25/33/40/50/66/75/100MHz
80486 VL Turbo Main Borad

MB

-1425UIV

-1433UIV

-1440UIV

-1450UIV

User's Manual

Thanks for your

choice of our product

From now on you will enjoy the

highest quality

&

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Date: 03/27/1995

Trademarks

Chapter1 System Board

Introduction

System Overview

The mainboard is a two-chip mainboard providing optimal performance for 486SX/DX/DX2/DX4(P24C), OverDrive™, P24D, P24T, Cyrix M6, M7, AMDA80486DX2 and UMC486 based PC/AT system. The mainboard is designed for system running at frequencies of 25/33/40/50MHz, supports GREEN FUNCTION (Power Down Mode). It is ideal for multi-tasking and fully supports MS/DOS, Windows, Windows NT, Novell, OS/2, etc. This manual also explains how to install the mainboard for operation, and how to set up your CMOS configuration with BIOS Setup program.

Features

• Hardware

Green function

- Power Down Timer from (0.5 - 512 mins.)
- Wake up by any key or mouse activity.

CPU

- 80486SX/DX/DX2, 80486SL, OverDriver™, P24T, DX4, Cyrix M6, Cyrix M7, AMD 486/DXLT/DX2, UMC 486.
- CPU socket as following:

  (1) 237-pin ZIF white socket (optional).
  (2) 237-pin PGA socket (optional).
  (3) 237-pin LIF socket (optional).

Speed

- 25/33/40/50MHz system and VESA Local Bus speed.
- Hardware and Software speed switchable function supported.
- Bus I/O clock 8MHz for maximum compatibility with add on cards.

Shadow RAM

- A memory controller that provides shadow RAM and supports 8-bit ROM BIOS.

DRAM memory

- Support (1) 1 bank 30-pin 256KB/1/4/16 MB SIMM Module sockets.
  (2) 2 banks 72-pin 1/2/4/8/16/32MB SIMM Module socket.
- Support DRAM memory up to 64MB on board.
- DRAM Type: page mode, 80ns required.

Cache memory

- Flexible Cache RAM size 64KB/128KB/256KB.

Bus slots

- Seven 16-bit ISA Bus slots and three VESA Local Bus slots.

Dimension

- 22 cm X 25 cm (W x L)

• Software

BIOS

- AWARD or AMI Legal BIOS

O.S.

- Offers the highest performance for MS/DOS, OS/2,Windows, Windows NT, Novell, etc.

System Performance

CPU Type/ Test Under Software	Landmark Ver 0.99	Landmark Ver 1.14	Landmark Ver 2.0	Power Meter MIPS Ver 1.7
486SX/DX-33MHz	167.8	151.9	111.53	14.9
486DX-40MHz	195.7	182.3	133.86	17.6
486DX2-66MHz	293.6	>200	223.06	26.9
486DX2-80MHz	234.9	>200	267.61	28.0
486DX4-75MHz	234.9	>200	272.40	30.0
486DX4-100MHz	293.6	>200	359.64	33.3

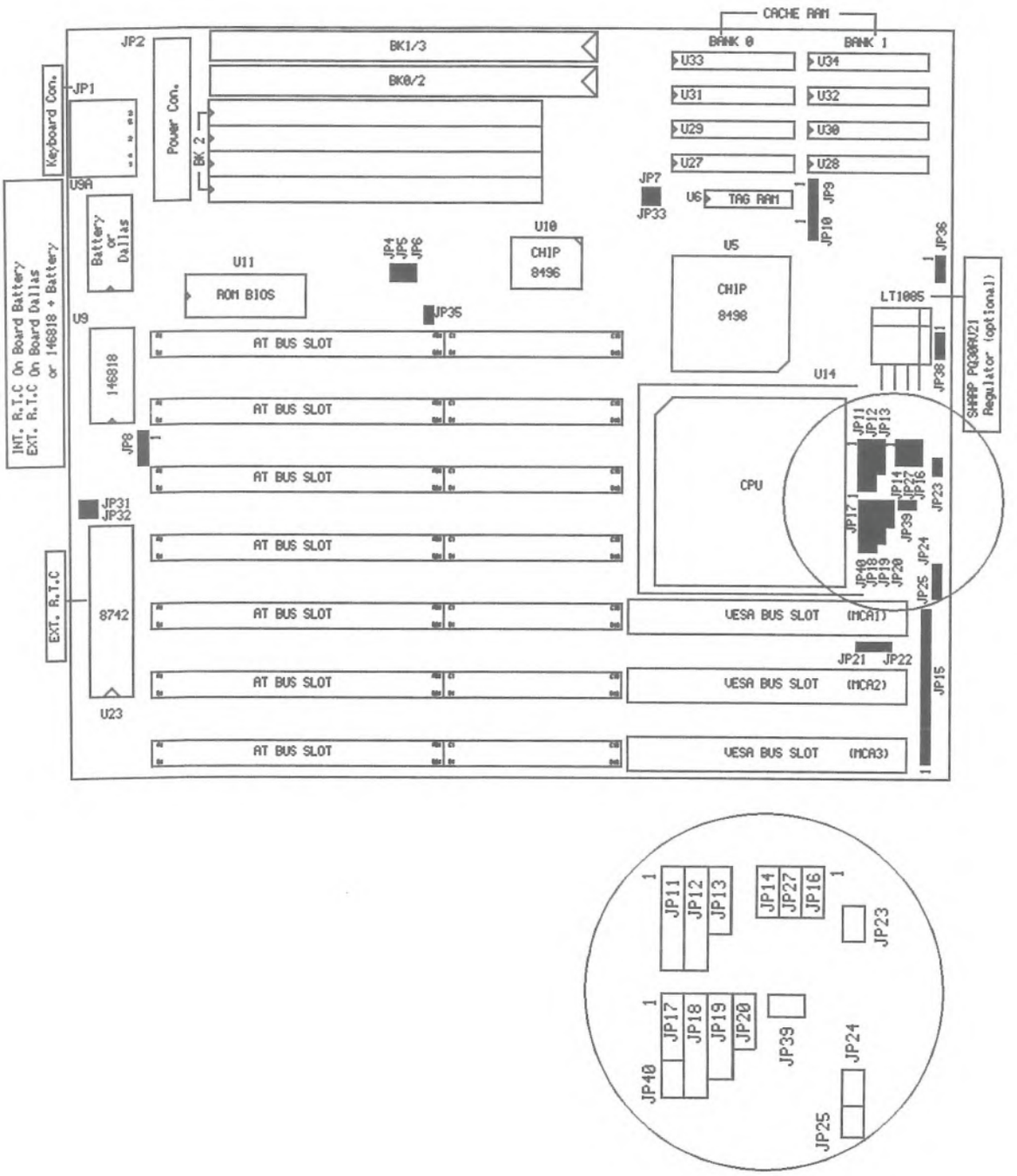
CPU Clock

CPU Type	486DX4-75 486DX-25/ 486DX2-50	486DX4-100 486DX-33/ 486DX2-66	486DX-40	486DX-50
CPU Clock	25MHz	33MHz	40MHz	50MHz

Mainboard Installation

Layout of Mainboard

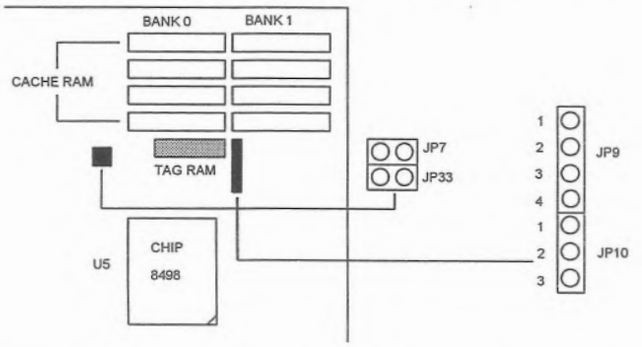
Model No. MB-1425/33/40/50UIV-A



Jumper Settings

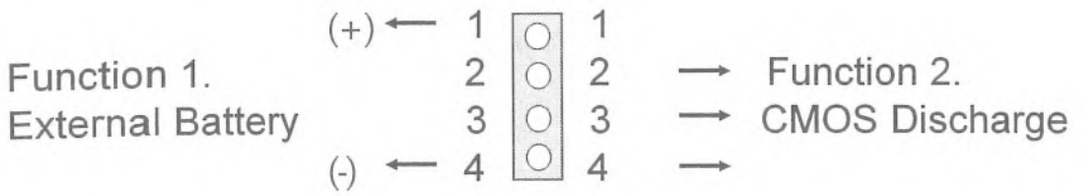
A jumper is several pins which may or may not be covered by a plastic jumper cap. A jumper is used to select different system options.

(A) JP7, JP9, JP10, JP33 Cache RAM Size Select



Jumper No./ SRAM size	64K	128K	256K	256K
JP7	open	open	closed	closed
JP33	open	closed	closed	closed
JP9	1 4 open	1 4 1-2 closed	1 4 1-2,3-4closed	1 4 2-3 closed
JP10	1 3 2-3 closed	1 3 1-2 closed	1 3 1-2 closed	1 3 2-3 closed
TAG RAM	8 K x 8	8 K x 8	32K x 8	32K x 8
Cache RAM	(8K x 8) x 8pcs	(32K x 8) x 4pcs	(64K x8) x 4pcs	(32K x8) x 8pcs
Bank	Bank 0 & 1	Bank 0	Bank 0	Bank 0 & 1

(B) JP8 This jumper has two functions, the details as the following:



Function 1. -- External Battery

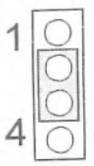
How to install an external battery on board:

Step 1: Turn the power off.

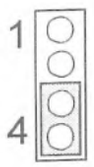
Step 2: Take off the cap of JP8 on board.

Step 3: Insert the connector of external battery to JP8.

Function 2. -- CMOS Discharge

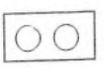


2-3 Closed: To maintain set up and extended setup data in CMOS for normal functioning.(default)

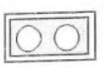


3-4 Closed: To clear CMOS setup memory, if there has been any inappropriate operation incurring the system is failure.

(C) JP21 VESA Bus Clock Select

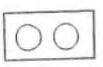


Open : Clock <= 33 MHz



Closed: Clock > 33 MHz

(D) JP22 VESA Bus Wait State



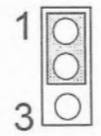
Open : o Wait State

Closed: 1 Wait State

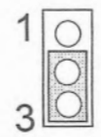
(E) JP24 Suspend LED

(F) JP25 Suspend Mode Switch

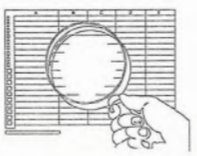
(G) JP36 MCA3 VESA Bus Slot Select



1-2 closed : Synchronous mode

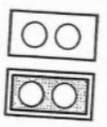


2-3 closed : Asynchronous mode



** JP36 jumper can be found in "1433/50UIV-A PCB Ver.3" and afterwards.*

(H) JP32 DS12887A(BQ3287A)/OEC12C887A Clear Select



open : Normal operation(default)

closed : Clear DS12887A(BQ3287A/ OEC12C887A)R.T.C module IC

***JP32 jumper can be found when IC DS12887A(BQ3287A/OEC12C887A) is used.**

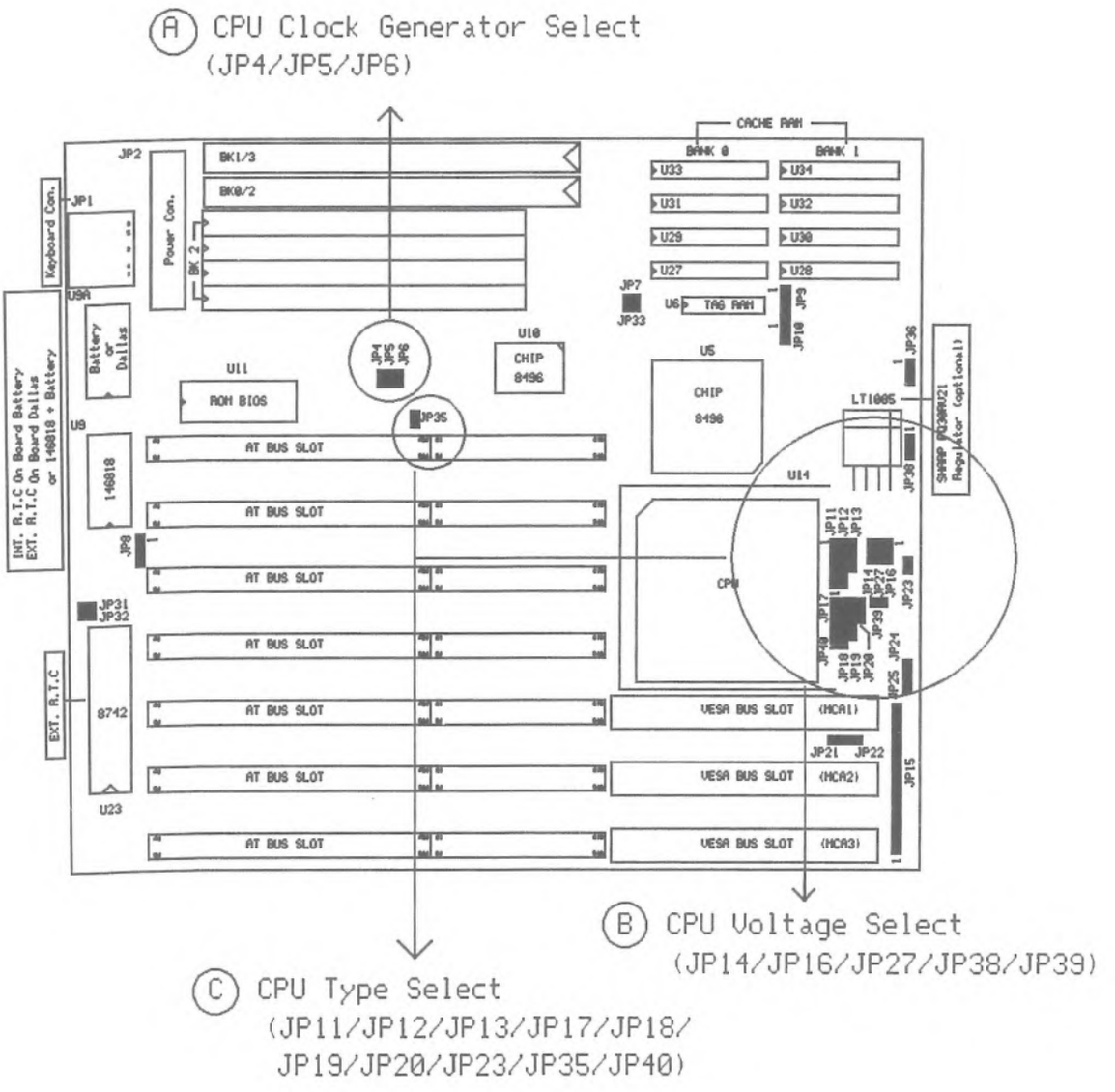
CPU Installation/Jumper Setting

There are three elements to determine proper jumper settings for CPU installation:

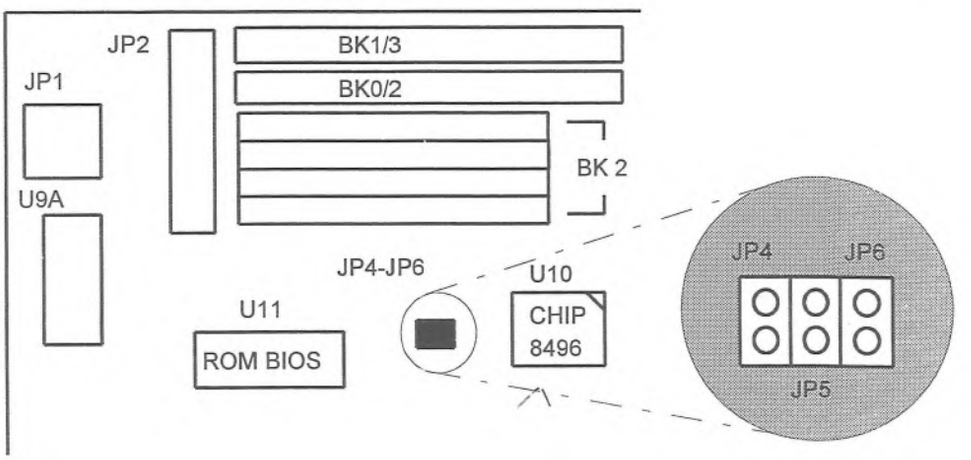
(A) Correct CPU clock.

(B) Voltage of CPU used.

(C) Type of CPU used.

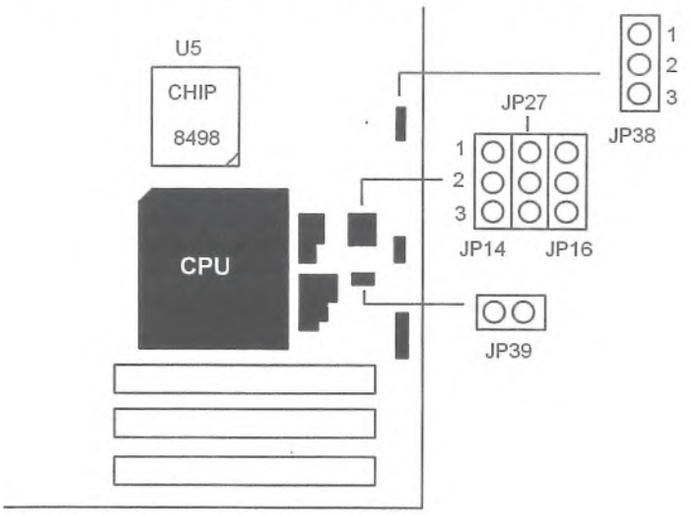


(A) JP4, JP5, JP6 CPU Clock Generator Select

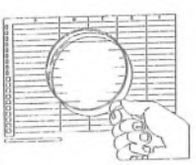


CPU Clock	JP4	JP5	JP6
25MHz (DX2-50MHz) (DX4-75MHz)	open	open	closed
33MHz (DX2-66MHz) (DX4-100MHz)	closed	closed	closed
40MHz (DX2-80MHz)	open	closed	closed
50MHz (DX-50MHz)	closed	open	open

(B) JP14, JP16, JP27,JP38,JP39 CPU Voltage Select



Function	JP14	JP27	JP16	JP38	JP39
3.3--3.6 Voltage CPU	1-2 closed	1-2 closed	1-2 closed	1-2 closed	open
Cyrix 4 Voltage CPU	1-2 closed	1-2 closed	1-2 closed	2-3 closed	closed
For 5 Voltage CPU	2-3 closed	2-3 closed	2-3 closed	1-2 closed	open



**JP38 and JP39 jumpers can be found in "1433/50UIV-A PCB Ver.6" and afterwards, support Cyrix 4V CPU.*

**When 3.45--3.6 or 4 Voltage CPU is installed, please have SHARP PQ30RV21 (Regulator) on board (LT1085 position). (optional)*

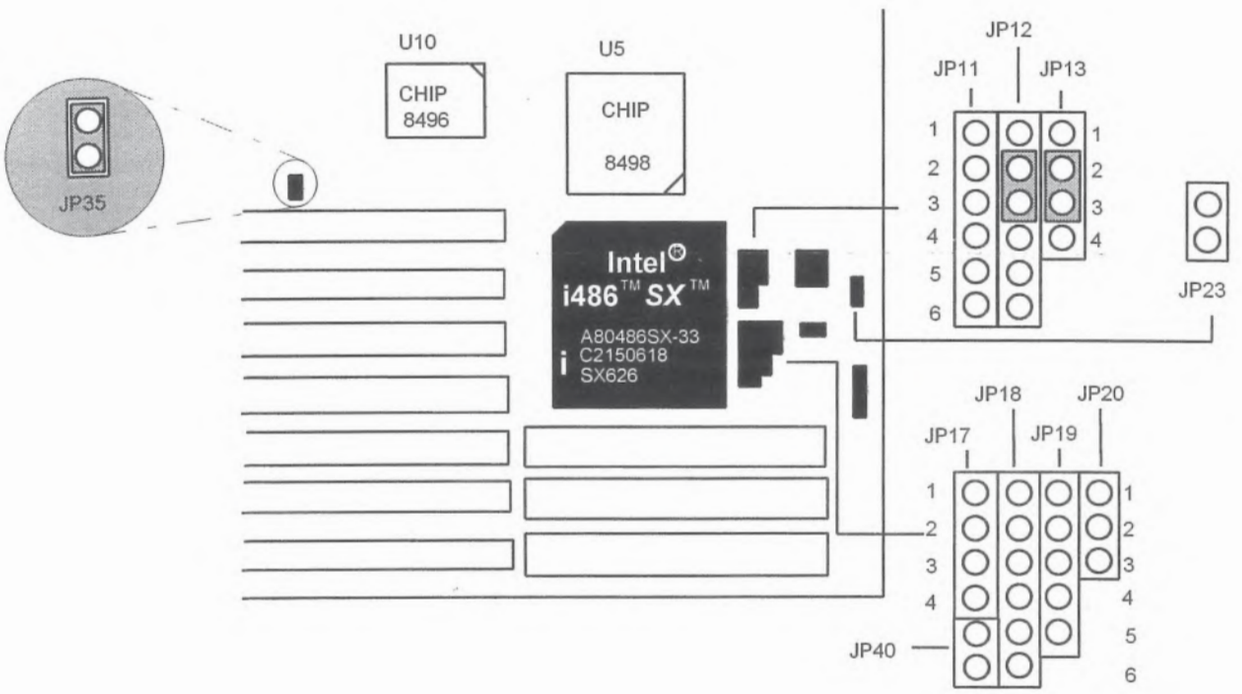
(C) JP11,JP12,JP13,JP17,JP18,JP19,JP20,JP23,JP35 CPU Type Select

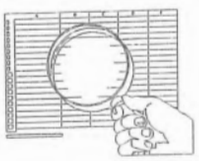
PCB Revision Description

PCB Ver.	JP20	JP23	JP40	Remark
Ver. 1	NO	NO	NO	
Ver. 2	NO	NO	NO	
Ver. 3	NO	YES	NO	support AMD 3V CPU (A80486DX2)
Ver. 5	YES(1x2pin)	NO	NO	support AMD 3V CPU (A80486DX2)
Ver. 6	YES(1x2pin)	NO	NO	support AMD 3V CPU(A80486DX2) & Cyrix 4V CPU(Cx486 DX2-80)
Ver. 7	YES(1x3pin)	NO	YES	support AMD 3V CPU(A80486DX2) / Cyrix 4V CPU(Cx486 DX2-80) / AMD Enhanced (plus) CPU

a. Intel 486SX

- Intel 486SX CPU without Green functions.

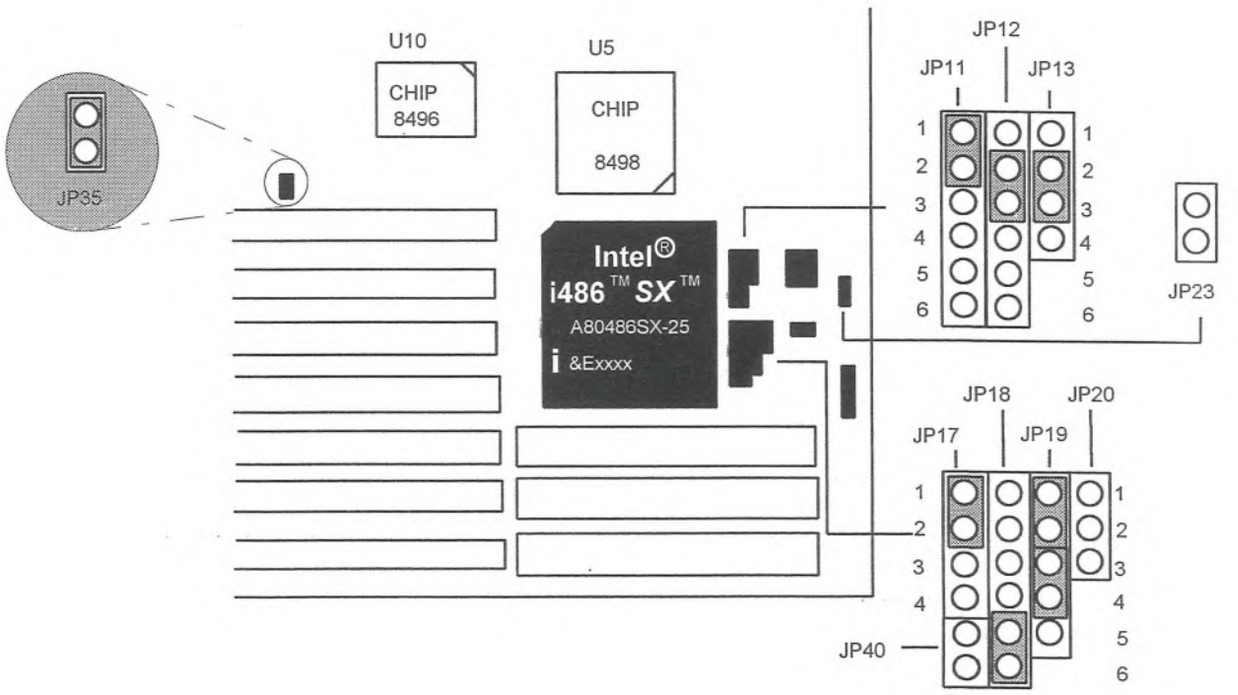


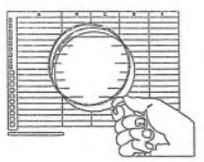


*1. JP23 can be found **"only"** in PCB Ver: 3.*
2. JP20 can be found in PCB Ver: 5 & afterwards.
3. JP40 can be found in PCB Ver: 7 & afterwards.
4. Please check page 1-9 CPU clock generator select & page 1-10 CPU voltage select.

b. Intel 486SX

- CPUs marked with "&Exxxx" can support Green functions.

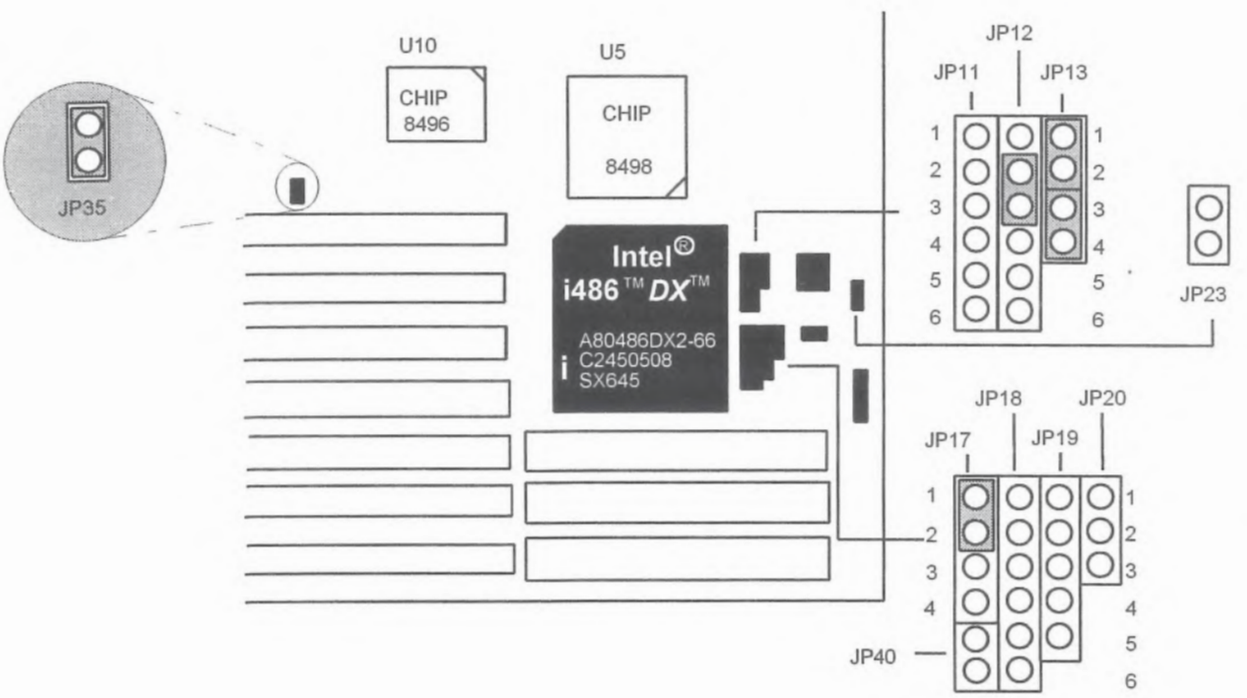


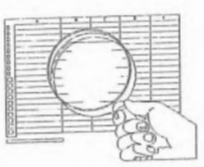


*1. JP23 can be found **"only"** in PCB Ver: 3.*
2. JP20 can be found in PCB Ver: 5 & afterwards.
3. JP40 can be found in PCB Ver: 7 & afterwards.
4. Please check page 1-9 CPU clock generator select & page 1-10 CPU voltage select.

c. Intel 486DX/DX2

- NON-Green (SMMmode) Functions.
- Old version, stop delivery from manufacturer.





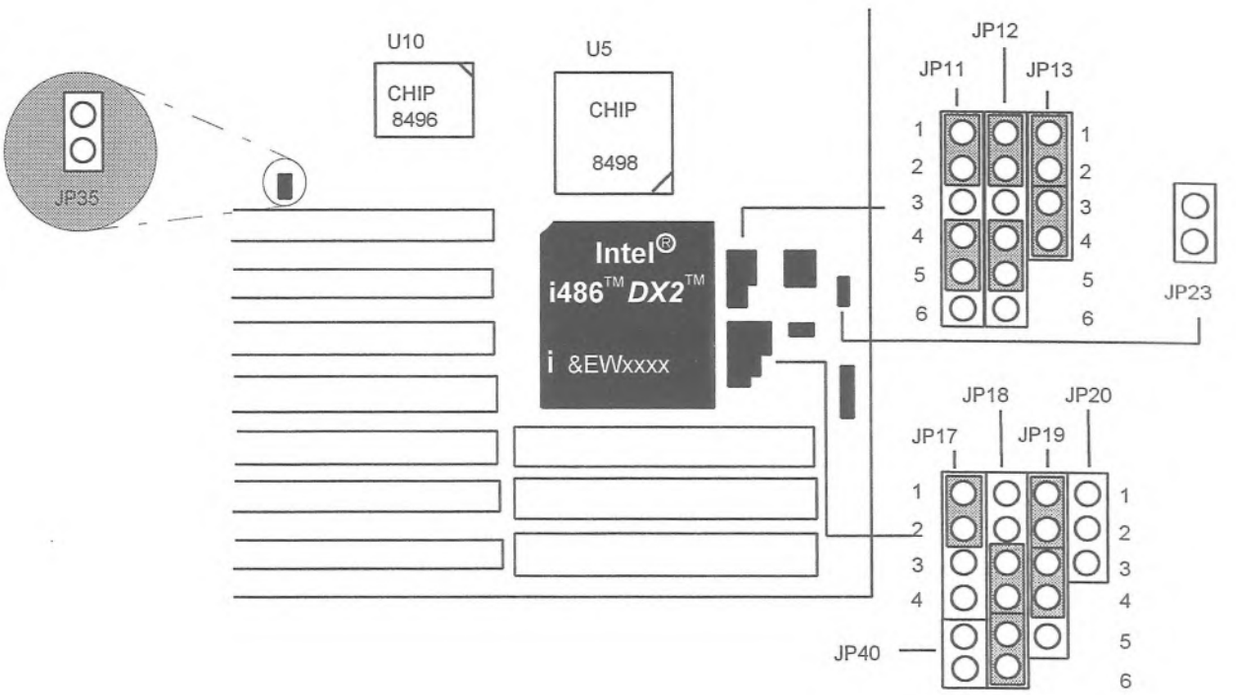
*1. JP23 can be found **"only"** in PCB Ver: 3.*
2. JP20 can be found in PCB Ver: 5 & afterwards.
3. JP40 can be found in PCB Ver: 7 & afterwards.
4. Please check page 1-9 CPU clock generator select & page 1-10 CPU voltage select.

d. Intel 486 DX/DX2/DX4 /DX4 OverDrive™

- CPUs marked with "&Exxxx" can support Green functions.

Intel P24D

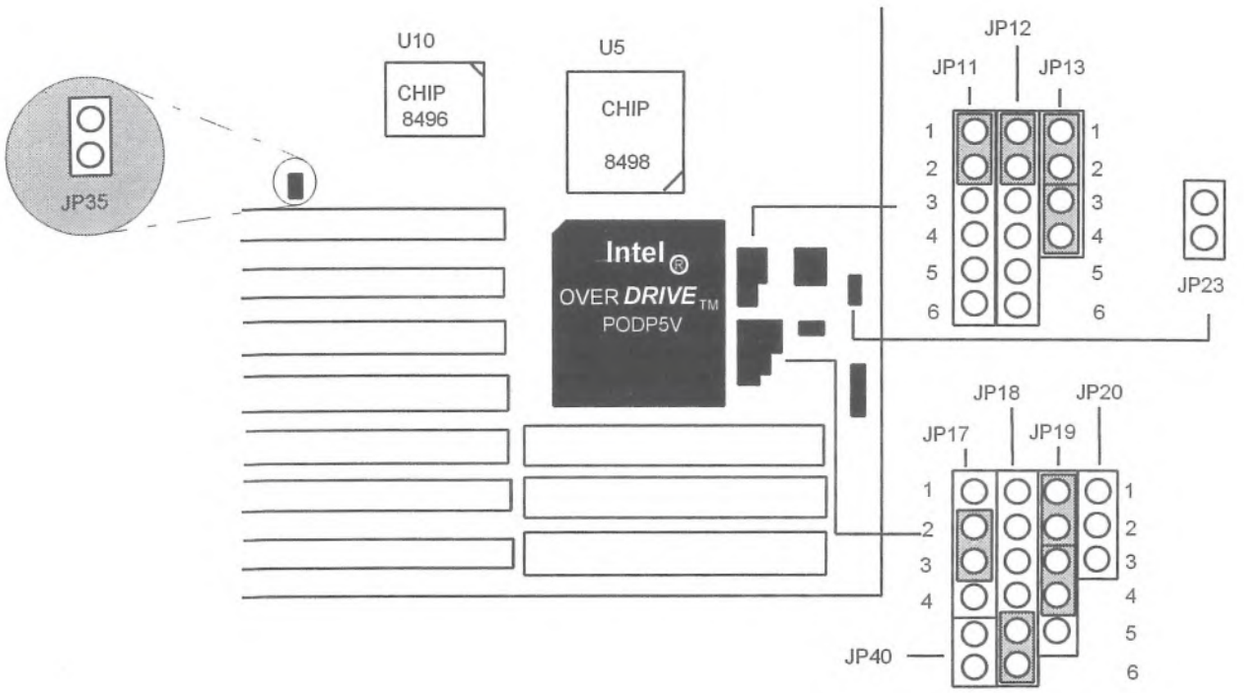
- CPUs marked with "&EWxxxx" can support Write-Back mode for the CPU's internal cache.



*1. JP23 can be found **"only"** in PCB Ver: 3.*
2. JP20 can be found in PCB Ver: 5 & afterwards.
3. JP40 can be found in PCB Ver: 7 & afterwards.
4. Please check page 1-9 CPU clock generator select & page 1-10 CPU voltage select.

e. Intel P24T

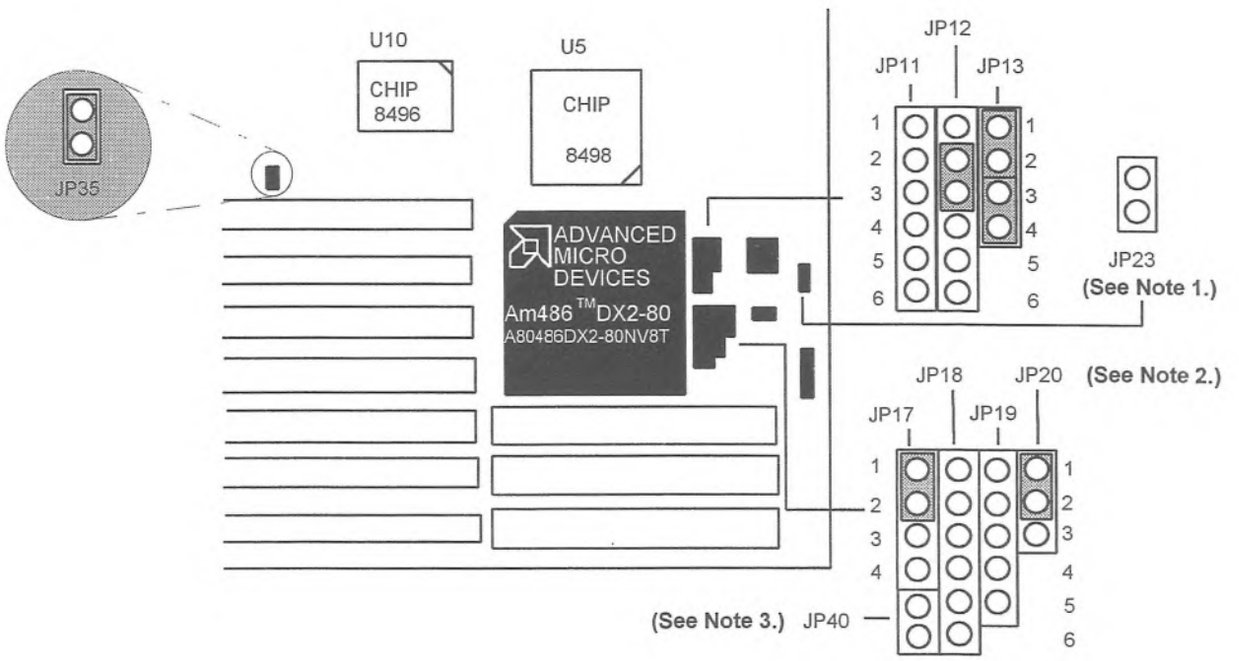
- Pentium OverDrive™ Processor, 237 pin.

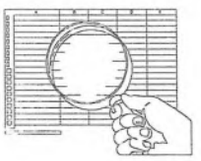


*1. JP23 can be found **"only"** in PCB Ver: 3.*
2. JP20 can be found in PCB Ver: 5 & afterwards.
3. JP40 can be found in PCB Ver: 7 & afterwards.
4. Please check page 1-9 CPU clock generator select & page 1-10 CPU voltage select.

f. AMD 486DX/DX2/DX4

- AMD 486DX/DX2/DX4 without Green functions.

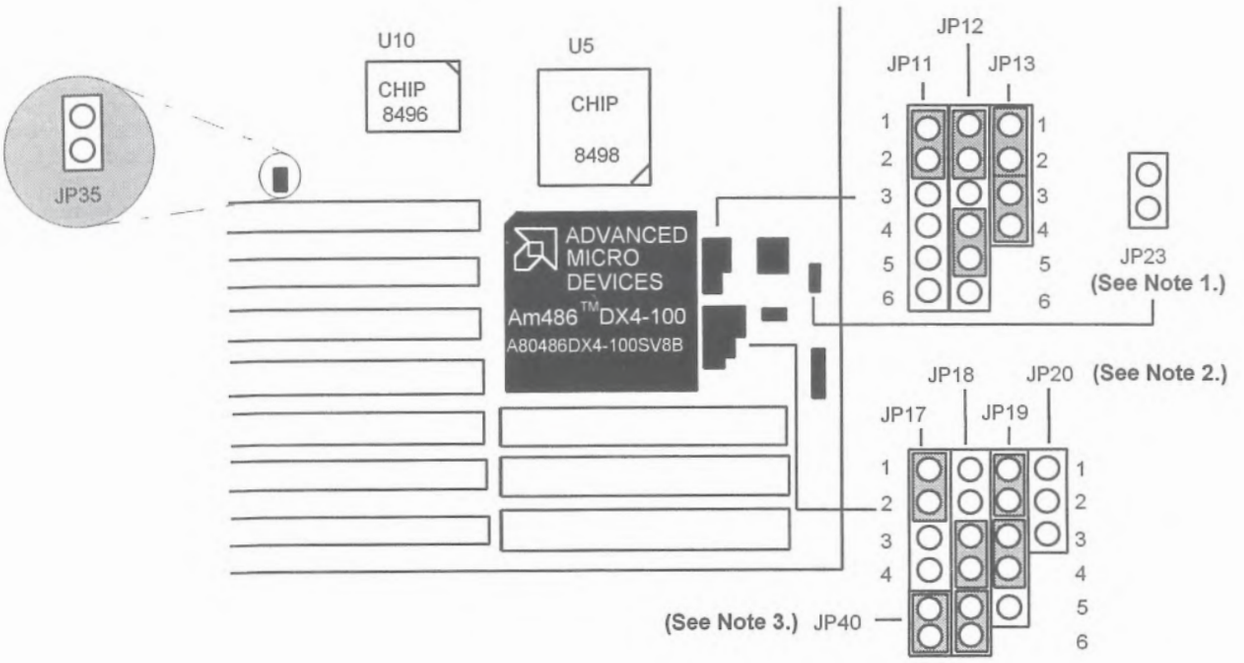


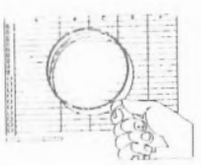


*1. JP23 can be found **"only"** in PCB Ver: 3.*
For Ver: 3 (JP23:DX/DX4=open, DX2=closed).
2. JP20 can be found in PCB Ver: 5 & afterwards.
For Ver:5/6 (JP20: DX/DX4=open, DX2=closed).
For Ver: 7 (JP20: DX/DX4=open DX2=1-2 closed).
3. JP40 can be found in PCB Ver: 7 & afterwards.
4. Please check page 1-9 CPU clock generator select & page 1-10 CPU voltage select.

g. AMD 486 DX2/DX4 Enhanced (Plus)

- Write Back Processor, With Green (SMM mode) Functions.
- CPUs marked with "A80486xxx-xxxSV8B" can support Write-Back mode for the CPU's internal cache.
- The AMD 486DX2/DX4 Enhanced (plus) CPU for PCB Ver. 7 & afterwards.

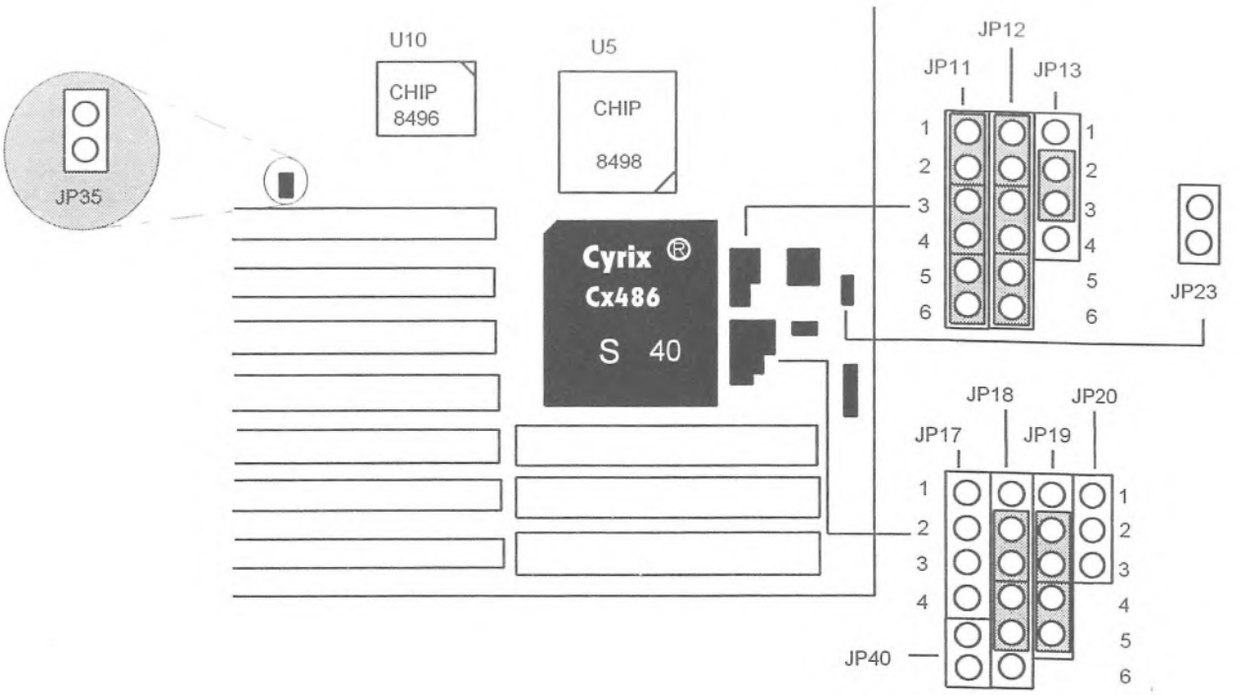




*1. JP23 can be found **"only"** in PCB Ver: 3.*
For Ver: 3 (JP23:DX/DX4=open, DX2=closed).
2. JP20 can be found in PCB Ver: 5 & afterwards.
For Ver: 5/6 (JP20: DX/DX4=open, DX2=closed).
For Ver: 7 (JP20: DX/DX4=open, DX2=2-3 closed).
3. JP40 can be found in PCB Ver: 7 & afterwards.
4. Please check page 1-9 CPU clock generator select & page 1-10 CPU voltage select.

h. Cyrix 486SX (M6)

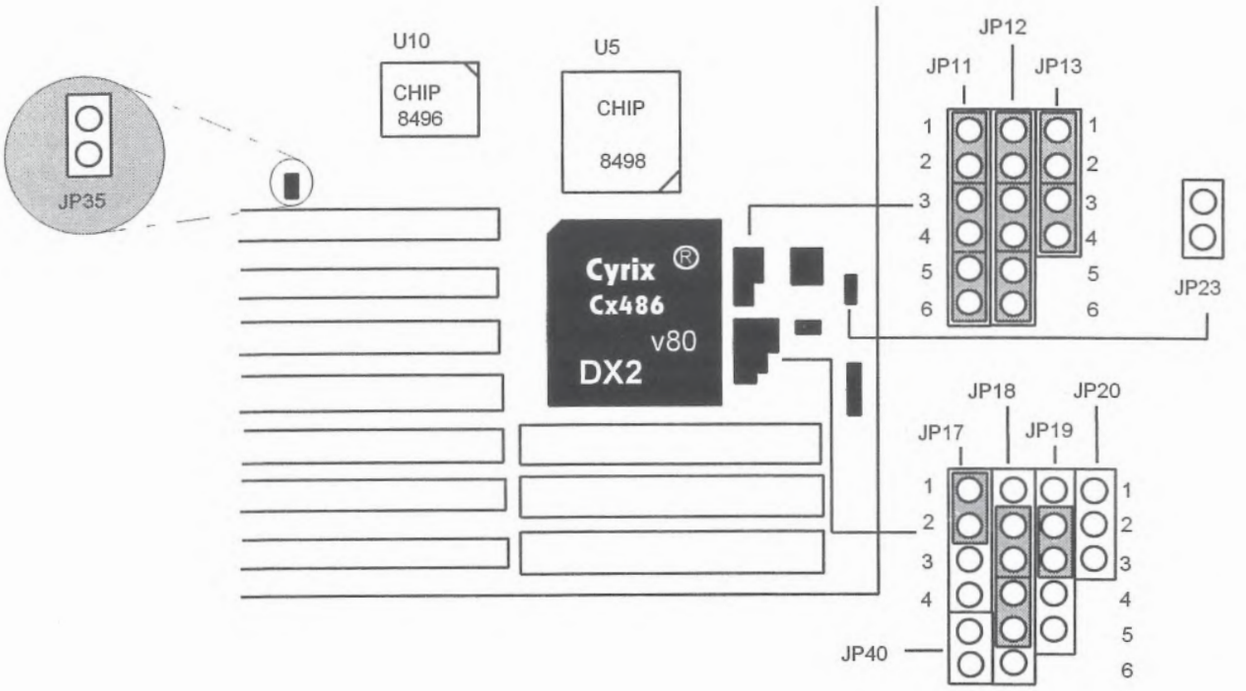
- Cyrix M6 CPU with Green (SMM mode) Functions.

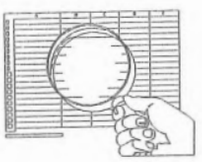


1. ***JP11: 5-6 pin (is for double clock).***
2. *JP23 can be found* ***"only"*** *in PCB Ver: 3.*
3. *JP20 can be found in PCB Ver: 5 & afterwards.*
4. *JP40 can be found in PCB Ver: 7 & afterwards.*
5. *Please check page 1-9 CPU clock generator select & page 1-10 CPU voltage select.*

i. Cyrix 486DX/DX2 (M7)

- Cyrix M7 CPU with Green (SMM mode) Functions.

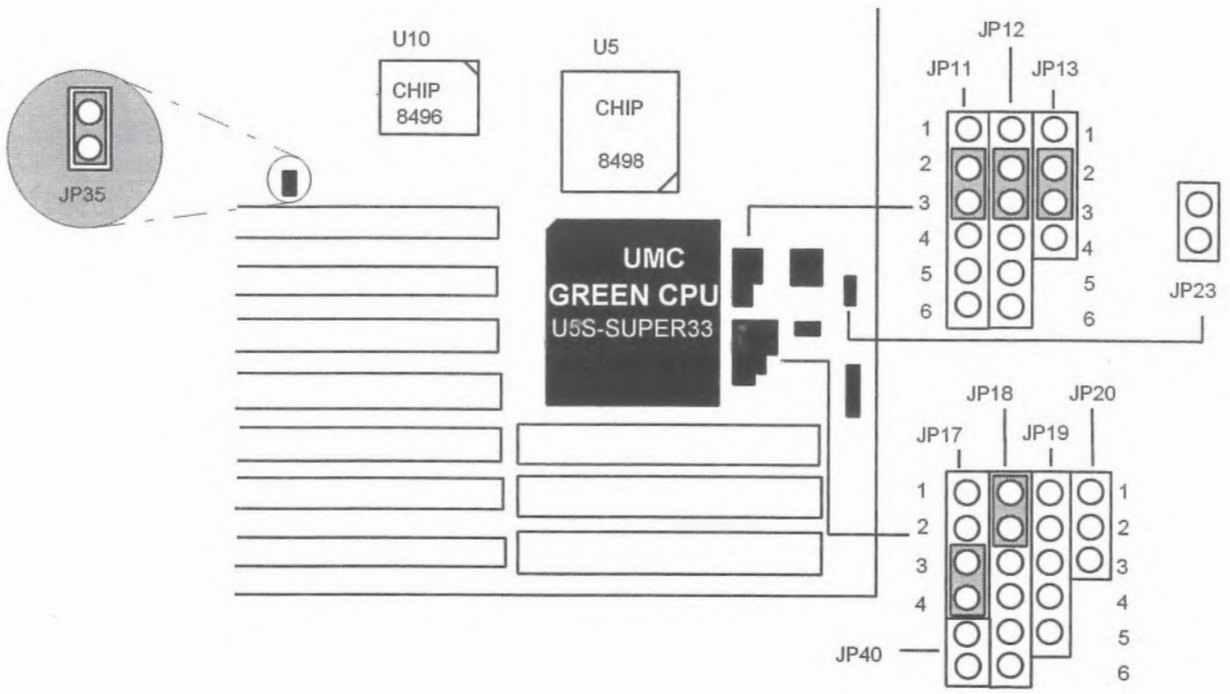


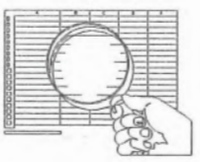


1. ***JP11: 5-6 pin (is for double clock).***
2. *JP23 can be found **"only"** in PCB Ver: 3.*
3. *JP20 can be found in PCB Ver: 5 & afterwards.*
4. *JP40 can be found in PCB Ver: 7 & afterwards.*
5. *Please check page 1-9 CPU clock generator select & page 1-10 CPU voltage select.*

j. UMC 486 (U5S)

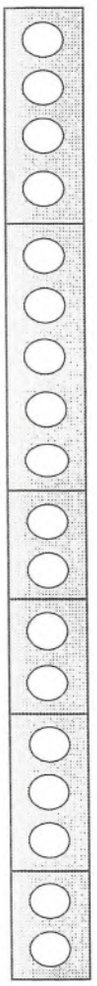
- UMC U5S CPU with Green (SMM mode) Functions.





*1. JP23 can be found **"only"** in PCB Ver: 3.*
2. JP20 can be found in PCB Ver: 5 & afterwards.
3. JP40 can be found in PCB Ver: 7 & afterwards.
4. Please check page 1-9 CPU clock generator select & page 1-10 CPU voltage select.

Connectors

JP15	Pin No.	Assignment	Function
	1	Speaker	Speaker Connector
	2	No Connection	
	3	Ground	
	4	+5Vdc	
	5	Power LED(+)	Power LED & Keylock
	6	No Connection	
	7	Ground	
	8	Keylock	
	9	Ground	
	10	Turbo LED(-)	Turbo LED
	11	Turbo LED(+)	
	12	Reset Control	Reset
	13	Ground	
	14	Turbo Control	Turbo Switch
	15	Ground	
	16	No Connection	
	17	+5Vdc	+5V,Gnd
	18	Ground	

DRAM Installation

DRAM Access Time: 80ns, page mode

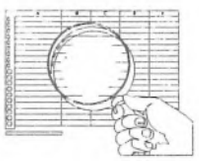
DRAM Type: 256KB/1MB/4MB/16MB SIMM Module (30Pin)

1MB/2MB/4MB/8MB/16MB/32MB SIMM Module (72Pin)

Memory Size	Bank 2 (30-Pin)	Bank 0/2 (72-Pin)	Bank 1/3 (72-Pin)
1M	256K Module x 4pcs	—	—
1M	—	1M Module x 1pcs	—
1M	—	—	1M Module x 1pcs
2M	256K Module x 4pcs	1M Module x 1pcs	—
2M	256K Module x 4pcs	—	1M Module x 1pcs
2M	—	1M Module x 1pcs	1M Module x 1pcs
2M	—	2M Module x 1pcs	—
2M	—	—	2M Module x 1pcs
3M	256K Module x 4pcs	1M Module x 1pcs	1M Module x 1pcs
3M	256K Module x 4pcs	—	2M Module x 1pcs
3M	—	1M Module x 1pcs	2M Module x 1pcs
3M	—	2M Module x 1pcs	1M Module x 1pcs
4M	256K Module x 4pcs	1M Module x 1pcs	2M Module x 1pcs
4M	1M Module x 4pcs	—	—
4M	—	2M Module x 1pcs	2M Module x 1pcs
4M	—	4M Module x 1pcs	—
4M	—	—	4M Module x 1pcs
5M	256K Module x 4pcs	4M Module x 1pcs	—
5M	256K Module x 4pcs	—	4M Module x 1pcs
5M	1M Module x 4pcs	1M Module x 1pcs	—
5M	1M Module x 4pcs	—	1M Module x 1pcs
5M	—	1M Module x 1pcs	4M Module x 1pcs
5M	—	4M Module x 1pcs	1M Module x 1pcs
6M	1M Module x 4pcs	—	2M Module x 1pcs
6M	—	4M Module x 1pcs	2M Module x 1pcs
6M	—	2M Module x 1pcs	4M Module x 1pcs

Memory Size	**Bank 2** (30-Pin)	**Bank 0/2** (72-Pin)	**Bank 1/3** (72-Pin)
7M	256K Module x 4pcs	4M Module x 1pcs	2M Module x 1pcs
7M	1M Module x 4pcs	1M Module x 1pcs	2M Module x 1pcs
8M	1M Module x 4pcs	4M Module x 1pcs	----
8M	1M Module x 4pcs	----	4M Module x 1pcs
8M	----	4M Module x 1pcs	4M Module x 1pcs
8M	----	8M Module x 1pcs	----
8M	----	----	8M Module x 1pcs
9M	256K Module x 4pcs	4M Module x 1pcs	4M Module x 1pcs
9M	1M Module x 4pcs	4M Module x 1pcs	1M Module x 1pcs
9M	1M Module x 4pcs	1M Module x 1pcs	4M Module x 1pcs
10M	1M Module x 4pcs	4M Module x 1pcs	2M Module x 1pcs
12M	1M Module x 4pcs	4M Module x 1pcs	4M Module x 1pcs
12M	4M Module x 4pcs	----	8M Module x 1pcs
12M	----	4M Module x 1pcs	8M Module x 1pcs
12M	----	8M Module x 1pcs	4M Module x 1pcs
16M	4M Module x 4pcs	----	----
16M	----	16M Module x 1pcs	----
16M	----	----	16M Module x 1pcs
17M	256K Module x 4pcs	16M Module x 1pcs	----
17M	256K Module x 4pcs	----	16M Module x 1pcs
17M	4M Module x 4pcs	1M Module x 1pcs	----
17M	4M Module x 4pcs	----	1M Module x 1pcs
18M	256K Module x 4pcs	1M Module x 1pcs	16M Module x 1pcs
18M	256K Module x 4pcs	16M Module x 1pcs	1M Module x 1pcs
19M	256K Module x 4pcs	16M Module x 1pcs	2M Module x 1pcs
20M	1M Module x 4pcs	16M Module x 1pcs	----
20M	1M Module x 4pcs	----	16M Module x 1pcs
20M	4M Module x 4pcs	4M Module x 1pcs	----
20M	4M Module x 4pcs	----	4M Module x 1pcs
21M	256K Module x 4pcs	4M Module x 1pcs	16M Module x 1pcs
21M	256K Module x 4pcs	16M Module x 1pcs	4M Module x 1pcs
24M	1M Module x 4pcs	4M Module x 1pcs	16M Module x 1pcs
24M	1M Module x 4pcs	16M Module x 1pcs	4M Module x 1pcs

Memory Size	**Bank 2** (30-Pin)	**Bank 0/2** (72-Pin)	**Bank 1/3** (72-Pin)
32M	4M Module x 4pcs	16M Module x 1pcs	—
32M	4M Module x 4pcs	—	16M Module x 1pcs
32M	—	16M Module x 1pcs	16M Module x 1pcs
32M	—	32M Module x 1pcs	—
32M	—	—	32M Module x 1pcs
33M	256K Module x 4pcs	—	32M Module x 1pcs
33M	256K Module x 4pcs	16M Module x 1pcs	16M Module x 1pcs
33M	4M Module x 4pcs	16M Module x 1pcs	1M Module x 1pcs
33M	4M Module x 4pcs	1M Module x 1pcs	16M Module x 1pcs
34M	4M Module x 4pcs	16M Module x 1pcs	2M Module x 1pcs
36M	4M Module x 4pcs	16M Module x 1pcs	4M Module x 1pcs
36M	4M Module x 4pcs	4M Module x 1pcs	16M Module x 1pcs
36M	1M Module x 4pcs	—	32M Module x 1pcs
36M	1M Module x 4pcs	16M Module x 1pcs	16M Module x 1pcs
48M	4M Module x 4pcs	16M Module x 1pcs	16M Module x 1pcs
48M	4M Module x 4pcs	—	32M Module x 1pcs
48M	—	16M Module x 1pcs	32M Module x 1pcs
48M	—	32M Module x 1pcs	16M Module x 1pcs
64M	—	32M Module x 1pcs	32M Module x 1pcs



**Each Bank can be installed and worked individually.*

**When Bank 2 sockets are filled with 30-pin modules, a 72-pin module of 1M/4M/16M can only be used on bank 0/2.*

**The mainboard provides optimal performance and free choices depending upon your needs.*

**The list above for DRAM configuration is just for reference.*

AMI BIOS Setup

BIOS Setup configures system information that is stored in CMOS RAM. BIOS Setup has an easy-to-use graphical user interface that will be immediately recognizable to.

Starting BIOS Setup

As POST executes, the following appears:

Hit <**Del**> if you want to run setup.

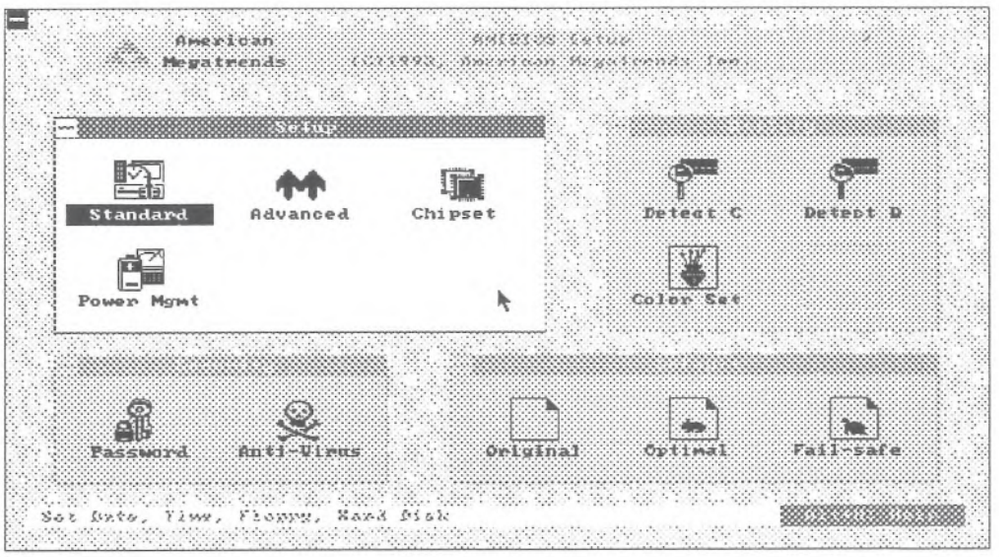
Press <**Del**> to run BIOS Setup.

Using the Keyboard with BIOS Setup

BIOS Setup has a built-in keyboard driver that uses simple keystroke combinations:

Keystroke	Function
<Tab>	Move to the next window or field.
→, ←, ↑, ↓	Move to the next field to the rigt, left, above, or below.
<Enter>	Select in the current field.
+	Increments a value.
-	Decrements a value.
<Esc>	Closes the current operation and return to previous level.
<PgUp>	Returns to the previous page.
<PgDn>	Advances to the next page.
<Home>	Returns to the beginning of the text.
<End>	Advances to the end of the text.
<Alt> <H>	Access a help window.
<Alt> <Spacebar>	Exit BIOS Setup.
Alphabetic keys	A to Z are used in the Virtual Keyboard, and are not case-sensitive.
Numeric keys	0 to 9 are used in the Virtual Keyboard and Numeric Keypad.

The BIOS Setup main menu, shown below, is organized into four windows.



Each section contains several icons. Clicking on each icon activates specific function.

Setup

The setup has four icons that permit you to set system configuration options such as date, time, hard disk type, floppy type, and many others.

Utilities

The utilities has three icons that perform system functions.

Security

The security has two icons that control BIOS security features.

Default

The default has three icons that permit you to select a group of settings for all BIOS Setup options.

Each BIOS Setup option has two default settings. The types of defaults are:

Optimal

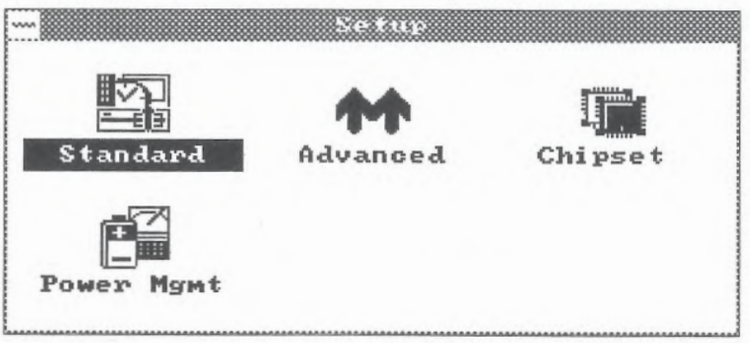
These settings provide the best performance characteristics.

Fail-Safe

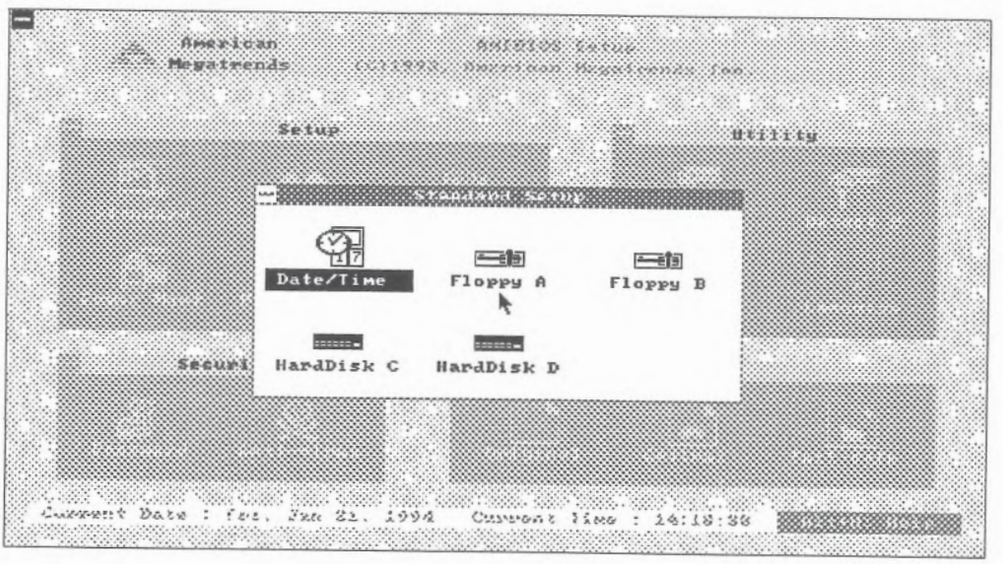
These settings are more likely to configure a workable computer when something is wrong. If you cannot boot the computer successfully, select the Fail-Safe BIOS Setup options and try to diagnose the problem after the computer boots. These settings do not provide optimal performance.

Standard Setup

The BIOS Setup options described in this section are selected by choosing the appropriate high-level icon from the BIOS Setup main menu selection screen. The selection window follows.



The Standard Setup screen follows.



Date, Day and Time Configuration

Select the Standard option. Select the Date and Time icon. The current values for each category are displayed. Enter new values through the keyboard.

Hard Disk C: Type.

Hard Disk D: Type

Select one of these hard disk drive icons to configure the drive named in the option. A scrollable screen that lists all valid disk drive types is displayed. Select the correct type and press <**Enter**>. If

the hard disk drive is an IDE drive, select Detect C: or Detect D: from the Utility section of the BIOS Setup main menu to allow BIOS to automatically detect the IDE drive parameters and report them on this screen.

Entering Drive Parameters

You can also enter the hard disk drive parameters. The drive parameters are:

Parameter	Description
Type	The number for a drive with certain identification parameters.
Cylinders	The number of cylinders in the disk drive.
Heads	The number of heads.
Write Precompensation	The size of a sector gets progressively smaller as the track diameter diminishes. Yet each sector must still hold 512 bytes. Write precompensation circuitry on the hard disk compensates for the physical difference in sector size by boosting the write current for sectors on inner tracks. This parameter is the track number where write precompensation begins.
Landing Zone	This number is the cylinder location where the heads will normally park when the system is shut down.
Sectors	The number of sectors per track. MFM drives have 17 sectors per track. RLL drives have 26 sectors per track. ESDI drives have 34 sectors per track. SCSI and IDE drive may have even more sectors per track.
Capacity	The formatted capacity of the drive is (Number of heads) x (Number of cylinders) x (Number of sectors per track) x (512 bytes per sector)

Using Auto Detect Hard Disk (Only for IDE Drives)

If you select Detect C: or Detect D: from the Utility section of the BIOS Setup main menu, BIOS automatically finds all IDE hard disk drive parameters. BIOS places the hard disk drive parameters that it finds in the Drive C: Type or Drive D: Type fields in Standard Setup.

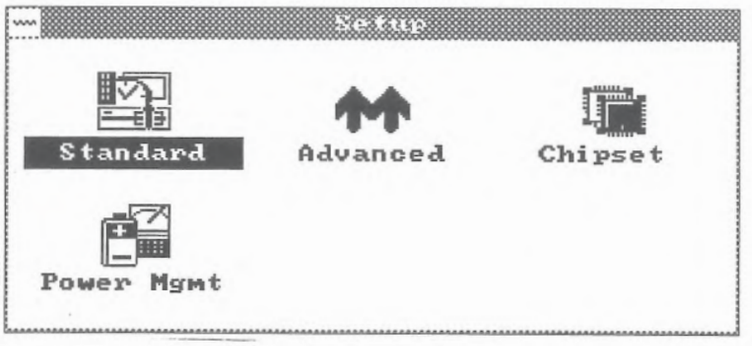
Floppy Drive A:

Floppy Drive B:

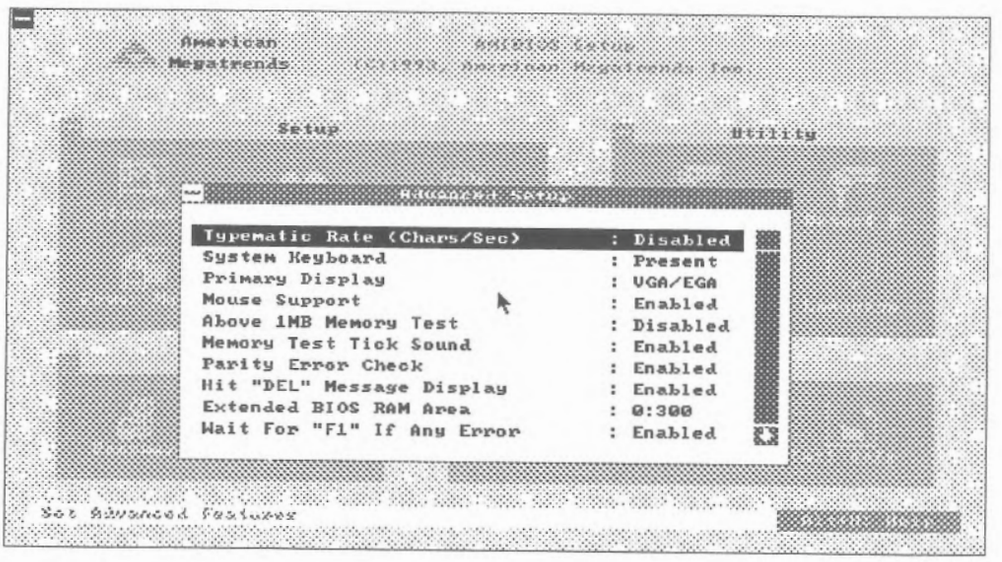
Move the cursor to these fields via ↑ and ↓ and select the floppy type. The settings are 360 KB 5 1/4 inch, 1.2 MB 5 1/4 inch, 720 KB 3 1/2 inch, 1.44 MB 3 1/2 inch, or 2.88 MB 3 1/2 inch.

Advanced Setup

The BIOS Setup options described in this section are selected by choosing the appropriate high-level icon from the BIOS Setup main menu. The selection window is shown below.



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 15, 20, 24, 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/PGA/EGA, or Not Installed.

Above 1 MB Memory Test

When this option is enabled, the BIOS 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 disables (turns off) the ticking sound during the memory test. The settings are Enabled or Disabled.

Parity Error Checking

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 <**Del**> 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 Top 1K or 0:300.

Wait for <F1> If Any Error

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

Press <F1> to continue

If this option is enabled, BIOS waits for the end user to press <F1> before continuing. If this option is disabled, BIOS 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.

Weitek Power 9000VGA

The default value is Absent. The settings are Absent or Present.

Floppy Drive Seek At Boot

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

System Boot Up Sequence

This option sets the sequence of boot drives (either floppy drive A: or hard disk drive C:) that BIOS 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 External cache memory.

Internal Cache

This option enables 486 CPU Internal cache memory.

Internal Cache WB or WT

This option Wr-Back or Wr-Thru Internal cache memory.

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 BIOS is executed. The Optimal and Fail-Safe default settings are Setup.

Video ROM Shadow C000,16K

When this option is set to Enabled, the video ROM area from C0000h - C3FFFh is copied (shadowed) to RAM for faster execution. The settings are Absent, No Shadow, or Shadow.

Video ROM Shadow C400,16K

When this option is set to Enabled, the video ROM area from C4000h - C7FFFh is copied (shadowed) to RAM for faster execution. The settings are Absent, No Shadow, or Shadow.

Shadow C800,16K Shadow CC00,16K Shadow D000,16K
Shadow D400,16K Shadow D800,16K Shadow DC00,16K
Shadow E000,64K

These options enable shadowing of the contents of the ROM area named in the option title. The settings are Absent, NoShadow, or Shadow. The ROM area that is not used by ISA adapter cards.

IDE Multi-Sector Transfer

The default value is Auto. The settings are Auto, 2, 4 or 8.

Primary IDE 32 Bit Transfer

The default value is Disabled. The settings are Disabled, Master, Slave or Mas/Sla.

Primary IDE Block Mode

The default value is Disabled. The settings are Disabled, Master, Slave or Mas/Sla.

Primary IDE LBA Mode

The default value is Mas/Sla. The settings are Disabled, Master, Slave or Mas/Sla.

Secondary IDE Present

The default value is 2. The settings are 2, None or 1.

Secondary IDE 32 BIT Transfer

The default value is Disabled. The settings are Disabled, Master, Slave or Mas/Sla.

Secondary IDE Block Mode

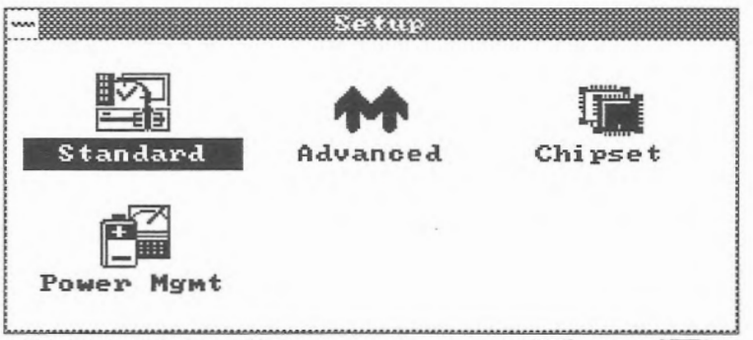
The default value is Disabled. The settings are Disabled, Master, Slave or Mas/Sla.

Secondary IDE LBA Mode

The default value is Mas/Sla. The settings are Disabled, Master, Slave or Mas/Sla.

Chipset Setup

The BIOS Setup options described in this section are selected by choosing the appropriate high-level icon from the BIOS Setup main menu. The selection window is shown below.

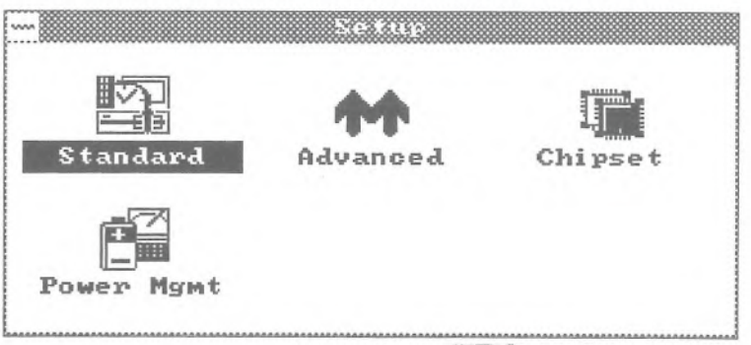


Chipset Setup

AUTO Config Function	: Enabled
Cache Read Hit Wait State	: 3-2-2-2
Cache Write Hit Wait State	: 2 W.S.
DRAM Wait State Select	: 2 W.S.
DRAM Page Mode	: Slow
Local Ready Delay Setting	: Delay 1T
CPU ADS# Delay 1T or Not	: Delay 1T
Signal LDEV# Sample Time	: in T2
Hardware DRAM Parity Check	: Disabled
Adaptor ROM Cache C800,16K	: Disabled
Adaptor ROM Cache CC00,16K	: Disabled
Adaptor ROM Cache D000,16K	: Disabled
Adaptor ROM Cache D400,16K	: Disabled
Adaptor ROM Cache D800,16K	: Disabled
Adaptor ROM Cache DC00,16K	: Disabled
Adaptor ROM Cache E000,32K	: Disabled
Adaptor ROM Cache E800,32K	: Disabled
LOWA20# Select	: Chipset
RC Rest Select	: Chipset

Power Management Setup

The BIOS Setup options described in this section are selected by choosing the appropriate high-level icon from the BIOS Setup main menu. The selection window is shown below.



Power Mangement Setup

Power Management Mode Select	: Enabled
Standby Timer Value	: 0.5 Min
Inactive Timer Value	: 2 Min
Monitor LPT Port Activity	: Enabled
Monitor COM Port Activity	: Enabled
Monitor ISA Master Activity	: Enabled
Monitor IDE Activity	: Enabled
Monitor FDC Activity	: Enabled
Monitor VGA Activity	: Disabled
Monitor KBC Activity	: Enabled
Monitor VESA Slave Activity	: Disabled
Clock Out on Standby Mode	: PCLK/4
VGA Power Control	: SMART
IDE Power Control	: Disabled
APM Function	: Disabled
NON SMI CPU Support	: IRQ 10

Utility

The following icons appear in this section:

Detect C:

if drive C: is an IDE drive, the hard disk drive parameters for drive C: are automatically detected and reported to the Hard Disk Drive C: screen in Standard Setup, so you can easily configure drive C:.

Detect D:

if drive D: is an IDE drive, the hard disk drive parameters for drive D: are automatically detected and reported to the Hard Disk Drive D: screen in Standard Setup, so you can easily configure drive D:.

IDE Setup:

IDE Setup can automatically detected and reported to four IDE Hard Disk Drive.

Note:

(The icons appear for "1433/50UIV PCB Ver.7" or later version.)

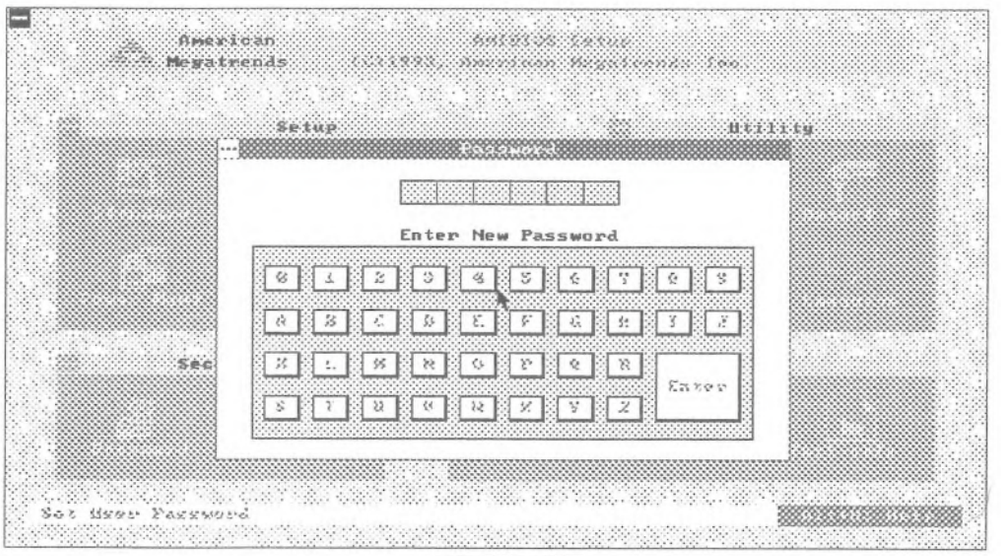
Color Set

sets the BIOS Setup screen colors.

Security

BIOS Password Support

BIOS 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 BIOS Setup is executed. The following screen appears when you select the password icon.



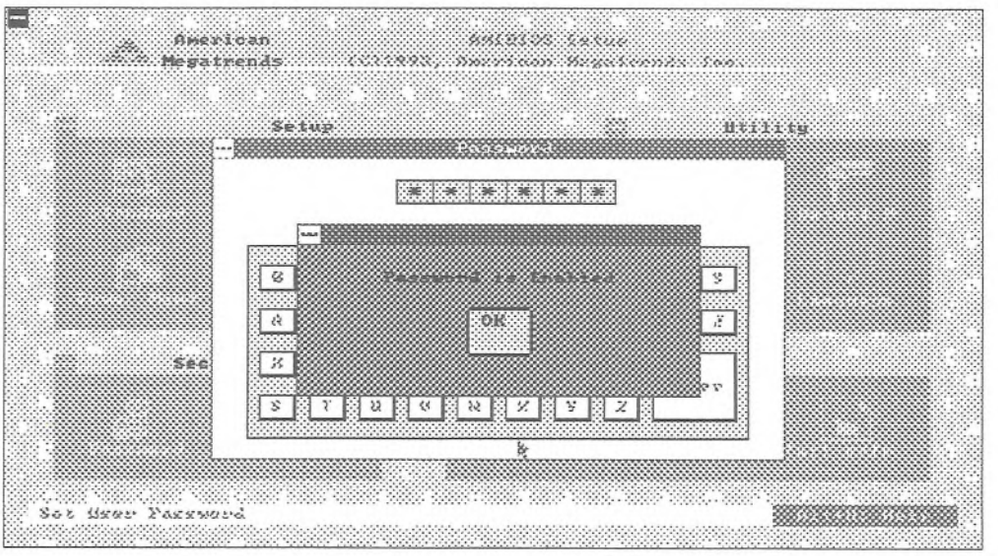
You can enter a password by:

- typing the password on the keyboard,
- selecting each letter via the mouse, or
- selecting each letter via the pen stylus.

Pen access must be customized for each specific hardware platform.

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 BIOS Setup is run). The password is stored in CMOS RAM. The tem asks for a password.

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



Select the Password icon from the Security section of the BIOS 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**>.

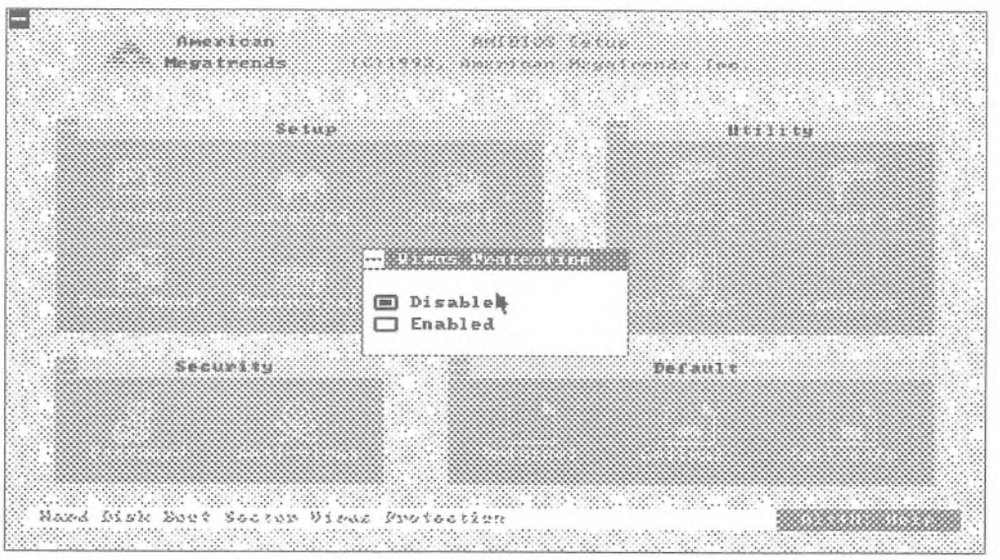
If the password confirmation is incorrect, an error message appears. If the new password is entered without error, press <**Esc**> to return to the BIOS Setup Main Menu. The password is stored in CMOS RAM after BIOS Setup completes. The next time the system boots, you are prompted for the password if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

Remember the Password

Keep a record of the new password when the password is changed.

Anti-Virus

When this icon is selected from the Security section of the BIOS Setup main menu, BIOS issues a warning when any program (or virus) issues a Disk Format command or 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 Enaled or Disabled. If enabled, the following appears when a write is attempted 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 retries before the Format utility is actually aborted.

Default

The icons in this section permit you to select a group of settings for all BIOS 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 BIOS Setup when you first began this BIOS Setup session.

Optimal

You can load the optimal default settings for the BIOS 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 BIOS Setup option settings by selecting the Fail-Safe icon from the Default section of the BIOS 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.