

CH-498B

Motherboard

User's Manual



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Chapter 1

Introduction

The mainboard is a 486-based PC/AT system and provides Dark Green function.

Three VESA slots support high performance add-on cards, optimized for running software operation in high performance, such as OS/2, Windows/386, Windows 3.1, XENIX, UNIX and so on.

And Dark Green function is designed for power saving. This mainboard can provide numerous work frequency, uses different kinds of CPU, compatible for CPU upgrade.

And on board voltage regulator support +3.3V for the 3.3V CPU series.

Mainboard Specification

- CPU: INTEL i486DX/DX2, i486SX, i487SX PGA package.
SL enhanced PGA package.
P24T PGA package.
i486DX4 PGA package * (optional).
P24D PGA package.
AMD Am486DX/DX2/DXL/DXL2 PGA package.
CYRIX Cx486DX/DX2 PGA package.
UMC U55
- Frequency: Support system running 20/25/33/40/50 MHz.
- System chipset: UMC 82C498, 82C496.
- Cache size: Write back direct mapped cache with size of 64/128/256KB/512K/1MB selection.
- SRAM type: TAG SRAM 8Kx8/16Kx8/32Kx8/64Kx8
DATA SRAM 8Kx8/32Kx8/64Kx8/128Kx8.
- DRAM size: Four banks of mixed 72-pin and 30-pin SIMM module of up to 128 MB.
- DRAM type: Support 256Kx1, 512Kx8, 1Mx1, 2Mx8, 4Mx1, 4Mx4, 16Mx1 DRAM chip.
- Slots: Seven 16-bit ISA slots, one 8-bit ISA slot, three VESA master mode slots, located at ISA slot 1,2,3.
- Dark Green function: IDE Power Down
VGA Power Down
External Device Power Down
CPU stop clock
CPU slow clock (8 MHz)
INTEL SL enhanced.
Cyrrix Cx486DX/DX2.
INTEL i486SX/DX/DX2.
AMD Am486DX/DX2/DXL/DXL2
UMC U55
- PCB: 220 x 260 m/m, 4 layers
- Support green power supply connector for controlling the AC output power.
- On board adjustable voltage regulator for 3.3V CPU series (e.g i486DX4)
- Hardware suspend switch supported

Remark **: If the mainboard with regulator in Q3 or Q4, then it can support 3.3V CPU (e.g. i486DX4).

Chapter 2

Hardware Description

Connector and Jumper Settings

In this chapter we will describe the system mainboard's connectors and jumpers. That will help you do the right setting of this board whenever you change the system configuration or make an upgrade. For the PCB Layout Placement, please refer to the Appendix.

Connectors

J1: Keyboard Connector

J2: Power Connector

J3: On board/External Battery Connector

Pin 1 & 4:	•	For external battery pack
Pin 1:		+Vdc
Pin 4:		Ground
Pin 2 & 3:		On board battery enabled/disabled
2-3 short:		Enabled
2-3 Open:		Disabled

J4: External Device Power Down Connector

Pin 1-2:		For external device 1
Pin 1:		Active low signal output
Pin 2:		Ground
Pin 3-4:		For external device 2
Pin 3:		Active low signal output
Pin 4:		Ground

J5: Hardware Reset Connector

J6: Hardware Turbo Switch Connector

J7: Turbo LED Connector

Pin 1: LED cathode
Pin 2: LED anode

J8: Speaker Connector

J9: Suspend Switch Connector

J10: Power LED (Green indicator) & Keylock Connector

Pin 1: LED power
Pin 2: NC
Pin 3: Ground
Pin 4: Keyboard inhibit
Pin 5: Ground

Jumpers

A. Cache Size Selection: (JP0 ~ JP7)

Cache Size	Cache RAM		TAGRAM	JP0	JP1	JP2	JP3	JP4	JP5	JP6	JP7
	Bank 0	Bank 1	U9								
128 KB	32 K x 8		8 K x 8	2-3	OFF	2-3	2-3	ON	OFF	OFF	OFF
256 KB	32 K x 8	32 K x 8	16 K x 8 or 32 K x 8	2-3	OFF	1-2	1-2	ON	ON	OFF	OFF
256 KB	64 K x 8		16 K x 8 or 32 K x 8	1-2	OFF	2-3	1-2	ON	ON	OFF	OFF
512 KB	64 K x 8	64 K x 8	32 K x 8	2-3	OFF	1-2	1-2	ON	ON	ON	OFF
512 KB	128 K x 8		32 K x 8	2-3	1-2	2-3	1-2	ON	ON	ON	OFF
1 MB	128 K x 8	128 K x 8	64 K x 8 or 128 K x 8	2-3	2-3	1-2	1-2	ON	ON	ON	ON

NOTE:

1. Bank 0 = U1, U2, U3 & U4
2. Bank 1 = U5, U6, U7 & U8
3. TAG RAM: U9
4. Both Cache RAM and TAG RAM access time is ≤ 20 ns required

B. Voltage Adjustment for 3.3V CPU: (JP8)

Voltage	Jumper Setting	Default
4.0 V	1-2	*
3.15 V	3-4	
3.45 V	5-6	
3.6 V	7-8	
3.3 V	9-10	

NOTE:

1. In order to meet the future CPU series, the voltage may be changed without notices.
2. 3.3V voltage will be supported from ver 2.0 PCB.

J. CPU Type Selection (JP21~JP29)

C. 5V/3.3V Voltage Selection: (JP9~JP11)

CPU	JP11	JP10	JP9	Default
5 V	1-2	1-2	1-2	*
3.3 V	2-3	2-3	2-3	

D. JP12: Reserved Function, Setting is Open

E. CMOS Data Clear (JP13)

- 1-2: Clearing CMOS data
2-3: Normal operation (Default)

F. Powergood Signal Selection: (JP14)

- 1-2: Powergood signal from power supply (Default)
2-3: On board that generate the powergood signal

G. CPU Clock Selection (JP15)

- 1-2: One gate delay
2-3: Normal operation (Default)

NOTE:
This function is for hardware engineer used only. Normally there is no change.

H. VL-Bus Targets High Speed write: (JP16)

- Short: 1 wait state write (Default)
Open: 0 wait state write

I. CPU Clock Selection: (JP17~JP20)

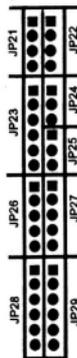
MHz	JP20	JP19	JP18	Default	CPU Type
20	OPEN	OPEN	OPEN		486SX/DX-20 Cx486DX2-40
25	CLOSE	OPEN	OPEN		486SX/DX-25, Cx486DX2-25, 487SX-25 486DX2-50, Cx486DX2-50, 486DX4-75, USS-25
33	CLOSE	CLOSE	CLOSE	*	486SX/DX-33, 487SX-33, 486DX2-66 486DX4-100, Cx486DX2-66, Cx486DX-33, USS-33
40	CLOSE	CLOSE	OPEN		486DX-40, Cx486DX-40, USS-40 Am486DX-40, Am486DXL-40
50	OPEN	OPEN	CLOSE		486DX-50, Cx486DX-50

NOTE:
1. JP17 always open.
2. If the CPU type is not shown above, please contact your dealer for help.

CPU TYPE	JP21	JP22	JP23	JP24	JP25	JP26	JP27	JP28	JP29	JP34
INTEL 486SX	OPEN	2-3	OPEN	1-2	OPEN	OPEN	OPEN	OPEN	2-3	OPEN
INTEL 486DX/DX2	OPEN	1-2,3-4	OPEN	1-2	OPEN	3-4	OPEN	OPEN	2-3	OPEN
AMD Am486DX/DX2	OPEN	2-3	OPEN	2-3	OPEN	1-2	1-2,3-4	4-5	1-2	OPEN
INTEL 486SX-SL	OPEN	1-2,3-4	OPEN	2-3	OPEN	1-2,3-4	1-2,3-4	4-5	1-2	OPEN
INTEL 486DX/DX2-SL	OPEN	1-2,3-4	OPEN	2-3	OPEN	1-2,3-4	1-2,3-4	4-5	1-2	OPEN
INTEL 486DX4	OPEN	1-2,3-4	OPEN	1-2,3-4	1-2,3-4	2,3,4,5	3X CPU CLOCK	1-2,3-4	1-2,4-5	OPEN
INTEL P240	2-3	1-2,3-4	OPEN	2-3	OPEN	1-2,3-4	1-2,3-4	2-3,4-5	1-2	OPEN
INTEL P281	OPEN	1-2,3-4	OPEN	2-3	OPEN	1-2,3-4	1-2,3-4	4-5	1-2	OPEN
INTEL Cx486DX	1-2	1-2,3-4	OPEN	2-3	OPEN	1-2,3-4	2-3	1-2,3-4	1-2,3-4,5-6	OPEN
CYRIX Cx486DX2	1-2,3-4	1-2,3-4	OPEN	2-3	OPEN	1-2,3-4	2-3	1-2,3-4	1-2,3-4,5-6	OPEN
AMD Am486DX/DX2	OPEN	1-2,3-4	OPEN	1-2	OPEN	3-4	OPEN	OPEN	2-3	OPEN
AMD Am486DX/DX2L	OPEN	1-2,3-4	OPEN	1-2	OPEN	3-4	OPEN	OPEN	2-3	OPEN
UMC USS	OPEN	2-3	1-2,3-4,5-6	1-2	OPEN	OPEN	OPEN	OPEN	2-3	OPEN
AMD Am486DX4	OPEN	1-2,3-4	OPEN	1-2	OPEN	3-4	OPEN	OPEN	2-3	ON/2X OFF/3X

NOTE:

1. ■ signifies Pin 1.
2. The AMD Am486dx4 CPU is supported in PCB version 2.0 or later



K. VL-Bus Operation Clock Selection: (JP30)

Short: CPU clock > 33 MHz (Default)

Open: CPU clock ≤ 33 MHz

L. Reserved Function: (JP31~JP33)

Default Setting

JP31: Open

JP32: 2-3

JP33: Short

DRAM Bank Configuration

There are two 72-pin double-side SIMM sockets (four banks) and one bank of 30-pin SIMM socket; Guarantee the DRAM module installed up to four banks which are all auto banking. The mainboard will auto detect the total memory installed in the SIMM socket. The total memory size is up to 128 MB.

The 72-pin SIMM socket support single bank (RAS pin = pin 33, 34) and double banks (RAS pin = pin 34, 44 and pin 33, 45) DRAM module, the DRAM module of 80 ns fast page mode is required.

Hardware or Software Speed Change

The mainboard supports hardware and software speed changed function. Hardware speed is changed by the hardware turbo switch and software speed is changed by the keyboard as follows:

<ALT><CTRL><+> is set to high speed.

<ALT><CTRL><-> is set to low speed.

If the turbo switch is set to ON, the system is set to low speed or if the turbo switch is set to OFF, the system can be set to high speed depending on the software speed change is also set to HIGH speed. If you want to set the system to HIGH speed with the use of keyboard, while at the same time the turbo switch must also be set to OFF.

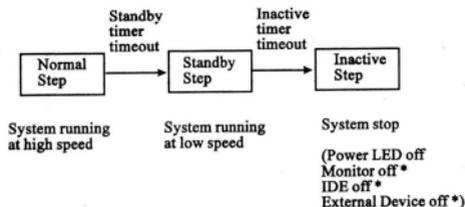
Chapter 3

Green Function

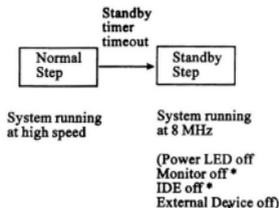
CPU Power Down Control

The mainboard supports green function for the system saving power. The system BIOS supports two timer to set the power down time. The CPU clock can also be set to low clock rate on standby mode. These function are included in the Power Management Setup. The power down sequence are as follows:

For SMI Green (can stop clock CPU series)



For Normal Green (can't stop clock CPU series)



NOTE: * = If these power down control functions are enabled.

VGA Power Down Control

The mainboard supports VGA power down control to set monitor to OFF, the Power Management Setup provides Disabled/Normal/DPMS/SMART for different VGA card.

- Disabled: Disable the function
- Normal: Support no screen mode but no power saving function.
- DPMS: For VGA card with VESA DPMS function.
- SMART: BIOS will automatically detect the VGA card type then proceed to the monitor power down mode for power saving.

IDE Power Down Control

The mainboard supports IDE power down control to save the IDE power consumption. If the IDE power down control setup enable the system to enter the power management function, the IDE will be power down.

External Device Power Down Control

The mainboard supports two external device for power down connector (J4) to control the external peripheral. The system BIOS can set the external device power down function to Enabled or Disabled by the Power Management Setup. If the system uses the non stop clock function CPU, the external device power down function is always set to Enabled. For more detail information, please refer to chapter 2 for hardware connection (J4).

Chapter 4

WinBIOS Setup

WinBIOS Setup configures system information that is stored in CMOS RAM. WinBIOS Setup has an easy-to-use graphical user interface that is easily recognize by anyone who had used the Microsoft Windows. WinBIOS Setup sets a new standard in BIOS user interface.

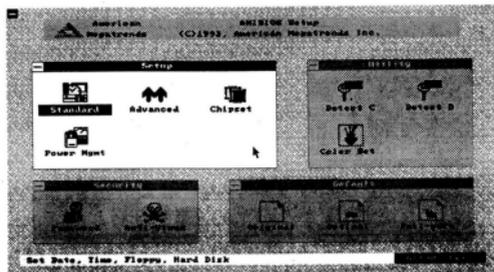
Starting WinBIOS Setup:

As POST executes, the following appears:

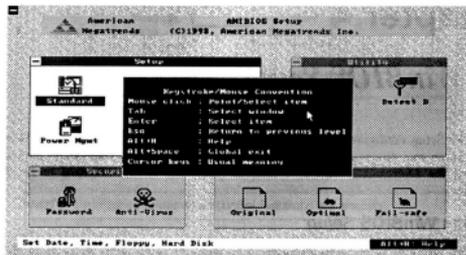
Hit if you want to run setup.

Press to run WinBIOS Setup.

The WinBIOS Setup main menu, shown below, is organized into Setup, Utilities, Security and Default four windows. Each window contains several icons, by clicking each icon will activate a specific function. The WinBIOS Setup icons and functions are described as follows:



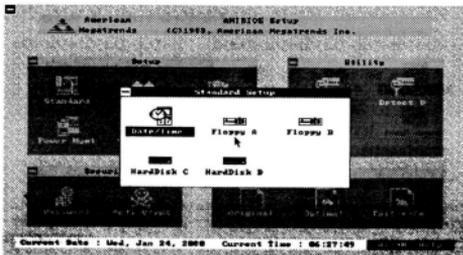
The WinBIOS Setup provides HELP screen for Advanced Setup, Chipset Setup and Power Management Setup, Help on Mouse and Keyboard use is also available. Choose HELP by pressing <Alt> <H> and its screen is as follows.



A. Setup Window

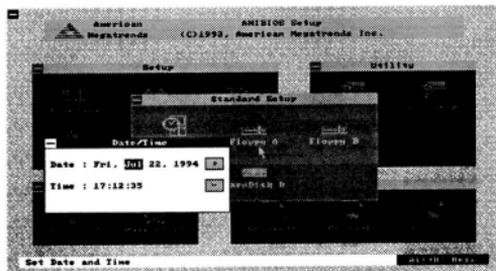
a. Standard Setup

The WinBIOS Setup options described in this section are selected by choosing the appropriate high-level icon from the WinBIOS Setup main menu selection screen. The standard setup screen is as follows:



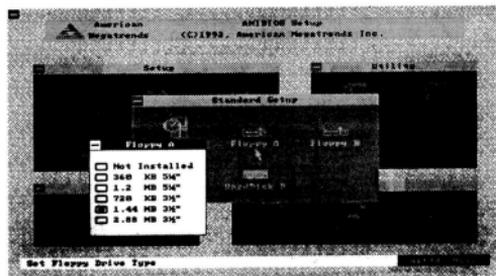
Date, Day and Time Configuration

Select the Standard option, then choose the Date/Time icon. The current values for each category are displayed and enter new values through the use of the keyboard. The Date and Time Setup screen is as follows:



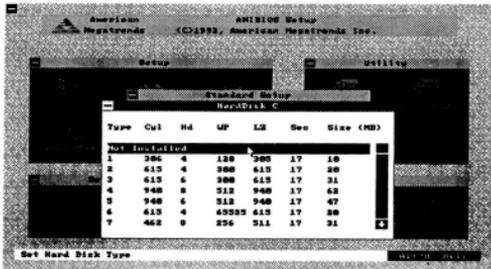
Floppy Driver A: and B:

Move the cursor to these fields via ↑ and ↓ then select the floppy type. The settings are 360KB, 1.2MB, 720KB, 1.44MB, 2.88MB or Not Installed. The Floppy A: Setup screen is as follows:

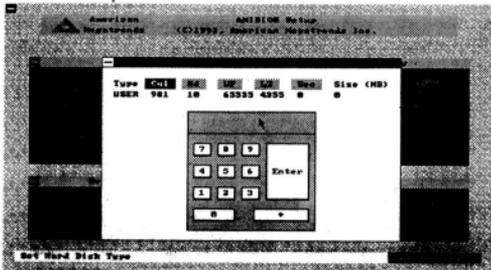


Hard Disk C: and D:

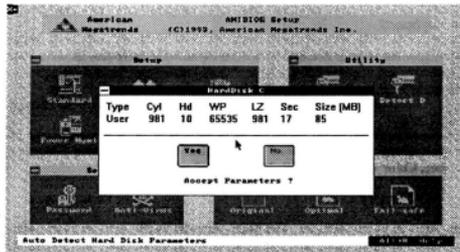
Select one of these hard disk drive icons to configure the drive being named in the option. A list of all valid disk drive type is displayed on the screen that is easy to scroll over. Select the correct type and press Enter key. The hard disk C: type select screen is as follows:



If the hard disk drive parameters are not equal to the listed valid disk drive type, you can also enter the hard disk driver parameters named as User Type. The User Type screen is as follows:



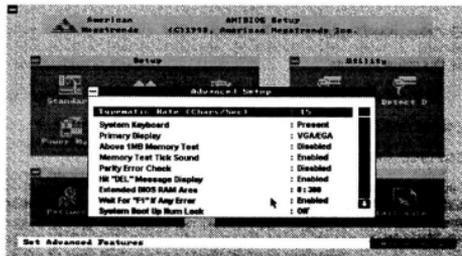
If the hard disk drive is an IDE drive, select Detect C: or Detect D: from the utility section of the WinBIOS Setup main menu to allow WinBIOS to automatically detect the IDE drive parameters and illustrate them on this screen as follows:



NOTE:
Not all hard disk drive can be automatically detected.

b. Advanced Setup

The Advanced Setup options described in this section are the standard options as shown on the following screen:



Typematic Rate (Chars/Sec)

Typematic rate sets the rate at which characters on the screen repeat when a key is pressed and held down. The settings are **Disabled**, **15**, **20** or **30** characters per second.

System Keyboard

This option does not specify if a keyboard is attached to the computer. Rather, it specifies if error messages are displayed if a keyboard is not attached. This option permits you to configure workstations with no keyboards. The settings are **Absent** or **Present**.

Primary Display

Select this icon to configure the type of monitor attached to the computer. The settings are **Monochrome**, **Color 40x25**, **Color 80x25**, **VGA/EGA**, or **Absent**.

Above 1 MB Memory Test

When this option is enabled, the WinBIOS memory test is performed on all system memory. When this option is disabled, the memory test is done only on the first 1 MB of system memory. The settings are **Enabled** or **Disabled**.

Memory Test Tick Sound

This option enables (turns on) or disabled (turns off) the ticking sound during the memory test. The settings are **Enabled** or **Disabled**.

Parity Error Check

This option enables or disables parity error checking for system RAM. The settings are **Enabled** (all system RAM parity is checked) or **Disabled** (parity is checked only on the first 1 MB of system RAM).

Hit "DEL" message Display

Disabling this option prevents

Hit if you want to run Setup

from appearing when the system boots. The settings are **Enabled** or **Disabled**.

Extended BIOS RAM Area

Specify in this option if the top 1 KB of the system programming area beginning at 639K or 0:300 in the system BIOS area in low memory will be used to store hard disk information. The settings are **DOS 1K** or **0:300**.

Wait for "F1" If Any Error

WinBIOS POST runs system diagnostic tests that can generate a message followed by:

Press <F1> to continue

If this option is enabled, WinBIOS waits for the end user to press <F1> before continuing. If this option is disabled, WinBIOS continues the boot process without waiting for <F1> to be pressed. The settings are **Enabled** or **Disabled**.

System Boot Up Num Lock

When **On**, this option turns off Num Lock when the system is powered on so the end user can use the arrow keys on both the numeric keypad and the keyboard. The settings are **On** or **Off**.

Floppy Drive Seek At Boot

When this option is enabled, WinBIOS performs a Seek command on floppy drive A: or/and B: before booting the system. The settings are **Enabled** or **Disabled**.

System Boot Up Sequence

This option sets the sequence of boot drivers (either floppy drive A: or hard disk drive C:) that WinBIOS attempts to boot from after POST completes. The settings are **C:**, **A:** or **A:**, **C:**.

System Boot Up CPU Speed

This option sets the speed of the CPU at system boot time. The settings are **High** or **Low**.

External Cache

This option enables secondary cache memory. If enabled is selected, external cache memory is enabled. If Disabled is chosen, the external cache memory is disabled. The settings are **Disabled** or **Enabled**.

Internal Cache

This option enabled internal cache memory. If enabled is selected, the cache memory in the CPU is enabled. If disabled is chosen, the internal cache memory is disabled.

Password Checking

This option enables the password check option every time the system boots or the end user runs Setup. If **Always** is chosen, a user password prompt appears every time the computer is turned on. If **Setup** is chosen, the password prompt appears if WinBIOS Setup is executed. See Security Section of the WinBIOS Setup main menu.

Video Shadow C000, 16K
Video Shadow C400, 16K

When this option is set to Enabled, the video ROM area from C0000h - C7FFFh is copied (shadowed) to RAM for faster execution. The settings are Disabled or Enabled.

ShadowC800, 16K
ShadowCC00, 16K
ShadowD000, 16K
ShadowD400, 16K
ShadowD800, 16K
ShadowDC00, 16K
ShadowE000, 64K

These options enable shadowing of the contents of the ROM area named in the option title. The settings are Disabled or Enabled.

Main BIOS Shadow F000, 64K

When this option is set to enabled, the main BIOS ROM area from F0000h - FFFFFh is copied (shadowed) to RAM for faster execution. The setting are Disabled or Enabled.

IDE Block Mode

The BIOS support the transfer of multiple sectors to and from an IDE drive. This option that specifies the maximum number of sectors that can be transferred at a time may also be present. The setting are Disabled or Enabled.

IDE LBA Mode

When set to enable, the BIOS can support the IDE hard disk drive size bigger than 528 MB, otherwise the IDE hard disk drive size limitation is 528 MB.

IDE 32 Bit Mode

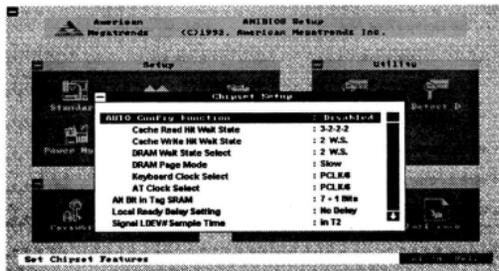
If the IDE hard disk drive and IDE controller card support 32-bit transfer, you can set it to enable to speed up the IDE access speed. It does not support 32-bit transfer, this feature should be disabled.

Video Shadow Before Video Init

When set to enable, the system power on is initiated to fast speed, otherwise it is only in normal speed.

c. Chipset Setup

The Chipset setup options described in this section are selected by choosing the appropriate high-level icon from the WinBIOS Setup main menu. The chipset setup screen is as follows:



Auto Config Function

Enable this item and the BIOS detects the CPU type and speed automatically, and set the optimal values for cache read hit wait state, cache write hit wait state, DRAM wait state, DRAM page mode, keyboard clock and AT bus clock.

Disable this option, the setting values must be set accordingly to CPU type and speed. If the setting values is changed by the user, the system may not be stable, so we suggest to set the auto config function to enabled.

Cache Read Hit Wait State
Cache Write Hit Wait State
DRAM Wait State Select
DRAM Page Mode
Keyboard Clock Select
AT Clock Select

These item is automatically set when the auto config function is enabled.

Alt Bit in Tag SRAM

This option is used to set the secondary cache memory in write-back mode or write-through mode. When selecting the 7+1 bits, it is running at write-back mode, and 8+0 bits, it is running at write-through mode.

Local Ready Delay Setting Signal LDEV# Sample Time CPU ADS# Delay 1T or Not

These options are used to set the local bus access timing, the default values are as follows:

Local ready delay setting:	Delay 1T
Signal LDEV# Sample time:	in T2
CPU ADS# delay 1T or Not:	No delay

If the setting values is changed, the system may not be stable.

Hardware DRAM Parity Check

When this option is set to enabled, the system can support the without parity bit DRAM memory module. The setting are **Enabled** or **Disabled**.

ISA Bus Refresh Disable Bit

When set to slow, it enable the ISA bus standard refresh cycle or when set to fast, it enable the refresh DRAM only.

DRAM Refresh Method

The DRAM refresh method can select the RAS only or CAS before RAS mode.

Divider for Refresh

The divider for refresh frequency options are 1/1, 1/2, 1/4, 1/8, 1/16, 1/32 or 1/64 and the default setting is 1/1 to be compatible with the general DRAM.

*Video ROM Cache C000, 16K
Video ROM Cache C400, 16K
AdaptorROM Cache C800, 16K
AdaptorROM Cache CC00, 16K
AdaptorROM Cache D000, 16K
AdaptorROM Cache D400, 16K
AdaptorROM Cache D800, 16K
AdaptorROM Cache DC00, 16K
AdaptorROM Cache E000, 32K
AdaptorROM Cache E800, 32K
System ROM Cache F000, 64K*

These options which are used to set the ROM BIOS area data is cacheable or non cacheable. The default setting is disabled to reduce compatible problem.

Low A20# Select

Selecting the LOWA20# signal will be generated from keyboard controller or chipset emulation.

RC Reset Select

Select the RC reset signal will be generated from keyboard controller or chipset emulation.

IO Recovery Time Select

This option is supported to adjust the on board I/O port and ISA bus I/O card recovery time to get good compatibility for some add-on cards.

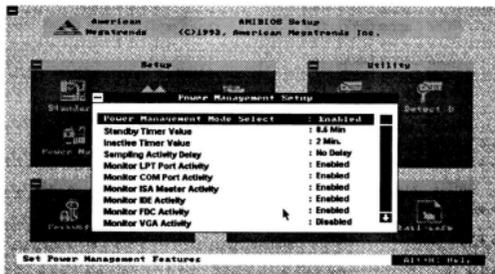
*Hold CPU percentage
Software Flash 80486
Enable Force Read Miss*

These options are use for non-turbo mode control. The non-turbo control can be one option, two options or all options enabled. The suggested setting is enabling software flash 80486 and other options are disabled.

When the Hold CPU percentage is enabled (any one from 1/16~7/16), and the system running in non-turbo mode, the green function is disabled automatically.

d. Power Management Setup

The Power Management Setup is described in this section, the screen is shown below:



Power Management Mode Select

This option is used to enable or disabled the system power management function.

Standby Timer value

When power management mode select is enabled, the system standby timer can be set from 0.5 minute to 64 minutes for time-out values.

Inactive Timer Value

If the power management mode select is enabled and the CPU support stop clock function, the system can set the inactive timer value to support this function. The available time-out value is 2 minutes to 64 minutes.

Sampling Activity Delay

This option is used to set the sampling activity time, delay 1T or No Delay.

Monitor LPT Port Activity
Monitor COM Port Activity
Monitor ISA Master Activity
Monitor IDE Activity
Monitor FDC Activity
Monitor VGA Activity
Monitor KBC Activity
Monitor VESA Slave Activity

These options are used to enable the activity device while the system is running at standby or inactive mode. The setting is enabled or disabled.

SMI# Pulse Width

This option is used to set the SMI# pulse width of 2 PCLK, 3 PCLK or 4 PCLK.

KBC Hot Key

This hot key function is not supported.

Suspend/Resume Switch

The mainboard supports a suspend switch connector (J9). This option is used to set the suspend switch function to enabled or disabled mode.

Clock Out on Standby Mode

This option select the CPU clock while entering the Standby mode. These selection are PCLK/1, PCLK/2, PCLK/3, PCLK/4, PCLK/5, PCLK/6 or PCLK/8.

VGA Power Down Control

IDE Power Down Control

External Device Power Down

These options is used to enable or disabled the VGA, IDE and External Device Power Down Control while the system enter the standby or inactive mode. For more detail information, please refer to Green Function of chapter 3.

B. Utility Window

a. Detect C: and Detect D:

The utility setup support those that automatically detect the IDE driver parameters and report to the hard disk drive C: and D: in standard setup, so you can easily configure drive C: and D:. Please refer to the standard setup of hard disk C: and D: setup.

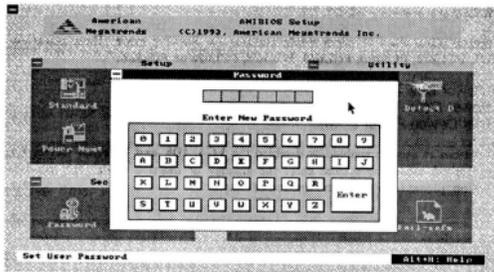
b. Color Set

Sets the WinBIOS Setup screen colors.

C. Security Window

a. Password

WinBIOS Setup has an optional password feature. The system can be configured so that all users must enter a password every time the system boots or when WinBIOS Setup is executed. The following screen appears when you select the password icon.

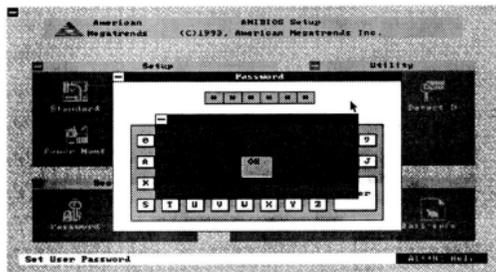


You can enter a password by:

- Typing the password in the keyboard, or
- Selecting each letter via the mouse.

The password check option is enabled in Advanced Setup by choosing either Always (the password prompt appears every time the system is powered on) or Setup (the password prompt appears only when WinBIOS Setup is run). The password is stored in CMOS RAM. The system asks for a password.

Enter a 1-6 character password. The password does not appear on the screen when typed. WinBIOS will ask you to retype the password. Make sure you write it down. If you forget it, you must drain CMOS RAM (for more detail please refer to JP13) and reconfigure the system. WinBIOS will then display the following:



Changing a Password

Select the Password icon from the Security section of the WinBIOS Setup main menu. Enter the password and press Enter. The screen does not display the characters entered. After the new password is entered, retype the new password as prompted and press Enter.

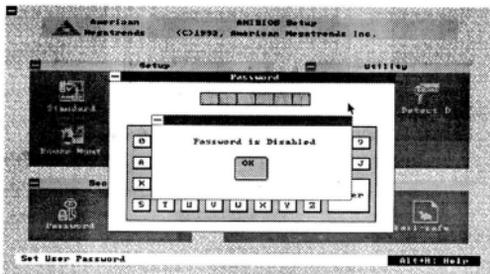
If the password confirmation is incorrect, an error message appears. If the new password is entered without error, press Esc to return to the WinBIOS Setup Main menu. The password is stored in CMOS RAM after WinBIOS Setup completes. The next time the system boots, you are prompted for the password if the password function is present and is enabled.

Remember the Password

Keep a record of the new password when the password is changed. If you forget the password, power off and remove the computer cover, set JP13 1-2 short, and back to 2-3 short for normal operation, then power on the computer. WinBIOS erases the password and you have to re-setup the system.

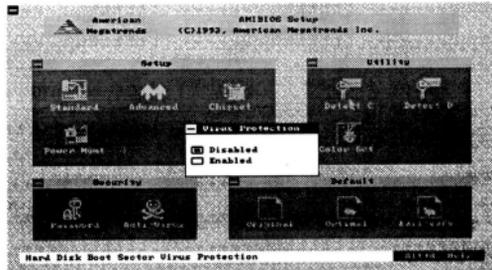
Disabling a Password

Select the password icon from the security section of the WinBIOS Setup main menu. Enter the password and press the Enter key, the screen does not display the characters entered on screen. It is required to enter a new password and press the Enter key twice. If the password is disabled, WinBIOS will then display it on the screen as shown below.



b. Anti-Virus

When this icon is selected from the Security section of the WinBIOS Setup main menu, WinBIOS issue a warning when any program (or virus) issues a Disk Format command or any attempts to write to the boot sector of the hard disk drive. The following screen appears when you select the Anti-Virus icon:



The settings are Enabled or Disabled. If enabled, the following appears when a write is attempted to the boot sector. You may have to type N several times to prevent the boot sector write.

Boot Sector Write !!!
Possible Virus : Continue (Y/N) ?

The following is displayed after any attempt to format any cylinder, head, or sector of any hard disk drive via the BIOS INT 13 Hard Disk Drive Service:

Format !!!
Possible Virus : Continue (Y/N) ?

Formatting the Hard Disk Drive

You should not enable anti-virus protection when formatting a hard disk drive.

The DOS hard disk format utility does not use INT 13h function AH=05h to format the hard disk. It only verifies the hard disk using the INT 13h Verify function (AH=04h). The virus warning message is not displayed during DOS hard disk drive formatting.

If the anti-virus feature is enabled, a virus warning message will be displayed when you attempt to format the hard disk drive.

If you select Continue, formatting proceeds as normal.

If you do not want to continue formatting, you may have to press N several times (depending on how many retries are performed by the upper-level software). DOS, for example, does at least five entries before the Format utility is actually aborted.

D. Default Window

The icons in this section permit you to select a group of settings for all WinBIOS Setup options. Not only can you use these icons to quickly set system configuration parameters, you can choose a group of settings that have a better chance of working when the system is having configuration-related problems.

Original

Choose the Original icon to return to the system configuration values present in WinBIOS Setup when you first began this WinBIOS Setup session.

Optimal

You can load the optimal default settings for the WinBIOS Setup options by selecting the Optimal icon. The Optimal default settings are best-case values that should optimize system performance. If CMOS RAM is corrupted, the Optimal settings are loaded automatically.

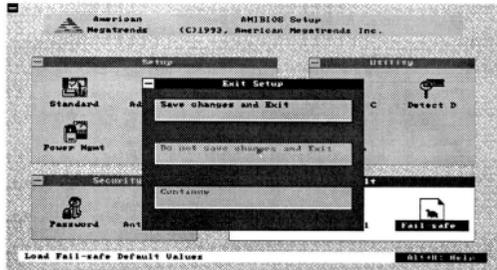
Fail-Safe

You can load the Fail-Safe WinBIOS Setup option settings by selecting the Fail-Safe icon from the Default section of the WinBIOS Setup main menu.

The Fail-Safe settings provide far from optimal system performance, but are the most stable settings. Use this option as a diagnostic aid if the system is behaving erratically.

E. Exit Setup

When you finish the WinBIOS Setup, press Esc key to exit from the WinBIOS Setup main menu, the screen is shown below:



Save Changes and Exit

Select this option, the new setup values will be stored in the CMOS memory before exiting the WinBIOS Setup.

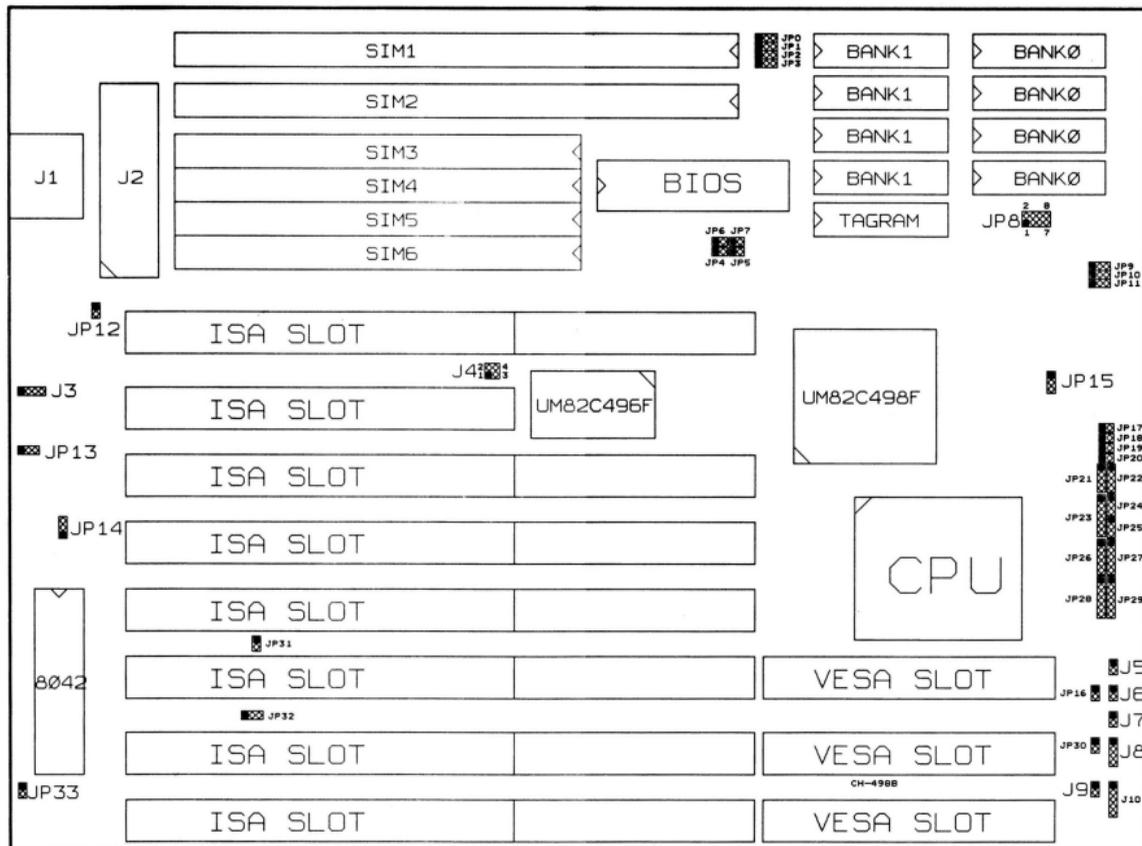
Do Not Save Changes and Exit

This option will exit the WinBIOS Setup and no other new setup values will be stored.

Continue

No exit from the WinBIOS setup menu.

Appendix : PCB LAYOUT PLACEMENT



Note: "■" signifies Pin 1.