



MB 5070

**PCI Bus Motherboard
With On Board PCI
DIE and Super
Multi-I/O**

Technique Notes

Due to that the BIOS provides auto hard disk detect function, it is strongly recommended to use the default setting. That is to say, set both the HARD DISKS TYPE and MODE to be AUTO in BIOS STANDARD CMOS SETUP menu. Because it is hard to distinguish from the hard disks to be LBA mode or not, manual setting may cause unnecessary trouble. If not necessary, please don't change the BIOS HARD DISKS TYPE and MODE manually, it may cause the format utility cannot correctly obtain the full hard disk size. In addition, unless you want to change the floppy setting, or please just save the BIOS setting and then quit.

**User's Manual
Version 3.0**

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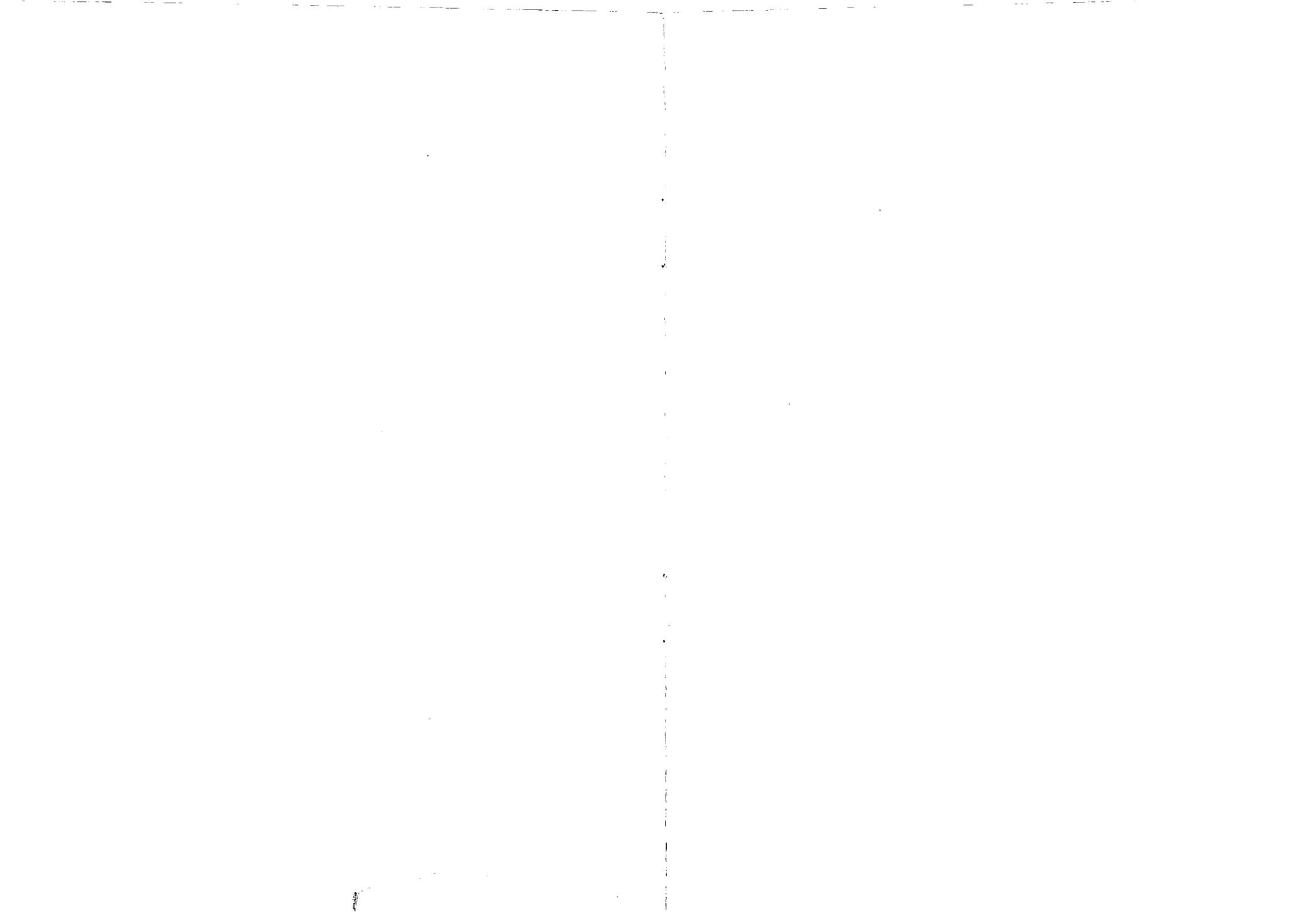
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SAVE & EXIT SETUP

Select this item from the main menu and type “Y” to save the values entered during the current session and then exit the BIOS Setup program. Type “N” to return to the Setup program.

EXIT WITHOUT SAVING

Select this item from the main menu and type “Y” to exit the BIOS Setup program without saving the values entered during the current session. Type “N” to return to the Setup program.

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IDE HDD AUTO DETECTION

1. If your system has an IDE hard drive, you can use this utility to detect its parameters and automatically enter them into the Standard CMOS Setup.

2.

ROM PCI/ISA BIOS (2A59CF52)									
CMOS SETUP UTILITY									
AWARD SOFTWARE, INC.									
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE	
Primary Master :									
Select Primary Master Option (N=Skip):N									
OPTIONS	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE		
2(Y)	21	699	32	0	1398	63	LBA		
1	722	1399	16	65535	1398	63	NORMAL		
2	721	699	32	65535	1398	63	LARGE		
ESC: Skip									

For IDE hard disk driver, the BIOS provide three modes to support both normal IDE hard disk and also drives large than 528MB, a short description of three modes as follows:

- a. **Normal mode:** For drives small than 528MB
- b. **Large Mode:** For drives larger than 528MB that do not use LBA. There can only be used with MS-Dos operating system.
- c. **LBA mode:** For drives larger than 528MB and upto 8.4GB that use logic block addressing mode. Normally we recommend to select LBA Mode if your HDD drivers large than 528MB.

3. This utility will autodetect as many as four IDE drivers.

PASSWORD SETTING

This Main Menu item lets you configure the system so that a password is required every time the system boots or an attempt is made to enter the Setup program. The password cannot be longer than 8 characters.

ROM PCI/ISA BIOS (2A59CF52) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP	PASSWORD SETTING
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	SAVE & EXIT SETUP
POWER MANAGEMENT SETUP	EXIT WITHOUT SAVING
PCI CONFIGURATION SETUP	Enter Password:
LOAD SETUP DEFAULTS	
Esc : Quit	←→↑↓: Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color
Change/Set/Disable Password	

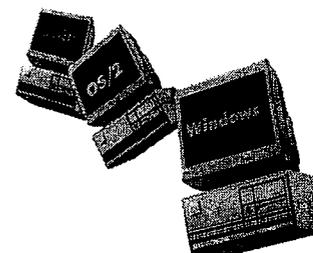
Important:

Keep a safe record of the new password. If you forget or lose the password, the only way to access the system is to discharge CMOS memory using jumper J7.

Chapter

1

Introduction



The **DCCHIPS** mainboard is a high-performance mainboard based on the advanced PENTIUM™

microprocessor, the PCI Local Bus and the Intel chipset.

The mainboard offers a high degree of flexibility in configuration and is fully IBM PC/AT compatible.

Key Features

- Intel PCIset™ chipset
- Support either 75/90/100/120/133/1xx MHz PENTIUM™ CPUs with 321pin ZIF socket and Voltage Regulator Module (VRM)
- Uses 72-pin SIMM modules x 4 auto banking in multiple configuration up to 128MB.
- Supports Both Fast Page Mode and Extended DATA Output(EDO) DRAM module
- Supports cache module socket, cache module options include 256KB or 512KB of asynchronous SRAM or 256KB of pipeline burst SRAM
- 3 PCI Local Bus slots, and 4 x 16 bits ISA Bus slots.
- All 3 PCI slots support Master mode.
- System BIOS support 4 IDE harddisk drivers that don't need device driver for S/W application, the each harddisk capacity can large than 528MB up to 8.4GB
- PCI Bus master IDE interface on board with two connectors support 4 IDE devices in 2 channel, the PCI IDE Controller supports PIO Mode 0 to Mode 4 at maximum transfer rate of 16.67 MB/s and Bus master IDE DMA Mode 2 at maximum 22MB/s
- On board "Multi-I/O" using the UMC UM8663 super Multi-I/O chip that support 2 serial port with 16550 Fast UART compatible, 1 parallel port with EPP and ECP capabilities, and a floppy disk drive interface
- System BIOS supports NCR810 SCSI BIOS firmware and Green feature function.

LOAD SETUP DEFAULTS

This Main Menu item loads the default system values. **These settings are recommended for optimum performance.** If the CMOS is corrupted when enter BIOS setup utility you must load setup default again. Choose this item and the following message appears:

"Load SETUP Defaults (Y/N)? N"

To use the Setup defaults, change the prompt to "Y" and press <Enter> .

4. After you have finished with the PCI Slot Configuration program, press the <ESC> key and then follow screen instructions to save or disregard your settings.

Static Electricity Precautions

Static electricity can easily damage your **CHIPS** mainboard. Observing a few basic precautions can help you safeguard against damage that could result in expensive repairs. Follow the measures below to protect your equipment from static discharge:

- Keep the mainboard and other system components in their anti-static packaging until you are ready to install them.
- Touch a grounded surface before you remove any system component from its protective anti-static packaging. A grounded surface within easy reach is the expansion slot covers at the rear of the system case, or any other unpainted portion of the system chassis.
- During configuration and installation, touch a grounded surface frequently to discharge any static electric charge that may build up in your body. Another option is to wear a grounding wrist strap.
- When handling a mainboard or an adapter card, avoid touching its components. Handle the mainboard and adapter cards either by the edges or by the mounting bracket that attaches to the slot opening in the case.

Unpacking the Mainboard

The **LGCHIPS** Mainboard comes packed in a sturdy cardboard shipping carton. The carton contains:

- The **LGCHIPS** Mainboard
- This User's Guide

Note:

Do not remove the mainboard from its original packing until you are ready to install it.

The **LGCHIPS** mainboard is easily damaged by static electricity. Observe the following precautions while unpacking and installing the mainboard.

1. Touch an unpainted area of the system chassis before handling the mainboard or any component. Doing so discharge the static charge your body may have built.
2. Remove the mainboard for damage. Shipping may have loosened integrated circuits from their sockets. If any integrated circuit appears loose, press carefully to seat it firmly in its socket.

Do not apply power if the mainboard appears damaged, If there is damage to the board, or items are missing, contact you dealer immediately.

PCI SLOT CONFIGURATION SETUP

The "PCI SLOT CONFIGURATION" sets the system for use with PCI bus cards.

Run the PCI Slot Configuration program as follows.

1. Choose "PCI SLOT CONFIGURATION" from the Main Menu and a screen with a list of items appears.

ROM PCI/ISA BIOS (2A59CF52) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
Slot 1 Using INT#	: AUTO
Slot 2 Using INT#	: AUTO
Slot 3 Using INT#	: AUTO
1st Available IRQ	: 10
2nd Available IRQ	: 11
3rd Available IRQ	: 9
4th Available IRQ	: 12
PCI IRQ Activated By	: Level
PCI IDE IRQ Map To	: ISA
ESC : Quit	←→↑↓ : Select Item
F1 : Help	Pu/PD/+/- : Modify
F5 : Old Values (Shift)F2 : Color	
F6 : Load BIOS Defaults	
F7 : Load Setup Defaults	

2. Use the arrow keys to move between items and to select values. Modify the selected fields using the PgUp/PgDn/ +/- keys. <F> keys are explained below:

<F1>: "Help" gives options available for each item.

<F2>: Change color

<F5> : Get the old values. The user started the current session with these values.

<F6>: Load all options in the BIOS Features Setup with the BIOS Default values.

<F7>: Load all options in the BIOS Features Setup with the Setup Default values.

Max Saving	The "Max Saving" defaults are all "1 Min"
User define	Allows you to set the power mode time-out by yourself
Disable:[default]	Turn off all power saving time-outs.
Doze mode	Put the system performance down to 20%
Stand by mode	Turn off the video signal and cause CPU enter SMM mode
Suspend mode	Turn off the video signal and cause CPU enter SMM mode and shut down any IDE hard disk drivers connected to the system.
HDD Power down	Shut down any IDE hard disk drivers in the system if they are not accessed

Note:

HDD Power down does not effect SCSI hard disks.

Individual IRQ wake-up Event

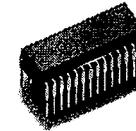
The setting in this group determine if a system IRQ is monitored for activity so as to wake up the system if an interrupt request is generated by a device using , if an IRQ is not use, there is no effect.

Power Down Activities

The Pown Down Activities determined which I/O port and IRQs are monitored when you enable the I/O ports or IRQs activities option.

Chapter 2

Hardware Configuration



Before you install the  mainboard into the system chassis, you may find it convenient to first configure the mainboard's hardware. This chapter describes how to set jumpers and install memory modules, and where to attach components.

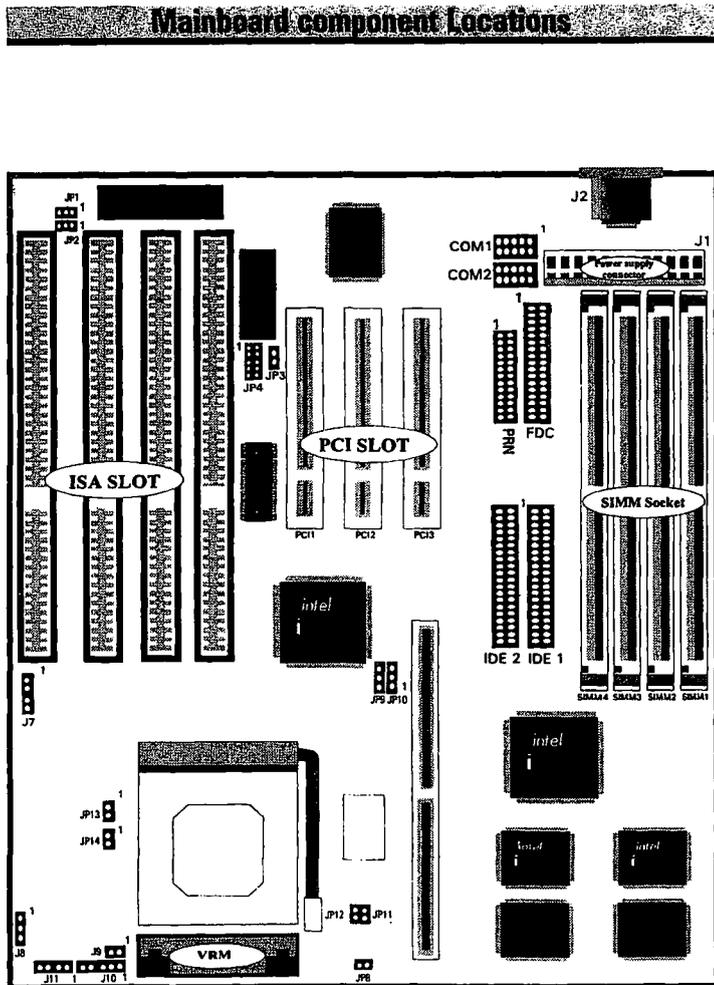


Figure 2-1 Mainboard Component Locations

POWER MANAGEMENT SETUP

The Power Management controls the mainboard's "green" features that for the power saving Mode, Display turn off and HDD power down that together form the hardware power conservation scheme.

Run the Power Management Setup as follows:

1. Choose "POWER MANAGEMENT SETUP" from the Main Menu and a screen with a list of items appears.

ROM PCI/ISA BIOS (2A59CF52)			
CMOS SETUP UTILITY			
AWARD SOFTWARE, INC.			
Power Management	: Disabled	IRQ3 (COM2)	: ON
PM Control by APM	: Yes	IRQ4 (COM1)	: ON
Video off Method	: Blank screen	IRQ5 (LPT 2)	: OFF
		IRQ6 (Floppy Disk)	: OFF
Doze Mode	: Disable	IRQ7 (LPT1)	: OFF
Standby Mode	: Disable	IRQ8 (RTC Alarm)	: OFF
Suspend Mode	: Disable	IRQ9 (IRQ2 Redir)	: OFF
HDD Power Down	: Disable	IRQ10 (Reserved)	: OFF
		IRQ11 (Reserved)	: OFF
IRQ3 (Wake-Up Event)	: ON	IRQ12 (PS/2 Mouse)	: OFF
IRQ4 (Wake-Up Event)	: ON	IRQ13 (Coprocesor)	: OFF
IRQ8 (RTC Alarm)	: OFF	IRQ14 (Hard Disk)	: ON
IRQ12 (Wake-Up Event)	: ON	IRQ15 (Reserved)	: OFF
Power Down Activities		ESC : Quit ←→↑↓: Select Item	
COM Ports Accessed	: ON	F1 : Help	PUI/PD/+/- : Modify
LPT Ports Accessed	: ON	F5 : Old Values	(Shift)F2 : Color
Drive Ports Accessed	: ON	F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

2. A short description of the screen items follows:
 "POWER MANAGEMENT" is the master control for the four power saving modes, doze, standby, suspend mode and HDD power down mode..

Min Saving

The "Min saving" defaults as "1 hour", "1 hour", "1 hour" and "15 Min" respectively.

Serial Port

The "Onboard Serial Port 1 " and "Onboard serial Port 2" lines control the assignments for the mainboard's two onboard serial connectors. They can be assigned as COM1, COM3 for serial Port 1 and COM2, COM4 for serial Port 2, or disable.

When you have done with this section, press the <ESC> key to go back to the main screen.

Power Precautions

Before you begin configuration, make sure you are working with an unplugged mainboard. Many components are powered by low-voltage current, but there still may be a dangerous electric current coming from the leads and power supply. You should take the following precautions:

- Turn off the power supply, and unplug the power cord before you begin
- Unplug all cables that connect the mainboard to any external devices.

Connectors

Attach system components and case devices to the mainboard via the mainboard connectors. A description of each connector; and its connector pins follows. See Figure 2-1 for the location of the connectors on the mainboard.

Note:

Before making connections to the board, make sure that power to the system is turned off.

Jumper Settings

You can configure hardware options by setting jumper on the mainboard. See Figure 2-1 for jumper locations.

Set a jumper as follows:

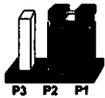
- Short a jumper by placing the plastic jumper cap over two pins of the jumper.
- Open the pins of a jumper by removing the jumper cap.

Note:

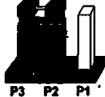
When you open the jumper, attach the plastic jumper cap to one of the pins so you won't lose it.

Symbols:

For setting 3-pin jumpers, the symbols below are used:



Pins 1 and 2 are Shorted with a jumper cap.



Pins 2 and 3 are Shorted with a jumper cap.

For setting 2-pin jumpers, the following symbols are used:



The jumper is Shorted when the jumper cap is placed over the two pins of the jumper.



The jumper is Open when the jumper cap is removed from the jumper.

IDE HDD Block Mode

Choose Enabled or Disabled. If your IDE HDD supports BLOCK MODE, then you can enable this function to speed up the HDD Access time. If not, please disable this function to avoid an HDD Access Error.

Onboard PCI IDE Controller

The on Chip PCI IDE controller is default "Enable" setting, if you disable On-Chip primary and secondary PCI IDE, it will disable the on board IDE controller. Make sure you do this if you want to use an IDE controller other than on the mainboard IDE controller.

Onboard FDD Controller

The default setting for the "Onboard FDC Controller" is "Enabled". This setting allows you to connect your floppy disk drives to the onboard "Floppy" connector. Choose the "Disabled" setting if you want to use a separate controller card.

Parallel Port

The options for "Onboard Parallel Port" is 378H. This item controls the on-board parallel port connector, if you are using an I/O card with a parallel port, make sure the address don't conflict.

Parallel Port Mode

The option for "Onboard LPT Port Mode" is default EPP/SPP mode, you can select EPP, ECP, and SPP Mode just change setting, if you have a parallel interface peripheral device, use one of the parallel port enhancements and set this line for the enhanced mode that your peripheral supports.

CHIPSET FEATURES SETUP

The "CHIPSET FEATURES SETUP" is used to control the values of the chipset registers. These registers control most of the system options in the computer.

Run the Chipset Features Setup as follows:

1. Choose "CHIPSET FEATURES SETUP" from the Main Menu and a screen with a list of items appears.

ROM PCI/ISA BIOS (2A5CF52)			
CMOS SETUP UTILITY			
AWARD SOFTWARE, INC.			
DRAM RAS# Precharge Time	: 4	Onboard FDD Controller	: Enabled
DRAM Leadoff Timing	: 7/5	Onboard Parallel Mode	: EPP/SPP
DRAM RAS To Cas Delay	: 3	Onboard Parallel Port	: 378H
DRAM Read Burst Timing	: x2222	Onboard Serial Port 1	: COM1
DRAM Write Burst Timing	: x3333	Onboard Serial Port 2	: COM2
PCI Bursting	: Enabled		
PCI Concurrency	: Disabled		
PCI Streaming	: Disabled		
8 Bit I/O Recovery Time	: 2		
16 Bit I/O Recovery Time	: 1		
System BIOS Cacheable	: Disabled		
Video BIOS Cacheable	: Disabled		
IDE HDD Block Mode	: Disabled		
IDE Primary Master PIO	: Mode0		
IDE Primary Slave PIO	: Mode0		
IDE Secondary Master PIO	: Mode0		
IDE Secondary Slave PIO	: Mode0		
On-Chip Primary PCI IDE	: Enabled	ESC : Quit	←→↑↓: Select Item
On-Chip Secondary PCI IDE	: Enabled	F1 : Help	PU/PD/+/- : Modify
PCI Slot IDE 2nd Channel	: Enabled	F5 : Old Values	(Shift)F2 : Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

2. The first eight items are optimal setting for this mainboard, you should not change them unless you are familiar with the intel chipset.

There are five Modes defined in Manual Mode. They are Mode 0,1,2,3,4. The default setting for on board timing is PIO Mode 0. If you use real fast enhanced IDE Mode 3 and Mode 4 HDD, please make sure changing to the Mode that you need, it will provide optimum performance for your HDD.

J1 Power Supply Connectors

The power supply connectors are two six-pin male header connectors. Plug the dual connectors from the power directly onto the board connectors.

Most of power supply have two leads. Each lead has six wires. Two of which are black, orient the connectors, so the black wires are in the middle.

The black wires should be in the middle



Pin	Description	Pin	Description
1	Power Good	7	Ground
2	+5V DC	8	Ground
3	+12V DC	9	-5V DC
4	-12V DC	10	+5V DC
5	Ground	11	+5V DC
6	Ground	12	+5V DC

J2 Keyboard Connector

A standard five-pin female DIN keyboard connector is located at the rear of the board J2.

Pin	Description
1	Keyboard Clock
2	Keyboard Data
3	N.C.
4	Ground
5	+5VDC

J9 Reset Switch Connector

Attach the Reset switch cable to this connector.

Setting	Description
Open	Normal Mode
Short	Reset System

JP8 HDD LED Connector

Pin	Description
1	5V
2	Active Low

JP9 Sleep Switch Connector

Attach the sleep switch cable to this connector

Description	JP9
Normal Mode	
Sleep Mode On	

J10 Keylock & Power LED Connector

J10 is a keylock connector that enables and disables the keyboard and the Power-LED on the case.



Pin	Description
1	LED Output
2	NC
3	Ground
4	Keylock
5	Ground

J11 Speaker Connectors

Attach the system speaker to connector J11.



Pin	Description
1	DATA Out
2	NC
3	Ground
4	+5V

Boot Up System Speed Choose High or Low. This option lets you choose system bootup speed. The default is High.

Gate A20 Option Choose Fast or Normal. This item lets you use the GA20 from the chipset or the keyboard controller.

Typematic Rate Setting Choose Enabled or Disabled. Enable this option to adjust the keystroke repeat rate.

Typematic Rate(Chars/Sec) Choose the rate a character keeps repeating.

Typematic Delay (Msec) Choose how long after you press a key that a character begins repeating.

Security Option Choose Setup, or System. Use this feature to prevent unauthorized system boot-up or unauthorized use of BIOS Setup.

"System"- Each time the system boots the password prompt appears.

"Setup"- Password prompt only appears if you attempt to enter the Setup program.

Video BIOS Shadow VIDEO shadow copies BIOS code from slower ROM to faster RAM. BIOS can then execute from RAM.

- After you have finished with the BIOS Features Setup program, press the <ESC> key and then follow screen instructions to save or disregard your settings.

A short description of the screen items follows:

Virus Warning	Choose Enabled or Disabled. Enable this option and a SYSTEM WARNING MESSAGE appears when the system detects a virus.
CPU Internal Cache	Choose Enabled or Disabled. This option lets you enable the CPU's internal cache memory.
External Cache	Choose Enabled or Disabled. This option lets you enable the external cache memory. For better performance, make sure you always choose "Enabled."
Quick Power On Self Test	Choose Enabled or Disabled. Enabled provides a fast POST and boot-up speed.
Boot Sequence	The default setting first to boot from drive C: You can reverse this sequence with "A:C:", will then drive A: boot directly.
Swap Floppy Driver	Choose Enabled or Disabled. When Enabled Floppy drives A & B are swapped under DOS.
Boot Up Floppy Seek	Choose Enabled or Disabled. "Disabled" provides a fast boot and reduces the possibility of damage to the heads.
Boot Up Num Lock Status	Choose On or Off. On puts numeric keypad in Num Lock mode at boot-up. Off puts this keypad in arrow key mode at boot-up.

JP1,JP2- Parallel Port ECP Mode DMA channel Selectors

Description	JP1	JP2
DMA1		 (default)
DMA3		

JP10- AT Bus Clock Selector

Description	JP10
PCI Clock/4	 (default)
PCI Clock/3	

Note: CPU Speed=80MHz or 66MHz JP10 set to 1-2
CPU Speed=60MHz JP10 set to 2-3

J8- Voltage Regulator Output Selectors

Description	J8
3.3 Volt (STD/VR)	
3.5 Volt (VRE)	 (default)

JP11,JP12 - CPU Speed Selectors

The mainboard has a clock generator that lets you choose the CPU frequency by settings jumpers JP11,JP12. You can set the CPU speed to 50/60MHz or 66 MHz as shown below.

Jumpers	CPU Speed		
	66 MHz	60 MHz	50MHz
JP11			
JP12			

JP13,JP14 - Internal Clock Speed Selectors

Description	JP13	JP14
Internal speed=2.0 x external input clock		
Internal speed=1.5 x external input clock (Default)		
Internal speed=2.5 x external input clock		
Internal speed=3.0 x external input clock		

BIOS FEATURES SETUP

Run the BIOS Features Setup as follows.

1. Choose "BIOS FEATURES SETUP" from the Main Menu and a screen with a list of items appears.

ROM PCI/ISA BIOS (2A59CF52)			
CMOS SETUP UTILITY			
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
Quick Power On Self Test	: Enabled	D0000-D3FFF Shadow	: Disabled
Boot Sequence	: C,A	D4000-D7FFF Shadow	: Disabled
Swap Floppy Drive	: Disabled	D8000-DBFFF Shadow	: Disabled
Boot Up Floppy Seek	: Disabled	DC000-DFFFF Shadow	: Disabled
Boot Up NumLock Status	: On		
Boot Up System Speed	: High		
Gate A20 Option	: Fast		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup		

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

2. Use the arrow keys to move between items and to select values. Modify the selected fields using the PgUp/PgDn/ +/- keys. An explanation of <F> keys follows:
 - <F1>: "Help" gives options available for each item.
 - <F2>: Change color
 - <F5>: Get the old values. The user started the current session with these values.
 - <F6>: Load all options in the BIOS Features Setup with the BIOS Default values.
 - <F7>: Load all options in the BIOS Features Setup with the Setup Default values.

Drive A & B
Primary master and slave
Secondary master and slave

Choose 360KB 5 1/4"
 Choose from the standard hard disk types 1 to 46, or "User" defined. If you choose "User", run the IDE HDD Auto detection function from the Main Menu, or enter the HDD information directly from the keyboard and press <Enter>. If you use Auto mode the BIOS can Auto detect HDD type and do not enter any HDD information from the keyboard

Drive A & B

Choose 360KB 5 1/4"
 1.2MB 5 1/4"
 720KB 3 1/2"
 1.44MB 3 1/2"
 2.88MB 3 1/2" or
 Not installed

Video

Choose Monochrome,
 Color 40x25,
 VGA/PGA/EGA,
 Color 80x25, or
 Not installed

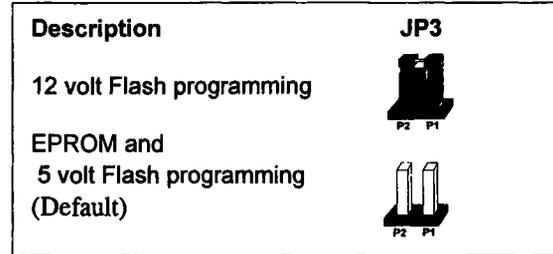
Halt On

Choose All Errors (Default)
 No Errors
 All, But Keyboard
 All, But Diskette
 All, But Disk/Key

3. After you have finished with the Standard CMOS Setup program, press the <ESC> key to return to the Main Menu.

JP3 Flash EPROM BIOS Jumper

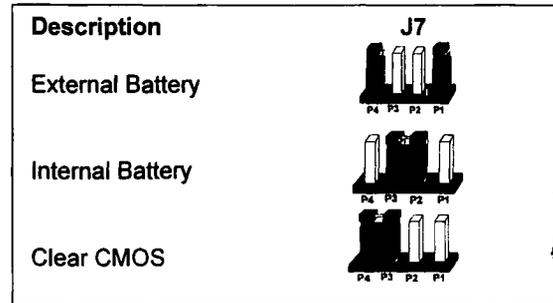
The mainboard can use two types of Flash EPROM - 5 volt and 12 volt. Set the mainboard for either type with jumper JP3. You can update both types with new BIOS files as they come available.



Note:

The default jumper setting 5 volt flash programming have a function to write-protect a 12 volt flash EPROM, if you use the 12 volt flash. When you are programming the 12 volt flash ROM, you should change the JP3 setting from the default to the 12 volt setting. When you finish programming, must set JP3 back to the default 5 volt setting.

J7- Internal/External Battery Selectors



953403

External Cache Configuration

This mainboard supports a cache module socket you can install pipeline burst or asynchronous SRAM on a cache module in the cache socket, the cache module size can upgrade from 256KB to 512KB.

Cache Type	Size	Data Chip Size	Tag Chip Size
Asynchronous	256KB	32k8x8pcs	8k8,16k8or32k8x1pc
	512KB	64k8x8pcs	16k8 or 32k8x1pc
Pipeline Burst	256KB	32k32x2pcs	8k8,16k8or32k8x1pc
	512KB	32k32x4pcs	16k8 or 32k8x1pc

Main Menu Options

The Main Menu options of the Award BIOS are as below.

STANDARD CMOS SETUP

Run the Standard CMOS Setup as follows.

1. Choose "STANDARD CMOS SETUP" from the Main Menu and a screen with a list of items appears.

ROM PCI/ISA BIOS (2A59CF52)								
CMOS SETUP UTILITY								
AWARD SOFTWARE, INC.								
Date (mm:dd:yy) : Thu, Sep 6 1995								
Time (hh:mm:ss) : 14 : 37 : 7								
HARD DISKS	TYPE	SIZE	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Master :	Auto	0	0	0	0	0	0	Auto
Primary Slave :	Auto	0	0	0	0	0	0	Auto
Secondary Master :	Auto	0	0	0	0	0	0	Auto
Secondary Slave :	Auto	0	0	0	0	0	0	Auto
Drive A : 1.44M, 3.5 in				Base Memory: 640K				
Drive B : None				Extended Memory: 15360K				
Video : EGA/VGA				Other Memory: 384K				
Halt On : All Errors				Total Memory: 16384K				
ESC : Quit		←→↑↓ : Select Item		PU/PD/+/- : Modify				
F1 : Help		(Shift)F2 : Change Color						

2. Use the arrow keys to move between items and to select values. Modify the selected fields using the PgUp/PgDn/ +/- keys. Some fields let you enter numeric values directly.

Date (mm/dd/yy) Type the current date

Time (hh:mm:ss) Type the current time

Award BIOS Setup

Enter the Award Setup program's Main Menu as follows:

1. Turn on or reboot the system. The following message appears at the bottom of the screen:
"Press to enter setup, ESC to skip memory test"
2. Press the key to enter the Award BIOS setup program and the following screen appears:

ROM PCI/ISA BIOS (2A59CF52) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
STANDARD CMOS SETUP	PASSWORD SETTING
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	SAVE & EXIT SETUP
POWER MANAGEMENT SETUP	EXIT WITHOUT SAVING
PCI CONFIGURATION SETUP	
LOAD SETUP DEFAULTS	
Esc : Quit	←→↑↓: Select Item
F10 : Save & Exit Setup	(Shift)F2 : Change Color
Abandon all datas & Exit SETUP	

3. Choose an option and press <Enter>. Modify the system parameters to reflect the options installed in the system. (See the following sections for more information.)
4. Press <ESC> at anytime to return to the Main Menu.
5. In the Main Menu, choose "SAVE AND EXIT SETUP" or <F10> to save your changes and reboot the system. Choosing "EXIT WITHOUT SAVING" or <ESC> ignores your changes and exits the program.

Memory Installation

The mainboard lets you add up to 128MB of system memory via SIMM sockets on the mainboard. Four sockets on the mainboard are divided into two banks: Bank 0, Bank 1. Each bank consists of two 72-pin SIMM modules. the mainboard supports the following memory configurations.

SIMM Socket 1&2	SIMM Socket 3&4	Total Memory in Sockets 1 through 4
4MBx2	None	8MB
8MBx2	None	16MB
16MBx2	None	32MB
32MBx2	None	64MB
None	4MBx2	8MB
None	8MBx2	16MB
None	16MBx2	32MB
None	32MBx2	64MB
4MBx2	4MBx2	16MB
4MBx2	8MBx2	24MB
4MBx2	16MBx2	32MB
4MBx2	32MBx2	72MB
8MBx2	4MBx2	24MB
8MBx2	8MBx2	32MB
8MBx2	16MBx2	48MB
8MBx2	32MBx2	80MB
16MBx2	4MBx2	40MB
16MBx2	8MBx2	48MB
16MBx2	16MBx2	64MB
16MBx2	32MBx2	96MB
32MBx2	4MBx2	72MB
32MBx2	8MBx2	80MB
32MBx2	16MBx2	96MB
32MBx2	32MBx2	128MB

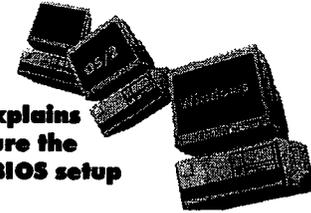
Notes:

All SIMMs must faster than 70ns.
All banks can use either 1-sided or 2-sided SIMMs.
All banks are auto bank.
DRAM Type: Fast Page Mode or Extended Data Output (EDO)

Chapter

3

BIOS Setup



This chapter explains how to configure the mainboard's BIOS setup program.

After you have configured the mainboard, and have assembled the components, you can turn on the completed system. At this point, run the software setup to ensure that the system information is correct.

The software setup of the system board is achieved through Basic Input-Output System (BIOS) programming. You use the BIOS setup program to tell the operating system what type of devices are connected to your system board.

The system setup is also called CMOS setup. Normally, you need to run system setup if either the hardware is not identical with information contained in the CMOS RAM, or if the CMOS RAM has lost power.