

Notice to End Users

This User's Guide & Technical Reference is for assisting system manufacturers and end users in setting up and installing the mainboard.

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SL-65A SERIAL

Contents

Chapter 1: Introduction	4
Features	5
Mainboard Layout with Default Settings	6
Chapter 2: Hardware Setup	7
CPU Type Configuration	8
CPU 2.5X Clock Setting	8
CPU 3.0X Clock Setting	9
System Memory Configuration	9
Cooling FAN Settings	10
Installation	10
Removal	11
Jumper Settings	11
Factory Fixed Jumpers	11
JP1, JP2, JP3: Bus Ratio Select	12
JP18: Clear CMOS Data	13
JP22: CRT Type Select	13
JP9, JP10: External Bus Frequency Select	14
Connectors	15
KB1: Keyboard Connector	15
MS1: PS/2 Mouse Connector	15
PRT1: Parallel Port	16
COM1 /COM2: Serial Port Connectors	16

FDC: Floppy Drive Connector -----	17
IDE1/IDE2: Primary/Secondary IDE Connectors-----	17
P3: Power Connector-----	18
JC1: Speaker Connector -----	18
JC2: Reset Switch -----	18
JC3: Keylock Switch -----	18
JC4: CASE Display Connector -----	18
JC5: SMI Switch -----	19
JP15: Power On Switch -----	19
HD1: IDE LED Activity Light-----	19
IR1: Infrared Port Module Connector-----	19
USB: USB Connector -----	20

Chapter 3: BIOS Setup ----- 21

Standard CMOS Setup -----	22
BIOS Features Setup -----	24
Chipset Features Setup -----	27
Power Management Setup -----	30
PnP/PCI Configuration Setup -----	32
Load Setup Defaults -----	34
Integrated Peripherals -----	34
Supervisor/User Password -----	38
IDE HDD Auto Detection -----	39
Save & Exit Setup -----	39
Exit Without Saving -----	39

Chapter 1

Introduction

The 82440FX ATX motherboard is a high performance system hardware based on the Intel Pentium® processor and is equipped with four PCI slots, four standard ISA slots, Super Multi I/O controller, and dual ports PCI IDE connectors for future expansion. The hardware dimension is ATX Form Factor 240mm x 304mm with four layer design technology.

Features

- Full supports for the Pentium Pro processors and OverDrive Processors using Socket 8 from 150MHz to 200MHz
- CPU bus frequencies up to 66 MHz
- **ATX Form Factor size**
- Intel 82440FX chipset, PCI Rev 2.1 compliant
- Supports wide range of DRAMS from **8MB to 384MB** including:
 - FPM, EDO, and BEDO DRAM Types
 - 50, 60, and 70ns DRAM speeds
 - DRAM supports ECC or Parity function
 - **Supports 6pcs SIMM DRAM Socket**
- Supports 4PCI and 4ISA Add-In slots
- Integrated Fast IDE Controller
 - PIO Mode 4 transfers timing
 - **PCI IDE Bus Master Support**
 - Supports 2 IDE Connectors for the maximum of 4 IDE Drives (up to 8.4GB for each IDE device)
- On-board Super I/O Controller
 - One floppy port (include 3.5-inch, 1.2MB, 3 Mode function)
 - Two high speed UART ports (16550 compatible)
 - One parallel port with SPP/EPP/ECP capabilities
 - Integrated USB (Universal Serial Bus) controller w/i 2 USB ports
 - PS/2 mouse connector
- Supports Power Management function
- Supports Award Plug & Play BIOS with Flash memory

Mainboard Layout with Default Settings

The default settings of the following figure is for the Pentium Pro 180/60.

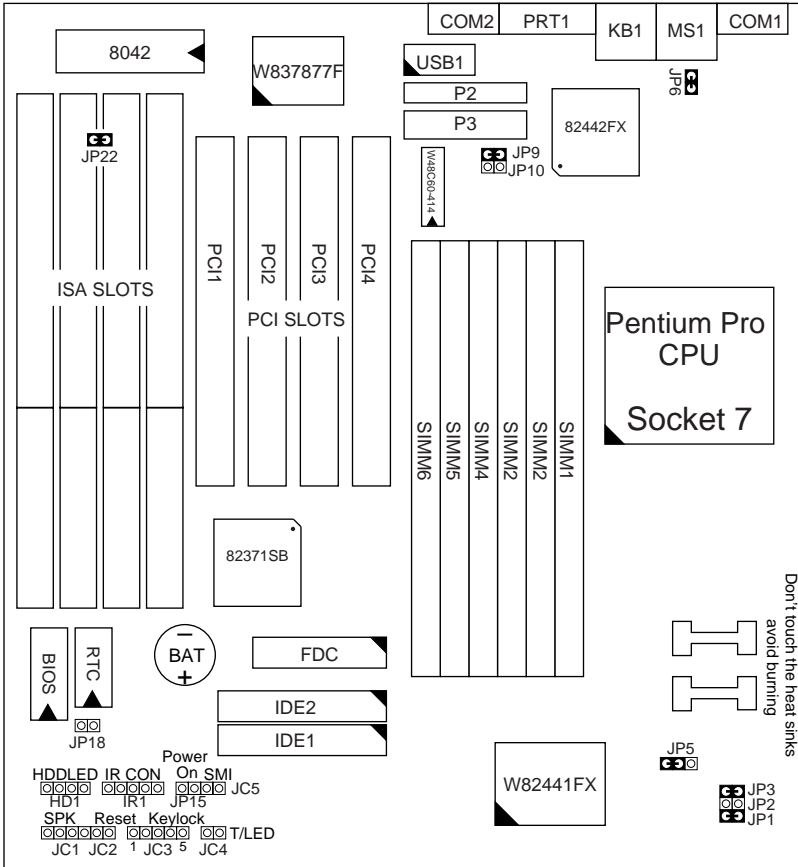


Figure 1-1. Motherboard Layout

Chapter 2

Hardware Setup

This chapter includes sections of setting up jumpers on the motherboard, the system memory configuration, the cache memory configuration, and attaching the connectors. Refer back to this chapter when you need to upgrade or reconfigure your system and remember to turn off the power of the system as well as all peripheral devices before performing any work on the system.

Symbols used in this chapter are described below:

For 2-pin jumper:

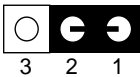


– Close the jumper by inserting the jumper cap over the two pins of the jumper.

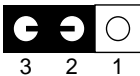


– Open the jumper by removing the jumper cap.

For 3-pin jumper:



– Close pins 1 and 2 with an jumper cap.



– Close pins 2 and 3 with an jumper cap.

CPU Type Configuration

Set the motherboard jumpers JP9, JP10 and JP1~JP3 according to the CPU type as shown in the following figures.

CPU 2.5X Clock Setting

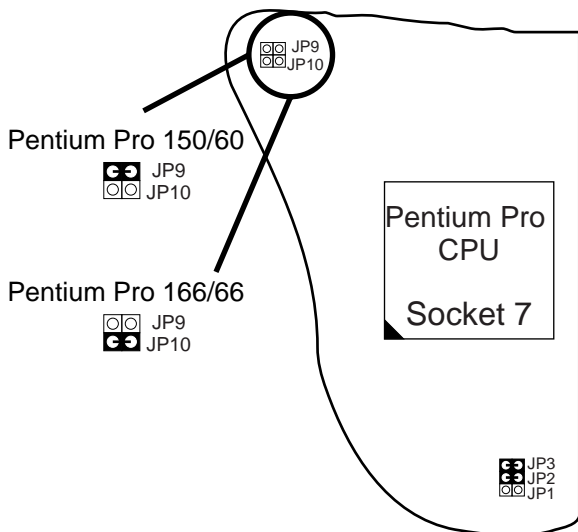


Figure 2-1. CPU Type Configuration

CPU 3.0X Clock Setting

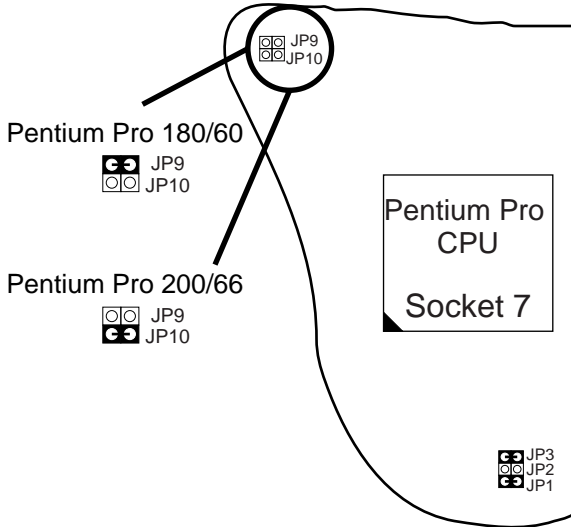


Figure 2-2. CPU Type Configuration

System Memory Configuration

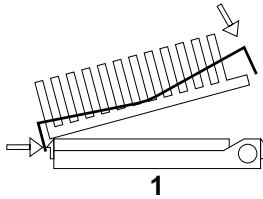
This 82440FX motherboard supports 72-pin SIMMs of 4MB, 8MB, 16MB, or 32MB to form a memory size between 8MB to 384MB. **Each bank must have 2 pcs of DRAM modules (w/i same size and type) installed.** 82440FX chipsets provide "Table-Free" function. It means that users can install DRAM with any configuration and in any bank, and that is why the DRAM table is not needed.

Cooling FAN Settings

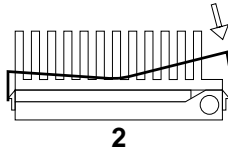
Note: Install a fan facing the heat sink, for better cooling effect,

Installation

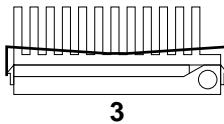
1. Place CPU into your socket and put CPU cooler on top of CPU as shown in the following drawing. Slide one side hole of clip into the key way of the socket, then



2. Press another side hole of clip and slide into socket key way as shown in the following drawing

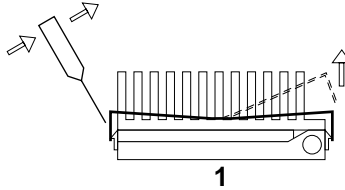


3. Complete the installation.

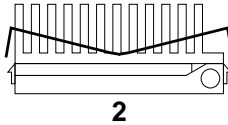


Removal

1. Insert your screw driver into one side hole of the clip and push, as shown in the following drawing:



2. Finished as in the following drawing.



Jumper Settings

Factory Fixed Jumpers

The following jumpers are set by the factory.

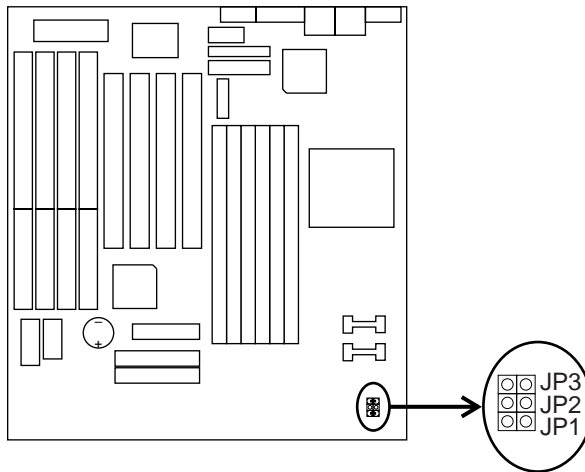
Jumpers	Factory settings
JP5	Factory setting at 1-2
JP6	Factory setting at Short

JP1, JP2, JP3: Bus Ratio Select

Set these jumpers according to your CPU clock.

	2X	2.5X	3X	3.5X
JP3				
JP2				
JP1				
	4X	4.5X	5X	5.5X
JP3				
JP2				
JP1				

Notice that the cap colors of JP1~JP3 are RED.



JP18: Clear CMOS Data

Clear the CMOS memory by shorting this jumper momentarily; then remove the cap to retain new settings.

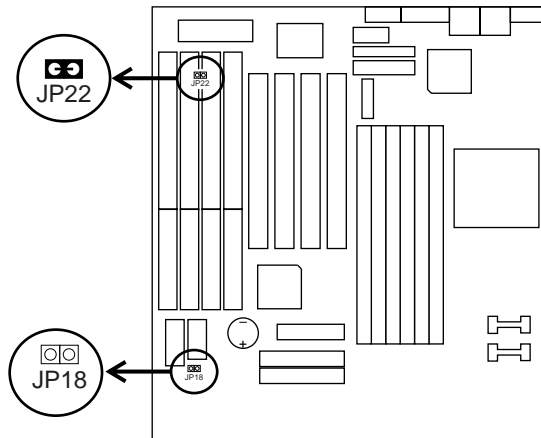
COMS Data	JP18
Clear Data	Close
Retain Data (default)	Open

JP22: CRT Type Select

This jumper sets the color or monochrome monitor.



CRT Type	JP22
Mono	Open
Color (default)	Close

Notice that the cap color of JP22 is BLACK.

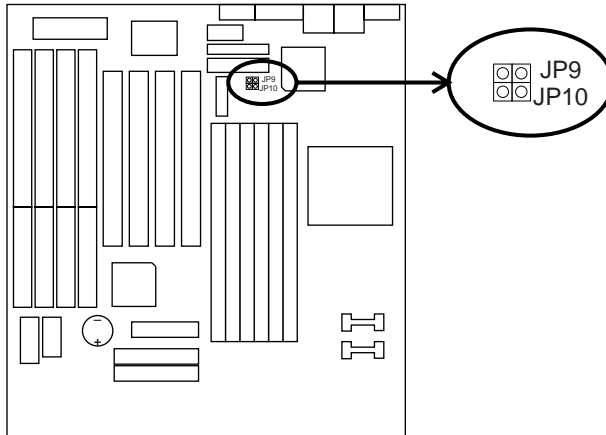


JP9, JP10: External Bus Frequency Select

These 2 jumpers instructs the clock generator what frequency to send to the CPU. Set these jumpers as shown, according to the CPU's internal clock speed.

Settings	JP9 JP10
60MHz (default)	
66MHz	

Notice that the color of the cap is RED.



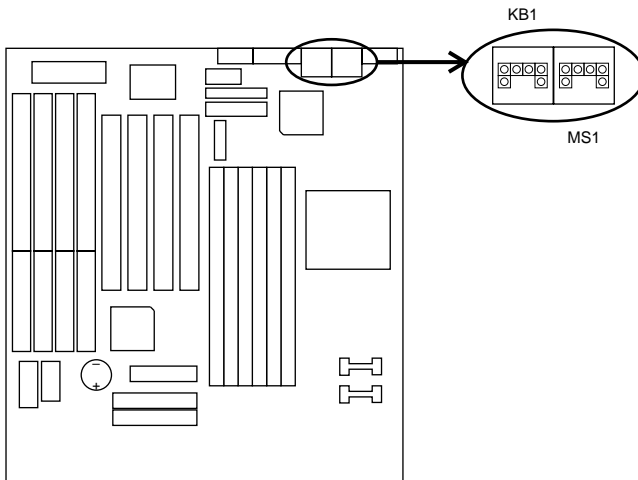
Connectors

KB1: Keyboard Connector

A 5-pin female DIN keyboard connector is located at the upper right corner of the motherboard. Plug the keyboard jack direct to this connector.

MS1: PS/2 Mouse Connector

Attach PS/2 mouse cable to this 6-pin connector.

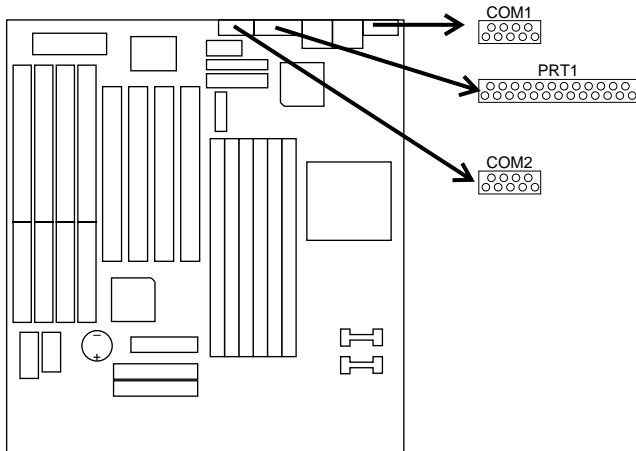


PRT1: Parallel Port

The system board provides a 25-pin parallel port connector.

COM1 /COM2: Serial Port Connectors

The system board has two 9-pin serial port connectors, COM1 and COM2.

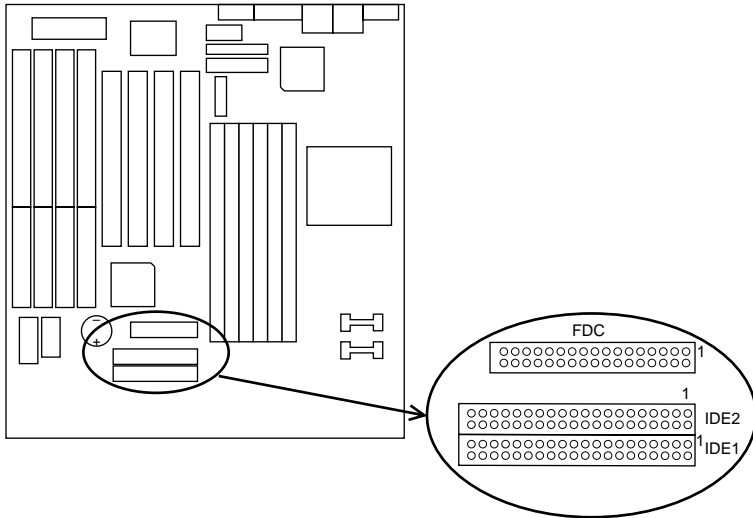


FDC: Floppy Drive Connector

The system board has a 2x17-pin floppy drive connector, FDC. Connect one end of a floppy drive cable to this connector and the other end to a floppy drive.

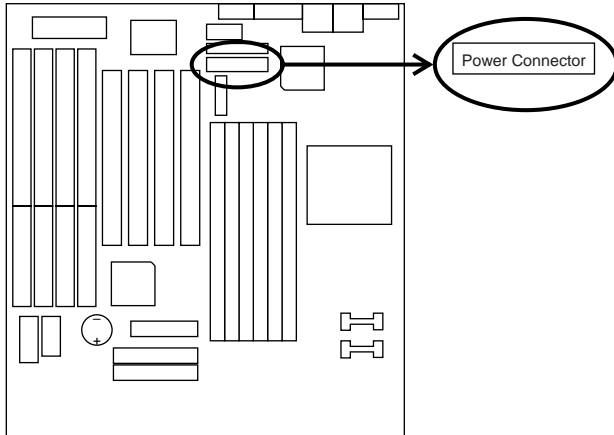
IDE1/IDE2: Primary/Secondary IDE Connectors

The system board has a 32-bit Enhanced PCI IDE Controller that provides for two HDD connectors, IDE1 (primary) and IDE2 (secondary).



P3: Power Connector

The power connector has one 2x10 pin male header connectors. Plug the connector from the power directly onto the board connector.



JC1: Speaker Connector

The speaker connector is a 4-pin connector for connecting the system and the speaker. (See the following drawing for jumper position.)

JC2: Reset Switch

The system board has a 2-pin connector for rebooting your computer without having to turn off your power switch. This prolongs the life of the system's power supply.

JC3: Keylock Switch

The keylock switch is a 5-pin connector for locking the keyboard for security purposes. (See the following drawing for jumper position, and pin1 is connected to Vcc.)

JC4: CASE Display Connector

This connector is for CASE Digital Display.

JC5: SMI Switch

Toggle this jumper force the system to sleep and the system won't wake up until the hardware event is coming. (The BIOS Power Management setting must be Enabled.)

JP15: Power On Switch

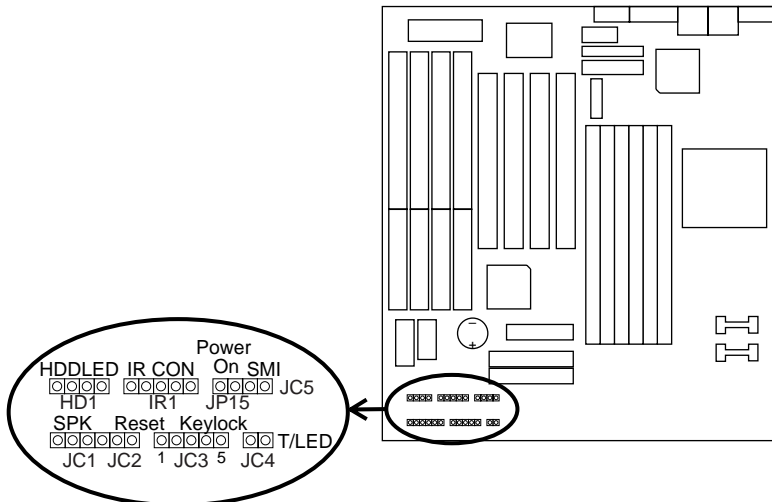
Connect the power switch to this connector (depend on your ATX case).

HD1: IDE LED Activity Light

These connectors connect to the hard disk activity indicator light on the case.

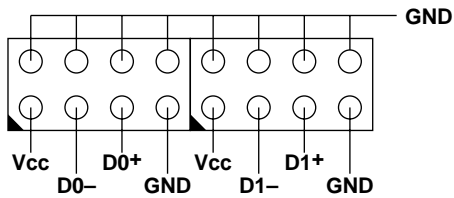
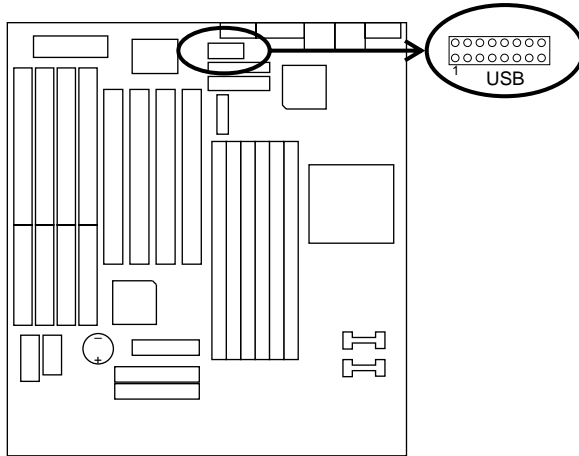
IR1: Infrared Port Module Connector

The system board provides a 5-pin infrared connector—IR1 CON as an optional module for wireless transmitting and receiving. (The UART2 setting must set either ASKIR or HPSIR, refer to page 33 for more detail.) **Pin 1 through 5 are Transimt, GND, Receive, N.C., and Vcc, respectively.**



USB: USB Connector

This jumper connects to the USB cable to provide USB device. (USB function default is Disabled, refer to page 34 for more detail.)



Chapter 3

Award BIOS Setup

This 82440FX motherboard comes with the AWARD BIOS from AWARD Software Inc. Enter the Award BIOS program's Main Menu as follows:

1. Turn on or reboot the system.

After a series of diagnostic checks, the following message will appear:

PRESS TO ENTER SETUP

2. Press the key and the main program screen appears as in the following page.

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

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

3. Using one of the arrows on your keyboard to select an option and press <Enter>. Modify the system parameters to reflect the options installed in the system.
4. You may return to the Main Menu anytime by press <ESC> .
5. In the Main Menu, "SAVE AND EXIT SETUP" saves your changes and reboots the system, and "EXIT WITHOUT SAVING" ignores your changes and exits the program.

Standard CMOS Setup

Standard CMOS Setup allows you to record some basic system hardware configuration and set the system clock and error handling. You only need to modify the configuration values of this option when you change your system hardware configuration or the configuration stored in the CMOS memory got lost or damaged.

Run the Standard CMOS Setup as follows:

1. Choose "STANDARD CMOS SETUP" from the Main Menu and a screen with a list of options appears.

```

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

Date (mm:dd:yy) : Thu, May 9 1996
Time (hh:mm:ss) : 15 : 45 : 10

HARD DISKS      TYPE   SIZE  CYLS  HEAD  PRECOMP  LANDZ  SECTOR  MODE
-----
Primary Master  : Auto   0      0    0      0       0      0    Auto
Primary Slave   : Auto   0      0    0      0       0      0    Auto
Secondary Master : Auto   0      0    0      0       0      0    Auto
Secondary Slave : Auto   0      0    0      0       0      0    Auto

Drive A : 1.44M, 3.5 in.
Drive B : None
Floppy 3 Mode Support : Disabled

Video : EGA/VGA
Halt On : All Errors

Base Memory: 640K
Extended Memory: 15360K
Other Memory: 384K
-----
Total Memory: 16384K

Esc : Quit          ↑ ↓ → ← : Select Item   PU/PD/+/- : Modify
Fl : Help          (Shift) F2 : Change Color

```

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

Date (mm:dd:yy)	Set the current date and time.
Time (hh:mm:ss)	
Primary (Secondary) Master/Slave	This field records the specifications for all non-SCSI hard disk drives installed in your system. Refer to the respective documentation on how to install the drivers.
Drive A/B	Set this field to the types of floppy disk drives installed in your system. The choices are: 360KB, 5.25 in., 1.2MB, 5.25 in., 720KB, 3.5 in., 1.44M, 3.5 in. (default), 2.88MB, 3.5 in., or None
Floppy 3 Mode Support	Drive A/B, Both: Enabled 3.5-inch, 1.2MB function. Disabled (default): Disabled 3.5-inch, 1.2MB function.
Video	Set this field to the type of video display card installed in the system. The choices are: Monochrome; Color 40x25; VGA/EGA (default); or Color 80x25
Halt On	Set this field to the type of errors that will cause the system to halt. The choices are: All Errors (default); No Errors; All, But Keyboard; All, But Diskette; or All, But Disk/Key

3. Press <ESC> to return to the Main Menu when you finish setting up in the "Standard CMOS Setup".

BIOS Features Setup

BIOS Features Setup allows you to improve your system performance or set up some system features according to your preference.

Run the BIOS Features Setup as follows:

1. Choose "BIOS FEATURES SETUP" from the Main Menu and a screen with a list of options appears.

ROM PCI/ISA BIOS
BIOS FEATURES SETUP
AWARD SOFTWARE, INC.

CPU Internal Cache : Enabled	Video BIOS Shadow : Enabled
External Cache : Enabled	C8000-CBFFF Shadow : Disabled
Quick Power on Self Test : Enabled	CC000-CFFFF Shadow : Disabled
Boot Sequence : A,C	D0000-D3FFF Shadow : Disabled
Swap Floppy Drive : Disabled	D4000-D7FFF Shadow : Disabled
Boot Up NumLock Status : On	D8000-DBFFF Shadow : Disabled
Gate A20 Option : Fast	DC000-DFFFF Shadow : Disabled
Typematic Rate Setting : Disabled	
Typematic Rate (Chars/Sec): 6	
Typematic Delay (Msec) : 250	ESC : Quit ↑ ↓ → ←: Select Item
Security Option : Setup	F1 : Help PU/PD/+/- : Modify
PCI/VGA Palette Snoop : Disabled	F5 : Old Values (Shift)F2 : Color
OS/2 Select for DRAMs>64MB: Non-OS/2	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

Shift <F2>: Change color.

<F5> : Get the previous values. These values are the values with which the user started the current session.

<F6>: Load all options with the BIOS default values.

<F7>: Load all options with the Setup default values.

A short description of screen options follows:

CPU Internal Cache	Choose Enabled (default) or Disabled. This option allows you to enable or disable the CPU's internal cache.
External Cache	Choose Enabled (default) or Disabled. This option allows you to enable or disable the external cache memory.
Quick Power On Self Test	Choose Enabled (default) or Disabled. This option allows you to speed up the Power On Self Test routine.
Boot Sequence	Choose "C:, A", "C, CD-ROM, A", "CD-ROM, C, A", or "A:, C" (default). This option determines which drive to look for first for an operating system.
Swap Floppy Drive	Choose Enabled or Disabled (default). This option swaps floppy drive assignments when it is enabled.
Boot Up NumLock Status	Choose On (default) or Off. This option lets user to activate the NumLock function at boot-up.
Gate A20 Option	Choose Normal or Fast (default). This option allows the RAM to access the memory above 1MB by using the fast gate A20 line.
Typematic Rate Setting	Choose Enabled or Disabled (default). Enable this option to adjust the keystroke repeat rate.

Typematic Rate (Chars/Sec)	Range between 6 (default) and 30 characters per second. This option controls the speed of repeating keystrokes.
Typematic Delay (Msec)	Choose 250 (default), 500, 750, and 1000. This option sets the time interval for displaying the first and the second characters.
Security Option	Choose System or Setup (default). This option is to prevent unauthorized system boot-up or use of BIOS Setup.
PCI/VGA palette Snoop	Choose Enabled or Disabled (default). It determines whether the MPEG ISA cards can work with PCI/VGA or not.
OS Select for DRAM>64MB	Choose Non-OS2 (default) or OS2. This option allows you to access the memory that is over 64MB in OS/2.
Video BIOS Shadow	Enabled (default): Map the VGA BIOS to system RAM. Disabled: Don't map the VGA BIOS to system RAM.
C8000-CBFFF to DC000-DFFF Shadow	These options are used to shadow other expansion card ROMs.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Chipset Features Setup

Chipset Features Setup changes the values of the chipset registers. These registers control the system options.

Run the Chipset Features Setup as follows:

1. Choose "CHIPSET FEATURES SETUP" from the Main Menu and a screen with a list of options appears.

ROM PCI/ISA BIOS CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.	
Auto Configuration : Enabled	8 Bit I/O Recovery Time : 3
DRAM Speed Selection : 70 ns	16 Bit I/O Recovery Time : 2
DRAM RAS# Precharge Time : 3	Memory Hole At 15M-16M : Disabled
RAS# To CAS# Delay : Disabled	
DRAM Read Burst (B/E/F) : x2/3/4	
DRAM Write Burst (B/E/F) : x3/3/4	
ISA Bus Clock : PCICLK/4	
DRAM Refresh Queue : Enabled	
DRAM RAS Only Refresh : Disabled	
ECC Checking/Generation : Disabled	
Fast Dram Refresh : Disabled	
Read-around-Write : Enabled	
PCI Burst Write Combine : Disabled	
PCI-To-DRAM Pipeline : Enabled	
CPU-To-PCI Write Post : Enabled	
CPU-To_PCI IDE Posting : Enabled	
System BIOS Cacheable : Disabled	
Video BIOS Cacheable : Disabled	
	ESC : Quit ↑ ↓ → ← : Select Item
	F1 : Help PU/PD/+/- : Modify
	F5 : Old Values (Shift)F2 : Color
	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

Auto Configuration Choose Enabled (default) or Disabled. The system sets all options on the left side of the screen automatically when choose Enabled.

DRAM Speed Selection Choose 60ns or 70ns (default). Do not change this setting unless you know the DRAM access time spec.

DRAM RAS# Precharge Time	Use the default setting. This option allows you to determine the number of the CPU clocks allocated for the RAS to accumulate / charge it before the DRAM is refreshed.
RAS# to CAS# Delay	Use the default setting. This setup option allows you to determine the delay time in completing the transition from RAS to CAS.
DRAM Read Burst (B/E/F)	Use the default setting. Burst read / write requests are generated by the CPU in four separate parts.
DRAM Write Burst (B/E/F)	The 1st part provides the location within the DRAM where the read or write is to take place while the remaining three parts provide the actual data. The lower the timing number is, the faster the system memory will be addressed.
ISA Bus Clock	Use the default setting.
DRAM Refresh Queue	Use the default setting.
DRAM RAS Only Refresh	Use the default setting.
ECC Checking/ Generation	Use the default setting.
Fast Dram Refresh	Use the default setting.
Read-Around-Write	Use the default setting.
PCI Burst Write Combine	Use the default setting.
PCI-TO-DRAM Pipeline	Use the default setting.

CPU-To-PCI Write Post	Choose Enabled (default) or Disabled.
CPU-To-PCI IDE Posting	Choose Enabled (default) or Disabled.
System BIOS Cacheable	Choose Enabled or Disabled (default).
Video RAM Cacheable	Choose Enabled or Disabled (default).
8 Bit I/O Recovery Time Select Item	<p>This delay happens when the CPU is running so much faster than the I/O bus that the CPU must be delayed to allow for the completion of the I/O.</p> <p>The choices for 8 bit I/O are NA, 1 to 8 CPU clock. Default is 3.</p> <p>The choices for 16 bit I/O are NA, 1 to 4 CPU clock. Default is 2.</p>
16 Bit I/O Recovery Time Select Item	
Memory Hole At 15M-16M	Choose Enabled or Disabled (default). In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory's space below 16MB.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Power Management Setup

Power Management Setup sets the system's power saving functions.

1. Choose "POWER MANAGEMENT SETUP" from the Main Menu and a screen with a list of options appears.

ROM PCI/ISA BIOS POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.	
Power Management : Disabled	** Power Down & Resume Events **
PM Control by APM : No	IRQ 3 (COM 2) : ON
Video Off Method : V/H SYNC+Blank	IRQ 4 (COM 1) : ON
MODEM Use IRQ : 3	IRQ 5 (LPT 2) : ON
Doze Mode : Disabled	IRQ 6 (Floppy Disk) : ON
Standby Mode : Disabled	IRQ 7 (LPT 1) : ON
Suspend Mode : Disabled	IRQ 8 (RTC Alarm) : OFF
HDD Power Down : Disabled	IRQ 9 (IRQ2 Redir) : ON
** Wake Up Events In Doze & Standby **	IRQ 10 (Reserved) : ON
IRQ3 (Wake-Up Event) : ON	IRQ 11 (Reserved) : ON
IRQ4 (Wake-Up Event) : ON	IRQ 12 (PS/2 mouse) : ON
IRQ8 (Wake-Up Event) : ON	IRQ 13 (Coprocesor) : ON
IRQ12 (Wake-Up Event) : ON	IRQ 14 (Hard Disk) : ON
	IRQ 15 (Reserved) : ON
	ESC : Quit ↑ ↓ → ← : Select Item
	F1 : Help PU/PD/+/- : Modify
	F5 : Old Values (Shift)F2 : Color
	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

Power Management Choose Max. Saving, User Define, Disabled (default), or Min Saving.

PM Control by APM Choose Yes or No (default). You need to choose Yes when the operating system has the APM functions, choose No otherwise.

Video Off Method Choose Blank , DPMS, or V/H Sync+Blank (default). You can chose either DPMS or V/H Sync+Blank when the monitor has the Green function. You need to choose Blank when the monitor has neither the Green function.

MODEM Use IRQ Assign the IRQ number to the modem which is being used so that the ring signal can wakeup the system. The default setting is 3 (COM2).

Doze Mode This option sets the CPU speed down to 33MHz during this mode.

Standby Mode
Suspend Mode These two options allow you to choose the mode for the different timers. The Standby Mode turns off the VGA monitor, and the Suspend Mode turns off the CPU and saves the energy of the system.

HDD power Down Time is adjustable from 1 to 15 minutes. When the set time has elapsed, the BIOS sends a command to the HDD to power down, which turns off the motor.

IRQx (Wake-Up Event) Set these IRQs individually. Activity detected from any enabled IRQ channel (ON) will wake up the system.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

PnP/PCI Configuration Setup

PnP/PCI Configuration Setup configures the PCI bus slots.

Run the Chipset Features Setup as follows:

1. Choose “PnP/PCI CONFIGURATION SETUP” from the Main Menu and a screen with a list of options appears.

ROM PCI/ISA BIOS PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.	
PNP OS Installed : No	PCI IRQ Activated By : Level
Resources Controlled By : Manual	PCI IDE IRQ Map To : PCI-AUTO
Reset Configuration Data : Disabled	Primary IDE INT# : A
	Secondary IDE INT# : B
IRQ-3 assigned to : Legacy ISA	
IRQ-4 assigned to : Legacy ISA	
IRQ-5 assigned to : PCI/ISA PnP	
IRQ-7 assigned to : PCI/ISA PnP	
IRQ-9 assigned to : PCI/ISA PnP	
IRQ-10 assigned to : PCI/ISA PnP	
IRQ-11 assigned to : PCI/ISA PnP	
IRQ-12 assigned to : PCI/ISA PnP	
IRQ-14 assigned to : PCI/ISA PnP	
IRQ-15 assigned to : PCI/ISA PnP	
DMA-0 assigned to : PCI/ISA PnP	
DMA-1 assigned to : PCI/ISA PnP	
DMA-3 assigned to : PCI/ISA PnP	
DMA-5 assigned to : PCI/ISA PnP	
DMA-6 assigned to : PCI/ISA PnP	
DMA-7 assigned to : PCI/ISA PnP	
	ESC : Quit ↑ ↓ → ← : Select Item
	F1 : Help PU/PD/+/- : Modify
	F5 : Old Values (Shift)F2 : Color
	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

PNP OS Installed Yes: OS supports Plug and Play function.
No (default): OS doesn't support Plug and Play function.

Note: BIOS will automatically disable all PnP resources except the boot device card when select Yes on Non-PnP OS.

Resources Controlled By Choose Manual (default) or Auto. The BIOS checks the IRQ/DMA channel number on the ISA and PCI card manually if chose Manual and the IRQ/DMA channel number will be checked automatically if choose Auto.

Reset Configuration Data Choose Enabled or Disabled (default). Disabled means to retain PnP configuration data in BIOS and Enabled means to reset PnP configuration data in BIOS.

IRQ-x assigned to DMA-x assigned to Legacy ISA: Manually assigns IRQ/DMA to device.
PCI/ISA PnP: BIOS assigns IRQ/DMA to device automatically.

PCI IRQ Activated By Choose Edge or Level (default). Most PCI trigger signals are Level.

PCI IDE IRQ Map To Select PCI-AUTO (default), ISA, or assign a PCI SLOT number (depending on which slot the PCI IDE is inserted). If PCI-AUTO does not work, then assign an individual PCI SLOT number.

Primary/ IDE INT# Choose A (default), B, C, or D.

Secondary IDE INT# Choose A, B (default), C, or D.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Load Setup Defaults

Load Setup Defaults option loads the default system values to the system configuration fields. If the CMOS is corrupted the defaults are loaded automatically. Choose this option and the following message appears:

“Load Setup Defaults (Y/N)? N”

To use the Setup defaults, change the prompt to “Y” and press <Enter>.

Integrated Peripherals

Integrated Peripherals option changes the values of the chipset registers. These registers control system options in the computer.

1. Choose “INTEGRATED PERIPHERALS” from the Main Menu and a screen with a list of options appears.

ROM PCI/ISA BIOS INTEGRATED PERIPHERALS AWARD SOFTWARE, INC.	
IDE HDD Block Mode : Enabled	USB Controller : Disabled
IDE Primary Master PIO : Auto	
IDE Primary Slave PIO : Auto	
IDE Secondary Master PIO : Auto	
IDE Secondary Slave PIO : Auto	
On-Chip Primary PCI IDE: Enabled	
On-Chip Secondary PCI IDE: Enabled	
PCI Slot IDE 2nd Channel : Enabled	
Onboard FDD Controller : Enabled	
Onboard Serial Port 1 : 3F8/IRQ4	
Onboard Serial Port 2 : 2F8/IRQ3	
UART 2 Mode : Standard	
IR Function Duplex+ : Half	
RxD, TxD Active+ : Lo, Lo	ESC : Quit ↑ ↓ → ← : Select Item
Onboard Parallel Port : 378H/IRQ7	F1 : Help PU/PD/+/- : Modify
Onboard Parallel MODE : SPP	F5 : Old Values (Shift)F2 : Color
ECP Mode Use DMA* : 3	F6 : Load BIOS Defaults
Parallel Port EPP Type* : EPP1.7	F7 : Load Setup Defaults

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/- keys.

A short description of screen options follows:

IDE HDD Block Mode	Choose Enabled (default) or Disabled. If your hard disk size is larger than 540MB, choose Enabled, and, if you are using the IDE HDD Auto Detection option, the BIOS will choose this option automatically. (Note: Some HDDs of old models don't provide this feature.)
IDE Primary Master/Slave PIO	Choose Auto (default) or Mode 0~4.
IDE Secondary Master/Slave PIO	The BIOS will detect the HDD Mode type automatically when you choose Auto. You need to set to a lower mode than Auto when your hard disk becomes unstable.
On-Chip Primary/Secondary PCI IDE	Enabled (default): Turn on the onboard IDE function. Disabled: Turn off the onboard IDE function.
PCI Slot IDE 2nd Channel	Enabled (default) : Reserved IRQ15 for secondary IDE device. Disabled: Release IRQ15 for other devices.
Onboard FDD Controller	Choose Enabled (default) or Disabled. Choose Disabled when you use an ISA card with FDD function, or , choose Enabled to use the onboard FDD connector.

Onboard Serial Port 1	Choose 3F8/IRQ4 (default), 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, or Disabled. Do no set port 1 & 2 to the same value except for Disabled.
Onboard Serial Port 2	Choose 3F8/IRQ4 , 2F8/IRQ3 (default), 3E8/IRQ4, 2E8/IRQ3, or Disabled.
UART 2 Mode	Choose Standard (default), ASKIR, or HPSIR.
IR Function Duplex*	Choose Half (default), or Full. Half: Doesn't transmit and receive activities at the same time. Full: Transmit and receive activities at the same time.
RxD, TxD Active*	Choose Hi/Hi, Hi/Lo, Lo/Hi, or Lo/Lo (default). <i>*: The above 2 options won't work unless UART 2 Mode ASKIR/HPSIR is selected.</i>
Onboard Parallel Mode	Choose SPP (default), EPP/SPP, ECP, or ECP/EPP. The mode depends on your external device that connects to this port.
ECP Mode Use DMA*	Choose DMA3 (default) or DMA1. Most sound cards use DMA1. Check with your sound card configuration to make sure that there is no conflict with this function.

Parallel Port EPP Type* Choose EPP1.7 (default) or EPP1.9. EPP1.9 supports hardware handshake. This setting is dependent on your EPP device.

**: The above 2 options won't work unless EPP/ECP function is selected.*

USB Controller Enabled: Enable USB function and it will occupy one IRQ, usually the IRQ11.

Disabled (default): Disable USB function and it will not occupy IRQ.
Choose Disabled when it is not connect to an USB device.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Supervisor/User Password

These two options allows you to set your system passwords. Normally, supervisor has a higher right to change the CMOS setup option than the user. The way to set up the passwords for both Supervisor and User are as follow:

1. Choose "Change Password" in the Main Menu and press <Enter>. The following message appears:
"Enter Password:"
2. The first time you run this option, enter your password up to only 8 characters and press <Enter>. The screen does not display the entered characters.
3. After you enter the password, the following message appears prompting you to confirm the password:
"Confirm Password:"
4. Enter exact the same password you just typed again to confirm the password and press <Enter>.
5. Move the cursor to Save & Exit Setup to save the password.
6. If you need to delete the password you entered before, choose the Supervisor Password and press <Enter>. It will delete the password that you had before.
7. Move the cursor to Save & Exit Setup to save the option you did, otherwise the old password will still be there when you turn on your machine next time.
8. Press <ESC> to exit to the Main Menu.

Note: If you forget or lose the password, the only way to access the system is to clear the CMOS RAM by setting JP18. All setup information will be lost and you need to run the BIOS setup program again.

IDE HDD Auto Detection

IDE HDD Auto Detection detects the parameters of an IDE hard disk drive and automatically enters them to the Standard CMOS Setup screen.

The screen will ask you to select a specific hard disk for Primary Master after you select this option. If you accept a hard disk detected by the BIOS, you can enter "Y" to confirm and then press <Enter> to check next hard disk. This function allows you to check four hard disks and you may press the <ESC> after the <Enter> to skip this function and go back to the Main Menu.

Save & Exit Setup

Save & Exit Setup allows you to save all modifications you have specified into the CMOS memory. Highlight this option on the Main Menu and the following message appears:

SAVE to CMOS and EXIT (Y/N)? Y

Press <Enter> key to save the configuration changes.

Exit Without Saving

Exit Without Saving allows you to exit the Setup utility without saving the modifications that you have specified. Highlight this option on the Main Menu and the following message appears:

Quit Without Saving (Y/N)? N

You may change the prompt to "Y" and press <Enter> key to leave this option.