BIOS Setup

The mainboard comes with the Award BIOS chipthat contains the ROM Setup information of your system. This chip serves as an interface between the processor and the rest of the mainboard's components. This section explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

CMOS Setup Utility

```
             ROM PCI/ISA BIOS (2A6LJF09)
                   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 BIOS DEFAULTS           │  EXIT WITHOUT SAVING          │
│                               │                               │
│  LOAD SETUP DEFAULTS          │                               │
├──────────────────────────────┴──────────────────────────────┤
│  Esc :  Quit                    ↑ ↓ → ←  :  Select Item      │
│  F10 :  Save & Exit Setup       (Shift)F2 :  Change Color    │
│                                                              │
└──────────────────────────────────────────────────────────────┘
```

A Setup program, built into the system BIOS, is stored in the CMOS RAM. This Setup utility program allows changes to the mainboard configuration settings. It is executed when the user changes system configuration; user changes system backup battery; or the system detects a configuration error and asks the user to run the Setup program. Use the arrow keys to select and press **Enter** to run the selected program.

Standard CMOS Setup

```
                    ROM PCI/ISA BIOS (2A6LJF09)
                       STANDARD CMOS SETUP
                       AWARD SOFTWARE, INC.

 Date (mm:dd:yy) : Fri, Sep  3   1999
 Time (hh:mm:ss) : 15 : 37 : 55
 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  :  None
 Drive B  :  None                         Base Memroy:    640K
 Floppy 3 Mode Support : Disabled         Extended Meory: 31744K
                                          Other Memory:    384K
 Video  :  EGA/VGA                        Total Memory: 32768K
 Halt On  :  All Errors
 Esc :  Quit              ↑↓→←  :  Select Item      PU/PD/+/-  :  Modify
 F1  :  Save & Exit Setup  (Shift)F2  :  Change Color
```

The Standard CMOS Setup screen is displayed above. Each item may have one or more option settings. The system BIOS automatically detects memory size, thus no changes are necessary. Use the arrow keys to highlight the item and then use **PgUp** or **PgDn** keys to select the value you want in each item.

Hard Disk Configurations

TYPE: Select *User* to fill the remaining fields. Select *Aut*o to detect the HDD type automatically (recommended).

SIZE: The hard disk size. The unit is Mega Bytes.

CYLS: The cylinder number of the hard disk.

HEAD: The read/write head number of hard disk.

PRECOMP: The cylinder number at which the disk drive changes the write current.

LANDZ: The cylinder number that the disk drive heads (read/write) are seated when the disk drive is parked.

SECTOR: The sector number of each track defined on the hard disk.

MODE: Select *Auto* to detect the mode type automatically. If your hard disk supports the LBA mode, select *LBA* or *Large*. However, if your hard disk cylinder is more than 1024 and does not support the LBA function, set at *Large*. Select *Normal* if your hard disk supporting cylinders is below 1024.

Software Turbo Speed

The BIOS supports Software Turbo Speed feature. Instead of pressing the Turbo Speed Button on the front panel, simply press the **Alt, Ctrl, and +** keys at the same time to enable the Turbo Speed feature; and press the **Alt, Ctrl, and -** keys at the same time to disable the feature.

BIOS Features Setup

```
              ROM PCI/ISA BIOS (2A6LJF09)
                  BIOS FEATURES SETUP
                  AWARD SOFTWARE, INC.

Anti-Virus Protection      : Enabled    Video BIOS Shadow    : Enabled
CPU Internal Cache         : Enabled    BIOS Guardian        : Enabled
External Cache             : Enabled
Processor Number Feature   : Enabled
Quick Power On Self Test   : Enabled
Boot From LAN First        : Enabled
Boot Sequence              : A, C, SCSI
Swap Floppy Drive          : Disabled
Boot Up Floppy Seek        : Enabled
Boot Up NumLock Status     : On
Gate A20 Option            : Fast
Memory Parity/ECC Check    : 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 Select For DRAM > 64MB  : Non-OS2    F6  : Load BIOS Defaults
HDD S.M.A.R.T. capability  : Disabled   F7  : Load Setup Defaults
Report No FDD For WIN 95   : Yes
```

Anti-Virus Protection

This feature starts the virus scan tool to detect if boot virus in boot sector of the first hard disk drive when booting up.
The options are: Enabled (Default), Disabled.

CPU Internal Cache

When enabled, improves the system performance. Disable this item when testing or trouble-shooting. The options are: Enabled (Default), Disabled.

External Cache

When enabled, supports an optional cache SRAM. This feature allows you to disable the cache function when the system performance is unstable to run some software. The options are: Enabled (Default), Disabled.

Processor Number Feature

If a Pentium III processor is installed on this mainboard, the system BIOS will allow other utilities to access the Intel Pentium III serial number while this feature set at Enabled. The options are: Enabled (Default), Disabled.

Quick Power On Self Test

When enabled, allows the BIOS to bypass the extensive memory test. The options are: Enabled (Default), Disabled.

Boot From LAN First

This feature makes the system bootable by the remote server via LAN. The options are: Enabled (Default), Disabled.

Boot Sequence

Allows the system BIOS to first try to boot the operating system from the selected disk drive. The options are: A, C, SCSI (Default); C, A, SCSI; C, CDROM, A; CDROM, C, A; D, A, SCSI; E, A, SCSI; F, A, SCSI; SCSI, A, C; SCSI, C, A; C Only; LS/ZIP, C.

Swap Floppy Drive

Allows you to switch the order in which the operating system accesses the floppy drives during boot up.
The options are: Enabled, Disabled (Default).

Boot Up Floppy Seek

When enabled, assigns the BIOS to perform floppy diskette drive tests by issuing the time-consuming seek commands. The options are: Enabled (Default), Disabled.

Boot Up Numlock Status

When set to On, allows the BIOS to automatically enable the Num Lock Function when the system boots up. The options are: On (Default), Off.

Gate A20 Option

When set at Fast, allows a faster access response under Protected mode. The options are: Fast (Default), Normal.

Memory Parity Check/ECC Check

This feature enables BIOS to perform automatic memory checking upon detection of ECC or parity DRAM.
The options are: Enabled, Disabled (Default).

Typematic Rate Setting

The term typematic means that when a keyboard key is held down, the character is repeatedly entered until the key is released.
The options are: Disabled (Default), Enabled.

Typematic Rate (Chars/Sec)

This feature is available only if the above item, Typematic Rate Setting, is set at Enabled. Sets the rate of a character repeat when the key is held down.
The options are: 6 (Default), 8, 10, 12, 15, 20, 24, 30.

Typematic Delay (Msec)

This feature is available only if the item, Typematic Rate Setting, is set at Enabled. Sets the delay time before a character is repeated.
The options are: 250 (Default), 500, 750, 1000 millisecond.

Security Option

Allows you to set the security level of the system.
The options are: Setup (Default), System.

PCI/VGA Palette Snoop

Set this feature to be enabled if any ISA adapter card installed in the system requires the VGA palette snoop function.
The options are: Disabled (Default), Enabled.

OS Select For DRAM > 64MB

If your operating system (OS) is OS/2, select the option OS2. Otherwise, stay with the default setting Non-OS2.
The options are: Non-OS2 (Default), OS2.

HDD S.M.A.R.T. Capability

S.M.A.R.T. stands for Self-Monitoring and Analysis Reporting Technology which allows your hard disk drive to report any read/write errors and issues a warning with LDCM installed.
The options are: Disabled (Default); Enabled.

Chapter 3
BIOS Setup

Report No FDD For WIN 95

When the field under the Standard CMOS Setup Menu for Drive A and/or Drive B is set at None, users must set this field is set at Yes for it to function properly. Otherwise, set at No, even if field for Drive A and/or Drive B is set at None, system will still detect and recognize of a floppy drive(s).

The options are: Yes (Default), No.

Video BIOS Shadow

Allows the BIOS to copy the video ROM code of the add-on video card to the system memory for faster access.

The options are: Enabled (Default), Disabled.

BIOS Guardian

It allows the system to prevent computer viruses. Users will need to disable it to update BIOS.

The options are: Enabled (Default), Disabled.

Chipset Features Setup

```
            ROM PCI/ISA BIOS (2A6LJF09)
              CHIPSET FEATURES SETUP
                AWARD SOFTWARE, INC.

Bank 0/1 DRAM Timing  : SDRAM 10ns    CPU Warning Temperature  : Disabled
Bank 2/3 DRAM Timing  : SDRAM 10ns    Current System Temp.     :
Bank 4/5 DRAM Timing  : SDRAM 10ns    Current CPU1 Temperature :
Bank 6/7 DRAM Timing  : SDRAM 10ns    Current CPU   Fan Speed  :
SDRAM Cycle Length    : Auto          Current Chassis Fan Speed :
DRAM Clock            : Auto          Current Power  Fan Speed :
Memory Hole           : Disabled      IN0 (V)        IN2(V)    :
P2C/C2P Concurrency   : Enabled       + 5 V          +12 V     :
Fast R-W Turn Around  : Disabled      -12 V          - 5 V     : -
System BIOS Cacheable : Enabled       VBAT(V)        5SVB(V)   :
Video RAM Cacheable   : Disabled      Shutdown Temperature     : 70°C/ 158°F
AGP Aperture Size     : 64M
AGP-4X Mode           : Enabled
AGP Fast Write        : Disabled      Esc : Quit       ↑↓→← : Select Item
OnChip USB            : Enabled       F1  : Help       PU/PD/+/- : Modify
USB Keyboard Support  : Disabled      F5  : Old Values   (Shift)F2  : Color
                                      F6  : Load BIOS Defaults
Auto Detect DIMM/PCI Clk : Enabled    F7  : Load Setup Defaults
Spread Spectrum       : Enabled
CPU Host/PCI Clock    : Default
```

Bank 0/1 DRAM Timing; Bank 2/3 DRAM Timing; Bank 4/5 DRAM Timing; Bank 6/7 DRAM Timing

This feature allows you to select the DRAM read/write speed.

The options are: SDRAM 10ns (Default), SDRAM 8ns, Normal, Medium, Fast, Turbo.

SDRAM Cycle Length

This item will function only when SDRAM DIMM/s are installed on the mainboard (BIOS auto detection). If the CAS latency of your SDRAM DIMM is 2, set it at 2 to enhance your system performance. If the CAS latency of your SDRAM DIMM is 3, stay with the default setting, 3.

The options are: Auto (Default), 3, 2.

DRAM Clock

The feature allows users to select the DRAM clock.

The options are: Auto (Default), HCLK-33M, HCLK+33M.

Memory Hole

When you install a Legacy ISA card, this feature allows you to select the memory hole's address range of the ISA cycle when the processor accesses the selected address area. Please read your card manual for detail information. When disabled, the memory hole at the 14MB (or 15MB) address will be treated as a DRAM cycle when the processor accesses the 14~16MB (or 15~16MB) address area.

The options are: 15M - 16M, Disabled (Default).

P2C/C2P Concurrency

This feature allows users to set PCI/AGP Master-to-CPU/ CPU-to-PCI/ AGP Slave concurrent.

The options are: Enabled (Default), Disabled.

Fast R-W Turnaround

It allows users to set DRAM fast read-to-write turn around.

The options are: Enabled, Disabled (Default).

Chapter 3
BIOS Setup

System BIOS Cacheable

When enabled, allows the ROM area F000H-FFFFH to be cacheable when cache controller is activated. The options are: Enabled (Default), Disabled.

Video RAM Cacheable

When enabled, allows the system to use the video RAM from cache RAM, instead of the slower DRAMs or ROMs.
The options are: Enabled, Disabled (Default).

AGP Aperture Size

It allows you to select the main memory frame size for AGP use.
The options are 4, 8, 16, 32, 64 (Default), 128MB.

AGP-4X Mode

This feature allows user to select the AGP mode be to 2x or 4x when an AGP add-in card installed. However, when set at Enabled and the AGP card only support 1x mode, the system will fall back 1x mode automatically.
The options are: Enabled (Default), Disabled.

AGP Fast Write

When enabled, this feature allows you to set AGP fast write made.
The options are: Enabled, Disabled (Default).

OnChip USB

When enabled, this feature allows you to use the onboard USB feature.
The options are: Enabled (Default), Disabled.

USB Keyboard Support

This feature will appear only if the above item Onchip USB is set at Enabled. Set this feature to Enabled to use a USB keyboard with your system.
The options are: Disabled (Default), Enabled.

Auto Detect DIMM/PCI Clk

Set this field at Enabled to allow auto detection of DIMM and PCI. If none detected, it will stop the clock of each DIMM and PCI.
The options are: Enabled (Default), Disabled.

Spread Spectrum

This feature is used to set the spread Spectrum to be center spread type or down spread type. The options are: Enabled (Default), Disabled.

CPU Host/PCI Clock (MHz)

Select *Default* or select a timing combination for the CPU and the PCI bus. When set to *Default*, BIOS uses the actual CPU and PCI bus clock values. The options are: Default (Default), 66.8/33.4 MHz, 75/37.5 MHz, 83.3/41.7 MHz, 90/30 MHz, 100/33.3 MHz, 105/35 MHz, 110/36.7 MHz, 112/37.3 MHz, 115/38.3 MHz, 120/40 MHz, 124/41.3 MHz, 124/31 MHz, 133/33.3MHz, 140/35 MHz, 150/37.5 MHz.

CPU Warning Temperature

This feature allows you to set the temperature to slow down the CPU clock frequency.
The options are: Disabled (Default), 50°C/122°F, 53°C/127°F, 56°C/133°F, 60°C/140°F, 63°C/145°F, 66°C/151°F, 70°C/158°F.

Current System Temp. / Current CPU Temperature / Current CPUFAN Speed / Current CHAFAN1/2 Speed / Current PWRFAN Speed / IN0(V): to IN2(V): / +5V: / +12V: / –12V: / –5V: / VBAT(V): / 5VSB(V):

These items allow end users and technicians to monitor data provided by the BIOS on this mainboard. It is not user-configurable.

Shutdown Temperature

When Windows 98 ACPI mode installed, this feature helps to shutdown the system when the system temperature is as high as the selected temperature to prevent from the overheat problem.
The options are: 60°c/140°F, 65°c/149°F, 70°c/158°F (Default), 75°c/167°F.

Chapter 3
BIOS Setup

3 - 9

Power Management Setup

```
ROM PCI/ISA BIOS (2A6LJF09)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management      : User Define      Primary INTR        : ON
PM Control by APM     : Yes              IRQ3   (COM 2)      : Primary
Video Off After       : Suspend          IRQ4   (COM 1)      : Primary
Video Off Method      : DPMS Support     IRQ5   (LPT  2)     : Primary
MODEM Use IRQ         : 3                IRQ6   (Floppy Disk) : Primary
Soft-Off by PWRBTN    : Instant-Off      IRQ7   (LPT  1)     : Primary
HDD Power Down        : Disable          IRQ8   (RTC  Alarm)  : Disabled
Doze Mode             : Disable          IRQ9   (IRQ2 Redir) : Secondary
Suspend Mode          : Disable          IRQ10  (Reserved)   : Secondary
VGA                   : OFF              IRQ11  (Reserved)   : Secondary
LPT & COM             : LPT/COM          IRQ12  (PS/2 Mouse) : Primary
HDD & FDD             : ON               IRQ13  (Coprocessor) : Primary
DMA/master            : OFF              IRQ14  (Hard Disk)   : Primary
Modem Ring Resume     : Enabled          IRQ15  (Reserved)    : Disabled
RTC Alarm Resume      : Disabled
                                         Esc : Quit        ↑↓→← : Select Item
Wake Up On LAN        : Enabled          F1  : Help         PU/PD/+/- : Modify
PowerOn by PCI Card   : Disabled         F5  : Old Values   (Shift)F2  : Color
                                         F6  : Load BIOS Defaults
                                         F7  : Load Setup Defaults
```

Power Management

This item allows you to adjust the power management features. Select
Disable for disabling global power management features. Select User De-
fine for configuring your own power management features. Min Saving
initiates all predefined timers in their minimum values. Max Saving, on the
other hand, initiates maximum values. The options are: User Define (De-
fault), Min Saving, Max Saving.

PM Control by APM

The option No allows the APM (Advanced Power Management) specifi-
cation be ignored. Selecting Yes will allow the BIOS wait for APM's prompt
before it enters Doze mode, Standby mode, or Suspend mode. If the APM
is installed, it will prompt the BIOS to set the system into power saving
mode when all tasks are done. The options are: No, Yes (Default).

Video Off After

It allows you to activate the video off feature for the display monitor power
management. The options are Suspend (Default), Doze, NA.

Video Off Method

The option *V/H SYNC+Blank* allows the BIOS to blank off screen display by turning off the V-Sync and H-Sync signals sent from add-on VGA card. *DPMS Support* allows the BIOS to blank off screen display by your add-on VGA card which supports DPMS (Display Power Management Signaling function). *Blank Screen* allows the BIOS to blank off screen display by turning off the red-green-blue signals.

The options are: V/H SYNC+Blank, DPMS Support (Default), Blank Screen.

MODEM Use IRQ

The feature allows users to select the IRQ# of the system that is the same IRQ# as the modem use. The settings are: NA, 3 (Default), 4, 5, 7, 9, 10, 11.

Soft-Off by PWR-BTTN

The selection Delay 4 Sec. will allow the system shut down after 4 seconds after the power button is pressed. The selection Instant-Off will allow the system shut down immediately once the power button is pressed.

The settings are: Delay 4 Sec, Instant-Off (Default).

HDD Power Down

The option lets the BIOS turn the HDD motor off when system is in Suspend mode. Selecting 1 Min..15 Min allows you define the HDD idle time before the HDD enters the Power Saving Mode.

The options 1 Min..15 Min will not work concurrently. When HDD is in the Power Saving Mode, any access to the HDD will wake the HDD up.

The options are: Disable (Default), 1 Min..15 Min.

Doze Mode

When disabled, the system will not enter Doze mode. The specified time option defines the idle time the system takes before it enters Doze mode.

The options are: Disable (Default), 10, 20, 30, 40 Sec, 1, 2, 4, 6, 8, 10, 20, 30, 40 Min, 1 Hour.

Suspend Mode

When disabled, the system will not enter Suspend mode. The specified time option defines the idle time the system takes before it enters Suspend mode. The options are: Disable (Default), 10, 20, 30, 40 Sec, 1, 2, 4, 6, 8, 10, 20, 30, 40 Min, 1 Hour.

**Chapter 3
BIOS Setup**

VGA

ON enables the power management timers when a no activity events is detected in the VGA. *OFF* disables the PM timer even if a no activity event is detected. The options are: OFF (Default), ON.

LPT & COM

LPT/COM enables the power management timers when a no activity event is detected in the LPT and COM ports. *LPT (COM)* enables the power management timers when a no activity event is detected in the LPT (COM) ports. *NONE* to disable the PM timer even if a no activity event is detected. The options are: LPT/COM (Default), LPT, COM, NONE.

HDD & FDD

ON will enable the power management timers when no activity event is detected in the hard drive and floppy drive. *OFF* disables the PM timer even if no activity event is detected. The options are: OFF, ON (Default).

DMA/master

To set this feature at ON activates that Power Management feautre (PM) wake-up event for the DMA or bus master (of the LAN card or/and SCSI card). The options are: OFF (Default), ON.

Modem Ring Resume

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state. The options are: Enabled (Default), Disabled.

RTC Alarm Resume

Enabled allows you to set the time the system will be turned on from the system power-off status. The options are: Enabled, Disabled (Default).

Date (of Month)

This feature allows you to set the day of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled. The options are: 0, 1..31.

Timer (hh:mm:ss)

If an ATX power supply is installed and when RTC Alarm Resume is Enabled, this feature allows you to set the time of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.
The options are: 7: 0: 0 (Default). hh (*hour*) - 0, 1, 2,.., 23; mm (*minute*) - 0, 1, 2,..,59; ss (*second*) - 0, 1, 2,..,59.

Wake Up On LAN

When set at Enabled, an input signal comes from the other client/server on the LAN awakes the system from a soft off state if connected over LAN. The options are Disabled (Default) or Enabled.

PowerOn by PCI Card

When set at Enabled, any PCI-PM event awakes the system from a PCI-PM controlled state.
The options are Disabled (Default) or Enabled.

Primary INTR

Whe the Primary interrupt (the Primary option in the featuer of IRQ# Activity) generates will make the Power Management feautre (PM) wake-up event on. If set at OFF, all the primary interrupt will not wake-up the systetm.
The options are: OFF, ON (Default).

IRQ# Activity

After the time period which you set at in Suspend Mode Feature, the system advances from Doze Mode to Suspend Mode in which the CPU clock stops and the screen display is off. At this moment, if the IRQ activity which is defined as Primary occurs, the system goes back to Full-on Mode directly.

If the IRQ activity which is defined as Secondary takes place, the system enters another low power state, Dream Mode, in which the system will act as Full-on Mode except that the screen display remains off until the corresponding IRQ handler finishes, then back to Suspend Mode.

The options of IRQ 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 are: Primary, Secondary, Disabled.

The default values of IRQ 8, 15 are: Disabled.

The default value of IRQ 3, 4, 5, 6, 7, 12, 13, 14 are: Primary.

The default value of IRQ 9, 10, 11 are: Secondary.

PNP/PCI Configuration

```
ROM PCI/ISA BIOS (2A6LJF09)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.

PNP OS Installed        : No          CPU to PCI Write Buffer  : Enabled
Resource Controlled By  : Auto        PCI Dynamic Bursting     : Enabled
Reset Configuration Data : Disabled   PCI Master 0 WS Write    : Enabled
                                      PCI Delay Transaction    : Disabled
                                      PCI#2 Access #1 Retry    : Disabled
                                      AGP Master 1 WS Write    : Disabled
                                      AGP Master 1 WS Read     : Disabled

                                      Assign IRQ For VGA  : Enabled
                                      Slot 1 Use IRQ No.  : Auto
                                      Slot 2 Use IRQ No.  : Auto
                                      Slot 3 Use IRQ No.  : Auto
                                      Slot 4 Use IRQ No.  : Auto
                                      Slot 5 Use IRQ No.  : Auto

                                      Esc : Quit        ↑↓→← : Select Item
                                      F1  : Help        PU/PD/+/- : Modify
                                      F5  : Old Values  (Shift)F2 : Color
                                      F6  : Load BIOS Defaults
                                      F7  : Load Setup Defaults
```

PNP OS Installed

If your operating system is a Plug-and-Play one, such as Windows NT, Windows 95, select Yes. The options are: No (Default), Yes.

Resources Controlled By

If set at Auto, the BIOS arranges all system resources. If there exists conflict, select Manual. The options are: Auto (Default), Manual.

The manual options of **IRQ- / DMA- assigned to** are: Legacy ISA, PCI/ISA PnP (Default).

Reset Configuration Data

When enabled, allows the system to clear the last BIOS configuration data and reset with the default data.

The options are: Enabled, Disabled (Default).

CPU to PCI Write Buffer

When enabled, allows data and address access to the internal buffer of the system controller; so the processor can be released from the waiting state. The options are: Enabled (Default), Disabled.

PCI Dynamic Bursting

When enabled, the PCI controller allows Bursting PCI transfer if the con-
secutive PCI cycles come with the address falling in same 1KB space. This
improves the PCI bus throughput.
The options are: Enabled (Default), Disabled.

PCI Master 0 WS Write

When enabled, allows a zero-wait-state-cycle delay when the PCI master
drive writes data to DRAM. The options are: Enabled (Default), Disabled.

PCI Delay Transaction

Enable this feature to abort the current CPI master cycle and to accept the
new PCI master request, it reaccepts the original PCI master and returns
the PCI data phase to the original PCI master.
The options are: Disabled (Default), Enabled.

PCI#2 Access #1 Retry

When enabled, the AGP (PCI#2) access to PCI (PCI#1) will be retried until
the maximum count. The options are: Disabled (Default); Enabled.

AGP Master 1 WS Write

When enabled, the AGP bus master write access to DRAMs will add one
wait-state cycle. The options are: Enabled (Default); Disabled.

AGP Master 1 WS Read

When enabled, the AGP bus master read access to the DRAMs will add
one wait-state cycle. The options are: Disabled (Default); Enabled.

Assign IRQ For VGA

If your PCI VGA card does not need an IRQ, select Disabled; therefore, an
IRQ can be released for the system use.
The options are: Enabled (Default), Disabled.

Slot 1/2/3/4/5 Use IRQ No.

Some PCI devices would need to use an IRQ on the PCI bus. Selecting
Auto allows the PCI controller to automatically allocate an IRQ.
The options are: Auto (Default); 3, 4, 5; 7; 9, 10, 11, 12; 14; 15.

Load BIOS Defaults

```
                    ROM PCI/ISA BIOS (2A5LEF0A)
                        CMOS SETUP UTILITY
                      AWARD SOFTWARE,  INC.

   STANDARD CMOS SETUP                INTEGRATED PERIPERALS

   BIOS FEATURES SETUP                SUPERVISOR PASSWORD

   CHIPSET FEATURES SETUP             USER PASSWORD

   POWER MANAGEMENT SETUP             IDE HDD AUTO DETECTION

   PNP/PCI CONFIGURATION SETUP        SAVE & EXIT SETUP
                         Load BIOS Defaults (Y/N)? N
   LOAD BIOS DEFAULTS                          UT SAVING

   LOAD SETUP DEFAULTS


   Esc :  Quit                  ↑ ↓ → ←   :  Select Item
   F10 :  Save & Exit Setup     (Shift)F2  :  Change Color

          Load BIOS Defaults except Standard CMOS SETUP
```

BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance. The OEM manufacturer may change the defaults through MODBIN before the binary image burns into the ROM.

Load Setup Defaults

```
                    ROM PCI/ISA BIOS (2A5LEF0A)
                        CMOS SETUP UTILITY
                      AWARD SOFTWARE,  INC.

   STANDARD CMOS SETUP                INTEGRATED PERIPERALS

   BIOS FEATURES SETUP                SUPERVISOR PASSWORD

   CHIPSET FEATURES SETUP             USER PASSWORD

   POWER MANAGEMENT SETUP             IDE HDD AUTO DETECTION

   PNP/PCI CONFIGURATION SETUP        SAVE & EXIT SETUP
                      Load SETUP Defaults (Y/N)? N
   LOAD BIOS DEFAULTS                         UT SAVING

   LOAD SETUP DEFAULTS


   Esc :  Quit                  ↑ ↓ → ←   :  Select Item
   F10 :  Save & Exit Setup     (Shift)F2  :  Change Color

          Load Setup Defaults except Standard CMOS SETUP
```

Selecting *this* field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

Integrated Peripherals

```
                    ROM PCI/ISA BIOS (2A6LJF09)
                      INTEGRATED PERIPHERALS
                       AWARD SOFTWARE, INC.

OnChip IDE Channel0      : Enabled      Onboard Serial Port 1    : 3F8/IRQ4
OnChip IDE Channel1      : Enabled      Onboard Serial Port 2    :
IDE Prefetch Mode        : Enabled      UART Mode Select         :
IDE HDD Block Mode       : Enabled      UART2 Duplex Mode        : Half
IDE Treshhold            : Enabled      RxD, TxD Active          : Hi, Lo
Primary Master    PIO  : Auto           IR Transmission delay    : Enabled
Primary Slave     PIO  : Auto           Onboard Parallel Port    :
Secondary Master  PIO  : Auto           Parallel Port Mode       :
Secondary Slave   PIO  : Auto           ECP Mode Use DMA         : 3
Primary Master    UDMA : Auto           EPP Mode Select          : EPP1.7
Primary Slave     UDMA : Auto           PWRON After PWR-Fail     : Former-Sts
Secondary Master UDMA : Auto
Secondary Slave   UDMA : Auto
Init Display First       : PCI Slot
                                        Esc : Quit        ↑↓→← : Select Item
POWER ON Function        :              F1  : Help        PU/PD/+/- : Modify
KB Power ON Password     : Enter        F5  : Old Values  (Shift)F2  : Color
Hot Key Power ON         : Ctrl-F1      F6  : Load BIOS Defaults
KBC Input clock          : 8 MHz        F7  : Load Setup Defaults
Onboard FDC Controller   : Enabled
```

OnChip IDE Channel0

When enabled, allows you to use the onboard primary PCI IDE. If a hard disk controller card is used, set at Disabled.
The options are: Enabled (Default), Disabled.

OnChip IDE Channel1

When enabled, allows you to use the onboard secondary PCI IDE. If a hard disk controller card is used, set at Disabled.
The options are: Enabled (Default), Disabled.

IDE Prefetch Mode

When set at Enabled, it allows data to be posted to and prefetched from the primary IDE data ports. Data prefetching is initiated when a data port read occurs. The read prefetch eliments latency to the IDE data ports and allows them to be performed back to back for the highest possible PIO data transfer rates. The first data prot read of a sector is called the demand read. Subsequent data port reads from the sector are called prefetch reads. The demand read and all prefetch reads must be of the same size (16 or 32 bits). The options are: Enabled (Default), Disabled.

IDE HDD Block Mode

When enabled, the system executes read/write requests to hard disk in block mode. The options are: Enabled (Default), Disabled.

IDE Treshhold

When disabled, the IDE data transfer starts immediately if FIFO is not empty.
The options are: Enabled (Default), Disabled.

Primary Master PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (master) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Primary Slave PIO

Allows an automatic or a manual configuration of the PCI primary IDE hard disk (slave) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Secondary Master PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (master) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Secondary Slave PIO

Allows an automatic or a manual configuration of the PCI secondary IDE hard disk (slave) mode. The options are: Auto (Default), Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

Primary Master UDMA

Allows you to select the first PCI IDE channel of the first master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disable.

IDE Primary Slave UDMA

Allows you to select the first PCI IDE channel of the first slave hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disable.

IDE Secondary Master UDMA

Allows you to select the second PCI IDE channel of the secondary master hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disable.

IDE Secondary Slave UDMA

Allows you to select the second PCI IDE channel of the secondary slave hard disk mode or to detect it by the BIOS if the hard disk supports UDMA (Ultra DMA, faster than DMA). The options are: Auto (Default), Disable.

Init Display First

When you install an AGP VGA card and a PCI VGA card on the board, this feature allows you to select the first initiation of the monitor display from which card. The options are: PCI Slot (Default), AGP.

POWER ON Function

Allows you to set the method for powering-on the system. The default option of *BUTTON-ONLY* allows system power-on using the standard system case mounted ON/OFF switch. The option *Password* allows you to set up to 5 alphanumeric characters to power-on the system. The option *Hot KEY* allows you to set which of the 12 keyboard function keys (**F1** to **F12**) in combination with the **Ctrl** key to power-on the system. The option *Mouse Click* allows you to use the PS/2 mouse to power-on the system by double-clicking on the mouse button. The options are: Button Only (Default); Password; Hot KEY; Mouse Right, Mouse Left.

> **NOTE:** When using Password, Hot KEY, or Mouse Click options for the item POWER ON Function will render the power button on the system case ineffective. In case user forgets password or hot key setting, use the clear password switch or jumper to clear RTC data (refer to section about clear password on Chapter 2). Another method is to unplug system power from the AC power outlet and then re-insert the power cord. Previous password and hot key settings will be disabled allowing user to set a new one.

KB Power ON Password

Allows you to set up to 5 alphanumeric characters use in powering-on the system. To set password, set the above item POWER ON Function to *Password*, then using the keyboard's down arrow key to move cursor to this item KB Power ON Password and press the <**Enter**> key. A box will appear asking you to input the password desired to power-on the system.

Hot Key power ON

Allows you to set which of the 12 keyboard function keys (**F1** to **F12**) in combination with the **Ctrl** key will be used to power-on the system. The options are: *Ctrl-F1* (default) up to *Ctrl-F12*.

KBC input clock

This feature allows you to select different KBC input clocks which your keyboard actually supported. Please read your keyboard manual also for more information. The options are: 6, 8 (Default), 12, 16 MHz.

Onboard FDC Controller

When enabled, the floppy diskette drive (FDD) controller is activated. The options are: Enabled (Default), Disabled.

Onboard Serial Port 1

If the serial port 1 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are: 3F8/IRQ4 (Default), 3E8/IRQ4, 2F8/IRQ3, 2E8/IRQ3, Disabled.

Onboard Serial Port 2

If the serial port 2 uses the onboard I/O controller, you can modify your serial port parameters. If an I/O card needs to be installed, COM3 and COM4 may be needed. The options are: 2F8/IRQ3 (Default), 3E8/IRQ4, 2E8/IRQ3, 3F8/IRQ4, Disabled.

UART Mode Select

Allows you to select the IR modes if the serial port 2 is used as an IR port. Set at Standard, if you use COM2 as the serial port as the serial port, instead as an IR port. The options are: HPSIR, ASKIR, Normal (Default).

UART2 Duplex Mode

Allows you to select the IR modes.
The options are: Half (Default), Full.

RxD , TxD Active

This feature is available only if the item, UART 2 Mode, is set at ASKIR or HPSIR. The feature allows you to select the active signals of the reception end and the transmission end. This is for technician use only.

The options are: Hi, Lo (Default); Hi, Hi; Lo, Hi; Lo, Lo.

IR Transmission Delay

When Enabled, the transmission delays 4 characters-time (40 bit-time) if SIR is changed from RX mode to TX mode. When Disabled, no transmission delay if SIR is changed from RX mode to TX mode.

The options are: Enabled (Default), Disabled.

Onboard Parallel Port

Allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller.

The options are: 378/IRQ7 (Default), 278/IRQ5, 3BC/IRQ7, Disabled.

Parallel Port Mode

Allows you to connect with an advanced printer via the port mode it supports.

The options are: SPP (Default), EPP, ECP, ECP+EPP.

ECP Mode Use DMA

This feature allows you to select Direct Memory Access (DMA) channel if the ECP mode selected. The options are: 3 (Default), 1.

EPP Mode Select

This feature allows you to select the EPP type version.

The options are: EPP1.7 (Default), EPP1.9.

PWRON After PWR-Fail

When the system is shut down owing to the power failure, the system will not be back to power on by itself. This feature allows you to set the system back to which power status of the system when the system power is resumed. The options are Former-Sts (Default), On, or Off.

Supervisor/User Password

To enable the Supervisor/User passwords, select the item from the Standard CMOS Setup. You will be prompted to create your own password. Type your password up to eight characters and press Enter. You will be asked to confirm the password. Type the password again and press Enter. To disable password, press Enter twice when you are prompted to enter a password. A message appears, confirming the password is disabled.

Under the BIOS Feature Setup, if *Setup* is selected under the Security Option field and the Supervisor/User Password is enabled, you will be prompted password every time you try to enter the CMOS Setup Utility. If *System* is selected and the Supervisor/User Password is enabled, you will be requested to enter the Password every time when you reboot the system or enter the CMOS Setup utility.

IDE HDD Auto Detection

The IDE Hard Disk Drive Auto Detection feature automatically configures your new hard disk. Use it for a quick configuration of new hard drives. This feature allows you to set the parameters of up to four IDE HDDs. The option with **(Y)** are recommended by the system BIOS. You may also keys in your own parameters instead of setting by the system BIOS. After all settings, press Esc key to return the main menu. For confirmation, enter the Standard CMOS Setup feature.

Save and Exit Setup

After you have made changes under Setup, press Esc to return to the main menu. Move cursor to Save and Exit Setup or press F10 and then press Y to change the CMOS Setup. If you did not change anything, press Esc again or move cursor to Exit Without Saving and press Y to retain the Setup settings. The following message will appear at the center of the screen to allow you to save data to CMOS and exit the setup utility: **SAVE to CMOS and EXIT (Y/N)?**

Exit without Saving

If you select this feature, the following message will appear at the center of the screen to allow you to exit the setup utility without saving CMOS modifications: **Quit Without Saving (Y/N)?**