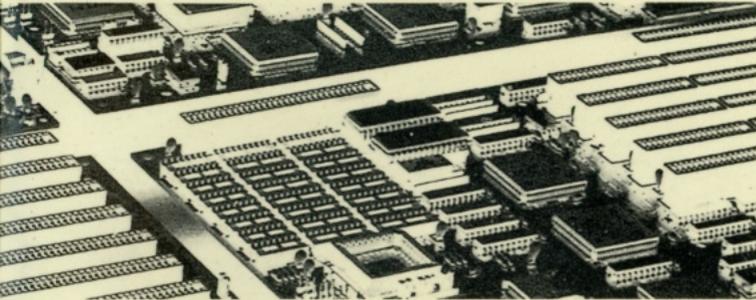


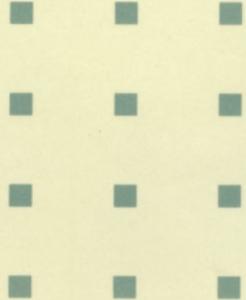
EPA POLLUTION PREVENTER

UM8810P AIO

(for Phoenix BIOS)



U S E R ' S M A N U A L



UM8810P AIO

User's Manual (for Phoenix BIOS)

V2.0

UM8810P AIO User's Manual (for Phoenix BIOS)

V2.0

Trademarks

All brand and product names used in this manual may be trademarks or registered trademarks of their respective companies.

Table of Contents

Introduction

General Specifications	1
------------------------------	---

Memory Configurations

System Memory	2
Cache Memory Configuration	3

Jumper Settings and Connectors

What kind of CPU are you using ?	4
Setting the Jumpers	7
Connectors	13
Board Layout	14
Graphical Descriptions of Jumper Settings	15

Built-in BIOS SETUP Program

SETUP Program	27
System Setup	29
Fixed Disk Setup	30
Advanced Chipset SETUP	32
Integrated Peripherals	32
Memory Cache	34
Memory Shadow	35
Advanced Chipset Control	36
PCI Devices	37
Boot Options	39
Security and Anti-Virus	40
Green PC Features	41
Load ROM Default Values	44
Load Values from CMOS	45
Save Values to CMOS	46
Quitting SETUP	47

Appendix A Setting the System Speed

1

Introduction

The UM8810P AIO is a 4-layer, 3/4 Baby AT size PCB. It includes UMC UM8881, UM8886 system chipset, CMD PCI0640B PCI Bus IDE controller, SMC37C665 super I/O controller and UMC 82C865 I/O TTL Integration.

1.1 General Specifications

Processor☆: Intel i486 series - SX/SX2/DX/DX2/DX4, Overdrive
AMD486 - DX/DX2/DX4
Cyrix - Cx486S/Cx486DX/DX2
UMC486

Chipset: UMC UM8881 (Host Bridge for 486)
UMC UM8886 (ISA Bridge Controller)
CMD PCI0640B (PCI Bus IDE Controller)
SMC37C665 (Super I/O Controller)
UMC 82C865 (I/O TTL Integration)

Cache Size: Both cache W/B and W/T policies are supported.
Cache sizes options is 128/256/512KB

Memory Type: Supports 4 SIMMs with memory size up to 64MB
All support double side SIMM.

System BIOS: Phoenix BIOS (128KB EPROM or Flash BIOS)

Slots : Three 16-bit ISA slots
One set of shared slots that includes one 16-bit ISA slot (S4) and one PCI slot (J4).
Two PCI slots

I/O Connectors: Two serial ports (16550 UART compatible)
One parallel port (STANDARD\ECP\EPP)
One FDC connector
Two PCI IDE connectors (Supports four IDE drives)
One AT keyboard connector

Board: 4 layers

Form Factor: 3/4 Baby AT Size

☆: *The detail descriptions of the CPU voltage setting and the processor, please refer to pages 15 till 26.*

2 Memory Configurations

2.1 System Memory

The DRAM type of SIMM1/SIMM2 is independent of SIMM3/SIMM4.

Note: *The type of SIMM1/SIMM2 must be same. (if co-exist)*
 The type of SIMM3/SIMM4 must be same. (if co-exist)

The following table lists all the possible DRAM of SIMM1/SIMM2 module combinations.

SIMM1	SIMM2	Group Size
1Mx36 single	None	4MB
None	1Mx36 single	4MB
1Mx36 single	1Mx36 single	8MB
1Mx36 double	None	8MB
None	1Mx36 double	8MB
1Mx36 double	1Mx36 double	16MB
2Mx36 single	None	8MB
None	2Mx36 single	8MB
2Mx36 single	2Mx36 single	16MB
2Mx36 double	None	16MB
None	2Mx36 double	16MB
2Mx36 double	2Mx36 double	32MB
4Mx36 single	None	16MB
None	4Mx36 single	16MB
4Mx36 single	4Mx36 single	32MB

Table 2-1. Memory Bank Configurations and Requirements
Continued.....

The following lists the illegal sample of SIMM1/SIMM2 module combinations.

SIMM 1	SIMM 2	Group Size
1Mx36 single	1Mx36 double	(Single/double)
1Mx36 double	1Mx36 single	(double/single)
4Mx36 single	1Mx36 single	(4M/1M)
1Mx36 single	4Mx36 single	(1M/4M)

Note: *The minimum group size of UM8810P AIO is 2MB (except zero). If you use single side 256Kx36 SIMMs for UM8810P AIO, you must put two or four SIMMs on the mainboard.*

2.2 Cache Memory Configuration

Option	TAG RAM (U31)	Cache Bank0 (U20, U21, U22, U23)	Cache Bank1 (U32, U33, U34, U35)
128K	32Kx8	32Kx8	None
256K	32Kx8	32Kx8	32Kx8
512K	32Kx8	64Kx8	64Kx8
512K	32Kx8	128Kx8	None

Table 2-2. Secondary Cache Memory Configurations

3 Jumper Settings and Connectors

3.1 What kind of CPU are you using ?

The following table lists the detail descriptions of CPU processor on the UM8810P AIO.

Intel CPU	
SL Enhanced Intel486™ SX processor (PGA)	
A80486SX-xx	Product name: Frequency-either 25 or 33 MHz
FFFFFFF: &E5V1X SX###: INTEL [M][C] '89'92	FPO # &E=SL Enhanced; 5 volt; 1X clock; spec #
SL Enhanced IntelSX2™ processor	
A80486SX2-50	Product name: Frequency
FFFFFFF: &E5V1X SX###: INTEL [M][C] '89'92	FPO # &E=SL Enhanced; 5 volt; spec#
SL Enhanced Intel486™ DX processor	
A80486DX-33	Product name: Frequency
FFFFFFF: &E5V1XSX###: INTEL [M][C] '89'92	FPO # &E=SL Enhanced; 5 volt; 1X clock; spec#
SL Enhanced IntelDX2™ processor	
A80486DX2-xx	Product name: Frequency - either 50 or 66 MHz
FFFFFFF: &E5V1X SX###: INTEL [M][C] '89'92	FPO # &E=SL Enhanced; 5 volt; spec #
SL Enhanced IntelDX2™ L1-WB processor (P24D)	
A80486DX2-xx	Product name: Frequency - 50 or 66 MHz
FFFFFFF: &E5V1X SX###: INTEL [M][C] '89'92	FPO # &E=SL Enhanced; 5 volt; SX954, SX955

SL Enhanced IntelDX4™ processor (P24C)	
A80486DX4-XX (P24C)	Product name: Frequency-Either 75 or 100MHz
FFFFFFF:	FPO number
&E 3VOLT SX###:	New S-spec#; & E=SL Enhanced; 3.3V
INTEL [M][C] '89'93	
Non-SL Enhanced IntelDX/SX/DX2/SX2 CPU processor	
A80486XX-XX	Product name: Frequency 25/33/50/DX2-50/DX2-66
FFFFFFF:	FPO#
SX###:	5V
INTEL [M][C] '89'93	
AMD CPU	
<p>Part Number: A 80486DX 4-100 N V 8 T</p> <p>168-pin PGA — A</p> <p>Am486DX Core — 80486DX</p> <p>2=Clock Doubled — 4</p> <p>4=Clock Tripled — 100</p> <p>“B” = Write Back — T</p> <p>“T” = Write Through — T</p> <p>8K Cache — 8</p> <p>3V Core with 5V Tolerant I/O — V</p> <p>Revision Identifier: “ ” = Contains ICE microcode “N” = No ICE Microcode “S” = SL-Enhance Compatible</p> <p>‘66=66MHz 75=75MHz 80=80MHz 100=100MHz</p>	

Continued.....

Cyrix CPU			
Part Number	CPU Frequency	Nominal Voltage	Voltage range
Cx486DX2-V50	50MHz	3.3 or 3.6 Volts	3.15-3.75 Volts
Cx486DX2-V66	66MHz	3.6 Volts	3.45-3.75 Volts
Cx486DX2-V80	80MHz	4.0 Volts	3.8-4.2 Volts
UMC CPU			
Part Number	Frequency	Package	Socket Type
U5S-SUPER25	25MHz	168PGA	SX Socket
U5S-SUPER33	33MHz	168PGA	SX Socket
U5S-SUPER40	40MHz	168PGA	SX Socket
U5SD-SUPER25	25MHz	168PGA	DX Socket
U5SD-SUPER33	33MHz	168PGA	DX Socket
U5SD-SUPER40	40MHz	168PGA	DX Socket

Note: If there are no "V" (Voltage) list above on the tables of AMD, Cyrix and UMC CPU, the meanings are 5V core.

3.2 Setting the Jumpers

The table below summarizes the appropriate functions and settings of each jumper on the UM8810P AIO.

	Function	Jumper Settings
CPU Type	Intel 80486 DX/DX2 AMD Am486 DX/DX2/DX4 NV8T	JP18 open JP19 open JP20 short 1-2, 3-4 JP21 short 1-2 JP22 open JP23 open JP24 short 1-2 JP27 open JP28 open JP36 open JP37 short 1-2 JP38 short 1-2 JP41 open JP44 open
	Intel 80487SX Overdrive (ODP)	JP18 open JP19 open JP20 short 1-2, 3-4 JP21 short 2-3 JP22 open JP23 open JP24 short 1-2 JP27 open JP28 open JP36 open JP37 short 1-2 JP38 short 1-2 JP41 open JP44 open
	Intel 80486SX	JP18 open JP19 open JP20 short 2-3 JP21 open JP22 open JP23 open JP24 short 1-2 JP25 short 1-2 JP27 open JP28 open JP36 open JP37 short 1-2 JP38 short 1-2 JP41 open JP44 open

Table 3-1. Jumper Settings (Continued....)

Function	Jumper Settings
<p>CPU Type</p> <p>Intel 80486 DX/DX2/DX4 (SL Enhance, L1 Write-Through) Overdrive DX2 ODPDR</p>	<p>JP18 open JP19 open JP20 short 1-2, 3-4 JP21 short 1-2 JP22 short 1-2 JP23 open JP24 short 2-3 JP27 short 2-3, 4-5 JP28 open JP36 short 1-2 JP37 short 1-2 JP38 short 1-2 JP41 open JP44 open</p>
<p>Intel 80486 SX/SX2 (SL Enhance)</p>	<p>JP18 open JP19 open JP20 short 2-3 JP21 open JP22 short 1-2 JP23 open JP24 short 2-3 JP27 short 2-3, 4-5 JP28 open JP36 short 1-2 JP37 short 1-2 JP38 short 1-2 JP41 open JP44 open</p>
<p>Intel 80486 DX2/DX4 AMD Am486 DX2/DX4 SV8B (SL Enhance, L1 Write-Back)</p>	<p>JP18 short JP19 open JP20 short 1-2, 3-4 JP21 short 1-2 JP22 short 1-2, 3-4 JP23 open JP24 short 2-3 JP27 short 2-3, 4-5 JP28 open JP36 short 1-2 JP37 short 1-2 JP38 short 1-2 JP41 open JP44 open</p>

Table 3-1. Jumper Settings (Continued.....)

	Function	Jumper Settings
	Intel PD5V (P24T)	JP18 open JP19 open JP20 short 1-2, 3-4 JP21 short 2-3 JP22 short 1-2 JP23 short 1-2 JP24 short 2-3 JP27 short 2-3, 4-5 JP28 short 1-2 JP36 short 1-2 JP37 short 1-2 JP38 short 1-2 JP41 short JP44 short
CPU Type	Cyrix Cx486 DX/DX2	JP18 open JP19 short JP20 short 1-2, 3-4 JP21 short 1-2 JP22 short 2-3 JP23 short 2-3 JP24 short 2-3 JP25 short 1-2 JP27 short 1-2, 3-4 JP28 short 2-3 JP31 short 1-2 JP36 short 1-2 JP37 short 1-2 JP38 short 2-3 JP41 open JP44 open
	Cyrix Cx486S	JP18 open JP19 short JP20 short 2-3 JP21 open JP22 short 2-3 JP23 short 2-3 JP24 short 2-3 JP27 short 1-2, 3-4 JP28 short 2-3 JP36 short 1-2 JP37 short 1-2 JP38 short 2-3 JP41 open JP44 open

Table 3-1. Jumper Settings (Continued.....)

Function		Jumper Settings
	UMC U5SD-SUPER	JP18 open JP19 open JP20 short 1-2, 3-4 JP21 short 1-2, 3-4 JP22 open JP23 open JP24 short 1-2 JP27 open JP28 short 3-4 JP36 short 2-3 JP37 short 2-3 JP38 short 1-2 JP41 open JP44 open
CPU Type	UMC U5S-SUPER	JP18 open JP19 open JP20 short 2-3 JP21 short 1-2, 3-4 JP22 open JP23 open JP24 short 1-2 JP27 open JP28 short 3-4 JP36 short 2-3 JP37 short 2-3 JP38 short 1-2 JP41 open JP44 open
AMD Am486 DX2/DX4 NV8T	3X CPU CLK	JP25 short 1-2 (default)
	2X CPU CLK ☆	JP25 short 2-3
Intel 80486 DX4 AMD Am486 DX2/DX4 SV8B	3X CPU CLK	JP29 open (default)
	2X CPU CLK	JP29 short
CPU CLK Select	25MHz	JP17 short 1-2 JP17 open 3-4, 5-6
	33MHz	JP17 short 1-2, 3-4, 5-6
	40MHz	JP17 short 1-2, 3-4 JP17 open 5-6
	50MHz	JP17 short 5-6 JP17 open 1-2, 3-4

Table 3-1. Jumper Settings (Continued.....)

☆: *If you install the Am486DX2-66/80 NV8T on-board, you must select the 2X CPU CLK (JP25 short 2-3).*

Function		Jumper Settings
CPU Vcc Source ☆	5V	JP10 short
	VR-100 or VR-102	JP10 open
VR-100 (Power Module Vcc Selection)	3.3V	JP1 short 1-2
	3.45V	JP1 short 3-4
	3.6V	JP1 short 5-6
	4.0V	JP1 short 7-8
Cache Size	128KB - with 32Kx8	JP13 open JP14 short 1-2 JP16 short 2-3 JP33 open JP35 open
	256KB (default) - with 32Kx8	JP13 open JP14 short 2-3 JP16 short 1-2 JP33 open JP35 short
	512KB - with 64Kx8	JP13 open JP14 short 2-3 JP16 short 1-2 JP33 short JP35 short
	512KB - with 128Kx8	JP13 short 1-2 JP14 short 2-3 JP16 short 2-3 JP33 short JP35 short
Clear RTC CMOS Data	Normal	JP30 open
	Clear	JP30 short
On-Board 37C665	Enable (default)	JP8 short 1-2
	Disable	JP8 short 2-3
System ROM Selection	EPROM	JP6 open
	Flash ROM + 5Vcc programmable	JP6 short 1-2
	Flash ROM + 12Vcc programmable	JP6 short 2-3

Table 3-1 Jumper Settings (Continued.....)

☆: Refer to the graphical descriptions on pages 23 and 24 for the positions of the CPU Vcc Source.

Function	Jumper Settings	
Parallel Port PRQ & DACK selection	DRQ1, DACK1	JP4 short 2-3 JP5 short 1-2
	DRQ3, DACK3 (default)	JP4 short 1-2 JP5 short 2-3
On-board IDE Controller	Enabled	JP12 open
	Disabled	JP12 short 5-6

Table 3-1 Jumper Settings

Cache Size	128KB - with 32KB	JP13 open JP14 short 1-2 JP15 short 2-3 JP16 open JP17 open
	256KB (default) - with 32KB	JP13 open JP14 short 2-3 JP15 short 1-2 JP16 open JP17 short 1-2
	512KB - with 64KB	JP13 open JP14 short 2-3 JP15 short 1-2 JP16 short 1-2 JP17 short 1-2
	1024KB - with 128KB	JP13 short 1-2 JP14 short 2-3 JP15 short 2-3 JP16 short 1-2 JP17 short 1-2
Clear RTC BIOS Data	Normal	JP20 open
	Clear	JP20 short
On-board CMOS	Enable (default)	JP8 short 1-2
	Disable	JP8 short 2-3
System ROM Selection	EPROM	JP8 open
	Flash ROM + BIOS programmable	JP8 short 1-2
	Flash ROM + BIOS programmable	JP8 short 2-3

Table 3-1 Jumper Settings (Continued.....)

Refer to the graphical descriptions on pages 23 and 24 for the positions of the CPU Vcc Source.

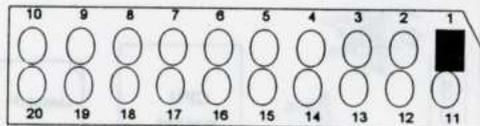
3.3 Connectors

There are several connectors located on the UM8810P AIO. They are used to connect with some peripheral devices to enhance the operating performance of the system. Refer to Figure 3-1 for the positions of all the connectors on the mainboard.

The following table lists the connectors on the UM8810P AIO.

Connector	Function
PS1	Power Connector
J1	Serial Port2 Connector
J2	Serial Port1 Connector
J3	Parallel Port Connector
J4	PCI 1 Slot
J5	PCI2 Slot
J6	PCI3 Slot
J7	PCI IDE Primary Connector
J8	PCI IDE Secondary
J9	ISA FDD Connector
J12	HDD LED
J17	PS/2 Keyboard Connector (option)
J18	PS/2 Mouse Connector (option)
J19	PS/2 Mouse 5-pin Jumper (option)

2X10 JUMPER BLOCK



- pin 2-3 Turbo LED
- pin 4-5 Suspend SW
- pin 6-7 Turbo SW
- pin 9-10 Reset
- pin 11-15 Keylock, Power
- pin 17-20 Speaker

3.4 Board Layout

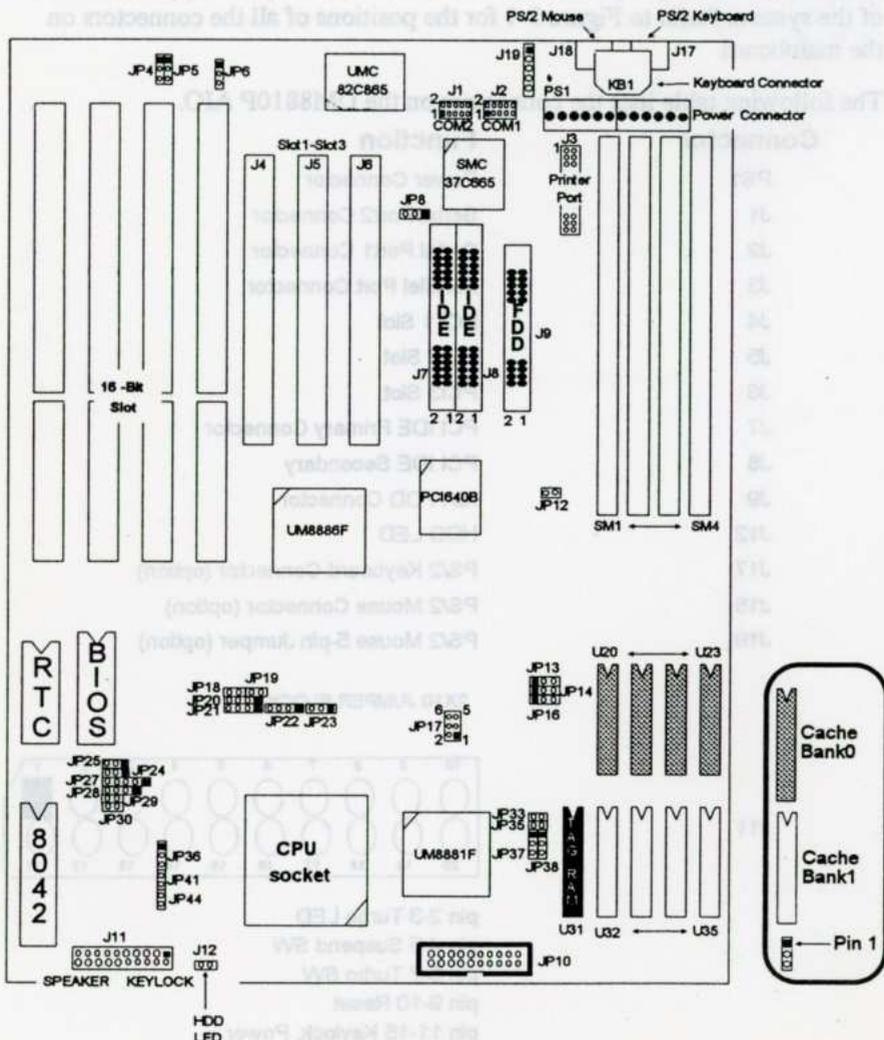
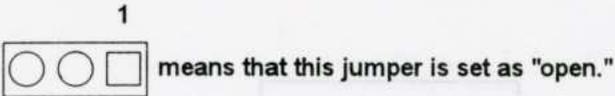


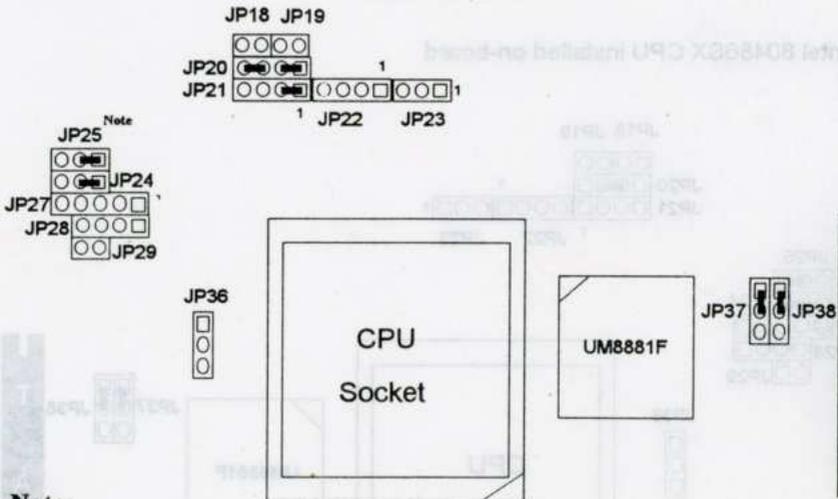
Figure 3-1. UM8810P AIO Mainboard Layout

3.5 Graphical Descriptions of Jumper Settings



CPU Type

1. Intel 80486 DX/DX2, AMD Am486 DX/DX2/DX4 NV8T CPU installed on-board



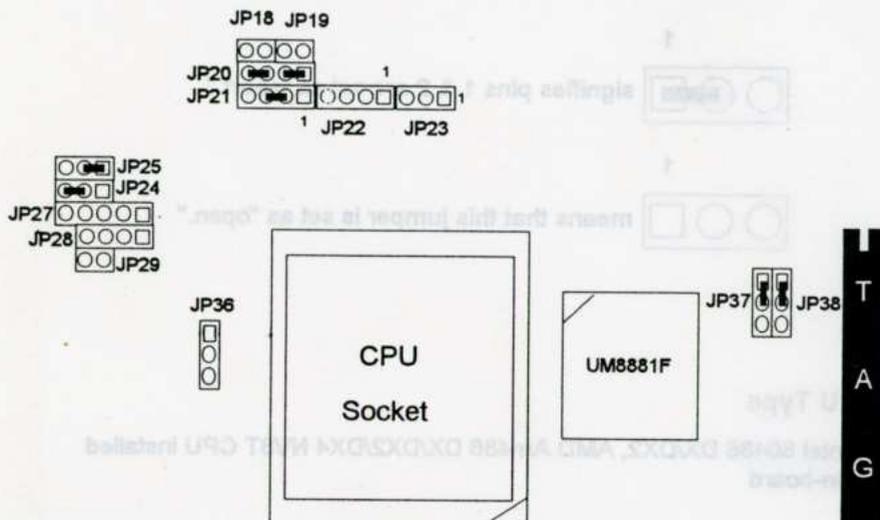
Note:

JP25 short 2-3: Am486DX2/DX4 NV8T 2X CPU Clock

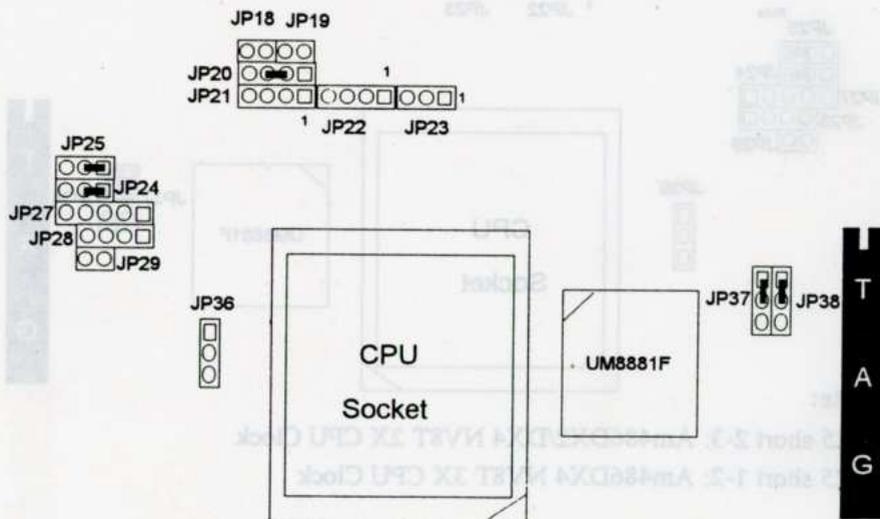
JP25 short 1-2: Am486DX4 NV8T 3X CPU Clock

TAG

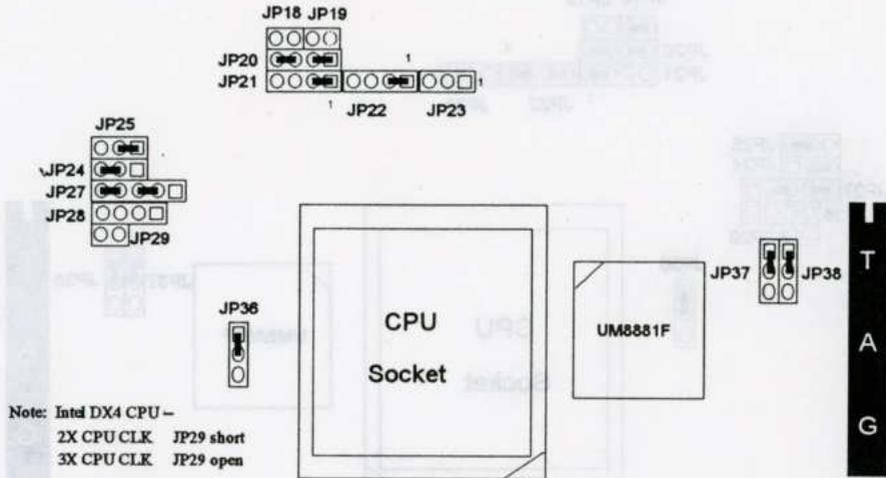
2. Intel 80487SX Overdrive (ODP) CPU installed on-board



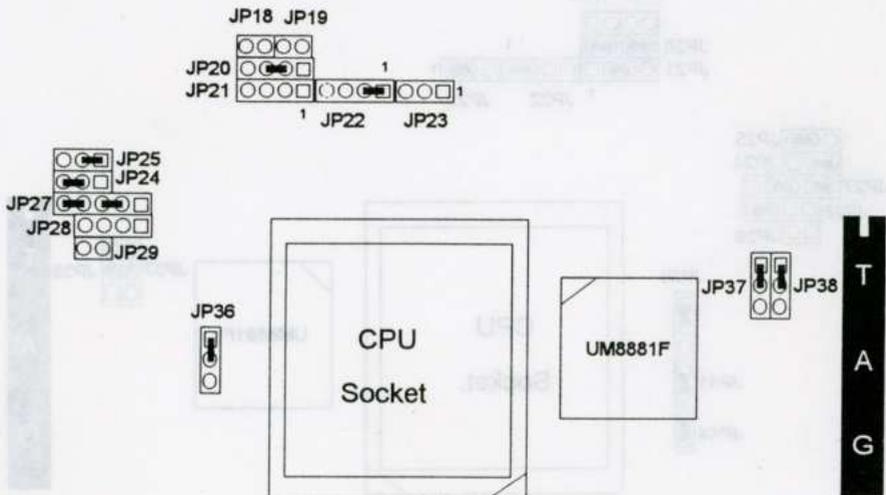
3. Intel 80486SX CPU installed on-board



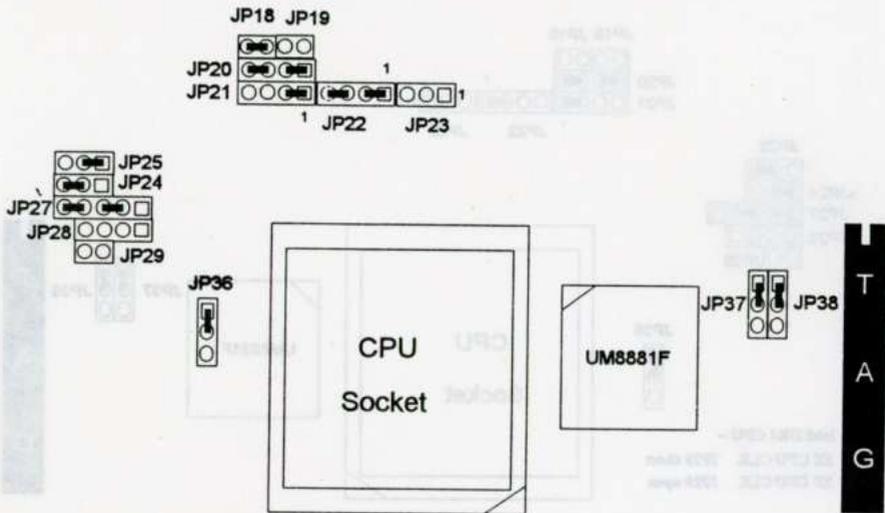
4. Intel 80486 DX/DX2/DX4 (SL Enhance, L1 Write-Through),
Overdrive DX2/DX4 (ODPR) CPU installed on-board



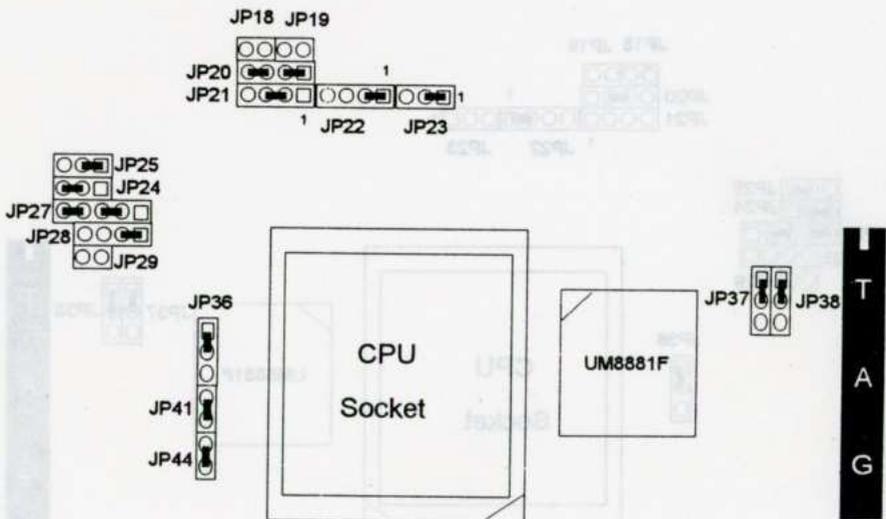
5. Intel 80486 SX/SX2 (SL Enhance) CPU installed on-board



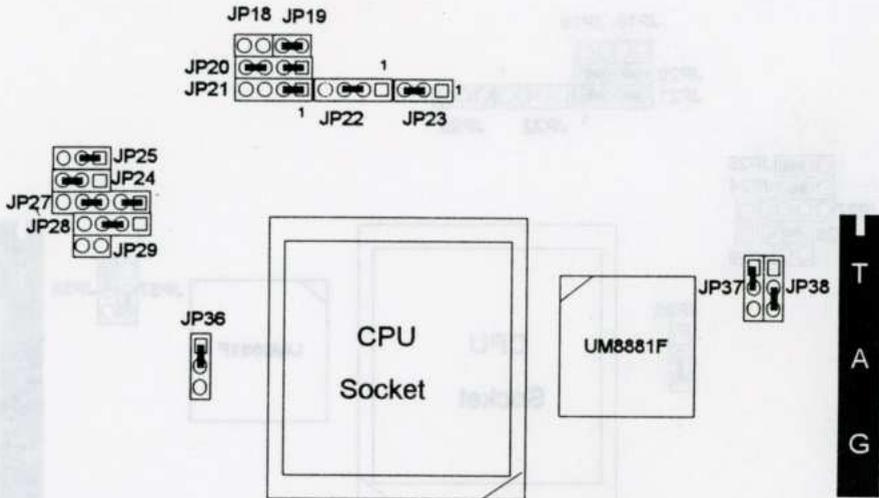
6. Intel 80486 DX2/DX4 (SL Enhance, L1 Write-Back),
AMD Am486 DX2/DX4 SV8B CPU installed on-board



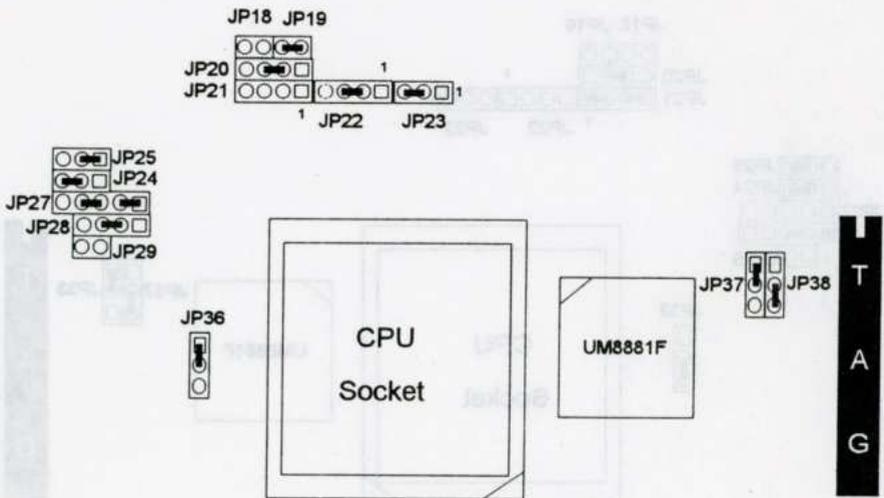
7. Intel PD5V (P24T) CPU installed on-board



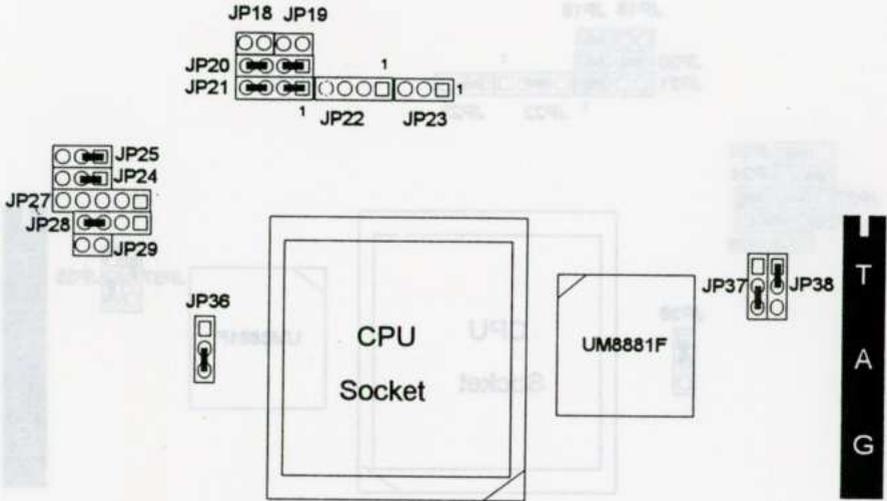
8. Cyrix Cx486 DX/DX2 CPU installed on-board



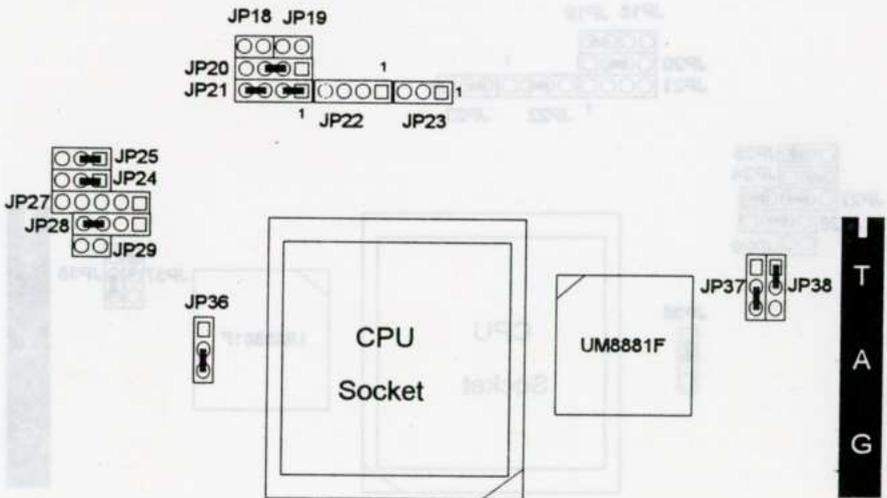
9. Cyrix Cx486S CPU installed on-board



10. UMC U5SD-SUPER CPU installed on-board

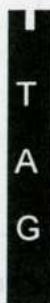
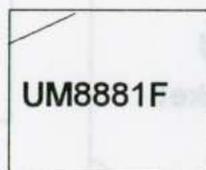
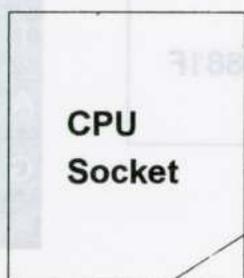
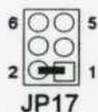


11. UMC U5S-SUPER CPU installed on-board

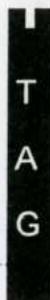
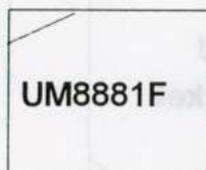
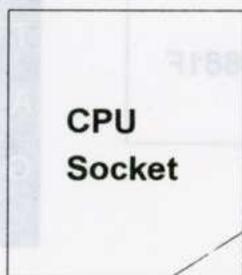
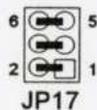


CPU Speed

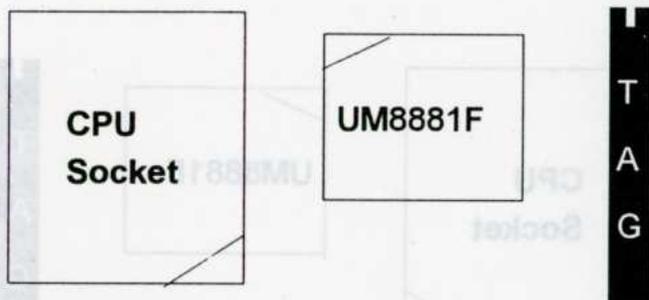
1. 25MHz CPU Speed



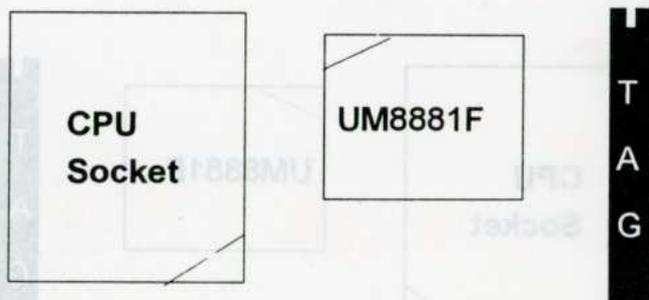
2. 33MHz CPU Speed



3. 40MHz CPU Speed

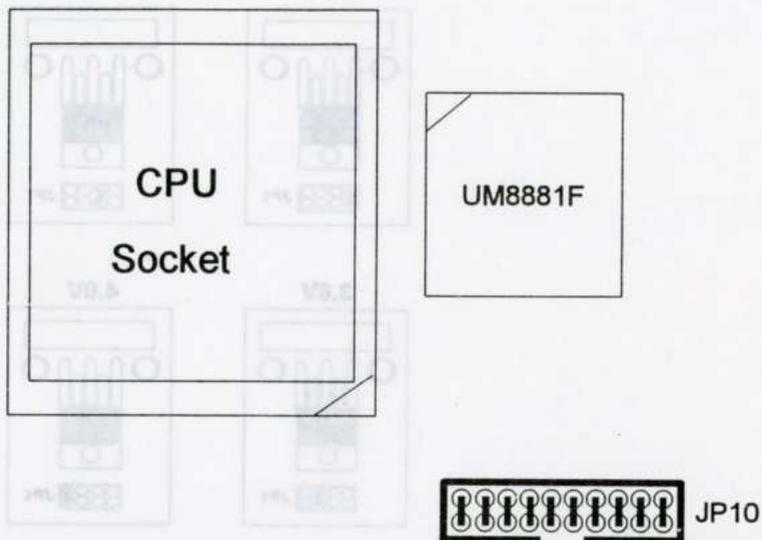


4. 50MHz CPU Speed



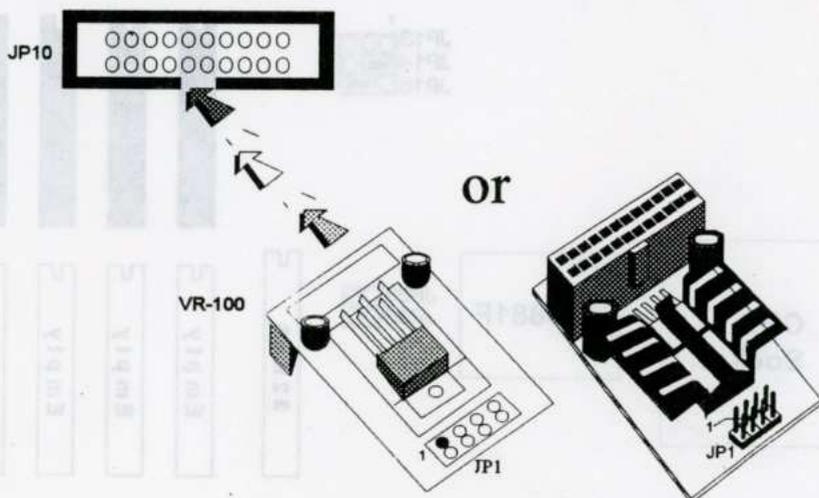
CPU Vcc Source

1. +5Vcc

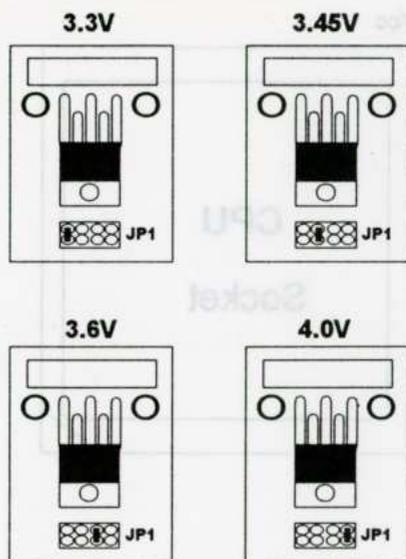


VR-100 or VR-102 (Power Module Vcc Selection)

1. +3.3/+3.45/+3.6/+4.0 Vcc

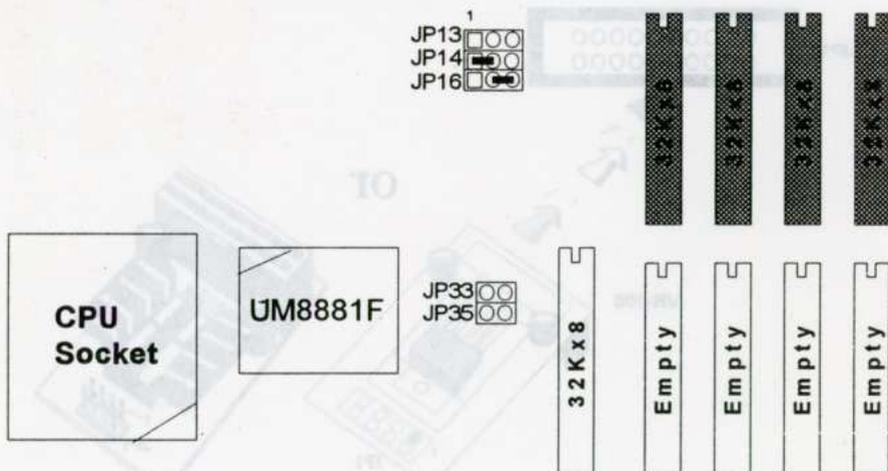


Jumper Settings for VR-100 and VR-102

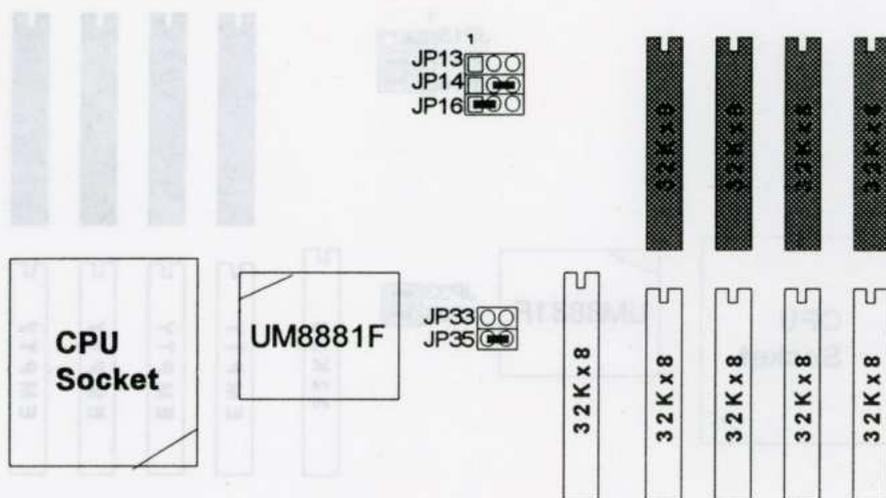


Cache Size Setting

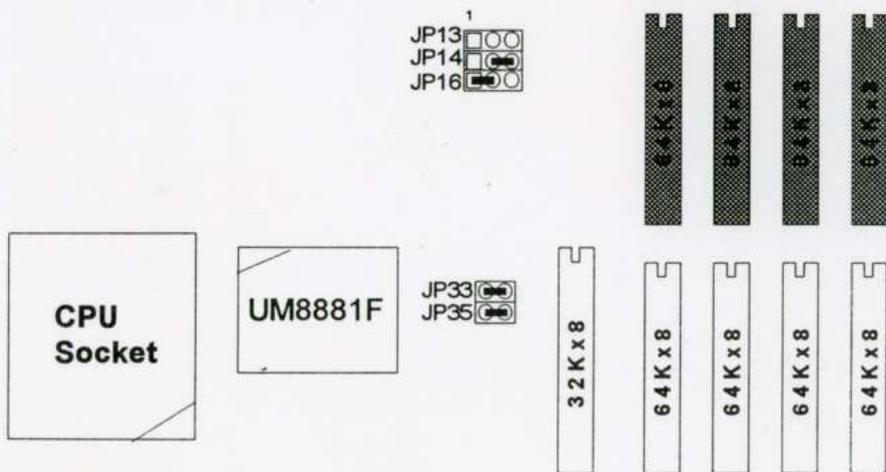
1. 128KB (32Kx8) Cache Size



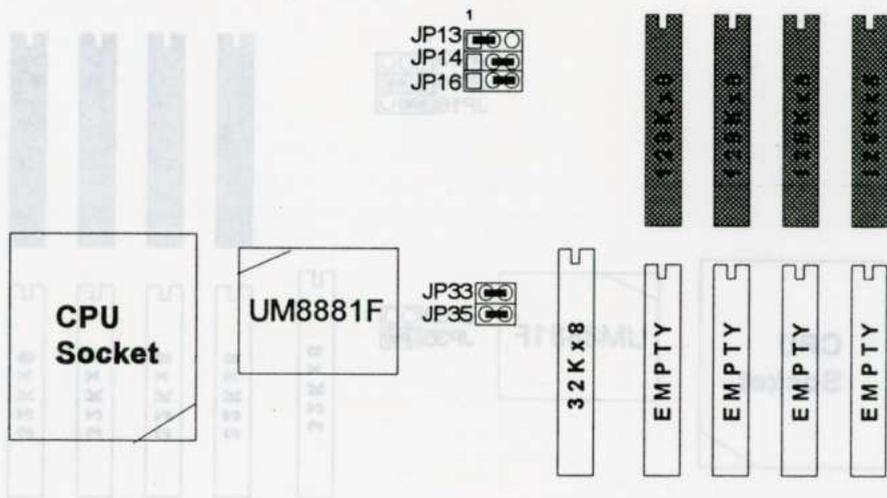
2. 256KB (32Kx8) Cache Size



3. 512KB (64Kx8) Cache Size



4. 512KB (128Kx8) Cache Size

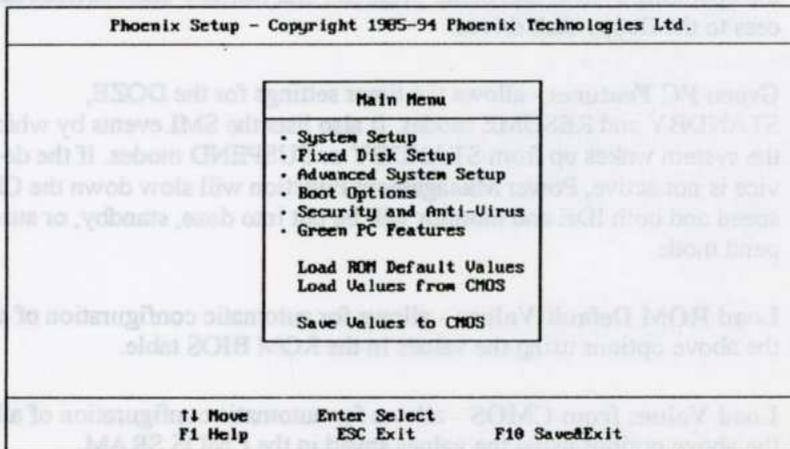


4 Built-in BIOS SETUP Program

4.1 SETUP Program

Use the BIOS for UM8810P AIO to record changes in your hardware and to control its special features. The Setup program uses a number of menus in which you can specify changes to your hardware and turn the special features to on or off.

To enter the BIOS Setup program, turn on or reboot the system. Press the key when the system displays the following message:



Press to enter Setup. The following screen will then be displayed.

Figure 4-1. SETUP Main Menu

It is highly recommended that you list down all the values of the SETUP program before making any changes. Doing so will save a lot of time restoring the system back in the event of a configuration memory loss.

Note: *On-screen instructions at the bottom of each screen explain how to use the program.*

- **System Setup** - allows checking or modification of general configuration information.

- **Fixed Disk Setup** - allows for automatic detection of the hard disk drive type including the number of cylinders and heads, write pre-compensation time, read/write head landing zone, and number of sectors per track.
- **Advanced Chipset SETUP** - sets the various system options for the user, including the internal/external cache memory functions, ISA features, video and system shadowing etc..
- **Boot Options** - determines the sequence with which the system will proceed when booting the operating system.
- **Security and Anti-Virus** - provides special access for the user to enter the operating system and Setup program, and restricts unauthorized access to the floppy disk drives.
- **Green PC Features** - allows the timer settings for the DOZE, STANDBY and RESUME modes. It also lists the SMI events by which the system wakes up from STANDBY or SUSPEND modes. If the device is not active, Power Management Function will slow down the CPU speed and both IDE and monitor will be put into doze, standby, or suspend mode.
- **Load ROM Default Values** - allows for automatic configuration of all the above options using the values in the ROM BIOS table.
- **Load Values from CMOS** - allows for automatic configuration of all the above options using the values saved in the CMOS SRAM.
- **Save Values to CMOS** - saves the changes you have made in the Setup program, then quits and reboots the system.

To choose an item from the SETUP main menu, move the cursor to appropriate line using the Up<↑> and Down<↓> arrow keys and press <Enter>. The screen will display a warning message as shown below.

4.2 System Setup

Phoenix Setup - Copyright 1985-94 Phoenix Technologies Ltd.			
System Setup			
System Time:	[00]:32:48]		
System Date:	[04/01/1994]		
Video System:	[EGA / UGA]		
System Memory:	640 KB		
Extended Memory:	3 MB		
Diskette Drive A:	[Not Installed]		
Diskette Drive B:	[Not Installed]		
Keyboard :	[Installed]		
F4 Move	ESC Exit F1 Help	FgUp Previous Value FgDn Next Value	F5 Previous Configuration F6 Default Configuration

Figure 4-2. System Setup

System Time - includes hour, minutes, seconds but only the values of hour and minute can be set.

System Date - allows manual setting of the electronic calendar on the main-board.

Video System - specifies the display adapter installed.

System Memory and Extended Memory - displays important information about your system which includes the conventional and extended memory sizes. They are updated automatically by the Setup program according to the status detected by the BIOS self-test. This section of the System Setup screen is for viewing purpose only and manual modifications are not allowed.

Diskette Drives A: and B: - specify the capacity and format of the floppy drives installed in your system.

Keyboard: selects Installed/Not Installed for keyboard device setting.

4.3 Fixed Disk Setup

The Fixed Disk Setup provides auto configuration of the hard drive installed in the system. After pressing the <Enter>key on this item on the main menu, the screen will display the following screen.

Phoenix Setup - Copyright 1985-94 Phoenix Technologies Ltd.			
Fixed Disk Setup			
IDE Adapter 0 Master (C: 541 Mb)			
IDE Adapter 0 Slave (None)			
IDE Adapter 1 Master (None)			
IDE Adapter 1 Slave (None)			
Large Disk DOS Compatibility:[Enabled]			
T1 Move	ESC Exit	FgUp Previous Value	F5 Previous Configuration
	F1 Help	FgDn Next Value	F6 Default Configuration

Figure 4-3. Fixed Disk Setup Screen 1

Once the program detects the type of hard disk installed, it will display the relative information such as the type, cylinders, heads, write precompensation, landing zone, and number of sectors per track.

Phoenix Setup - Copyright 1985-94 Phoenix Technologies Ltd.	
IDE Adapter 0 Master (None)	
Autotype Fixed Disk:	[Press Enter]
Type:	[User]
Cylinders:	[667]
Heads:	[8]
Sectors/Track:	[33]
Write precomp:	[None]
Multi-Sector Transfers:	[Disabled]
LBA Mode Control:	[Disabled]
32 Bit I/O:	[Disabled]
T1 Move	Enter Select
F1 Help	ESC Exit
	F10 SavedExit

Figure 4-4. Fixed Disk Setup Screen 2

If the program fails to detect the hard disk(s) or the <Enter> key was not pressed in the Autotype Fixed Disk option, manual setting of the values is recommended.

Autotype Fixed Disk - detects the type of fixed disk 0 and/or 1 installed. If successful, it fills the remaining fields on this menu.

Type - 1 to 45 fills in remaining fields with values for predefined disk drives. "User" allows the user to fill in the remaining fields..

Cylinders - specifies the number of cylinders of the hard disk drive.

Heads - specifies the number of read/write heads of the hard disk drive.

Sectors/Track - provides the number of sectors per track defined for the hard disk drive.

Write Precomp - refers the cylinder number, above which, disk drive operations require reduced write current. Also specifies the number of cylinder at which to change the write timing.

Multi-Sector Transfers: determines the number of sectors per block for multiple sector transfers. The available options are 2/4/8/16 sectors, "Auto" which refers to the size the disk returns when queried, and "Disabled".

Large Disk DOS Compatibility - for Large Hard Disk Compatibility (Larger than 528MB) issue, you must enable this item except UNIX operating system.

LBA Mode Control - turns on or off the hard disk drive's LBA Mode support. Some HDD support more than 540MB and LBA Mode for data transfer. If your hard disk supports LBA Mode, you should enable (on) this option otherwise disable (off) it.

Warning: *LBA Mode and Large Disk DOS compatibility are new specifications which may not be fully supported by all operating systems. An example of which is the current version of UNIX system (R3. 2. 4) which is still unable to support the LBA function. Therefore, determine the specifications of your hard disk drive and operating system before selecting the drive's mode.*

4.4 Advanced Chipset SETUP

The Advanced System Setup allows the user to program five main groups of parameters under the Advanced System Setup namely the Integrated Peripherals, the Memory Cache, the Memory Shadow, the Advanced chipset Control and PCI Devices. This BIOS Setup parameter is designed for programmers who wish to fine tune the on-board chipset.

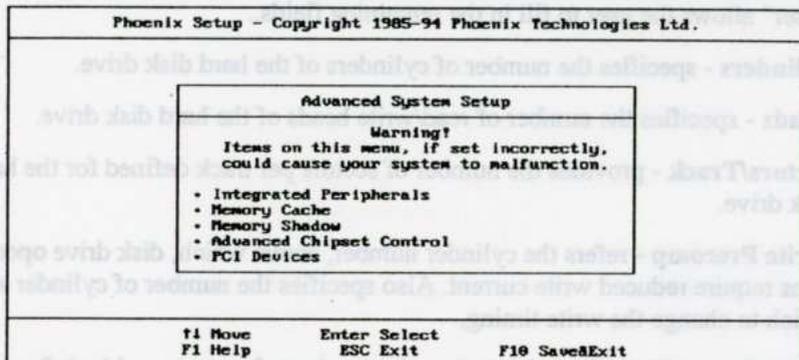


Figure 4-5. Advanced System SETUP Screen

Integrated Peripherals

Selecting Integrated Peripherals from the Advanced System Setup main menu display the following screen. The actual features displayed depend on the capabilities of your system's hardware.

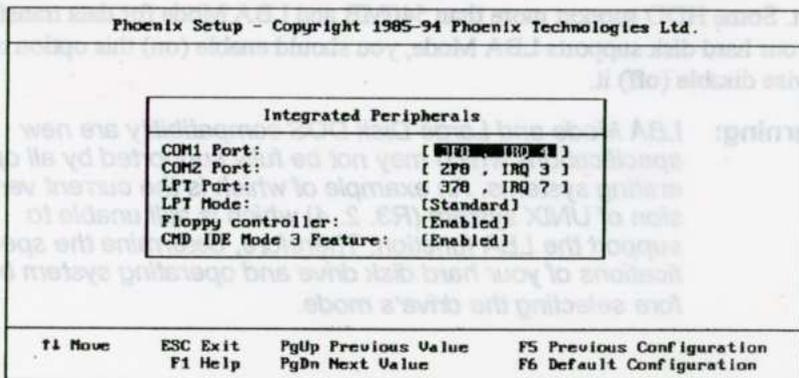


Figure 4-6. Integrated Peripherals

COM1 port - assigns the address of the primary serial port on-board. The available options are listed below.

- 3F8, IRQ 4 (default)
- 2F8, IRQ 3
- 238, IRQ 3
- 2E8, IRQ 3
- 2E0, IRQ 3
- 3E8, IRQ 4
- 338, IRQ 4
- 2E8, IRQ 3
- 2E8, IRQ 4

COM2 port - assigns the address of the secondary serial port on-board. The available options are list below.

- Enabled (default)
- Disable

LPT Port - assigns the address of the parallel port on-board. This option also prevents the system from encountering any conflict when an add-on card with parallel port is installed in the future. The available options are listed below.

- 378, IRQ 7 (default)
- Auto
- 278, IRQ 7
- Disabled

LPT Mode - In "ECP & EPP" mode, EPP can select through the ECR register of ECP mode 100. "Standard" mode can be selected through the ECR register as mode 000. The available options are:

- Standard (default)
- EPP
- Bi-Directional
- ECP

Floppy controller - sets the floppy controller mode of the SMC 665 I/O chip to either on or ff. The available options are:

- Enabled (default)
- Disabled

CMD IDE Mode 3 Feature- enables 32 Bit I/O and CMD IDE Mode 3 Feature to support CMD DOS driver. The available options are:

- Enabled (default)
- Disabled

Memory Cache

Selecting Memory Cache from the Advanced System Setup main menu displays the following screen.

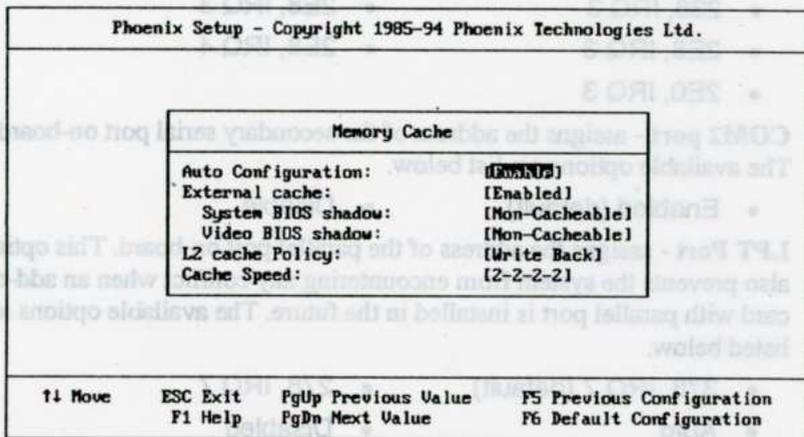


Figure 4-7. Memory Cache Screen

Auto Configuration - Disabling this option allows the values for the other parameters to be changed. Enabling it will restrict you from making any changes.

External Cache - sets the state of the external cache memory. The available options are:

- Enabled (default)
- Disabled

System BIOS shadow - if you have a shadowing of video BIOS, this memory function may be "Cacheable". Otherwise, select its default setting "Non-Cacheable".

Video BIOS shadow - Shadowing is always set in the system BIOS. The "Cacheable" and "Non-Cacheable" (default) options allow setting of this memory function to either on or off.

L2 cache Policy - sets the L2 cache memory of the mainboard to either write-back (**Write Back** - default) or write-through (**Write-Through**) mode.

Cache Speed - determines the number of cycle times to be inserted when CPU reads data to SRAM. The setting depends on the speed of the CPU and

SRAM. If the CPU is of high speed, the time required by SRAM to process data will need an extension, with the exception of some SRAMs that are fast enough to catch up with the speed of the CPU. The following are the available options.

- AUTO
- 3-1-1-1
- 2-1-1-1
- 3-2-2-2
- 2-2-2-2

Memory Shadow

Select Memory Shadow from the Advanced System Setup main menu displays the following screen.

Phoenix Setup - Copyright 1985-94 Phoenix Technologies Ltd.			
Memory Shadow			
System shadow:	Enabled		
Video shadow:	[Enabled]		
Shadow Memory Regions			
C800 - CBFF:	[Disabled]		
CC00 - CFFF:	[Disabled]		
D000 - D3FF:	[Disabled]		
D400 - D7FF:	[Disabled]		
D800 - DBFF:	[Disabled]		
DC00 - DFFF:	[Disabled]		
F1 Move	ESC Exit	PgUp Previous Value	F5 Previous Configuration
	F1 Help	PgDn Next Value	F6 Default Configuration

Figure 4-8. Memory Shadow Screen

System shadow - allows shadowing of the system BIOS and improves the system performance. This options always set as *Enabled*.

Video shadow - sets the mode of the system's video BIOS shadowing mode. The available options are:

- Enabled (default)
- Disabled

Shadow Memory Regions - shadows the option ROM located in the specified blocks of memory, and can improve the system performance.

Note: *Some option ROMs do not work properly when shadowed.*

Advanced Chipset Control

Selecting Advanced Chipset Control from the Advanced System Setup main menu displays the following screen. Technicians use this menu when changing values in the chipset register and optimizing the system's performance.

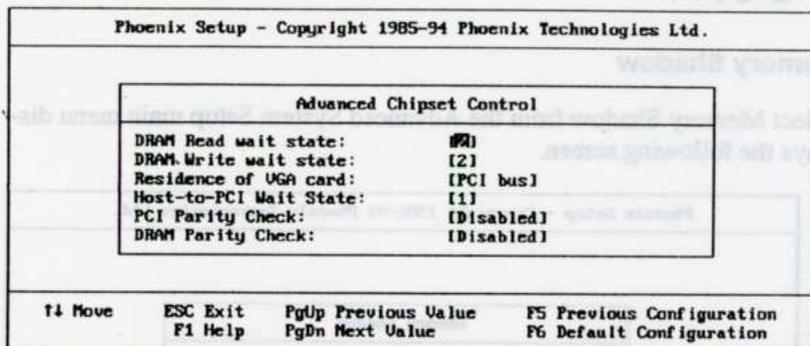


Figure 4-9. Advanced Chipset Control Screen

Note: *The contents of this menu depends on the chipset installed on your mainboard, and chipsets vary widely. Consult your dealer or the <F1> help screens before changing the items on this menu. Incorrect settings can cause your system to malfunction.*

DRAM Read/Write wait state - determines the number of wait states to be inserted when the CPU Read/write data into the local DRAM. The following are the available options.

- AUTO
- 2
- 0
- 3
- 1

Residence of VGA card - selects VGA card for PCI or VL bus. The available options are:

- PCI bus (default)
- VL bus

Host - to - PCI Wait State - determines the number of Host - to - PCI wait states. The available options are:

- AUTO
- 0
- 1

PCI Parity Check - enables or disables(default) the PCI parity check.

DRAM Parity Check - allows the system to check for the parity bit of every DRAM module. The available options are:

- Disabled (default) ■ Enabled

PCI Devices

Selecting Memory Shadow from the Advanced System Setup main menu displays the following screens.

Phoenix Setup - Copyright 1985-94 Phoenix Technologies Ltd.	
PCI Devices	
PCI Bridge:	[AUTO]
(HCLK PCICLK):	[Disabled]
PCI Master Retry Timer:	[AUTO]
PCI-ISA BCLK Divider:	[4]
IO Recovery (BCLK):	[3000]
Base I/O Address:	[000000000]
Base Memory Address:	[Disabled]
Multimedia mode:	[Disabled]
Parity: (which)	[Disabled]
PCI SLOT 1 INT A Set To:	[None]
Edge/Level Select:	[Level]
F1 Move ESC Exit PgUp Previous Value F5 Previous Configuration F1 Help PgDn Next Value F6 Default Configuration	

Figure 4-10. PCI Devices Screen 1

Phoenix Setup - Copyright 1985-94 Phoenix Technologies Ltd.	
PCI Devices	
PCI SLOT 2 INT A Set To:	[IO]
Edge/Level Select:	[Level]
PCI SLOT 3 INT A Set To:	[None]
Edge/Level Select:	[Level]
PCI Devices, Slot 1:	
Enable Device:	[Enabled]
Enable Master:	[Enabled]
Use Default Latency Timer Value:	[Yes]
Latency Timer Value:	[0040]
PCI Device, Slot 2:	
F1 Move ESC Exit PgUp Previous Value F5 Previous Configuration F1 Help PgDn Next Value F6 Default Configuration	

Figure 4-11. PCI Devices Screen 2

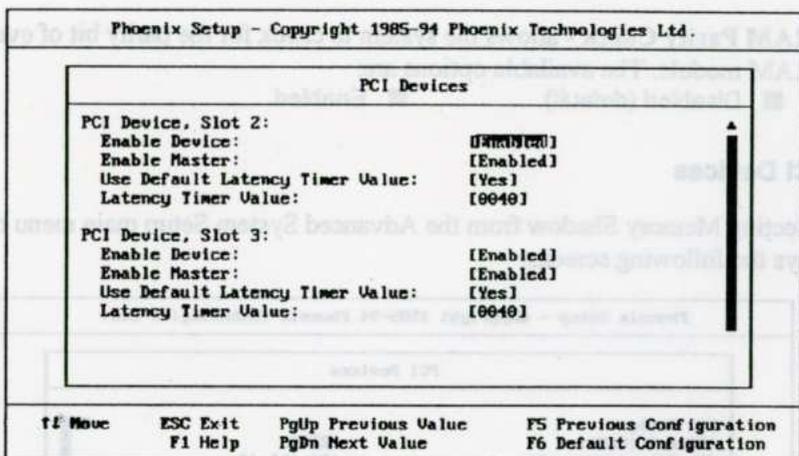


Figure 4-12. PCI Devices Screen 3

HCLK PCICLK - Host clk v.s PCI clk divider. The available options are:

- AUTO (default)
- 1 1/2
- 1 1

PCI Master Retry Timer - The available options are:

- Disabled (default)
- Enabled

PCI - ISA BCLK Divider - PCI bus clk v.s. ISA bus clk divider. The available options are:

- AUTO (default)
- PCICLK/2
- PCICLK/3
- PCICLK/4

IO Recovery (BCLK) - The available options are:

- 2
- 4 (default)
- 8
- 12

Base I/O Address - refers to the base of I/O address ranges from which the PCI device resource requests are satisfied.

Base Memory Address - pertains to the base of 32-bit memory address range from which the PCI device resource requests are satisfied.

Multimedia mode - enables or disables palette snooping for multimedia card.

Parity - enables or disables the parity checking.

PCI Slot 1/2/3 INTx - program the IRQ associated with PCI INTX of slots 1, 2, 3. The available IRQs are 3/4/5/7/9/10/11/12/14/15.

Edge/Level Select - programs the PCI IRQ to single edge or logic level.

- Note:**
- The PCI IDE is IRQ14 on board for primary IDE an IRQ15 for secondary IDE. Installing ISA cards using the same IRQ15 will create a conflict with the IRQ on board. To choose another IRQ for the ISA card or PCI card.
 - If it disables on board PCI IDE, the IRQ14/15 are available for ISA/PCI cards.

PCI Device, Slot 1/2/3 :

Enable Device - enables or disables PCI device as a slave bus.

Enable Master - enables or disables PCI device as a bus master.

Use Default Latency Timer Value - If set as "Yes", there is no further need to program the Latency Timer Value.

- Yes (default)
- No

Latency Timer Value - specifies the length of time that the bus master will occupy the PCI bus. The available options are:

- 0040 (default)
- 0000 - 00F8

4.5 Boot Options

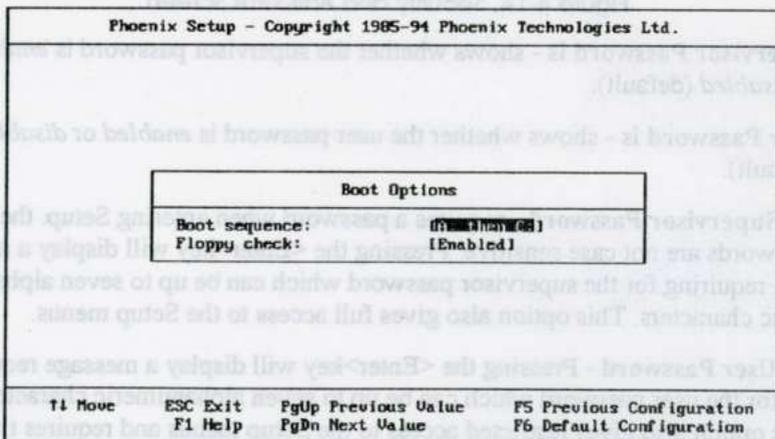


Figure 4-13. Boot Options Screen

Boot sequence - sets the sequence from where the BIOS will attempt to load the operating system. The options are:

- C: then A:
- C: only
- A: then C: (default)

Floppy check - selects enable/disable for seeking floppy disk drive before boot.

4.6 Security and Anti-Virus

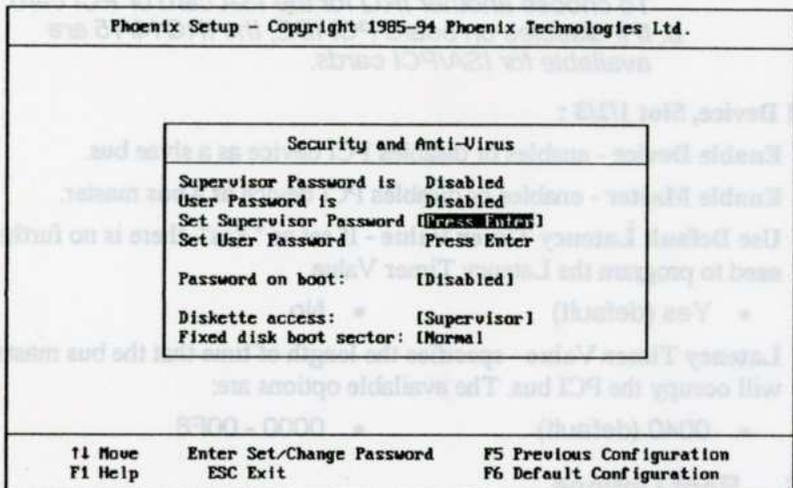


Figure 4-14. Security and Anti-Virus Screen

Supervisor Password is - shows whether the supervisor password is *enabled* or *disabled* (default).

User Password is - shows whether the user password is *enabled* or *disabled* (default).

Set Supervisor Password - requires a password when entering Setup. the passwords are not case sensitive. Pressing the <Enter>key will display a message requiring for the supervisor password which can be up to seven alphanumeric characters. This option also gives full access to the Setup menus.

Set User Password - Pressing the <Enter>key will display a message requiring for the user password which can be up to seven alphanumeric characters. This option also gives restricted access to the Setup menus and requires the setting of the Supervisor Password first.

Password on boot - determines whether the password is required on boot. The option needs the setting of the Supervisor Password. If Supervisor Password is set and this option is *disabled* (default), BIOS assumes that the user is booting.

Diskette access - restricts the use of floppy drives only to the supervisor when set as *Supervisor* (default). Also, choosing *Supervisor* for this option will require the setting of the Supervisor Password. Setting it as *User* allows access to the floppy drives at any time.

Fixed disk boot sector - allows the user to protect the hard disk drive's boot sector from unnecessary writing (e.g. using the format command under DOS). Setting this option to Normal makes writing on the boot sector possible. The available options are:

- Normal (default)
- Write Protect

4.7 Green PC Features

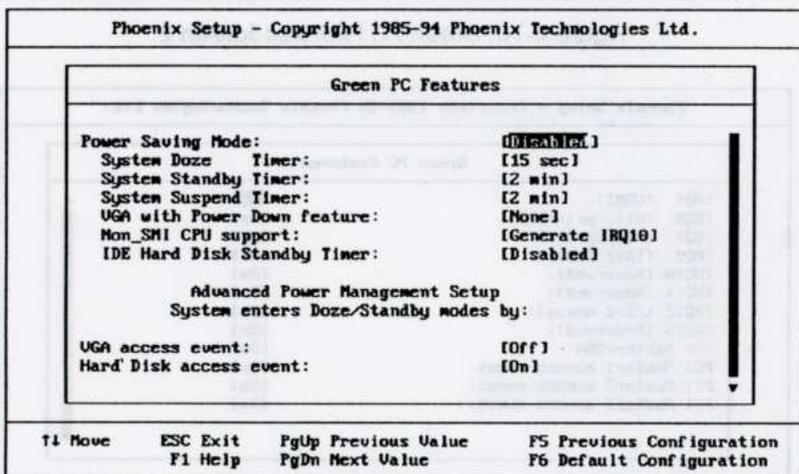


Figure 4-15. Green PC Features Screen 1

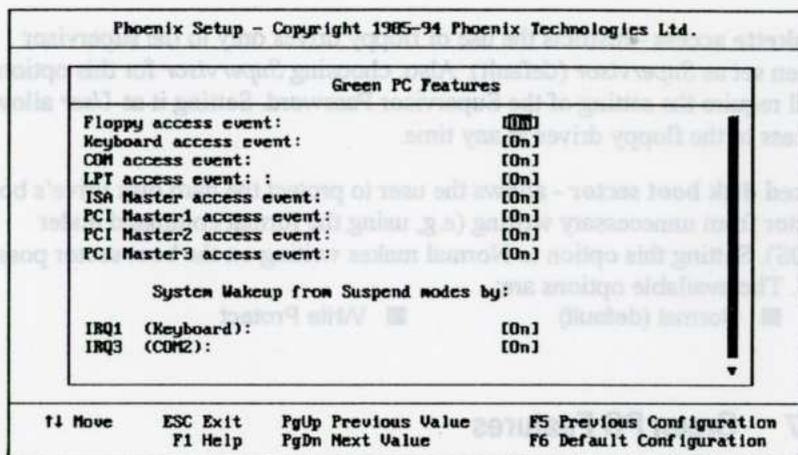


Figure 4-16. Green PC Features Screen 2

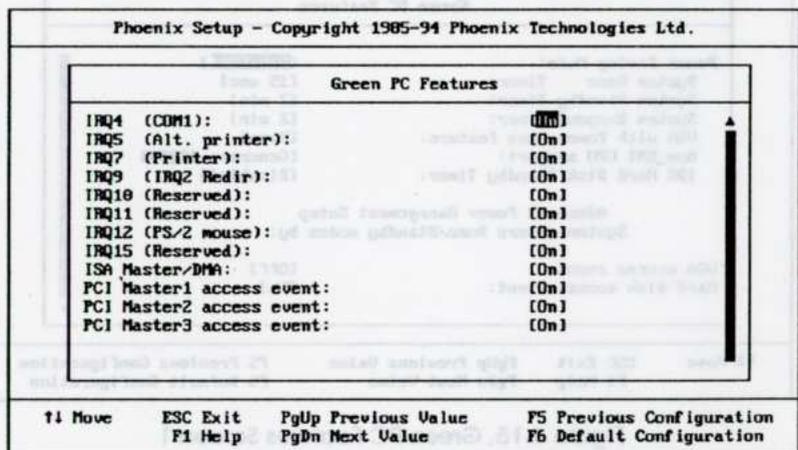


Figure 4-17. Green PC Features Screen 3

Power Saving Mode - enables or disables (default) the power saving mode feature of the chipset. Once enabled, the values of the following options can be set.

System Doze Timer - sets the time interval after system inactivity when the system enters DOZE mode. The available options are:

- 15 sec (default)
- 30 sec
- 1/2/4/8/15 min

System Standby Timer - sets the time interval after system inactivity when the system events enters STANDBY mode. The options are:

- 2 min (default)
- 4/8/16/32/64/128/256/512 min
- Disabled

System Suspend Timer - sets the time interval after system inactivity when the system enters SUSPEND mode. The available options are:

- 2 min (default)
- 4/8/16/32/64/128/256/512 min
- Disabled

VGA with Power Down feature - sets the method by which the VGA chip enters SLEEP mode. The options are:

- None (default)
- VESA DPMS
- Standard

Non_SMI CPU support - The available options are:

- Generate IRQ10 (default)
- Generate IRQ15

IDE Hard Disk Standby Timer - The available options are:

- Disabled (default)
- 1, 2, 3-15 min

Advanced Power Management Setup System enters power Doze/Standby up modes by: (Switch the following parameters to on or off)

- | | |
|---|---|
| <input type="checkbox"/> VGA access event | <input type="checkbox"/> Hard Disk access event |
| <input type="checkbox"/> Floppy access event | <input type="checkbox"/> Keyboard access event |
| <input type="checkbox"/> COM access event | <input type="checkbox"/> LPT access event |
| <input type="checkbox"/> ISA Master access event | <input type="checkbox"/> PCI Master1 access event |
| <input type="checkbox"/> PCI Master2 access event | <input type="checkbox"/> PCI Master3 access event |

System Wakeup from Suspend modes by: (Switch the following parameters to on or off)

- | | |
|---|--|
| <input type="checkbox"/> IRQ1 (Keyboard) | <input type="checkbox"/> IRQ3 (COM2) |
| <input type="checkbox"/> IRQ4 (COM1) | <input type="checkbox"/> IRQ5 (Alt. printer) |
| <input type="checkbox"/> IRQ7 (Printer) | <input type="checkbox"/> IRQ9 (IRQ2 Redir) |
| <input type="checkbox"/> IRQ10 (Reserved) | <input type="checkbox"/> IRQ11 (Reserved) |
| <input type="checkbox"/> IRQ12 (PS/2 mouse) | <input type="checkbox"/> IRQ15 (Reserved) |
| <input type="checkbox"/> ISA Master/DMA | |

4.8 Load ROM Default Values

If, during bootup, the BIOS program detects a problem in the integrity of the CMOS, it will display a message asking you to either press the key to run Setup or the <F1>key to resume booting. This probably means that the CMOS values have been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS.

Press the <F1>key to resume the boot or to run Setup with the ROM default values already loaded in the menus. You can make other changes before saving the values to CMOS.

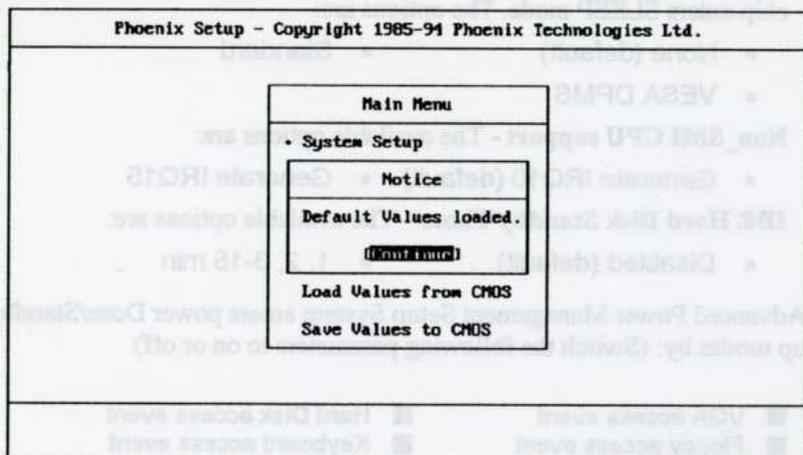


Figure 4-18. Load ROM Default Values Screen

4.9 Load Values from CMOS

If, during a Setup session, you change your mind about your selections and have not yet saved the values to CMOS, you can restore the values you previously saved to CMOS.

Select Load Values from CMOS on the Main Menu and the program will display the following screen.

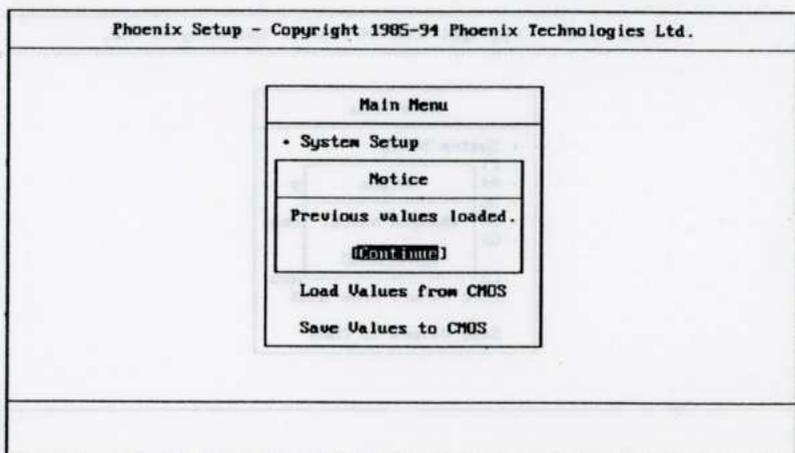


Figure 4-19. Load Values from CMOS Screen

4.10 Save Values to CMOS

After making your selections on the Setup menus, always select Save Values to CMOS in order to make them operative. Unlike standard RAM memory, CMOS RAM is sustained by an on-board battery and stays on after you turn your system off.

After you save your selections, the program will display the following screen.

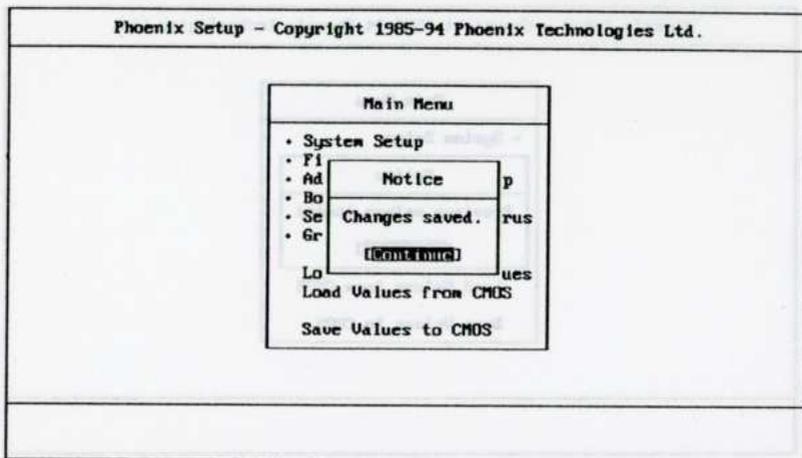


Figure 4-20. Save Values to CMOS Screen

If you attempt to exit without saving, the program will ask you if you would like to save the changes made before exiting.

During bootup, BIOS for the chipset attempts to load the values you saved in the CMOS RAM. If the values saved in the CMOS cause the system boot to fail, reboot and press the key to enter Setup. In Setup, you may load the ROM default values (as described in the section 4.8) or try to change the values that caused the boot to fail.

4.11 Quitting SETUP

After making all modifications in the SETUP program, go to the option "Save Values to CMOS" then press the <Enter> key or simply press the <F10>key. The screen will display a message asking you whether you would like to save and exit or not.

Use the arrow keys or press <Y>for Yes then the <Enter>key to save your settings before exiting. Press <N>for No then the <Enter>key to exit without saving.

If you made changes to the CMOS values and then press the <ESC>key, the program will prompt you whether you would like to Quit without saving or not.

Press <Y> for Yes then the <Enter>key to quit without saving, or press <N>then the <Enter>key to save your settings first before exiting Setup.



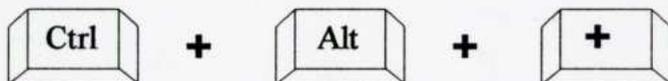
Appendix A

Setting the System Speed

There are two methods in changing the system processing speed of your UM8810P AIO. The first method is implemented through the hardware turbo switch J11. The second method, software setting, requires the simultaneous pressing of several keys on the keyboard known as hot-keys. You may change the speed during normal operate while working with your application program.

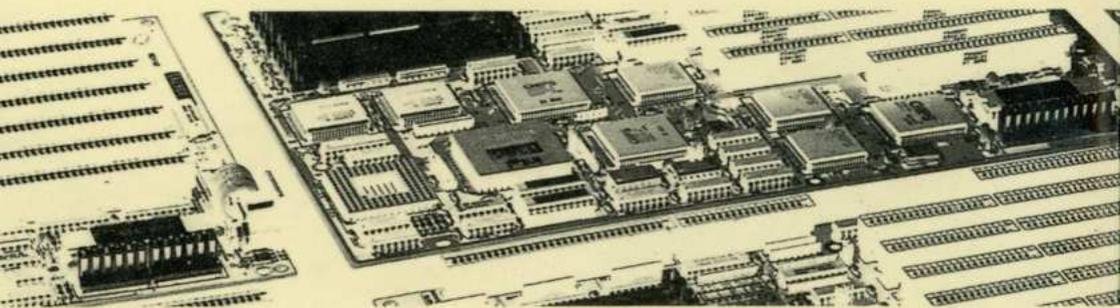
The hot-key combinates for setting the system speed on your UM8810P AIO are shown on the following diagrams.

■ High Speed



■ Low Speed





40-012-433200

Version 2.0



RECYCLABLE