4. BIOS CONFIGURATION

Award's BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS SRAM so that it retains the Setup information when the power is turned off.

4.1. ENTERING SETUP

Power ON the computer and press <Del> immediately will allow you to enter Setup. If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" bottom on the system case. You may also restart by simultaneously press <Ctrl>, <Alt>, and <Del> keys.

4.2. CONTROL KEYS

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item in the left hand
Right arrow	Move to the item in the right hand
Esc key	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
F2 key	Change color from total 16 colors
F3 key	Reserved
F4 key	Reserved
F5 key	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
F6 key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 key	Load the default
F8 key	Reserved
F9 key	Reserved
F10 key	Save all the CMOS changes, only for Main Menu

4.3. GETTING HELP

4.3.1. Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

4.3.2. Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

4.4. THE MAIN MENU

Once you enter Award BIOS CMOS Setup Utility, the Main Menu (Figure 4.1) will appear on the screen. The Main Menu allows you to select setup functions and exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

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

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
LOAD BIOS DEFAULTS	
LOAD PERFORMANCE DEFAULTS	

ESC : Quit	¡ Ｐ Ｐ̃ ℱ̃ Ö: Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color

Time, Date, Hard Disk Type, ...

Figure 4.1: Main Menu

- Standard CMOS setup

  This setup page includes all the items in standard compatible BIOS.

- BIOS features setup

  This setup page includes all the items of Award special enhanced features.

- Chipset features setup

  This setup page includes all the items of chipset special features.

- Power management setup

  This setup page includes all the items of Green function features.

- PNP/PCI configuration

  This setup page includes all the configurations of PCI & PnP ISA resources.

- Load BIOS defaults

  BIOS Defaults indicates the most appropriate value of the system parameters that the system would be in safe configuration.

- Load Performance defaults

  Performance Defaults indicates the value of the system parameters that the system would be in the best performance configuration.

- Integrated peripherals

  This setup page includes all onboard peripherals.

- User password

  Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

- IDE HDD auto detection

  Automatically configure hard disk parameters.

- Save & exit setup

  Save CMOS value settings to CMOS and exit setup.

- Exit without saving

  Abandon all CMOS value changes and exit setup.

4.5. STANDARD CMOS SETUP MENU

The items in Standard CMOS Setup Menu (Figure 4.2) are divided into 9 categories. Each category includes no, one or more than one setup items. Use the arrows to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

```
                         ROM PCI / ISA BIOS
                        STANDARD CMOS SETUP
                        AWARD SOFTWARE, INC.
```
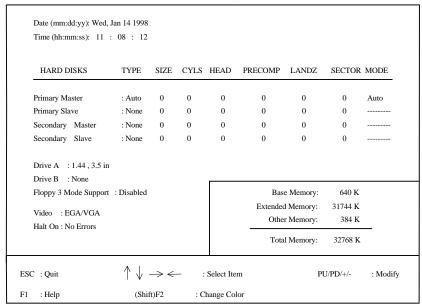
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master	: Auto	0	0	0	0	0	0	Auto
Primary Slave	: None	0	0	0	0	0	0	---------
Secondary Master	: None	0	0	0	0	0	0	---------
Secondary Slave	: None	0	0	0	0	0	0	---------

Date (mm:dd:yy): Wed, Jan 14 1998
Time (hh:mm:ss): 11 : 08 : 12

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

Video : EGA/VGA
Halt On : No Errors

Base Memory: 640 K
Extended Memory: 31744 K
Other Memory: 384 K
Total Memory: 32768 K

ESC : Quit   ↑ ↓ → ←   : Select Item   PU/PD/+/-   : Modify
F1 : Help   (Shift)F2   : Change Color

Figure 4.2: Standard CMOS Setup Menu

- Date
  The date format is <day>, <month> <date> <year>.

day	The day, from Sun to Sat, determined by the BIOS and is display-only
month	The month, Jan. through Dec.
date	The date, from 1 to 31 (or the maximum allowed in the month)
year	The year, from 1994 through 2079

- Time

  The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

- Primary HDDs / Secondary HDDs

  The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and user definable type. User type is user-definable; Auto type which will automatically detect HDD type.

  Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

  If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

CYLS.	Number of cylinders
HEADS	number of heads
PRECOMP	write precomp
LANDZONE	Landing zone
SECTORS	number of sectors

  If a hard disk has not been installed select NONE and press <Enter>.

- Drive A type / Drive B type

  The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

None	No floppy drive installed
360K, 5.25 in.	5.25 inch PC-type standard drive; 360K byte capacity.
1.2M, 5.25 in.	5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled).
720K, 3.5 in.	3.5 inch double-sided drive; 720K byte capacity
1.44M, 3.5 in.	3.5 inch double-sided drive; 1.44M byte capacity.

2.88M, 3.5 in.	3.5 inch double-sided drive; 2.88M byte capacity.

- Floppy 3 Mode Support (for Japan Area)

Disabled	Normal Floppy Drive.
Drive A	Drive A is 3 mode Floppy Drive.
Drive B	Drive B is 3 mode Floppy Drive.
Both	Drive A & B are 3 mode Floppy Drives.

- Video

  The category detects the type of adapter used for the primary system monitor that must match your video display card and monitor. Although secondary monitors are supported, you do not have to select the type in setup.

EGA/VGA	Enhanced Graphics Adapter/Video Graphics Array. For EGA, VGA, SVGA, or PGA monitor adapters
CGA 40	Color Graphics Adapter, power up in 40 column mode
CGA 80	Color Graphics Adapter, power up in 80 column mode
MONO	Monochrome adapter, includes high resolution monochrome adapters

- Halt on

  The category determines whether the computer will stop if an error is detected during power up.

NO Errors	The system boot will not stop for any error that may be detected
All Errors	Whenever the BIOS detects a non-fatal error the system will be stopped and you will be prompted
All, But Keyboard	The system boot will not stop for a keyboard error; it will stop for all other errors
All, But Diskette	The system boot will not stop for a disk error; it will stop for all other errors
All, But Disk/Key	The system boot will not stop for a keyboard or disk error; it will stop for all other errors

- Memory

  The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

  Base Memory

  The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

  The value of the base memory is typically 512 K for systems with 512 K memory installed on the motherboard, or 640 K for systems with 640 K or more memory installed on the motherboard.

  Extended Memory

  The BIOS determines how much extended memory is present during the POST.

  This is the amount of memory located above 1 MB in the CPU's memory address map.

  Expanded Memory

  Expanded Memory in memory defined by the Lotus/Intel/Microsoft (LIM) standard as EMS.
  Many standard DOS applications can not utilize memory above 640 K; the Expanded Memory Specification (EMS) swaps memory, which not utilized by DOS with a section, or frame, so these applications, can access all of the system memory.

  Memory can be swapped by EMS is usually 64 K within 1 MB or memory above 1 MB, depends on the chipset design.

  Expanded memory device driver is required to use memory as Expanded Memory.

  Other Memory

  This refers to the memory located in the 640 K to 1024 K address space. This is memory that can be used for different applications.

  DOS uses this area to load device drivers to keep as much base memory free for application programs. Most use for this area is Shadow RAM.

4.6. BIOS FEATURES SETUP

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

Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled		
External Cache	: Enabled		
CPU L2 Cache ECC Checking	: Disabled		
Quick Power On Self Test	: Enabled		
CPU Update Data	: Enabled		
Boot From LAN First	: Enabled		
Boot Sequence	: A, C, SCSI		
Swap Floppy Drive	: Disabled		
VGA Boot From	: AGP		
Boot Up Floppy Seek	: Enabled		
Boot Up NumLock Status	: On		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250	ESC : Quit ¡ Ô Õ Ŧ Ö	: Select Item
Security Option	: Setup	F1 : Help PU/PD/+/-	: Modify
PCI/VGA Palette Snoop	: Disabled	F5 : Old Values (Shift)F2	: Color
Assign IRQ For VGA	: Enabled	F7 : Load Performance Defaults	
OS Select For DRAM >64MB	: Non-OS2		

Figure 4.3: BIOS Features Setup

- Virus Warning

  If it is set to enable, the category will flash on the screen when there is any attempt to write to the boot sector or partition table of the hard disk drive. The system will halt and the warning message will appear in the mean time. You can run anti-virus program to locate the problem.

  Default value is Disabled.

Enabled	Activate 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 to 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. The default value is Enabled.

Enabled	Enable cache
Disabled	Disable cache

- CPU L2 Cache ECC Checking

  The default value is Disabled.

Enabled	Enable CPU L2 Cache ECC Checking
Disabled	Disable CPU L2 Cache ECC Checking

- Quick Power On Self Test

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

  The default value is Enabled.

Enabled	Enable quick POST
Disabled	Normal POST

- CPU Update Data

  The default value is Enabled.

Enabled	Enable CPU Update Data
Disabled	Normal CPU Update Data

- Boot Sequence

  This category determines which drive computer searches first for the disk operating system (i.e., DOS). Default value is A, C, SCSI.

X1, X2, X3	System will first search for X1 disk drive then X2 disk drive and then X3 disk drive.

- Swap Floppy Drive

  The default value is Disabled.

Enabled	Floppy A & B will be swapped under DOS
Disabled	Floppy A & B will be normal definition

• VGA Boot From

  The default value is AGP.

AGP	VGA Boot From AGP
PCI	VGA Boot From PCI

• Boot Up Floppy Seek

  During POST, BIOS will determine the floppy disk drive installed is 40 or 80 tracks. 360 K type is 40 tracks 720 K, 1.2 M and 1.44 M are all 80 tracks. The default value is Enabled.

Enabled	BIOS searches for floppy disk drive to determine it is 40 or 80 tracks. Note that BIOS can not tell from 720 K, 1.2 M or 1.44 M drive type as they are all 80 tracks
Disabled	BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360 K

• Boot Up NumLock Status

  The default value is On.

On	Keypad is number keys
Off	Keypad is arrow keys

• Typematic Rate Setting

  The default value is Disabled.

Enabled	Enable Keyboard Typematic rate setting.
Disabled	Disable Keyboard Typematic rate setting.

• Typematic Rate (Chars / Sec)

  The default value is 6.

6-30	Set the maximum Typematic rate from 6 chars. Per second to 30 chars. Per second.

• Typematic Delay (Msec)

  The default value is 250.

250-1000	Set the time delay from first key to repeat the same key in to computer.

• Security Option

This category allows you to limit access to the system and Setup, or just to Setup. The default value is Setup.

System	The system can not boot and can not access to Setup page 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

💣※ **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 page freely.**

• PCI/VGA Palette Snoop

The default value is Disabled.

Enabled	For having Video Card on ISA Bus and VGA Card on PCI Bus.
Disabled	For VGA Card only.

• OS Select For DRAM>64MB

The default value is Non-OS2.

Non-OS2	Using non-OS2 operating system.
OS2	Using OS2 operating system and DRAM>64MB.

• Video BIOS Shadow

It determines whether video BIOS is able to copy to RAM, however, it is optional from chipset design. Video Shadow will increase the video speed. The default value is Enabled.

Enabled	Video shadow is enabled
Disabled	Video shadow is disabled

4.7. CHIPSET FEATURES SETUP

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

EDO CASx# MA Wait State	: 1	Current CPU Temperature	: 39 ℃/102 ℉
EDO RASx# Wait State	: 1	Current CPUFAN Speed	: 5152 RPM
SDRAM CAS latency Time	: Auto	Current CPUVCore A	: 2.83 V
DRAM Data Integrity Mode	: Non-ECC	Current CPUVCore B	: 1.50 V
System BIOS Cacheable	: Enabled	Current +3.3 V	: 3.53 V
Video BIOS Cacheable	: Enabled	Current +5 V	: 4.99 V
Video RAM Cacheable	: Disabled	Current +12 V	: 12.28 V
16 Bit I/O Recovery Time	: 1	Current - 12 V	:-11.81 V
Memory Hole At 15M-16M	: Disabled	Current - 5 V	:-5.04 V
Delayed Transaction	: Disabled	Current Battery Life	: OK
Clock Spread Spectrum	: Disabled		
Slow Down CPU Duty Cycle	: Normal		
Alarm When CPU Overheat	: Disabled	ESC : Quit ↑ ↓ → ← : Select Item	
CPU Temperature Select	: 75 ℃/167 ℉	F1 : Help PU/PD/+/- : Modify	
CPUFan Control	: Enabled	F5 : Old Values (Shift)F2 : Color	
✳CPUFan Fail Alarm	: Disabled	F7 : Load Performance Defaults	

Figure 4.4: Chipset Features Setup

* This item will be unavailable when "CPUFan Control" is set to Disabled.

● EDO CASx# MA Wait State

The default value is 1.

1	Set EDO CASx# MA Wait State to 1.
2	Set EDO CASx# MA Wait State to 2.

● EDO RASx# Wait State

The default value is 1.

1	Set EDO RASx# Wait State to 1.
2	Set EDO RASx# Wait State to 2.

- SDRAM CAS latency Time

  The default value is Auto.

3	For 67 / 83 MHz SDRAM DIMM module.
2	For 100 MHz SDRAM DIMM module.
Auto	CAS latency time will be set automatically if you have SPD on SDRAM

- DRAM Data Integrity Mode

  The default value is Non-ECC.

Non-ECC	For 64bit standard type DIMM module.
ECC	For 72bit ECC type DIMM module.

- System BIOS Cacheable

  The default value is Enabled.

Enabled	Enable System BIOS Cacheable.
Disabled	Disable System BIOS Cacheable.

- Video BIOS Cacheable

  The default value is Enabled.

Enabled	Enable video BIOS Cacheable.
Disabled	Disable video BIOS Cacheable.

- Video RAM Cacheable

  The default value is Disabled.

Disabled	Disable this function.
Enabled	Enable this function to get better VGA performance; while some brands of VGA must be disabled this function (e.g.ET4000W32P).

- 16 Bit I/O Recovery Time

  The default value is 1.

1-4	Set 16 Bit I/O recovery time from 1 to 4.
NA	None.

- Memory Hole At 15M-16M

  The default value is Disabled.

Disabled	Normal Setting.
Enabled	Set Address=15~16MB remap to ISA BUS.

- Delayed Transaction

  The default value is Disabled.

Disabled	Normal operation.
Enabled	For slow speed ISA device in system.

- Clock Spread Spectrum

  The default value is Disable.

Disabled	Normal operation.
Enabled	Enable Clock Spread Spectrum

- Slow Down CPU Duty Cycle (Optional)

  The default value is Normal.

Normal	Disable Slow Down CPU Duty Cycle.
12.5%	Set Slow Down CPU Duty Cycle to 12.5%.
25.0%	Set Slow Down CPU Duty Cycle to 25.5%.
37.5%	Set Slow Down CPU Duty Cycle to 37.5%.
50.0%	Set Slow Down CPU Duty Cycle to 50.0%.
62.5%	Set Slow Down CPU Duty Cycle to 62.5%.
75.0%	Set Slow Down CPU Duty Cycle to 75.0%.

- Alarm When CPU Overheat (Optional)

  The default value is Disabled.

Disabled	Disable this function.
Enabled	Alarm When CPU Overheat.

- CPU Temperature Select (Optional)

  The default value is 75°C / 167°F. (Selectable from 65°C/ 158°F to 95°C / 203°F)

75°C / 167°F	Monitor CPU Temp. at 75°C / 167°F, if Temp. > 75°C / 167°F will cause system alarming & slow down CPU speed.

- CPUFan Control (Optional)

  The default value is Disabled.

Disabled	Disable this function.
Enabled	System will check the CPUAN status.

- CPUFan Fail Alarm (Optional)

  The default value is Disabled.

Disabled	Disable this function.
Enabled	Alarm When CPUFan Failed.

- Current CPU Temperature (Optional)

  Detect CPU Temperature automatically.

- Current CPUFAN Speed (Optional)

  Detect CPU Fan speed status automatically.

- Current CPU Vcore A / B ,+3.3V , ±12V , ±5V (Optional)

  Detect system's voltage status automatically.

- Current Battery Life (Optional)

  The default value depends on system monitoring Battery status.

Fail	The Battery (3V) voltage is out of SPEC.
OK	The Battery (3V) voltage is in SPEC.

4.8. POWER MANAGEMENT SETUP

```
                        ROM PCI / ISA BIOS
                     POWER MANAGEMENT SETUP
                      AWARD SOFTWARE, INC.
```

Power Management	: Enable	* * Reload Global Timer Events * *	
PM Control by APM	: Yes	IRQ [3-7,9-15] ,NMI	: Enabled
Suspend Mode	: Disable	Primary IDE 0	: Disabled
HDD Power Down	: Disable	Primary IDE 1	: Disabled
Suspend Mode option	: PowerOn Suspend	Secondary IDE 0	: Disabled
VGA Active Monitor	: Disabled	Secondary IDE 1	: Disabled
Soft-off by PWR-BTTN	: Instant-off	Floppy Disk	: Enabled
Power-Supply Type	: Auto	Serial Port	: Enabled
CPUFAN Off In Suspend	: Enabled	Parallel Port	: Disabled
* Resume by Alarm	: Enabled		
** Date (of Month) Alarm	: 0		
** Time (hh:mm:ss) Alarm	: 00:00:00		

```
ESC : Quit          ¡ Ƥ Ṗ ╪ ö  : Select Item
F1   : Help          PU/PD/+/-    : Modify
F5   : Old Values    (Shift)F2     : Color
F7   : Load Performance Defaults
```

Figure 4.5: Power Management Setup

* This item will show up when user uses ATX power supply.

* * These two items will show up when Resume by Alarm is enabled.

● Power Management

The default value is Enabled.

Enabled	Enable Green function.
Disabled	Disable Green function.

● PM Control by APM

The default value is Yes.

Yes	Enable software APM function.
No	Disable software APM function.

- Suspend Mode

  The default value is Disable.

Disabled	Disable Suspend Mode.
1 min - 1 Hour	Setup the timer to enter Suspend Mode.

- HDD Power Down

  The default value is Disable.

Disable	Disable HDD Power Down mode function.
1-15 mins.	Enable HDD Power Down mode between 1 to 15 mins.

  Suspend Mode Option

  The default value is PowerOn Suspend. (Suspend to Disk: Optional)

PowerOn Suspend	Set the system to PowerOn Suspend mode
Suspend to Disk	Set the system to Suspend to Disk mode

- VGA Active Monitor

  The default value is Disabled.

Disabled	Disable monitor VGA activity.
Enabled	Enable monitor VGA activity.

- Soft-off by PWR-BTTN

  The default value is Instant-Off.

Instant-off	Soft switch ON/OFF for POWER ON/OFF
Delay 4 Sec.	Soft switch ON 4sec. for POWER OFF.

- Power-Supply Type

  The default value is Auto.

Auto	Auto-detect which type of power supply is used.
P8&P9	Power-Supply Type is P8&P9.
ATX	Power-Supply Type is ATX.

- CPUFAN Off In Suspend

    The default value is Enabled.

Disabled	Disable this function.
Enabled	Stop CPU FAN when entering Suspend mode.

- Resume by Alarm
    The default value is Disabled.

Disabled	Disable this function.
Enabled	Enable alarm function to POWER ON system.

    If the "Resume by Alarm" is Enabled.

Date (of Month) Alarm :	0~31
Time (hh: mm: ss) Alarm :	(0~23) : (0~59) : (0~59)

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

    The default value is Enabled.

Disabled	Disable this function.
Enabled	Enable monitor IRQ [3-7,9-15] for Green event.

- Primary IDE 0/1

    The default value is Disabled.

Disabled	Disable this function.
Enabled	Enable monitor Primary IDE 0/1 for Green event.

- Secondary IDE 0/1

    The default value is Disabled.

Disabled	Disable this function.
Enabled	Enable monitor Secondary IDE 0/1 for Green event.

- Floppy Disk

    The default value is Enabled.

Disabled	Disable this function.
Enabled	Enable monitor Floppy Disk for Green event.

- Serial Port

  The default value is Enabled.

Disabled	Disable this function.
Enabled	Enable monitor Serial Port for Green event.

- Parallel Port

  The default value is Disabled.

Disabled	Disable this function.
Enabled	Enable monitor Parallel Port for Green event.

4.9. PNP/PCI CONFIGURATION

```
                    ROM PCI / ISA BIOS
                  PNP/PCI CONFIGURATION
                   AWARD SOFTWARE, INC.

PNP OS Installed         : No       Used MEM base addr       : N/A
Resources Controlled by  : Manual   *Used MEM Length         : 8K
Reset Configuration Data : Disabled  Assign IRQ For USB      : Enabled

IRQ-3  assigned to       : Legacy ISA
IRQ-4  assigned to       : Legacy ISA
IRQ-5  assigned to       : PCI/ISA PnP
IRQ-7  assigned to       : Legacy ISA
IRQ-9  assigned to       : PCI/ISA PnP
IRQ-10 assigned to       : PCI/ISA PnP
IRQ-11 assigned to       : PCI/ISA PnP
IRQ-12 assigned to       : Legacy ISA
IRQ-14 assigned to       : Legacy ISA
IRQ-15 assigned to       : Legacy ISA
DMA-0  assigned to       : PCI/ISA PnP
DMA-1  assigned to       : PCI/ISA PnP
DMA-3  assigned to       : PCI/ISA PnP   ESC : Quit        ↑↓→← : Select Item
DMA-5  assigned to       : PCI/ISA PnP   F1  : Help        PU/PD/+/- : Modify
DMA-6  assigned to       : PCI/ISA PnP   F5  : Old Values  (Shift)F2 : Color
DMA-7  assigned to       : PCI/ISA PnP   F7  : Load Performance Defaults
```

Figure 4.6: PCI Slot Configuration

* This item will show up when Used MEM base addr has been set.

- PNP OS Installed

  The default value is No.

Yes	Enable PNP OS Installed function.
No	Disable PNP OS Installed function.

- Resources Controlled by

  The default value is Manual.

Manual	User can set the PnP resource (I/O Address, IRQ & DMA channels) used by legacy ISA DEVICE.
Auto	BIOS automatically use these PnP rescuers.

- Reset Configuration Data

  The default value is Disabled.

Disabled	Disable this function.
Enabled	Enable clear PnP information in ESCD.

- IRQ (3,4,5,7,9,10,11,12,14,15), DMA(0,1,3,5,6,7) assigned to

  The default value is "Legacy ISA" or "PCI/ISA PnP".

Legacy ISA	The resource is used by Legacy ISA device.
PCI/ISA PnP	The resource is used by PCI/ISA PnP device (PCI or ISA).

- Used MEM base addr

  The default value is N/A.

N/A	Disable the MEM. block using.
C800 ~ DC00	Select the MEM. block starting address.

- Used MEM Length

  The default value is 8K.

8K ~ 64K	Select the MEM. block size.

- Assign IRQ For USB

  The default value is Enabled.

Enabled	Assign a specific IRQ for USB
Disabled	No IRQ is assigned for USB

4.10. LOAD BIOS DEFAULTS

ROM PCI / ISA BIOS
LOAD BIOS DEFAULTS
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
LOAD BIOS DEFA	Load BIOS Defaults (Y/N)? N
LOAD PERFORMANCE DEFAULTS	

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

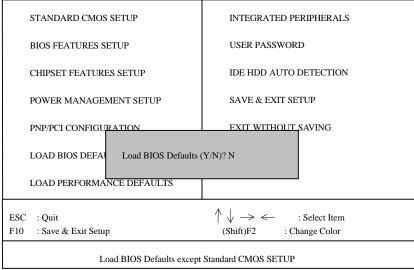Load BIOS Defaults except Standard CMOS SETUP

Figure 4.7: Load BIOS Defaults

- Load BIOS Defaults

  To load BIOS defaults value to CMOS SRAM, enter "Y". If not, enter "N".

4.11. LOAD PERFORMANCE DEFAULTS

```
                    ROM PCI / ISA BIOS
                  LOAD SETUP DEFAULTS
                  AWARD SOFTWARE, INC.
```

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
LOAD BIOS DEFAU	Load PERFORMANCE Defaults (Y/N)? N
LOAD PERFORMANCE DEFAULTS	

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

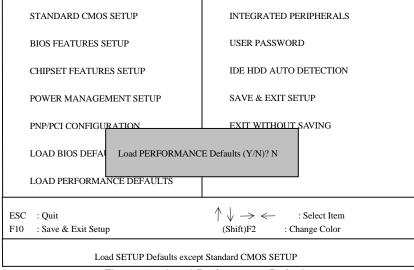Load SETUP Defaults except Standard CMOS SETUP

Figure 4.8: Load Performance Defaults

● Load PERFORMANCE Defaults

To load PERFORMANCE defaults value to CMOS SRAM, enter "Y". If not, enter "N".

✦ **If there is any problem occurred, loading BIOS DEFAULTS step is recommended.**

4.12. INTEGRATED PERIPHERALS

```
                          ROM PCI / ISA BIOS
                       INTEGRATED PERIPHERALS
                        AWARD SOFTWARE, INC.
┌─────────────────────────────────────┬──────────────────────────────────────┐
│ IDE HDD Block Mode       : Enabled   │  PS/2 Mouse Power On      : Disabled  │
│ IDE Primary Master PIO   : Auto      │  Keyboard Power On        : Enabled   │
│ IDE Primary Slave PIO    : Auto      │ * KB Power On Multikey    : Enter     │
│ 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  │                                      │
│                                      │                                      │
│ Onboard FDD Controller   : Enabled   │                                      │
│ Onboard Serial Port1     : 3F8/IRQ4  │                                      │
│ Onboard Serial Port2     : 2F8/IRQ3  ├──────────────────────────────────────┤
│ Onboard Parallel Port    : 378/IRQ7  │ ESC : Quit      ↑ ↓ → ← : Select Item │
│ Parallel Port Mode       : SPP       │ F1  : Help    PU/PD/+/- : Modify      │
│                                      │ F5  : Old Values (Shift)F2 : Color    │
│                                      │ F7  : Load Performance Defaults       │
└─────────────────────────────────────┴──────────────────────────────────────┘
```

Figure 4.7: Integrated Peripherals

* This item will show up when "Keyboard Power On: Multikey" is selected.

- IDE HDD Block Mode

    The default value is Enabled.

Enabled	Enable IDE HDD Block Mode
Disabled	Disable IDE HDD Block Mode

- IDE Primary Master PIO (for onboard IDE 1st channel).

    The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Mode0~4	Manually set the IDE Accessing mode.

- IDE Primary Slave PIO (for onboard IDE 1st channel).

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Mode0~4	Manually set the IDE Accessing mode.

- IDE Secondary Master PIO (for onboard IDE 2nd channel).

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Mode0~4	Manually set the IDE Accessing mode.

- IDE Secondary Slave PIO (for onboard IDE 2nd channel).

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Mode0~4	Manually set the IDE Accessing mode.

- IDE Primary Master UDMA.

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disable UDMA function.

- IDE Primary Slave UDMA.

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disable UDMA function.

- IDE Secondary Master UDMA.

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disable UDMA function.

- IDE Secondary Slave UDMA.

  The default value is Auto.

Auto	BIOS will automatically detect the IDE HDD Accessing mode.
Disabled	Disable UDMA function.

- On-Chip Primary PCI IDE

  The default value is Enabled.

Enabled	Enable onboard 1st channel IDE port.
Disabled	Disable onboard 1st channel IDE port.

- On-Chip Secondary PCI IDE

  The default value is Enabled.

Enabled	Enable onboard 2nd channel IDE port.
Disabled	Disable onboard 2nd channel IDE port.

- USB Keyboard Support

  The default value is Disabled.

Enabled	Enable USB Keyboard Support.
Disabled	Disable USB Keyboard Support.

- Onboard FDD Controller

  The default value is Enabled.

Enabled	Enable onboard FDD port.
Disabled	Disable onboard FDD port.

- Onboard Serial Port 1

  The default value is 3F8/IRQ4.

Auto	BIOS will automatically setup the port 1 address.
3F8/IRQ4	Enable onboard Serial port 1 and address is 3F8.
2F8/IRQ3	Enable onboard Serial port 1 and address is 2F8.
3E8/IRQ4	Enable onboard Serial port 1 and address is 3E8.
2E8/IRQ3	Enable onboard Serial port 1 and address is 2E8.
Disabled	Disable onboard Serial port 1.

- Onboard Serial Port 2

  The default value is 2F8/IRQ3.

Auto	BIOS will automatically setup the port 2 address.
3F8/IRQ4	Enable onboard Serial port 2 and address is 3F8.
2F8/IRQ3	Enable onboard Serial port 2 and address is 2F8.
3E8/IRQ4	Enable onboard Serial port 2 and address is 3E8.
2E8/IRQ3	Enable onboard Serial port 2 and address is 2E8.
Disabled	Disable onboard Serial port 2.

- Onboard Parallel port

  The default value is 378/IRQ7.

378/IRQ7	Enable onboard LPT port and address is 378/IRQ7.
278/IRQ5	Enable onboard LPT port and address is 278/IRQ5.
Disabled	Disable onboard LPT port.
3BC/IRQ7	Enable onboard LPT port and address is 3BC/IRQ7.

- Parallel Port Mode

  The default value is SPP.

SPP	Using Parallel port as Standard Printer Port.
EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port.
ECP/EPP	Using Parallel port as ECP/EPP mode.

- PS/2 Mouse Power on

    The default value is Disabled.

Disabled	Disable PS/2 Mouse Power on .
Left Double	Click twice on PS/2 mouse left button to Power on system.
Right Double	Click twice on PS/2 mouse right button to Power on system.

- Keyboard Power on

    The default value is Disabled.

Disabled	Disable Keyboard Power on .
Multikey	Enter multikey combination to Power on system.

- KB Power ON Multikey

Enter	Enter from 1 to 5 characters to set the Keyboard Power On Password.

    You can power on your system by entering password from the Keyboard after setting the "Keyboard power on" jumper (JP1) and password in CMOS Setup.

4.13. USER PASSWORD

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ROM PCI / ISA BIOS
USER PASSWORD
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
LOAD BIOS DEFAUL Enter Password:	
LOAD PERFORMANCE DEFAULTS	

ESC : Quit   ↑ ↓ → ←   : Select Item
F10 : Save & Exit Setup   (Shift)F2   : Change Color
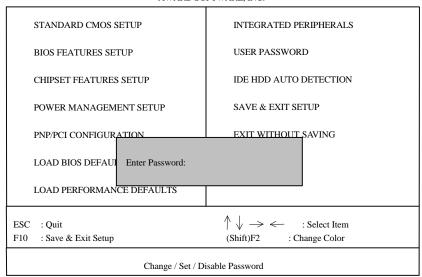
Change / Set / Disable Password

Figure 4.8: Password Setting

Type the password, up to eight characters, and press <Enter>. The password typed now will clear the previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>.

To disable password, just press <Enter> when you are prompted to enter password. A message "PASSWORD DISABLED" will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

If you select System at Security Option in BIOS Features Setup Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu. If you select Setup at Security Option in BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

4.14. IDE HDD AUTO DETECTION

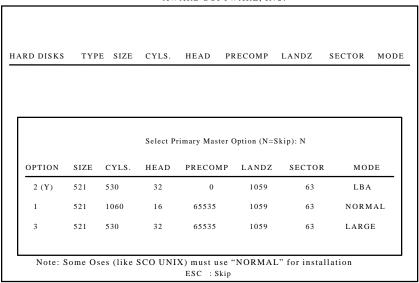ROMPCI / ISA BIOS
IDE HDDD AUTO DETECTION
AWARD SOFTWARE, INC.

HARD DISKS	TYPE	SIZE	CYLS.	HEAD	PRECOMP	LANDZ	SECTOR	MODE

Select Primary Master Option (N=Skip): N

OPTION	SIZE	CYLS.	HEAD	PRECOMP	LANDZ	SECTOR	MODE
2 (Y)	521	530	32	0	1059	63	LBA
1	521	1060	16	65535	1059	63	NORMAL
3	521	530	32	65535	1059	63	LARGE

Note: Some Oses (like SCO UNIX) must use "NORMAL" for installation
ESC : Skip

Figure 4.9: IDE HDD Auto Detection

Type "Y" will accept the H.D.D. parameter reported by BIOS.

Type "N" will keep the old H.D.D. parameter setup. If the hard disk cylinder number is over 1024, then the user can select LBA mode or LARGER mode for DOS partition larger than 528 MB.

4.15. SAVE & EXIT SETUP

ROM PCI / ISA BIOS
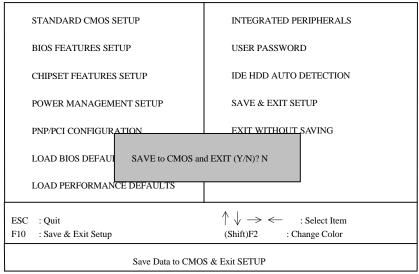SAVE & EXIT SETUP
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
LOAD BIOS DEFAU[SAVE to CMOS and EXIT (Y/N)? N	
LOAD PERFORMANCE DEFAULTS	

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

Save Data to CMOS & Exit SETUP

Figure 4.10: Save & Exit Setup

Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS SRAM.

Type "N" will return to Setup Utility.

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4.16. EXIT WITHOUT SAVING

ROM PCI / ISA BIOS
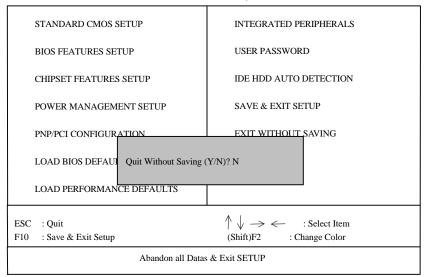EXIT WITHOUT SAVING
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	USER PASSWORD
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
LOAD BIOS DEFAULT	Quit Without Saving (Y/N)? N
LOAD PERFORMANCE DEFAULTS	

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

Abandon all Datas & Exit SETUP

Figure 4.11: Exit Without Saving

Type "Y" will quit the Setup Utility without saving to RTC CMOS SRAM.

Type "N" will return to Setup Utility.

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FCC Compliance Statement:

This equipment has been tested and found to comply with limits for a Class B digital device , pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna

-Move the equipment away from the receiver

-Plug the equipment into an outlet on a circuit different from that to which the receiver is connected

-Consult the dealer or an experienced radio/television technician for additional suggestions

You are cautioned that any change or modifications to the equipment not expressly approve by the party responsible for compliance could void Your authority to operate such equipment.

This device complies with Part 15 of the FCC Rules. Operation is subjected to the following two conditions 1) this device may not cause harmful interference and 2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of Conformity
We, Manufacturer/Importer
(full address)

G.B.T. Technology Träding GMbH
Ausschlager Weg 41, 1F, 20537 Hamburg, Germany

declare that the product
(description of the apparatus, system, installation to which it refers)

Mother Board
GA-6BA

is in conformity with
(reference to the specification under which conformity is declared)
in accordance with 89/336 EEC-EMC Directive

☐ **EN 55011**	Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM high frequency equipment	☐ **EN 61000-3-2*** ☒ **EN60555-2**		Disturbances in supply systems caused by household appliances and similar electrical equipment "Harmonics"
☐ **EN55013**	Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment	☐ **EN61000-3-3*** ☒ **EN60555-3**		Disturbances in supply systems caused by household appliances and similar electrical equipment "Voltage fluctuations"
☐ **EN 55014**	Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus	☒ **EN 50081-1**		Generic emission standard Part 1: Residual, commercial and light industry
		☒ **EN 50082-1**		Generic immunity standard Part 1: Residual, commercial and light industry
☐ **EN 55015**	Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries	☐ **EN 55081-2**		Generic emission standard Part 2: Industrial environment
☐ **EN 55020**	Immunity from radio interference of broadcast receivers and associated equipment	☐ **EN 55082-2**		Generic immunity standard Part 2: Industrial environment
☒ **EN 55022**	Limits and methods of measurement of radio disturbance characteristics of information technology equipment	☐ **ENV 55104**		Immunity requirements for household appliances tools and similar apparatus
☐ **DIN VDE 0855** ☐ **part 10** ☐ **part 12**	Cabled distribution systems; Equipment for receiving and/or **distribution** from sound and television signals	☐ **EN 50091- 2**		EMC requirements for uninterruptible power systems (UPS)

☒ **CE marking**

$C \epsilon$ (EC conformity marking)

The manufacturer also declares the conformity of above mentioned product
with the actual required safety standards in accordance with LVD 73/23 EEC

☐ **EN 60065**	Safety requirements for mains operated electronic and related apparatus for household and similar general use	☐ **EN 60950**	Safety for information technology equipment including electrical business equipment
☐ **EN 60335**	Safety of household and similar electrical appliances	☐ **EN 50091-1**	General and Safety requirements for uninterruptible power systems (UPS)

Manufacturer/Importer

Signature : _Rex Lin_

(Stamp)   Date : May. 27, 1998   Name   : _Rex Lin_