User's Manual

An Intel 815EB Chipset based Socket370 mainboard

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Section 1
INTRODUCTION

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☑ B. (1) User's manual

☑ C. (1) Floppy ribbon cable

☑ D. (1) ATA-66/100 Hard drive ribbon
          cable

☑ E. (1) Driver and utility
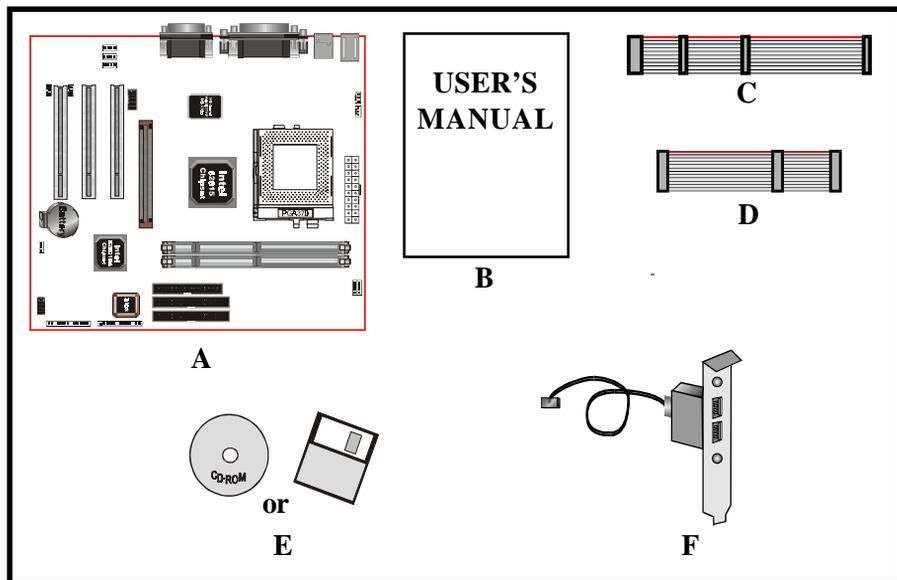
Introduction

Intel(R) 815 Series chipset features

The Intel(R) 815 series chipset that SDRAM interface supports 100MHz and 133MHz operation, the Intel(R) 815 series chipset has re-engineered the Value PC, providing next generation features and great graphics performance.

The 82815 series Graphics Memory Controller Hub (GMCH) features : Intel(R) graphics technology and software drivers, using Direct AGP (integrated AGP) to create vivid 2D and 3D effects and images. The 82815 series chip feature integrated Hardware Motion Compensation to improve soft DVD video quality.

The Inte(R) 82815 series chipset use Intel(R) Dynamic Video Memory Technology (D. V.M.T.) is an architecture that offers breakthrough performance for the (motherboard) PC through efficient memory utilization and Direct AGP. The system OS uses the Intel software drivers and intelligent memory arbiter to support richer graphics applications.

The Intel(R) 82815 series provides an AGP universal connector to support the AGP 2.0 including 4X AGP data transfers.

The 82801BA I/O Controller Hub (ICH2) employs the Intel(R) Accelerated Hub Architecture to make a direct connection from the graphics and memory to the integrated AC97 controller, the IDE controllers (ATA/66 or ATA/33 or ATA/100), dual USB ports, and PCI add-in cards.

The Accelerated Hub Architecture provides twice the bandwidth of the PCI bus at 266 MB per second. This allows a wider flow of rich information from the I/O controller to the memory controller, with optimized arbitration rules allowing more functions to run concurrently, enabling more life-like audio and video.

The Integrated Audio-Codec 97 controller enables software audio by using the processor to run sound. By reusing existing system resources, this feature adds flexibility, improves sound and modem quality.

The 82802 Firmware Hub (FWH, 4MB) stores system BIOS and video BIOS, eliminating a redundant nonvolatile memory component. In addition, the 82802 contains a hardware Random Number Generator (RNG). The Intel(R) RNG provides truly random numbers to enable fundamental security building blocks supporting stronger encryption, digital signing, and security protocols for the future application program.

Mainboard Form-Factor

The is designed with Micro ATX form factor - the new industry standard of chassis. Micro ATX form factor is essentially a Baby-AT baseboard rotated 90 degrees within the chassis enclosure and a new mounting configuration for the power supply. With these changes the processor is relocated away from the expansion slots, allowing them all to hold full length add-in cards. Micro ATX defines a double height aperture to the rear of the chassis which can be used to host a wide range of onboard I/O. Only the size and position of this aperture is defined, allowing PC manufacturers to add new I/O features (e.g.; TV input, TV output, joystick, modem, LAN, etc.) to systems. This will help systems integrators differentiate their products in the marketplace, and better meet your needs.

• By integrating more I/O down onto the board and better positioning the hard drive and floppy connectors material cost of cables and add-in cards is reduced.

• By reducing the number of cables and components in the system, manufacturing time and inventory holding costs are reduced and reliability will increase.

• By using an optimized power supply, it's possible to reduce cooling costs and lower acoustical noise. Micro ATX power supply, which has a side-mounted fan, allows direct cooling of the processor and add-in cards making a secondary fan or active heatsink unnecessary in most system applications.
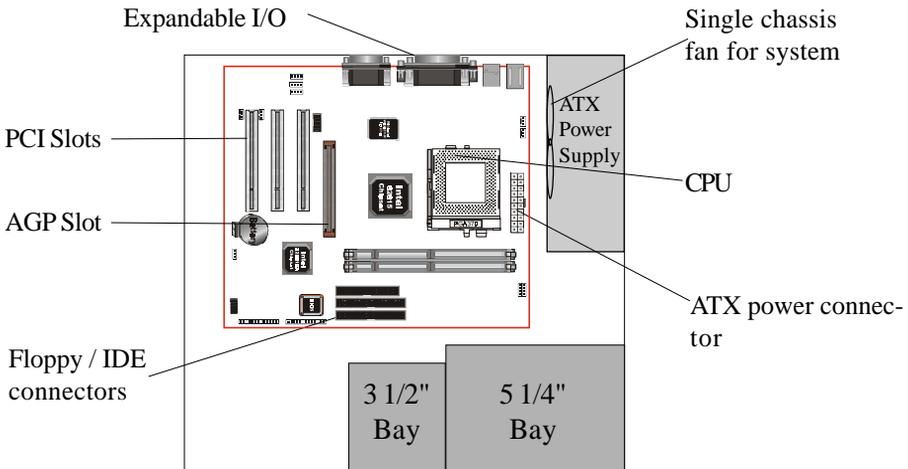
Figure 2: Summary of ATX chassis features

I/O Shield Connector

The board is equipped with an I/O back panel. Please use the appropriate I/O shield (figure 3).

parallel port

Joystick/Midi

PS/2 Mouse

USB port

PS/2 Keyboard

COM1

VGA1

Speaker

Line_in

MIC
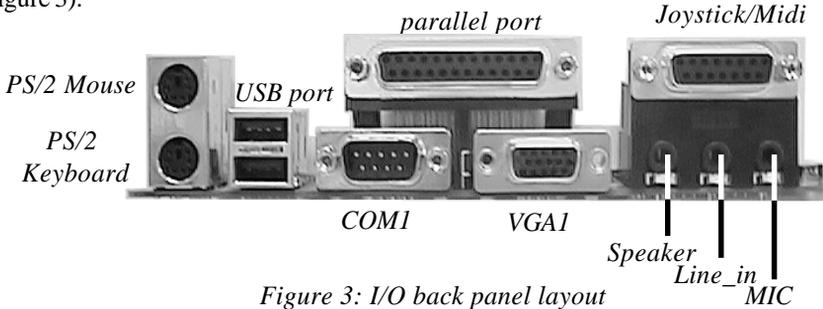
Figure 3: I/O back panel layout

Power-On/Off (Remote)

The board has a single 20-pin connector for ATX power supplies. For ATX power supplies that support the **Remote On/Off** feature, this should be connected to the systems front panel for system Power On/Off button. The systems power On/Off button should be a momentary button that is normally open.

The board has been designed with "Soft Off" functions. You can turn Off the system from one of two sources: The first is the front panel Power On/Off button, and the other is the "Soft Off" function (coming from the onboard circuit controller) that can be controlled by the operating system such asWindows® 95/98/SE/ME or Windows®2000.

ATX POWER SUPPLY

J 3

Case (chassis) Power ON/OFF button (J 3)
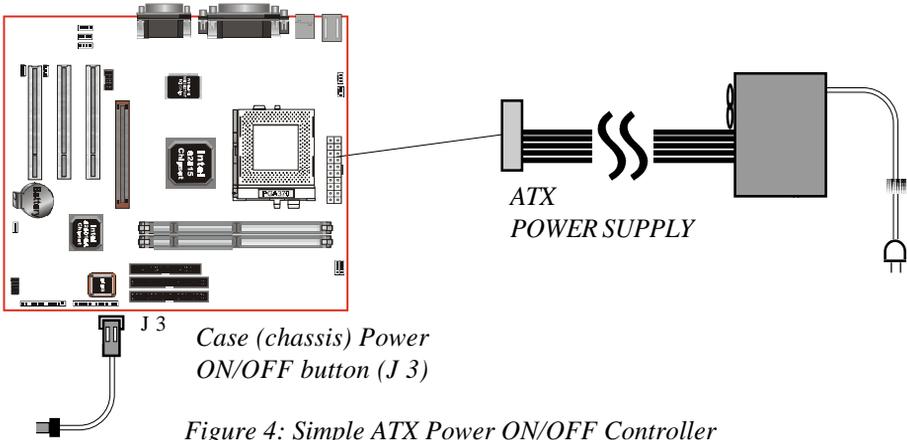
Figure 4: Simple ATX Power ON/OFF Controller

System Block Diagram
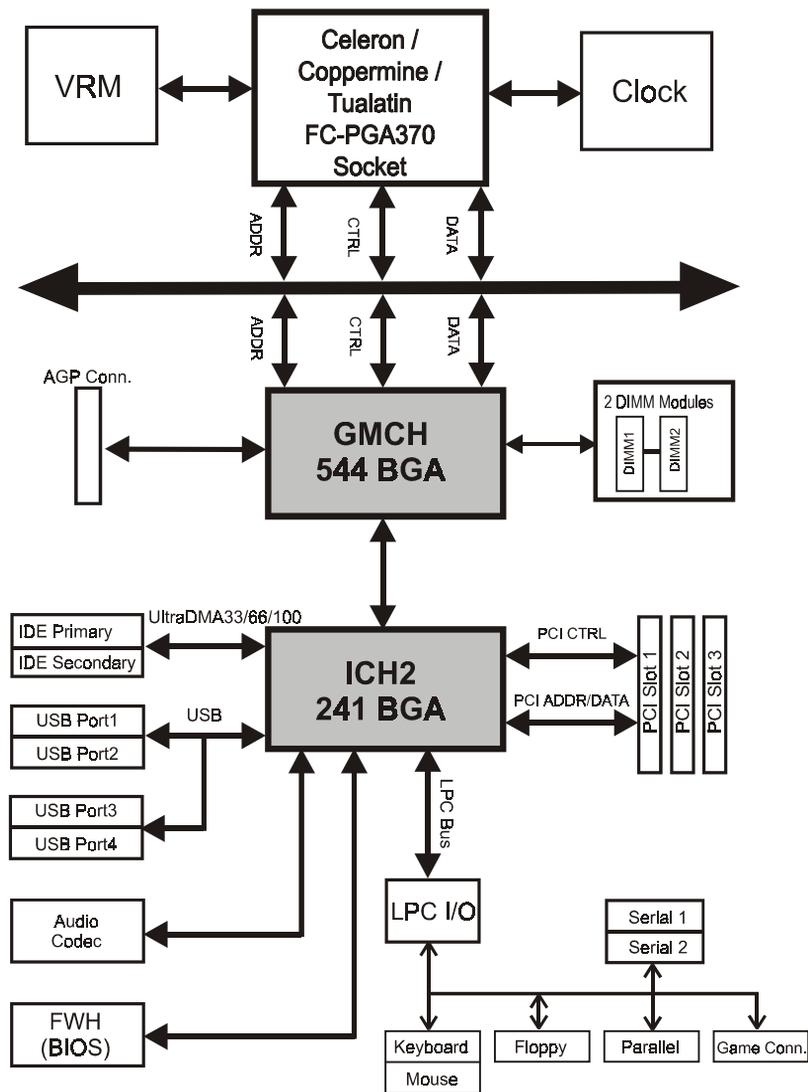
Figure 5: System Block Diagram

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Section 2
FEATURES

Mainboard Features:

◆ **CPU**
- Intel Celeron™ Processors with FC-PGA socket 370 packing, operating at 533A MHz and > 566MHz (66MHz and 100MHz system bus)
- Intel Pentium®III / Coppermine™ / Tualatin™ Processors with FC-PGA socket 370 packing, operating at 500MHz ~ 1.13GHz

◆ **CPU Bus Speed**
- 66/100/133MHz FSB

◆ **CHIPSET**
Intel 815EB
- Northbridge: Intel 82815EB GMCH
- Southbridge: Intel 82801BA ICH2

◆ **System Memory**
- Two 168 pin 3.3V PC133 DIMM sockets
- Supports up to 512MB SDRAM maximum
- Supports 100/133MHz Synchronous DRAM

◆ **Graphics**
- Integrated Intel i752 3D graphics engine in chipset
- Provides 4MB display cache via AIMM card
- Provides AGP 4X Interface
- Universal AGP slot; support 3.3V(2X) / 1.5V(4X) AGP card Transfer rate up to 1GB/sec
- Automatically disable internal graphics when add-in graphics card is present

Features

- ◆ **Audio onboard**
  - AC97 2.1 compliant
  - 16-bit stereo codec

- ◆ **LAN onboard (Optional)**
  - Integrate 10/100Mb fast Ethernet controller in chipset with external Intel 82562ET Physical Layer

- ◆ **Storage System**
  - Two PCI master IDE ports support up to 4 IDE devices, Supports ATA33/ 66/100
  - One floppy port supports up to two 3.5" or 5.25" floppy devices (360K/ 720K/1.2M/1.44M/2.88M)
  - Supports LS 120 floppy disk drive and ZIP drive

- ◆ **SLOTs**
  - PCI x 3, AGP slot x 1

- ◆ **I/O**
  - 2 high speed serial ports (16550 Fast URAT compatible)
  - 1 Enhanced parallel port support EPP / ECP / SPP
  - 4 USB ports (2 USB on real I/O panel, 2 USB headers on board)
  - 1 PS2 keyboard port / 1 PS2 mouse port
  - 1 Speak out / 1 Line in / 1 MIC jacks
  - 1 Game port / MIDI port
  - 1 15-pin VGA connector
  - IrDA port supports up to 115.2Kb/s transfer rate
  - All I/O ports can be enabled / disabled by BIOS setup
  - 1 RJ45 LAN connector (Optional)

- ◆ **BIOS**
  - 4MB Intel Firmware Hub
  - Licensed advance AWARD BIOS
  - Supports plug and play
  - Supports ACPI and OS directed power management

◆ **System Health Monitor**
- CPU & System temperatures, CPU fan & PWR fan speeds, Power supply and CPU voltages

◆ **Power Management**
- ACPI v1.0 and APM compliant
- Supports S0, S1, S3, S5 ACPI power status
- Supports Suspend to RAM

◆ **Advanced Features**
- Wake up on LAN
- Wake up on Modem

◆ **Certificates**
- CE/FCC
- WHQL logo

◆ **FORM FACTOR**
- 205mm x 243mm Micro ATX Size

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Section 3
INSTALLATION
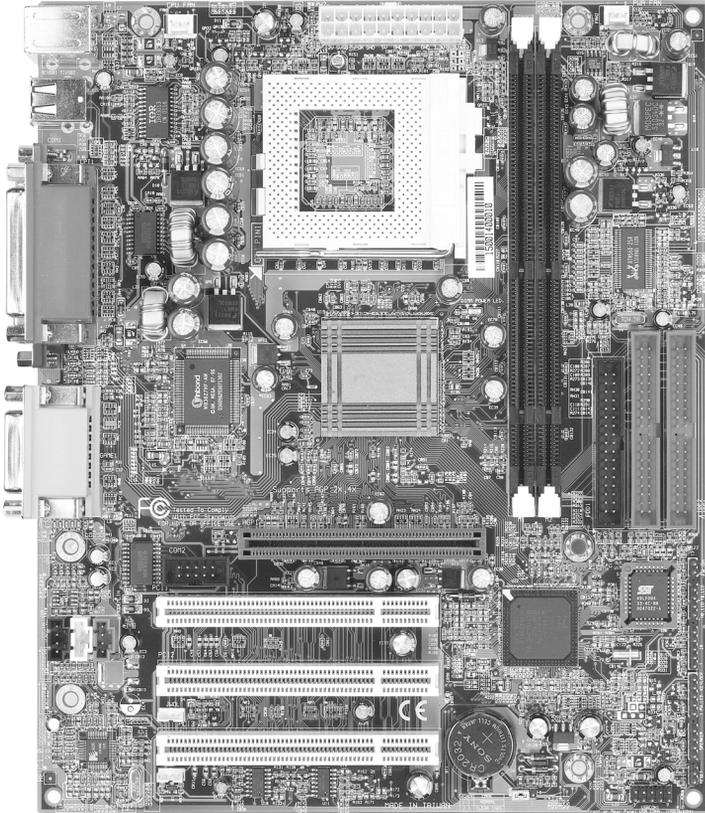
Mainboard Detailed Layout
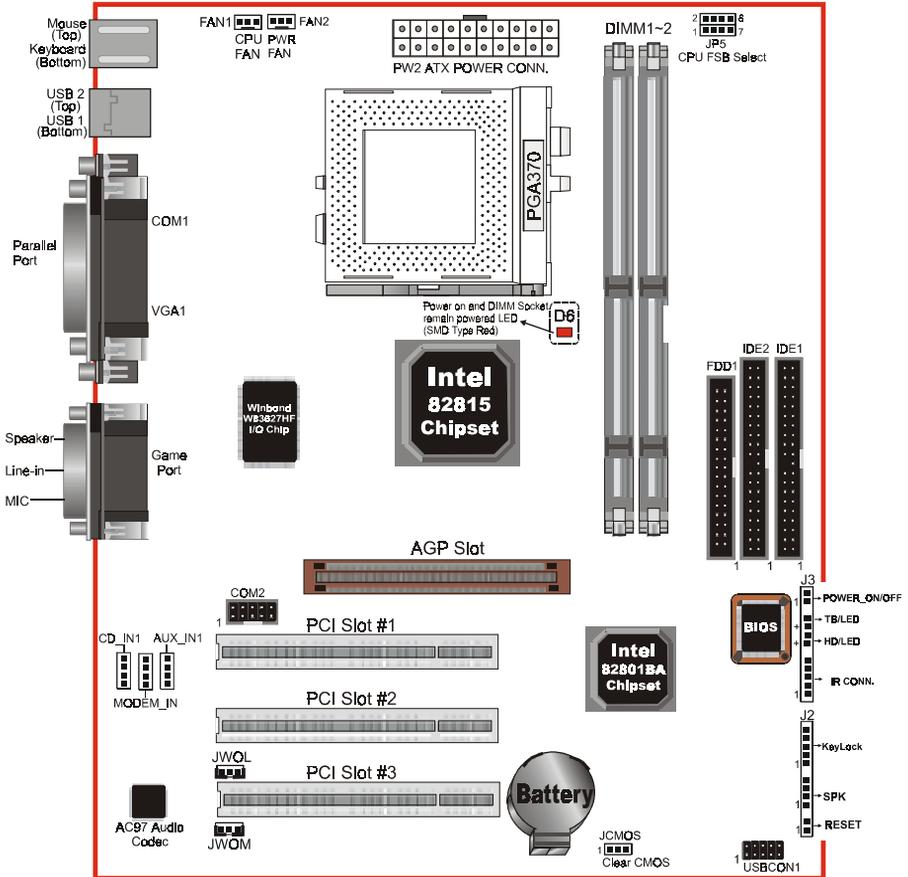
Figure 1

Easy Installation Procedure

The following must be completed before powering on your new system:

3-1.   CPU Insertion

3-2.   Jumper Settings

3-3.   System memory Configuration

3-4.   Device Connectors

3-5.   STR (Suspend To RAM) Function

Section 3-1
CPU Insertion

CPU Insertion
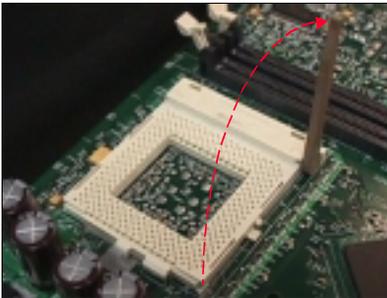
Figure 2

Step 1

Open the socket by raising the actuation lever.
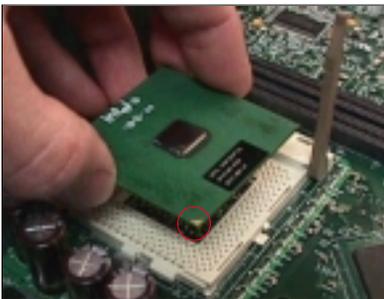
Figure 3

Step 2

Insert the processor.

Ensure proper pin 1 orientation by aligning the FC-PGA corner marking with the socket corner closest to the actuation arm tip. The pin field is keyed to prevent mis-oriented insertion.

Don't force processor into socket. If it does not go in easily, check for mis-orientation and debris. Make sure the processor is fully inserted into the socket on all sides.

Installation

Figure 4

Step 3

Close the socket by lowering and locking the actuation lever.

Note: Intel's reference design thermal solution is an active heatsink; an extruded aluminum heatsink based and a fan attached to the top on the fin array. (See Figure 5)
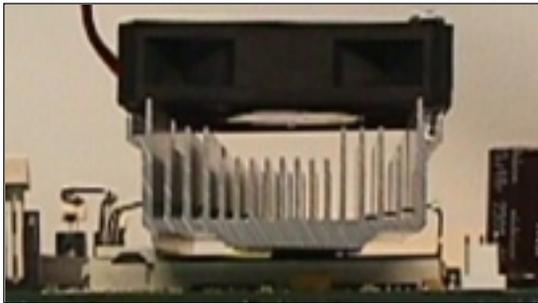
Figure 5

Section 3-2
Jumper Settings
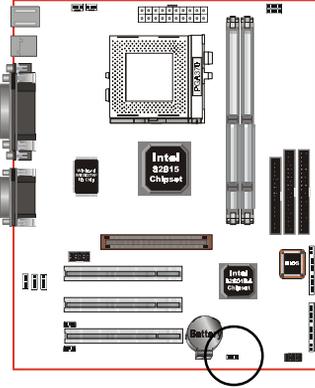
JCMOS

CMOS Clear
JP1 =1-2 Normal (Default)
     =2-3 Clear CMOS
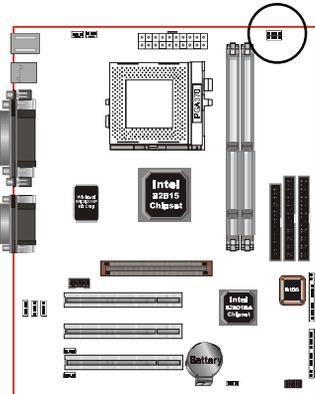
JP5

CPU FSB Select
JP5 = 1-3, 2-4   AUTO(Default)
    = 3-5, 4-6   133MHz
    = 5-7, 4-6   100MHz
    = 5-7, 6-8   66MHz

Installation

Section 3-3
System Memory Configuration

Memory Layout

The board supports (2) PC133 168-pin DIMMs (Dual In-line Memory Module).
The DIMMs is for SDRAM (Synchronous DRAM) .

- DIMM SDRAM may be 83MHz (12ns), 100MHz (10ns),
125MHz (8ns) or 133MHz (7.5ns)bus speed.

- If you use both 50ns and 60ns memory you must configure
your BIOS to read 60ns.

- When using Synchronous DRAM we recommend using the
4 clock variety over the 2 clock.

Figure 6 and Table 1 show several possible memory configuration.
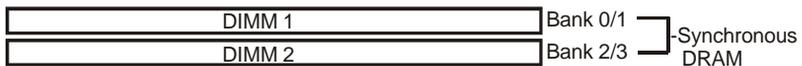
Figure 6

Total Memory	DIMM 1 (Bank 0/1)	DIMM 2 (Bank 2/3)
= 256MB Maximum	SDRAM* 32MB, 64MB, 128MB, 256MB X 1	None
= 512MB Maximum	SDRAM* 32MB, 64MB, 128MB, 256MB X 1	SDRAM* 32MB, 64MB, 128MB, 256MB X 1

Table 1

* SDRAM supports 32, 64, 128, 256MB DIMM modules.

* We recommend to use PC100 Memory Module for bus speed between 66MHz and 100MHz and PC133 Memory for bus speed over 100MHz.

* Using non-compliant memory with higher bus speed (over clocking) may severely compromise the integrity of the system.

DIMM Module Installation

Figure 7 displays the notch marks and what they should look like on your DIMM memory module.

DIMMs have 168-pins and two notches that will match with the onboard DIMM socket. DIMM modules are installed by placing the chip firmly into the socket at a 90 degree angle and pressing straight down (figure 8) until it fits tightly into the DIMM socket (figure 9).

LEFT KEY ZONE
(UNBUFFERED)

CENTER KEY ZONE
(3.3 V DRAM)

Figure 7

Figure 8

DIMM Module clip before installation

Figure 9
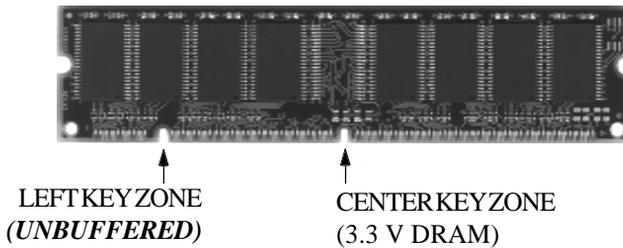
DIMM Module clip after installation
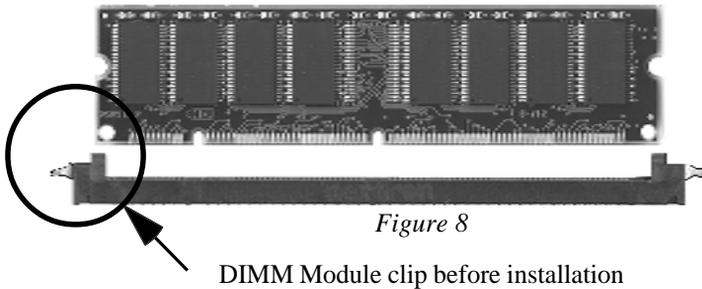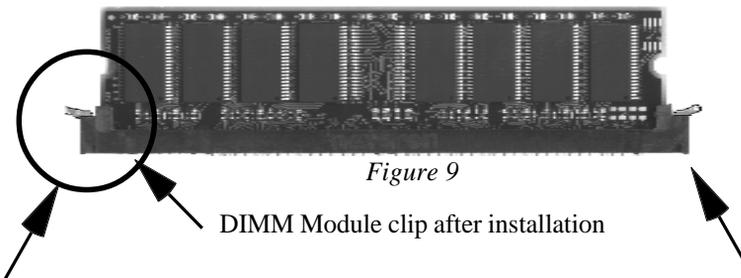
To remove the DIMM module simply press down both of the white clips on either side and the module will be released from the socket.

Installation

Section 3-4
Device Connectors

parallel port *Joystick/Midi*

PS/2 Mouse *USB port*

PS/2 Keyboard

COM1 *VGA1*

Speaker
Line_in
MIC
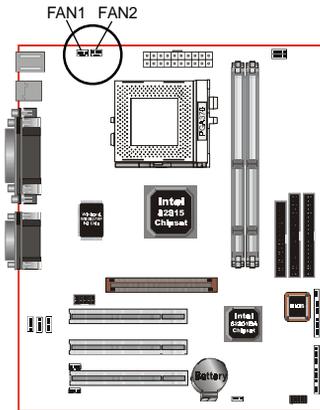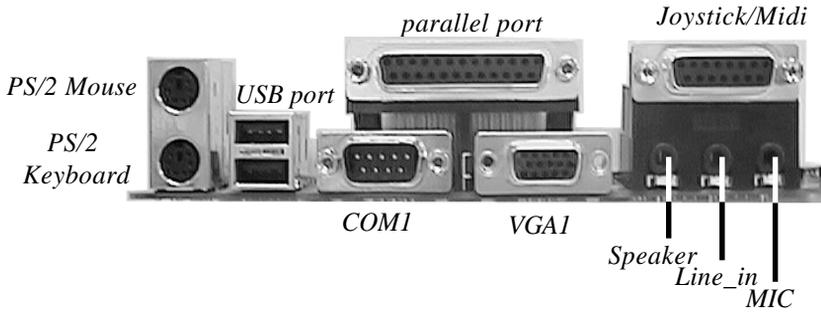
FAN1 FAN2

FAN1 / FAN2:
• A plug-in for the CPU/Power Supply Fan power

FAN1: CPU Fan   FAN2: PWR Fan

GND +12V Rotation

GND +12V Rotation
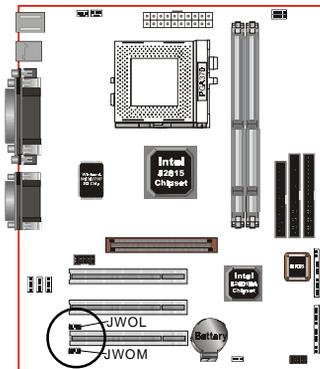
JWOL: WOL (Wake On LAN) Connector

+5V Standby PME GND

JWOM: WOM (Wake On Modem) Connector

+5V Standby PME GND

JWOL
JWOM
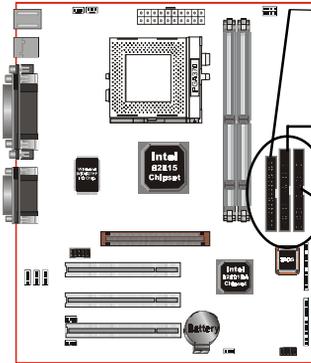
FDD1: Floppy Controller Connector (Black color)

IDE2: Ultra 66/100 Primary IDE Connector (Blue color)

IDE1: Ultra 66/100 Secondary IDE Connector (Black color)
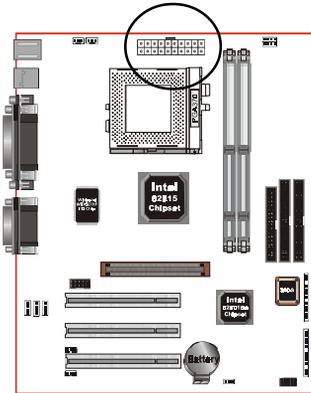
PW2: ATX Power Connector
- 20-pin power connector
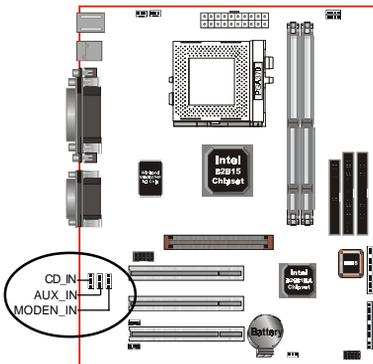
CD_IN: CD Audio_IN Connector

```
┌─ CD_IN_Right
├─ CD_Reference
1 └─ CD_IN_Left
```
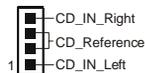
AUX_IN: Auxiliary Line_IN Connector

```
┌─ CD_IN_Right
├─ GND
1 └─ CD_IN_Left
```
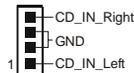
MODEM_IN: Teleohony Connector for Modem audio output

```
┌─ Mic-out to Modem
├─ GND
1 └─ Audio_IN
```

Installation

COM2: RS232 COM2 Connector
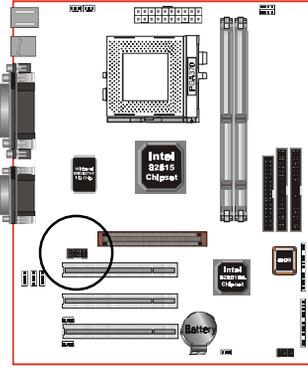
USBCON1: USB port header pins for share with two USB ports.
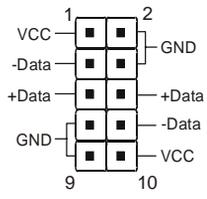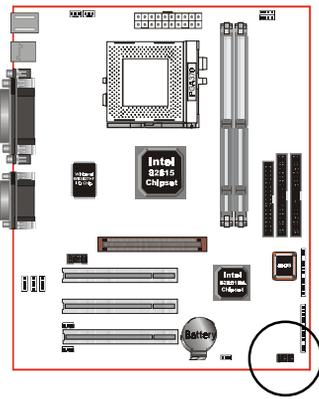
USB port header pin descriptions.

PIN#	Wire color	Signal Name	Comment
1	Red	Vcc	Cable Power
2	Black	Ground	Case Ground
3	White	-Data	Data
4	Black	Ground	Cable Ground
5	Green	+Data	Data
6	Green	+Data	Data
7	Black	Ground	Cable Ground
8	White	-Data	Data
9	Black	Ground	Case Ground
10	Red	Vcc	Cable Power
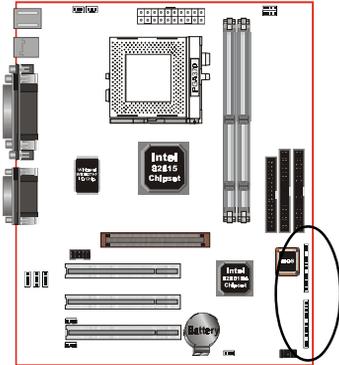
◆ **Power On/Off**
(This is connected to the power button on the case. Using the Soft-Off by Pwr-BTTN feature, you can choose either Instant Off (turns system off immediately), or 4 sec delay (you need to push the button down for 4 seconds before the system turns off). When the system is in 4 sec delay mode, suspend mode is enabled by pushing the button momentarily.)

◆ **Turbo LED indicator**
LED ON when higher speed is selected

◆ **IDE LED indicator**
LED ON when Onboard PCI IDE Hard disks is activate

J3

◆ **IR Connector**
1. VCC   4. GND
2. NC   5. IRTX
3. IRRX

◆ **KeyLock**
Keyboard lock switch & Power LED connector
1. Power LED(+)   4. NC
2. N/C   5. GND
3. GND   * The power LED lights when the system is powered on and blinks in SLEEP Mode or STR Mode.

J2

◆ **Speaker**
Connect to the system's speaker for beeping
1. Speaker   3. GND
2. N/C   4. GND

◆ **Reset**
Closed to restart system.
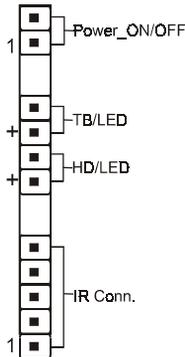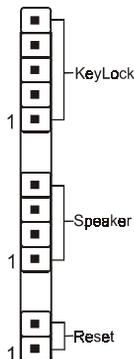
Installation

Device Connectors (continued)

◆ AIMM Card with AGP connector (For integrated graphics to upgrade 4MB display cache).

To I/O Rear Panel

AIMM Card*

AGP Connector
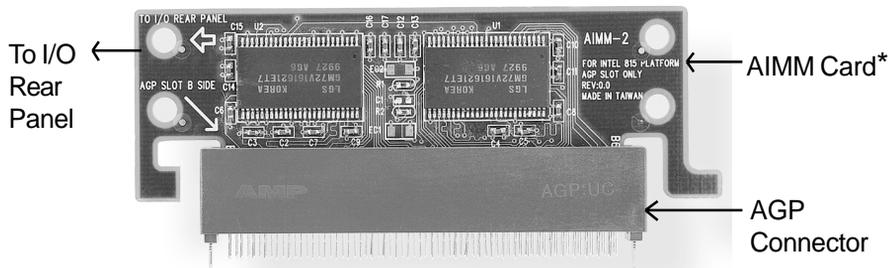
Note: The AIMM card for Intel 815 chipset M.B's AGP slot only.
   * : The AIMM Card (optional)

3-5 STR (Suspend To RAM) Function

The board supports the STR power management state by maintaining the appropriate states on the SDRAM interface signals. The power source must be kept alive to the SDRAM during STR (ACPI S3). Advanced Configuration Power Interface (ACPI) provides more Energy Saving Features for operating systems that supporting Instant ON and QuickStart™ function.

1. To enable the ACPI function and use the STR functionally to save your system energy, you are recommended to confirm the following requirements:

    a. Please do install all ACPI qualified add-on cards such as AGP, LAN, Modem cards.

    b. In BIOS, please select " ACPI function: Enable" and "ACPI Suspend Type: S3(STR)" in the Power Management Setup menu.

    c. Then, please install the Windows® 98SE/ME or Windows® 2000.

    d. Restart your system.

    e. Getting in to the "Advanced" of the Power Management icon of Control Panel, and selecting the "Stand By" in the Power Buttons.

2. Getting start with STR function, please click the START button and choose Shut Down. Then, select the Stand By option in the Shut Down Windows box to get into STR mode.

    Here are the differences between STR power saving mode and Green (or Suspend) mode:

    a. It is the most advanced Power Management mode

    b. It cuts all the power supplied to peripherals except to Memory - max. power saving

    c. It saves and keeps all on-screen data including any executed applications to SDRAM.

    d. You must push the Power button connected with onboard J3 pin to wake up you system (not to click to mouse or press keyboard to wake up the system).

Installation

Just pushing Power button, your system will quickly back to the last screen for you.

The "LED Indicator for ACPI Status" table shown below will guide you and give you a reference for ACPI status on this mainboard.

ACPI Onboard's LED Status Indicator Table					
Onboard's LED Location	Status				
	Plug in the ATX Power Core	Power ON J3(PW-ON)	Green Mode (S1)	STR (S3)	Shutdown (Soft-OFF) (S5)
D6 (Red LED)	OFF	ON	ON	ON	OFF
J2 PW_LED	OFF	ON	Blinking	Blinking	OFF

Section 4
BIOS SETUP

Main Menu

Once you enter the AwardBIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several 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.

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

    ▶ Standard CMOS Features          ▶ Frequency/Voltage Control
    ▶ Advanced BIOS Features            Load Fail-Safe Defaults
    ▶ Advanced Chipset Features         Load Optimized Defaults
    ▶ Integrated Peripherals            Set Supervisor Password
    ▶ Power Management Setup            Set User Password
    ▶ PnP/PCI Configurations            Save & Exit Setup
    ▶ PC Health Status                  Exit Without Saving

    Esc : Quit        F9 : Menu in BIOS      ↑ ↓ → ←   : Select Item
    F10 : Save & Exit Setup

                     Time, Date, Hard Disk Type...
```

Note that a brief description of each highlighted selection appears at the bottom of the screen.

Setup Items

The main menu includes the following main setup categories. Recall that some systems may not include all entries.

Standard CMOS Features

Use this menu for basic system configuration.

BIOS

Advanced BIOS Features

Use this menu to set the Advanced Features available on your system.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system's performance.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals.

Power Management Setup

Use this menu to specify your settings for power management.

PnP / PCI Configuration

This entry appears if your system supports PnP / PCI.

PC Health Status

This item is only show the system health status (include Voltage, Fan speed, CPU temperature...)

Frequency/Voltage Control

Use this menu to specify your settings for frequency/voltage control.

Load Fail-Safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

Load Optimized Defaults

Use this menu to load the BIOS default values that are factory settings for optimal performance system operations. While Award has designed the custom BIOS to maximize performance, the factory has the right to change these defaults to meet their needs.

Supervisor / User Password

Use this menu to set User and Supervisor Passwords.

Save & Exit Setup

Save CMOS value changes to CMOS and exit setup.

Exit Without Save

Abandon all CMOS value changes and exit setup.

4-1 Standard CMOS Setup

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

```
          CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
                            Standard CMOS Features
      Date (mm:dd:yy)            Tue, Jan  2 2001          Item Help
      Time (hh:mm:ss)            17 :  0 : 40
                                                      Menu Level    ▶
    ▶ IDE Primary Master
    ▶ IDE Primary Slave                               Change the day, month,
    ▶ IDE Secondary Master                            year and century
    ▶ IDE Secondary Slave

      Drive A                    [1.44M, 3.5 in.]
      Drive B                    [None]

      Video                      [EGA/VGA]
      Halt On                    [All , But Keyboard]

      Base Memory                      640K
      Extended Memory                65472K
      Total Memory                    1024K


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

Figure 1: The Main Menu

Main Menu Selections

This table shows the selections that you can make on the Main Menu

Item	Options	Description
Date	Month DD YYYY	Set the system date. Note that the 'Day' automatically hanges when you set the date
Time	HH : MM : SS	Set the system time
IDE Primary Master	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
IDE Primary Slave	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
IDE Secondary Master	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
IDE Secondary Slave	Options are in its sub menu (described in Table 3)	Press <Enter> to enter the sub menu of detailed options
Drive A Drive B	None 360K, 5.25 in 1.2M, 5.25 in 720K, 3.5 in 1.44M, 3.5 in 2.88M, 3.5 in	Select the type of floppy disk drive installed in your system
Video	EGA/VGA CGA 40 CGA 80 MONO	Select the default video device
Halt On	All Errors No Errors All, but Keyboard All, but Diskette All, but Disk/Key	Select the situation in which you want the BIOS to stop the POST process and notify you
Base Memory	N/A	Displays the amount of conventional memory detected during boot up
Extended Memory	N/A	Displays the amount of extended memory detected during boot up
Total Memory	N/A	Displays the total memory available in the system

Table 2 Main Menu Selections

IDE Adapters

The IDE adapters control the hard disk drive. Use a separate sub menu to configure each hard disk drive.

Figure 2 shows the IDE primary master sub menu.

```
          CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
                              IDE Primary Slave

    IDE HDD Auto-Detection      [Press Enter]              Item Help

    IDE Primary Slave           [Auto]           Menu Level    ►►
    Access Mode                 [Auto]
                                                 To auto-detect the
    Capacity                      6449 MB         HDD's size, head... on
                                                 this channel
    Cylinder                     13328
    Head                            15
    Precomp                      65535
    Landing Zone                 13327
    Sector                          63




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

Figure 2 IDE Primary Master sub menu

BIOS

Use the legend keys to navigate through this menu and exit to the main menu. Use Table 3 to configure the hard disk.

Item	Options	Description
IIDE HDD Auto-detection	Press Enter	Press Enter to auto-detect the HDD on this channel. If detection is successful, it fills the remaining fields on this menu.
IDE Primary Master	None Auto Manual	Selecting 'manual' lets you set the remaining fields on this screen. Selects the type of fixed disk. "User Type" will let you select the number of cylinders, heads, etc. Note: PRECOMP=65535 means NONE !
Capacity	Auto Display your disk drive size	Disk drive capacity (Approximated). Note that this size is usually slightly greater than the size of a formatted disk given by a disk checking program.
Access Mode	Normal LBA Large Auto	Choose the access mode for this hard disk
The following options are selectable only if the 'IDE Primary Master' item is set to 'Manual'		
Cylinder	Min = 0 Max = 65535	Set the number of cylinders for this hard disk.
Head	Min = 0 Max = 255	Set the number of read/write heads
Precomp	Min = 0 Max = 65535	**** **Warning**: Setting a value of 65535 means no hard disk
Landing zone	Min = 0 Max = 65535	****
Sector	Min = 0 Max = 255	Number of sectors per track

Table 3 Hard disk selections

4-2 Advanced BIOS Features

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.

```
          CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
                          Advanced BIOS Features
    Virus Warning              [Disabled]        ▲        Item Help
    CPU Internal Cache         [Enabled]
    External Cache             [Enabled]            Menu Level    ▶
    CPU L2 Cache ECC Checking  [Disabled]
    Processor Number Feature   [Enabled]            Allows you to choose
    Quick Power On Self Test   [Enabled]            the VIRUS warning
    First Boot Device          [Floppy]             feature for IDE Hard
    Second Boot Device         [HDD-0]              Disk boot sector
    Third Boot Device          [LS120]              protection. If this
    Boot Other Device          [Enabled]            function is enabled
    Swap Floppy Drive          [Disabled]           and someone attempt to
    Boot Up Floppy Seek        [Enabled]            write data into this
    Boot Up NumLock Status     [On]                 area , BIOS will show
    Gate A20 Option            [Fast]               a warning message on
    Typematic Rate Setting     [Disabled]           screen and alarm beep
  x Typematic Rate (Chars/Sec) 6
  x Typematic Delay (Msec)     250
    Security Option            [Setup]
    OS Select For DRAM > 64MB  [Non-OS2]    ▼
  ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
       F5:Previous Values    F6:Fail-Safe Defaults   F7:Optimized Defaults
```

Virus Warning
Allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.

Enabled: Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Disabled: No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

CPU Internal Cache/External Cache
These two categories speed up memory access. However, it depends on CPU/chipset design.

Enabled: Enable cache
Disabled: Disable cache

BIOS

CPU L2 Cache ECC Checking

This item allows you to enable/disable CPU L2 Cache ECC checking.

The choice: Enabled, Disabled.

Processor Number Feature

Pentium III or later CPU new feature. The default is Enabled.

Enabled**:** Processor serial number readable.

Disabled: Processor serial number disabled.

Quick Power On Self Test

This category speeds up Power On Self Test (POST) after you power up the computer.
If it is set to Enable, BIOS will shorten or skip some check items during POST.

Enabled: Enable quick POST

Disabled: Normal POST

First/Second/Third/Other Boot Device

The BIOS attempts to load the operating system from the devices in the sequence
selected in these items.

The Choice: Floppy, LS120, HDD-0, SCSI, CDROM, HDD-1, HDD-2, HDD-3,
ZIP100, USB-FDD, USB-ZIP, USB-HDD, LAN, Disabled.

Swap Floppy Drive

If the system has two floppy drives, you can swap the logical drive name assignments.
The choice: Enabled/Disabled.

Boot Up Floppy Seek

Seeks disk drives during boot up. Disabling speeds boot up.
The choice: Enabled/Disabled.

Boot Up NumLock Status

Select power on state for NumLock.
The choice: On/Off.

Gate A20 Option

Select if chipset or keyboard controller should control GateA20.

Normal: A pin in the keyboard controller controls GateA20

Fast: Lets chipset control GateA20

Typematic Rate Setting

Key strokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected.
The choice: Enabled/Disabled.

Typematic Rate (Chars/Sec)

Sets the number of times a second to repeat a key stroke when you hold the key down.
The choice: 6, 8, 10, 12, 15, 20, 24, 30.

Typematic Delay (Msec)

Sets the delay time after the key is held down before it begins to repeat the keystroke.
The choice: 250, 500, 750, 1000.

Security Option

Select whether the password is required every time the system boots or only when you enter setup.

System   The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.

Setup   The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

Note: To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

OS Select For DRAM > 64MB

Select the operating system that is running with greater than 64MB of RAM on the system. The choice: Non-OS2, OS2.

HDD S.M.A.R.T Capability

Allows you to choose the HDD S.M.A.R.T for detect HDD condition.
The choice: Enabled/Disabled.

Report No FDD For Win 95

Whether report no FDD for Win 95 or not.
The choice: Yes, No.

4-3 Advanced Chipset Features

```
          CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
                         Advanced Chipset Features

     DRAM CTL Buffer Strengths [Default]      ▲          Item Help
     DRAM MD Buffer Strengths  [Default]
     SDRAM CAS Latency Time    [Auto]              Menu Level   ▶
     SDRAM Cycle Time Tras/Trc [Auto]
     SDRAM RAS-to-CAS Delay    [Auto]
     SDRAM RAS Precharge Time  [Auto]
     System BIOS Cacheable     [Disabled]
     Video BIOS Cacheable      [Disabled]
     Memory Hole At 15M-16M    [Disabled]
     CPU Latency Timer         [Enabled]
     Delayed Transaction       [Enabled]
     AGP Graphics Aperture Size[64MB]
     AGP Device 4X Support     [Enabled]
     Display Cache Frequency   [100 MHz]
     System Memory Frequency   [Auto]
     On-Chip Video Window Size [64MB]

     * Onboard Display Cache Setting *
        CAS# Latency            [3]           ▼

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

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 also coordinates communications between the conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

DRAM CTL Buffer Strengths

The system memory DRAM interface signal buffer strengths.

The Choice: Default, Strong, Weak, Normal.

DRAM MD Buffer Strengths

The system memory DRAM interface signal buffer strengths.

The Choice: Default, Strong, Weak, Normal.

SDRAM CAS Latency Time

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.
The Choice: 2, 3, Auto.

SDRAM Cycle Time Tras/Trc

Select the number of SCLKs for an access cycle.
The Choice: 5/7, 7/9, Auto.

SDRAM RAS-to-CAS Delay

This field lets you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. *Fast* gives faster performance; and *Slow* gives more stable performance. This field applies only when synchronous DRAM is installed in the system.
The Choice: 2, 3, Auto.

SDRAM RAS Precharge Time

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. *Fast* gives faster performance; and *Slow* gives more stable performance. This field applies only when synchronous DRAM is installed in the system.
The Choice: 2, 3, Auto.

System BIOS Cacheable

Selecting *Enabled* allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.
The choice: Enabled, Disabled.

Video BIOS Cacheable

Select Enabled allows caching of the video BIOS , resulting in better system performance. However, if any program writes to this memory area, a system error may result.
The Choice: Enabled, Disabled.

Memory Hole At 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements.
The Choice: Enabled, Disabled.

BIOS

CPU Latency Timer

Enabled: The processor cycle will be deferred immediately after the GMCH receives another ADS#.

Disabled: The processor cycle will only be deferred after for 31 clocks and another ADS# has arrived.

Delayed Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select *Enabled* to support compliance with PCI specification version 2.1.

The Choice: Enabled, Disabled.

AGP Graphics Aperture Size (MB)

The amount of system memory that the AGP card is allowed to share. The default is 64.

　　32: 32MB of systems memory accessable by the AGP card.

　　64: 64MB of systems memory accessable by the AGP card.

AGP Device 4X Support

Enblaes and disables the use of AGP 4X Mode. The default is Enabled.

Display Cache Frequency

If your insert AGP In-Line Memory Module (AIMM). This function setting AIMM frequency. The default is 100MHz.

System Memory Frequency

Setting the SDRAM frequency. The default is Auto.

The choice: 100Mhz, 133MHz, Auto.

Note: When the CPU host (FSB) is 100MHz, then SDRAM frequency is fixed at 100MHz. This item is not show automatically on screen.

On-Chip Video Window Size

The amount of system memory that the 815 series AGP is allowed to share. The default is 64MB.

Onboard Display Cache Setting

Setting the onboard display cache timing.

CAS # Latency

Select the local memory clock periods.
The Choice: 2, 3

Paging Mode Control

Select the paging mode control.
The Choice: Close, Open.

RAS-to-CAS Override

Select the display cache clock periods control.
The Choice: by CAS# LT, Override(2).

RAS# Timing

This item controls RAS# active to Protegra, and refresh to RAS# active delay (in local memory clocks).
The Choice: Fast, Slow.

RAS# Precharge Timing

This item controls RAS# precharge (in local memory clocks).
The choice: Fast, Slow.

4-4 Integrated Peripherals

```
         CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
                          Integrated Peripherals
   On-Chip Primary   PCI IDE [Enabled]            │      Item Help
   On-Chip Secondary PCI IDE [Enabled]            │
   IDE Primary Master PIO    [Auto]               │  Menu Level    ▶
   IDE Primary Slave  PIO    [Auto]               │
   IDE Secondary Master PIO  [Auto]               │
   IDE Secondary Slave  PIO  [Auto]               │
   IDE Primary Master UDMA   [Auto]               │
   IDE Primary Slave  UDMA   [Auto]               │
   IDE Secondary Master UDMA [Auto]               │
   IDE Secondary Slave  UDMA [Auto]               │
   USB Controller            [Enabled]            │
   USB Keyboard Support      [Disabled]           │
   Init Display First        [PCI Slot]           │
   AC97 Audio                [Auto]               │
   IDE HDD Block Mode        [Enabled]            │
   Onboard FDC Controller    [Enabled]            │
   Onboard Serial Port 1     [3F8/IRQ4]           │
   Onboard Serial Port 2     [2F8/IRQ3]           │
   UART Mode Select          [Normal]             │
 ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
    F5:Previous Values      F6:Fail-Safe Defaults    F7:Optimized Defaults
```

OnChip Primary/Secondary PCI IDE

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select *Enabled* to activate each channel separately.

The choice: Enabled, Disabled.

IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, select Auto to enable BIOS support.

The Choice: Auto, Disabled.

USB Controller

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.

The choice: Enabled, Disabled.

USB Keyboard Support

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have a USB Keyboard.

The choice: Enabled, Disabled.

Init Display First

This item allows you to decide to active whether PCI Slot or on-chip VGA first

The choice: PCI Slot, Onboard .

AC97 Audio

This item allows you to decide to Auto/disable the 815 chipset family to support AC97 Audio.

The function setting AC97 Audio Codec states. The system default is Auto.

IDE HDD Block Mode

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.

The choice: Enabled, Disabled

Onboard FDC Controller

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install and-in FDC or the system has no floppy drive, select Disabled in this field.

The choice: Enabled, Disabled.

Onboard Serial Port 1/Port 2

Select an address and corresponding interrupt for the first and second serial ports.

The choice: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

BIOS

UART Mode Select

This filed allows the users to configure what IR mode the 2nd serial port should use.
The default is Normal.

Optional: Normal, IrDA and ASKIR.

RxD, TxD Active

This field configures the receive and transmit signals generated from the IR port.
The default is Hi Lo (when UART Mode Select is not set to Normal).

Options: Hi Hi, Hi Lo, Lo Hi, and Lo Lo.

IR Transmission delay

The default is Enabled (when UART Mode Select is not set to Normal).
Options: Enabled and Disabled.

UR2 Duplex Mode

This item allows you to select IR half/full duplex function.
The choice: Half, Full

Use IR Pins

This item allows you to select IR transmission routes, one is RxD2, TxD2 (COM
Port) and the other is IR-Rx2Tx2.

The choice: IR-Rx2Tx2; RxD2, TxD2.

Onboard Parallel port

This field allows the user to configure the LPT port.
The default is 378H / IRQ7.

   378H: Enable Onboard LPT port and address is 378H and IRQ7.

   278H: Enable Onboard LPT port and address is 278H and IRQ5.

   3BCH: Enable Onboard LPT port and address is 3BCH and IRQ7.

   Disabled: Disable Onboard LPT port.

Parallel Port Mode

This field allows the user to select the parallel port mode.
The default is ECP+EPP.

   EPP: Enhanced Parallel Port mode.

   ECP: Extended Capabilities Port mode.

   EPP+ECP: ECP Mode & EPP Mode.

EPP Mode Select

This item allows you to determine the IR transfer mode of onboard I/O chip.
options: EPP1.9, EPP1.7.

ECP Mode USE DMA

This field allows the user to select DMA1 or DMA3 for the ECP mode.
The default is DMA3.

   DMA1:   This field selects the routing of DMA1 for the ECP mode.

   DMA3:   This field selects the routing of DMA3 for the ECP mode.

PWRON After PWR-Fail

The system will stay of or power on after a power interrupte.
The default is OFF.

   Fomer-Status: Stay off or power on depend on system safe shut-down or
                       power fail.

   ON: System always power on after a power interrupte.

   OFF: System always stay off after a power interrupte.

Game Port Address

Select an address for the Game port.
The choice: 201, 209, Disabled.

Midi Port Address

Select an address for the Midi port.
The choice: 290, 300, 330, Disabled.

Midi Port IRQ

Select an interrupt for the Midi port.
The choice: 5, 10.

4-5 Power Management Setup

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

```
        CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
                          Power Management Setup
    ACPI Function              [Enabled]            ▲        Item Help
    ACPI Suspend Type          [S1(POS)]
    Power Management           [User Define]              Menu Level    ▸
    Video Off Method           [DPMS]
    Video Off In Suspend       [Yes]
    Suspend Type               [Stop Grant]
    MODEM Use IRQ              [3]
    Suspend Mode               [Disabled]
    HDD Power Down             [Disabled]
    Soft-Off by PWR-BTTN       [Instant-Off]
    Wake-Up by PCI card        [Disabled]
    Power On by Ring           [Enabled]
    CPU Thermal-Throttling     [50.0%]
    Resume by Alarm            [Disabled]
  x  Date(of Month) Alarm        0
  x  Time(hh:mm:ss) Alarm        0 :  0 :  0

    ** Reload Global Timer Events **
    Primary IDE 0              [Disabled]            ▼
 ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help
        F5:Previous Values     F6:Fail-Safe Defaults    F7:Optimized Defaults
```

ACPI Function

This item allows you to enable/disable the Advanced Configuration and Power Management (ACPI).

The choice: Enabled, Disabled.

ACPI Suspend Type

This item allows you to select S1(POS) or S3(STR) function.

The choice: S1(POS), S3(STR).

Power Management

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

1. HDD Power Down
2. Doze Mode
3. Suspend Mode

There are four selections for Power Management, three of which have fixed mode settings.

Disable (default)	No power management. Disables all four modes
Min. Power Saving	Minimum power management. Doze Mode = 1 hr. Standby Mode = 1 hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.
Max. Power Saving	Maximum power management -- **ONLY AVAILABLE FOR SL CPU's**. Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., and HDD Power Down = 1 min.
User Defined	Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

Video Off Method

This determines the manner in which the monitor is blanked.

V/H SYNC+Blank	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen	This option only writes blanks to the video buffer.
DPMS	Initial display power management signaling.

Video Off In Suspend

This determines the manner in which the monitor is blanked.
The choice: Yes, No.

Suspend Type

Select the Suspend Type.
The choice: PWRON Suspend, Stop Grant.

MODEM Use IRQ

This determines the IRQ in which the MODEM can use.
The choice: 3, 4, 5, 7, 9, 10, 11, NA.

Suspend Mode

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.
The choice: Enabled, Disabled.

BIOS

HDD Power Down

When enabled and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

The choice: Enabled, Disabled.

Soft-Off by PWR-BTTN

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has "hung." The default is Instant-off.

The choice: Delay 4 Sec, Instant-Off.

Wake-Up by PCI Card

An input signal form PME on the PCI Card awakens the system form a soft off state.

The choice: Enabled, Disabled.

PowerOn By Ring

This option is used to set the remote ring in and Wake on LAN (WOL) features.

The choice: Enabled, Disabled.

CPU Thermal-Throttling

Select the CPU THRM-Throttling rate.

The choice: 25.0%, 37.5%, 50.0%, 62.5%, 75.0%, 87.5%.

Resume by Alarm

This option allows you to have the system turn on at a present time each day or on a certain day.

The choice: Disabled, Enabled.

****** *PM Events* ******

PM events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything which occurs to a device which is configured as *Enabled* , even when the system is in a power down mode.

   Primary IDE 0
   Primary IDE 1
   Secondary IDE 0
   Secondary IDE 1
   FDD, COM, LPT Port
   PCI PIRQ[A-D] #

4-6 PnP/PCI Configuration Setup

This section describes configuring the PCI bus system. PCI, or **P**ersonal **C**omputer **I**nterconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

```
       CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
                         PnP/PCI Configurations

   Reset Configuration Data    [Disabled]              Item Help

   Resources Controlled By     [Auto(ESCD)]     Menu Level   ▶
 x IRQ Resources                Press Enter
                                               Default is Disabled.
   PCI/VGA Palette Snoop       [Disabled]       Select Enabled to
   INT Pin 1 Assignment        [Auto]           reset Extended System
   INT Pin 2 Assignment        [Auto]           Configuration Data
   INT Pin 3 Assignment        [Auto]           ESCD) when you exit
   INT Pin 4 Assignment        [Auto]           Setup if you have
                                                installed a new add-on
                                                and the system
                                                reconfiguration has
                                                caused such a serious
                                                conflict that the OS
                                                cannot boot




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

Reset Configuration Data

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot.

The choice: Enabled, Disabled .

Resource controlled by

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows95. If you set this field to "manual" choose specific resources by going

into each of the sub menu that follows this field (a sub menu is preceded by a "Ø").
The choice: Auto(ESCD), Manual.

PCI/VGA Palette Snoop
Leave this field at *Disabled*.
Choices are Enabled, Disabled.

INT Pin1 to Pin4 Assignment
These settings allow the user to specify what IRQ will be assigned to PCI devices
in the chosen slot. Options available: Auto,3,4,5,7,9,10,11,12,14 & 15. The
defaults are Auto.

4-7 PC Health Status

```
          CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
                              PC Health Status

   CPU Warning Temperature    [Disabled]              Item Help
   Current CPU    Temp.        33ºC/91ºF
   Current System Temp.        59ºC/138ºF       Menu Level   ►
   Current Chassis Fan Speed   0 RPM
   Current CPU     Fan Speed   0 RPM
   Current Power   Fan Speed   0 RPM
   Vtt  (V)                    1.53V
   Vcore(V)                    2.09V
   Vi/o (V)                    3.42V
   + 5 V                       4.97V
   +12 V                       12.16V
   -12 V                       12.28V
   - 5 V                       5.09V
   VBAT(V)                     3.48V
   5VSB(V)                     4.89V
   Shutdown Temperature       [Disabled]


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

CPU Warning Temperature
This is the temperature that the computer will respond to an overheating CPU. The
default is Disabled.
Enabled: Temperature is monitored on the CPU, default is 95ºC/205ºF.
Disabled: This feature is turned off.

Current CPU Temperature

This is the current temperature of the CPU.

Current System Temp

This is the Current temperature of the system.

Current CPU Fan/ Power Fan/ Chassis Fan Speed

The current CPU fan speed in RPMs.

CPU(V)

The voltage level of the Vtt, Vcore, Vio.

+5V, +12V, -12V, -5V, VBAT, 5VSB: The voltage level of the switch power supply.

Shutdown Temperature

This is the temperature that the computer will turn off the power to combat the effects of an overheating system. (requires ACPI to be enabled in Power Management BIOS and ACPI compliant operating system.) The default is Disabled.

Options available are 60°C/140°F to 75°C/167°F in increments of 5°C.

4-8 Frequency/Voltage Control

```
         CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
                         Frequency/Voltage Control
 ┌─────────────────────────────────────────────┬──────────────────────────┐
 │  Auto Detect DIMM/PCI Clk  [Enabled]         │       Item Help          │
 │  Spread Spectrum Modulated [Disabled]        │                          │
 │x Linear Spread Model           3             │  Menu Level    ▶         │
 │x Linear Spread Range           0             │                          │
 │  CPU Host/PCI Clock        [ 66]             │                          │
 │  CPU Clock Ratio           [X 3]             │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 │                                              │                          │
 ├──────────────────────────────────────────────┴──────────────────────────┤
 │ ↑↓→←:Move  Enter:Select  +/-/PU/PD:Value  F10:Save  ESC:Exit  F1:General Help │
 │    F5:Previous Values     F6:Fail-Safe Defaults    F7:Optimized Defaults      │
 └──────────────────────────────────────────────────────────────────────────┘
```

Auto Detect DIMM/PCI Clk

This item allows you to enable/disable auto detect DIMM/PCI Clock.
The choice: Enabled, Disabled.

CPU Host / PCI Clock

The mainboard is designed to set the CPU Host/PCI clock via BIOS. This item
allows you to select the CPU Host and PCI clock speed by "Enter" key. The default
speed depends on what CPU was installed. Ex: Celeron CPU default 66. Coppermine
CPU default 100 or 133.

Note: Overclocking failure will cause system No display problem. At this moment,
please press "Insert" key to back to the initial or default setting to boot up
your system.

CPU Clock Ratio

This item allows you to select the CPU ratio. If the CPU ratio is fixed. This item was no
function. Configuration options: [3.x]...[7x], [7.5x], [8.x].

4-9 Defaults Menu

Selecting "Defaults" from the main menu shows you two options which are described below

Load Fail-Safe Defaults
When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Fail-Safe Defaults (Y/N) ? N

Pressing 'Y' loads the BIOS default values for the most stable, minimal-performance system operations.

Load Optimized Defaults
When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N) ? N

Pressing 'Y' loads the default values that are factory settings for optimal performance system operations.

4-10 Supervisor/User Password Setting

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

supervisor password : can enter and change the options of the setup menus.
user password   : just can only enter but do not have the right to 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.

<div align="center">

ENTER PASSWORD:

</div>

Type the password, up to eight characters in length, and press <Enter>. The password typed now will clear any previously entered password from 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 not enter a password. To disable a password, just press <Enter> when you are prompted to enter the password. A message will confirm the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

<div align="center">

PASSWORD DISABLED.

</div>

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

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

You determine when the password is required within the BIOS Features Setup Menu and its Security option (see Section 3). If the Security option is set to "System", the password will be required both at boot and at entry to Setup. If set to "Setup", prompting only occurs when trying to enter Setup.

4-11 Exit Selecting

Save & Exit Setup

Pressing <Enter> on this item asks for confirmation:

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

Pressing "Y" stores the selections made in the menus in CMOS – a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

Exit Without Saving

Pressing <Enter> on this item asks for confirmation:

Quit without saving (Y/N)? Y

This allows you to exit Setup without storing in CMOS any change. The previous selections remain in effect. This exits the Setup utility and restarts your computer.

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Section 5
815 Series VGA and Sound Driver Installation

Easy Driver Installation

Step 1 : Click **INTEL CHIPSET INF FILES/INSTALLATION UTILITIES** that enable the Intel® 815 series Chipset to be recognized by listed operating systems. This installer will unpack updated .INF files into a specified folder. Supported operating systems: Microsoft Windows® 95 OSR 2.1+, Windows® 98/98SE/98ME and Windows® NT2000 operating systems. This procedure will Re-start the system.

Step 2 : Click **INTEL ULTRA STORAGE DRIVER** to install IDE Driver.

Step 3 : Click **VGA DRIVER** to install VGA Driver.

Step 4 : Click **AVANCE LOGIC AUDIO DRIVER** to install Audio Sound Driver.

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Appendix A

A-1 EEPROM BIOS Remover

Do not remove the BIOS chip, unless instructed by a technician and only with a PLCC IC extractor tool.
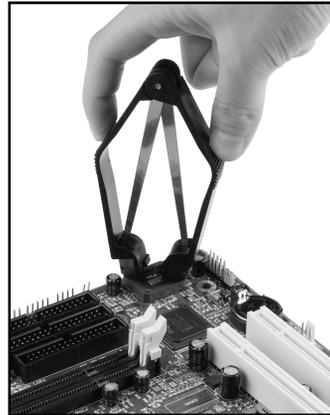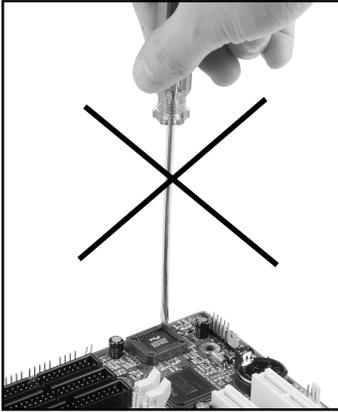
The BIOS socket may be damaged if using an improper method to replace the BIOS chip.

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Appendix B

B-1 Update Your System BIOS

Download the xxxxx.EXE file corresponding to your model form the our website to an empty directory on your hard disk or floppy. Run the downloaded xxxxx.EXE file and it will self extract. Copy these extracted files to a bootable DOS floppy disk.

Note: The DOS floppy disk should contain NO device drivers or other programs.

1. Type "A:\AWDFLASH and press <Enter> Key.

2. You will see the following setup on screen.

3. Please key in the xxxxx.bin BIOS file name.
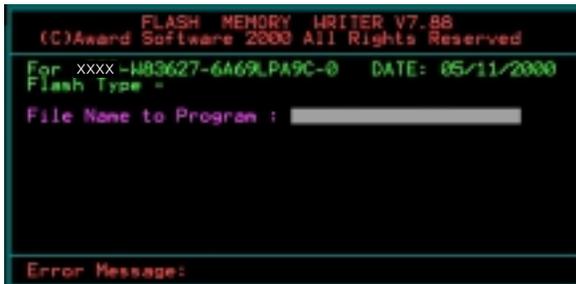
```
          FLASH  MEMORY  WRITER V7.88
   (C)Award Software 2000 All Rights Reserved

For  XXXX -W83627-6A69LPA9C-0    DATE: 05/11/2000
Flash Type -

File Name to Program : ▭▭▭▭▭▭▭▭▭▭▭▭▭▭




Error Message:
```

4. If you want to save the previous BIOS data to the diskette, please key in [Y],
   otherwise please key in [N].

```
          FLASH  MEMORY  WRITER V7.88
   (C)Award Software 2000 All Rights Reserved

For  XXXX -W83627-6A69LPA9C-0    DATE: 05/11/2000
Flash Type -  XXXXX , E82802AB /3.3V

File Name to Program : xxxxx.bin




Error Message:  Do You Want To Save Bios (Y/N)
```

5. Key in File Name to save previous BIOS to file.

6. Are you sure to program (y/n), please key in [Y] to start the programming.
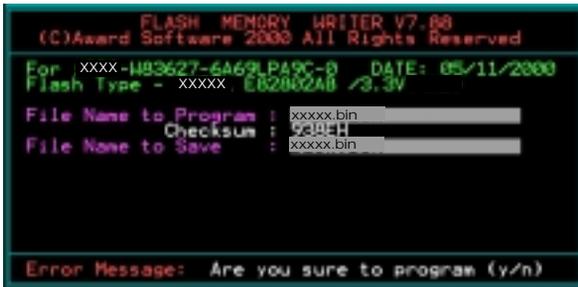
7. The programming is finished.

Appendix C
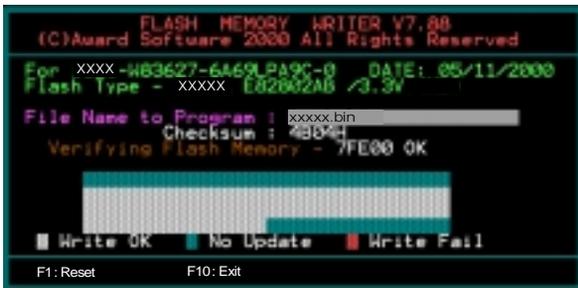
C-1 Avance® Media Player User's Guide

Avance® Media Player Platform
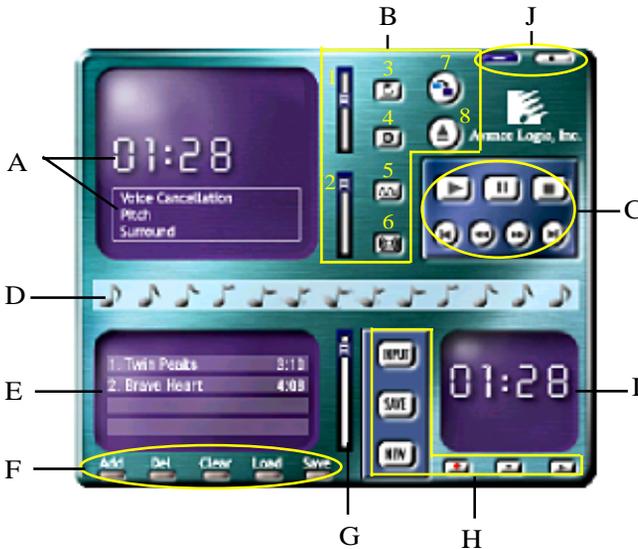
Functional Descriptions

A. Playback Windows Display

Playback windows displays the following mode information:

1. Playback Time Display

2. Voice Cancellation Mode Display

3. Pitch Mode Display

4. Surround Sound Mode Display

B. Playback Function Controls

There are 8 selectable functions for the playback:

1. Volume control   High/Low Adjustment Bar.

2. Pitch control   4-step High/Low Adjustment Bar.

3. Repeat mode	Choice of Repeat, All Repeat, Random or No Repeat Mode.
4. Mute	Mute On/Off Mode select.
5. Voice cancellation	Voice Cancellation On/Off Mode select for Karaoke.
6. Surround mode	A total of 26 Surround Sound mode select as shown in the table below.

Surround mode	Surround mode
Generic	Stone corridor
Padded	Alley
Room	Forrest
Bathroom	City
Living room	Mountain
Stone	Quarry
Auditorium	Plain
Concert	Parking lot
Cave	Sewer pipe
Arena	Under water
Hangar	Drug
Carpet	Dizzy
Hallway	Psychological

7. Skin change	Media Player Skin Type select.
8. Open	Open file formats including MP3, CDA, MDI, WAV & WMA support.

C. Playback Controls
The playback controls include "Play", "Pause", "Stop", "Previous", "Backward", "Forward", & "Next".

D. Seeking bar
Display Animated Playback Status

E. Title/Play List Windows
Display Currently Selected Title(s)

F. Title/Play List Edit Controls

There title/play list controls include "Add", "Del", "Clear", "Load", & "Store".

1. Add	Add to the Title/Play List.
2. Del	Remove form the Title/Play List.
3. Clear	Clear the Title/Play Lost.
4. Load	Load Title/Play List.
5. Store	Save Title/Play List.

G. Title/Play List Scroll bar

Scroll Up/Down the Title/Play List.

H. Recording Function Controls

The recording function controls include "Input", "Save:, "New", "Rec", "Stop", & "Play".

1. Input	Input soruce select.
2. Save	Save to file.
3. New	Open new file & select format includes Sampling Rate, Sampling bit, Mono or Stereo.
4. Rec	Start Rec.
5. Stop	Stop Rec.
6. Play	Playback Rec file.

I. REC/Playback Time Display

Displays REC/Playback Time.

J. Platform Display Panel Controls

The platform display panel control include "Minimize" & "Close".

1. Minimize	Minimize Platform Display Panel.
2. Close	Close/Exit Platform Display Panel.

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