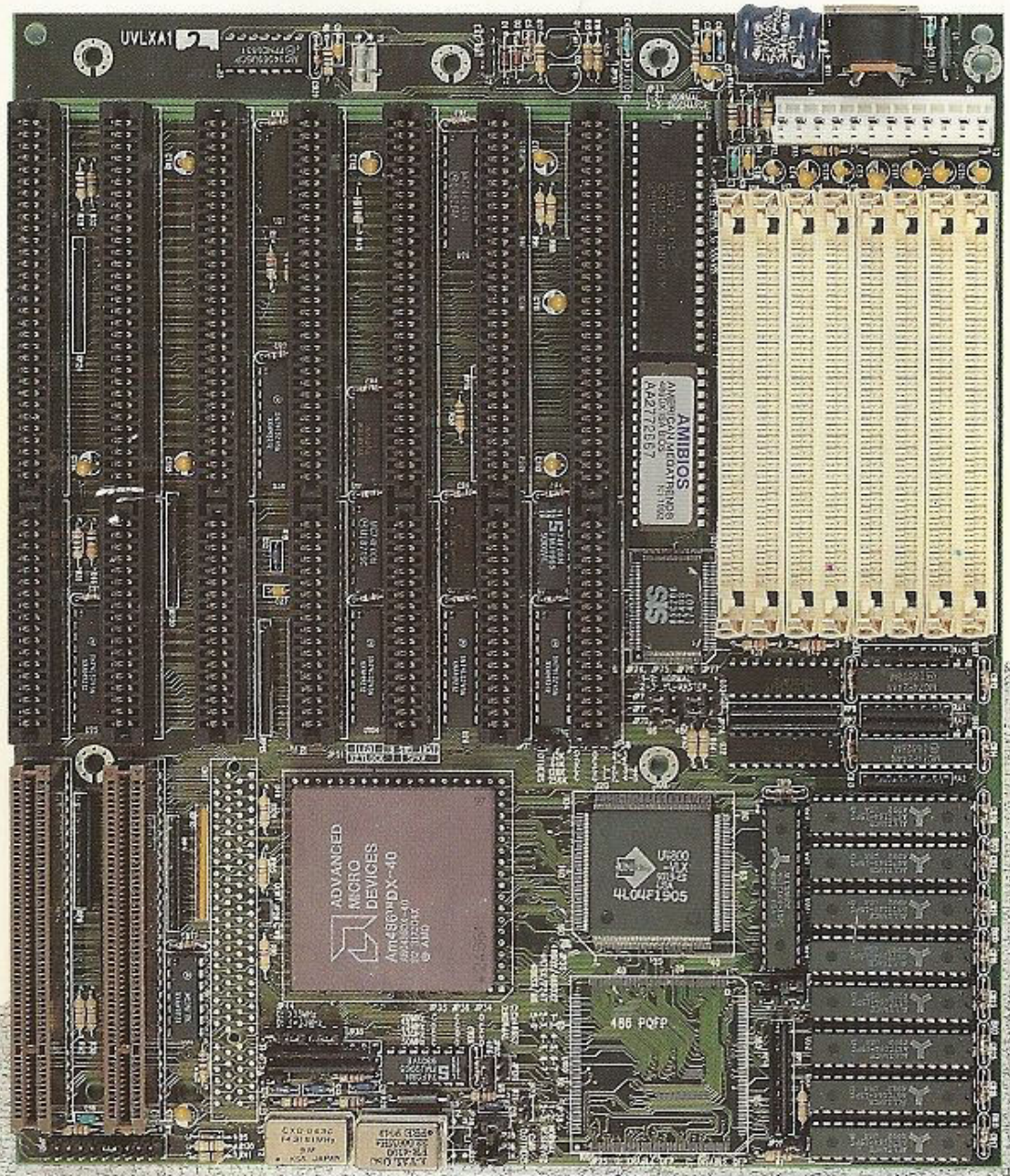
UNI-486WB

USER'S Manual



CONTENTS

CHAPTER 1

INTRODUCTION

CHAPTER 1 INTRODUCTION

Congratulations on the purchase of your new UNI-486WB Main Board.

The UNI-486WB motherboard is a Low-Cost two-chip solution offering optimal performance for low to mid range 486-based AT system. The UNI-486WB is designed for 486 systems running from 25, 33, 40 and 50MHz. It supports 486SX, 486DX, 486DX2, P24T, CYRIX M6 and Two 32-bit Local Bus.

The UNI-486WB motherboard also has an option to accommodate either 32K, 64K, 128K, 256K of external cache.

Because of its unique memory subsystem design, the UNI-486WB M/B allows for 1 Megabyte to 64 Megabyte of 32-bit high speed memory by using 256K , 1M, 4M and 16M simm modules. The available memory configurations are 1MB, 2MB, 4MB, 5MB, 8MB, 16MB, 20MB, 32MB, 64MB, 80MB, 128MB.

SPECIFICATION

Processor :	486SX, 486DX, 486DX2, P24T, Cyrix M6
CPU Clock :	25/33/40/50/DX2-66MHz for 486 M/B
CPU Clock Source :	Clock gernerator/Oscillator
Memory :	Up to 128MB
Memory configuration :	1MB/2MB/4MB/5MB/8MB/16MB/20MB/32MB/64MB 80MB/128MB
Memory using :	256K/1MB/4MB/16MB Module, memory up to 128MB on board
SRAM configuration :	32KB/64KB/128KB/256KB
BIOS Subsystem Type :	AMI ROM BIOS

Additional BIOS features : Setup program resides in ROM.

I/O Subsystem NO. slot : SEVEN 16-bit & SEVEN 8-bit ISA Slot, TWO 32-bit Local Bus Slots.

Dimension : 9.8" × 8.6", 2/3 Baby AT size.

Additional features

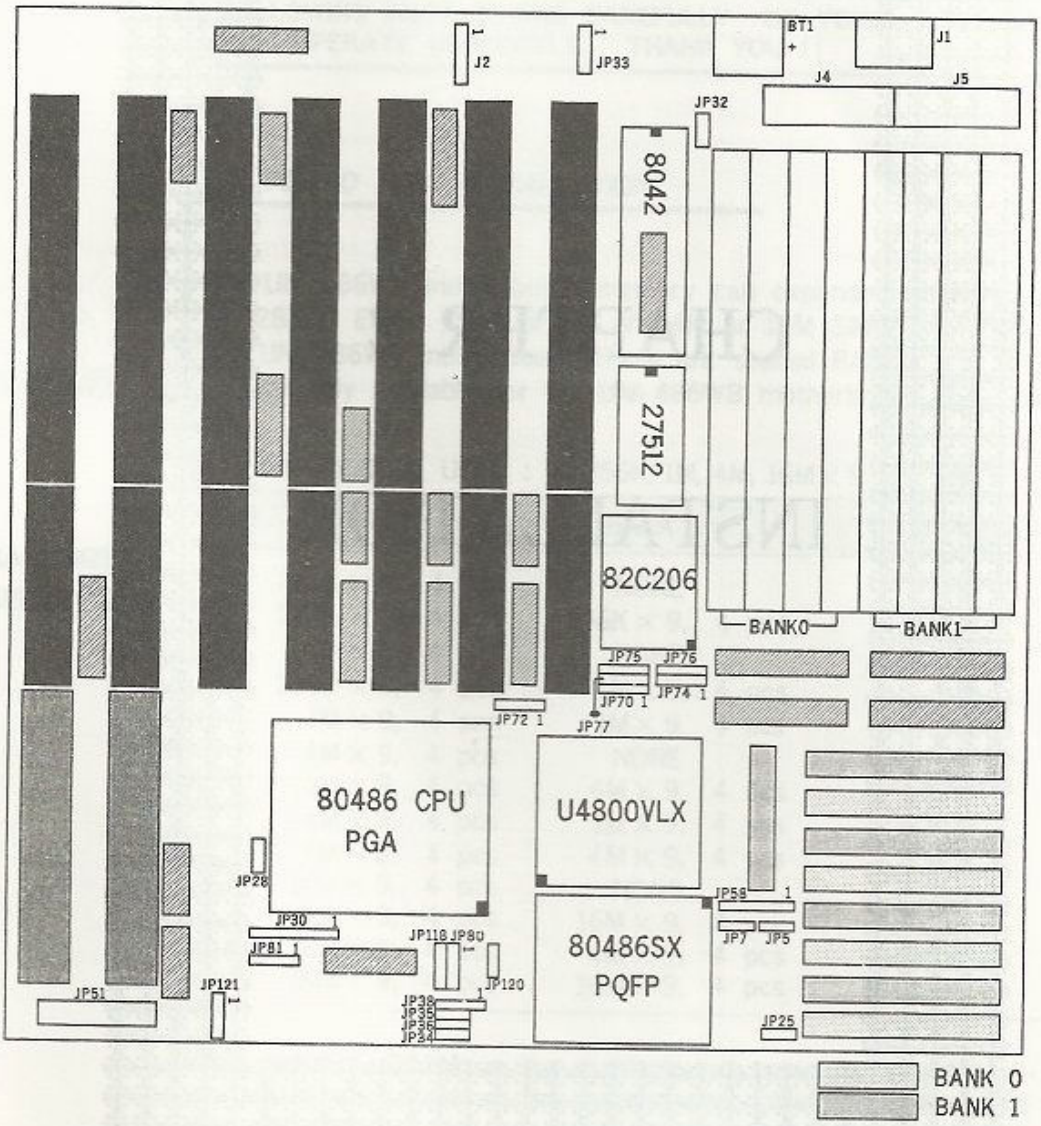
Miscellanous connectors : Reset buttom. Turbo speed indicator. Internal battery.

Board design : Four layer implementation for low noise operation.

SYSTEM FEATURES

- Support INTEL P24T/Cyrix M6 CPUs with on-chip write-back cache scheme ability.
- VESA Local Bus interface support :
  Fully support VESA local bus standard.
  VESA master device can be supported without PAL.
  Support ISA master/DMA accessing VESA target.
- Supports 20, 25, 33, 40, 50 and 66MHz 80486DX/SX, P24T, CYRIX M6 or cacheless system.
- 1X clock for 80486, P24T and M6 based system.
- Built-in internal comparator.
- Optional write-back or write-through cache update algorithm.
- Support 32K, 64K, 128K, 256K cache size.
- Optional caching of shadowed video BIOS.
- System memory size ranging from 1MB up to 128MB.
- All-in-one ROM BIOS.
- Data bus conversion between local bus, memory bus and system bus.
- Optional one or two AT bus clocks for back-to-back I/O cycle recovery time.
- NMI and Port B logic support.
- CPU reset logic support.
- Emulation fast gate A20 and fast keyboard reset support.

UNI-486WB MOTHERBOARD LAYOUT



CHAPTER 2

INSTALLATION

CHAPTER 2 INSTALLATION

BEFORE TURNING ON THE SYSTEM POWER, PLEASE FOLLOW THE FOLLOWING INSTRUCTIONS CAREFULLY OR YOUR SYSTEM MAY NOT OPERATE CORRECTLY. THANK YOU !!

ON BOARD SIMM INSTALLATION

The UNI-486WB motherboard memory can expanded memory from 1MB, to 128MB. Either 256K or 1M or 4M or 16M SIM DRAM can be used the UNI-486WB motherboard. There are spacial BANK0 and BANK1 SIMM of assembly available for the UNI-486WB motherboard. They are :

RAM SIZE SELECTION

■ SIMM MODULE USED : (256K, 1M, 4M, 16M × 9 OF SIM 4 PCS)

BANK 0	BANK 1	TOTAL MEMORY
256K × 9, 4 pcs	NONE	1M
256K × 9, 4 pcs	256K × 9, 4 pcs	2M
1M × 9, 4 pcs	NONE	4M
256K × 9, 4 pcs	1M × 9, 4 pcs	5M
1M × 9, 4 pcs	1M × 9, 4 pcs	8M
4M × 9, 4 pcs	NONE	16M
1M × 9, 4 pcs	4M × 9, 4 pcs	20M
4M × 9, 4 pcs	1M × 9, 4 pcs	20M
4M × 9, 4 pcs	4M × 9, 4 pcs	32M
16M × 9, 4 pcs	NONE	64M
4M × 9, 4 pcs	16M × 9, 4 pcs	80M
16M × 9, 4 pcs	4M × 9, 4 pcs	80M
16M × 9, 4 pcs	16M × 9, 4 pcs	128M

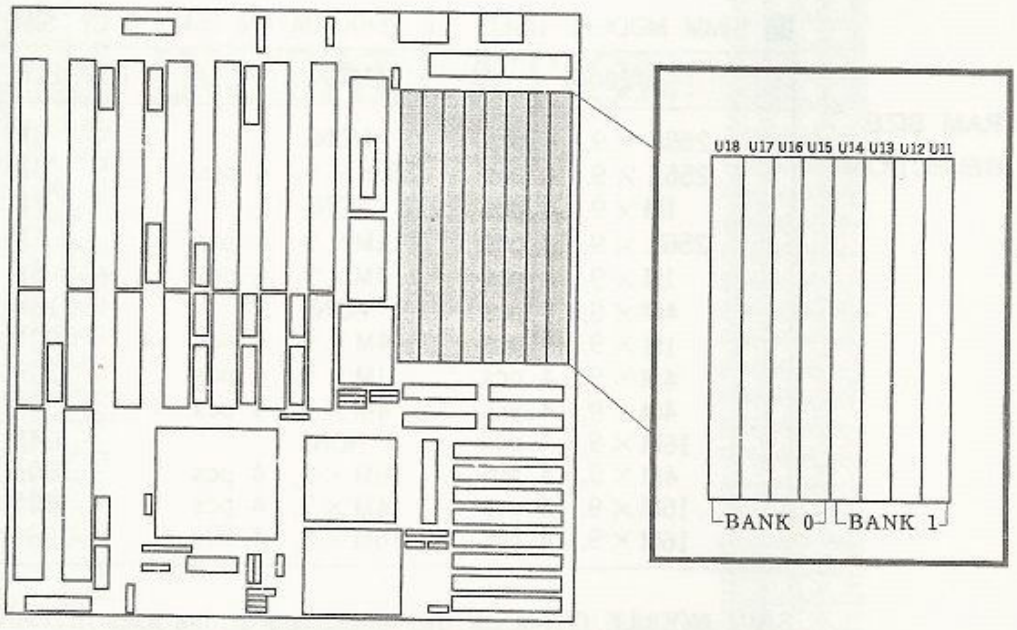
SIMM MODULE DRAM on the motherboard consists of BANK 0-1. When you install the DRAM on the motherboard, first completely fill BANK 0, then fill BANK 1. The spaces of BANK 0 should be fully occupied, otherwise the motherboard will not work.

SIM RAM ON BOARD POSITION

Please refer to the table for the BANK 0 and BANK 1 position.

BANK 0 INSTALL :	U15, U16, U17, U18
BANK 1 INSTALL :	U11, U12, U13, U14

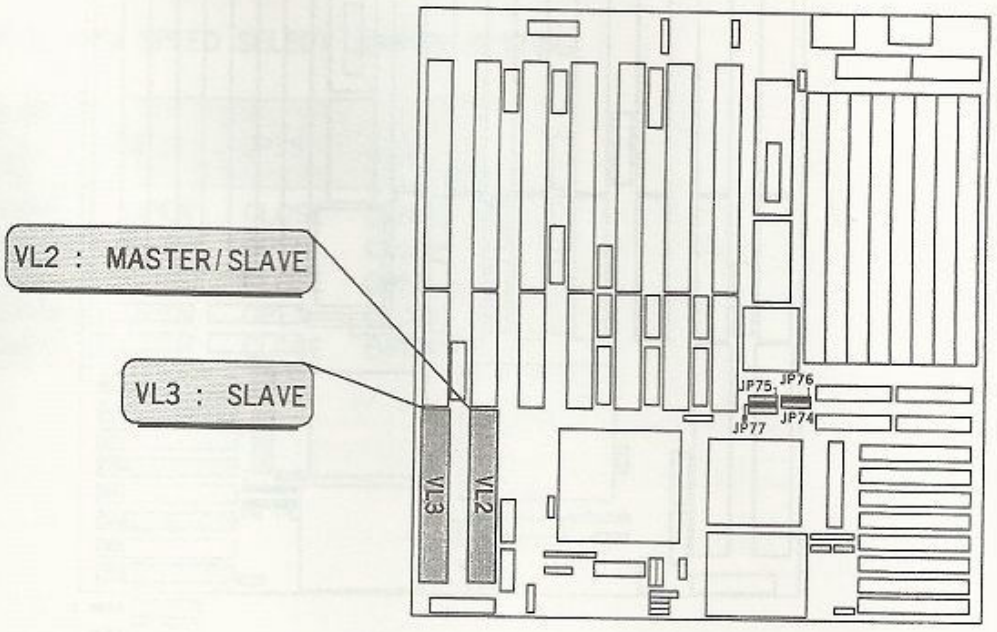
■ Please refer to the following figure for operating the sim dram:



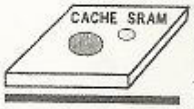
VL BUS MASTER/SLAVE SELECTION

JUMPER / VL BUS	JP74	JP75	USAGE
VL2	1-2	1-2	SLAVE
	2-3	2-3	MASTER/SLAVE
JUMPER / VL BUS	JP76	JP77	USAGE
VL3	1-2	1-2	SLAVE
	2-3	2-3	MASTER/SLAVE

- Please refer to the following figure for setting up to JP74, JP75, JP76, JP77 position :

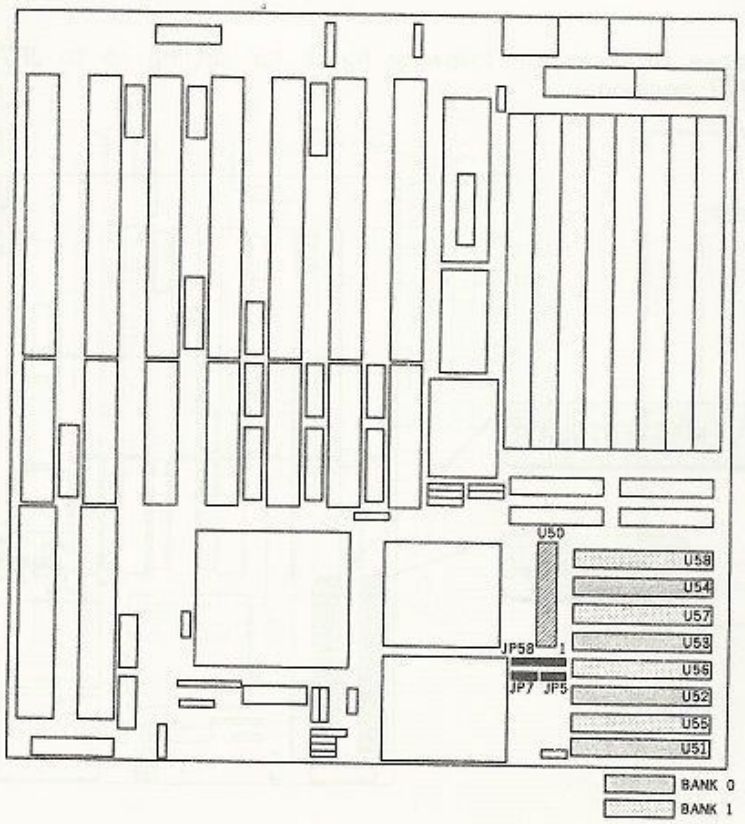


CACHE SRAM INSTALL SELECTION



CACHE SIZE JUMPER SETTING			CACHE SRAM		TAG RAM	CACHE SIZE
JP5	JP7	JP58	BANK 0	BANK 1		
			U51, U52, U53, U54	U55, U56, U57, U58	U50	
OPEN	OPEN	2-3	8K×8, 4pcs	NONE	8K×8	32K
CLOSE	OPEN	1-2	8K×8, 4pcs	8K×8, 4pcs	8K×8	64K
CLOSE	CLOSE	1-2, 3-4	32K×8, 4pcs	NONE	8K×8	128K
CLOSE	CLOSE	1-2, 4-5	32K×8, 4pcs	32K×8, 4pcs	32K×8/16K×8	256K

- Please refer to the following figure for setting up to JP5, JP7, JP58 position:



CPU INSTALL SELECTION

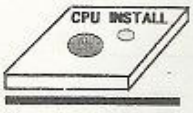
STEP 1 CPU TYPE JUMPER SETTING

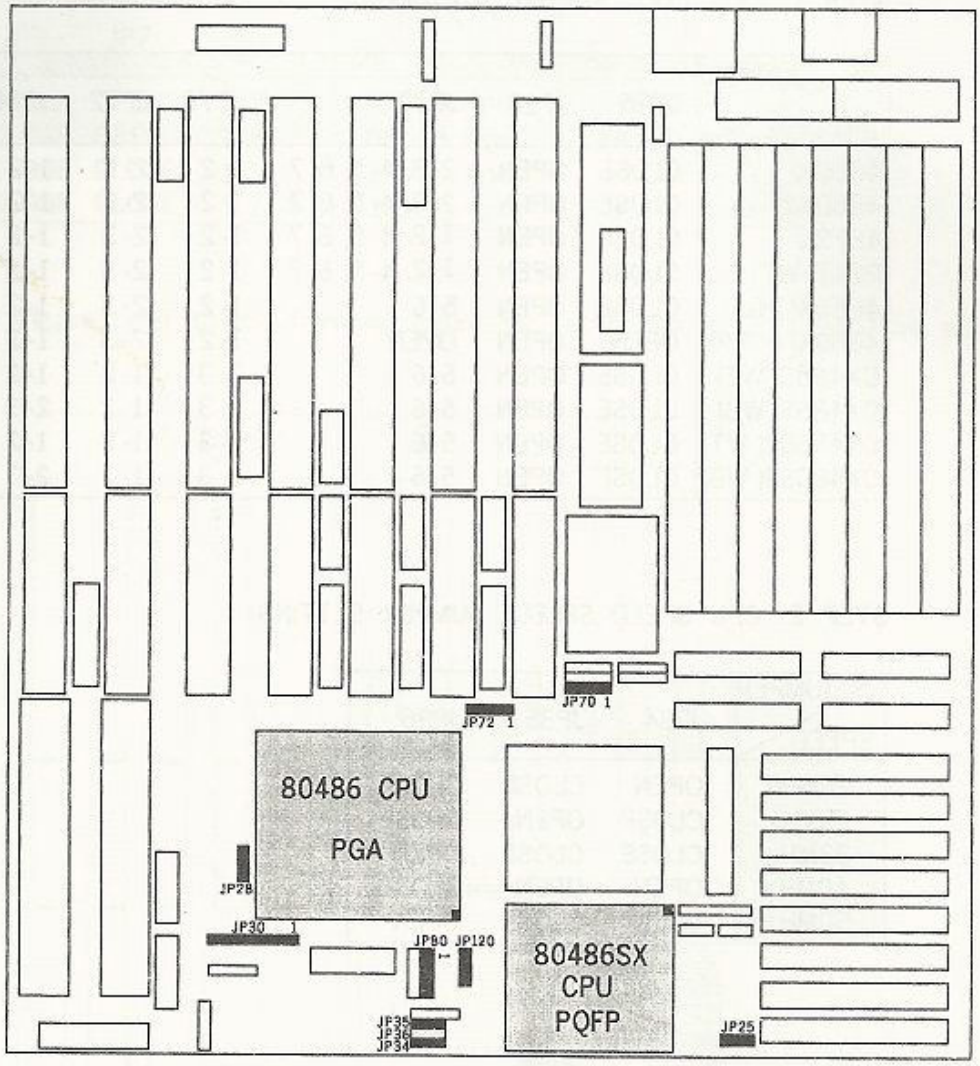
JUMPER / CPU TYPE	JP25	JP28	JP30	JP70	JP72	JP80	JP120
486DX	CLOSE	OPEN	2-3, 4-5, 6-7	1-2	2-3	1-2	OPEN
486DX2	CLOSE	OPEN	2-3, 4-5, 6-7	1-2	2-3	1-2	OPEN
487SX	CLOSE	OPEN	1-2, 4-5, 6-7	1-2	2-3	1-2	OPEN
P24T(WT)	CLOSE	OPEN	1-2, 4-5, 6-7	1-2	2-3	1-2	OPEN
486SX(PGA)	CLOSE	OPEN	5-6	1-2	2-3	1-2	OPEN
486SX(PQFP)	OPEN	OPEN	OPEN	1-2	2-3	1-2	OPEN
CX486S(WT)	CLOSE	OPEN	5-6	2-3	1-2	1-2	OPEN
CX486S(WB)	CLOSE	OPEN	5-6	2-3	1-2	2-3	OPEN
CX486S2(WT)	CLOSE	OPEN	5-6	2-3	1-2	1-2	CLOSE
CX486S2(WB)	CLOSE	OPEN	5-6	2-3	1-2	2-3	CLOSE

STEP 2 CPU SPEED SELECT JUMPER SETTING

JUMPER / SPEED	JP34	JP35	JP36
20MHz	OPEN	CLOSE	CLOSE
25MHz	CLOSE	OPEN	CLOSE
33MHz	CLOSE	CLOSE	OPEN
40MHz	OPEN	OPEN	CLOSE
50MHz	OPEN	CLOSE	OPEN

STEP 3 Please refer to the following figure for setting up to JP25, JP28, JP30, JP34, JP35, JP36, JP70, JP72, JP80, JP120 & 80486(PGA) & 80486SX(PQFP) CPU position :

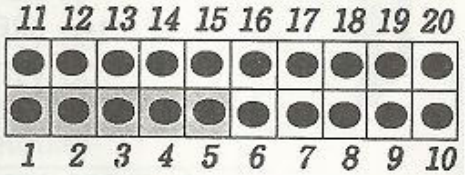




UNI-486WB FUNCTION CONNECTOR

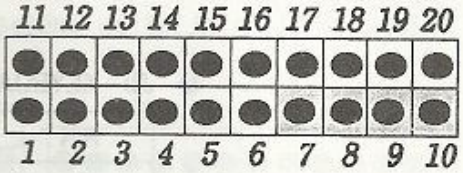
◆ KEYLOCK & POWER LED CONNECTOR JP51

PIN	DESCRIPTION
5	LED POWER
4	NOT USED
3	GROUND
2	KEYBOARD INHIBITER
1	GROUND



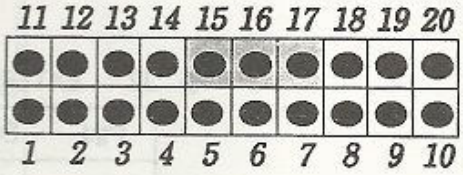
◆ SPEAKER CONNECTOR JP51

PIN	DESCRIPTION
10	DATA OUT
9	NOT USED
8	GROUND
7	+ 5V



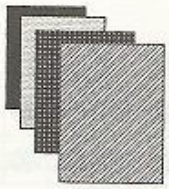
◆ TURBO SW CONNECTOR JP51

PIN	DESCRIPTION
17	GROUND
16	SELECT PIN
15	SELECT PIN



When 15-16 SHORT and it's on the turbo mode.

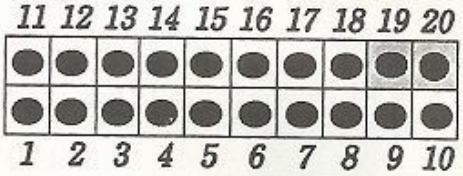
When 16-17 SHORT and it's on the normal mode.



◆ RESET SW CONNECTOR

PIN	DESCRIPTION
20	GROUND
19	RESET IN

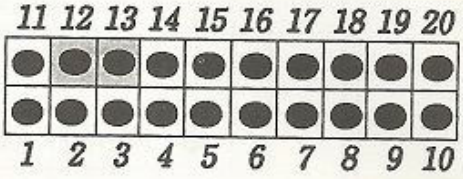
JP51



◆ TURBO LED CONNECTOR

PIN	DESCRIPTION
13	+ ANODE
12	- CATHODE

JP51



◆ J1: KEYBOARD CONNECTOR

PIN	DESCRIPTION
1	KEYBOARD CLOCK
2	KEYBOARD DATA
3	SPACE
4	GROUND
5	+ 5V DC

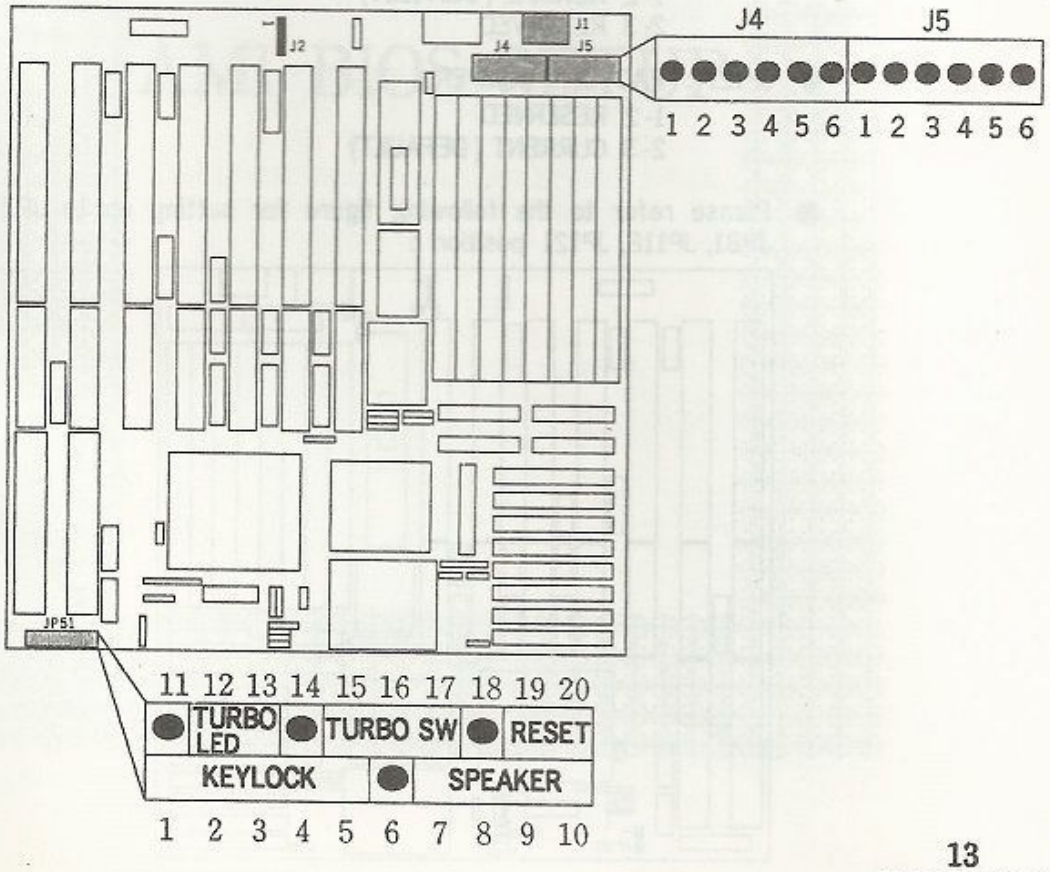
◆ J2 : EXTERNAL BATTERY CONNECTOR

PIN	DESCRIPTION
1	PLUG IN BATTERY (+)
2	N. C.
3	N. C.
4	PLUG IN BATTERY (-)

◆ POWER SUPPLY CONNECTOR

CONNECTOR	PIN	DESCRIPTION
J4	1	POWER GOOD
	2	+ 5V DC
	3	+12V DC
	4	-12V DC
	5	GROUND
	6	GROUND
J5	1	GROUND
	2	GROUND
	3	-5V dc
	4	+5V dc
	5	+5V dc
	6	+5V dc

● Please refer to the following figure for setting up to J1, J2, J4, J5, JP51 position :



OTHER JUMPER

- JP32 : COLOR/MONO MONITOR
  OPEN- MONO
  CLOSE- COLOR

- JP33 : CMOS RAM BATTERY SETTING
  1-2 INTERNAL BATTERY USED **(DEFAULT)**
  2-3 CLEAR BIOS SETUP DATA

NOTE : MUST PUT ON 1-2 LOCATION JUST CAN OPERATING THE SYSTEM

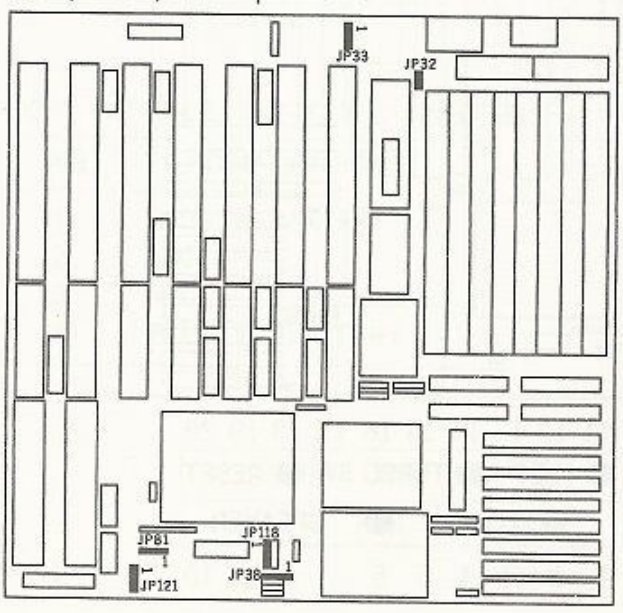
- JP38 : SPECIAL VESA VGA OPTION **NOTE: FOR SOME SPECIAL VESA VGA CARD**
  1-2 NORMAL **(DEFAULT)**
  2-3 SPECIAL VESA (EXAMPLE : WEITEK9000, ETW32, WD33)

- JP81 : FACTORY JUMPER
  1-2 FOR SCC 9200 **(DEFAULT)**
  2-3 NORMAL

- JP118 : FACTORY JUMPER
  1-2 NORMAL **(DEFAULT)**
  2-3 RESERVED

- JP121 : FACTORY JUMPER
  1-2 RESERVED
  2-3 CURRENT **(DEFAULT)**

● Please refer to the following figure for setting up to JP32, JP33, JP38, JP81, JP118, JP121 position :



CHAPTER 3

AMI BIOS SETUP

CHAPTER 3 SYSTEM SETUP

AMI BIOS SYSTEM CONFIGURATION SETUP

This section will tell you how to set up the system configurations (CMOS) under the AMI BIOS. After booting the system and testing the memory.

The SETUP program is contained in the system's Read-Only-Memory Rather than on a diskette.

To enter SETUP, press the "DEL" key. The following menu appears:


```
AMIBIOS SETUP PROGRAM-AMI BIOS SETUP UTILITIES
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        STANDARD CMOS SETUP
        ADVANCED CMOS SETUP
        ADVANCED CHIPSET SETUP
        AUTO CONFIGURATION WITH BIOS DEFAULTS
        AUTO CONFIGURATION WITH POWER-ON DEFAULTS
        CHANGE PASSWORD
        AUTO DETECT HARD DISK
        HARD DISK UTILITY
        WRITE TO CMOS AND EXIT
        DO NOT WRITE TO CMOS AND EXIT

Standard CMOS Setup for changing Time, Date, Hard Disk Type, etc.

ESC: EXIT  ↓ → ↑ : Sel  F2/F3: Color  F10: Save & Exit
```

Please enter "STANDARD CMOS SETUP" to enter the next screen.

The following pages show simple charts and instructions for the CMOS setup.

AMIBIOS SETUP PROGRAM- WARNING INFORMATION
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Improper Use of Setup may Casuse Problems!!

If System Hangs, Reboot System and Enter Setup by Pressing the <DEL> key

Do any of the following After Entering Setup
(i) Alter Options to make System Work
(ii) Load BIOS Setup Defaults
(iii) Load Power-on Defaults

Hit "ESC" to Stop now, Any other Key to Continue

Cyln Head WPcom LZone Sect Size

AMIBIOS SETUP PROGRAM- STANDARD CMOS SETUP
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Data (mm/date/year): Mon, Mar 14 1993
Time (hour/min/sec) : 19: 39: 53

Base memory size : 640 KB
Ext. memory size : 3072 KB

		Cyln	Head	WPcom	LZone	Sect	Size
Hard disk C: type	: 47=USER TYPE	984	10	0	0	34	163MB
Hard disk D: type	: Not Installed						
Floppy drive A:	: 1.2 MB, 5 1/4"						
Floppy drive B:	: Not Installed						
Primary display	: VGA/PGA/EGA						
Keyboard	: Installed						

Month : Jan, Feb. . . . . Dec
Date : 01 02 03, ... 31
Year : 1901, 1902, ... 2099

Sat	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

ESC: Exit ↓ → ↑ : Select F2/F3: Color PU/PD: Modify

AMIBIOS SETUP PROGRAM- AMI BIOS SETUP UTILITIES
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STANDARD CMOS SETUP
ADVANCED CMOS SETUP
ADVANCED CHIPSET SETUP
AUTO CONFIGURATION WITH BIOS DEFAULTS
AUTO CONFIGURATION WITH POWER- ON DEFAULTS
CHANGE PASSWORD
AUTO DETECT HARD DISK
HARD DISK UTILITY
WRITE TO CMOS AND EXIT
DO NOT WRITE TO CMOS AND EXIT

Advanced CMOS Setup for configuring System Options

ESC: EXIT ↓ → ↑ : Sel F2/F3: Color F10: Save & Exit

AMIBIOS SETUP PROGRAM- WARNING INFORMATION
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Improper Use of Setup may Casuse Problems!!

If System Hangs, Reboot System and Enter Setup by Pressing the <DEL> key

Do any of the following After Entering Setup
(i) Alter Options to make System Work
(ii) Load BIOS Setup Defaults
(iii) Load Power- on Defaults

Hit "ESC" to Stop now, Any other Key to Continue

AMIBIOS SETUP PROGRAM- ADVANCED CMOS SETUP
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Typematic Rate Programming	: Disabled	Video ROM Shadow C000, 16K	: Shad/WP
Typematic Rate Delay (msec)	: 500	Video ROM Shadow C400, 16K	: Shad/WP
Typematic Rate (Cache/Sec)	: 15	Adapter ROM Shadow C800, 16K	: Disabled
Mouse Support Option	: Enabled	Adapter ROM Shadow CC00, 16K	: Disabled
Above 1 MB Memory Test	: Enabled	Adapter ROM Shadow D000, 16K	: Disabled
Memory Test Tick Sound	: Enabled	Adapter ROM Shadow D400, 16K	: Disabled
Memory Parity Error Check	: Enabled	Adapter ROM Shadow D800, 16K	: Disabled
Hit <DEL> Message Display	: Enabled	Adapter ROM Shadow DC00, 16K	: Disabled
Hard Disk Type 47 RAM Area	: 0: 300	System ROM Shadow F000, 16K	: Enabled
Wait For <F1> If Any Error	: Enabled	* BootSector Virus Protection	: Disabled
System Boot Up Num Lock	: on	Auto Configuration	: Enabled
Floppy Drive Seek At Boot	: Enabled		
System Boot Up Sequence	: A:, C:		
System Boot Up CPU Speed	: High		
Cache Momory Select	: Both		
Fast Gate A20 Option	: Enabled		
Turbo Switch Function	: Enabled		
Password Checking Option	: Setup		

- NOTE -
It will automatic set advance CHIPS set up (Example: 0 wait, 1 wait, AT BUS CLK...etc will follow CPU speed change)

- NOTE -
Internal : for internal cache
Disabled : for non-cache
Both : for internal & external cache

Esc: Exit ↓ → ↑: Sel (Ctrl) Pu/Pd: Modify F1: Help F2/F3: Color
F5: Old Values F6: BIOS Setup Defaults F7: Power-On Defaults

* The BootSector Virus Protection function is option. When use K8 KEYBIOS this function is defect, but use KF KEYBIOS is useable.

AMIBIOS SETUP PROGRAM- AMI BIOS SETUP UTILITIES
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STANDARD CMOS SETUP
ADVANCED CMOS SETUP
ADVANCED CHIPSET SETUP
AUTO CONFIGURATION WITH BIOS DEFAULTS
AUTO CONFIGURATION WITH POWER-ON DEFAULTS
CHANGE PASSWORD
AUTO DETECT HARD DISK
HARD DISK UTILITY
WRITE TO CMOS AND EXIT
DO NOT WRITE TO CMOS AND EXIT

Advance Chipset Setup for Configure and CHIPSET Registering

ESC: EXIT ↓ → ↑ : Sel F2/F3: Color F10: Save & Exit

AMIBIOS SETUP PROGRAM- WARNING INFORMATION
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Improper Use of Setup may Casuse Problems!!

If System Hangs, Reboot System and Enter Setup by Pressing the <DEL> key

Do any of the following After Entering Setup
(i) Alter Options to make System Work
(ii) Load BIOS Setup Defaults
(iii) Load Power-on Defaults

Hit "ESC" to Stop now, Any other Key to Continue

● THE SETUP FOR OPERATION 486DX-50MHz CPU SYSTEM M/B

AMIBIOS SETUP PROGRAM- ADVANCE CHIPSET SETUP
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Local Ready Synchronized	:	Enabled	Definition of Block 1	:	NonCache
*Synch ADS	:	Enabled	Non-Cacheable Block-1 Size	:	0 KB
Hidden Refresh	:	Enabled	Non-Cacheable Block-1 Base	:	0000000H
Slow Refresh	:	Disabled	Cyrix A20M Pin	:	Enabled
Cache Scheme	:	W-Back	Cyrix Pin Enabled	:	Barb
VL-Bus Master Channel 1 & 2	:	Disabled			
Video BIOS Cache	:	Enabled			
DRAM Read/Write	:	2 WS			
SRAM Read	:	1 WS			
SRAM Burst	:	Enabled			
SRAM Write	:	2 WS			
Master Cycle Swap	:	Disabled			
IO Recovery Time	:	1ATCLK			
AT Wait State	:	0 WS			
AT Bus CLK	:	SCLK/6			
Definition of Block 0	:	NonCache			
Non-Cacheable Block-0 Size	:	0 KB			
Non-Cacheable Block-0 Base	:	0000000H			

Esc: Exit ↓ → ↑: Sel (Ctrl) Pu/Pd: Modify F1: Help F2/F3: Color
F5: Old Values F6: BIOS Setup Defaults F7: Power-On Defaults

* The Synch ADS Enabled is guarantee , it's compatiable for VESA 486 50MHz & 386 40MHz.

● THE SETUP FOR OPERATION 486DX-40MHz(AMD) / Cyrix M6-40MHz CPU SYSTEM M/B

AMIBIOS SETUP PROGRAM- ADVANCE CHIPSET SETUP
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Local Ready Synchronized	: Enabled	Definition of Block 1	: NonCache
Synch ADS	: Enabled	Non-Cacheable Block-1 Size	: 0 KB
Hidden Refresh	: Enabled	Non-Cacheable Block-1 Base	: 0000000H
Slow Refresh	: Disabled	Cyrix A20M Pin	: Enabled
Cache Scheme	: W-Back	Cyrix Pin Enabled	: Barb
VL-Bus Master Channel 1 & 2	: Disabled		
Video BIOS Cache	: Enabled		
DRAM Read/Write	: 1 WS		
SRAM Read	: 0 WS		
SRAM Burst	: Enabled		
SRAM Write	: 1 WS		
Master Cycle Swap	: Disabled		
IO Recovery Time	: 1ATCLK		
AT Wait State	: 0 WS		
AT Bus CLK	: SCLK/5		
Definition of Block 0	: NonCache		
Non-Cacheable Block-0 Size	: 0 KB		
Non-Cacheable Block-0 Base	: 0000000H		

Esc: Exit ↓ → ↑: Sel (Ctrl) Pu/Pd: Modify F1: Help F2/F3: Color
F5: Old Values F6: BIOS Setup Defaults F7: Power-On Defaults

● THE SETUP FOR OPERATION 486DX-33/486DX2-66/OVERDRIVE-33/Cyrix M6-33MHz 486SX-33MHz CPU SYSTEM M/B

AMIBIOS SETUP PROGRAM- ADVANCE CHIPSET SETUP
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Local Ready Synchronized	: Enabled	Definition of Block 1	: NonCache
*Synch ADS	: Enabled	Non-Cacheable Block-1 Size	: 0 KB
Hidden Refresh	: Enabled	Non-Cacheable Block-1 Base	: 0000000H
Slow Refresh	: Disabled	Cyrix A20M Pin	: Enabled
Cache Scheme	: W-Back	Cyrix Pin Enabled	: Barb
VL-Bus Master Channel 1 & 2	: Disabled		
Video BIOS Cache	: Enabled		
DRAM Read/Write	: 1 WS		
SRAM Read	: 0 WS		
SRAM Burst	: Enabled		
SRAM Write	: 0 WS		
Master Cycle Swap	: Disabled		
IO Recovery Time	: 1ATCLK		
AT Wait State	: 0 WS		
AT Bus CLK	: SCLK/4		
Definition of Block 0	: NonCache		
Non-Cacheable Block-0 Size	: 0 KB		
Non-Cacheable Block-0 Base	: 0000000H		

Esc: Exit ↓ → ↑: Sel (Ctrl) Pu/Pd: Modify F1: Help F2/F3: Color
F5: Old Values F6: BIOS Setup Defaults F7: Power-On Defaults

* "Synch ADS" if set Disabled can speed up performance, but must set "Auto Configuration Disabled"(see page 18) first !

● THE SETUP FOR OPERATION 486DX2-50/OVERDRIVE-25/486SX-25 CPU SYSTEM M/B

AMIBIOS SETUP PROGRAM- ADVANCE CHIPSET SETUP
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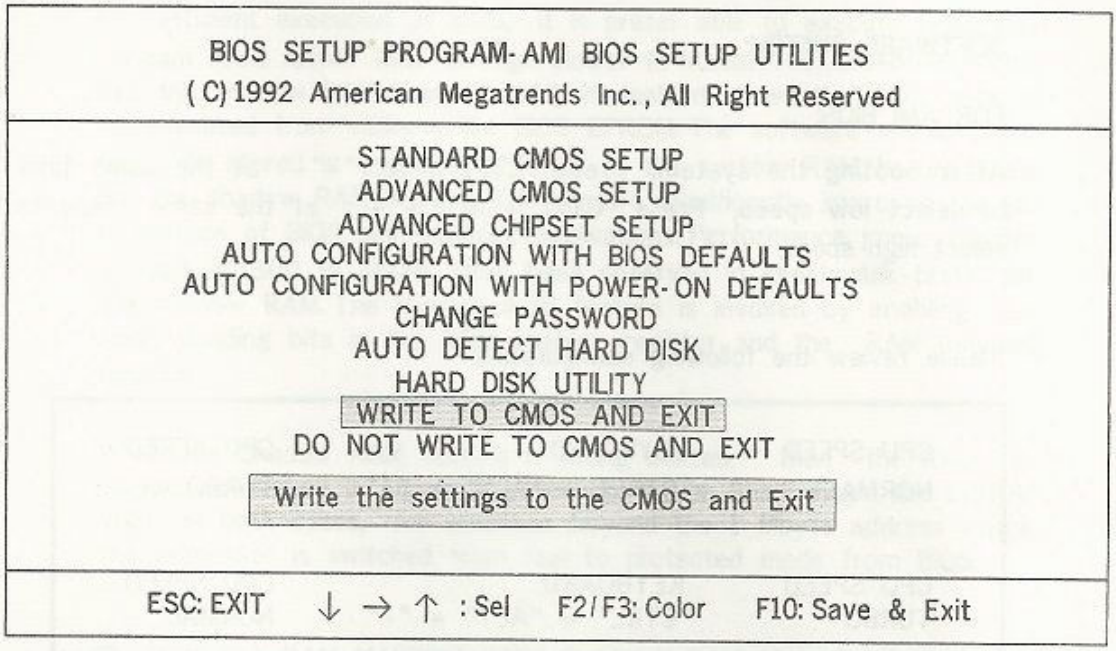
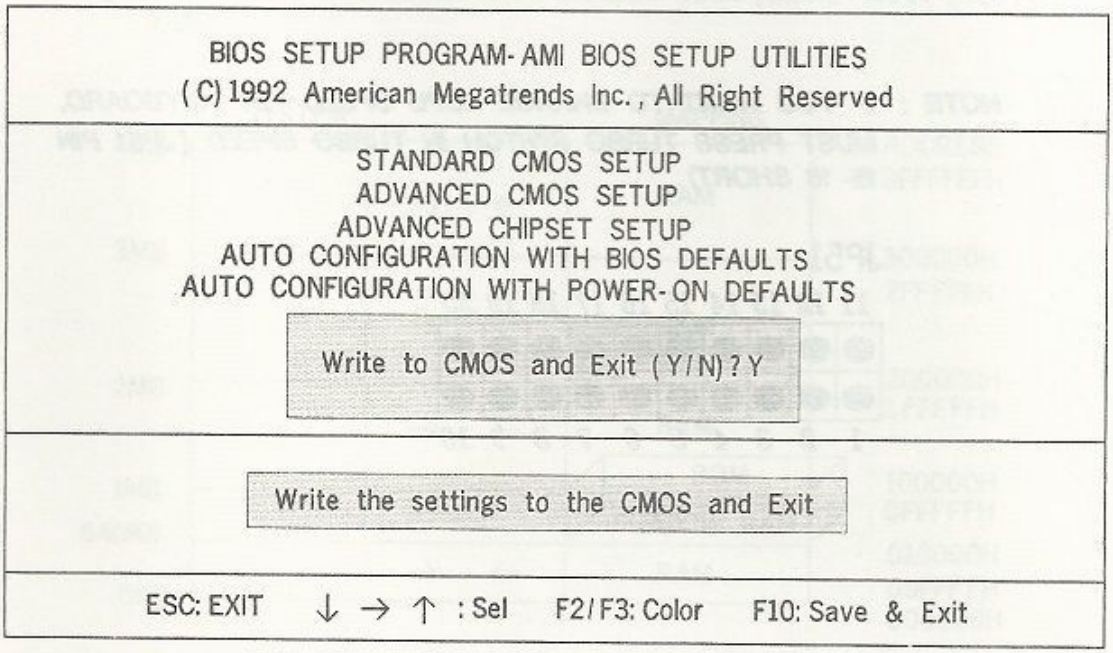
Local Ready Synchronized	: Enabled	Definition of Block 1	: NonCache
* Synch ADS	: Enabled	Non-Cacheable Block-1 Size	: 0 KB
Hidden Refresh	: Enabled	Non-Cacheable Block-1 Base	: 0000000H
Slow Refresh	: Disabled	Cyrix A20M Pin	: Enabled
Cache Scheme	: W-Back	Cyrix Pin Enabled	: Barb
VL-Bus Master Channel 1 & 2	: Disabled		
Video BIOS Cache	: Enabled		
DRAM Read/Write	: 1 WS		
SRAM Read	: 0 WS		
SRAM Burst	: Enabled		
SRAM Write	: 0 WS		
Master Cycle Swap	: Disabled		
IO Recovery Time	: 1ATCLK		
AT Wait State	: 0 WS		
AT Bus CLK	: SCLK/3		
Definition of Block 0	: NonCache		
Non-Cacheable Block-0 Size	: 0 KB		
Non-Cacheable Block-0 Base	: 0000000H		

Esc: Exit ↓ → ↑: Sel (Ctrl) Pu/Pd: Modify F1: Help F2/F3: Color
F5: Old Values F6: BIOS Setup Defaults F7: Power-On Defaults

* "Synch ADS" if set Disabled can speed up performance, but must set "Auto Configuration Disabled" (see page 18) first !

Select this option and press "ENTER" key after CMOS setup is done to aceivate the changes. User is prompted "Write to CMOS and EXIT(Y/N)?"N". Press "Y" to save the changes and System reboot. Press "N" to go back to the setup program.





ALTERNATIVE SYSTEM SPEED

SOFTWARE SWITCH:

FOR AMI BIOS:

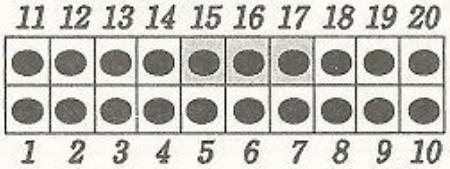
After booting the system. Press "CTRL"+"ALT"+"-" at the same time to select low-speed, Press "CTRL"+"ALT"+"+" at the same time to select high-speed.

Please review the following configuration:

CPU SPEED NORMAL	KEYBOARD "CTRL" + "ALT" + "+"	CPU SPEED TURBO
CPU SPEED TURBO	KEYBOARD "CTRL" + "ALT" + "-"	CPU SPEED NORMAL

NOTE : IF YOU WANT TO CHANGE CPU SPEED BY KEYBOARD, MUST PRESS TURBO SWITCH IN TURBO SPEED (JP51 PIN 15- 16 SHORT).

JP51

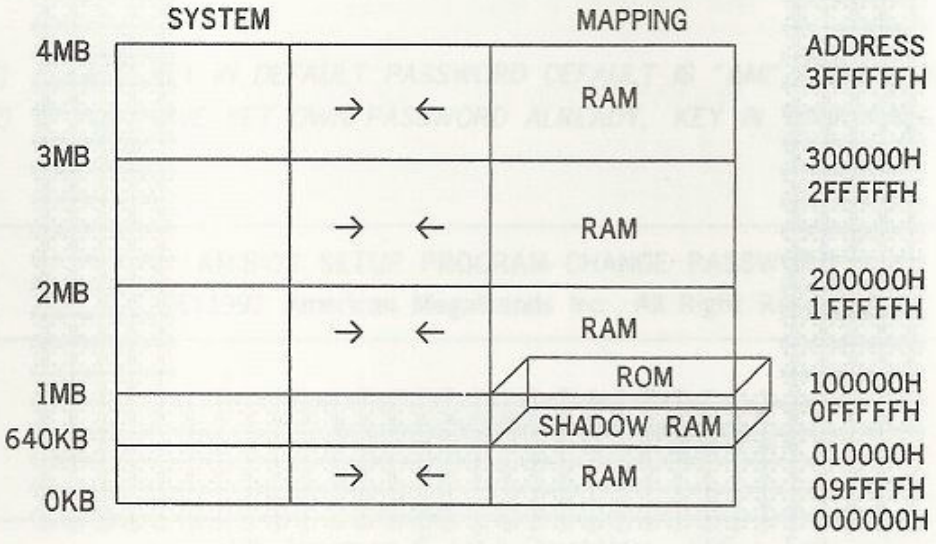


SHADOW RAM

For efficient execution of BIOS, it is prefer able to execute BIOS code through RAM rather than through slower EPROMs. The UNI486WB provides the shadow RAM feature which if enabled allows the BIOS code to be executed from address like BIOS EPROM. The software should transfer code stored in the BIOS EPROMs to the system RAM, before enabling the shadow RAM feature. This feature significantly improves the performance of BIOS-call intensive applications. Performance improvements as high as 300 to 400% have been observed in benchmark tests on the shadow RAM. The shadow RAM feature is invoked by enabling the corresponding bits in the ROM enable register and the RAM mapping register.

When the Shadow RAM feature is beiing utilized, then the RAM is mapped as shown in Figure 1, overlapping or Shadowing the EPROM area. In both cases, for accesses beyond the 1 Mbyte address range, the processor is switched from real to protected mode from BIOS,

● *FIGURE 1 RAM MAPPING WITH SHADOW RAM (MORE THAN 1MB OF RAM)*



APPENDIX

APPENDIX

■ NOTICE : *PLEASE REMEMBER YOUR PASSWORD OF SETTED CHARACTERS! IF KEY IN ERROR PASSWORD THE SYSTEM CAN'T BOOT ON ANY MORE!!*

```
BIOS SETUP PROGRAM- AMI BIOS SETUP UTILITIES
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STANDARD CMOS SETUP
ADVANCED CMOS SETUP
ADVANCED CHIPSET SETUP
AUTO CONFIGURATION WITH BIOS DEFAULTS
AUTO CONFIGURATION WITH POWER- ON DEFAULTS
CHANGE PASSWORD
AUTO DETECT HARD DISK
HARD DISK UTILITY
WRITE TO CMOS AND EXIT
DO NOT WRITE TO CMOS AND EXIT

Change the User Password Stored in the CMOS

ESC: EXIT  ↓ → ↑ : Sel  F2/F3: Color  F10: Save & Exit
```

■ *(1) PLEASE KEY IN DEFAULT PASSWORD DEFAULT IS "AMI" (FIRST TIME)*
*(2) IF YOU HAVE SET OWN PASSWORD ALREADY, KEY IN YOUR PASSWORD "*******"*

```
AMIBIOS SETUP PROGRAM- CHANGE PASSWORD
( C) 1992 American Megatrends Inc., All Right Reserved

Enter CURRENT Password: AMI

USE Maximum 6 ASCII Characters, ESC : Exit
```

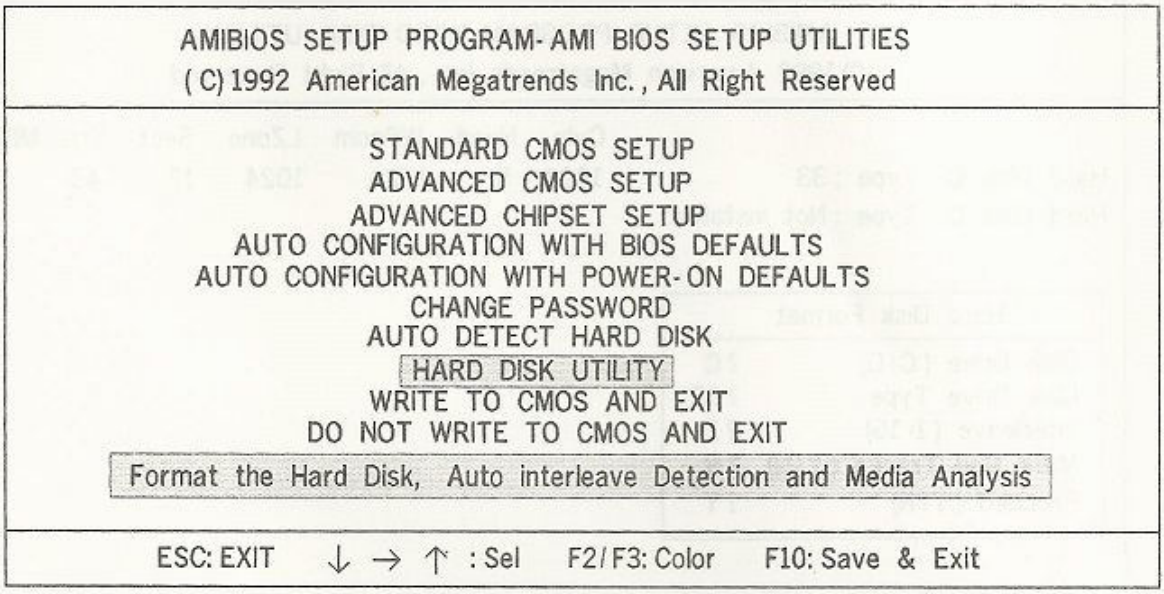
■ *IF YOU WANT TO CHANGE NEW PASSWORD GO TO NEXT SETUP !*

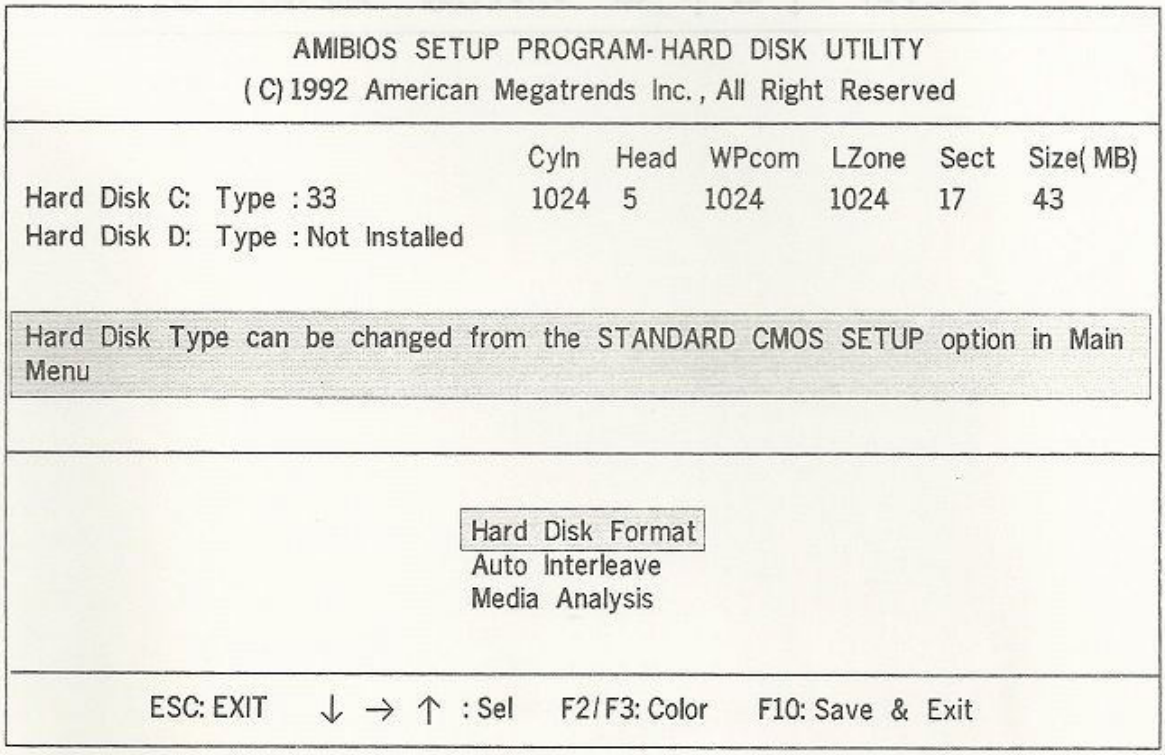
AMIBIOS SETUP PROGRAM- CHANGE PASSWORD (C) 1992 American Megatrends Inc., All Right Reserved
Enter NEW Password :
USE Maximum 6 ASCII Characters, ESC : Exit

AMIBIOS SETUP PROGRAM- CHANGE PASSWORD (C) 1992 American Megatrends Inc., All Right Reserved
Re- Enter NEW Password:
USE Maximum 6 ASCII Characters, ESC : Exit

■ *NEXT SCREEN OF MEANING IS YOU HAVE FINISHED PASSWORD SETTINGS! PRESS "ENTER" TO FINAL !*

AMIBIOS SETUP PROGRAM- CHANGE PASSWORD (C) 1992 American Megatrends Inc., All Right Reserved
NEW Password Installed:
USE Maximum 6 ASCII Characters, ESC : Exit


AMIBIOS SETUP PROGRAM- AMI BIOS SETUP UTILITIES
(C) 1992 American Megatrends Inc., All Right Reserved
STANDARD CMOS SETUP
ADVANCED CMOS SETUP
ADVANCED CHIPSET SETUP
AUTO CONFIGURATION WITH BIOS DEFAULTS
AUTO CONFIGURATION WITH POWER-ON DEFAULTS
CHANGE PASSWORD
AUTO DETECT HARD DISK
HARD DISK UTILITY
WRITE TO CMOS AND EXIT
DO NOT WRITE TO CMOS AND EXIT
Format the Hard Disk, Auto interleave Detection and Media Analysis
ESC: EXIT ↓ → ↑ : Sel F2/F3: Color F10: Save & Exit


AMIBIOS SETUP PROGRAM- HARD DISK UTILITY
(C) 1992 American Megatrends Inc., All Right Reserved
Cyln Head WPcom LZone Sect Size(MB)
Hard Disk C: Type : 33 1024 5 1024 1024 17 43
Hard Disk D: Type : Not Installed
Hard Disk Type can be changed from the STANDARD CMOS SETUP option in Main Menu
Hard Disk Format
Auto Interleave
Media Analysis
ESC: EXIT ↓ → ↑ : Sel F2/F3: Color F10: Save & Exit

AMIBIOS SETUP PROGRAM- HARD DISK UTILITY
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	Cyln	Head	WPcom	LZone	Sect	Size(MB)
Hard Disk C: Type : 33	1024	5	1024	1024	17	43
Hard Disk D: Type : Not Installed						

Hard Disk Format	
Disk Drive (C/ D)	? C
Disk Drive Type	? 33
Interleave (1- 16)	? 1
Mark Bad Tracks (Y/ N)	? N
Proceed (Y/ N)	? Y

ESC: EXIT ↓ → ↑ : Sel F2/ F3: Color F10: Save & Exit