



Electronic Emission Notices

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions contained in this manual, may cause harmful interference to radio and television 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 THE RECEIVER
- CONNECT THE EQUIPMENT INTO AN OUTLET ON A CIRCUIT DIFFERENT FROM THAT OF THE RECEIVER
- CONSULT THE DEALER OR AN EXPERIENCED AUDIO/TELEVISION TECHNICIAN

NOTE: Connecting this device to peripheral devices that do not comply with Class B requirements, or using an unshielded peripheral data cable, could also result in harmful interference to radio or television reception.

The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

To ensure that the use of this product does not contribute to interference, it is necessary to use shielded I/O cables.

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HARDWARE CONFIGURATION

This motherboard is based on the VIA® VPX/VPX97 Chipset. The chipset is a highly integrated solution for a cost-effective and compact motherboard. Features on-board include super-I/O, PCI bus master IDE, PCI Ver 2.1 compliance, and support of Pentium CPUs running at 100, 120, 133, 150, 166, 180, 200 and 233MHz, Cyrix/IBM 6x86/6x86L/6x86MX CPUs, AMD K5/K6 processors. DIMM and SIMM sockets are provided onboard, allowing flexible installation of main memory. Creative VIBRA™ 16XV Sound on board(optional). The onboard pipelined burst cache further boosts the system performance.

Key Features

Processor

- ZIF Socket 7.
- Full support for the Intel® Pentium processors with MMX technology using socket 7.
- Supports 50MHz, 55MHz, 60MHz, 66MHz and 75MHz bus speed including all Pentium® processors operating from 100MHz to 233MHz.
- Supports Cyrix®/IBM® 6x86/6x86L/6x86MX™ processors.
- Supports AMD® K5/K6 processors.
- Supports IDT® WinChip C6 processors.

Cache

- Direct-mapped, write-back external cache.
- On board 512KB synchronous pipelined burst cache.

Memory Organization

Two 72-pin SIMM Sockets

- Supports Fast Page Mode (FPM) and Extended Data Out (EDO) at 60 and 70ns speeds.
- Supports Symmetrical and Asymmetrical DRAM addressing.
- Memory size from 4MB up to 128MB.
- Supports single-density SIMMs of 512KB, 1MB, 2MB, 4MB and 8MB depth (x32 or x36).
- Supports double-density SIMMs of 1MB, 2MB, 4MB, 8MB and 16MB depth (x32 or 36).
- Supports banks of different DRAM types and depth.

Two 168-pin DIMM Sockets

- Supports Fast Page Mode (FPM), Extended Data Out (EDO) at 60 and 70ns speeds.
- Supports 3.3V Synchronous DRAM (SDRAM).
- Supports Symmetrical and Asymmetrical DRAM addressing.
- Memory size from 8MB up to 256MB.
- Supports single-density DIMMs of 1MB, 2MB, 4MB and 8MB depth (x64).
- Supports double-density DIMMs of 2MB, 4MB, 8MB and 16MB depth (X64).
- Supports banks of different DRAM types and depth.

On-Board I/O

- Two PCI fast IDE ports supporting up to 4 ATA, ATA2, and Ultra DMA33 IDE HDDS, CD-ROMs, ZIP and LS-120 drives as boot devices.
- Supports Bus Master IDE, PIO Mode 4 (up to 22MB/sec) and Ultra DMA33 (up to 33MB/sec) transfer.
- One ECP/EPP parallel port.
- Two 16550-compatible UART serial ports.
- One floppy port supporting two FDDs of 360KB, 720KB, 1.2MB or 1.44MB formatted capacity.
- One Standard AT Keyboard port (factory option for PS/2 Type).
- One PS/2 mouse port (via a header).
- Infrared (IrDA) support (via a header).
- Two USB ports (via a header).

On board Sound (optional)

- Creative® ViBRA 16XV sound chip.
- Plug-and-Play.
- Creative 3D Enhancement.
- Sound Blaster 16 compatible.
- Full-Duplex 16-bit record & playback.
- Roland MPV 401 VRAT mode compatible.
- Speaker out (Line-out), Mic-in, one Line-in and MIDI/Game port (via a cable).

System BIOS

- 1MB or 2MB flash BIOS supporting PnP, APM, ATAPI and Windows® 95.
- Auto detects and supports LBA hard disks with formatted capacities up to 8.4GB.
- Easily upgradable by end-user.

Plug-and-Play

- Supports plug-and-play specification 1.1a.
- Plug-and-play for DOS, Windows® 3.X as well as Windows® 95.
- Fully steerable PCI interrupts.

PC 97/98

- PC97/PC98 ready.

Power Management

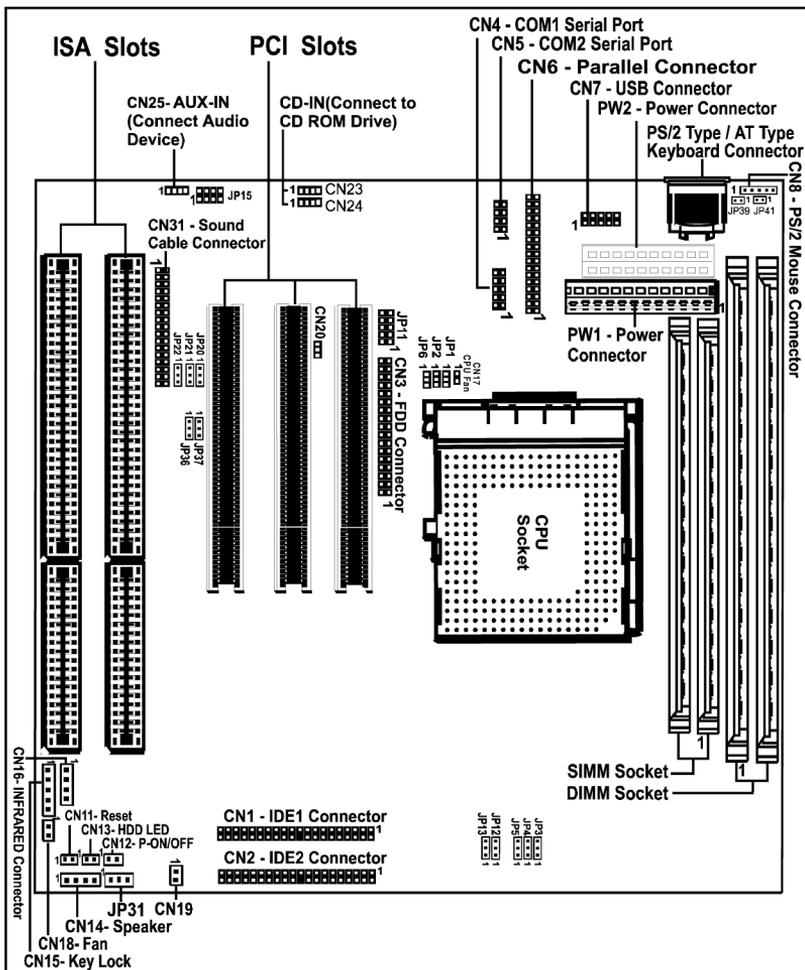
- Supports SMM and APM.
- Break switch for instant suspend/resume on system operation.
- Energy star “Green PC” compliant.
- Support Keyboard and External Modem Ring-in Power ON (Only under system being connected to ATX Power Supply).

Expansion Slots

- 3 PCI bus master slots (rev. 2.1 compliant).
- 2 ISA slots.

Motherboard Layout (Model Code No. - 35882302)

The following diagram shows the relative positions of the jumpers, connectors, major components and banks on the motherboard.



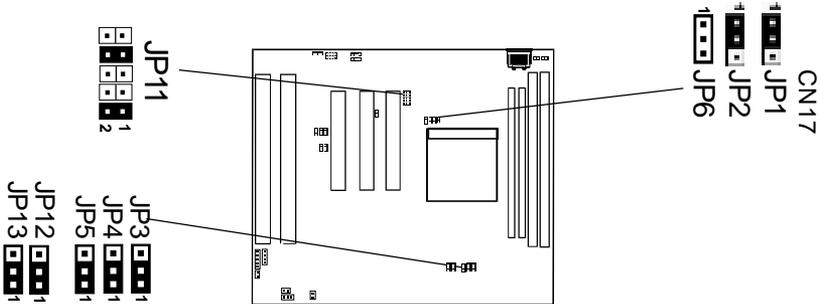
Warning:

All connectors on board are labeled Pin "1" at one corner. Ribbon cables should always be connected with the red stripe on the Pin "1" side of the connector.

Jumper Settings

This section explains how to configure the motherboard's hardware. Before using your computer, make sure all jumpers and DRAM modules are set correctly. Refer to this chapter whenever in doubt.

CPU Type and Voltage Selection Jumper - JP1, JP2, JP3, JP4, JP5, JP11, JP12, JP13



Intel® MMX CPU

| CPU Type & Speed | CPU Bus Clock & CPU Type | | | | | | CPU Voltage | | | |
|----------------------|--------------------------|-----|-----|-----|-----|-----|-------------|------|------|--|
| | JP3 | JP4 | JP5 | JP1 | JP2 | JP6 | JP11 | JP12 | JP13 | |
| Intel Pentium-166MMX | 66MHz | | | | | | | | | |
| Intel Pentium-200MMX | 66MHz | | | | | | | | | |
| Intel Pentium-233MMX | 66MHz | | | | | | | | | |

IDT® WinChip C6 CPU

| CPU Type & Speed | CPU Bus Clock & CPU Type | | | | | | CPU Voltage | | | |
|--------------------|--------------------------|-----|-----|-----|-----|-----|-------------|------|------|--|
| | JP3 | JP4 | JP5 | JP1 | JP2 | JP6 | JP11 | JP12 | JP13 | |
| IDT WinChip C6-200 | 66MHz | | | | | | | | | |
| IDT WinChip C6-225 | 75MHz | | | | | | | | | |
| | 75MHz | | | | | | | | | |

JP6 is reserved for future AMD K6 processors. Simply leave JP6 OPEN for all existing Intel, Cyrix, AMD K5 and AMD K6 processors (except AMD-K6-266 or above).

Close Open

Intel® CPU (Intel® Pentium® CPU without MMX Technology)

| CPU Type & Speed | CPU Bus Clock & CPU Type | | | | | | CPU Voltage | | | |
|-------------------|--------------------------|-----|-----|-----|-----|-----|-------------|------|------|------|
| | | JP3 | JP4 | JP5 | JP1 | JP2 | JP6 | JP11 | JP12 | JP13 |
| Intel Pentium-100 | 66MHz | | | | | | | | | |
| Intel Pentium-120 | 60MHz | | | | | | | | | |
| Intel Pentium-133 | 66MHz | | | | | | | | | |
| Intel Pentium-150 | 60MHz | | | | | | | | | |
| Intel Pentium-166 | 66MHz | | | | | | | | | |
| Intel Pentium-180 | 60MHz | | | | | | | | | |
| Intel Pentium-200 | 66MHz | | | | | | | | | |

AMD® CPU

| CPU Type & Speed | CPU Bus Clock & CPU Type | | | | | | CPU Voltage | | | |
|-------------------|--------------------------|-----|-----|-----|-----|-----|-------------|------|------|------|
| | | JP3 | JP4 | JP5 | JP1 | JP2 | JP6 | JP11 | JP12 | JP13 |
| AMD-K5-PR100 | 66MHz | | | | | | | | | |
| AMD-K5-PR120 | 60MHz | | | | | | | | | |
| AMD-K5-PR133 | 66MHz | | | | | | | | | |
| AMD-K5-PR166 | 66MHz | | | | | | | | | |
| AMD-K5-PR200 | 66MHz | | | | | | | | | |
| AMD-K6-166 | 66MHz | | | | | | | | | |
| AMD-K6-200 | 66MHz | | | | | | | | | |
| AMD-K6-233 (3.2V) | 66MHz | | | | | | | | | |
| AMD-K6-233 (2.2V) | 66MHz | | | | | | | | | |
| AMD-K6-266 | 66MHz | | | | | | | | | |
| AMD-K6-300 | 66MHz | | | | | | | | | |

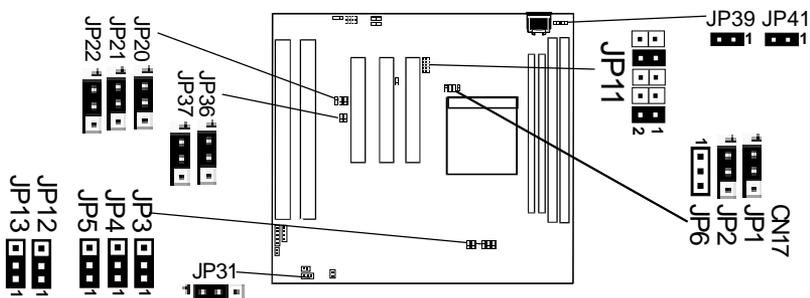
Cyrix®/IBM® CPU

| CPU Type & Speed | CPU Bus Clock & CPU Type | | | | | | CPU Voltage | | | |
|---------------------------|--------------------------|-----|-----|-----|-----|-----|-------------|------|------|--|
| | JP3 | JP4 | JP5 | JP1 | JP2 | JP6 | JP11 | JP12 | JP13 | |
| Cyrix/IBM 6x86-PR120+ | 50MHz | | | | | | | | | |
| Cyrix/IBM 6x86-PR150+ | 60MHz | | | | | | | | | |
| Cyrix/IBM 6x86-PR166+ | 66MHz | | | | | | | | | |
| Cyrix/IBM 6x86-PR200+ | 50MHz | | | | | | | | | |
| | 75MHz | | | | | | | | | |
| | 75MHz | | | | | | | | | |
| Cyrix/IBM 6x86L-PR150+ | 60MHz | | | | | | | | | |
| Cyrix/IBM 6x86L-PR166+ | 66MHz | | | | | | | | | |
| Cyrix/IBM 6x86L-PR200+ | 50MHz | | | | | | | | | |
| | 75MHz | | | | | | | | | |
| | 75MHz | | | | | | | | | |
| Cyrix/IBM 6x86MX-PR166 | 60MHz | | | | | | | | | |
| | 66MHz | | | | | | | | | |
| Cyrix/IBM 6x86MX-PR200 | 66MHz | | | | | | | | | |
| | 75MHz | | | | | | | | | |
| | 75MHz | | | | | | | | | |
| Cyrix/IBM 6x86MX-PR233 | 66MHz | | | | | | | | | |
| | 75MHz | | | | | | | | | |
| | 75MHz | | | | | | | | | |
| Cyrix MII/IBM 6x86MX-300* | 66MHz* | | | | | | | | | |

- This motherboard is compatible with Cyrix 6x86 CPU, which must be Revision 2.7 or newer. Please contact your CPU supplier for details on identification of Cyrix 6x86 CPU revisions.
- This motherboard can be run with Cyrix 6x86-P200+ CPU specifications of all add on cards. If system does not behave reliably at 75MHz Bus Clock , you should set the Bus Clock to 50MHz (JP3 set "2-3", JP4 set "2-3", JP5 set "2-3").
- JP6 is reserved for future AMD K6 processors. Simply leave JP6 OPEN for all existing Intel, Cyrix, AMD K5 and AMD K6 processors (except AMD-K6-266 or above).

* = Default setting (Cyrix MII/IBM 6x86MX-300 CPU)





JP20, JP21, JP22 - On Board Sound Function (Applicable for on Board Sound Ver. only)

| JP20 | JP21 | JP22 | Function |
|----------------|----------------|----------------|---------------------------------|
| 1 ■ ■ ■ (1-2)* | 1 ■ ■ ■ (1-2)* | 1 ■ ■ ■ (1-2)* | Enable on board Sound Function* |
| 1 ■ ■ ■ (2-3) | 1 ■ ■ ■ (2-3) | 1 ■ ■ ■ (2-3) | Disable on board Sound Function |

JP31 - CMOS Clear Jumper

| JP31 | CMOS |
|----------------|-------------------|
| 1 ■ ■ ■ (1-2)* | Normal operation* |
| 1 ■ ■ ■ (2-3) | Clear |

JP36 - Flash BIOS Voltage

| JP36 | Flash BIOS Voltage |
|---------------|--------------------|
| 1 ■ ■ ■ (1-2) | 5V |
| 1 ■ ■ ■ (2-3) | 12V |

JP37 - Flash BIOS Type Selection

| JP37 | Flash BIOS Type |
|---------------|-----------------|
| 1 ■ ■ ■ (1-2) | Others |
| 1 ■ ■ ■ (2-3) | Intel Flash |

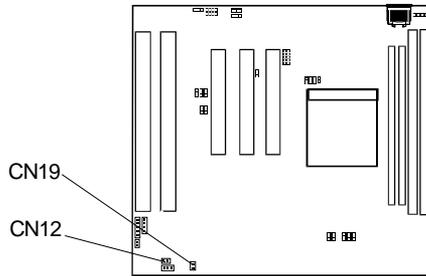
JP36 and JP37 are pre-installed in the factory. They should NOT be altered by the users

JP39, JP41 - ATX/AT Type Power Supply Selection (Applicable for VPX97 version only)

| JP39 | JP41 | Power Supply Type |
|------------------|-----------------|-------------------|
| ■ ■ ■ 1 (Close)* | ■ ■ ■ 1 (Close) | AT Power Supply |
| ■ ■ 1 (Open) | ■ ■ 1 (Open) | ATX Power Supply |

* = Default setting

■ ■ ■ Close ■ ■ Open



CN12 - ATX Power ON/OFF Button Connector

When ATX power supply is installed, connect the the front panel ON/OFF power button cable to the on board 2-pin connector - CN12.

- Pushing the front panel power button once will switch the system between **ON** and **SLEEP**.
- Pushing the front panel power button second will switch the system to **suspend** mode.
- Pushing the front panel power button while in the ON mode for more than 4 seconds will turn the system **OFF**. The system power LED shows the status of the system's power.

CN19 - Suspend Switch

Pushing the case-mounted suspend switch button once will switch the system to **suspend** mode. Pushing the switch button second will walk-up the system.

Resume Feature (Set in "Power Management" in CMOS SETUP)

Keyboard Resume: Enable -Pressing any key can turn on the System Power.
Disable -Disable keyboard on Power function.

Modem Resume: Enable -When external Modem Rings can turn on the System Power.
Disable -Disable Modem Ring-in on Power function.

RTC Alarm Resume:Enable -This sets up the system alarm so that the PC will automatically Switch on at the decided day of month and time.
Disable -Disable the above function.

Warning:

Before handling the motherboard from its original package, please ensure that there is no static electricity on your body. Otherwise it may cause damage to the integrated circuits on the motherboard.

Memory Configuration

The table 1 and table 2 shows the possible memory combinations. The motherboard will support Fast Page Mode (FPM), Extended Data Output (EDO), Burst Extended Data Output (BEDO) and Synchronous DRAM (SDRAM) DIMMs.

Table 1 (DIMM Configurations)

| DIMM 1 | DIMM 2 | Total | DIMM 1 | DIMM 2 | Total |
|--------|--------|-------|--------|--------|-------|
| Empty | 8MB | 8MB | 32MB | Empty | 32MB |
| Empty | 16MB | 16MB | 32MB | 8MB | 40MB |
| Empty | 32MB | 32MB | 32MB | 16MB | 48MB |
| Empty | 64MB | 64MB | 32MB | 32MB | 64MB |
| Empty | 128MB | 128MB | 32MB | 64MB | 96MB |
| 8MB | Empty | 8MB | 32MB | 128MB | 160MB |
| 8MB | 8MB | 16MB | 64MB | Empty | 64MB |
| 8MB | 16MB | 24MB | 64MB | 8MB | 72MB |
| 8MB | 32MB | 40MB | 64MB | 16MB | 80MB |
| 8MB | 64MB | 72MB | 64MB | 32MB | 96MB |
| 8MB | 128MB | 136MB | 64MB | 64MB | 128MB |
| 16MB | Empty | 16MB | 64MB | 128MB | 192MB |
| 16MB | 8MB | 24MB | 128MB | Empty | 128MB |
| 16MB | 16MB | 32MB | 128MB | 8MB | 136MB |
| 16MB | 32MB | 48MB | 128MB | 16MB | 144MB |
| 16MB | 64MB | 80MB | 128MB | 32MB | 160MB |
| 16MB | 128MB | 144MB | 128MB | 64MB | 192MB |
| | | | 128MB | 128MB | 256MB |

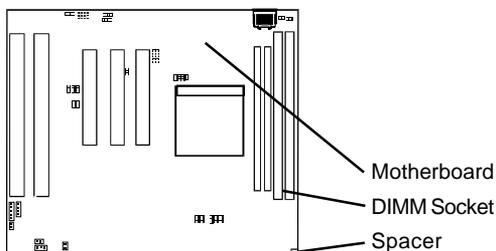
Table 2 (SIMM Configurations)

| SIMM1 | SIMM2 | Total |
|-------|-------|-------|
| 4MB | 4MB | 8MB |
| 8MB | 8MB | 16MB |
| 16MB | 16MB | 32MB |
| 32MB | 32MB | 64MB |
| 64MB | 64MB | 128MB |

Installation

Installing the Spacer

When installing the motherboard (Baby AT), you need to insert the SPACER at the corner near the DIMM sockets to provide better support for connect future DRAM modules.



Installing a DRAM Module

To install a DRAM module:

- Determine the desired amount of memory and acquire the necessary DRAM modules.
- Note that a DRAM module has a polarity notch at one end so that it fits into a socket only one way. Hold the module by the edges. Do not touch the shiny contacts.
- Align the DRAM module edge connector with the slot at the center of the socket.
- Position the DRAM module to the left of the socket and press the DRAM module edge connector firmly into the socket.

If you have misaligned or only partially seated the module, remove the DRAM module gently and reinstall it.

Warning:

Turn system power off before installing and removing any device, otherwise you'll cause the system damage.

Installing the Processor

For easy installation of the CPU, it is recommended that you remove all Cards in PCI slots first.

- Unpack the CPU and identify the pin 1 corner of the CPU.
- Match pin 1 of the CPU with pin 1 of the CPU socket. The pin 1 corner of the CPU socket is designated by a small triangle printed on the motherboard.
- Carefully insert the CPU into the CPU socket and move the metal arm downward to replace it in its original position. Change any jumper settings as detailed in the manual.

The small circle marked on the top of the CPU designates the pin 1 corner. If a heat sink is attached and covers the top of the CPU, identify the pin 1 corner by turning the CPU over. Locate the small gold finger that extends from one corner of the large central square portion of the CPU. The gold finger points towards pin 1, which is also uniquely identified by a square pad.

Positioning the CPU incorrectly in the socket can permanently damage the CPU and the computer when you turn on the system.

Warning:

There is a fan attached the CPU to prevent the overheating, please ensure that the fan can operate. Otherwise the CPU can overheat and cause damage to both CPU and motherboard.

BIOS SETUP

This chapter discusses Award's Setup Program built into the ROM BIOS. The Setup Program allows users to modify the basic system configuration. This special information is then stored in battery-backed RAM, which retains the setup information when the power is turned off.

Starting Setup

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

While the BIOS is in control, the Setup Program can be activated :

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

Press DEL to enter SETUP

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

PRESS F1 TO CONTINUE, DEL TO ENTER SETUP

Getting Help

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

In Case of Problems

If, after making and saving system changes with the Setup Program, you discover that your computer does not reset, use the Award BIOS defaults to override the CMOS settings.

Main Menu

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

ROM PCI/ISA BIOS
CMOS SETUP UTILITY
AWARD SOFTWARE. INC.

| | |
|--|--|
| STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION SETUP LOAD BIOS DEFAULTS LOAD SETUP DEFAULTS | INTEGRATED PERIPHERALS SUPERVISOR PASSWORD USER PASSWORD IDE HDD AUTO DETECTION HDD LOW LEVEL FORMAT SAVE & EXIT SETUP EXIT WITHOUT SAVING |
| Esc : Quit F10 : Save & Exit Setup | ↑↓→← : Select Item (Shift) F2 : Change Color |
| Time. Date. Hard Disk Type | |

(Note : The figures of BIOS Setup Menu included here only show a typical case, and may not be exactly the same as the one on your unit.)

Note that a brief description of each highlighted item will appear at the bottom of the screen.

| | |
|--------------------------------------|--|
| Standard CMOS Setup | This setup page includes all the items of Award™ special standard features. |
| BIOS Features Setup | This setup page includes all the items of Award™ special enhanced features. |
| Chipset Features Setup | This setup page includes all the items of chipset special features. |
| Power Management Setup | This entry only appears if your system supports Power Management “Green PC” standards. |
| PNP / PCI Configuration Setup | This entry appears if your system supports PNP/PCI. |
| Load BIOS Defaults | The BIOS defaults have been set by the manufacturer and represent settings which provide the minimum requirements for your system to operate. |
| Load Setup Defaults | The chipset defaults are settings which provide for maximum system performance. While Award has designed the custom BIOS to maximize performance, the manufacturer has the right to change these defaults to meet its needs. |
| Integrated Peripherals | This section page includes all the items of IDE hard drive and Programmed Input / Output features. |

Supervisor / User Password Setting Changes, sets, or disables password. It allows you to limit access to the system and the Setup Program.

IDE HDD Auto Detection Automatically detects and configures the hard disk parameters. The Award BIOS includes this ability in the event you are uncertain of your hard disk's parameters.

HDD Low Level Format If supported by your system, this provides a hard disk low level format utility.

Save & Exit Setup Saves value changes to CMOS and exits setup.

Exit Without Save Abandons all CMOS value changes and exits setup.

Standard CMOS Setup

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes one or more setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> key to select the desired value in each item.

ROM PCI/ISA BIOS
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

| | | | |
|------------------------------------|---------------------------|----------------------------|---------------------------------------|
| Date (mm:dd:yy) : Thu, Jan 23 1997 | | Time (hh:mm:ss) : 00:00:00 | |
| HARD DISKS | TYPE | SIZE | CYLS. HEADS PRECOMPLANDZ SECTORS Mode |
| Primary Master | : None | 0 0 | 0 0 0 0 --- |
| Primary Slave | : None | 0 0 | 0 0 0 0 --- |
| Secondary Master | : None | 0 0 | 0 0 0 0 --- |
| Secondary Slave | : None | 0 0 | 0 0 0 0 --- |
| Drive A : | 1.44M, 3.5 in | Base Memory : 640K | |
| Drive B : | None | Extended Memory : 15360K | |
| Video : | EGA/VGA | Other Memory : 384K | |
| Halt on : | All Errors | Total Memory : 16384K | |
| Esc : Quit | ↑↓→← : Select Item | PU/PD/+/- : Modify | |
| F1 : Help | (Shift) F2 : Change Color | | |

(Note : The figures of BIOS Setup Menu included here only show a typical case, and may not be exactly the same as the one on your unit.)

Date The date format is <day-of-the-week>. <day> <month> <year>. Press <F3> to display the calendar.

Time The time format is <hour> <Minute> <second> displayed in 24-hour military-time clock. For example, 1 p. m. is displayed as 13:00:00.

Primary These categories identify the types of the two channels that
Master/Primary have been installed in the computer. There are 45 predefined
Slave/Secondary types and one user definable types in BIOS. Type 1 to Type
Master/Secondary 45 are predefined. Type "user" is user-definable.
Slave

Press PgUp or PgDn to select a numbered hard disk type or type the number and press <Enter>. Note that the specifications of your drive must match with those of the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can select Type "User" to define your own drive type manually.

If you select Type "User", you will need to know the information listed below. Enter the information directly from the keyboard and press <Enter>. This information should be included in the documentation from your hard disk vendor or the system manufacturer.

If the controller of the HDD interface is ESDI, the selection shall be "Type1".

If the controller of the HDD interface is SCSI, the selection shall be "None" .

If you select Type "Auto", the BIOS will auto-detect the HDD and CD-ROM drive at the POST stage and show the IDE for the HDD and CD-ROM drive.

TYPE -Drive type
CYLS -Number of cylinders
HEADS -Number of heads
PRECOMP -Write precom
LANDZONE -Landing zone
SECTORS -Number of sectors
MODE -Mode type

If a hard disk has not been installed, select NONE and press <Enter> .

Drive A Type / This category identifies the types of floppy disk drive A or
Drive B Type drive B that has been installed in the computer.

Video This category selects the type of video adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select them in Setup.

BIOS Features Setup

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

Chipset Features Setup

The Chipset Features Setup option is used to change the values of the chipset registers. These registers control most of the system options in the computer.

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and the external cache. It must be stated that these items should not be altered. The default settings have been chosen because they provide the best operating conditions for your system.

Power Management Setup

The Power Management Setup Menu allows you to configure your system to most save energy while operating in a manner consistent with your own style of computer use .

PNP/PCI Configuration Setup

This section describes how to configure the PCI bus system. This section covers some very technical items and it is recommended that only experienced users should make any changes to the default settings.

Integrated Peripherals

The Integrated Peripherals Setup allows the user to configure the onboard IDE controller, floppy disk controller, the printer port and the serial ports.

Supervisor/User Password Setting

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

Supervisor Password : You can enter the Setup Program and change the options of the setup menus.

User Password : You can enter the Setup Program but cannot change the options of the setup menus.

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

ENTER PASSWORD:

Type the password, up to eight characters in length, and press<Enter>. The new password will clear the previously entered password from the CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and operate without a password.

To disable a password, just press <Enter> when you are prompted to enter the password. A message will be displayed to confirm that the password is disabled.

PASSWORD DISABLED.

Once the password is disabled, the system will reset and you can enter the Setup Program freely.

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

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

The password requirement is defined by the Security Option of the BIOS Features Setup Menu. If the Security Option is set to "System", the password will be required both at resetting and at entering setup. If the option is set to "Setup", the prompt only appears when you try to enter setup.

Flash Update Procedure

A program AWDFLASH.EXE is included in the utility diskette or CD. The user is recommended to follow the procedure below to update the flash BIOS.

1. Create a DOS-bootable floppy diskette. Copy the new BIOS file (just obtained or downloaded) and the utility program AWDFLASH.EXE to the diskette.
2. Allow the PC system to boot from the DOS diskette.
3. At the DOS prompt, key in

AWDFLASH

and hit <ENTER>

4. Enter the file name of the new BIOS.
5. The question: "Do you want to save file?" is displayed.
Key in "N" if there is no need to save the existing BIOS content.
Key in "Y" if a backup copy of the existing BIOS is needed.
(A file name has to be assigned to the existing BIOS binary file.)
6. The question : "Are you sure to program?" is displayed.
Key in "Y"
7. Wait until the flash-update is completed.
8. Power down the PC system.
9. Restart the PC.

Warning:

1. If the flash memory writer utility was not able to successfully update a complete BIOS file, the system may not boot up.
2. Make sure that the BIOS file is available for this motherboard.
3. If you encounter problem while updating the new BIOS, DO NOT turn off your PC since this might prevent the system from booting up. Repeat the process, if the problem still persist, use the original BIOS file you saved to disk above to update. If it failed, you need service.

APPENDIX - Technical Reference

CPU to Bus Frequency Ratio (JP1, JP2, JP6)

JP1, JP2 and JP6 are used in combination to decide the ratio of the internal frequency of the CPU to the bus clock.

| JP1 | JP2 | JP6 | CPU to Bus Frequency Ratio | | |
|---|---|---|----------------------------|--------------------|-------|
| | | | AMD K6 | Pentium MMX/6x86MX | 6x86L |
|  |  |  | 3x | 3x | 4x |
|  |  |  | 2.5x | 2.5x | 2.5x |
|  |  |  | 2x | 2x | 2x |
|  |  |  | 3.5x | 3.5x | 3.5x |
|  |  |  | 4x | --- | --- |
|  |  |  | 4.5x | --- | --- |
|  |  |  | 5x | --- | --- |
|  |  |  | 5.5x | --- | --- |

CPU External Clock (BUS) Frequency (JP3, JP4, JP5)

JP3, JP4 and JP5 for the different CPU speed configuration.

| JP3 | JP4 | JP5 | Host Clock | PCI Clock |
|---|---|---|------------|-----------|
|  |  |  | 50MHz | 25MHz |
|  |  |  | 60MHz | 30MHz |
|  |  |  | 66MHz | 33MHz |
|  |  |  | 75MHz | 32MHz |
|  |  |  | 75MHz | 37.5MHz |

CPU Core Voltage (JP11)

This motherboard utilize switching control power. Support a wide CPU Core Voltage from 1.8V to 3.5V. You can use it for further CPUs. Please correctly set jumpers refer to your CPU Marking, CPU Core Voltage setting is as below.

| Core Voltage | JP11 | Core Voltage | JP11 |
|--------------|--|--------------|--|
| 1.8V |  1 2 | 2.8V |  1 2 |
| 2.1V |  1 2 | 2.9V |  1 2 |
| 2.2V |  1 2 | 3.2V |  1 2 |
| 2.5V |  1 2 | 3.3V |  1 2 |
| 2.7V |  1 2 | 3.5V |  1 2 |