

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 immediately will allow you to enter Setup.

The other way to enter Setup is to power on the computer, when the below message appears briefly at the bottom of the screen during the POST (Power On Self Test), press Key or simultaneously press <Ctrl>, <Alt>, and <Esc> keys.

- Press DEL 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 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	Calendar, only for Status Page Setup Menu.
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.

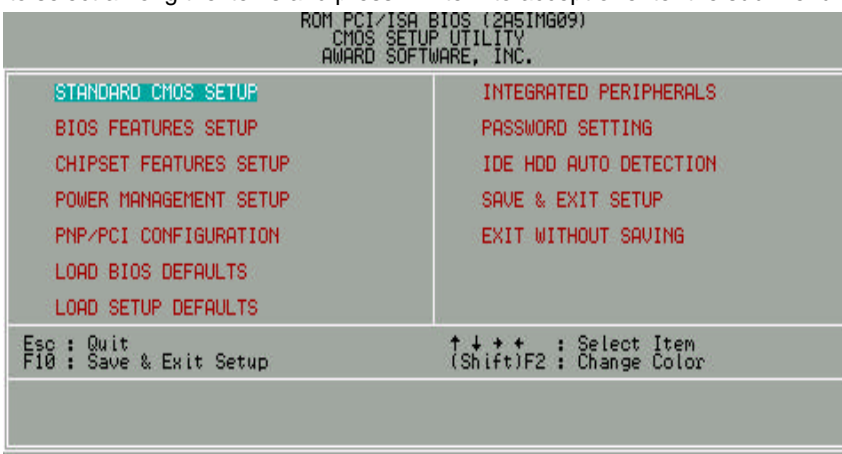


Figure 4.1: Main Menu

- Standard CMOS setup
This setup page includes all the items in a 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 items of PNP/PCI configuration features.
- Load BIOS defaults
BIOS defaults indicates the most appropriate value of the system parameter which the system would be in safe configuration.
- Load Setup defaults
Setup 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 the items of peripherals features.
- Password setting
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 parameter.
- Save & exit setup
Save CMOS value changes to CMOS and exit setup.
- Exit without save
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.

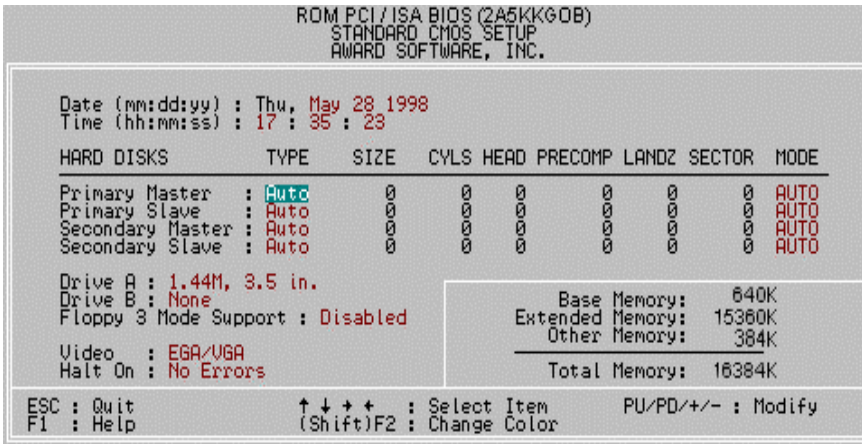


Figure 4.2: Standard CMOS Setup Menu

- Date

The date format is <week>, <month> <date> <year>. Press <F3> to show the calendar.

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

- Time

The time format is <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 identify the types of hard disk from drive C to drive F 4 devices that has been installed in the computer.

There are three options for definable type; User, Auto and None .

Type User is user-definable; and type Auto means automatically detecting HDD's type and None means No IDE HDD installed.

If you select Type User, related information is asked to be entered to the following items.

Enter the information directly from the keyboard and press <Enter>.

Those information should be provided in the documentation from 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 identify 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.	5-1/4 inch PC-type standard drive; 360 kilobyte capacity.
1.2M, 5.25 in.	5-1/4 inch AT-type high-density drive; 1.2 megabyte capacity (3-1/2 inch when 3 Mode is Enabled).
720K, 3.5 in.	3-1/2 inch double-sided drive; 720 kilobyte capacity
1.44M, 3.5 in.	3-1/2 inch double-sided drive; 1.44 megabyte capacity.
2.88M, 3.5 in.	3-1/2 inch double-sided drive; 2.88 megabyte capacity.

- Floppy 3 Mode Support (for Japan Area)

Disable	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 Drive.

- 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 be stopped 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 640K 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, 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 64K 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 to 1024 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

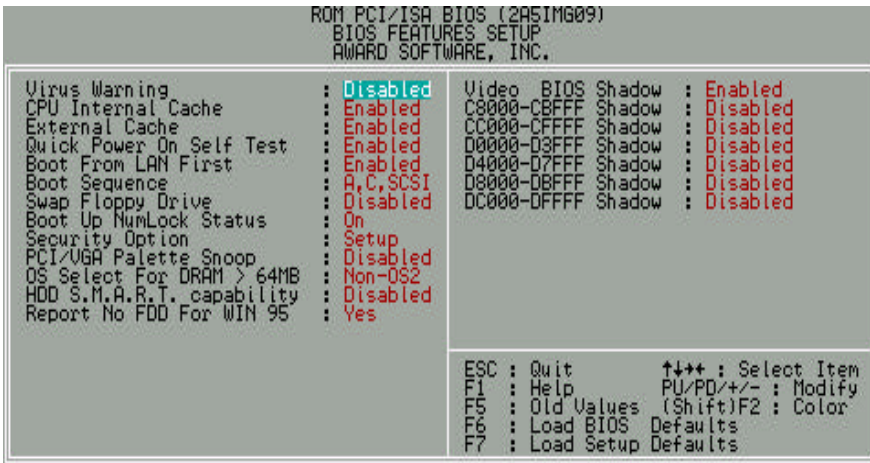


Figure 4.3: BIOS Features Setup

- Virus Warning

This category flashes on the screen. During and after the system boots up, any attempt to write to the boot sector or partition table of the hard disk drive will halt the system and the following error message will appear, in the mean time, you can run anti-virus program to locate the problem.

The 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 appears 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	Enabled cache function.
Disabled	Disabled cache function.

- Quick Power On Self Test

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

The default value is Enabled.

Enabled	Enabled quick POST.
Disabled	Normal POST.

- Boot From LAN First

The default value is Enabled.

Enabled	Enabled Boot From LAN First
Disabled	Disabled Boot From LAN First
Auto	Boot From LAN First set to Auto

- Boot Sequence

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

A,C,SCSI	System will first search for floppy disk drive then hard disk (C) drive and SCSI drive.
C,A,SCSI	System will first search for hard disk (C) drive then floppy disk drive and SCSI drive.
C,CDROM,A	System will first search for hard disk (C) drive then CDROM drive and floppy disk drive.
A,CDROM,C	System will first search for floppy disk drive then CDROM drive and hard disk (C) drive.
CDROM,A,C	System will first search for CDROM drive then floppy disk drive and hard disk (C) drive.
CDROM,C,A	System will first search for CDROM drive then hard disk (C) drive and floppy disk drive.
D,A,SCSI	System will first search for hard disk (D) drive then floppy disk drive and SCSI drive.
E,A,SCSI	System will first search for hard disk (E) drive then floppy disk drive and SCSI drive.
F,A,SCSI	System will first search for hard disk (F) drive then floppy disk drive and SCSI drive.

SCSI,A,C	System will first search for SCSI drive then floppy disk drive and hard disk (C) drive .
SCSI,C,A	System will first search for SCSI drive and hard disk (C) drive then floppy disk drive .
C only	System will only search for hard disk (C) drive.
LS/ZIP,C	System will first search for floppy disk drive (LS) or ZIP drive then hard disk (C) 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.

- Boot Up NumLock Status

The default value is On.

On	Keypad is number keys.
Off	Keypad is arrow keys.

- Security option

The default value is Setup.

Setup	The system will boot and access to Setup will be denied if the correct password is not entered at the prompt.
System	The system will not boot and 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. If the user does not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.**

- PCI/VGA Palette Snoop

The default value are 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.

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

The default value is Disabled.

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

- Report No FDD For WIN 95

The default value is Yes.

Yes	FDD Detect IRQ6 Automatically.
No	Assign IRQ6 For FDD.

- Video BIOS Shadow

It determines whether video BIOS will copied 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.

- C8000 - CFFFF Shadow / D0000 - DFFFF Shadow

These categories determine whether optional ROM will be copied to RAM by 16 byte. The default value are Disabled.

Enabled	Optional shadow is enabled.
Disabled	Optional shadow is disabled.

4.7. CHIPSET FEATURES SETUP

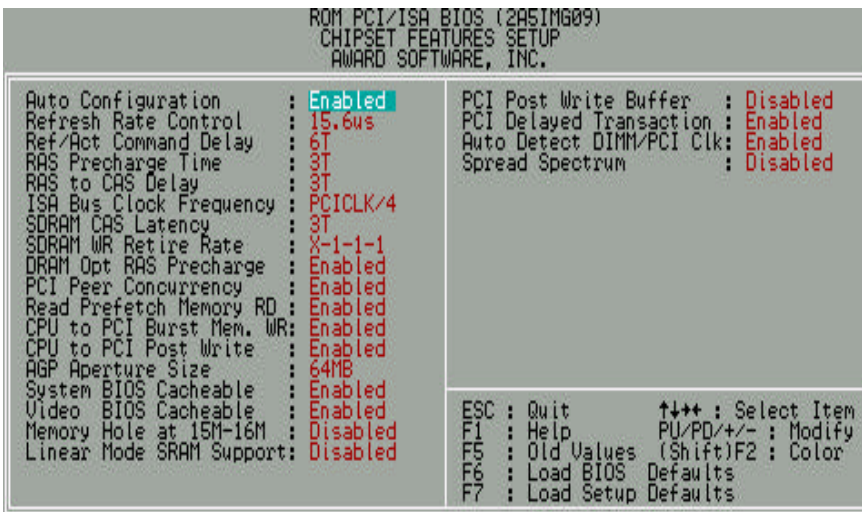


Figure 4.4: Chipset Features Setup

- Auto Configuration

The default value is Enabled.

Enabled	For General State.
Disabled	For Special SDRAM Timing and ISA CLK.

- Refresh Rate Control

The default value is 15.6us.

15.6us	Set Refresh Rate Control function to 15.6us.
7.8us	Set Refresh Rate Control function to 7.8us.
3.9us	Set Refresh Rate Control function to 3.9us.

- Ref/Act Command Delay

The default value is 6T.

5T	Set Ref/Act Command Delay to 5T.
6T	Set Ref/Act Command Delay to 6T.
7T	Set Ref/Act Command Delay to 7T.
8T	Set Ref/Act Command Delay to 8T.

- RAS Precharge Time

The default value is 3T

2T	Set RAS Precharge Time to 2T.
3T	Set RAS Precharge Time to 3T.
4T	Set RAS Precharge Time to 4T.
5T	Set RAS Precharge Time to 5T.

- RAS to CAS Delay

The default value is 3T

2T	Set RAS to CAS Delay to 2T.
3T	Set RAS to CAS Delay to 3T.
4T	Set RAS to CAS Delay to 4T.
5T	Set RAS to CAS Delay to 5T.

- ISA Bus Clock Frequency

The default value is PCICLK/4

PCICLK/3	Set ISA Bus Clock Frequency to PCICLK/3.
PCICLK/4	Set ISA Bus Clock Frequency to PCICLK/4.
7.159MHz	Set ISA Bus Clock Frequency to 7.159MHz.

- SDRAM CAS Latency

The default value is 3T

2T	Set SDRAM CAS Latency to 2T.
3T	Set SDRAM CAS Latency to 3T.

- SDRAM WR Retire Rate

The default value is X-1-1-1

X-1-1-1	Set SDRAM WR Retire Rate to X-1-1-1.
X-2-2-2	Set SDRAM WR Retire Rate to X-2-2-2.

- DRAM Opt RAS Precharge

The default value is Enabled.

Enabled	Enabled DRAM Opt RAS Precharge Function.
Disabled	Disabled DRAM Opt RAS Precharge Function.

- PCI Peer Concurrency

The default value is Enabled.

Enabled	Enabled PCI Peer Concurrency Function.
Disabled	Disabled PCI Peer Concurrency Function.

- Read Prefetch Memory RD

The default value is Enabled.

Enabled	Enabled Read Prefetch Memory RD.
Disabled	Disabled Read Prefetch Memory RD.

- CPU to PCI Burst Mem. WR

The default value is Enabled.

Disabled	Disabled CPU to PCI Burst Mem. WR.
Enabled	Enabled CPU to PCI Burst Mem. WR.

- CPU to PCI Post Write

The default value is Enabled

Enabled	Enabled CPU to PCI Post Write Function.
Disabled	Disabled CPU to PCI Post Write Function.

- AGP Aperture Size

The default value is 64MB.

4MB	Set AGP Aperture Size to 4MB.
8MB	Set AGP Aperture Size to 8MB.
16MB	Set AGP Aperture Size to 16MB.
32MB	Set AGP Aperture Size to 32MB.
64MB	Set AGP Aperture Size to 64MB.
128MB	Set AGP Aperture Size to 128MB.
256MB	Set AGP Aperture Size to 256MB.

- System BIOS Cacheable

The default value is Enabled.

Enabled	Enabled System BIOS cacheable.
Disabled	Disabled System BIOS cacheable.

- Video BIOS Cacheable

The default value is Enabled.

Enabled	Enabled video BIOS cacheable.
Disabled	Disabled video BIOS cacheable.

- Memory Hole at 15M-16M

The default value is Disabled.

Enabled	Set Address=15-16MB relocate to ISA BUS.
Disabled	Normal Setting.

- Linear Mode SRAM Support

The default value is Disabled.

Enabled	Enabled Linear Mode SRAM Support.
Disabled	Disabled Linear Mode SRAM Support.

- PCI Post Write Buffer

The default value is Disabled.

Enabled	Enabled PCI Post Write Buffer.
Disabled	Disabled PCI Post Write Buffer.

- PCI Delayed Transaction

The default value is Enabled.

Enabled	Enabled PCI Delayed Transaction.
Disabled	Disabled PCI Delayed Transaction.

- Auto Detect DIMM/PCI Clk

The default value is Enabled.

Disabled	Disabled Auto Detect DIMM/PCI Function.
Enabled	Enabled Auto Detect DIMM/PCI Function.

- Spread Spectrum

The default value is Disabled.

Disabled	Disabled Spread Spectrum function.
Enabled	Enabled Spread Spectrum function.

4.8. POWER MANAGEMENT SETUP

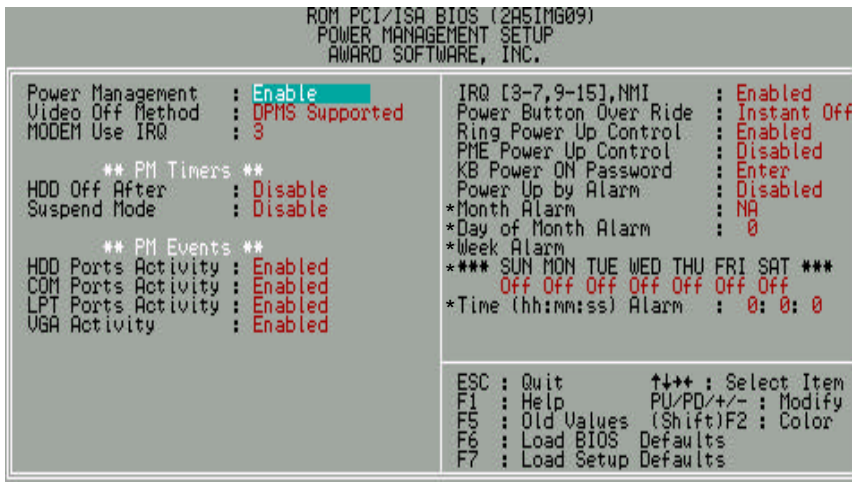


Figure 4.5: Power Management Setup

* These five items will show up when Power Up by Alarm is Enabled.

- Power Management

The default value is Enable.

Enable	Enable Green function.
Disable	Disable Green function.

- Video off Method

The default value is DPMS Supported.

V/H SYNC+Blank	BIOS will turn off V/H-SYNC when gets into Green mode for Green monitor power saving.
Blank Screen	BIOS will only black monitor when gets into Green mode.
DPMS Supported	BIOS will use DPMS Standard to control VGA card. (The Green type VGA card will turn off V/H-SYNC automatically.)

- MODEM use IRQ

The default value is 3.

NA	No use IRQ for Modem.
3~5,7,9~11	Assign Available IRQ# for Modem.

- HDD Off After

The default value is Disable.

Disable	Disable HDD Off After.
1min-15min	Set HDD timer to get into power down mode.

- Suspend Mode

The default value is Disable.

Disable	Disable Suspend Mode.
10 Sec - 4 Hour	Setup the timer to enter Suspend Mode.

- HDD Ports Activity

The default value is Enabled.

Disabled	Disabled HDD Ports Activity.
Enabled	Enabled HDD Ports Activity.

- COM Ports Activity

The default value is Enabled.

Disabled	Disabled COM Ports Activity.
Enabled	Enabled COM Ports Activity.

- LPT Ports Activity

The default value is Enabled.

Disabled	Disabled LPT Ports Activity.
Enabled	Enabled LPT Ports Activity.

- VGA Activity

The default value is Enabled.

Disabled	Disabled VGA Activity.
Enabled	Enabled VGA Activity.

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

The default value is Enabled.

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

- Power Button Over Ride

The default value is Instant Off.

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

- Ring Power Up Control

The default value is Enabled.

Disabled	Disabled Modem Ring On Function.
Enabled	Enabled Modem Ring On Function.

- PME Power Up Control

The default value is Disabled.

Disabled	Disabled PME Power Up Control Function.
Enabled	Enabled PME Power Up Control Function.

- KB Power ON Password

Enter	Enter from 1 to 8 characters to set the Keyboard Password.
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- Power Up by Alarm

The default value is Disabled.

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

If the default value is Enabled.

Month Alarm:	NA,1~12
Date of Month Alarm:	0~31
Week Alarm:	*** SUN MON TUE WED THU FRI SAT *** Off Off Off Off Off Off Off
Time (hh: mm: ss) Alarm:	(0~23) : (0~59) : (0~59)

4.9. PNP/PCI CONFIGURATION

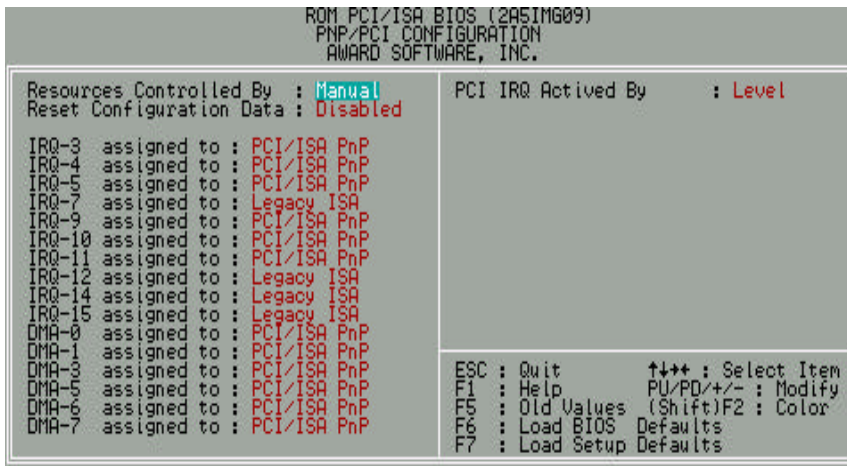


Figure 4.6:PCI Slot Configuration

- 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	Disabled this function.
Enabled	Enabled 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).

- PCI IRQ Activated By

The default value is Level.

Level	Set PCI IRQ Activated by Level.
Edge	Set PCI IRQ Activated by Edge.

4.10. LOAD BIOS DEFAULTS

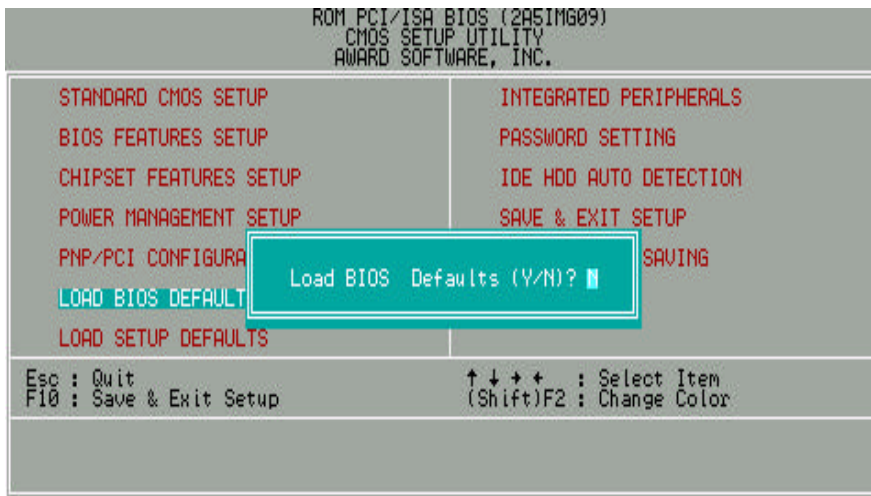


Figure 4.7: Load BIOS Defaults

- Load BIOS Defaults

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

4.11. LOAD SETUP DEFAULTS

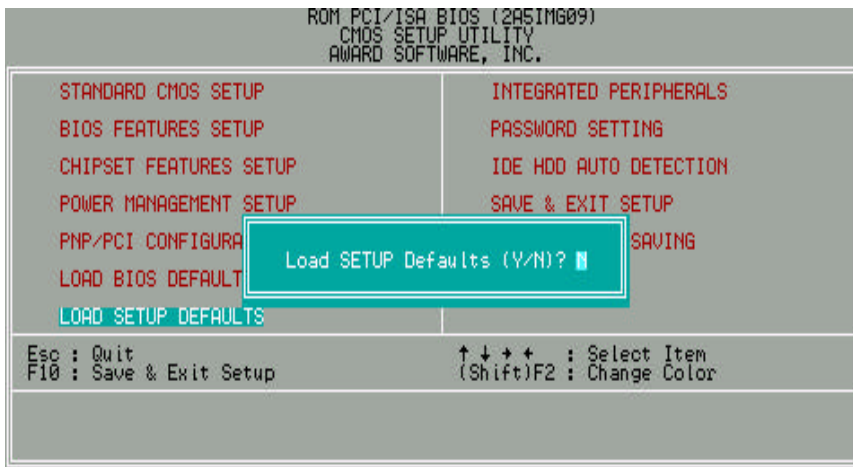


Figure 4.8: Load Setup Defaults

- Load SETUP Defaults

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

- **If there is any problem occurred, loading SETUP DEFAULTS step is recommended.**

4.12. INTEGRATED PERIPHERALS

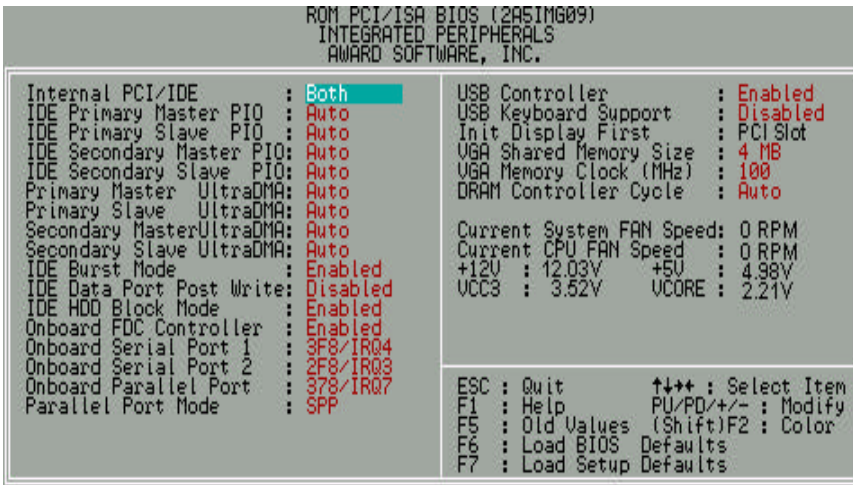


Figure 4.9: Integrated peripherals

- Internal PCI/IDE

The default value is Both.

Disabled	Disabled Internal PCI/IDE .
Primary	Set Internal PCI/IDE to Primary.
Secondary	Set Internal PCI/IDE to Secondary .
Both	Set Internal PCI/IDE to Both.

- 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.

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

The default value is Auto.

Auto	BIOS will automatically set the IDE HDD to Ultra DMA/33 Mode.
Disabled	Disable Ultra DMA HDD Function.

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

The default value is Auto.

Auto	BIOS will automatically set the IDE HDD to Ultra DMA/33 Mode.
Disabled	Disable Ultra DMA HDD Function.

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

The default value is Auto.

Auto	BIOS will automatically set the IDE HDD to Ultra DMA/33 Mode.
Disabled	Disable Ultra DMA HDD Function.

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

The default value is Auto.

Auto	BIOS will automatically set the IDE HDD to Ultra DMA/33 Mode.
Disabled	Disable Ultra DMA HDD Function.

- IDE Burst Mode

The default value is Enabled.

Enabled	Enable IDE Burst Mode.
Disabled	Disable IDE Burst Mode.

- IDE Data Port Post Write

The default value is Disabled.

Enabled	Enable IDE Data Port Post Write.
Disabled	Disable IDE Data Port Post Write.

- IDE HDD Block Mode

The default value is Enabled.

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

- Onboard FDC Controller

The default value is Enabled.

Enabled	Enable onboard FDC port.
Disabled	Disable onboard FDC 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.
3BC/IRQ7	Enable onboard LPT port and address is 3BC/IRQ7.
Disabled	Disable onboard LPT port.

- Onboard Parallel Mode

The default value is SPP.

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

- USB Controller

The default value is Enabled.

Disabled	Disable USB Controller.
Enabled	Enable USB Controller.

- USB Keyboard Support

The default value is Disabled.

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

- Init Display First

The default value is PCI Slot.

PCI Slot	System will boot from PCI VGA Card.
AGP	System will boot from AGP Display Card.

- VGA Shared Memory Size

The default value is 4MB.

2MB	Set VGA Shared Memory Size to 2MB.
4MB	Set VGA Shared Memory Size to 4MB.
8MB	Set VGA Shared Memory Size to 8MB.

- When shared memory is used, the system memory (SDRAM DIMM) must be installed in DIMM 1.**

- VGA Memory Clock (MHz)

The default value is 100.

66	Set VGA Memory Clock to 66MHz.
75	Set VGA Memory Clock to 75MHz.
83	Set VGA Memory Clock to 83MHz.
90	Set VGA Memory Clock to 90MHz.
95	Set VGA Memory Clock to 95MHz.
100	Set VGA Memory Clock to 100MHz.

- **It is recommended to set the video memory clock to be the same frequency as the system frequency.**

- DRAM Controller Cycle

The default value is Auto.

Auto	Set this function to Auto.
1R1W	Set DRAM Controller Cycle to 1R1W.
2R2W	Set DRAM Controller Cycle to 2R2W.

- Current System FAN Speed

Detect System Fan speed status automatically.

- Current CPUFAN Speed

Detect CPU Fan speed status automatically.

- Current CPU VCORE ,VCC3 ,+5V ,+12V

Detect system's 4 positive voltage status automatically.

4.13. PASSWORD SETTING

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

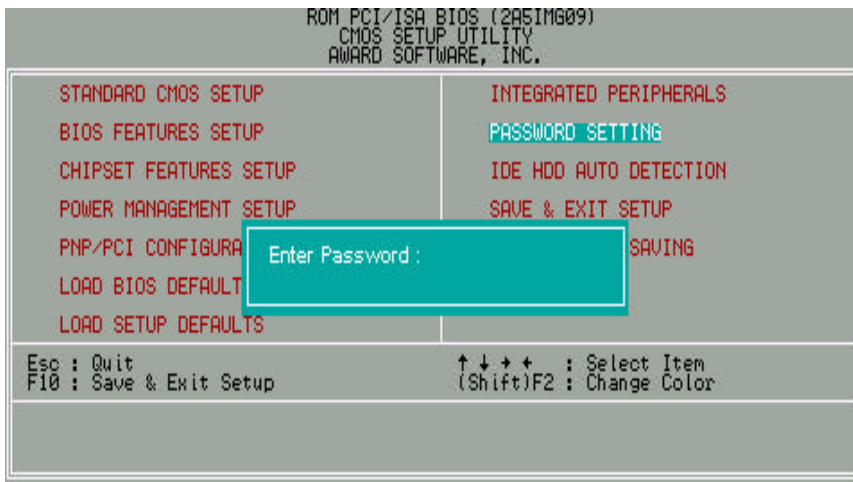


Figure 4.10: Password Setting

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

You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable password, just press <Enter> when you are prompted to enter password. A message will confirm the password being disabled.

Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED

If you select System at Security Option of 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.

If you select Setup at Security Option of BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

4.14. IDE HDD AUTO DETECTION

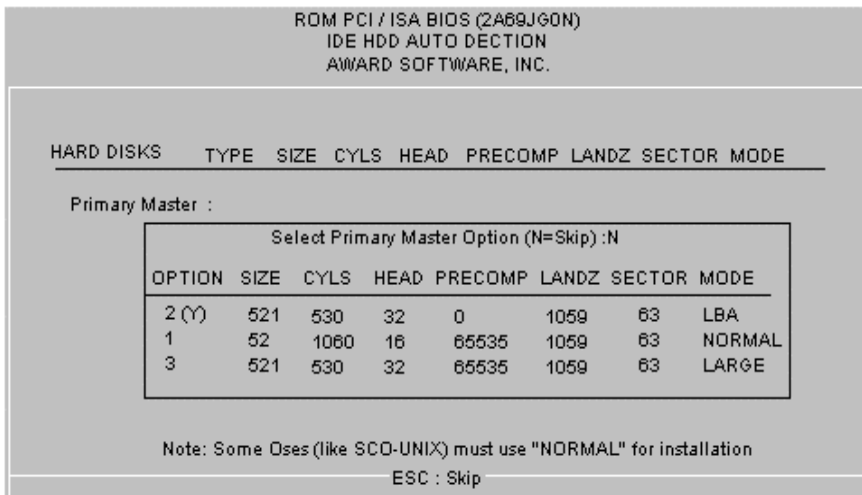


Figure 4.11: IDE HDD Auto Detection

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 NO. is over 1024, then the user can select LBA mode or LARGE mode for DOS partition larger than 528 MB.

4.15. SAVE & EXIT SETUP



Figure 4.12: 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.

4.16. EXIT WITHOUT SAVING

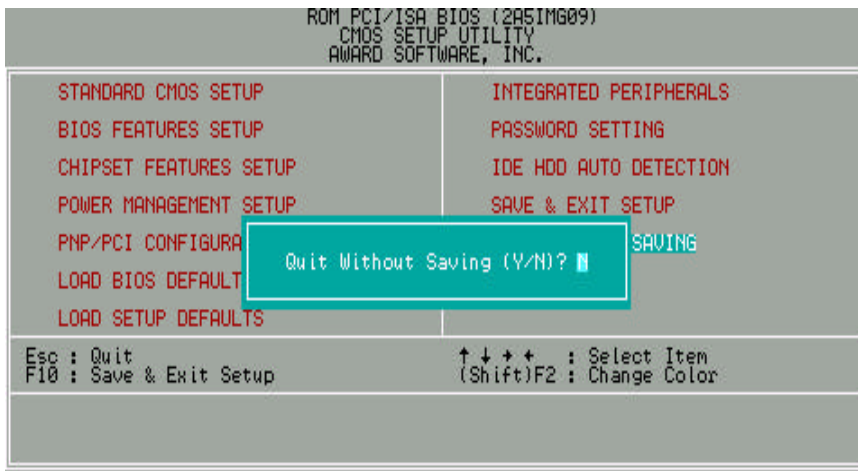


Figure 4.13: Exit Without Saving

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

Type "N" will return to Setup Utility.

APPENDIX A: Onboard Driver Installation Procedure

(In this manual, we assume that your CD-ROM Drive letter to be Drive D:)

Please reference TUCD CD directory D: \ Manual \ SiS530.pdf

<p align="center">DECLARATION OF CONFORMITY Per FCC Part 2 Section 2.1077(a)</p> <p align="center">FC</p> <p>Responsible Party Name: G.B.T. INC. Address: 18365 Valley Blvd., Suite#A LA Point, CA 91744 Phone/Fax No: (818) 854-9338 / (818) 854-9339</p> <p>hereby declares that the product Product Name: Mother Board Model Number: GA-55MM</p> <p>Conforms to the following specifications: FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109(a), Class B Digital Device</p> <p>Supplementary Information: This device complies with part 15 of the FCC Rules. Operation is subject 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.</p> <p>Representative Person's Name: <u>ERIC LU</u> Signature: <u>Eric Lu</u> Date: <u>Jan 15, 1999</u></p>

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 Trading GMBH
Ausschlagler Weg 41, 1F, 20537 Hamburg, Germany

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

Mother Board
GA-5SMM

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

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

CE marking



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

- | | | | |
|-----------------------------------|---|-------------------------------------|---|
| <input type="checkbox"/> EN 60065 | Safety requirements for mains operated electronic and related apparatus for household and similar general use | <input type="checkbox"/> EN 60950 | Safety for information technology equipment including electrical business equipment |
| <input type="checkbox"/> EN 60335 | Safety of household and similar electrical appliances | <input type="checkbox"/> EN 50091-1 | General and Safety requirements for uninterruptible power systems (UPS) |

Manufacturer/Importer

Signature : Rex Lin
Name : Rex Lin

(Stamp)

Date : Jan. 15, 1999

