



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:

- RE-ORIENT 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.

Copyright

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Table of Contents

Hardware Configuration	3
Key Features	3
Motherboard Layout (Model Code No. - 35827303)	5
Jumper Settings	6
Memory Configuration	10
BIOS Setup	15
Main Menu	15
Standard CMOS Setup	17
BIOS Features Setup	19
Chipset Features Setup	19
Integrated Peripherals	19
Supervisor/User Password Setting	19
Power Management Setup	20
PNP/PCI Configuration Setup	20
Flash Update Procedure	20

Note to User

This manual is for use with both versions with or without the DIMM socket. If your motherboard does not have a DIMM socket, ignore the DIMM socket on motherboard layout and the respective DIMM configurations.

HARDWARE CONFIGURATION

The Intel® 430TX Pentium® PCI motherboard is based on the Intel® 430TX BGA 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(support ultra DMA 33MB/Sec), PCI Ver 2.1 compliance, USB, support of Pentium CPUs running at 90, 100, 120, 133, 150, 166, 180, 200, 233MHz, Cyrix 6x86 CPUs AMD K5 and AMD K6 processors. DIMM and SIMM sockets are provided onboard, allowing flexible installation of main memory. The onboard pipelined burst cache further boosts the system performance.

Key Features

Processor

- ZIF Socket 7.
- Full support for the Intel® Pentium processor with MMX technology using socket 7.
- Supports 60MHz and 66MHz bus speed including all Pentium® processors operating from 90MHz to 233MHz.
- Supports Cyrix 6x86 and AMD K5 and AMD K6 processors.

Cache

- The external cache policy is direct-mapped, write-back.
- 256KB or 512KB synchronous pipelined burst cache is supported.

System Memory

- 8M to 256MB
- A total of four 72-pin SIMM sockets and three 168-pin DIMM sockets.
- Both 5V Fast Page Mode and Extended Data Output (EDO) DRAM types are supported by SIMM sockets.
- 3.3V SDRAM types supported by DIMM sockets.

Memory Organization

Four 72-pin SIMM Sockets

- System memory is divided into two banks. Each bank has two 72-pin SIMM slots.
- Supports Fast Page Mode (FPM), Extended Data Out (EDO) at , 60 and 70ns speeds.
- Supports Symmetrical and Asymmetrical DRAM addressing.
- Memory size from 8M byte up to 256M byte.
- Supports single-density SIMMs of 512KBx32, 1MBx32, 2MBx32and 4MBx32 depth and 16MBx32 depth.
- Supports double-density SIMMs of 1MBx32, 2MBx32, 4MBx32 and 8MBx32 depth.
- Banks of different DRAM types and depths can be mixed.

Three 168-pin DIMM Sockets

- Supports Synchronous DRAM (SDRAM) at 66MHz.
- Supports Symmetrical and Asymmetrical DRAM addressing.
- Memory size from 8M byte up to 256M byte.
- Supports single-density DIMMs of 1MBx64, 2MBx64, 4MBx64 and 8MBx64 depth.
- Supports double-density DIMMs of 2MBx64, 4MBx64, 8MBx64 and 16MBx64 depth.
- Supports 3.3V SDRAM types.

On-Board I/O

- Two enhanced IDE channel supporting up to four ATA or ATA2 or Ultra DMA IDE devices.
- Bus Master IDE function enhances multitasking performance.
- One ECP/EPP parallel port (via a header).
- Two 16550-compatible UART serial ports (via a header).
- One floppy port supporting two FDDs of 360KB, 720KB, 1.2MB, 1.44MB or 2.88MB.
- Two USB ports (via a header).
- Factory option to have one standard AT keyboard port or one PS/2 keyboard port(not both).
- PS/2 mouse port (via a header).
- Infrared (IrDA) support (via a header).

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

Expansion Slots

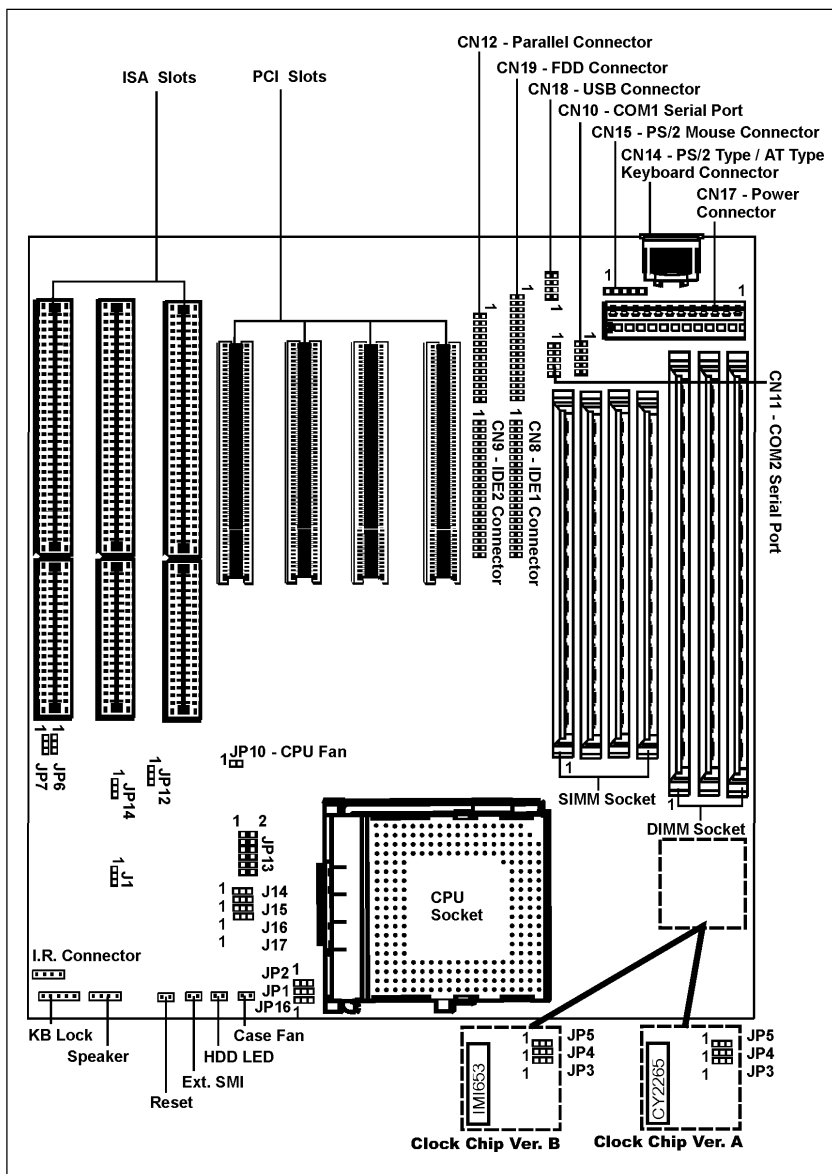
- 4 PCI bus master slots (rev. 2.1 compliant, with 1 PCI slot sharing with 1 ISA slot).
- 3 ISA slots (1 ISA slot sharing with 1 PCI slot).

Power Management

- APM specification 1.2 compliant.
- Support auto display off and hard disk standby.
- Activity monitoring for non-APM power management.
- Support external SMI push-button.
- comply to the Energy star "Green PC" program.
- Advanced system Config and Power Interface(ACPI).

Motherboard Layout (Model Code No. - 35827303)

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

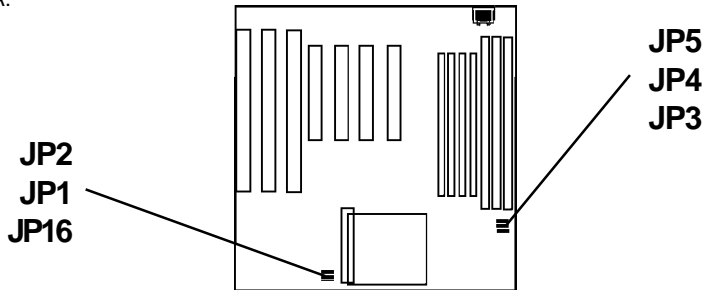


Jumper Settings

This chapter 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.

JP1, JP2, JP3, JP4, JP5 - CPU Type Selection (Clock Generator Ver. A)

You can locate three headers JP3, JP4 and JP5 (of the same color) for clock generator ver A.

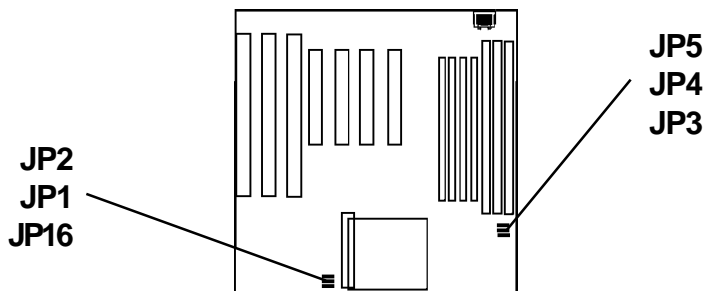


CPU Type & Speed	Bus Clock	JP1	JP2	JP3	JP4	JP5
Intel Pentium-90	60MHz	1-2	1-2	1-2	1-2	2-3
Intel Pentium-100	66MHz	1-2	1-2	2-3	1-2	1-2
Intel Pentium-120	60MHz	1-2	2-3	1-2	1-2	2-3
Intel Pentium-133	66MHz	1-2	2-3	2-3	1-2	1-2
Intel Pentium-150	60MHz	2-3	2-3	1-2	1-2	2-3
Intel Pentium-166	66MHz	2-3	2-3	2-3	1-2	1-2
Intel Pentium-180	60MHz	2-3	1-2	1-2	1-2	2-3
Intel Pentium-200	66MHz	2-3	1-2	2-3	1-2	1-2
Intel Pentium-233	66MHz	1-2	1-2	2-3	1-2	1-2
Cyrix 6x86-P150+	60MHz	1-2	2-3	1-2	1-2	2-3
Cyrix 6x86-P166+	66MHz	1-2	2-3	2-3	1-2	1-2
AMD-K5-PR90	60MHz	1-2	1-2	1-2	1-2	2-3
AMD-K5-PR100	66MHz	1-2	1-2	2-3	1-2	1-2
AMD-K5-PR120	60MHz	1-2	1-2	1-2	1-2	2-3
AMD-K5-PR133	66MHz	1-2	1-2	2-3	1-2	1-2
AMD-K5-PR166	66MHz	2-3	2-3	2-3	1-2	1-2
AMD-K5-PR200	66MHz	2-3	1-2	2-3	1-2	1-2
AMD-K6-PR2-166	66MHz	2-3	2-3	2-3	1-2	1-2
AMD-K6-PR2-200	66MHz	2-3	1-2	2-3	1-2	1-2
AMD-K6-PR2-233	66MHz	1-2	1-2	2-3	1-2	1-2

JP16 is reserved for *future* AMD K6 processors. Simply leave JP16 OPEN for all *existing* Intel, Cyrix, AMD K5 and AMD K6 processors. This motherboard is compatible with Cyrix 6x86 CPU but must be Revision 2.7 and newer. Please contact your CPU supplier for details on identification of Cyrix 6x86 CPU revisions.

JP1, JP2, JP3, JP4,JP5 - CPU Type Selection (Clock Generator Ver. B)

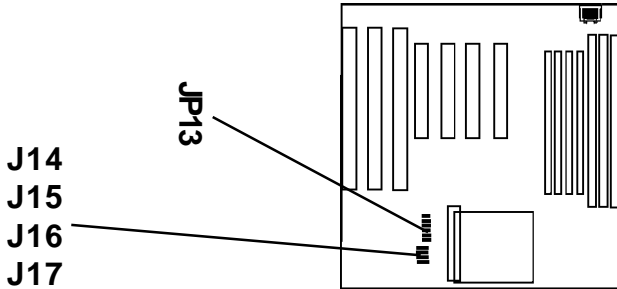
You can locate two headers JP4 and JP5 of the same color for Clock Generator ver B. JP3 is preinstalled in factory (different colour).



CPU Type & Speed	Bus Clock	JP1	JP2	JP4	JP5
Intel Pentium-90	60MHz	1-2	1-2	1-2	2-3
Intel Pentium-100	66MHz	1-2	1-2	1-2	1-2
Intel Pentium-120	60MHz	1-2	2-3	1-2	2-3
Intel Pentium-133	66MHz	1-2	2-3	1-2	1-2
Intel Pentium-150	60MHz	2-3	2-3	1-2	2-3
Intel Pentium-166	66MHz	2-3	2-3	1-2	1-2
Intel Pentium-180	60MHz	2-3	1-2	1-2	2-3
Intel Pentium-200	66MHz	2-3	1-2	1-2	1-2
Intel Pentium-233	66MHz	1-2	1-2	1-2	1-2
Cyrix 6x86-P150+	60MHz	1-2	2-3	1-2	2-3
Cyrix 6x86-P166+	66MHz	1-2	2-3	1-2	1-2
AMD-K5-PR90	60MHz	1-2	1-2	1-2	2-3
AMD-K5-PR100	66MHz	1-2	1-2	1-2	1-2
AMD-K5-PR120	60MHz	1-2	1-2	1-2	2-3
AMD-K5-PR133	66MHz	1-2	1-2	1-2	1-2
AMD-K5-PR166	66MHz	2-3	2-3	1-2	1-2
AMD-K5-PR200	66MHz	2-3	1-2	1-2	1-2
AMD-K6-PR2-166	66MHz	2-3	2-3	1-2	1-2
AMD-K6-PR2-200	66MHz	2-3	1-2	1-2	1-2
AMD-K6-PR2-233	66MHz	1-2	1-2	1-2	1-2

JP16 is reserved for future AMD K6 processors. Simply leave JP16 OPEN for all existing Intel, Cyrix, AMD K5 and AMD K6 processors. JP3 is reserved and set to 1-2. This motherboard is compatible with Cyrix 6x86 CPU but must be Revision 2.7 and newer. Please contact your CPU supplier for details on identification of Cyrix 6x86 CPU revisions.

Remark: Both types of clock generators have identical functions



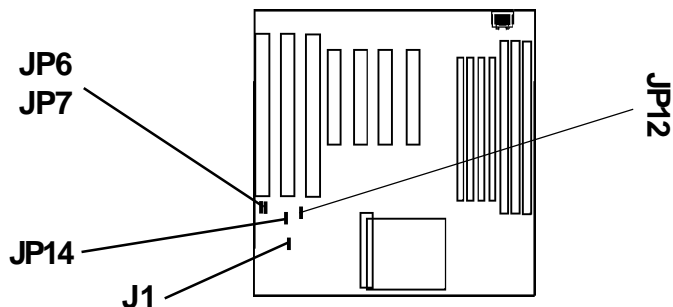
JP13, J14, J15, J16, J17- Power Selection for the CPU Bus Section & CPU Core-Voltage Select

JP13	J14, J15, J16, J17	Core Voltage	CPU Examples
1-2	1-2	2.7V	- AMD K5 ("J" marking)
3-4	1-2	2.8V	- Intel® Pentium Processors with MMX technology - Cyrix 6x86L (Core 2.8V I/O 3.3V)
5-6	1-2	2.9V	- AMD K5 ("H" marking) - AMD K6 PR2-166 - AMD K6 PR2-200
7-8	1-2	3.2V	- AMD K6 PR2-233
9-10	2-3	3.3V	- AMD K5 ("C" or "F" marking)
11-12*	2-3	3.5V	- Intel P54C - AMD K5 ("B" marking) - Cyrix 6x86

Remark: Example of AMD marking : "AMD-K5-PR100ABQ"

In the above tables, the AMD marking refers to the 2nd character - (B in the example) after P-rating (PR100 in the example).

Note: Cyrix 6x86 is a single-voltage CPU while Cyrix 6x86L is a dual-voltage version.



JP12 - CPU Bus-Voltage Select

JP12	Bus-Voltage	CPU Examples
1-2*	3.5V	<ul style="list-style-type: none"> - Intel® Pentium Processors with MMX technology - Intel P54C - Cyrix 6x86 - AMD K5 ("B", "C", "F" marking) - AMD K6 PR2-166 - AMD K6 PR2-200 - AMD K6 PR2-233
2-3	3.3V	<ul style="list-style-type: none"> - AMD K5 ("H", "J" marking) - Cyrix 6x86L

J1 - CMOS Clear

J1	CMOS
1-2	Normal operation
2-3	Clear

JP14 - Power Connector Selection

JP14 is present in the dual power - connector version

JP14	
1 -2	Standard AT Power Supply is installed
2 -3	ATX Power Supply is installed

JP6, JP7 - Reserved Jumpers

Reserved jumpers are pre-installed in factory. They should NOT be altered by the users.

Memory Configuration

Table 1 and 2 show the possible memory combinations. The motherboard will support both Fast Page DRAM or EDO DRAM SIMMs and SDRAM DIMMs

Notice:

Don't mix the Fast Page DRAM and EDO DRAM within the same memory bank. If Fast Page DRAM and EDO DRAM SIMMs are installed in separate banks, each bank will be optimized for maximum performance.

Table 1 (SIMM Configurations)

SIMM1 (Bank 0)	SIMM2 (Bank 0)	SIMM3 (Bank 1)	SIMM4 (Bank 1)	Total
Empty	Empty	4MB	4MB	8MB
Empty	Empty	8MB	8MB	16MB
Empty	Empty	16MB	16MB	32MB
Empty	Empty	32MB	32MB	64MB
Empty	Empty	64MB	64MB	128MB
4MB	4MB	Empty	Empty	8MB
4MB	4MB	4MB	4MB	16MB
4MB	4MB	8MB	8MB	24MB
4MB	4MB	16MB	16MB	40MB
4MB	4MB	32MB	32MB	72MB
4MB	4MB	64MB	64MB	136MB
8MB	8MB	Empty	Empty	16MB
8MB	8MB	4MB	4MB	24MB
8MB	8MB	8MB	8MB	32MB
8MB	8MB	16MB	16MB	48MB
8MB	8MB	32MB	32MB	80MB
8MB	8MB	64MB	64MB	144MB
16MB	16MB	Empty	Empty	32MB
16MB	16MB	4MB	4MB	40MB
16MB	16MB	8MB	8MB	48MB
16MB	16MB	16MB	16MB	64MB
16MB	16MB	32MB	32MB	96MB
16MB	16MB	64MB	64MB	160MB
32MB	32MB	Empty	Empty	64MB
32MB	32MB	4MB	4MB	72MB
32MB	32MB	8MB	8MB	80MB
32MB	32MB	16MB	16MB	96MB
32MB	32MB	32MB	32MB	128MB
32MB	32MB	64MB	64MB	192MB
64MB	64MB	Empty	Empty	128MB
64MB	64MB	4MB	4MB	136MB
64MB	64MB	8MB	8MB	144MB
64MB	64MB	16MB	16MB	160MB
64MB	64MB	32MB	32MB	192MB
64MB	64MB	64MB	64MB	256MB

Table 2 (DIMM Configurations)

DIMM1	DIMM2	DIMM3 (if populated)	Total
None	8MB	None	8MB
None	16MB	None	16MB
None	32MB	None	32MB
None	64MB	None	64MB
None	128MB	None	128MB
8MB	None	None	8MB
8MB	8MB	None	16MB
8MB	16MB	None	24MB
8MB	32MB	None	40MB
8MB	64MB	None	72MB
8MB	128MB	None	136MB
16MB	None	None	16MB
16MB	8MB	None	24MB
16MB	16MB	None	32MB
16MB	32MB	None	48MB
16MB	64MB	None	80MB
16MB	128MB	None	144MB
32MB	None	None	32MB
32MB	8MB	None	40MB
32MB	16MB	None	48MB
32MB	32MB	None	64MB
32MB	64MB	None	96MB
32MB	128MB	None	160MB
64MB	None	None	64MB
64MB	8MB	None	72MB
64MB	16MB	None	80MB
64MB	32MB	None	96MB
64MB	64MB	None	128MB
64MB	128MB	None	192MB
128MB	None	None	128MB
128MB	8MB	None	136MB
128MB	16MB	None	144MB
128MB	32MB	None	160MB
128MB	64MB	None	192MB
128MB	128MB	None	256MB
None	None	8MB (1M X 16)	8MB
None	8MB	8MB (1M X 16)	16MB
None	16MB	8MB (1M X 16)	24MB
None	32MB	8MB (1M X 16)	40MB
None	64MB	8MB (1M X 16)	72MB
None	128MB	8MB (1M X 16)	136MB
8MB	None	8MB (1M X 16)	16MB
8MB	8MB	8MB (1M X 16)	24MB

DIMM1	DIMM2	DIMM3 (if populated)	Total
8MB	16MB	8MB (1M X 16)	32MB
8MB	32MB	8MB (1M X 16)	48MB
8MB	64MB	8MB (1M X 16)	80MB
8MB	128MB	8MB (1M X 16)	144MB
16MB	None	8MB (1M X 16)	24MB
16MB	8MB	8MB (1M X 16)	32MB
16MB	16MB	8MB (1M X 16)	40MB
16MB	32MB	8MB (1M X 16)	56MB
16MB	64MB	8MB (1M X 16)	88MB
16MB	128MB	8MB (1M X 16)	152MB
32MB	None	8MB (1M X 16)	40MB
32MB	8MB	8MB (1M X 16)	48MB
32MB	16MB	8MB (1M X 16)	56MB
32MB	32MB	8MB (1M X 16)	72MB
32MB	64MB	8MB (1M X 16)	104MB
32MB	128MB	8MB (1M X 16)	168MB
64MB	None	8MB (1M X 16)	72MB
64MB	8MB	8MB (1M X 16)	80MB
64MB	16MB	8MB (1M X 16)	88MB
64MB	32MB	8MB (1M X 16)	104MB
64MB	64MB	8MB (1M X 16)	136MB
64MB	128MB	8MB (1M X 16)	200MB
128MB	None	8MB (1M X 16)	136MB
128MB	8MB	8MB (1M X 16)	144MB
128MB	16MB	8MB (1M X 16)	152MB
128MB	32MB	8MB (1M X 16)	168MB
128MB	64MB	8MB (1M X 16)	200MB
None	None	16MB (2M X 8)	16MB
None	8MB	16MB (2M X 8)	24MB
None	16MB	16MB (2M X 8)	32MB
None	32MB	16MB (2M X 8)	48MB
None	64MB	16MB (2M X 8)	80MB
None	128MB	16MB (2M X 8)	144MB
8MB	None	16MB (2M X 8)	24MB
8MB	8MB	16MB (2M X 8)	32MB
8MB	16MB	16MB (2M X 8)	40MB
8MB	32MB	16MB (2M X 8)	56MB
8MB	64MB	16MB (2M X 8)	88MB
8MB	128MB	16MB (2M X 8)	152MB
16MB	None	16MB (2M X 8)	32MB
16MB	8MB	16MB (2M X 8)	40MB
16MB	16MB	16MB (2M X 8)	48MB
16MB	32MB	16MB (2M X 8)	64MB
16MB	64MB	16MB (2M X 8)	96MB

DIMM1	DIMM2	DIMM3 (if populated)	Total
16MB	128MB	16MB (2M X 8)	160MB
32MB	None	16MB (2M X 8)	48MB
32MB	8MB	16MB (2M X 8)	56MB
32MB	16MB	16MB (2M X 8)	64MB
32MB	32MB	16MB (2M X 8)	80MB
32MB	64MB	16MB (2M X 8)	112MB
32MB	128MB	16MB (2M X 8)	176MB
64MB	None	16MB (2M X 8)	80MB
64MB	8MB	16MB (2M X 8)	88MB
64MB	16MB	16MB (2M X 8)	96MB
64MB	32MB	16MB (2M X 8)	112MB
64MB	64MB	16MB (2M X 8)	144MB
64MB	128MB	16MB (2M X 8)	208MB
128MB	None	16MB (2M X 8)	144MB
128MB	8MB	16MB (2M X 8)	152MB
128MB	16MB	16MB (2M X 8)	160MB
128MB	32MB	16MB (2M X 8)	176MB
128MB	64MB	16MB (2M X 8)	208MB
None	None	32MB (4M X 16)	8MB
None	8MB	32MB (4M X 16)	16MB
None	16MB	32MB (4M X 16)	24MB
None	32MB	32MB (4M X 16)	40MB
None	64MB	32MB (4M X 16)	72MB
None	128MB	32MB (4M X 16)	136MB
8MB	None	32MB (4M X 16)	40MB
8MB	8MB	32MB (4M X 16)	48MB
8MB	16MB	32MB (4M X 16)	56MB
8MB	32MB	32MB (4M X 16)	72MB
8MB	64MB	32MB (4M X 16)	104MB
8MB	128MB	32MB (4M X 16)	168MB
16MB	None	32MB (4M X 16)	48MB
16MB	8MB	32MB (4M X 16)	56MB
16MB	16MB	32MB (4M X 16)	64MB
16MB	32MB	32MB (4M X 16)	80MB
16MB	64MB	32MB (4M X 16)	112MB
16MB	128MB	32MB (4M X 16)	176MB
32MB	None	32MB (4M X 16)	64MB
32MB	8MB	32MB (4M X 16)	72MB
32MB	16MB	32MB (4M X 16)	80MB
32MB	32MB	32MB (4M X 16)	96MB
32MB	64MB	32MB (4M X 16)	128MB
32MB	128MB	32MB (4M X 16)	192MB
64MB	None	32MB (4M X 16)	96MB
64MB	8MB	32MB (4M X 16)	104MB

DIMM1	DIMM2	DIMM3 (if populated)	Total
64MB	16MB	32MB (4M X 16)	112MB
64MB	32MB	32MB (4M X 16)	128MB
64MB	64MB	32MB (4M X 16)	160MB
64MB	128MB	32MB (4M X 16)	224MB
128MB	None	32MB (4M X 16)	160MB
128MB	8MB	32MB (4M X 16)	168MB
128MB	16MB	32MB (4M X 16)	176MB
128MB	32MB	32MB (4M X 16)	192MB
128MB	64MB	32MB (4M X 16)	224MB
None	None	64MB (8M X 8)	64MB
None	8MB	64MB (8M X 8)	72MB
None	16MB	64MB (8M X 8)	80MB
None	32MB	64MB (8M X 8)	96MB
None	64MB	64MB (8M X 8)	128MB
None	128MB	64MB (8M X 8)	192MB
8MB	None	64MB (8M X 8)	72MB
8MB	8MB	64MB (8M X 8)	80MB
8MB	16MB	64MB (8M X 8)	88MB
8MB	32MB	64MB (8M X 8)	104MB
8MB	64MB	64MB (8M X 8)	136MB
8MB	128MB	64MB (8M X 8)	200MB
16MB	None	64MB (8M X 8)	80MB
16MB	8MB	64MB (8M X 8)	88MB
16MB	16MB	64MB (8M X 8)	96MB
16MB	32MB	64MB (8M X 8)	112MB
16MB	64MB	64MB (8M X 8)	144MB
16MB	128MB	64MB (8M X 8)	208MB
32MB	None	64MB (8M X 8)	96MB
32MB	8MB	64MB (8M X 8)	104MB
32MB	16MB	64MB (8M X 8)	112MB
32MB	32MB	64MB (8M X 8)	128MB
32MB	64MB	64MB (8M X 8)	160MB
32MB	128MB	64MB (8M X 8)	224MB
64MB	None	64MB (8M X 8)	128MB
64MB	8MB	64MB (8M X 8)	136MB
64MB	16MB	64MB (8M X 8)	144MB
64MB	32MB	64MB (8M X 8)	160MB
64MB	64MB	64MB (8M X 8)	192MB
64MB	128MB	64MB (8M X 8)	256MB

Remark : DIMM socket 3 can only accept single density modules of the following types.

- 1) 8MB DIMM comprising 4pcs. of 1M X 16 chips.
- 2) 16MB DIMM comprising 8pcs. of 2M X 8 chips.
- 3) 32MB DIMM comprising 4pcs. of 4M X 16 chips.
- 4) 64MB DIMM comprising 8pcs. of 8M X 8 chips.

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) : Mon, 01 Jan 1990		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 0 ---
Primary Slave	: None	0 0	0 0 0 0 0 ---
Secondary Master	: None	0 0	0 0 0 0 0 ---
Secondary Slave	: None	0 0	0 0 0 0 0 ---
Drive A : 1.2M, 5.25"		Base Memory : 640K	
Drive B : None		Extended Memory : 15360K	
Video : EGA/VGA		Other Memory : 384K	
Halt on : No 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
Slave/Secondary predefined types and four user definable types are BIOS.
Master/Secondary Type 1 to Type 45 are predefined. Type "user" is user-
Slave definable.

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 your 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.

Integrated Peripherals

The Integrate 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 differences between 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.

Power Management Setup

The Power Management Setup Menu allows you to configure your system save most 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.

Flash Update Procedure

A program AWDFLASH.EXE is included in the utility diskette. 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.