KB-6130

MOTHERBOARD MANUAL

DOC No.　: 16599

Rev.　　　: A0

Date　　　: 8, 1998

Part No.　: 25-10894-

Table of Contents

Installation Procedures

The motherboard has several user-adjustable jumpers/switches on the board that allow you to configure your system to suit your requirements. This chapter contains information on the various hardware settings on your motherboard.

To set up your computer, you should follow these installation steps:

■ Step 1 - Set system jumpers/switches

■ Step 2 - Install memory modules

■ Step 3 - Install the CPU

■ Step 4 - Install expansion cards

■ Step 5 - Connect devices

■ Step 6 - Set up BIOS feature

■ Step 7 - Set up software utilities

CAUTION: If you use an electric drill to install this motherboard on your chassis, please wear a static wrist strap. The recommended electric drill torque is from 5.0 to 8.0 kg/cm to avoid damaging the chips' pins.

Clear CMOS: SW1-5

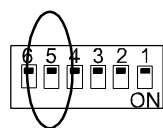The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data: (1). Turn off your computer, (2). Enable this feature by setting the SW1-5 to On position, (3). Turn on your computer, (4). Turn off the computer, (5). Disable the Clear CMOS feature, (6). Turn on the computer. (7). Hold down the Delete key when boots and enter BIOS Setup to re-enter user preferences.
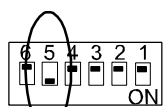
Enable (Clear CMOS)

Disable (Default)
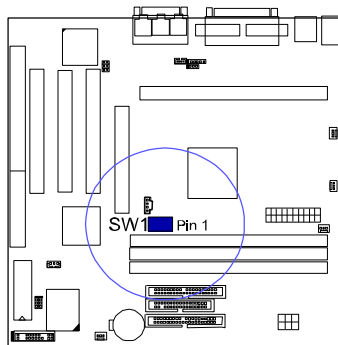
Clear Password: SW1-6

This switch allows you to enable or to disable the password settings. You may need to adjust switch if you forget your password. To clear the password setting: (1). Turn off your computer, (2). Enable this feature by setting the SW1-6 to On position, (3). Turn on your computer, (4). Turn off your computer, (5). Disable the Clear Password feature by setting the SW1-6 to Off position, (6). Turn on your computer, (7). Hold down the Delete key when boots and enter BIOS Setup to re-enter user preferences.
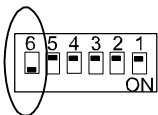
Enable
(Clear Password)
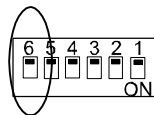
Disable (Default)

Flash ROM Type Selection: EP1, EP2

These two jumpers allow you to configure the type of flash ROM chip. This jumper setting is correct by manufactory default. If you want to know the flash ROM type installed on this motherboard, remove the sticker from the chip to see its type.
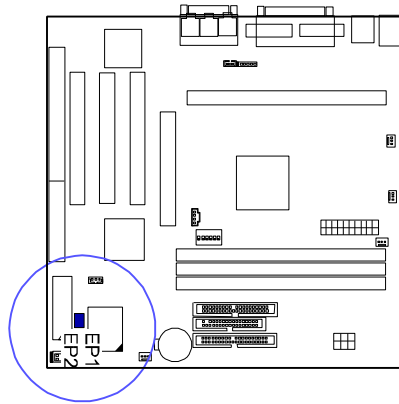
2MB:

MXIC 28F2000TPC

SST 29EE020
ATMEL AT29C020
Winbond W29C020

AMD AM29F002NT

CPU Internal Frequency Selection: SW1-1, SW1-2, SW1-3, SW1-4

These four switches are used to decide the internal frequency of the CPU.
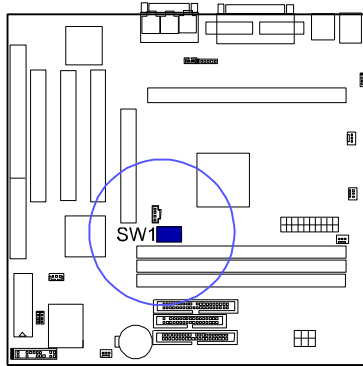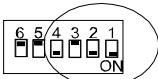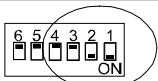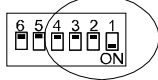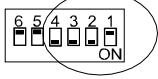
Ratio	Bus Frequency = 100MHz	Bus Frequency = 66MHz	Switches Settings
3.5 x	350MHz	233MHz	6 5 4 3 2 1 ON
4 x	400MHz	266MHz	6 5 4 3 2 1 ON
4.5 x	450MHz	300MHz	6 5 4 3 2 1 ON
5 x		333MHz	6 5 4 3 2 1 ON

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(25-10894-30 / Jan. 1999)

The mainboard had been improved to support more CPU frequency selections since this manual was printed. The new table below is used to replace the table on Page 19.

Bus Frequency = 100MHz	Bus Frequency = 66MHz	Switches Settings
350MHz	233MHz	
400MHz	266MHz	
450MHz	300MHz	
500MHz	333MHz	
550MHz	366MHz	
600MHz	400MHz	

BIOS Setup

The motherboard comes with an Award BIOS chip that contains the ROM Setup information of your system. This chip serves as an interface between the processor and the rest of the motherboard's components. This chapter 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 (2A69KF0D)
                       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     F5 : Menu in BIOS    ↑ ↓ → ←  :  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 motherboard 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. The **F5:**

Menu in BIOS is a convenient feature for users to refer the board settings in this BIOS top level menu.

Standard CMOS Setup

```
                    ROM PCI/ISA BIOS (2A69KF0D)
                        STANDARD CMOS SETUP
                       AWARD SOFTWARE, INC.

  Date (mm:dd:yy) : Mon, Jul 13 1998
  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
  Halt On :  All Errors                 Total Memory: 32768K
  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 the 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 Auto 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.

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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.

Floppy 3 Mode Support

This feature allows you to install a 3.5" (1.2MB) NEC 9801 floppy drive.

The options are: Disabled (Default), Drive A.

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 (2A69KF0D)
                         BIOS FEATURES SETUP
                       AWARD SOFTWARE,  INC.

 Anti-Virus Protection        : Enabled    Video    BIOS Shadow    : Enabled
 CPU Internal Cache           : Enabled
 External Cache               : Enabled
 CPU L2 Cache ECC Checking    : Enabled
 Quick Power On Self Test     : Enabled
 Boot From LAN First          : Disabled
 Boot Sequence                : A, C, SCSI
 Swap Floppy Drive            : Disabled
 Boot Up Floppy Seek          : Disabled
 Boot Up NumLock Status       : Off
 Gate A20 Option              : Fast
 Typematic Rate Setting       : Disabled
 Typematic Rate (Chars/Sec)   : 6
 Typematic Delay (Msec)       : 250
 Security Option              : Setup
 PCI/VGA Pallete Snoop        : Disabled    Esc: Quit        ↑↓→← : Select Item
 OS Select For DRAM > 64MB    : Non-OS2     F1  : Help        PU/PD/+/- : Modify
 HDD S.M.A.R.T. capablity     : Disabled    F5  : Old Values  (Shift)F2  : Color
 Report No FDD For WIN 95     : No          F6  : Load BIOS Defaults
                                            F7  : Load Setup Defaults
```

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.
The options are: Enabled (Default), Disabled.

CPU L2 Cache ECC Checking

The default setting, Enabled, activates the CPU L2 cache's **Error Check & Correction** feature.
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, Disabled (Default).

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. With the NumLock enabled, numerical keypad on the keyboard can be used right after bootup. The options are: On (Default), Off.

Gate A20 Option

Gate A20 refers to the way the system addresses memory above 1 MB (extended memory). When set to Fast, the system chipset controls Gate A20. When set to Normal, a pin in the keyboard controller controls Gate A20. Setting Gate A20 to Fast improves system speed, particularly with OS/2 and Windows.
The options are: Fast (Default), Normal.

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. When this item is enabled, you may change the typematic repeat rate.
The options are: Disabled (Default), Enabled.

Typematic Rate (Chars/Sec)

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)

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 Pallete Snoop

This feature must be set at Enabled if any ISA adapter card installed in the computer requires VGA pallete Snoop.
The options are: Disabled (Default), Enabled.

OS Select For DRAM > 64MB

Select OS2 only if you are running OS/2 operating system with greater than 64 MB of RAM on your system.
The options are: Non-OS2 (Default), OS2.

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

"S.M.A.R.T" is the abbrevation of "Self-Mointoring, Analysis and Reproting Technology". To enable it will assist you in preventing some (but not all) system down time due to hard disk drive failure. The harddisk must be S.M.A.R.T-comptiblel in order to use this feature. The options are: Enabled, Disabled (Default).

Report No FDD For WIN 95

When the features of **Drive A** set at None. This feature BIOS will not report to the opeating system Windows 95 or Windows 98 if set at Yes. If set at No, the BIOS will report to the the opeating system Windows 95 or Windows 98 the message 5.24" floppy for Win 95". The options are: Yes, No (Default).

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.

Chipset Features Setup

```
                    ROM PCI/ISA BIOS (2A69KF0D)
                     CHIPSET FEATURES SETUP
                      AWARD SOFTWARE, INC.

 SDRAM RAS-to-CAS Delay      : 3        Spread Spectrum Modulated   : Disabled
 SDRAM RAS Precharge Time    : 3        CPU Host/PCI Clock          : Default
 SDRAM CAS latency Time      : 3        CPU Warning Temperature     : Disabled
 SDRAM Precharge Control     : Disabled Current System Temp.        :
 DRAM Data Integrity Mode    : Non-ECC  Current CPU Temperature     :
 System BIOS Cacheable       : Disabled Current CPUFAN Speed        :
 Video BIOS Cacheable        : Disabled Current CHAFAN1/2 Speed     :
 Video RAM Cacheable         : Disabled Currnet PWRFAN Speed        :
 8 Bit I/O Recovery Time     : 1        IN0 (V)    :      IN2 (V)   :
 16 Bit I/O Recovery Time    : 1        + 5 V      :      +12 V     :
 Memory Hole At 15M-16M      : Disabled -12 V      :       - 5 V    :
 Passive Release             : Enabled  VBAT(V)    :      5VSB(V)   :
 Delayed Transaction         : Disabled Shutdown Temperature        : 60°C/140°F
 AGP Aperture Size (MB)      : 64
                                        Esc : Quit      ↑↓→← : Select Item
                                        F1  : Help          PU/PD/+/- : Modify
                                        F5  : Old Values  (Shift)F2   : Color
                                        F6  : Load BIOS Defaults
                                        F7  : Load Setup Defaults
```

SDRAM RAS-to-CAS Delay

This feature allows you to define the delay time that from the SDRAM RAS# active to CAS# active.
The settings are 2 Clocks or 3 Clocks. The default setting is 3 Clocks, depends on the CPU frequency and DRAM type.

SDRAM RAS Precharge Time

Allows you to select the DRAM RAS# Precharge Time (unit: clock).

The options are: 4, 3 (Default).

SDRAM CAS lattency Time

If any SDRAM DIMM is installed, this feature allows you to select the CAS Latency. The options are: 3 (Default), 2.

DRAM Data Integrity Mode

This feature provides software configurablity of selecting between ECC (ECC generation and checking/correction) mode or non-ECC mode of operation of the DRAM interface.

The options are: Non-ECC (Default), ECC.

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 options are: Disabled (Default), Enabled.

Video RAM Cacheable

Selecting Enabled allows caching of the video BIOS ROM at C0000h to C7FFFh, resulting in better video performance. However, if any program writes to this memory area, a memory access error may result.

The options are: Enabled, Disabled (Default).

8 Bit I/O Recovery Time

Allows you to set the 8-bit ISA I/O recovery time.

The options are: 1 (Default), 2, 3, 4, 5, 6, 7, NA, 8. Unit: Bus clock.

16 Bit I/O Recovery Time

Allows you to set the 16-bit ISA I/O recovery time.

The options are: 1 (Default), 2, 3, NA, 4. Unit: Bus clock.

Memory Hole At 15M-16M

When enabled, the memory hole at the 15MB address will be relocated to the 15~16MB address range of the ISA or PCI cycle when the processor accesses the 15~16MB address area.

When disabled, the memory hole at the 15MB address will be treated as a DRAM cycle when the processor accesses the 15~16MB address area.

The options are: Enabled, Disabled (Default).

Passive Release

Set this option to Enabled to enable passive release for the Intel PIIX4E chip. The options are: Enabled (Default), Disabled.

Delayed Transaction

Enable this feature to abort the current PCI 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. It will enhance the system performance. The options are: Enabled, Disabled (Default).

AGP Aperture Size (MB)

It allows you to select the main memory frame size fo AGP use.

The options are 4, 8, 16, 32, 64 (Default), 128, 256MB.

Spread Spectrum Modulated

This feature is used to set the spread Spectrum to be center spread type or down spread type.

The options are: Enabled, Disabled (Default).

CPU Host/PCI Clock

This feature allows you to set the CPU/PCI clock frequency.

The options are: Default (Default), 63/34MHz, 75/37MHz, 83/41MHz, 66/33MHz, 103/34MHz, 112/33MHz, 133/44MHz, 100/33MHz.

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.

This field displays the current system temperature, if your computer contains a monitoring system.

Current CPU Temperature

If your CPU internal frequency is 333MHz or above, it supports the internal thermal diode. This feature will report the CPU internal temperature.

Current CPUFAN Speed

These fields display the current speed of the CPU fan, if your computer contains a monitoring system.

Current CHAFAN1/2 Speed

These fields display the current speed of he chassis fan CHA_FAN1/2, if your computer contains a monitoring system.

Current PWRFAN Speed

These fields display the current speed of the fan of the power supply PWR_FAN, if your computer contains a monitoring system.

IN0-IN2 (V)

The IN0 is Vcore, the CPU Core Voltage. The IN2 is 3.3V
These fields display the current voltage of up to seven voltage input lines, if your computer contains a monitoring system.

+5V,;+12V; -12V; -5V; VBAT(V); 5VSB(V);

This fields display the power supply voltages.

Shutdown Temperature

When Windows 98 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: $60^{o}c/140^{o}F$ (Default), $65^{o}c/149^{o}F$, $70^{o}c/158^{o}F$, $75^{o}c/167^{o}F$.

Power Management Setup

```
                    ROM PCI/ISA BIOS (2A69KF0D)
                    POWER MANAGEMENT SETUP
                    AWARD SOFTWARE,   INC.

Power Management       : User Define      ** Reload Global Timer Events **
PM Control by APM      : Yes          IRQ[3-7, 9-15], NMI    : Disabled
Video Off Method       : DPMS         Primary IDE 0          : Disabled
Video Off After        : Suspend      Primary IDE 1          : Disabled
MODEM Use IRQ          : 3            Secondary IDE 0        : Disabled
Doze Mode              : Disable      Secondary IDE 1        : Disabled
Standby Mode           : Disable      Floppy Disk            : Disabled
Suspend Mode           : Disable      Serial Port            : Enabled
HDD Power Down         : Disable      Parallel Port          : Disabled
Throttle Duty Cycle    : 62.5%
PCI/VGA Act-Monitor    : Disabled
Soft-Off by PWR-BTTN   : Delay 4 Sec.
PWRON After PWR-Fail   : Former-Sts
CPUFAN Off In Suspend  : Enabled
Resume by Ring         : Enabled
Resume by Alarm        : Disabled     Esc: Quit        ↑↓→← : Select Item
                                      F1  : Help      PU/PD/+/- : Modify
Wake Up On LAN         : Enabled      F5  : Old Values  (Shift)F2   : Color
IRQ 8 Break Suspend    : Disabled     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 Defined 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: Disabled, User Defined (Default), MIN Saving, MAX Saving.

PM Control by APM

The option No allows the BIOS to ignore the APM (Advanced Power Management) specification. 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 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 Supported 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 (Default), Blank Screen.

Video Off After

This feature allows you to select under which mode to power off your monitor. The options are: Standby, Doze, NA, Suspend (Default).

MODEM Use IRQ

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

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), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

Standby Mode

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

The options are: Disable (Default), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

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), 1, 2, 4, 8, 12, 20, 30, 40 Min, 1 Hr.

HDD Power Down

Selecting Disable will turn off the hard disk drive (HDD) motor. Selecting 1 Min..15 Min allows you define the HDD idle time before the HDD enters the Power Saving Mode. The option When Suspend lets the BIOS turn the HDD motor off when system is in Suspend mode.

The options 1 Min..15 Min and When Suspend 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, When Suspend.

Throttle Duty Cycle

This option specifies the speed at which the system clock runs in power saving modes. The settings are expressed as a ratio between the normal clock speed and the power down clock speed.

The settings are 12.5 %, 25 %, 37.5 %, 50 %, 62.5 % (Default), 75%.

PCI/VGA Act-Monitor

Enable this feature to check if your PCI/VGA monitor can enter power-saving modes. The options are: Disabled (Default), Enabled.

Soft-Off by PWR-BTTN

This feature is designed for the case when you use an ATX power supply. 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. (Default) or Instant-Off.

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.

CPUFAN Off In Suspend

Enabling this feature will allow the CPU fan stop running when the system enters Suspend mode.

The options are Disabled or Enabled (Default).

Resume by Ring

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 Disabled or Enabled (Default).

Resume by Alarm

When set at Enabled, it allows you to set the time when the system to be turned on from the system power-off status.

The settings are Disabled (Default) or Enabled.

Date (of Month) Alarm

If Resume by Ring is set at Enabled , 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 (Default), 1..31.

Time (hh:mm:ss) Alarm

If Resume by Ring is set at 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 or Enabled (Default).

IRQ 8 Break Suspend

Enable this feature will keep the system not in the Suspend mode when IRQ8 is active.

The settings are Disabled (Default) or Enabled.

IRQ[3-7,9-15], NMI

Enable this feature will keep the system not in the Suspend mode when IRQ3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15 is active.

The options are Disabled (Default) or Enabled.

Primary IDE 0, Primary IDE 1, Secondary IDE 0, Secondary IDE 1, Floppy Disk, Serial Port, Parallel Port

Enable this feature will keep the system not in the Suspend mode when the selected device is active. The settings are Disabled or Enabled. The default setting is Disabled, except Serial Port.

PNP/PCI Configuration

```
                    ROM PCI/ISA BIOS (2A69KF0D)
                        PNP/PCI CONFIGURATION
                        AWARD SOFTWARE, INC.

 PNP OS Installed          : No        Assign IRQ For VGA    : Enabled
 Resources Controlled By   : Auto      Slot 1 Use IRQ No.    : Auto
 Reset Configuration Data  : Disabled  Slot 2 Use IRQ No.    : Auto
                                       Slot 3 Use IRQ No.    : Auto
                                       Audio 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 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.

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).

Assign IRQ For VGA

If your PCI VGA card does not need an IRQ, select Disabled to release an IRQ for system use.
The options are: Enabled, Disabled (Default).

Slot 1/2/3 Use IRQ No.

This feature allows you to assign the PCI IRQ numbers for PCI slots. Selecting the default, AUTO, allows the PCI controller to automatically allocate the IRQ numbers.
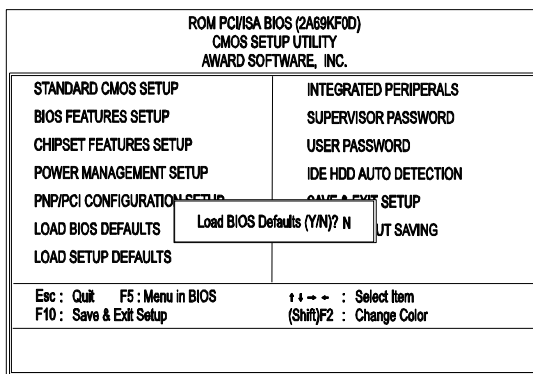
The options are: Auto (Default), 3, 4, 5, 7, 9, 10, 11, 12, 14, 15.

Audio Use IRQ No.

This feature allows you to assign the PCI IRQ numbers for onboard PCI audio device. Selecting the default, AUTO, allows the PCI controller to automatically allocate the IRQ numbers.
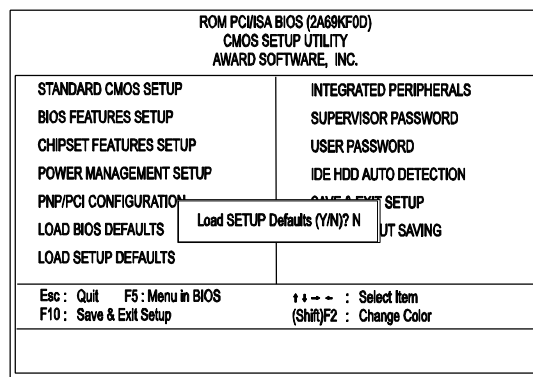
The options are: Auto (Default), 3, 4, 5, 7, 9, 10, 11, 12, 14, 15.

Load BIOS Defaults

```
                 ROM PCI/ISA BIOS (2A69KF0D)
                      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     │                     SETUP  │
  │  LOAD BIOS DEFAULTS  Load BIOS Defaults (Y/N)? N   UT SAVING  │
  │  LOAD SETUP DEFAULTS            │                             │
  ├────────────────────────────────┴────────────────────────────┤
  │  Esc :  Quit     F5 : Menu in BIOS      ↑ ↓ → ←  :  Select Item │
  │  F10 :  Save & Exit Setup               (Shift)F2  :  Change Color │
  │                                                               │
  └───────────────────────────────────────────────────────────────┘
```

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 (2A69KF0D)
                      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          │                     SETUP  │
  │  LOAD BIOS DEFAULTS  Load SETUP Defaults (Y/N)? N   UT SAVING │
  │  LOAD SETUP DEFAULTS            │                             │
  ├────────────────────────────────┴────────────────────────────┤
  │  Esc :  Quit     F5 : Menu in BIOS      ↑ ↓ → ←  :  Select Item │
  │  F10 :  Save & Exit Setup               (Shift)F2  :  Change Color │
  │                                                               │
  └───────────────────────────────────────────────────────────────┘
```

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

Integrated Peripherals

```
                    ROM PCI/ISA BIOS (2A69KF0D)
                      INTEGRATED PERIPHERALS
                       AWARD SOFTWARE,  INC.

IDE HDD Block Mode          : Enabled    Onboard Parallel Port    : 378/IRQ7
IDE Primary Master PIO      : Auto       Parallel Port Mode       : Normal
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
On-Chip Primary    PCI IDE  : Enabled
On-Chip Secondary  PCI IDE  : Enabled
USB Keyboard Support        : Disabled
Init Display First          : PCI Slot
                                        Esc : Quit           ↑↓→← : Select Item
Onboard FDC Controller      : Enabled   F1  : Help         PU/PD/+/- : Modify
Onboard Serial Port 1       : 3F8/IRQ4  F5  : Old Values   (Shift)F2  : Color
Onboard Serial Port 2       : 2F8/IRQ3  F6  : Load BIOS Defaults
UART2 Mode                  : Standard  F7  : Load Setup Defaults
```

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 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.

IDE 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.

IDE 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.

IDE 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.

IDE 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), Disabled.

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), Disabled.

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), Disabled.

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), Disabled.

On-Chip Primary PCI IDE

When enabled, allows you to use the onboard primary PCI IDE.
The options are: Enabled (Default), Disabled.

On-Chip Secondary PCI IDE

When enabled, allows you to use the onboard secondary PCI IDE.
The options are: Enabled (Default), Disabled.

USB Keyboard Support

If you install a USB keyboard, please set at Enabled.
The options are: Enabled, Disabled (default).

Init Display First

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

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), 2F8/IRQ3, 3E8/IRQ4,
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,
Disabled, 3F8/IRQ4.

UART2 Mode

Select an operating mode for the second serial port. Set at Standard, if you use COM2 as the serial port as the serial port, instead as an IR port.

The options are: Standard (Default), ASK-IR, IrDA 1.0.

Duplex Select

When the option ASK-IR of the above feature selected, this feature appears on the display to allow users to select the duplex mode.

The options are: Half (Default), Full.

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, Disabled, 3BC/IRQ7.

Parallel Port Mode

Allows you to connect with an advanced printer.

The options are: Normal (Default), EPP1.7+SPP, ECP+EPP1.7, SPP, EPP1.9+SPP, ECP+EPP1.9, ECP.

ECP Mode Use DMA

If your select ECP, ECP+EPP1.9, or ECP+EPP1.7 in Parallel Port Mode, this feature allows you to select Direct Memory Access (DMA) channel. The options are: 3 (Default), 1.

Supervisor/User Password

```
                      ROM PCI/ISA BIOS (2A69KF0D)
                          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
                       Enter Password:
  LOAD BIOS DEFAULTS                           JT SAVING

  LOAD SETUP DEFAULTS

  Esc :  Quit      F5 : Menu in BIOS    ↑ ↓ → ←   :  Select Item
  F10 :  Save & Exit Setup              (Shift)F2  :  Change Color
```

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. You may also press Esc to abort the selection and not enter a password. To disable password, press Enter when you are prompted to enter password. A message appears, confirming the password is disabled.

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

IDE HDD Auto Detection

```
                    ROM PCI/ISA BIOS (2A69KF0D)
                       CMOS SETUP UTILITY
                      AWARD SOFTWARE,  INC.

 HARD DISKS      TYPE  SIZE  CYLS  HEAD  PRECOMP  LANDZ  SECTOR  MODE

 Primary Master    :

               Select Primary Master Option (N=Skip) : N
  OPTIONS          SIZE  CYLS  HEAD  PRECOMP  LANDZ  SECTOR  MODE

   2 (Y)            851   825   32         0    1650      63    LBA
   1                852  1651   16     65535    1650      63  NORMAL
   3                851   825   32     65535    1650      63   LARGE
          Note : Some OSes (like SCO-UNIX) must use "NORMAL" for installation
                         ESC : Skip
```

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

```
                    ROM PCI/ISA BIOS (2A69KF0D)
                         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 CONFIGURATI  SAVE to CMOS and EXIT (Y/N)?N   T SETUP

   LOAD BIOS DEFAULTS              EXIT WITHOUT SAVING

   LOAD SETUP DEFAULTS

   Esc :  Quit      F5 : Menu in BIOS      ↑ ↓ → ←  :  Select Item
   F10 :  Save & Exit Setup                (Shift)F2  :  Change Color
```

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)?

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