port IRQ        7
   Parallel Port DMA        N/A
 OnBoard IDE                Both
 OnBoard Modem              Enabled        ESC : Quit          ↑↓←→ : Select Item
 OnBoard Sound              Enabled        F1  : Help          PU/PD/+/- : Modify
                                           F5  : Old Values  (Shift)F2 : Color
                                           F6  : Load BIOS Defaults
                                           F7  : Load Setup Defaults
```

Onboard FDC	Use this item to enable or disable the onboard floppy disk drive interface.
Onboard Serial Port 1	Use this item to enable or disable the onboard serial port COM1/3, and to assign a port address
Onboard Serial Port 2	Use this item to enable or disable the onboard serial port COM2/4, and to assign a port address
Onboard IR Port **IR items**	Use this item to determine the allocation of the resources of the second serial port. If you select normal, the resources are assigned to the optional second serial port. If you select a specific address, the resources are assigned to the IR port, and you can use the five items below to determine the operation of the IR port.
Onboard Parallel Port	Use this item to enable or disable the onboard parallel port LPT1, and to assign a port address

35

Parallel Port Mode	Use this item to determine the parallel port mode. You can select Normal, ECP (Extended Capabilities Port), EPP (Enhanced Parallel Port), or ECP + EPP.
EPP Version	Use this item to determine the EPP version, if you have set the Parallel Port Mode to EPP
Parallel Port IRQ	Use this item to assign an IRQ to the parallel port.
Parallel Port DMA	Use this item to assign a DMA channel to the parallel port.
Onboard IDE	Use this item to enable or disable either of the two onboard IDE channels, Primary or Secondary.
Onboard Modem	Use this item to enable or disable the onboard modem device.
Onboard Sound	Use this item to enable or disable the onboard sound system.

Hardware Monitor Status Page

This page displays the parameters for hardware monitoring.

```
                    AMIBIOS SETUP - HARDWARE MONITOR STATUS
                (C)1998 American Megatrends, Inc. All Rights Reserved

*** Hardware Monitor ***
Solt 1/System Temp.          41°C/125°F
Socket 370 / System Temp.    41°C/125°F
System Fan
CPU Fan
  Vcc                         5.000 V
  Vcc3                        3.300 V
  Vcore                       2.000 V
  +12V                       12.000 V



                                          ESC : Quit        ↑↓↔ : Select Item
                                          F1  : Help        PU/PD/+/- : Modify
                                          F5  : Old Values  (Shift)F2 : Color
                                          F6  : Load BIOS Defaults
                                          F7  : Load Setup Defaults
```

Slot 1 / Socket 370 / System Temp.	Use these items to monitor the threshold temperature for the CPU and the system.
FANs & voltages	Use these items to monitor the parameters for the fan speeds and the mainboard voltages.

Change Supervisor Password

If you highlight this item and press **Enter**, a dialog box appears which lets you enter a Supervisor password. You can enter no more than six letters or numbers. Press **Enter** after you have typed in the password. A second dialog box asks you to retype the password for confirmation. Press **Enter** after you have retyped it correctly. The password is required at boot time, or when the user enters the setup utility.

Change or Remove the Password
Highlight this item and type in the current password. At the next dialog box, type in the new password, or just press Enter to disable password protection.

37

Auto-Detect Hard Disks

This item automatically detects and installs any hard disk drives installed on the primary and secondary IDE channel. Most modern drives can be detected. If you are using a very old drive that can't be detected, you can install it manually.

Setup will check for two devices on the primary IDE channel and then two devices on the secondary IDE channel. At each device, the system will flash an N in the dialog box. Press **Enter** to skip the device and proceed to the next device. Press **Y**, then **Enter** to tell the system to auto-detect the device.

Save Settings and Exit

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

Exit Without Saving Option

Highlight this item and press **Enter** to discard any changes that you have made in the setup utility and exit the setup program. When the Exit Without Saving dialog box appears, press **Y** to discard changes and exit, or press **N** to return to the setup main menu.

Chapter 4

Software & Applications

Introduction

The support software CD-ROM included in the mainboard package contains all the drivers and utilities as needed to use our products. Below you can find a brief description of each software program, and the right location for your mainboard. More information on each individual software might be available in a README file, located in the same directory as the software.
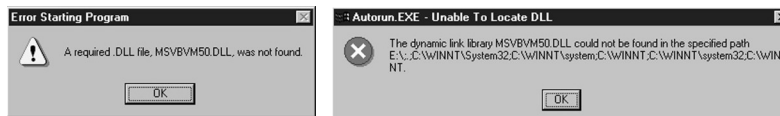
If the operating system used in your system is Windows 98, it will automatically install all the drivers and utilities for your board. See the Auto-Installing under Windows 98 section.

Installing the Drivers

The software on the support CD-ROM is for Windows 95/NT/2000 and Windows 98, but the automatic installation is now for Win98 only. If your operating system is not Windows 98, you have to manually install for your drivers.

Installing Under Windows 95/NT/2000

1. In order to run the software put the support software CD-ROM in the CD-ROM drive.
2. If your operating system is Windows 95/NT, the system might get an error message as one of two pictures below from the PnP function.

Error Starting Program ⚠	Autorun.EXE - Unable To Locate DLL ✕
⚠ A required .DLL file, MSVBVM50.DLL, was not found.	✕ The dynamic link library MSVBVM50.DLL could not be found in the specified path E:\;.;C:\WINNT\System32;C:\WINNT\system;C:\WINNT;C:\WINNT\system32;C:\WINNT.
OK	OK

Don't care the message, and click the **OK** button to exit. You don't really need the file to install the drivers.

If your operating system is Windows 2000, exit the Auto Set Up window and go on.

3. Use either My Computer or Windows Explorer to look at the directory structure. You must use the Open command. Double-clicking on the drive icon will not work.
4. Execute the EXE file name given in the description below.

*Note: The correct path name for each software driver is provided, where **D:** identifies the CD-ROM drive letter – modify if necessary.*

Bus Master IDE Driver

The IDE Bus Master Driver allows the system to properly manage the IDE channels on the mainboard. You need to install an IDE driver if you are running Windows 9X/NT.

♦   Windows 9X/NT – D:\IDE\ALI1621\

Sound Driver and Applications

The Sound driver allows the system to generate optimal sound effects. Find the driver and audio application here:

♦   D:\SOUND\DRIVER\C-Media\
♦   D:\SOUND\GAMUT\

Modem Driver and Applications

The Modem driver is required by the onboard modem module. SuperVoice is a suite of modem applications for data and voice transmissions. MediaRing Talk provides an internet telephone for the onboard modem.

♦   D:\MODEM\Driver\PCI\
♦   D:\MODEM\SUPERVOICE
♦   D:\MODEM\MEDIARING TALK

USB Driver

The USB Driver allows the system to recognize the USB ports on the mainboard. You need to install this driver if you are running Windows 95. This driver is available for:

♦   Win95 – D:\USB\EUSBSUPP\USBSUPP.EXE
♦   Win95 (Chinese) – D:\USB\CUSBSUPP\CUSBSUPP.EXE

3Deep Software
Find the software here:

♦   D:\3Deep\3Deep 3.3\Setup.EXE

BIOS Update Utility
The BIOS Update utility allows you to update the BIOS setup file on your mainboard to a newer version. You can download updates of the BIOS setup available for your mainboard from the website.

♦   D:\UTILITY\AMINF324.EXE

PC-Cillin Software
The PC-Cillin software program provides anti-virus protection. Find this program here:

♦   D:\PC-CILLIN\

Auto-Installing under Windows 98
During the installation under Win98 OS, the setup program will automatically find out and match the proper drivers for the hardware of your system. However, Windows might not be able to detect some of your new hardware.

Please follow the steps listed below to install drivers and applications for your system.
1.   Put the support CD into CD-ROM drive.
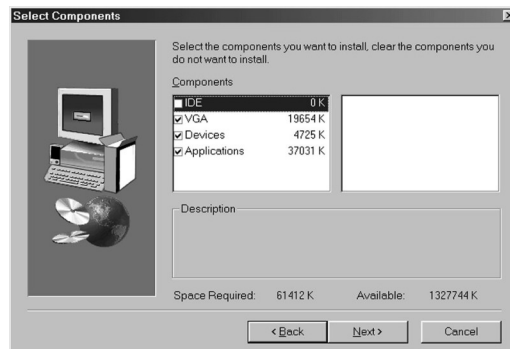2.   The setup window will appear as below.
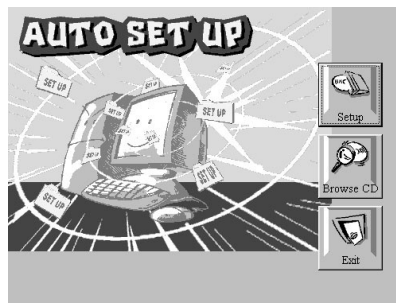
3.   Click **Setup** button to continue.

4. Click **Next** button to continue.
5. Select the items that you want to setup by clicking on it (the default options are recommended). Click the **Next** button to proceed.

6. The support software will automatically install.

Once any of the installation procedures start, software is automatically installed in sequence. You will need to follow the onscreen instructions, confirm commands and allow the computer to restart as few times as is needed to complete installing whatever software you selected to install. When the process is finished, all the support software will be installed and working.

There are some utilities that you have to manually install if you need, check to the above section.

Using the PCI Sound Pro Application

1. Before you install the Sound drivers, make sure your Operating System has been installed, otherwise the Sound might be detected as "Other device" by the device manager of your OS.
2. After the drivers are properly installed, choose the MULTIMEDIA icon in the CONTROL PANEL when you need to use the Software Wave-Table drivers as a MIDI output device. Select the MIDI page and click on "C-media SoftMidi Synthesis (Win98)/Driver (Win95)", then click **OK** to confirm.
3. A Windows application named Audio Rack is provided with the Sound drivers, which gives you control over all the audio functions through a user interface that is as simple to use as a home stereo system. We recommend that you use the System Mixer in the Audio Rack software to control your computer's audio volume, recording device and the recording gain.
4. If the devices that you are using require the MIDI port as the control interface, you need to select the MULTIMEDIA icon in the CONTROL PANEL. Select the MIDI page and click on "CM8738 MPU-401" (Win98) or "CM8738/C3DX PCI Audio External MIDI Port" (Win95), and then click **OK** to confirm.
5. For more information, refer to the PCI Sound Pro manual in the CD which ships with this mainboard.

The Four Speakers System

The onboard Sound audio system supports 2 wave channels (front/rear) known as the 4 speaker system. If you are running applications which use the DirectSound® 3D or A3D® audio interface, your system can simulate realistic 3D sound through a 4 speaker setup. Follow the steps below to install a 4-speaker setup.

Speaker Installation
Connect the front two speakers to the Line-out jack on the sound ports extension bracket. Connect the rear two speakers to the Line-in/Rear jack on the sound ports extension bracket. The original Line-in can be moved to Aux.

43

Speaker Position

Set up your speakers similar to the following figure to get the best audio result.
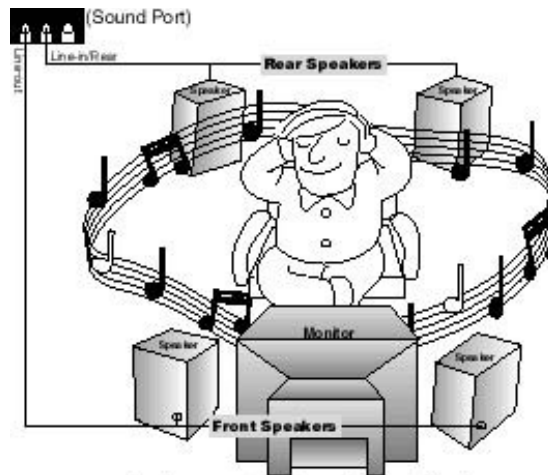
A picture on the 4 speakers application.

Mixer Setup

There is a 4-speakers option in the Volume Control of the Mixer when you are setting up the PCI Audio Application. Click on the 4 SPK icon to enable this option. This means that the output to the rear speakers is sent through the Line-in/Rear jack. In order to avoid hardware conflicts, **DO NOT** enable this option when the Line-in/Rear jack is connected with a line-in device. While the 4 speakers mode is enabled, turn on/off the output of the front speakers and adjust the volume of the speakers so that the front/rear speakers have the same volume.

Demo

Execute the "Helicopter" demo in the C3D HRTF Positional Audio Demos of the PCI Audio Application. When you hear the helicopter flying behind you, it means that the rear speakers are working properly.