EXHIBIT 5

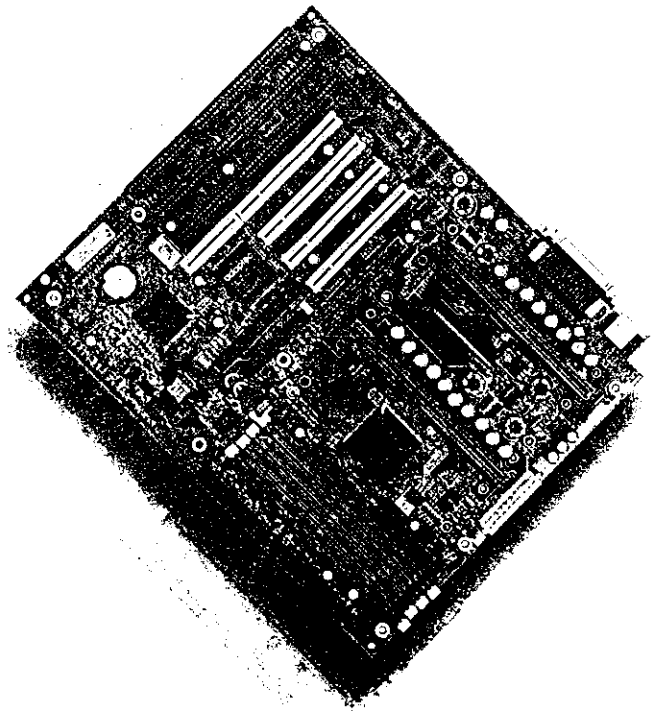
User's Manual

User's Manual

POST-CONSUMER
RECYCLED PAPER

PRINTED In TAIWAN

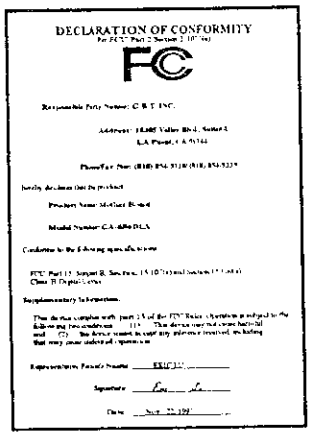
GA-686DLX
PCI-ISA BUS
USER'S MANUAL



PENTIUM® II PROCESSOR MAINBOARD

FCC ID MBDLEMTL SERIES

FCC ID. MBDMITAC SERIES


DECLARATION OF CONFORMITY

FC

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.

686DLX

USER'S MANUAL

Pentium® II Processor MAINBOARD

REV. 1 Second Edition

R-01-02-080206

NOTE :
(1) Synnex pr. Je a Pentium II 300MHz CPU submitted to FCC.
(2) SCSI port is not available till now, Synnex doesn't provide this port before submitted to FCC.

1. INTRODUCTION

1.1. PREFACE

Welcome to use the **686DLX** motherboard. The motherboard is a Dual Pentium® II Processor based PC / AT compatible system with AGP / PCI / ISA Bus, and has been designed to be the fastest PC / AT system. There are some new features allow you to operate the system with just the performance you want.

This manual also explains how to install the motherboard for operation, and how to set up your CMOS CONFIGURATION with BIOS SETUP program.

1.2. KEY FEATURES

- Intel Dual Pentium® II Processor based PC / AT compatible mainboard.
- Dual Slot 1 on board supports dual Pentium® II processor running at 200-633MHz.
- Intel 440LX chipset, Support AGP / SDRAM / Ultra DMA/33 IDE / ACPI features.
- Support CPU FAN Failure / Overheat Alarm & auto slow down CPU speed.
- Support Intel LDCM® Network Manageability.
- Supports 4xDIMMs using 3.3V EDO or SDRAM DIMM module.
- Supports 8 MB - 1 GB EDO / 512MB SDRAM memory on board.
- Supports ECC or Non-ECC type DRAM module.
- Supports Ultra & Ultra Wide SCSI ports for 15 SCSI Device.
- 1xAGP slot, 4xPCI Bus slots(1 PCI slot support RAID port), 3xISA Bus slots.
- Supports 2 channels Ultra DMA/33 IDE ports for 4 IDE Device.
- Supports 2xCOM (16550), 1xLPT (EPP / ECP), 1x1.44MB Floppy port.
- Supports 2xUSB ports, 1xPS/2 Mouse & 1xPS/2 Keyboard ports.
- Licensed AWARD BIOS, 2M bit FLASH RAM.
- ATX form factor, Double stack I/O connector, 4 layers PCB.

1.5. INTRODUCE THE Pentium® II Processor & AGP

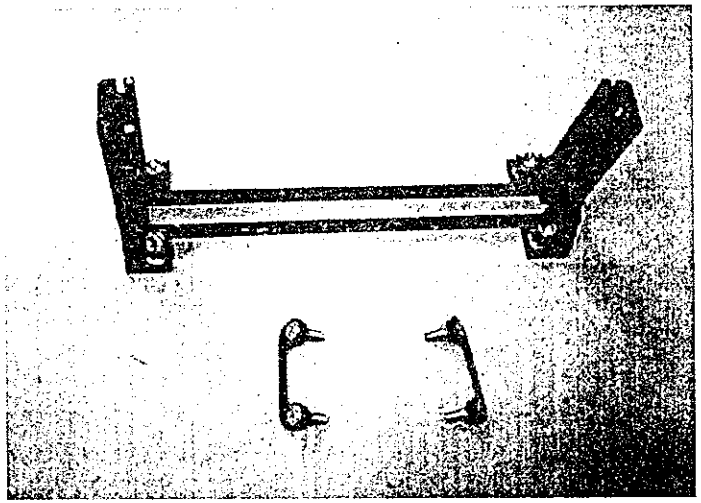


Figure 1:Retention Mechanism & attach Mount

Figure 2:OEM Pentium® II Processor

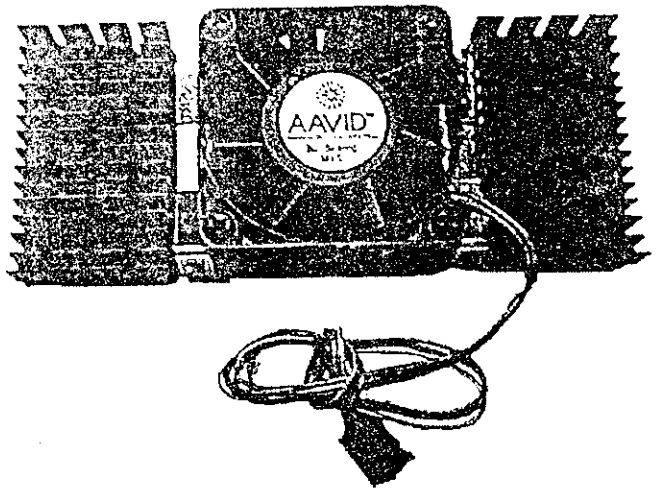


Figure 3:Heatsink / FAN & Heat sink support for OEM Pentium® II Processor

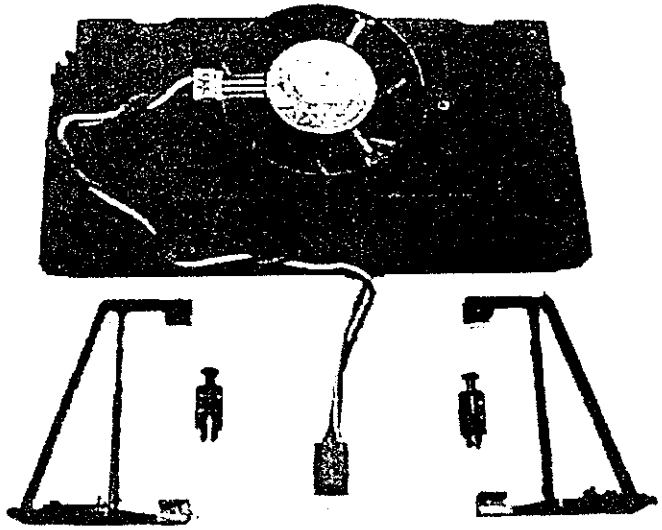


Figure 4:Boxed Pentium® II Processor & Heat sink support

• I/O PORTS	– Supports 2 16550 COM ports. (Using IRQ4, 3) – Supports 1 EPP/ECP LPT port. (Using IRQ7 or 5 and DMA3 or 1) – Supports 1 1.44/2.88 MB Floppy port. (Using DMA2 & IRQ6) – Supports 2 USB ports. – Supports PS/2 Mouse. (Using IRQ12) – Supports PS/2 Keyboard. (Using IRQ1)
• GREEN FUNCTION	– Suspend mode support. – Green switch & LED support. – IDE & Display power down support. – Monitor all IRQ / DMA / Display / I/O events.
• BIOS	– 256KB FLASH EEPROM. – Supports Plug & Play, DMI, ACPI Function.
• DIMENSION	– ATX Form Factor, 4 layers PCB.

2.2. SOFTWARE

• DRIVER	– Intel LDCM® optional. – Health monitor Utility. – Bus Master IDE Driver. – Suspend to HD Utility. – ULTRA WIDE SCSI Driver .
• BIOS	– Licensed AWARD BIOS. – AT CMOS Setup, BIOS / Chipset Setup, Green Setup, Hard Disk Utility included. – Monitor Health status.
• O.S.	– Operation with MS-DOS®, Windows®95, WINDOWS™ NT, OS/2, NOVELL and SCO UNIX.

2.3. ENVIRONMENT

• Ambient Temp.	– 0°C to +50°C (Operating).
• Relative Hum.	– 0 to +85% (Operating).
• Altitude	– 0 to 10,000 feet (Operating).
• Vibration	– 0 to 1,000 Hz.
• Electricity	– 4.9 V to 5.2 V. – Max. 20A current at 5V.

3. HARDWARE INSTALLATION

3.1. UNPACKING

The mainboard package should contain the following:

- The **686DLX** mainboard.
- The Retention Mechanism & Attach Mount
- USER'S MANUAL for mainboard.
- Cable set for IDE · Floppy & SCSI Device.
- Diskette & CD for SCSI Controller & Mainboard Utility.

The mainboard contains sensitive electric components, which can be easily damaged by static electricity, so the mainboard should be left in its original packing until it is installed.

Unpacking and installation should be done on a grounded anti-static mat. The operator should be wearing an anti static wristband, grounded at the same point as the anti-static mat.

Inspect the mainboard carton for obvious damage. Shipping and handling may cause damage to your board. Be sure there are no shipping and handling damages on the board before proceeding.

After opening the mainboard carton, extract the system board and place it only on a grounded anti-static surface component side up. Again inspect the board for damage. Press down on all of the socket IC's to make sure that they are properly seated. Do this only on with the board placed on a firm flat surface.

DO NOT APPLY POWER TO THE BOARD IF IT HAS BEEN DAMAGED.

You are now ready to install your mainboard. The mounting hole pattern on the mainboard matches the ATX system board. It is assumed that the chassis is designed for a standard ATX mainboard mounting.

Place the chassis on the anti-static mat and remove the cover. Take the clips, stand-off and screws for mounting the system board, and keep them separate.

♦ J8: Hard Disk active LED (HD-LED)	
Pin No.	Function
1	LED POWER (+)
2	LED POWER (-)
3	NC
4	LED POWER (+)

♦ J9: INFRARED Connector (IR) -- Function Option	
Pin No.	Function
1	IR Data Output
2	GND
3	IR Data Input
4	NC
5	POWER (+)

♦ J10: GN-SW
On – Off for enter suspend Green Mode.

♦ J11: Soft Power Switch
On – Off for POWER ON or Suspend IN / OUT.
On 4 sec. For POWER OFF before VGA Enable or CMOS setup select "delay 4sec." For POWER OFF mode.

♦ J12: Green LED	
OFF	Normal mode
ON	Suspend mode

♦ J16: Wake on Lan	
Pin No.	Function
1	+5V SB.
2	GND.
3	Signal.

♦ JP5: ATX POWER USE only	
Pin No.	Function
ON	System After AC BACK: Full_ON.
OFF	System After AC BACK: Soft_OFF.

♦ S1: CPU INT. / EXT. FREQ. RATIO					
CPU TYPE	1	2	3	4	CLK RATIO
200MHz	OFF	ON	OFF	OFF	X3
233MHz	ON	ON	OFF	OFF	X3.5
266MHz	OFF	OFF	ON	OFF	X4
300MHz	ON	OFF	ON	OFF	X4.5
333MHz	OFF	ON	ON	OFF	X5
366MHz	ON	ON	ON	OFF	X5.5

♦ POWER1: ATX POWER connector	
Pin No.	Function
3,5,7,13,15-17	GND
4,6,19,20	VCC (+5V)
10	+12V
12	-12V
18	-5V
8	Power Good
9	5V SB (Stand by +5V)
14	PS-ON (Soft ON/OFF)

3.4. DRAM INSTALLATION

The mainboard can be installed with 4 / 8 / 16 / 32 / 64 / 128 / 256 MB 168 pins DIMM module DRAM, and the DRAM speed must be 50 or 60 ns for EDO & 67~100 MHz for SDRAM. The DRAM memory system on mainboard consists of bank 0, 1, 2 & bank 3.

Because the 168 pins DIMM module is 64 bits width, using 1 PCS which can match a 64 bits system. The total memory size is 8 MB ~ 1 GB EDO / 512MB SDRAM. The DRAM installation position refer to Figure 3.1, and notice the Pin 1 of DIMM module must match with the Pin 1 of DIMM socket. Insert the DRAM DIMM module into the DIMM socket at Vertical angle. If there is a wrong direction of Pin 1, the DRAM DIMM module couldn't be inserted into socket completely.

3.11. SCSI DEVICE INSTALLATION

There are two SCSI ports on board, One is 8bit SCSI port for SCSI-2 or ULTRA SCSI device, and total 7 8bit SCSI devices can exist in a system.

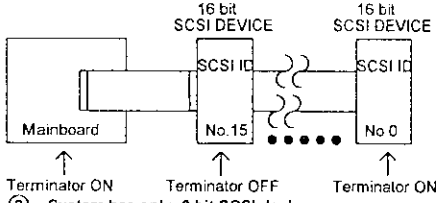
The other is 16bit SCSI port for wide or ULTRA Wide SCSI device, and total 15 SCSI devices (include 8bit SCSI device) can exist in a system.

The low byte Terminator (used for 8bit SCSI port) and High byte Terminator(used for Wide SCSI port) turning "ON" or "OFF" are controlled by BIOS SETUP(includes INTEGRATED PERIPHERALS SETUP PAGE).

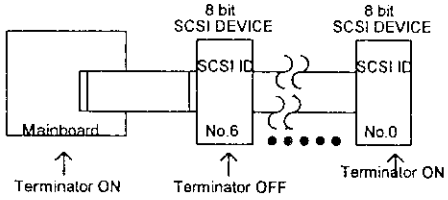
Terminator ON/OFF rules

CASE 1: BIOS SETUP(SCSI Terminator Enable: Both)

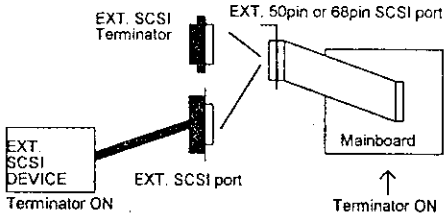
① System has 16 bit SCSI



② System has only 8 bit SCSI device

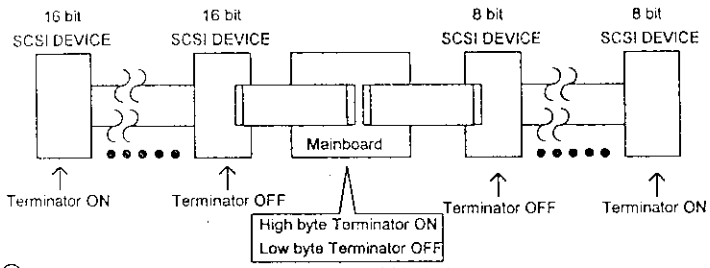


③ System has EXT. SCSI port but has not INT. SCSI device

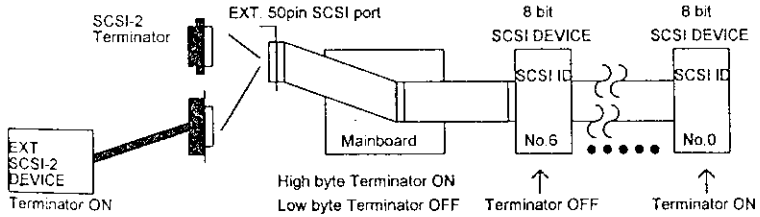


CASE 2: BIOS SETUP (SCSI Terminator Enable: High Byte)

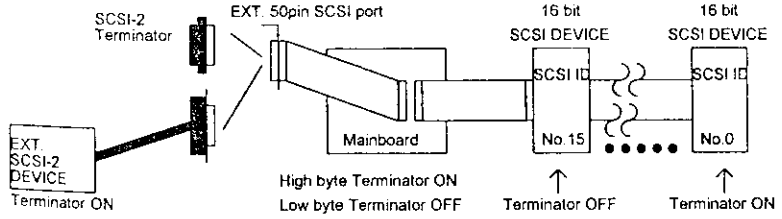
① System has 16 bit & 8 bit SCSI device



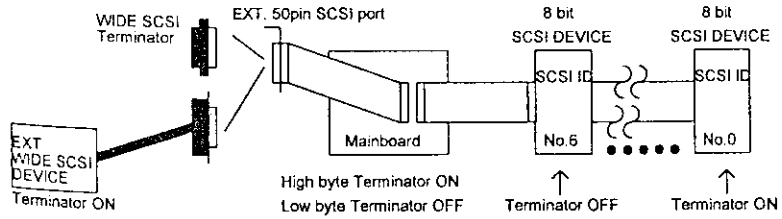
② System has 8 bit EXT. SCSI port & 8 bit INT. SCSI device



③ System has 8 bit EXT. SCSI port & 16 bit INT. SCSI device



④ System has 16 bit EXT. SCSI port & 8 bit INT. SCSI device



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 from nine setup functions and two 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	USER PASSWORD
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	SAVE & EXIT SETUP
POWER MANAGEMENT SETUP	EXIT WITHOUT SAVING
PNP/PCI CONFIGURATION	
INTEGRATED PERIPHERALS	
LOAD SETUP DEFAULTS	

ESC : Quit	↑ ↓ → ← : 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.

- Integrated peripherals

  This setup page includes all onboard peripherals.

- Load setup defaults

  Setup defaults indicates the most appropriate value of the system parameter which the system would be in safe configuration.

- 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 parameter.

- Save & exit setup

  Save CMOS value changes to CMOS and exit setup.

- Exit without saving

  Abandon all CMOS value changes and exit setup.

- 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.

- 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.

- VGA Boot From

  The default value is AGP.

AGP	Boot From AGP
PCI	Boot From PCI

- 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.

- MPS Version control For OS

  The default value is 1.4.

1.4	Enable MP spec. Ver.1.4.
1.1	Enable MP spec. Ver.1.1. (for some OS., ie SCO UNIX)

- 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.

- Delayed Transaction

The default value is Disabled.

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

- SDRAM RAS-to-CAS Delay

The default value is Fast.

Slow	For Slow SDRAM DIMM module.
Fast	For Fast SDRAM DIMM module.

- SDRAM RAS Precharge Time

The default value is Fast.

Slow	For Slow SDRAM DIMM module.
Fast	For Fast SDRAM DIMM module.

- SDRAM CAS latency Time

The default value is 2.

3	For Slow SDRAM DIMM module.
2	For Fast SDRAM DIMM module.

- CPU Temperature Select

The default value is 75°C / 167°F.

70°C / 158°F	Monitor CPU Temp. at 70°C / 158°F, if Temp. > 70°C / 158°F will cause system alarming & slow down CPU speed.
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.
Disabled	Disable monitors CPU Temp. (Overheat) function.

- CPU1 Fan Failure Control

The default value is Disabled.

Disabled	Disable monitor CPU FAN working status.
Enabled	Enable monitor CPU FAN working status.

- CPU2 Fan Failure Control

The default value is Disabled.

Disabled	Disable monitor CPU FAN working status.
Enabled	Enable monitor CPU FAN working status.

- CPU Fan Status

The default value depends on system monitoring CPU FAN status.

Fail	The CPU FAN fails to work.
OK	The CPU FAN works normally.
Ignore	Ignore

- CPU Temperature

The default value is OK.

High	CPU overheats. (CPU Temperature is out of SPEC.)
OK	CPU Temp. is in SPEC.

- Power Supply ±12V / ±5V

The default value depends on system monitoring ±12V / ±5V voltage status.

Fail	The ±12V / ±5V voltage from Power supply is out of SPEC.
OK	The ±12V / ±5V voltage from Power supply is in SPEC.

- 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 : PowerOn Suspend

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.

- CPUFAN off In Suspend

The default value is Disabled.

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 default value 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.

4.10. INTEGRATED PERIPHERALS

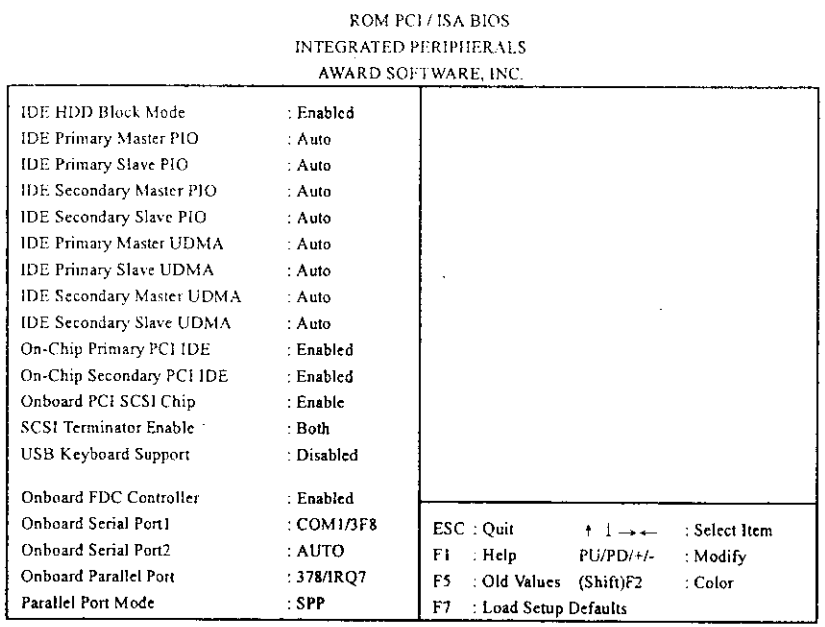


Figure 4.7: Load Setup Defaults

- 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.

- Onboard Serial Port 2

  The default value is AUTO.

Auto	BIOS will automatically setup the port 2 address.
COM1/3F8	Enable onboard Serial port 2 and address is 3F8.
COM2/2F8	Enable onboard Serial port 2 and address is 2F8.
COM3/3E8	Enable onboard Serial port 2 and address is 3E8.
COM4/2E8	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.

4.11. LOAD SETUP DEFAULTS

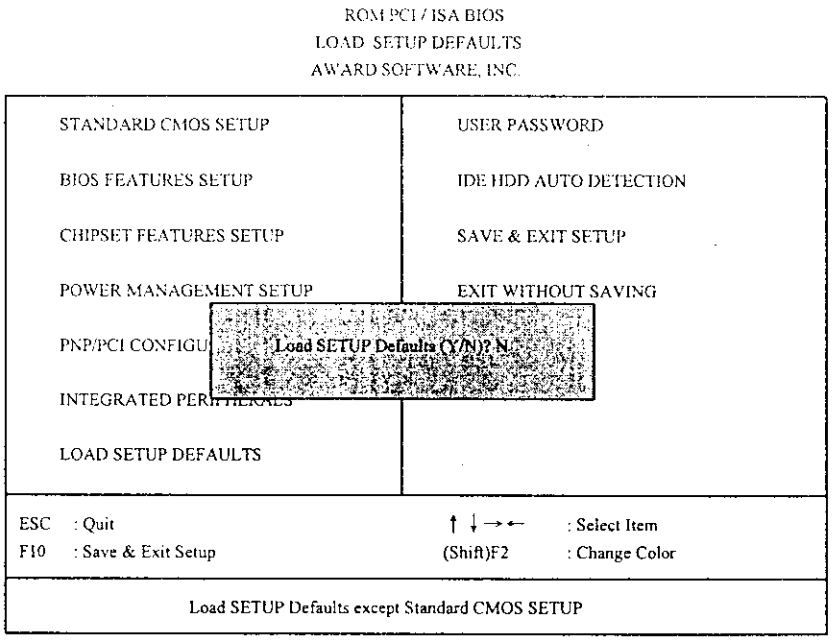


Figure 4.7: Load Setup Defaults

- Load SETUP Defaults

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

4.14. SAVE & EXIT SETUP

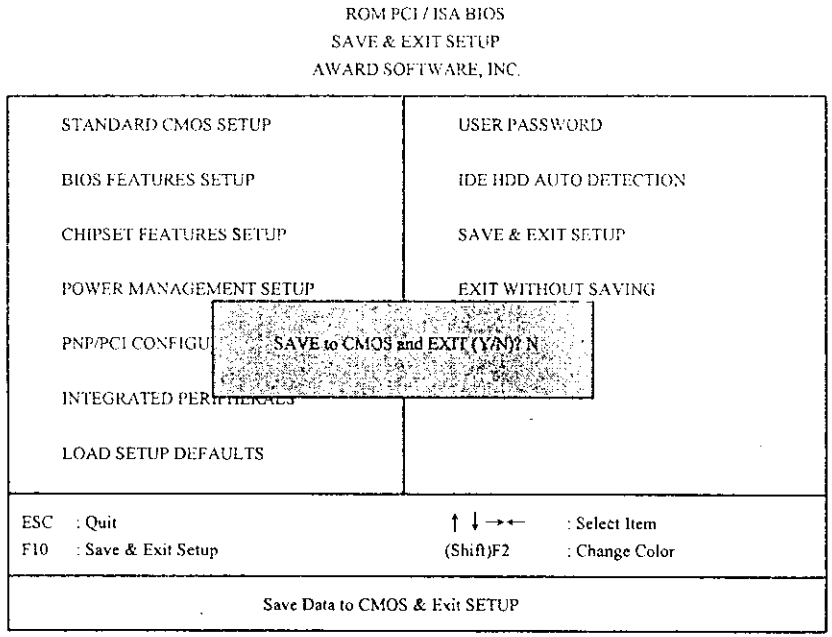


Figure 4.10: Save & Exit Setup

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

Type "N" will return to Setup Utility.

4.15. EXIT WITHOUT SAVING

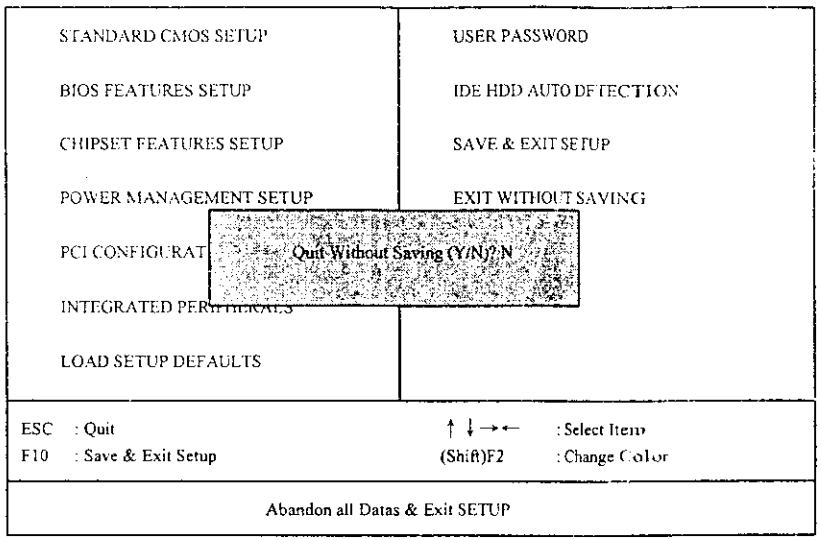


Figure 4.11: Exit Without Saving

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

Type "N" will return to Setup Utility.

4.12. 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.

ENTER PASSWORD

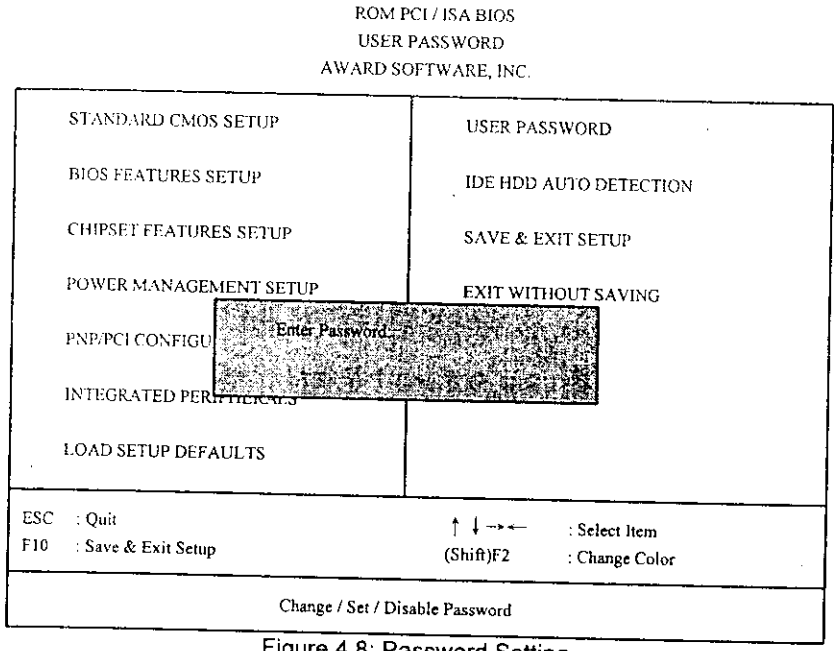


Figure 4.8: Password Setting

Type the password, up to eight characters, and press <Enter>. The password typed now will clear and 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.

4.13. IDE HDD AUTO DETECTION

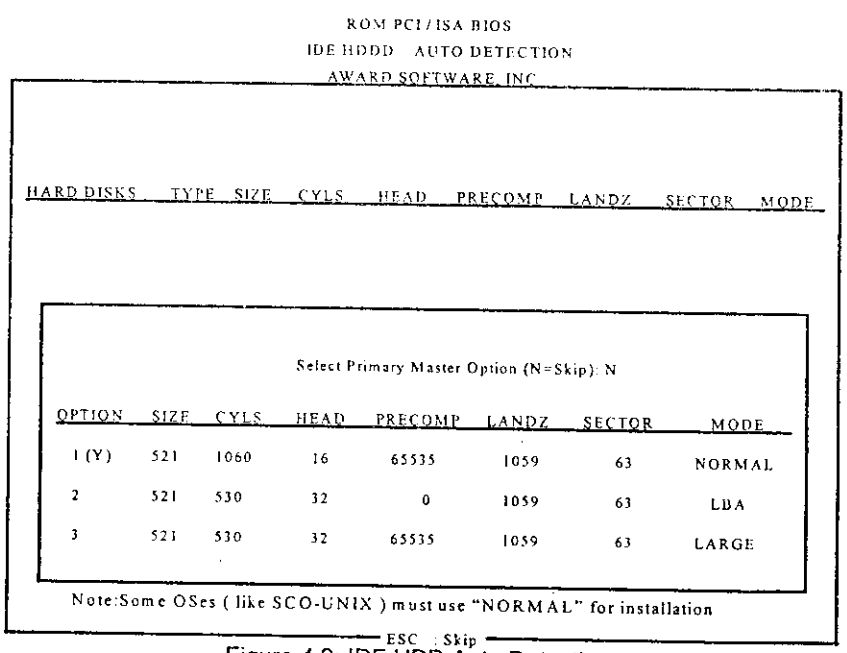


Figure 4.9: IDE HDD Auto Detection

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

- 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.

- Onboard PCI SCSI Chip

  The default value is Enabled.

Enabled	Enable onboard SCSI port.
Disabled	Disable onboard SCSI port.

- SCSI Terminator Enable

  The default value is Both.

Both	Support All SCSI Device.
None	Disable SCSI Device Support.
Low Byte	Low Byte-ON.
High Byte	High Byte-ON.

- 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 COM1/3F8.

Auto	BIOS will automatically setup the port 1 address.
COM1/3F8	Enable onboard Serial port 1 and address is 3F8.
COM2/2F8	Enable onboard Serial port 1 and address is 2F8.
COM3/3E8	Enable onboard Serial port 1 and address is 3E8.
COM4/2E8	Enable onboard Serial port 1 and address is 2E8.
Disabled	Disable onboard Serial port 1.

- 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 CONFGURATION
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		
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 Setup 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.

- Battery Status

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.

- CPU VCore Voltage

1.8V~3.5V	The voltage is current setting for CPU.

4.8. POWER MANAGEMENT SETUP

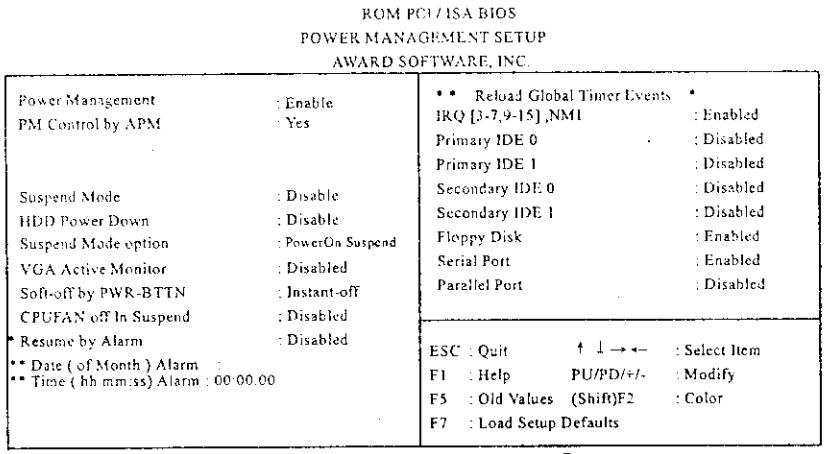


Figure 4.5: Power Management Setup

* 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.

- 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

- C8000 - CFFFF Shadow / D0000 - DFFFF Shadow

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

Enabled	Optional shadow is enabled
Disabled	Optional shadow is disabled

4.7. CHIPSET FEATURES SETUP

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

Auto Configuration	: Enabled	CPU Temperature Select	: 75 ℃/167 ℉
DRAM Speed Selection	: Normal	CPU1 Fan Failure Control	: Disabled
Memory Buffer Strength	: Middle	CPU2 Fan Failure Control	: Disabled
DRAM Data Integrity Mode	: Non-ECC	CPU Fan Status	: Ignore
Video RAM Cacheable	: Disabled	CPU Temperature	: OK
Memory Hole At 15M-16M	: Disabled	Power Supply +12V	: OK
Delayed Transaction	: Disabled	Power Supply -12V	: OK
SDRAM RAS-to-CAS Delay	: Fast	Power Supply +5V	: OK
SDRAM RAS Precharge Time	: Fast	Power Supply -5V	: OK
SDRAM CAS latency Time	: 2	Battery Status	: OK
		CPU VCore Voltage	: 2.8V

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

Figure 4.4: Chipset Features Setup

- Auto Configuration

  The default value is Enabled.

Enabled	For 50 - 60ns EDO DRAM Timing.
Disabled	For slow speed DRAM Timing.

- DRAM Speed Selection

  The default value is Normal.

Normal	For normal DRAM operation.
Fast	For Fastest DRAM timing operation.

- Memory Buffer Strength

  The default value is Middle.

Middle	For Middle Memory Buffer strength.
Low	For Low Memory Buffer strength.
High	For High Memory Buffer strength.

- 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.

- 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).

- Memory Hole At 15M-16M

  The default value is Disabled.

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

4.5. BIOS FEATURES SETUP

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

Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
CPU Internal Cache	: Enabled	C8000 - CBFFF Shadow	: Disabled
External Cache	: Enabled	CC000 - CFFFF Shadow	: Disabled
CPU L2 Cache ECC Checking	: Disable	D0000 - D3FFF Shadow	: Disabled
Quick Power On Self Test	: Enabled	D4000 - D7FFF Shadow	: Disabled
CPU Update Data	: Enabled	D8000 - DBFFF Shadow	: Disabled
Boot Sequence	: A, C, SCSI	DC000 - DFFFF Shadow	: Disabled
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		
Security Option	: Setup		
PCI/VGA Palette Snoop	: Disabled		
MPS Version Control For OS	: 1 . 4		
OS Select For DRAM >64MB	: Non-OS2		

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

Figure 4.3: BIOS Features Setup

- Virus Warning

  This category flashes on the screen during 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. 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

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.

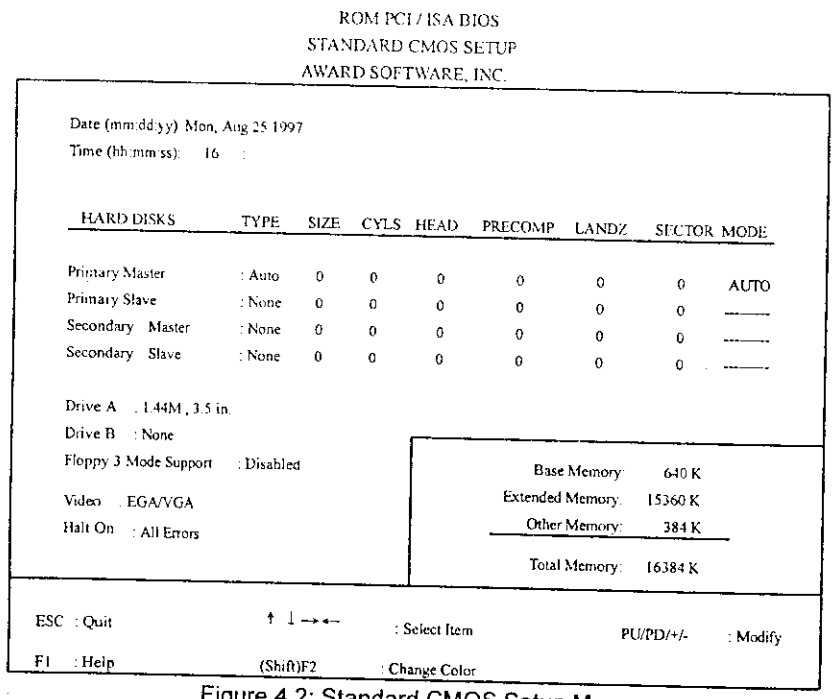


Figure 4.2: Standard CMOS Setup Menu

- Date

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

day	The day, from Sun to Sat, determined by the BIOS and is display-only
date	The date, from 1 to 31 (or the maximum allowed in the month)
month	The month, Jan. through Dec.
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 drive C drives F 4 devices 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's 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 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 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>.

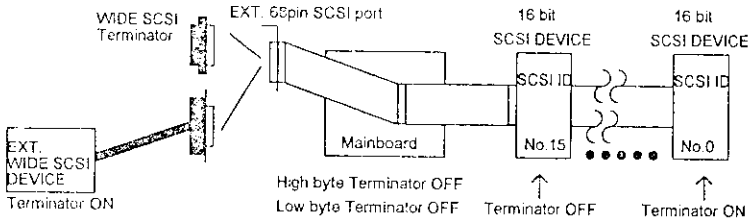
- Drive A type / Drive B type

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.

CASE 3: BIOS SETUP(SCSI Terminator Enable: None)

① System has 16 bit EXT. SCSI port & INT. 16 bit SCSI device



3.12. PERIPHERAL DEVICE INSTALLATION

After the I/O device installation and jumpers setup, the mainboard can be mounted into the case and fixed by screw.

To complete the mainboard installation, the peripheral device could be installed now. The basic system needs a display interface card.

If the PCI - Bus device is to be installed in the system, any one of five PCI - Bus slots can be used.

3.13. KEYBOARD & PS/2 MOUSE INSTALLATION

The main board supports PS/2 connector type keyboard & Mouse **(CN4)**.

The BIOS will auto detect whether the PS/2 Mouse is installed or nor & assign IRQ12 for Mouse port if which was installed.

After installing the peripheral device, the user should check everything again, and prepare to power-on the system.

3.14. KEYBOARD SETTING FUNCTION

After booting the O.S., there are some special functions used by keyboard as follows:

"CTRL_ALT_DEL"	– Pressing these keys simultaneously will cause system to Warm Start (Software Reset).

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

3.5. CPU SPEED SETUP

The system's speed is fixed to 66.6MHz. The user can change the DIP SWITCH **(S1)** selection to set up the CPU speed for 200 - 633MHz processor. The CPU speed must match with the frequency RATIO. It will cause system hanging up if the frequency RATIO is higher than CPU's.

DIP SWITCH (S1)				FREQ. RATIO	EXT.CLK. MHz	NT.CLK. MHz	CPU Type
1	2	3	4				
OFF	ON	OFF	OFF	3	66	200	Pentium® II 200 MHz
ON	ON	OFF	OFF	3.5	66	233	Pentium® II 233 MHz
OFF	OFF	ON	OFF	4	66	266	Pentium® II 266 MHz
ON	OFF	ON	OFF	4.5	66	300	Pentium® II 300 MHz
OFF	ON	ON	OFF	5	66	333	Pentium® II 333 MHz
ON	ON	ON	OFF	5.5	66	366	Pentium® II 366 MHz

- **The CPU is a sensitive electric component and it can be easily damaged by static electricity, so users must keep it away from metal surface when the CPU is installed onto mainboard.**

3.6. CMOS RTC & ISA CFG CMOS SRAM

There're RTC & CMOS SRAM on board; they have a power supply from external battery to keep the DATA inviolate & effective. The RTC is a REAL-TIME CLOCK device, which provides the DATE & TIME to system. The CMOS SRAM is used for keeping the information of system configuration, so the system can automatically boot OS. every time. Due to the life-time of Battery internal battery is 5 years, the user can change a new Battery to replace old one after it can not work.

- **Danger of explosion if battery is incorrectly replaced.**
- **Replace only with the same or equivalent type recommended by the manufacturer.**
- **Dispose of used batteries according to the manufacturer's instructions.**

3.7. SPEAKER CONNECTOR INSTALLATION

There is always a speaker in AT system for sound purpose. The 4 - Pins connector **J5** is used to connect speaker.

The speaker can work well in both direction of connector when it is installed to the connector **J5** on mainboard.

3.8. HARDWARE RESET SWITCH CONNECTOR INSTALLATION

The RESET switch on panel provides users with HARDWARE RESET function, which is almost the same as power-on/off.

The system will do a cold start after the RESET switch is pushed and released by user. The RESET switch is a 2 PIN connector and should be installed to **J6** on mainboard.

3.9. POWER LED CONNECTOR INSTALLATION

There are system power LED lamps on the panel of case. The power LED will light on when system is powered-on, which is connected to a 3 PIN connector.

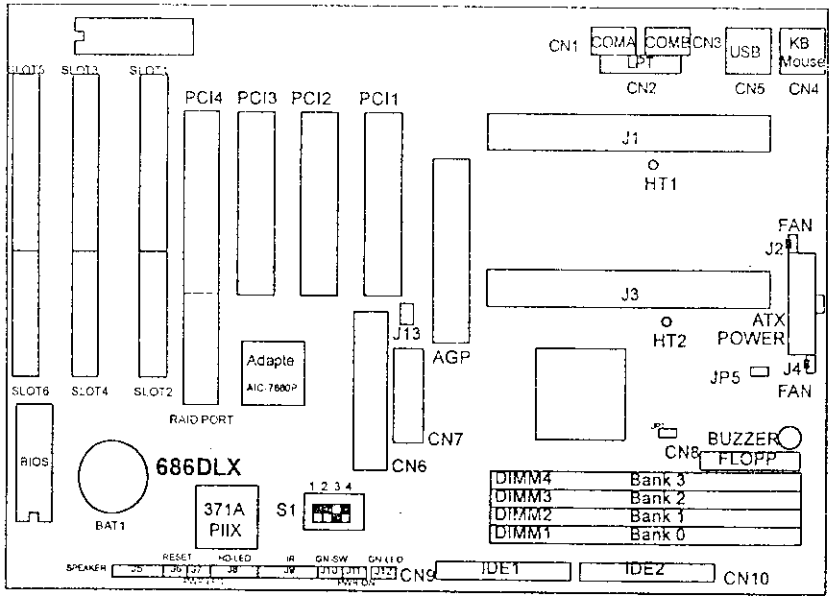
The connector should be connected to **J7** of mainboard in correct direction.

3.10. IDE & ATAPI DEVICE INSTALLATION

There are two Enhance PCI IDE ports **(CN9,10)** on board, which following ATAPI standard SPEC. Any one IDE port can connected to two ATAPI devices (IDE Hard Disk, CD-ROM & Tape Driver), so total four ATAPI devices can exist in a system.

The **J8** is the active LED port for ATAPI device.

3.2. MAINBOARD LAYOUT



<Figure 3.1>

3.3. QUICK REFERENCE FOR JUMPERS & CONNECTORS

♦ CN1-10 I/O Ports Connector	
CN1	For Serial port1 (COM A).
CN2	For LPT port.
CN3	For Serial port2 (COM B).
CN4	For PS/2 Mouse & Keyboard I/O ports.
CN5	For USB port.
CN6	For ULTRA 8 bit SCSI port.
CN7	For ULTRA WIDE SCSI port.
CN8	For Floppy port.
CN9	For Primary IDE port.
CN10	For Secondary IDE port.

♦ J1: slot1 (For CPU2)
For Pentium® II processor installed.

♦ J2: CPU2 cooling FAN Power Connector	
Pin No.	Function
1	GND.
2	+12V
3	SENSE

♦ J3: slot1 (For CPU1)
For Pentium® II processor installed.

♦ J4: CPU1 cooling FAN Power Connector	
Pin No.	Function
1	GND.
2	+12V
3	SENSE

♦ J5: SPEAKER Connector	
Pin No.	Function
1	VCC
2	NC.
3	NC.
4	Output

♦ J6: RESET Switch	
Pin No.	Function
1	RESET Input
2	GND

♦ J7: POWER ON LED (PW-LED)	
Pin No.	Function
1	LED POWER (+)
2	NC
3	GND (-)

1.6. What is AGP?

The Accelerated Graphics Port (AGP) is a new port on the Host-To-PCI bridge device that supports an AGP port. The main purpose of the AGP port is to provide fast access to system memory.

The AGP port can be used either as fast PCI port (32-bits at 66MHz vs. 32-bits at 33MHz) or as an AGP port which supports 2x data-rate, a read queue, and side band addressing. When the 2x-data rate is used the port can transmit data at 533Mb/sec (66.6*2*4). The read-queue can be used to pipeline reads – removing the effects of the reads-latency. Side band addressing can be used to transmit the data address on a separate line in order to further speed the transaction.

1.7. What is RAID PORT?

RAID PORT is the most popular in netware server applications. For example, it is having four Levels **0, 1, 0/1** and **5** (The RAID Levels is depend on your RAID CARD) .

RAID 0 (two driver minimum) is achieved by creating an array of striped disks. IF one driver in a RAID 0 system fails, all data on the array will be lost. RAID 0 is typically not used in network applications.

RAID 1 (two drivers) is as disk mirroring or duplexing. It's read performance is very good, because data can be read from either the primary or mirrored disk. However, it's write performance is slighhtly slower than with singal disks, because two requests must be issued to write the same data to both drivers.

RAID 0/1 (four driver minimunm) is as RAID 0+1, combines the performance of data striping (RAID 0) with the fault tolerance of RAID1.

RAID 5 (three drivers minimum) strips blocks of data as well as parity data across all driver in the array, ensuring that no data will be lost in the event of a single driver failure. RAID 5 delivers improved performance by allowing multiple, simultaneous read and write requests but it unlike the other RAID levels.

2. SPECIFICATION

2.1. HARDWARE

• CPU	– Dual Pentium® II processor 200 – 633 MHz. – Dual 242 pins 66MHz slot1 on board.
• PROTECTION	– Onboard Buzzer Alarm when detect "CPU FAN Failure" or "CPU Overheat". – Automatically slow down CPU speed when "CPU FAN Failure" or "CPU Overheat". – Intel LDCM® support. – H/W monitor power status (±5V, ±12V, CPU voltage & CMOS battery voltage).
• SPEED	– 66 MHz system speed. – 66 MHz AGP bus speed. (133MHz 2*mode) – 33 MHz PCI-Bus speed. – 8 MHz AT bus speed.
• DRAM MEMORY	– 4 banks 168 pins DIMM module sockets on board. – Use 8 / 16 / 32 / 64 / 128 / 256 MB 60~70 ns DIMM module DRAM. – 8 ~ 1 GB DRAM size. – Support 3.3V SDRAM / EDO type DRAM. – Support ECC or Non-ECC type DRAM.
• CACHE MEMORY	– 32 KB 1st cache memory included in CPU. – 256KB/512 KB 2nd cache in CPU. – Support DIB speed mode for L2 Cache.
• SCSI PORTS	– Using Adaptec 7880P chipset. – Supports one SCSI-2 or SCSI-3 (Ultra) port. – Support one Ultra or Ultra Wide port. – Support Adaptec RAID Port™ on board.
• I/O BUS SLOTS	– 1 66 / 133MHz AGP BUS. – 4 33MHz Master / Slave PCI-BUS. – 3 8MHz 16 bits ISA BUS.
• IDE PORTS	– 2 Ultra DMA/33 Bus Master IDE channels on board.(Using IRQ14,15) – Back ward Support Mode 3,4 IDE & ATAPI CD - ROM.

1.3. PERFORMANCE LIST

The following performance data list is the testing results of some popular benchmark testing programs.

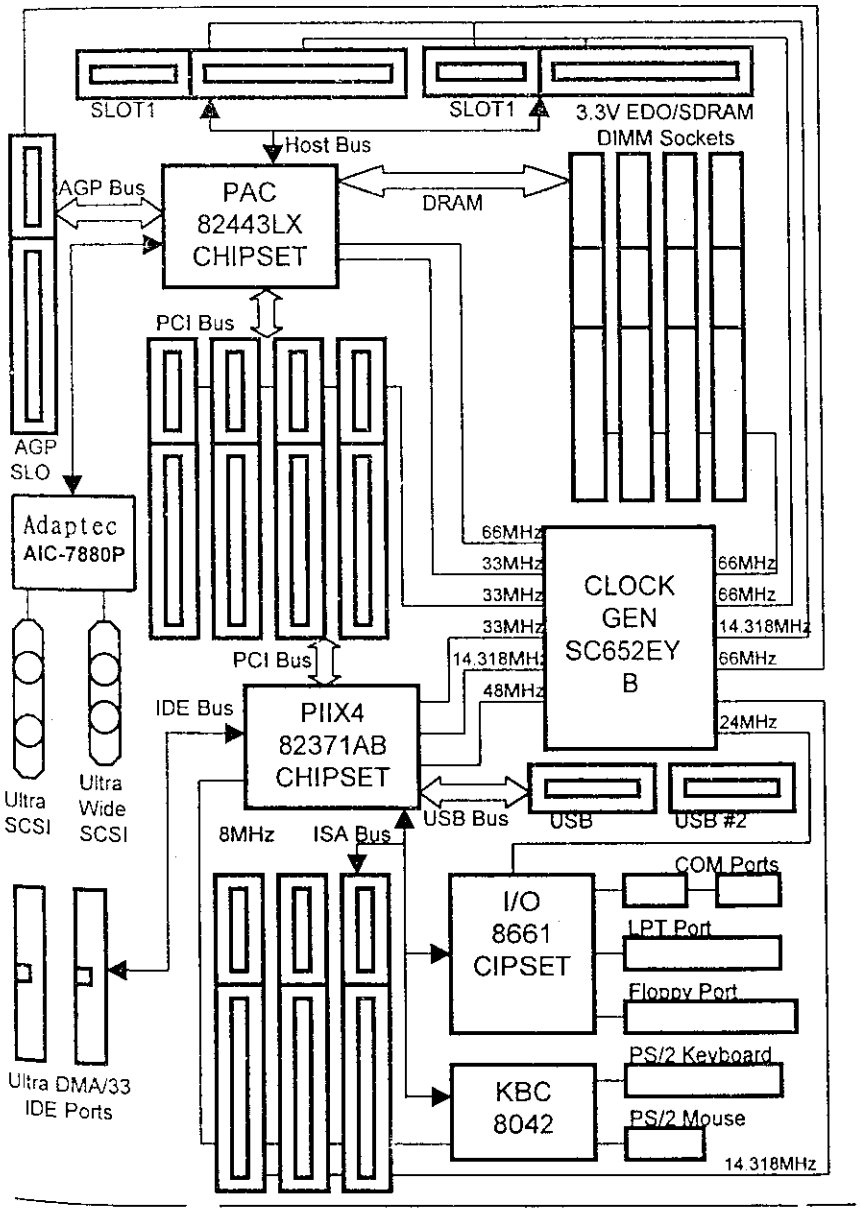
These data are just referred by users, and there is no responsibility for different testing data values gotten by users. (The different Hardware & Software configuration will result in different benchmark testing results.)

- CPU — Pentium® II processor
- DRAM — 64 MB SDRAM
- CACHE SIZE — 512 KB included in CPU
- DISPLAY — Matrox Millennium II 4MB PCI VGA
- STORAGE — Onboard IDE port
- O.S. — Windows95 OSR2.0.
- DRIVER — Display Driver at 1024 x 768 x 64K colors x 75Hz.
  Triones Bus Master IDE Driver 3.60K

	Intel Pentium® II	
	266MHz	300MHz
Winbench97		
CPU mark32	**697**	**783**
Business Disk	**2210**	**2260**
Hi-End Disk	**5890**	**6490**
Business Graphic	**116**	**127**
Hi-End Graphic	**50.8**	**56.3**
Winstone 97		
Business	**62**	**64.9**
Hi-End	**30.6**	**32.6**

「NOTE」
(1) Synnex provide a Pentium II 300MHz CPU submitted to FCC.
(2) SCSI port is not available till now, Synnex doesn't provide this port before submitted to FCC.

1.4. BLOCK DIAGRAM



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DECEMBER 06, 1997 Taipei, Taiwan

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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-686DLX

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 ☒ EN 50082-1	Generic emission standard Part 1: Residual, commercial and light industry 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		CE (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

(Stamp)

Date : Dec. 06, 1997

Signature : Rex Lin

Name : Rex Lin