FCC

Declaration of Conformity

According to 47 CFR, Parts 2 and 15 of the FCC Rules

The following designated product:

EQUIPMENT: MAINBOARD

MODEL NO. : 6WIV0

is a Class B digital device that complies with 47 CFR Parts 2 and 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

This declaration is given to the manufacturer:

CHAINTECH-EXCEL COMPUTER INC.

4427 Enterprise St. Fremont, CA 94538, U.S.A.

http://www.chaintech-excel.com

Chaintech President: Simon Ho

Signature:

Federal Communications Commission Statement

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

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

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

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

The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for audio noise emissions from digital apparatusses set out in the Radio Interference Regulations of the Canadian Department of Communications.

Manufacturer's Disclaimer Statement

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100% POST-CONSUMER RECYCLED PAPER

Table of Contents

Chapter 1

Introduction

1-1 Product Specifications

❏ **Processor**
- Supports Intel Socket370 processors up to 850MHz
- Supports 66/100MHz system clocks
- High efficiency switching power modules with dual power delivery(VRM 8.4 compliant)

❏ **Chipset**
- Intel **810**(GMCH+ICH+FWH Whitney) three chip AGPset with 2D/3D graphics controller

❏ **DRAM Memory**
- Two 168-pin DIMM sockets support up to 256MB SDRAM
- Supports 16/32/64/128MB, 64/72-bit unbuffered Synchronous DIMM modules

 ⚠ PC-100 certified SDRAM DIMM modules with SPD are required for 100MHz frequency clock speed

❏ **Embedded 3D AGP VGA**
- 3D Hyper Pipelined Architect w/ PDP, PPI
- Full 2D graphics up to 1600x1200x256c at 85Hz refresh
- Hardware Motion compensation assistance for S/W MPEG2 decode
- Integrated 24-bit 230MHz RAMDAC
- Optional 4MB SDRAM display cache (for GMH+ only)

❏ **Embedded Audio Subsystem**
- AC`97 v2.1 compliant CODEC with SRC

❏ **Embedded Ultra DMA-66 (ICH only) PCI IDE controller**
- Two IDE ports support up to 4 ATAPI devices
- Supports up to PIO Mode 4 up to 16.6MBps, Multi-Word Mode 4 up to 66MBps with bus mastering
- Bus Mastering software drivers for all common multitasking operating systems

❏ **Embedded USB Controller with two USB ports** (UHCI v.1.0 compliant)

❏ **Expansion Slots**
- One AMR slot (v 1.0 compliant)
- Three 32-bit PCI slots with master mode (Rev 2.2 compliant)
- One 16-bit ISA slots (optional)

❒ **Boot-Block Flash ROM**
- Intel 4Mb FWH (Firmware Hub)
- Award System BIOS, supports PnP, APM, DMI, ACPI & Multi-device booting features(Floppy, LS120, CD-ROM, IDE, SCSI, ZIP-ATAPI etc.)
- Includes Trend **ChipAway Virus** protection for virus-free boot and virus free operating system
  - ✎ Trend ChipAway Virus is a rule-based anti-virus technology and does not require periodical updates of virus code

❒ **Onboard LPC I/O Controller**
- NS87366 LPC I/O chip with System Monitor Hardware(SMH) for electrical security
- One Parallel (SPP/ECP/EPP) and two Serial (16550A compliant) ports
- One floppy disk drive connector supports up to 2.88MB, Japanese 3-Mode, and 1Mbps transfer rates
- Supports HPSIR, ASKIR and CIR function shared with 2nd serial port
- Supports Game/MIDI port

❒ **Embedded System Monitoring Hardware (Optional)**
- 9 voltage inputs for vcore, 3.3v, +/-12v, +5v, 2.5v, 1.5v, 5vsb,Vbat
- 2 temperature inputs for CPU thermal and System temperature
- 4 VID inputs pin for Socket-370 CPU Vore identification
- 2 Fan speed monitoring with On/Off control in Suspend
- Chassis intrusion detection with mnemonics during power loss

❒ **Double Stack Back-Panel I/O Connectors with PC99 Colored Codes**
- PS/2 Mini-DIN keyboard and mouse ports
- Two USB ports
- One D-Sub 9-pin male serial port
- One D-Sub 15-pin female VGA port
- One D-Sub 25-pin female Printer port
- One D-Sub 15-pin female Game/MIDI port
- Audio Line-out, Line-in and Mic-in jacks

❒ **Board Dimensions**
- Micro-ATX form factor, 244mm x 210mm, 4 Layers
- Six mounting holes

❒ **Advanced Management Features**
- Innovative *SeePU* technology for jumperless CPU installation
- LDCM compliant System Monitor Hardware
- Supports StDram (S3) ready!
- Poly-fuse over-current protection for USB and keyboard circuitry
- Power-on events: Mouse movement or clicks, Keyboard password, WOL(Wake-On-LAN) network card, Modem ring, RTC-Alarm, CIR, USBs
- AOL(Alert-on-LAN) network card
- Software power-off control for Win95/98
- Over-ride power button, Blinking Power-LED in suspend and Power failure recovery
- System lockup recovery
- Chassis intrusion detection against unauthorized access
- On-line BIOS help
- Complete Data Security
  Flash BIOS write protection against unauthorized access with Trend ChipAway Virus and PC-cillin98 to ensure virus-free booting procedure

❒ Switching Power Supply Requirement

Output Voltage	Max. Regulation Requirement	Min.Current Requirement(Amps)
+12V	+/- 5%	5.5
+5V	+/- 5%	20
+3.3V	+/- 5%	15
-5V	+/- 10%	0.5
-12V	+/- 10%	0.5
+5VSB	+/- 5%	0.75

Table 1-1

⚠ 3.3V at 15Amps is necessary too guarantee full loading operation because some AGP cards and memory modules have high current consumption.

1-2 Package Contents

This product comes with the following components:

❒ One mainboard

❒ One 40-pin Ultra DMA-66 IDE connector ribbon cable (Figure 1-1)

⚠ **Color coded connection for UDMA/66 cable**
Blue to mainboard, Gray to Master and Black to slave

❒ One 34-pin floppy disk drive ribbon cable (Figure 1-2)

❒ One plastic stub for standard ATX installation (Figure 1-3)

❒ One User's Manual

❒ One CD-ROM that includes

- Acrobat Reader
- Award Flash Utility and Award DMI Utility for DOS
- Intel Bus Master IDE drivers for Win95/98 and WinNT
- Intel secucity driver

- Exclamation Mark Remover Utility
- Audio Driver and Utility for Win95/98/NT
- AGP VGA Driver for Win95/98/NT
- System Health Monitoring Software

- Optional **Value Pack 2000** software group including Trend PC-cillin, Norton AntiVirus, ADOBE ActiveShare, Appio and X-stop
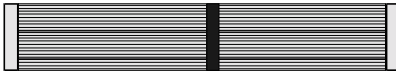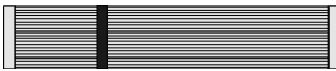

Figure 1-1   UDMA66 IDE cable

Figure 1-2   Standard Floppy cable

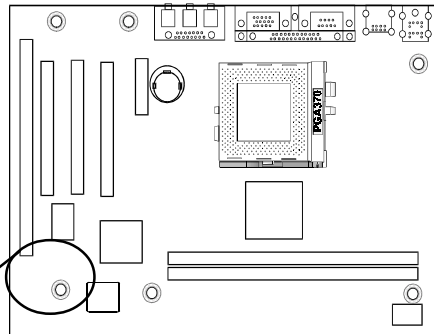Insert the stub if the mounting screw is not supported by the ATX case
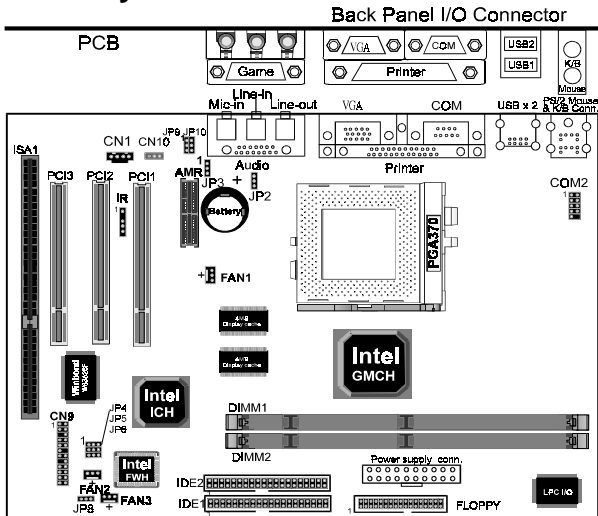

Figure 1-3

1-3 Mainboard Layout

1-4 Connector and Jumper Reference Chart

Jumper & Connector No.	Function	Page
IR	Infrared connector	13
CN1	CD-ROM audio in connector	16
CN9	Keyboard lock & Power indicator LED connector	12
	System reset switch connector	13
	Speaker connector	13
	Green switch & Green LED connector	13
	IDE activity LED connector	13
	Over-ride power button	12
CN10	WOL(Wake-on-LAN) connector	17
Power Supply	ATX Power supply connector	11
FAN1	CPU cooling fan connector	14
FAN2/FAN3	System cooling fan connector	14
JP2	Host bus frequency jumper	15
JP3	On Board audio codec jumper	15
JP4	System lockup recovery jumper	15
JP5	CMOS setting	16
JP6	CPU frequency ratio	15
JP8	Chassis intrusion detection	16
JP9/JP10	Audio Line out and Speaker out Jumper	16
Ports	PS/2 mouse and keyboard ports	14
Ports	USB (Universal Serial Bus) ports	17

Memo

Chapter 2

Hardware Setup

If your mainboard has already been installed in your computer you may still need to refer to this chapter if you plan to upgrade your system's hardware.

⚠ **Be sure to disconnect the power cable from the power source before performing any work on your mainboard, i. e. installing a CPU, memory module, changing a jumper setting, etc. Not doing so may result in electrical shock!**

2-1 Introduction to Jumpers

Jumpers are used to select between various operating modes. A jumper consists of a row of gold colored pins that protrude from the surface of the mainboard. It is important not to confuse jumpers with connectors or headers.

⚠ **Putting jumper caps on anything that is not a jumper may result in damaging your mainboard. Please refer to Section 1-3, Mainboard Layout, for the location of jumpers on your mainboard.**

As indicated in Figure 2-1 below, a cap is used to cover the pins of a jumper, resulting in shorting those pins that it covers. If the cap is removed from the top of the pins, the jumper is left "open." The number 1 shown both in the diagram below and in all multiple pin jumper and header diagrams in this manual indicates the pin designated with the number 1. The numbering of the remaining pins follows in sequence.
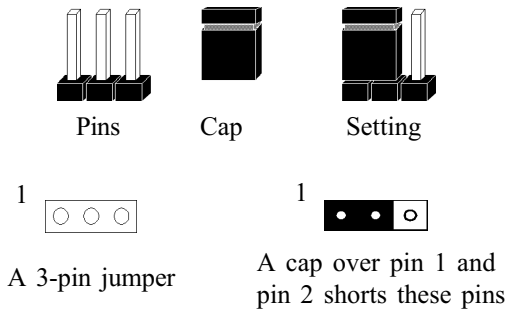
Pins   Cap   Setting

A 3-pin jumper

A cap over pin 1 and pin 2 shorts these pins

Figure 2-1

2-2 Installing a CPU in a Socket 370

The Intel Socket 370, designed for the Celeron processor, has been incorporated as a standard mainboard specification   To insert your CPU into Socket 370 please do the following:

1. Locate a small dot marked on the top surface of the CPU close to one if it's corners. The same corner will also be cut off, leaving a noticeable notch in the CPU's corner. These markings indicate Pin 1 of the CPU.
2. Pull up the lever of Socket 370 so that it is perpendicular with the surface of the mainboard. Gently insert the CPU with Pin 1 at the same corner of Socket 370 that contains the end of the lever. Allow the weight of the CPU to push itself into place. Do not apply extra pressure as doing so may result in damaging your CPU. Snap the lever back into place.

> Installing a heat sink with cooling fan is necessary for proper heat dissipation from your CPU. Failing to install these items may result in overheating and possible burn-out of your CPU.

2-3 Setting Your CPU's Parameters(*SeePU* Technology)

SeePU is a new user friendly technology that enables the user to setup a mainboard's CPU parameters through an easy to use BIOS setup procedure. It is no longer necessary to make many jumper settings as on conventional mainboards.

1. After installing all your hardware into your PC system, turn on your system's power. Enter the CMOS Setup Utility by pressing the Delete key when your BIOS identification screen appears.
2. Move the cursor to SeePU & Chipset Setup menu and press Enter. Find the CPU Setup commands at the right hand side of the BIOS screen (Figure 2-2) Commands for operating the cursor in BIOS are found at the Bottom right of the BIOS screen.
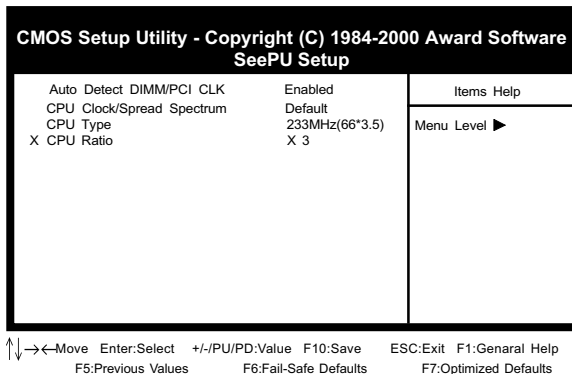
```
         CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
                               SeePU Setup
     ┌──────────────────────────────────────────┬──────────────────────┐
     │  Auto  Detect  DIMM/PCI  CLK    Enabled   │      Items  Help      │
     │  CPU  Clock/Spread  Spectrum    Default   │                       │
     │  CPU  Type              233MHz(66*3.5)    │  Menu Level  ▶        │
     │ X CPU  Ratio                    X 3       │                       │
     │                                           │                       │
     │                                           │                       │
     └──────────────────────────────────────────┴──────────────────────┘
   ↑↓→←Move  Enter:Select   +/-/PU/PD:Value  F10:Save      ESC:Exit  F1:Genaral Help
        F5:Previous  Values          F6:Fail-Safe Defaults        F7:Optimized Defaults
```

Figure 2-2

3. Change the CPU Type according to the speed of your processor. See Figure 2-3 for frequency specifications.

CPU Type	CPU Speed		
	External Clock	Frequency Ratio	Internal Clock
Intel Celeron Socket370 processor	66	4.5	300
		5	333
		5.5	366
		6	400
		6.5	433
		7	466
		7.5	500
		8	533
FC-PGA Socket370 processor	100	5	500
		5.5	550
		6	600
		6.5	650
		7	700
		7.5	750
		8	800
		8.5	850

Figure 2-3

4. Use the User Define option to custom set your CPU's parameters. Set the frequency ratio (also known as external clock multiplier factor) and CPU bus frequency according to your processor's specifications. See Figure 2-4.

⚠ You do not need to make voltage settings because *SeePU* automatically sets your CPU voltage.

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

   Auto Detect DIMM/PCI CLK      Enabled            Items Help
   CPU Clock/Spread Spectrum     Default
   CPU Type                      User's Define     Menu Level ▶
   CPU Ratio                     X 3








↑↓→← Move  Enter:Select   +/-/PU/PD:Value    F10:Save   ESC:Exit   F1:Genaral Help
          F5:Previous Values      F6:Fail-Safe Defaults   F7:Optimized Defaults
```
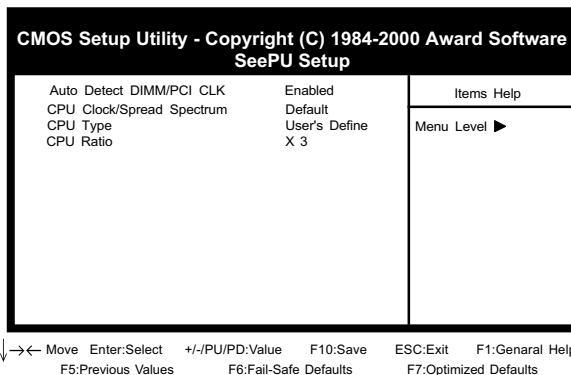
Figure 2-4

5. Press Esc to return to the CMOS Setup Utility, press F10 to Save and Exit Setup and choose 'Y' to confirm. The system will automatically reboot and during startup you will see the correct CPU type shown on the screen.

⚠ **Overclocking**

Operating a CPU at a higher frequency than it's specification allows is called overclocking. If the CPU frequency is set at a higher frequency than it's specification allows, it may or may not run at that freqency, depending on the quality of your CPU and the extent to which the frequency has been overset. The mainboard manufacturer highly discourages overclocking as it may result in data loss, CPU burn-out, system failure, etc.

Many Celeron processors are frequency locked processors and are not able to perform overclocking. Regardless of whether the processor is a frequency locked, overclocking may cause some processors to hang when turning on the system. When the processor hangs, the screen remains blank and the system does not boot. To solve this problem, turn off the computer and set the jumper to pin 2-3 of the **System Lock-up Recovery**(JP4) and then restart the computer.(see Sec 2-4)

2-4 Connector and Jumper Settings

Connectors are used to link the system board with other parts of the system, including the power supply, the keyboard, and the various controllers on the front panel of the system case.

⚠ **The power supply connector is the last connection to be made while installing a mainboard. Before connecting the power supply, please make sure it is not connected to the power source.**

ATX Power Supply Connector
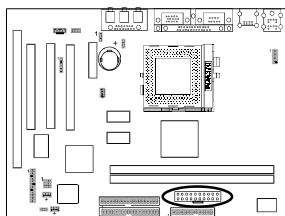
The power cord leading from the system's power supply to the external power source must be the very last part connected when assembling a system.

⚠ To support this function, a switching power supply with a minimum of **750mA** 5VSB is required.

The ATX power supply provides a single 20-pin connector interface which incorporates standard +/-5V, +/-12V, optional 3.3V and Soft-power signals. The Soft-power signal, a 5V trickle supply is continuously supplied when AC power is available.   When the system is in the Soft-Off mode, this trickle supply maintains the system in it's minimum power state.

12V	⑳	⑩	5V
5VSB	⑲	⑨	5V
PW-OK	⑱	⑧	-5V
᠐nup	⑰	⑦	Ground
5V	⑯	⑥	Ground
Ground	⑮	⑤	Ground
5V	⑭	④	PS-ON
Ground	⑬	③	Ground
3.3V	⑫	②	-12V
3.3V	⑪	①	3.3V

Software Power-Off Control

This mainboard can be powered down using theWindows 95/98 Software Power-Off function. To power down your computer, click the START button on the Windows 95 task bar. Select "Shut Down The Computer" and the system turns off. The message "It is now safe to turn off your computer" will not be shown when using this function.

Power-On By Modem

While in Soft-off state, if an external modem ring-up signal occurs, the system wakes up and can be remotely accessed. You may enable this function in BIOS's Power Management Setup menu.

Front Panel Connector Set (CN9) A through E

Over-ride Power Button Operation
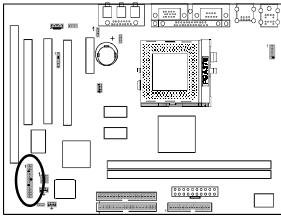
A. Over-ride Power Button Connector

The power button on the ATX chassis can be used as a normal power switch as well as a device to activate Advanced Power Management Suspend mode. This mode is used for saving electricity when the computer is not in use for long periods of time. The Soft-OFF by PWR-BTTN function in BIOS's Power Management Setup menu must be set to "Delay 4 Sec." to activate this function.
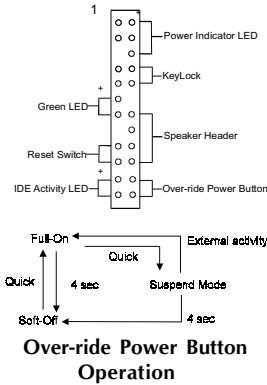
When the Soft-OFF by PWR-BTTN function is enabled, pushing the power button rapidly will switch the system to Suspend mode. Any occurence of external activities such as pressing a key on the keyboard or moving the mouse will bring the system back to Full-On. Pushing the button while in Full-On mode for more than 4 seconds will switch the system completely off. See Over-ride Power Button Operation diagram.

B. Keyboard Lock & Power Indicator LED Connector

Plugging this connector into the lock on the front panel of the system case allows the lock to enable or disable the keyboard. This function provides limited security against casual intruders. The power indicator LED shows the system's power status. It is important to pay attention to the correct cables and pin orientation (i.e., not to reverse the order of these two connectors.)
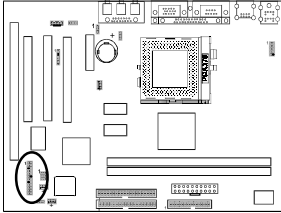
	Pin	Definition
Power Good LED	1	+5V DC
	2	No Connect
	3	Ground
Keyboard Lock	4	Keylock
	5	Ground

Suspend to RAM (STR)

The Suspend to RAM (STR) also known as S3 sleeping state feature allow the system to go into a low wake-up latency sleeping state where all system context is lost except system memory. CPU, cache and chip set context are lost in this state; the OS and drivers must restore all device context. Hardware must maintain memory context and restore some CPU and L2 configuration context.

Blinking LED in Suspend Mode

While in Suspend mode, the LED light on the front panel of your computer will flash. Suspend mode is entered by pressing the Override Power Button, pushing the Green button on your ATX case, or enabling the Power Management and Suspend Mode options in BIOS's Power Management menu.
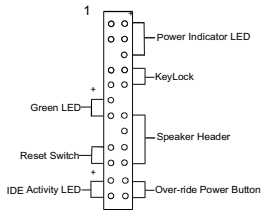
C. System Reset Switch Connector

This connector should be connected to the reset switch on the front panel of the system case. The reset switch allows you to restart the system without turning the power off.

Pin	Definition
1	System
2	GND

D. Speaker Connector

PIN	Definition
1	Speaker Signal
2	NC
3	NC
4	+5V DC

E. IDE Activity LED Connector

The IDE activity LED lights up whenever the system reads/writes to the IDE devices.

Infrared Connector
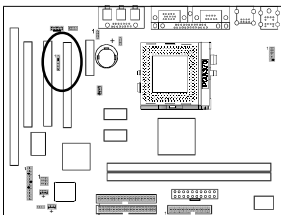
If you enable the IR Address Select in BIOS's Integrated Peripherals menu the IR port will support IR functions.
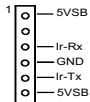
## CPU/System Cooling Fan Connectors (FAN1/FAN2/FAN3)
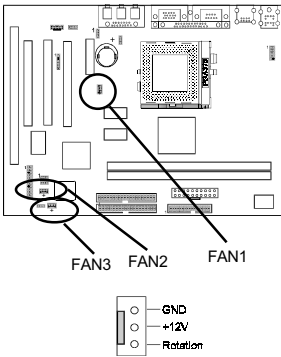
These added connectors allow the fan to draw their power from the mainboard instead of the disk drive connector.

The board's management extension hardware is able to detect the CPU and system fan speed in rpm (revolutions per minute). These connectors supports 3-pin cooling fans with minimum of 3500 RPM. The wiring and plug may vary depending on the manufacturer. On standard fans, the red is positive (+12V), the black is ground, and the yellow wire is the rotation signal.

FAN3 FAN2 FAN1

GND
+12V
Rotation

⚠ FAN3 is an indepemdent power line that is not control by system health monitor and power management.

PS/2 Mouse and Keyboard Ports
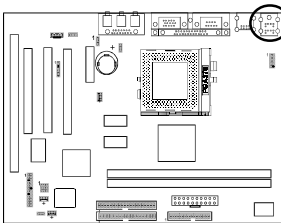
If a PS/2 mouse is used, BIOS will automatically detect and assign IRQ12 to the PS/2 mouse.

Pin	Definition
1	Data
2	No Connection
3	Ground
4	+ 5V (fused)
5	Clock
6	No Connection

Poly-fuse Over Current Protection

The poly-fuse protects the system from dangerous voltages the system might be exposed to via the keyboard or USB connectors. In case of such exposure, the poly-fuse will immediately be disconnected from the circuit, just like a normal fuse. After being disconnected for a certain period of time, the poly-fuse will return to its normal state, after which the keyboard or USB can function properly again. Unlike conventional fuses, the poly-fuse does not have to be replaced, relieving the user wasted time and inconvenience.
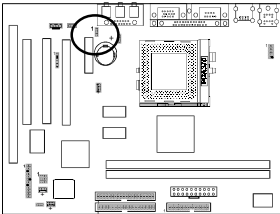
Host Bus Frequency Jumper (JP2)
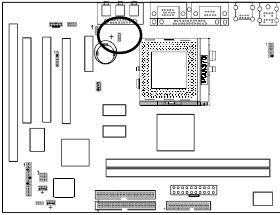
1 Auto-detect(default)   1 100MHz

This jumper allows the external clock frequency to be determined either by the CPU or the user. Set pins to 1-2 to let the CPU automatically determines the external clock speed and set pins to 2-3 to let the external clock always at 100MHz.
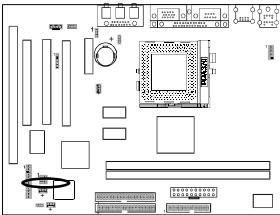
On Board Audio CODEC Jumper(JP3)

1 Enable(default)   1 Disable

This function allows you to enable or disable the embedded audio CODEC option. You must set this jumper's cap to pins 1-2 to enable and pins 2-3 to disable this function.

CPU Freq. ratio Jumper(JP6)

1 Safe mode for non freq.-locked CPU   1 Normal mode set by BIOS(default)

This function allows you to select the CPU freq. strap option during boot up. You must set the jumper's cap to pins 1-2 to boot by safe mode or pins 2-3 to boot by ICH/0 register. The default is pins 2-3

System Lockup Recovery Jumper (JP4)
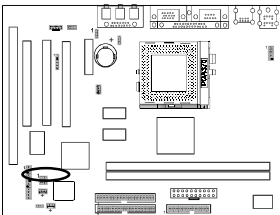
1 No reboot   1 Runs Safe mode while booting failure(default)

This feature is designed to let the system to reboot, should the system failed to boot. You must set the jumper's cap to pins 1-2 to disable and pins 2-3 to enable this function.

Audio Line out and Speaker out Jumper(JP9/JP10)
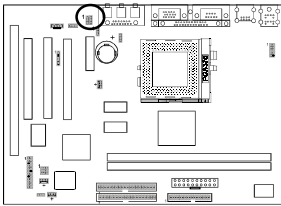
JP9 JP10   JP9 JP10

Line out   Speaker out

This jumper allows you to select between audio line-out or speaker out function. Set both JP9 and JP10 pins to 1-2 for line-out function or set both JP9 and JP10 pins to 2-3 for speaker out function..

CMOS Setting (JP5)
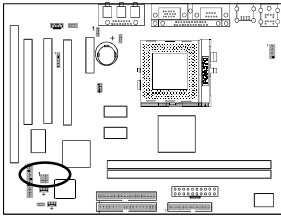
Normal(default)   Clear CMOS data

To clear the contents of the CMOS, please follow the steps below.
1. Disconnect the system power supply from the power source.
2. Set the jumper cap at location 2~3 for 5 seconds, then set it back to the default position.
3. Connect the system's power and then start the system.
4. Enter BIOS's CMOS Setup Utility and choose Load Setup Defaults. Type Y and press enter.
5. Set the system configuration in the Standard CMOS Setup menu.

Chassis Intrusion Detection (JP8)
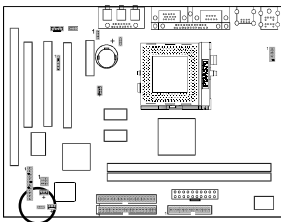
This board supports the chassis instruction detection feature of the management extension hardware by means of a mechanical or photo sensor switch attached to the motherboard through this 1x3-pin chassis security header. The mechanical switch is set to open for normal computer operation.

CD-ROM Audio-in Connector(CN1)
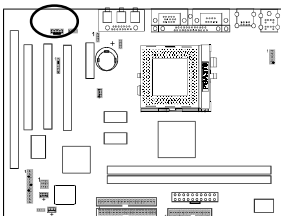
Use the audio cable enclosed with your CD-ROM disk drive to connect the CD-ROM to your mainboard. This will enable your CD-ROM's audio function.

WOL (Wake-on-LAN) Connector (CN10)
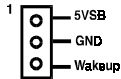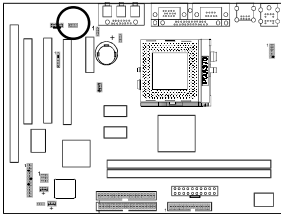
Enable the Wake Up On LAN selection in BIOS's Power Management Menu to use this function. The capability to remotely manage PCs on a network is a significant factor in reducing administrative and ownership costs. Magic Packet technology is designed to give WOL (Wake-on-LAN) capability to the LAN controller. When a PC capable of receiving wake up command goes to sleep, the Magic Packet mode in the LAN controller is enabled. When the LAN controller receives a Magic Packet frame, the LAN controller will wake up the PC. This header is used to connect an add-in NIC (Network Interface Card) which gives WOL capability to the mainboard.

To support this function, a switching power supply with a minimum of **750mA** 5VSB is required.

USB(Universal Serial Bus) Ports
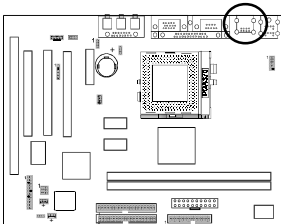
If you want to use a USB keyboard, you must enable the USB keyboard support function in BIOS's Integrated Peripherals menu . USB is an open industry standard, providing a simple and inexpensive way to connect up to 125 devices to a single computer port. Keyboards, mice, tablets, digitizers, scanners, bar-code readers, modems, printers and many more can all be used at the same time.

USB is a dynamically reconfigurable serial bus with an elementary data rate of 12Mbps. Based on off the shelf, low cost micro-controller technology, its modular layered software protocol supports sophisticated devices and application programs.

This board contains a USB Host controller and includes a root hub with two USB ports (meets USB Rev 1.0 spec.). Two USB peripherals or hub devices are able to be connected.

2-5 Main Memory Configuration

The DRAM memory system consists two banks and the memory size ranges from **16~256 MBytes**. If you only use one bank it does not matter which one you use and if you use two or more banks, it does not matter which bank you install first.

DIMM 1	Bank1
DIMM 2	Bank2

1   128
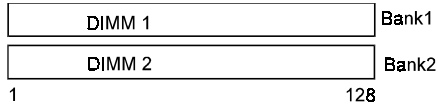
DRAM Specifications

DIMM type: 3.3V, 64/72-bit Synchronous DRAM

Module size: Single/double-sided 16/32/64/128 MBytes

DRAM speed: 10ns for Synchronous DRAM

Parity: Either parity or non-parity

> ⚠ The compatibility of 256MB DIMM is still under testing and cannot be guaranteed.

> ⚠ This mainboard supports 3.3v, unbuffered, 4-clock, SDRAM DIMM only. Buffered, 5V, or 2-clock SDRAM DIMMs should not be used.

> ⚠ Due to loading anomalies, using DIMM with an 'n x 4' DRAM base on this mainboard is not recommended. For example, a DIMM that uses sixteen 16Mb x 4 devices should not be used.

SPD (Serial Presence Detect)
This is an EPROM that contains speed and design information about the memory module. The mainboard queries the module and makes adjustments to system operation based on what it finds.

Chapter 3

Award BIOS Setup Program

Award's BIOS ROM has a built-in setup program that allows users to modify the basic system configuration. This information is stored in CMOS RAM so that it can retain the setup information, even when the power is turned off.

When you turn on or restart the system, press the Delete key to enter the Award BIOS setup program. The primary screen as shown in Figure 3-1 is a list of the menus and functions available in the setup program. Select the desired item and press enter to make changes. Operating commands are located at the bottom of this and all other BIOS screens. When a field is highlighted, on-line help information is displayed on the right side of the screen.

```
┌─────────────────────────────────────────────────────────────────────┐
│        CMOS Setup Utility- Copyright (C) 1984-2000 Award Software     │
├─────────────────────────────────────────────────────────────────────┤
│  ► Standard CMOS Features          ► SeePU Setup                      │
│                                                                       │
│  ► Advanced BIOS Features             Load Fail-Safe Defaults         │
│                                                                       │
│  ► Advanced Chipset Features          Load Optimized Defaults         │
│                                                                       │
│  ► Integrated Peripherals             Set Supervisor Password         │
│                                                                       │
│  ► Power Management Setup             Set User Password               │
│                                                                       │
│  ► PnP/PCI Configurations             Save & Exit Setup               │
│                                                                       │
│  ► PC Health Status                   Exit Without Saving             │
├─────────────────────────────────────────────────────────────────────┤
│  Esc  : Quit               ↑↓→←  : Select Item                        │
│  F10  : Save & Exit Setup                                             │
├─────────────────────────────────────────────────────────────────────┤
│                   Time, Date, Hard Disk Type...                       │
└─────────────────────────────────────────────────────────────────────┘
```
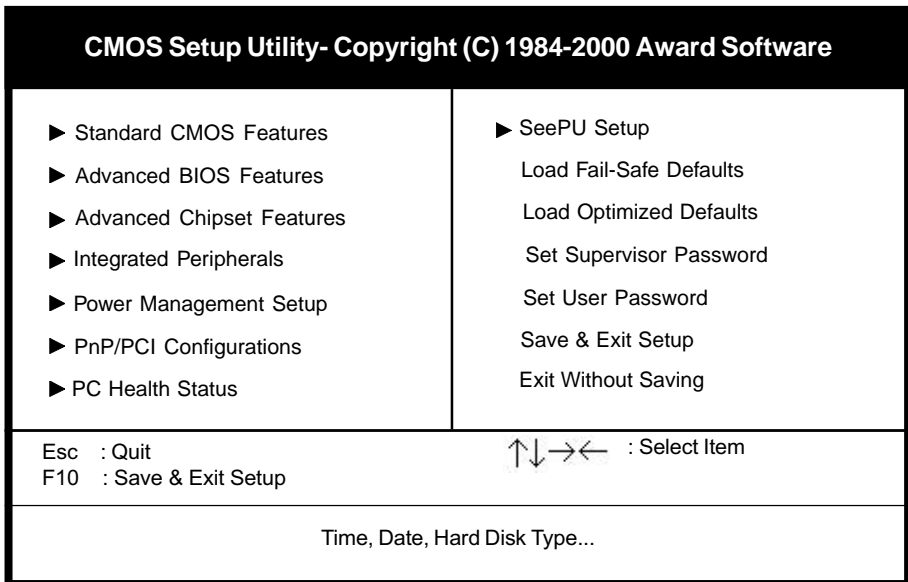
Figure 3-1 Setup Program Initial Screen

Memo

Chapter 4

Brief Software Driver Guide

The Mainboard Software Guide is found on the CD-ROM that is enclosed with your mainboard and is a PDF file which must be viewed with Adobe's freeware called Acrobat® Reader. The Acrobat Reader software is also included on the same CD-ROM. See the Readme.txt file in the CD-ROM's root directory for installation instructions of the Acrobat Reader. The Mainboard software guide discusses the following items:

The following items are discussed in the PDF files:

- Bus Master/PIO IDE Driver Installation
- USB Driver Installation
- Removing the Exclamation and/or Question Marks From the Windows 95 Device Manager Menu
- Updating Your System BIOS
- Installing and Using a Desktop Management Interface (DMI) Utility
- Sound Driver and Utility Installation

Memo

Appendix I

On Board I/O Addresses & IRQ Maps

System Resource	IRQ	I/O Address
1. Timer	IRQ0	040, 043
2. Keyboard	IRQ1	060, 064
3. Programmable INT	IRQ2	0020, 0021, 00A0, 00A1
4. COM2(B)	IRQ3	2F8, 2FF
5. COM1(A)	IRQ4	3F8, 3FF
6. Floppy	IRQ6	3F0, 3F7
7. LPT1	IRQ7	378, 37F
8. Real Time Clock	IRQ8	070, 071
9. PS/2 Mouse	IRQ12	060, 064
10. Math coprocessor	IRQ13	0F0, 0FF
11. IDE 1	IRQ14	1F0, 1F7
12. IDE 2	IRQ15	170, 177

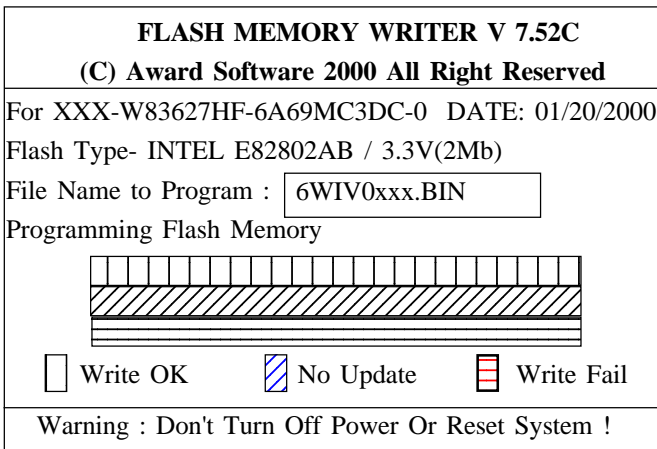☜ **IRQ 5, 9, 10 and 11 are available for interface cards.**

Memo

Embedded Flash Utility

This mainboard is equipped with an Erasable Flash ROM and an Embedded Flash Utility which allows the user to update the BIOS to a newer version. Embedded Flash Utility eases BIOS upgrade and eliminate the compatibility issue between different Flash ROM type and version of Flash utility.

Update Your System BIOS

1. Start computer, upon post, press ALT+F2 Keys to enter AWDFLASH setup.

2. Insert the floppy disk with the latest BIOS file into the floppy drive A(or B)

   and then press Enter to start programming.

FLASH MEMORY WRITER V 7.52C
(C) Award Software 2000 All Right Reserved

For XXX-W83627HF-6A69MC3DC-0   DATE: 01/20/2000

Flash Type- INTEL E82802AB / 3.3V(2Mb)

File Name to Program :   6WIV0xxx.BIN

Programming Flash Memory

☐ Write OK   ▨ No Update   ⊟ Write Fail

Warning : Don't Turn Off Power Or Reset System !

Sample of Programing Flash Memory Screen

3. When finished, the system will automatically Restart.

Note:

✎ Flash BIOS Protection must be set to Disabled in the Advance Chipset Feature from the CMOS Setup Utility menu. See Chapter 3.

✎ Don't turn off or restart your system during programming process.

✎ Make sure that your floppy diskette have only one BIN file to avoid confusion.

Memo