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1 Introduction

486F55 Mainboard Features

The 486F55 is a high performance, function enhanced computer mainboard that combines the power of 80486 DX/DX2/DX4 CPU and the PCI Local bus. The features integrated onto the 486F55 mainboard are as follows:

- . Supports 3-VOLT or 5-VOLT Intel, AMD, Cyrix 486 processor family.
- . SiS 496/497 PCI chipset.
- . Optional 128KB/256KB/512KB external cache.
- . 72-pin DRAM SIMM modules in multiple configurations up to 255MB.
- . On-board Local Bus Enhanced IDE (PIO mode3,4) controller with two connectors supporting up to 4 IDE devices.
- . On-board super I/O controller supporting 2 16550 Fast UART compatible serial ports, one parallel port with EPP and ECP capabilities and a floppy disk drive connector.
- . Award 486 PCI BIOS.
- . System and Video BIOS relocateable to RAM area to enhance performance.
- . Fast A20, fast reset and hidden DRAM refresh to boost system performance.
- . Four 16-bit ISA and three 32-bit Bus Master PCI expansion slots, with one slot shared between ISA and PCI.
- . Three Power Saving Modes: Doze, Standby, and Suspend.

Power Supply for 486F55 Mainboard

A clean steady power source is necessary to get reliable performance from the system. With the high clock speeds of the CPU (running at 25 MHz or above) the quality of the power supply becomes even more important. *Most power supplies on the market meet the standards required by the CPU. However some have been found to be out of specifications.* To be certain of the highest performance by your system, be sure your power supply provides a **voltage range from 5.25 volt maximum to 4.95 volt minimum.**

In areas with noisy power transmission, we suggest the use of a line noise filter between the power and the computer.

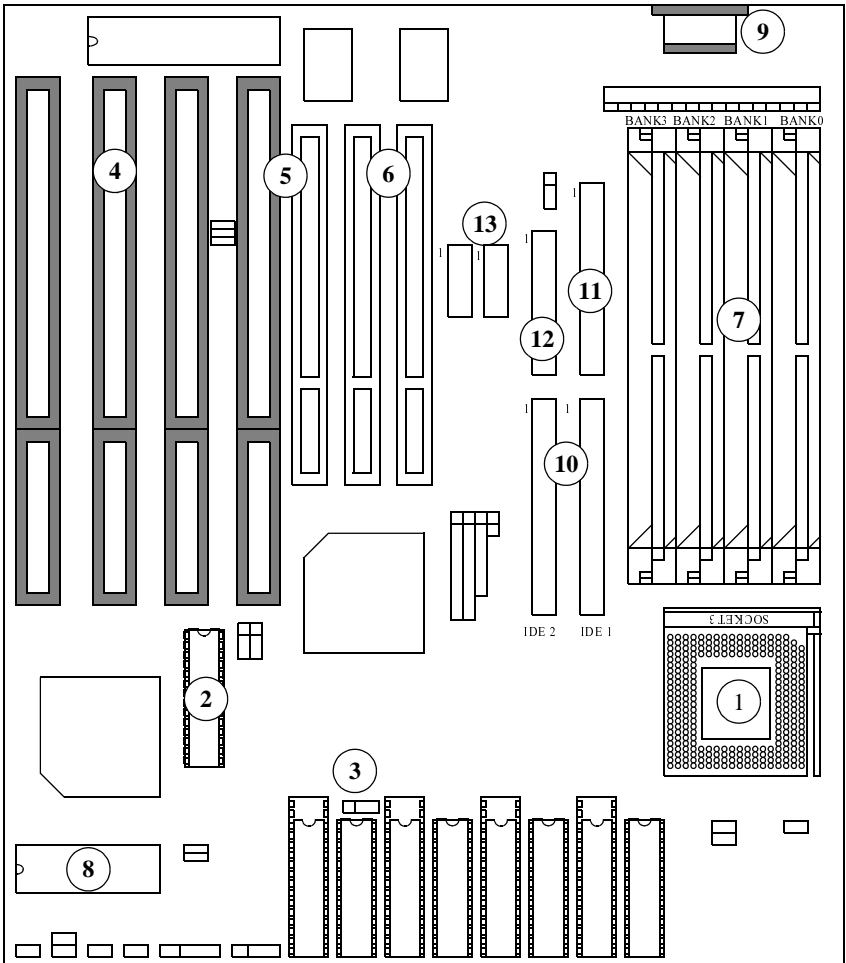
2 Hardware Guide

Before You Begin

Before removing the mainboard from its anti-static bag, you need to eliminate any static electricity that may be accumulated on your body. The charge that can build up in your body may be more than enough to damage integrated circuits on the system board. Therefore, it is important to observe basic precautions whenever you handle or use computer components. Although areas with humid climate are much less prone to static build-up, it is best to always safeguard against accidental damage that may lead to costly repairs. The following measures should be sufficient to protect your equipment from static discharge:

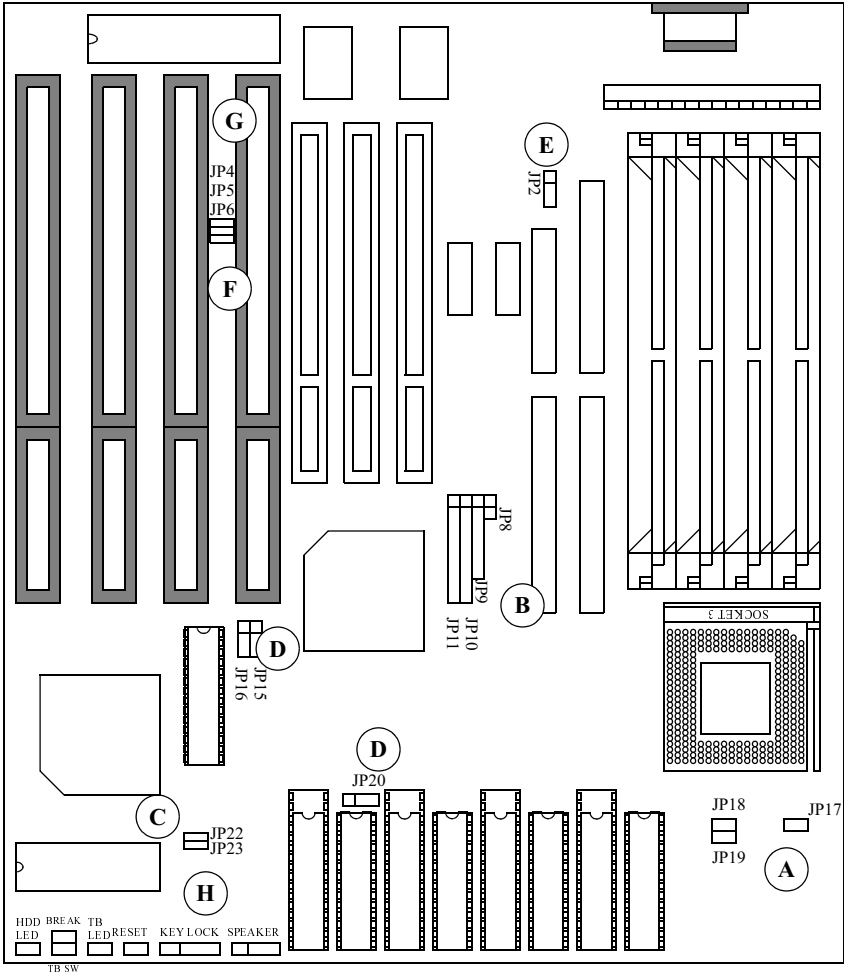
- After removing the system cover, discharge any static electricity that might have accumulated in your body by touching a grounded or anti-static surface (e.g. anti-static pads). If nothing is available, touch the power supply housing. This assumes the system unit is plugged into the AC outlet. Be certain to do this before removing components from their anti-static coverings.
- When handling separate cards, boards or modules, be cautious to avoid contacting with the components on them, and also with the “gold finger” connectors that plug into the expansion slot. It is best to handle them either by their edges or by mounting brackets that attach to the slot opening in the system cases. However, the above recommendation are just intended to avoid the static discharge problem.
- Make certain that everything connects to the system case, including the power supply, is unplugged before doing the installation work.

486F55 Mainboard Layout



- | | | |
|-----------------------|-----------------------|----------------------------|
| 1:CPU | 6:PCI Expansion Slots | 11:Floppy Drive Connector |
| 2:TAG SRAM Chip | 7:SIMM Module Sockets | 12:Parallel Port Connector |
| 3:Cache SRAM Chips | 8:BIOS ROM | 13:Serial Port Connectors |
| 4:ISA Expansion Slots | 9:Keyboard Connector | |
| 5:PCI/ISA Shared Slot | 10:IDE Connectors | |

486F55 Mainboard Jumper Location

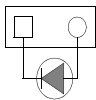


A:CPU Voltage Selection (JP17,JP18,JP19)
 B:CPU Type Selection (JP8,JP9,JP10,JP11)
 C:CPU Frequency Selection (JP22,JP23)
 D:Cache Size Selection (JP15,JP16,JP20)
 E:CMOS RAM Clear (JP2)

F: Parallel Port Interrupt Selection (JP6)
 G: ECP DMA Channel Selection (JP4, JP5)
 H: Front Panel Connector

Connectors

Hard Drive LED



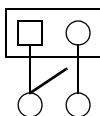
On: Hard Drive Active

Turbo LED



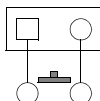
Light On: Turbo Speed

Turbo Switch



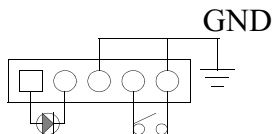
on: Turbo Speed
off: Slow Speed

Reset



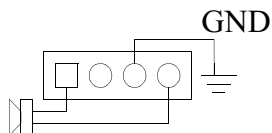
Press To Reset the System

KeyLock

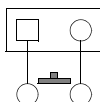


On: Disable Keyboard
Light On: +5V Exists

Speaker



Break



Press to enter the power saving suspend mode

Cache Memory

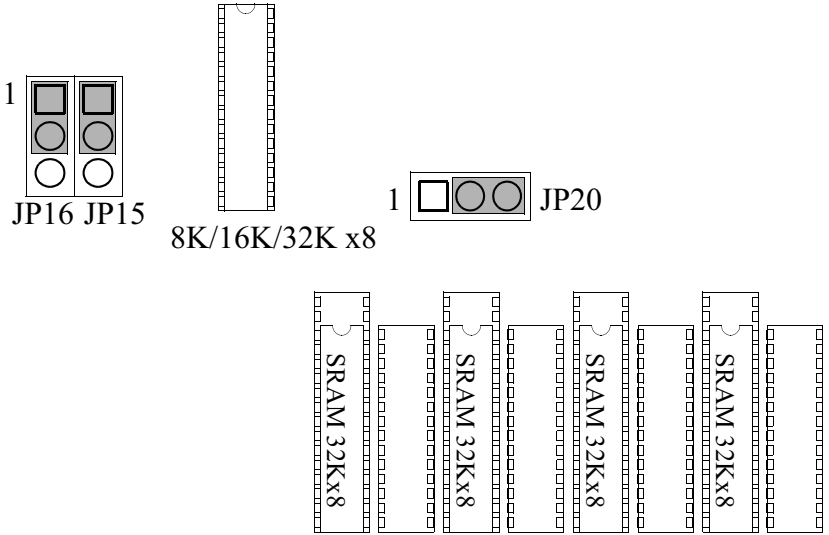
The 486F55 Mainboard has three external cache options 128KB, 256KB and 512KB. All SRAMs must have a speed of 20ns or faster. The chart below shows the SRAM chips required for each configuration.

Cache Size	Tag RAM	Data RAM
128KB	one 5V 8Kx8 or 16Kx8 or 32Kx8 SRAM	four 5V 32Kx8 SRAMs
256KB	one 5V 16Kx8 or 32Kx8 SRAM	four 5V 64Kx8 SRAMs or eight 32Kx8 SRAMs
512KB	one 5V 32Kx8 SRAM	four 5V 128Kx8 SRAMs

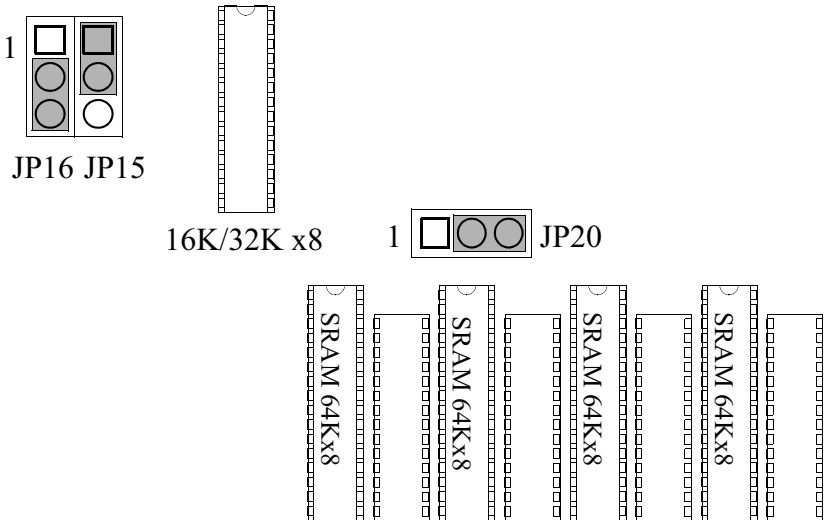
The figures below show where to install the SRAM chips and jumper setting for each configuration.

Note: Top 4 socket pins must be open when install a 28-pin SRAM chip in a 32-pin socket.

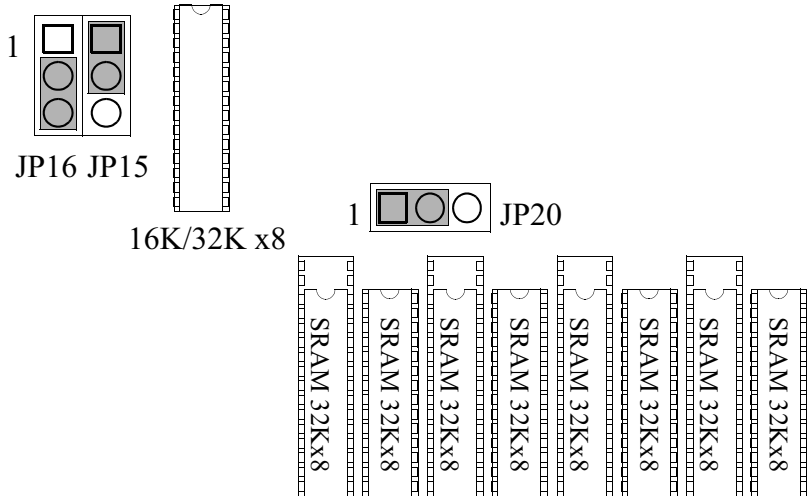
128KB Cache



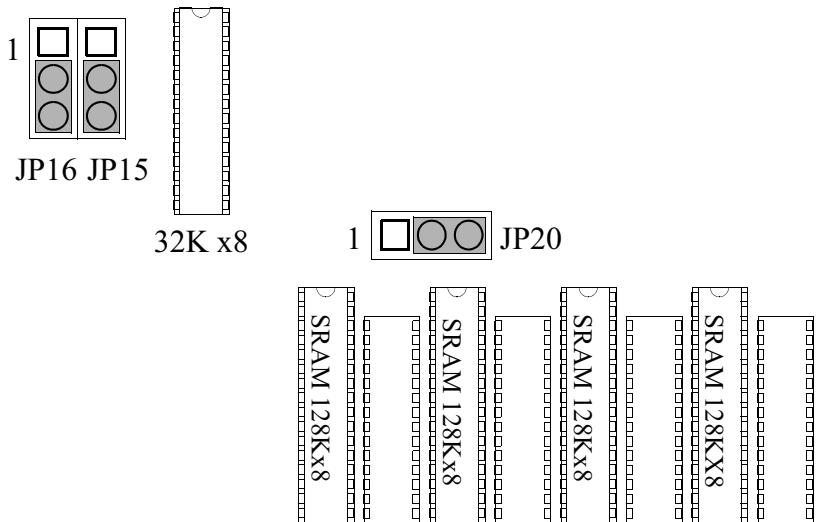
256KB Cache
(Single Bank)



256 KB Cache
(Double Banks)



512KB Cache



System Memory

Memory can be installed by using 1MB(S), 2MB(D), 4MB(S), 8MB(D), 16MB(S), 32MB(D), 64MB(S) or 128MB(D) 72-pin SIMM modules. S means single side and D means double side. Due to the 486F55 mainboard high speed design, the memory modules for the 486F55 must meet all of following requirements:

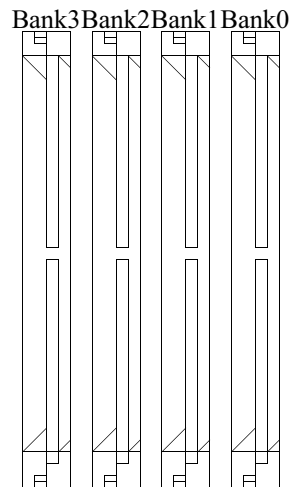
Modules Size: Single side 1MB, 4MB,
16MB, 64MB.
Double side 2MB, 8MB,
32MB, 128MB.

DRAM Speed: 70ns or faster

RAS Access Time: 60ns ~ 70ns

CAS Access Time: 10ns ~ 25ns

SIMMs have cut-out at one end that matches an extension on one of the vertical posts of each socket.



- . **With DRAM auto-sizing(table free) feature, SIMM modules need not to be installed starting from Bank 0 or in consecutive sequence.**

The following are all available memory configurations:

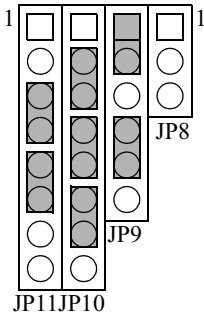
SIMM Bank 3	SIMM Bank 2	SIMM Bank 1	SIMM Bank 0
None or 1MB or 4MB or 16MB or 64MB	None or 1MB or 4MB or 16MB or 64MB	None or 1MB or 4MB or 16MB or 64MB	None or 1MB or 4MB or 16MB or 64MB
None or 2MB or 8MB or 32MB or 128MB	None	None or 1MB or 4MB or 16MB or 64MB	None or 1MB or 4MB or 16MB or 64MB
None or 2MB or 8MB or 32MB or 128MB	None	None or 2MB or 8MB or 32MB or 128MB	None
None or 1MB or 4MB or 16MB or 64MB	None or 1MB or 4MB or 16MB or 64MB	None or 2MB or 8MB or 32MB or 128MB	None

CPU Type Selection

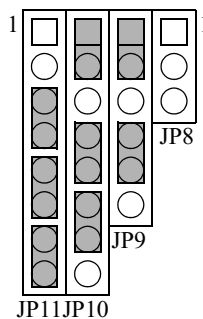
- Selecting the CPU Type.

There are four jumpers to be set for the CPU Type selection. Make Sure the settings are correct for your CPU. An improper setting may damage the CPU.

Intel 486SX/SX2
AMD 486SX/SX2

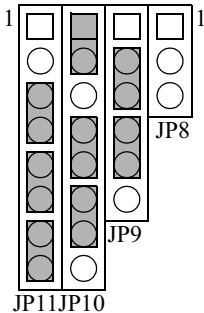


Cyrix 5x86
Intel 486DX/DX2
Intel 487SX/ODP
Intel 486DX4 (default)

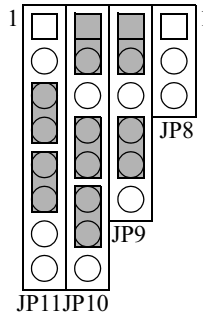


Intel P24D, P24C-WB
Intel P24T, P24CT

Write-Thru L1 Cache (JP11 short 7&8)
Write-Back L1 Cache (JP11 open 7&8)



AMD 486 DX2 (JP11 short 7&8)
AMD 486 DX4 (JP11 open 7&8)

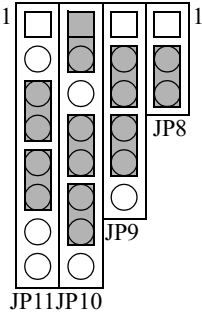


AMD - X5

AMD 486 DX2 Enhanced

Write-Thru L1 Cache (JP11 short 7&8)

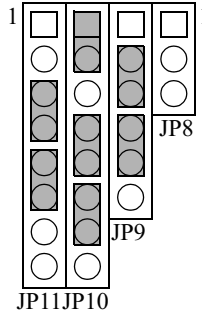
Write-Back L1 Cache (JP11 open 7&8)



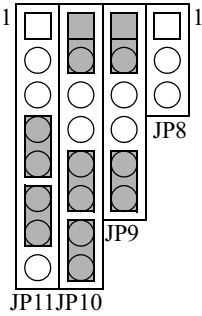
AMD 486 DX4 Enhanced

Write-Thru L1 Cache (JP11 short 7&8)

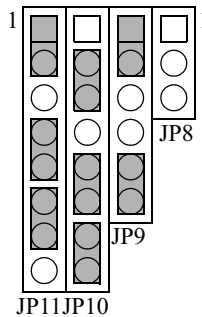
Write-Back L1 Cache (JP11 open 7&8)



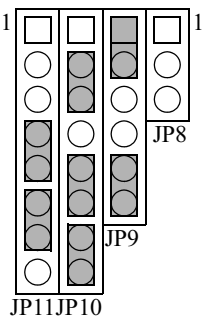
Cyrix 486DX/DX2



Cyrix 486S



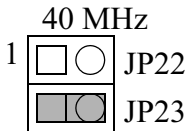
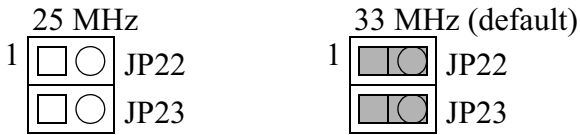
Cyrix 486 S2



CPU Speed Selection

- Selecting the CPU Speed.

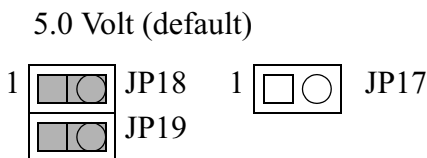
If you install a CPU with a different operating speed, you must change the CPU speed jumper setting.



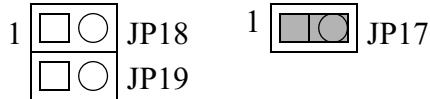
- The PCI Bus is running at the same frequency as the CPU.

CPU Voltage Selection

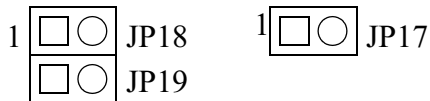
- There are three jumpers to be set for the CPU Voltage Selection. Make sure the setting are correct for your CPU. **An improper setting may damage the CPU.**



3.6 Volt (for Cyrix 3V CPU)



3.3 Volt (for Intel & AMD & Cyrix 5x86 3V CPU)





CMOS RAM Clearance

. Clearing CMOS RAM Data

If you need to clear the CMOS RAM data, first you need to turn your system's power off then remove the jumper shunt from JP2, place it at the position to short pin2 and pin3 for 5 seconds, then recover it to its original setting to short pin 1 and pin 2.

ECP DMA Channel Selection

- These jumpers select the DMA channel used by ECP.

DMA Channel 1 (default) 1  JP4
 1  JP5

DMA Channel 3 1  JP4
 1  JP5

Parallel Port Interrupt Selection

- This jumper selects the interrupt used by the parallel port.

Interrupt 7 (Default) 1  JP6

Interrupt 5 1  JP6

Cable Set

- Included with 486F55 mainboard is a cable set which contains:
 - one IDE Cable.
 - one floppy disk drive cable.
 - one serial port and parallel port cable with mounting bracket.
 - one serial port cable with mounting bracket.

3 Software Guide

Software Setup

After hardware configuration of 486F55 mainboard is completed, and system hardware has been assembled, the completed system may be powered up. At this point, software setup should be run to ensure that system information is correct.

Normally, system setup is needed when the system hardware is not identical with the information contained in the CMOS RAM, whenever the CMOS RAM has lost power, or the system features need to be changed.

Running AWARD BIOS

When the system is powered on, the BIOS will enter the Power-On Self Test (POST) routines. These routines perform the various diagnostic check at the time the system is powered up; if an error is encountered, the error will be reported in one of two different ways. If the error occurs before the display device is initialized, a series of beeps will be transmitted. If the error occurs after the display device is initialized, the screen will display the error message.

After the POST routines are completed, the following message appears:

“ Press DEL to enter SETUP”

To access the AWARD BIOS SETUP program, press the key. The main program screen will be displayed at this time.

The Main Program Screen

ROM PCI/ISA BIOS (2A41BF21) STANDARD SETUP AWARD SOFTWARE, INC	
STANDARD CMOS SETUP	PASSWORD SETTING
BIOS FEATURES SETUP	IDE HDD AUTO DETECTION
CHIPSET FEATURES SETUP	HDD LOW LEVEL FORMAT
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PCI CONFIGURATION SETUP	EXIT WITHOUT SAVING
LOAD BIOS DEFAULTS	
LOAD SETUP DEFAULTS	
ESC: Quit F10: Save & Exit Setup	↑ ↓ → ← : Select Item (SHIFT) F2: Change Color
Time, Date, Hard Disk Type....	

Listed below are explanations of the keys displayed at the bottom of the screen:

<ESC>: Exit the utility.

ARROW KEYS: Use arrow keys to move cursor to desired selection.

<Shift><F2>: Changes background and foreground colors.

<F10>: Saves all changes made to Setup and exits program.

Standard CMOS Setup

Selecting “STANDARD CMOS SETUP “on the main program screen displays this menu:

Standard CMOS Setup Screen

ROM PCI/ISA BIOS (2A41BF21)								
STANDARD SETUP								
AWARD SOFTWARE, INC								
Date (mm:dd:yy): Wed, Mar 15 1995								
Time (hh:mm:ss): 10:00:59								
HARD DISKS	TYPE	SIZE	CYLY	HEAD	PRECOMP	LANDZ	SECOTR	MODE
Primary Master	User	213	685	16	65535	684	38	NORMAL
Primary Slave	None	0	0	0	0	0	0	-----
Secondary Master	None	0	0	0	0	0	0	-----
Secondary Slave	None	0	0	0	0	0	0	-----
Drive A : 1.2 M						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								
F10 : Help (SHIFT) F2: Change Color								

The Standard CMOS Setup utility is used to configure the following features:

Set Date: Month, Date, Year.

Set Time: Hour, Minute, and Second. Use 24 Hour clock format (for PM numbers, add 12 to the hour, you would enter 4:30 p.m. as 16:30).

Hard Disks: Hard disk type from 1 to 45 are standard ones; type “User” is user definable, and Type “None” is not installed (e.g. SCSI). You must enter hard disk parameters for each drive.

There are six categories of information you must enter: “CYLS” (number of cylinders), “HEAD” (number of heads), “PRECOMP” (write precompensation), “LANDZ” (landing zone), “SECTOR” (number of sectors) and “MODE” (Normal, LBA, Large). The hard disk vendor’s or system manufacturer’s documentation should provide you the information needed. For an IDE hard drive, you can use the “IDE HDD AUTO DETECTION” utility in the main program screen to get this information.

The Award BIOS supports three HDD modes: NORMAL, LBA, and LARGE.

NORMAL mode: Generic access mode in which neither the BIOS nor the IDE controller will make any transformation during accessing. The maximum HDD size supported by the NORMAL mode is 528 Megabytes.

LBA mode: Logical Block Addressing mode is a new HDD accessing method to overcome the 528Megabytes bottleneck. The number of cylinders, heads, and sectors shown in setup may not be the number physically contained in the HDD. During HDD accessing, the IDE controller will transform the logical address described by the cylinder, head, and sector number into its own physical address inside the HDD. The maximum HDD size supported by the LBA mode is 8.4 Gigabytes.

LARGE mode: Some IDE HDD contain more than 1024 cylinders without LBA support. This access mode tricks DOS (or other OS) that the number of cylinders is less than 1024 by dividing it by 2. At the same time, number of heads is multiplied by 2.

A reverse transformation process will be made inside INT13h in order to access the right HDD address. The maximum HDD size supported by the LARGE mode is 1 Gigabytes.

Note: To support LBA or LARGE mode, there must be some software involved. All these software are located in the Award HDD Service Routine “INT13h”. It may fail to access a HDD with LBA or LARGE mode selected if you are running under an Operating System which replaces the whole INT13h.

Floppy Drive A and Floppy Drive B: The options are: “360K 5.25 in”, “1.2M 5.25in”, “720K 3.5 in”, “1.44M 3.5in”, “2.88M 3.5in” and “None (Not Installed)”. Not Installed could be used as an option for diskless workstations.

Video: Options are MONO, CGA40, CGA80 and EGA/VGA.

Halt on: Controls whether the system stops in the case of an error. The options are “All Errors”, “No Errors”, “All, But Keyboard”, “All, But Diskette” and “All, But Disk/Key”. The default setting is “All Errors”.

After you have made your selections, exit to the main program screen by pressing the <ESC> key.

BIOS Features Setup

Selecting “BIOS FEATURES SETUP” on the main program screen displays this menu:

BIOS Features Setup Screen

ROM PCI/ISA BIOS (2A41BF21)			
BIOS FEATURES SETUP			
AWARD SOFTWARE, INC			
Virus Warning	: Disabled	Video BIOS Shadow	: Enabled
Internal Cache	: Enabled	C8000-CBFFF Shadow	: Disabled
External Cache	: Enabled	D0000-D3FFF Shadow	: Disabled
		D8000-DBFFF Shadow	: Disabled
Quick Power On Self Test	: Enabled		
Boot Sequence	: C, A		
Swap Floppy Drive	: Disabled		
Boot Up Floppy Seek	: Enabled		
Boot Up NumLock Status	: On		
Gate A20 Option	: Fast		
Typematic Rate Setting	: Disabled	ESC : Quit	↑ ↓ → ← :Select Item
Typematic Rate (Chars/Sec)	: 6	F1 : Help	PU/PD/+/- :Modify
Typematic Delay (Msec)	: 250	F5 : Old Values	(Shift) F2: Color
		F6 : Load BIOS Defaults	
Password Option	: Setup	F7 : Load Setup Defaults	

The following explains the options for each features:

Virus Warning: The Virus Warning's default setting is "Disabled". When enabled, any attempt to write the boot sector and partition table will halt the system and cause a warning message to appear. If this happens, you can use an anti-virus utility on a virus free, bootable floppy diskette to reboot and clean your system.

Internal Cache: the default setting is "Enabled". This Setting enables the CPU internal cache.

External Cache: The default setting is "Enabled". This setting enables the external cache.

Quick Power On Self Test: The default setting is "Enabled". If enabled, this will skip some diagnostic checks during the Power On Self Test (POST) to speed up booting process.

Boot Sequence: The default setting is “C,A”; the other option is “A,C”. The BIOS will load the operating system from the disk drives in the sequence selected here.

Boot Up Floppy Seek: The defaults setting is “Enabled”. When enabled, the BIOS will check whether there is a floppy disk drive installed.

Boot Up Numlock Status: The default setting is “ON”. If set “OFF”, the cursor controls will function on the numeric keypad.

Gate A20 Option: the defaults setting is “Fast”. This is the optimal setting for the mainboard. The other option is “Normal”.

Typematic Rate Setting: The default setting is “Disabled”. If enabled, you can set the typematic Rate and typematic Delay.

Typematic Rate (Chars/Sec): This setting controls the speed at which the system registers repeated keystrokes. The choices range from 6 to 30 Chars/Sec. The default setting is “6 Chars/Sec”.

Typematic Delay (Msec): This setting controls the time between the display of the first and second characters. There are four delay rate choices: 250ms, 500ms, 750ms and 1000ms. The default setting is 250ms.

Password Option: This setting controls the password feature. The options are “Setup” and “System”. Select “Setup” will protect the configuration settings from being tampered with. Select “System” if you want to use password feature every time the system boots up.

The default setting is “Setup”. You can create your password by using the “PASSWORD SETTING” utility on the main program screen.

Video BIOS Shadow: The default setting is ‘Enabled’. When enabled, the ROM BIOS on the video display card is copied into system DRAM to enhance performance.

C8000-CBFFF Shadow to D8000-DBFFF Shadow: The default setting for the shadow feature is “Disabled”. When enabled, the ROM on the expansion card with the specific address is copied into system DRAM. It will also reduce the size of memory available to the system.

After you have made your selection in the BIOS FEATURES SETUP, press the <ESC> key to go back to the main program screen.

Chipset Features Setup

Selecting “CHIPSET FEATURES SETUP” on the main program screen displays this menu:

Chipset Features Screen

ROM PCI/ISA BIOS (2A41BF21)			
CHIPSET FEATURES SETUP			
AWARD SOFTWARE, INC			
Auto Configuration	: Enable	Onboard 496B IDE Port	: Enable
ISA Bus Clock	: 1/4PCLK	IDE 0 Master Mode	: Auto
Cache Write Cycle	: 2 CCLK	IDE 0 Slave Mode	: Auto
Cache Burst Read Cycle	: 1 CCLK	IDE 1 Master Mode	: Auto
L2 Cache/DRAM Cycle WS	: 2 CCLK	IDE 1 Slaver Mode	: Auto
DRAM RAS to CAS Delay	: 2 CCLK	IDE Prefetch Read Buffer	: Disable
DRAM Write Cycle	: 1 WS	IDE HDD Block Mode	: Enable
DRAM Write CAS Pulse	: 1 CCLK	Onboard FDD Controller	: Enabled
DRAM CAS Precharge Time	: 1 CCLK	Onboard Serial Port 1	: COM1
DRAM RAS to MA Delay	: 1 CCLK	Onboard Serial Port 2	: COM2
DRAM Speed	: Fast	Onboard Parallel Port	: 278H
DRAM Slow Refresh	: Disable	Onboard Parallel Mode	: Normal
CPU Burst Write	: Disable	ESC : Quit	↑ ↓ → ← :Select Item
External Cache Policy	: Write Back	F1 : Help	PU/PD/+/- :Modify
		F5 : Old Values	(Shift) F2: Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

This screen controls the settings for the board's chipset. All the entries on the screen are automatically configured. However you can change it according to your operating environment.

The default settings of IDE PIO modes are "AUTO". Should you have problems running IDE drives with PIO mode set to "AUTO", you may try using a slower PIO mode. All IDE drives should work with PIO mode 0.

For IDE Prefetch Read Buffer, if you use both IDE0 and IDE1, this option must be set to "Disable".

If you make any change for onboard FDD controller, serial ports and parallel port in the setup, save the change and then turn off the system. After turning system on again, the change will be effective.

After you have made your selections in the CHIPSET FEATURES SETUP, press the <ESC> key to go back to the main program screen.

Power Management Setup

The power Management Setup controls the mainboard's "green" features.

Selecting "POWER MANAGEMENT SETUP" on the main program screen displays this menu:

ROM PCI/ISA BIOS (2A41BF21)			
POWER MANAGEMENT SETUP			
AWARD SOFTWARE, INC			
Power Management	:	Disable	IRQ5 (LPT 2) : Enable
PM Control by APM	:	No	IRQ6 (Floppy Disk) : Enable
Video Off Method	:	V/H SYNC+Blank	IRQ7 (LPT 1) : Enable
Suspend Switch	:	Enable	IRQ8 (RTC Alarm) : Disable
			IRQ9 (IRQ2 Redir) : Enable
** PM Timer **			IRQ10 (Reserved) : Enable
HDD Off After	:	Disable	IRQ11 (Reserved) : Enable
Standby Mode	:	Disable	IRQ12 (PS/2 Mouse) : Enable
Suspend Mode	:	Disable	IRQ13 (Coprocessor) : Enable
Doze Mode	:	Disable	IRQ14 (Hard Disk) : Enable
			IRQ15 (Reserved) : Enable
** PM Events **			
PCI Master Activity	:	Enable	
COM Ports Activity	:	Enable	
LPT Ports Activity	:	Enable	
HDD Ports Activity	:	Enable	
DMA Ports Activity	:	Enable	
VGA Activity	:	Disable	
IRQ 3 (COM 2)	:	Enable	
IRQ 4 (COM 1)	:	Enable	
			ESC : Quit ↑ ↓ → ← :Select Item
			F1 : Help PU/PD/+/- :Modify
			F5 : Old Values (Shift) F2: Color
			F6 : Load BIOS Defaults
			F7 : Load Setup Defaults

Power Management: This setting controls the system Doze, System Standby and System Suspend Timer features. There are four options.

User Define: Allow you to customize all power saving timer features.

Optimize: This is recommended setting for general use.

Test/Demo: This is for test/demonstration purpose.

Disable: Disable the power management features.

PM Control by APM: The default setting is “NO”. If set to “Yes”, system BIOS will wait for APM’s prompt before it enters any PM mode.

Note: If your system power management is controlled by APM and there is a task running, the APM will not prompt the BIOS to enter any power saving mode after time out.

Video Off Method: This setting controls the Video off method in power saving mode. The default setting is “V/HSYNC+Blank”. This setting disables V/H SYNC signals and blanks the screen in power saving mode. The other options are “Blank Screen” and “DPMS”.

Suspend Switch : The default setting is “Enabled”. Along with “Power Management” enabled, The system will enter the suspend mode when the break switch is pressed.

HDD Off After: Options are from “1 Min” to “15 Min”, “Suspend” and “Disable”. The IDE hard drive will spin down if it is not accessed within a specified length of time.

Doze Mode: Options are from “10 Sec” to “40 Min” and “Disable”. The system speed will change from turbo to slow if no Power Management events occur for a specified length of time. The system will return to full power when a P.M. event is detected.

Standby Mode: Options are from “10 Sec” to “40 Min” and “Disable”. The system speed will change from turbo to slow and the video signal will be suspended if no Power Management events occur for a specified length of time. Full power function will return when a P.M. event is detected.

Suspend Mode: Options are from “10 Sec” to “40 Min” and “Disable”. The CPU clock will be stopped and the video signal will be suspended if no Power Management events occur for a specified length of time. Full power function will return when a P.M. event is detected.

PM Events: when a hardware event is enabled, the occurrence of a corresponding event will prevent the system from entering any PM mode.

After you have made your selection in the POWER MANAGEMENT SETUP, press the <ESC> key to go back to the main program screen.

PCI Configuration Setup

Both the ISA and PCI buses on the mainboard use system IRQ's. You must set up the IRQ assignments correctly thru the PCI Configuration Setup utility, otherwise the mainboard will not work properly.

Selecting “PCI CONFIGURATION SETUP” on the main program screen displays this menu:

PCI Configuration Screen

ROM PCI/ISA BIOS (2A41BF21)			
PCI CONFIGURATION SETUP			
AWARD SOFTWARE, INC			
Slot 1 Using INT#	: AUTO	CPU to PCI Post Write	: Enable
Slot 2 Using INT#	: AUTO	CPU to PCI Burst Write	: Enable
Slot 3 Using INT#	: AUTO	PCI Burst to Main Memory	: Enable
1st Available IRQ	: 9		
2nd Available IRQ	: 10		
3rd Available IRQ	: 11		
PCI IRQ Activated By	: Edge		
PCI IDE 2nd Channel	: Enable		
PCI IDE IRQ Map To	: PCI-AUTO		
Primary IDE INT#	: A		
Secondary IDE INT#	: B		
		ESC : Quit	↑ ↓ → ← :Select Item
		F1 : Help	PU/PD/+/- :Modify
		F5 : Old Values	(Shift) F2: Color
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

Each PCI slot has four interrupts, “INT A”, “INT B”, “INT C” and “INT D” which could be connected to IRQ thru a hardware router in the Chipset. When you install a PCI expansion card which requires an “IRQ” (ISA interrupts IRQ 3, 4, 5, 7, 9, 11, 12, 14 and 15) to operate, you must route the “INT” which is used by PCI expansion card to the proper IRQ.

PCI Expansion Card (Except PCI IDE) Installation

1. Set “INT” to each PCI slot.
 - a. If the PCI expansion cards is compliant to PCI plug and play specification, select “AUTO”.
 - b. If the PCI expansion card is not compliant to PCI plug and play specification, select “INT n” which is used by the expansion card.

2. Set the priority of available “IRQ’s” (NA, IRQ 3, 4, 5, 7, 9, 10, 11, 12, 14 and 15), do not select IRQ14 and/or IRQ15 when an ISA or PCI IDE card is installed on the mainboard. When system boots up, The BIOS will scan the PCI expansion cards starting from slot1 then slot 2, 3. If a PCI expansion card exists and requires an IRQ to operate, the BIOS will assign an available IRQ to it in the sequence of all available IRQ’s.
3. Select INT Level or Edge trigger.

Example:

- Install a PCI expansion card which is compliant to PCI plug and play specification on slot 3. The PCI expansion card requires IRQ 11 to operate.
- Install a PCI expansion card which is not compliant to PCI plug and play specification on the slot2. The PCI expansion card uses INT A and requires IRQ 9 to operate.
- Install a PCI expansion card which does not require IRQ to operate on slot 1.

The setting is as follows:

ROM PCI/ISA BIOS (2A41BF21)	
PCI CONFIGURATION SETUP	
AWARD SOFTWARE, INC	
Slot 1 Using INT#	: AUTO
Slot 2 Using INT#	: INTA
Slot 3 Using INT#	: AUTO
1st Available IRQ	: 9
2nd Available IRQ	: 11
3rd Available IRQ	: N/A
PCI IRQ Activated By	: Edge
PCI IDE 2nd Channel	: Enable
PCI IDE IRQ Map To	: PCI-AUTO
Primary IDE INT#	: A
Secondary IDE INT#	: B
CPU to PCI Post Write	: Enable
CPU to PCI Burst Write	: Enable
PCI Burst to Main Memory	: Enable
ESC : Quit ↑ ↓ → ← :Select Item F1 : Help PU/PD/+/- :Modify F5 : Old Values (Shift) F2: Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	

PCI IDE Installation

If a PCI IDE Card uses ISA IRQ directly thru a paddle card installed on ISA slot, set “ISA” for the option “PCI IDE IRQ Map To”. If a PCI IDE Card uses PCI ‘INT’, and it is compliant to PCI plug and play specification, set “PCI-AUTO” for the option “PCI IDE IRQ Map To”, otherwise set “PCI-SLOT n” (PCI-SLOT 1, PCI-SLOT 2 or PCI-SLOT 3) depends on which slot the PCI IDE Card is installed.

Only INT A and INT B are available for a PCI IDE Card, therefore you must set the PCI IDE Card primary interrupt to INT A and secondary interrupt to INT B. The INT A is routed to IRQ

14 and the INT B is routed to IRQ 15 thru a hardware router in the chipset.

Load BIOS Defaults

This is useful if you are having problems with your mainboard and need to debug or troubleshoot the system.

The defaults loaded only affect the BIOS Features Setup and Chipset Features Setup screens. There is no effect on the Standard CMOS Setup. To use this feature, highlight on the main screen and press <Enter>. A line will appear on the screen asking if you want to load the BIOS default values. Press the <Y> key and then press <Enter> key if you want to load the BIOS defaults. Press <N> if you don't want to proceed.

Load Setup Defaults

“LOAD SETUP DEFAULTS” loads optimal settings which are stored in the BIOS ROM.

The defaults loaded only affect the BIOS Features Setup and Chipset Features Setup screens. There is no effect on the Standard CMOS Setup. To use this feature, highlight on the main screen and press <Enter>. A line will appear on screen asking if you want to load the Setup default values.

Press the <Y> key and then press the <Enter> key if you want to load the Setup defaults. Press <N> if you don't want to proceed.

Password Setting

The “PASSWORD SETTING” utility sets the password. The mainboard is shipped with the password disabled. If you want to change the password, you must first enter current password. Then at the prompt enter your new password. The password is case sensitive and you can use up to 8 alphanumeric characters, press <Enter> after entering the password. At the next prompt, confirm the new password by typing it and pressing <Enter> again.

To disable the password, press the <Enter> key instead of entering a new password when the “Enter Password” dialog box appears. A message will appear confirming that the password is disabled.

Note: If you forget your password, the only way to solve this problem is to clear CMOS RAM data. Please refer to the section of clear CMOS RAM Data on Page 18.

IDE HDD Auto Detection

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

If the auto-detected parameters displayed do not match the ones that should be used for your hard drive, do not accept them. Press the <N> key to reject the values and enter the correct ones manually on the Standard CMOS Setup screen.

Note: If you are setting up a new hard disk drive (nothing on it) that supports LBA mode, more than one line will appear in the parameter box, choose the line that lists LBA for an LBA drive.

Do not choose Large or Normal if the hard disk drive is already fully formatted when you install it, choose the mode which is used to format it.

HDD Low Level Format

Selecting this option and pressing the <Enter> key enable you to perform low level format of hard disk drive.

Save And Exit Setup

Selecting this option and pressing the <Enter> key to save the new setting information in the CMOS memory and continue with the booting process.

Exit Without Saving

Selecting this option and pressing the <Enter> key lets you exit the Setup Utility without recording any new values or changing old ones.