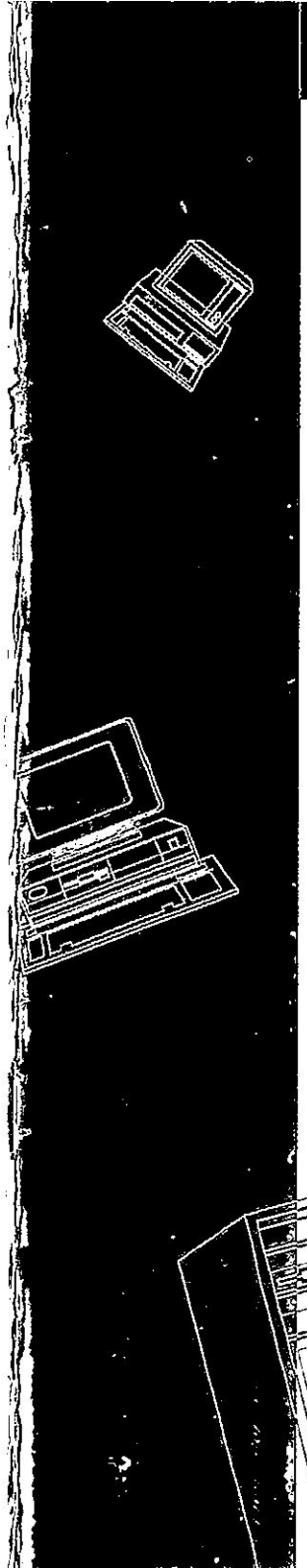
P/N 430-01006-401
ML-V4S471/472P/V1.0



SIS 486 P3 GREEN PC

User Manual

PC Main Board

DISCLAIMER

The information in this manual has been carefully checked and is believed to be accurate. We assume no responsibility for any inaccuracies that may still be contained in this manual. We reserve the right to make changes to this material at any time without notice.

TRADEMARK

All trademarks are the property of their owners.

Quick setup guide

CONTENTS

Description :

Jumper	Description	Setting
J1	Keylock Connector	(See P.2-2)
J2	Speaker Connector	(See P.2-2)
J4	Turbo LED Connector	(See P.2-1)
J5	Reset Switch Connector	(See P.2-1)
J13	CPU Selection	(See P.2-1)
J14	3.45V AMD 486 DX2/66/80 CPU	Close
	Others	Open
JP3	VESA Option : CLK>33MHz	2-3
	Others	1-2
JP4	VESA Identify Pins & Default	2-3
JP6, JP7	CPU Frequency Configuration	(See Quick Setup Guide B)
JP8, JP12, JP13, JP18, JP19, JP24, JP25, JP28, JP29, JP33, JP37, JP40, JP78	CPU Selection	(See P.2-1)
JP10	PM CLK Control	(See P.2-3)
JP27	Cyrix 486/SX2 CPU Selection	(See P.2-3)
JP30, JP31, JP32, JP35, JP36, JP55, JP81	Cache Memory Configuration	(See P.2-2)
JP39	CMOS Clear	(See P.2-3)
JP44	CPU Internal Clock Option	(See P.5-1)
JP73	Flash ROM Function	(See P.6-1)
JP74, JP75	Green Connector Pin	(See P.4-1)
S1	Turbo Switch Connector	(See P.2-1)
U50	3.45V CPU Support	(See P.2-3)
LED 1	Power LED Connector	(See P2-2)
J7	External Battery Connector	(See P.2-4)
JP38	Monitor Type Selection	(See P.2-3)
J9, J11, J12, JP17, JP20, JP43, JP79, TBSW, JP84	Default Settings (don't alter)	(See P.2-3)

Quick Setup Guide

(A) Most important configuration

SIS471 MB supports up to four 72-Pin **SIMM RAM**

XSIMM1	XSIMM2	XSIMM3	XSIMM4	Total Memory
1MB-S				1MB
1MB-S	1MB-S			2MB
1MB-S	1MB-S	2MB-D		4MB
2MB-D	2MB-D			4MB
4MB-S				4MB
2MB-D	2MB-D	4MB-S		8MB
4MB-S	4MB-S			8MB
8MB-D				8MB
4MB-S	4MB-S	4MB-S		12MB
4MB-S	4MB-S	4MB-S	4MB-S	16MB
8MB-D	8MB-D			16MB
16MB-S				16MB
4MB-S	4MB-S	16MB-S		24MB
8MB-D	8MB-D	8MB-D		24MB
8MB-D	8MB-D	8MB-D	8MB-D	32MB
16MB-S	16MB-S			32MB
32MB-D				32MB
16MB-S	16MB-S	16MB-S	16MB-S	64MB
32MB-D	32MB-D			64MB
16MB-S	16MB-S	32MB-D		64MB
64MB-S			(No Tested)	64MB
32MB-D	32MB-D	32MB-D	32MB-D (No Tested)	128MB

(B) CPU frequency configuration (JP6, JP7)

CPU	25MHz	33MHz	40MHz	50MHz
JP6	OPEN	CLOSE	CLOSE	OPEN
JP7	OPEN	CLOSE	OPEN	CLOSE

(C) CPU type configuration (J13, J14, JP12, JP13, JP18, JP19, JP24, JP25, JP28, JP29, JP33, JP37, JP40 ,JP78)

CPU type	486SX	486DX	SL-486 SX	SL-486 DX	SL-486 DX2	486DX4 -100	AMD486 DX-40	Cyrix 486 DX	UMC 486SX
JP12	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	2-3	OPEN
JP13	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	2-3	3-4
JP18	1-2	1-2	1-2	1-2	1-2	1-2	1-2	2-3	2-3
JP19	2-3	2-3	2-3	2-3	2-3	2-3	2-3	1-2	1-2
JP24	OPEN	OPEN	4-5	4-5	4-5	4-5	OPEN	2-3	OPEN
JP25	OPEN	OPEN	2-3	2-3	2-3	2-3	OPEN	1-2, 3-4	OPEN
JP28	OPEN	OPEN	1-2	1-2	1-2	1-2	OPEN	OPEN	OPEN
JP29	OPEN	OPEN	3-4	3-4	3-4	3-4	OPEN	2-3	OPEN
JP33	2-3	1-2 3-4	2-3	1-2 3-4	1-2 3-4	1-2 3-4	1-2 3-4	1-2 3-4	2-3
JP37	OPEN	3-4	OPEN	3-4	3-4	3-4	3-4	3-4	1-2
JP40	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3	2-3
J13	CLOSE	CLOSE	CLOSE	CLOSE	CLOSE	CLOSE	CLOSE	OPEN	CLOSE
J14	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
JP78	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	2-3

Note : 3.45V CPU, U50 must be open (3-6), (4-5)

3.45V AMD486 DX2/66/80 CPU, J14 must be **closed**

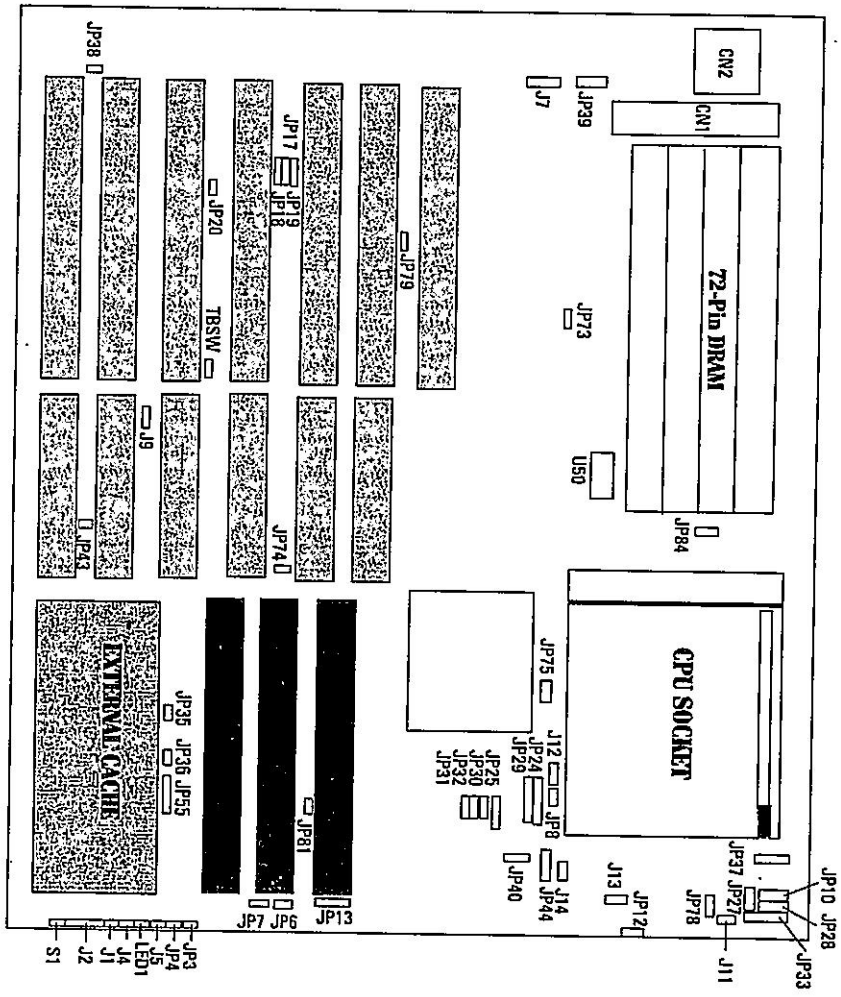
DX4-100 CPU, JP10 must be **open** .

(D) VESA options (JP3, JP4)

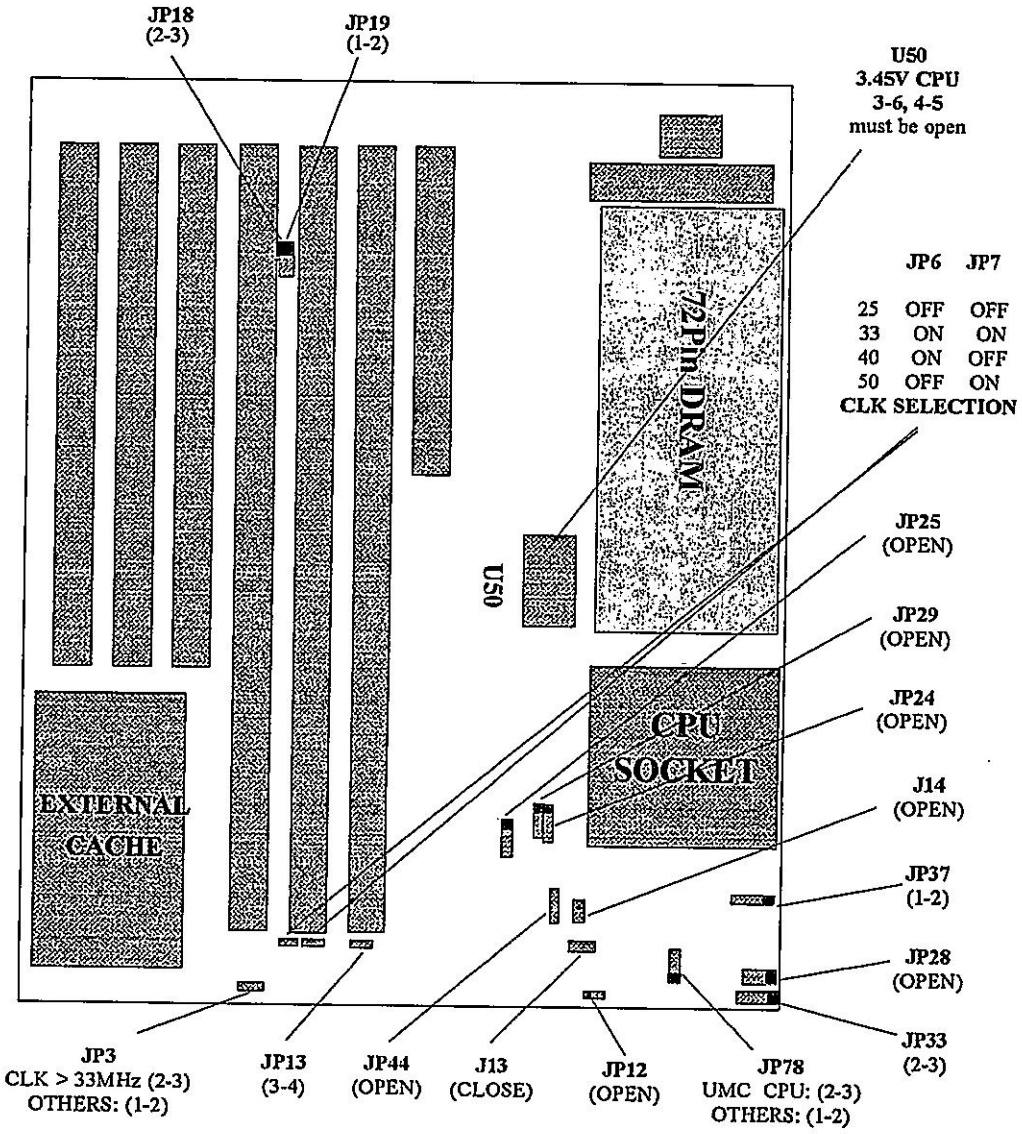
JUMPER	SETTING	FUNCTION
JP4	1-2	0 Wait
	2-3	1 Wait
JP3	1-2	<= 33MHz
	2-3	> 33MHz

Note: This MB supports three VESA slots, VESA1 and VESA2 are master slots.

7.8 Mainboard Layout



7.7 UMC 486 SX CPU Jumper Settings



This manual has two purposes. Firstly, to help the users to get familiar with the system board. Secondly, to serve as a procedure guide and specifications for future system upgrade.

1. Introduction

SIS85C471 MB is a high performance, 100% PC/AT compatible, Intel's 80486DX4/DX2/DX/SX/SL enhanced CPU and normal CPU supportive.

1.1. Features

- Supports power management mode
- Supports SMM and SMI CPU
- CPU stop clock function for SL-CPU and Cyrix 486DX CPU
- Four power saving states (normal/stand by/suspend/off)
- Long and short system timer
- Power saving on non-SMI CPU
- On board with auto detect UMB function
- Supports shadow RAM for system adapter and video BIOS
- Supports 32KB, 64KB, 128KB, 256KB, 512KB, 1MB cache memory
- Supports two VL-bus masters
- CPU operating frequency 8-100MHz
- Six 16-bit AT bus slots and one 8-bit XT bus slot
- Standard reset, keylock, speaker & turbo LED connectors
- Supports DOS, UNIX, XENIX & OS/2 operation systems
- Two-third of the baby AT size board (220mm x 250mm)
- Supports two kinds of FLASH ROM : standard FLASH ROM and boot block FLASH ROM

1.2. SUMMARY OF BENCHMARK

Test Software \ CPU	486DX40	486DX50	486DX2-66	486DX4-100
Power Meter V1.81 (MIPs)	12.2	15.1	20.6	25.6
Norton Utility CPU Speed	85.5	106.3	139.9	188.7
Norton Utility Overall Performance Index	61.5	75.2	97.6	127.0
Landmark V2.0 CPU MHz	133.83	167.64	222.71	357.57
Landmark V2.0 FPU MHz	326.04	408.89	543.40	875.23

2. Jumper Settings and Connector Pin Assignment

The settings of various jumpers are shown as follows:

2.1. CPU selection (J13, J14, JP8, JP12, JP13, JP18, JP19, JP24, JP25, JP28, JP29, JP33, JP37, JP40 , JP78)

CPU	JP8	JP12	JP13	JP18	JP19	JP24	JP25	JP28	JP29	JP33	JP37	JP40	J13	J14	JP78
486SX	2-3	OPEN	OPEN	1-2	2-3	OPEN	OPEN	OPEN	OPEN	2-3	OPEN	2-3	CLOSE	OPEN	1-2
486DX	2-3	OPEN	OPEN	1-2	2-3	OPEN	OPEN	OPEN	OPEN	1-2 3-4	3-4	2-3	CLOSE	OPEN	1-2
AMD486 DX-40	2-3	OPEN	OPEN	1-2	2-3	OPEN	OPEN	OPEN	OPEN	1-2 3-4	3-4	2-3	CLOSE	OPEN	1-2
SL - 486SX	2-3	OPEN	OPEN	1-2	2-3	4-5	2-3	1-2	3-4	2-3	OPEN	2-3	CLOSE	OPEN	1-2
SL - 486DX	2-3	OPEN	OPEN	1-2	2-3	4-5	2-3	1-2	3-4	1-2 3-4	3-4	2-3	CLOSE	OPEN	1-2
SL - 486DX2	2-3	OPEN	OPEN	1-2	2-3	4-5	2-3	1-2	3-4	1-2 3-4	3-4	2-3	CLOSE	OPEN	1-2
486DX4 - 100	2-3	OPEN	OPEN	1-2	2-3	4-5	2-3	1-2	3-4	1-2 3-4	3-4	2-3	CLOSE	OPEN	1-2
Cyrix 486DX	2-3	2-3	2-3	2-3	1-2	2-3	1-2 3-4	OPEN	2-3	1-2 3-4	3-4	2-3	OPEN	OPEN	1-2
UMC 486SX	2-3	OPEN	3-4	2-3	1-2	OPEN	OPEN	OPEN	OPEN	2-3	1-2	2-3	CLOSE	OPEN	2-3

Note : 3.45V CPU, U50 must be **open** (3-6), (4-5)

3.45V AMD 486DX2/66/80 CPU, J14 must be **closed**

DX4-100 CPU, JP10 must be **open**

2.2. Turbo switch connector (S1)

TURBO SWITCH	SPEED	TURBO LED
OPEN	HIGH	ON
CLOSE	LOW	OFF

2.3. Turbo LED connector (J4)

PIN NUMBER	FUNCTION
1	LED ANODE
2	LED CATHODE

2.4. Keyboard connector (CN2)

PIN NUMBER	FUNCTION
1	CLOCK
2	DATA
3	NC
4	GND
5	+5V

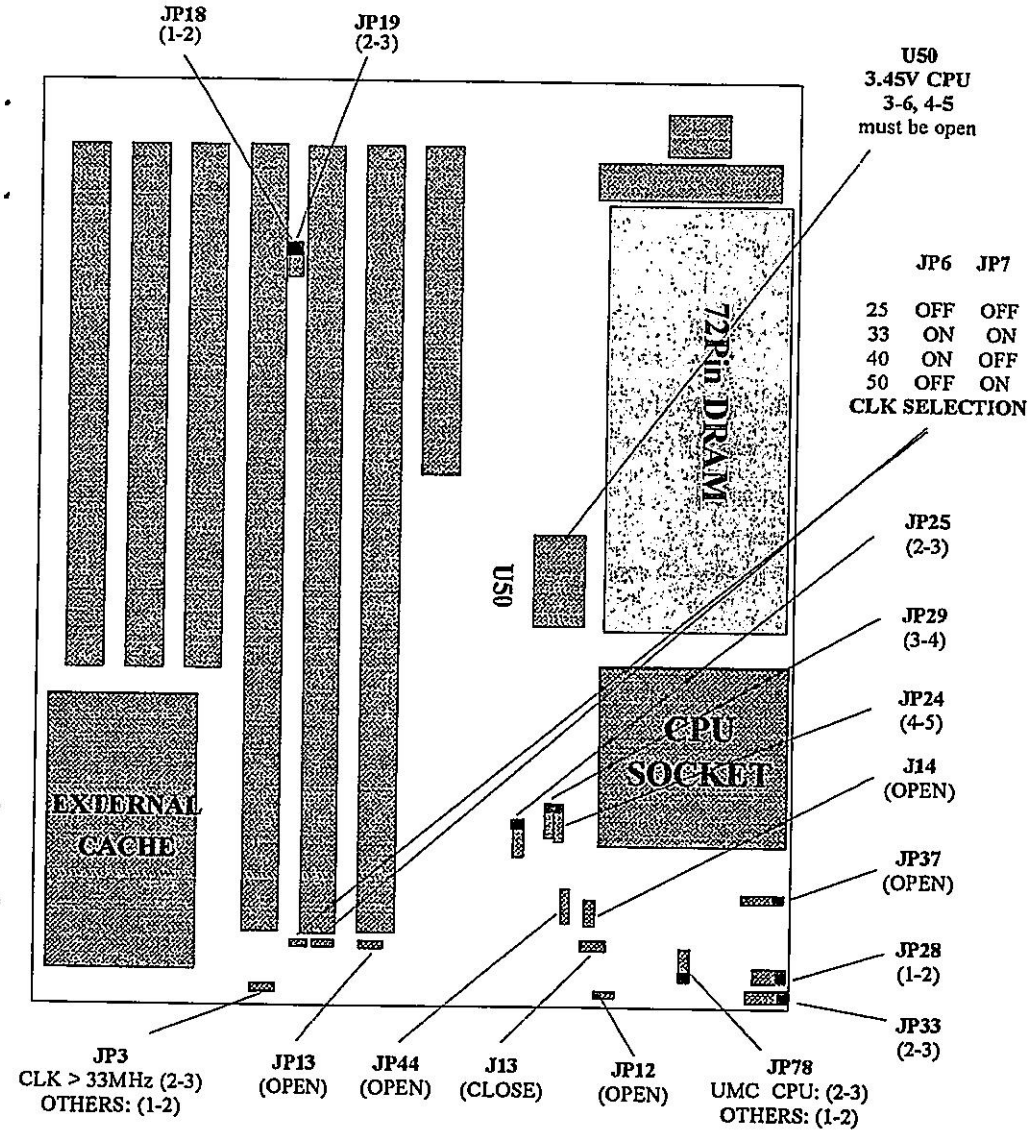
2.5. Reset switch connector (J5)

J5	FUNCTION
CLOSE ONCE	RESET THE SYSTEM
OPEN	NORMAL

7.6 Intel SL-486 SX CPU Jumper Settings

Intel SL-486 SX CPU including :

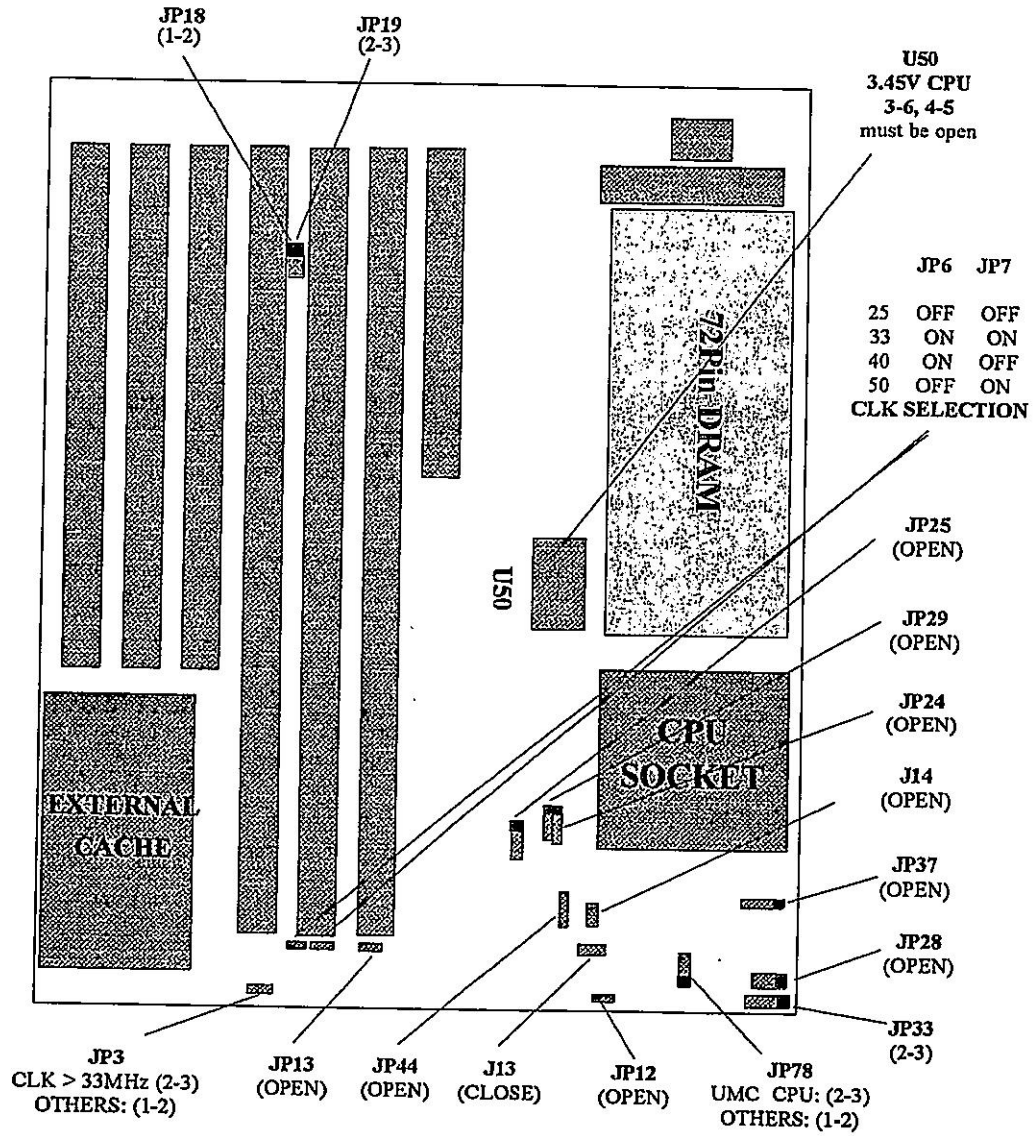
Intel SL-486 SX-486 SX2/50



7.5 486 SX CPU Jumper Settings

486 SX CPU including :

Intel 486 SX/33, 486 SX2/50



2.6. Keylock connector (J1)

PIN NUMBER	FUNCTION
1	+5V
2	NC
3	GND
4	KEYLOCK
5	GND

2.7. Power LED connector (LED1)

PIN NUMBER	FUNCTION
1	LED ANODE
2	LED CATHODE

2.8. Speaker connector (J2)

PIN NUMBER	FUNCTION
1	SPKDATA
2	GND
3	GND
4	VCC

2.9. Power connector (CN1)

PIN NUMBER	FUNCTION
1	Power good
2	+5V
3	+12V
4	-12V
5	GND
6	GND
7	GND
8	GND
9	-5V
10	+5V
11	+5V
12	+5V

2.10. Cache memory configuration (JP30, JP31, JP32, JP35, JP36, JP55, JP81)

CACHE SIZE	CACHE RAM	TAG RAM	JP30	JP31	JP32	JP35	JP36	JP81	JP55
128K	32Kx8 U(31-34)	8Kx8 U26	2-3	2-3	1-2	1-2	2-3	2-3	1-2
256K	32Kx8 U(27-34)	32Kx8 U26	2-3	2-3	2-3	2-3	2-3	2-3	2-3
256K	64Kx8 U(31-34)	32Kx8 U26	2-3	2-3	2-3	1-2	2-3	2-3	1-2, 3-4
512K	128Kx8 U(31-34)	32Kx8 U26	2-3	2-3	2-3	1-2	2-3	1-2	1-2, 3-4, 5-6
512K	64Kx8 U(27-34)	32Kx8 U26	2-3	2-3	2-3	2-3	2-3	1-2	2-3, 4-5
1MB	128Kx8 U(27-34)	64Kx8 U26	2-3	2-3	2-3	2-3	2-3	1-2	2-3, 4-5, 6-7

2.11. Jumper Introduction

JUMPER	SETTING	FUNCTION
JP39	1-2	Normal
	2-3	CMOS Discharge
JP38	MONITOR TYPE	
	SHORT	For CGA
	OPEN	For Mono, VGA/EGA
JP27	SHORT	For CX486S2 only
JP40	1-2	CLK IN and CPU CLK same phase
	2-3	CLK IN Delay for CPU CLK
JP10	1-2	CLK down by SM1 control
	2-3	CLK down by STPCLK control

2.12. Default jumper settings

JUMPER	NORMAL SETTING
J9	CLOSE
J11	OPEN
J12	OPEN
J13	CLOSE
JP8	2-3
JP10	1-2
JP12	OPEN
JP84	CLOSE
JP43	2-3
JP17	1-2
JP18	1-2
JP19	2-3
JP78	1-2
JP79	2-3
JP20	2-3
J14	OPEN
TBSW	4-5

2.13. 3.45V CPU support (U50)

We have three kinds of SiS 471 MB to support 3.45V CPU.

First : with UMB on board and voltage autodetect.

Second : without UMB on board

U50	3.45V CPU	5V CPU
Setting	5V-3.45V Converter	Close (3-6, 4-5)

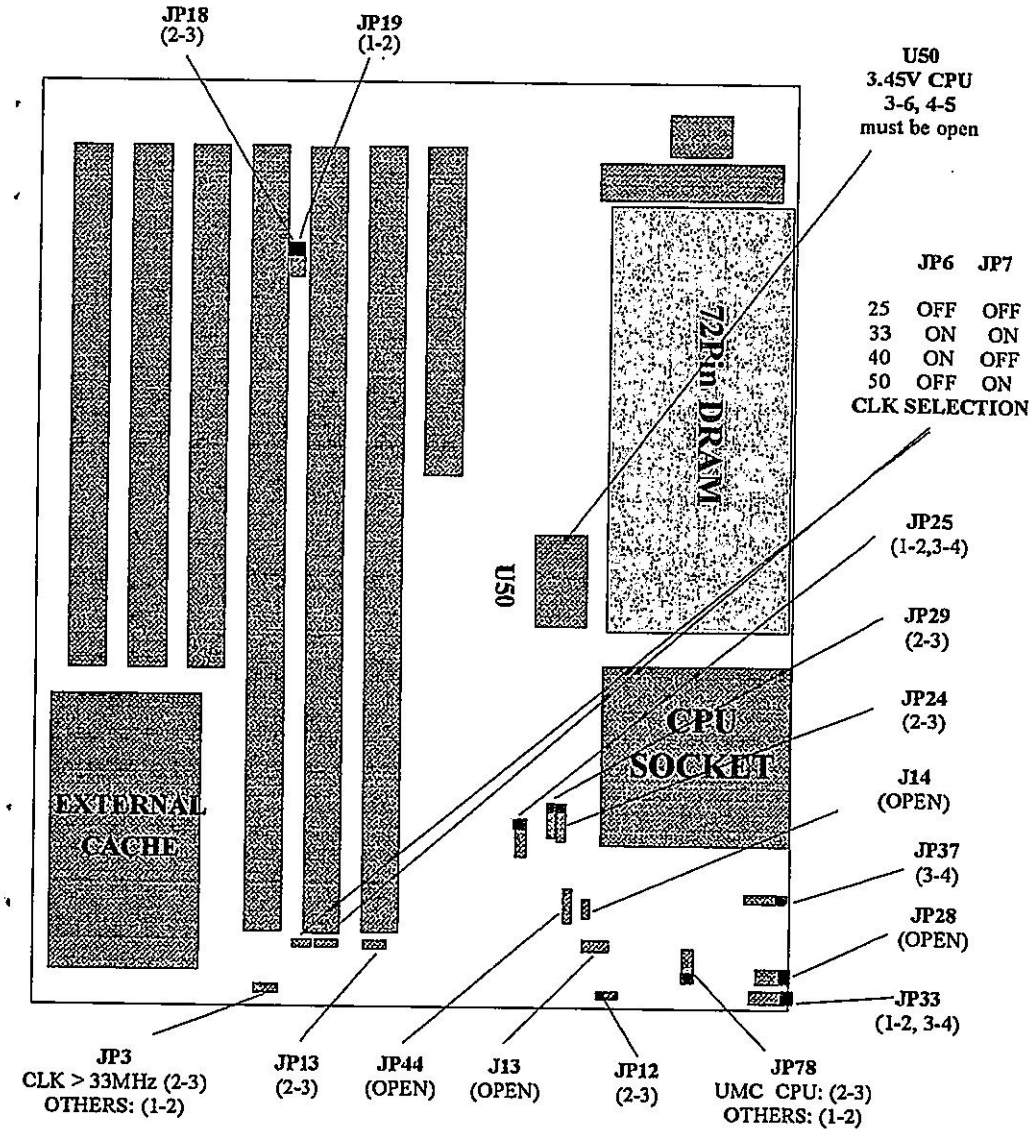
Third : with UMB on board but without Voltage autodetect

U50	3.45V CPU	5V CPU
Setting	Open (3-6, 4-5)	Close (3-6,4-5)

7.4 Cyrix 486 DX CPU Jumper Settings

Cyrix 486 DX CPU including :

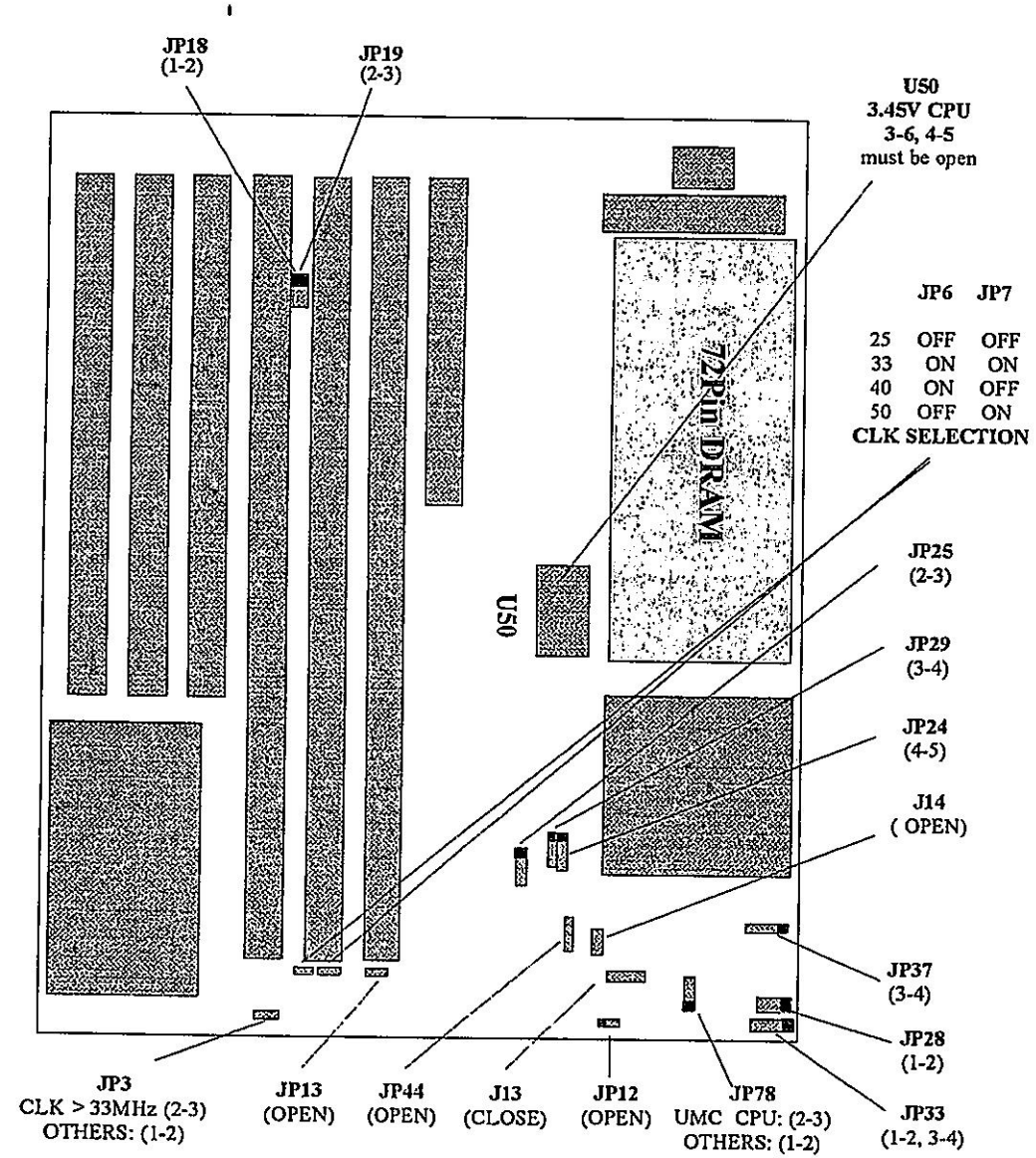
Cyrix 486 DX/40, Cyrix 486 DX2/50



7.3 Intel SL-486DX CPU Jumper Settings

Intel SL-486DX CPU including:

Intel SL-486DX/33/50, Intel SL-486DX2/50/66; 486 DX4/100



2.14 External Battery Connector (J7)

Pin Number	Function
1	4.5V
2	Key
3	GND
4	GND

3. Reconfigure AMI WINBIOS System

3.1. Enter AMI WINBIOS configuration program

During power-on memory test, pressing the <Del> key will bring the SETUP main menu to the screen. You can use the <Tab> Key to switch to the next window field and use the <Enter> key to make selection in the current field. Pressing <Alt><H> will help you to setup.

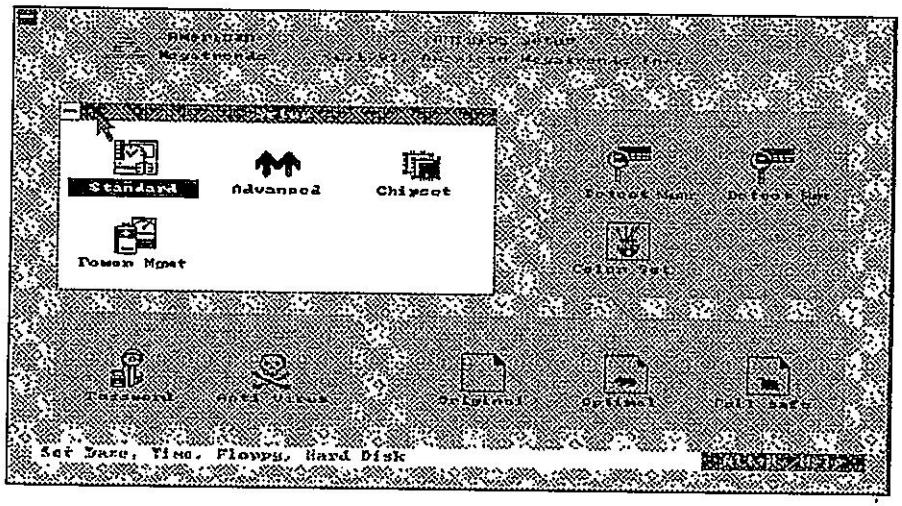


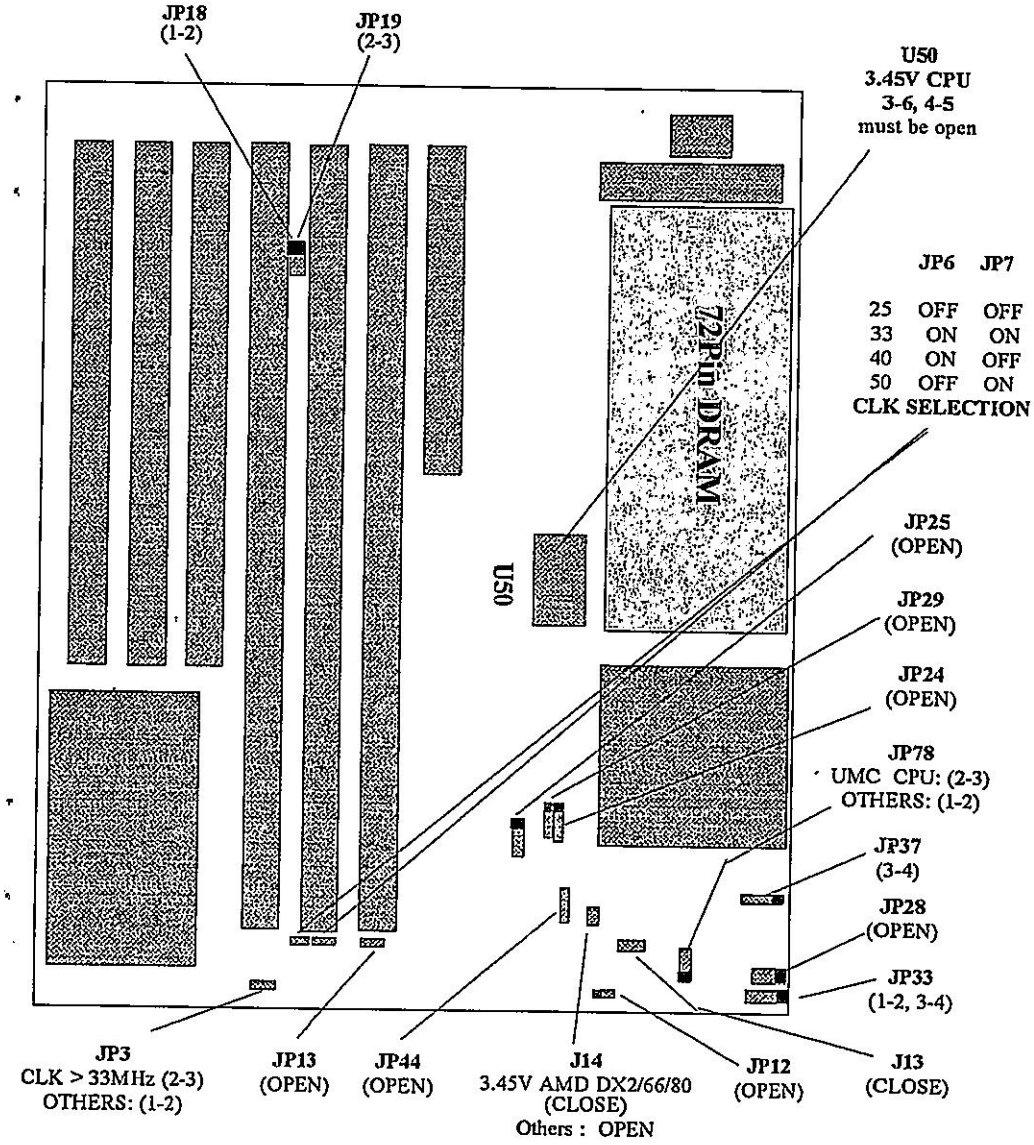
Figure 3-1 The screen of WINBIOS SETUP PROGRAM

NOTE : Use mouse to select a desired option. After highlighting an option, press the <Enter> key to enter its menu.

7.2 486 DX CPU Jumper Settings

486 DX CPU including:

Intel 486 DX /33/50, 486 DX2/50/66; AMD 486 DX/40, 486 DX2/66/80



7. Appendix

7.1. Drive table

Type	Cylinders	Heads	Write Precomp	LZ	Sector	Size
1	306	4	128	305	17	10MB
2	615	4	300	615	17	20MB
3	615	6	300	615	17	31MB
4	940	8	512	940	17	62MB
5	940	6	512	940	17	47MB
6	615	4	65535	615	17	20MB
7	462	8	256	511	17	31MB
8	733	5	65535	733	17	30MB
9	900	15	65535	901	17	112MB
10	820	3	65535	820	17	20MB
11	855	5	65535	855	17	35MB
12	855	7	65535	855	17	50MB
13	306	8	128	319	17	20MB
14	733	7	65535	733	17	43MB
15	—	—	—	—	—	—
16	612	4	0	663	17	20MB
17	977	5	300	977	17	41MB
18	977	7	65535	977	17	57MB
19	1024	7	512	1023	17	60MB
20	733	5	300	732	17	30MB
21	733	7	300	732	17	43MB
22	733	5	300	733	17	30MB
23	306	4	0	336	17	10MB
24	925	7	0	925	17	54MB
25	925	9	65535	925	17	69MB
26	754	7	754	754	17	44MB
27	754	11	65535	754	17	69MB
28	699	7	256	699	17	41MB
29	823	10	65535	823	17	68MB
30	918	7	918	918	17	53MB
31	1024	11	65535	1024	17	94MB
32	1024	15	65535	1024	17	128MB
33	1024	5	1024	1024	17	43MB
34	612	2	128	612	17	10MB
35	1024	9	65535	1024	17	77MB
36	1024	8	512	1024	17	68MB
37	615	8	128	615	17	41MB
38	987	3	987	987	17	25MB
39	987	7	987	987	17	57MB
40	820	6	820	820	17	41MB
41	977	5	977	977	17	41MB
42	981	5	981	981	17	41MB
43	830	7	512	830	17	48MB
44	830	10	65535	830	17	69MB
45	917	15	65535	918	17	114MB
46	1224	15	65535	1223	17	152MB
47	—	—	—	—	—	—

3.2. Standard Setup

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

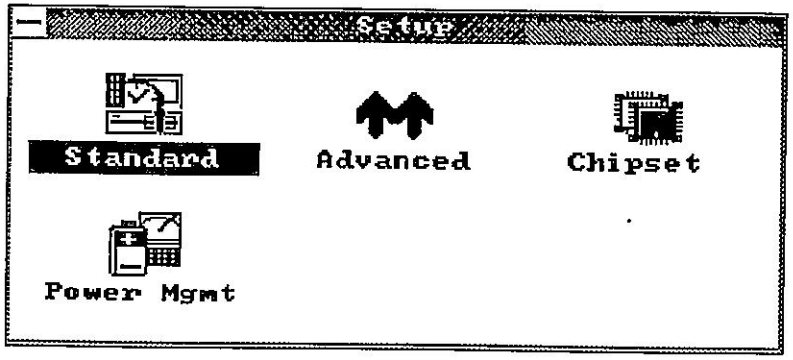


Figure 3-2 The screen of STANDARD SETUP

When "Standard" is selected , the following screen will appear

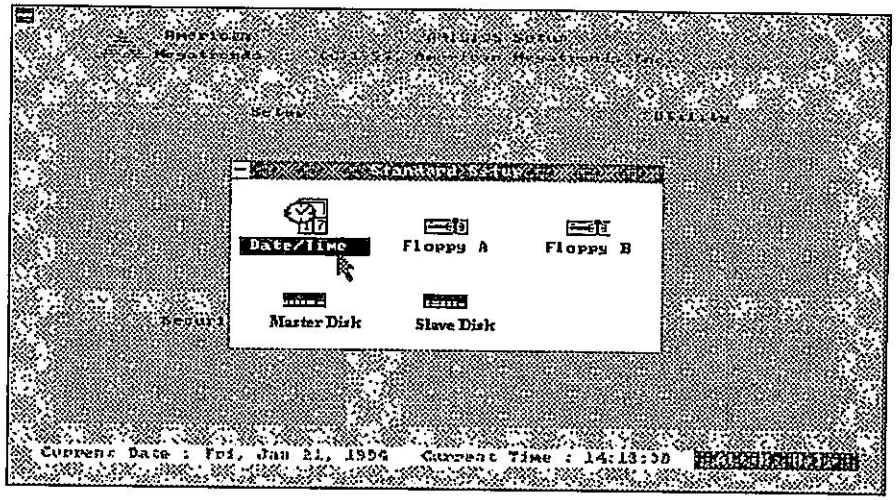


Figure 3-3 The screen of STANDARD SETUP

Within the "Standard" setup screen, move the cursor to select the "Date/Time", "Floppy A", "Floppy B", "Master Disk " and "Slave Disk " icons, then press the <Enter> key to set them up.

3.3. Advanced Setup

ADVANCED SETUP	
Typematic Rate (Chars / sec)	: 30
System Keyboard	: Absent
Primary Display	: VGA/EGA
Above 1MB Memory Test	: Disabled
Memory Test Tick Sound	: Enabled
Hit "Del"Message display	: Enabled
Extended BIOS RAM Area	: 0 : 300
Wait For "F1" If Any Error	: Enabled
System Boot Up Num Lock	: On
Numeric Processor Test	: Enabled
Floppy Drive Seek At Boot	: Enabled
System Boot Up Sequence	: A:, C:
System Boot Up CPU Speed	: High
External Cache	: Enabled
Internal Cache	: Enabled
Internal Cache W/B option	: W/Thrw
Turbo Switch Function	: Enabled
Password Checking	: Setup
Video Shadow C000, 32K	: Enabled
Shadow C800, 32K	: Disabled
Shadow D000, 32K	: Disabled
Shadow D800, 32K	: Disabled
Shadow E000, 32K	: Disabled
IDE Block Mode xfer	: Disabled
IDE Prim Controller 32 Bit xfer	: Enabled
IDE Prim Master HDD LBA Mode	: Disabled
IDE Prim Slave HDD LBA Mode	: Disabled
Number of HDDS in Sec controller	: None
IDE Sec Controller 32 Bit Xfer	: Disabled
IDE Sec Master HDD LBA Mode	: Disabled
IDE Sec Slave HDD LBA Mode	: Disabled
Video Cacheable option	: Disabled
BIOS Cacheable option	: Disabled

6. FLASH ROM Function (JP73)

SIS 471 MB supports FLASH ROM for the BIOS update simplification.

If the system uses EPROM (NO FLASH) that can only be erased by removing it from the system and exposing it to ultraviolet light and reprogrammed by specific equipment.

If SIS 471 system uses FLASH ROM, update BIOS (erased and reprogrammed EPROM) can be done by running an user's program.

6.1 Jumper JP73

JP73	FUNCTION
1-2	Without FLASH ROM
2-3	With FLASH ROM

5. UMB Function (JP44)

SiS 471 MB is a Universal Mother Board (UMB), which supports 5V CPU and 3.45V CPU (e.g. Intel DX4), by Auto Detect.

5.1. Jumper JP44

JP44	CPU INTERNAL CLOCK OPTION
1-2	X2
OPEN	X3

Note: JP44 is only used when using Intel DX4 CPU. When JP44 short (1-2) and external clock is 50MHz, BIOS SETUP must be changed according to next table. In Chipset Setup, set "Auto config" function **Disabled**, select the items and change them to the following settings:

DRAM SPEED OPTION	: Slowest
DRAM WRITE CAS PULSE	: 2T
DRAM WRITE CYCLE	: 1W/S
CACHE WRITE CYCLE OPTION	: 3T
CACHE BURST READ CYCLE	: 2T
BUS CLOCK FREQENCY SELEET	: 1/6 CLK

IMPORTANT NOTE :

Note: If the system is under DOS operation, IDE CHS Mode supports most HD size up to 528MB. LBA Mode supports IDE drives larger than 528MB when Enabled. Novell Netware and UNIX system can support IDE drives larger than 528MB by using the IDE CHS Values (no LBA translation). The IDE LBA Mode setup according to next description:

HD size larger than 528MB and system works under DOS:

IDE LBA Mode:Enabled.

Work under Novell Netware and UNIX system, IDE LBA Mode:Disabled.

All system HDD size smaller than 528MB, IDE LBA Mode:Disabled.

4 HDs support :

If using 4 HDs, change "number of HDDs in Sec controller" to 2.

The Prim master HDD and slave HDD can be autodetected at Utility (page 3-6).

The Sec master HDD and slave HDD have no display in BIOS, but can be seen when you are working with the system.

3.4. Chipset Setup

CHIPSET SETUP	
Auto Config Function	: Enabled
DRAM Speed Option	: Faster
DRAM Write CAS Pulse	: 2T
DRAM Write Cycle	: 0 W/S
Cache Write Cycle Option	: 2T
Cache Burst Read Cycle	: 2T
Bus Clock Frequency Select	: 1/4 CLK
Hidden Refresh	: Enabled
Non-Cacheable Area1	: DRAM
Non-Cacheable Size1	: Disabled
Local Bus Ready	: SYNC
Memory Cntlr Driving Capty	: 24 mA

Note: If different CPUs is used , the display of configuration is difference.

3.5. Power Management Setup

POWER MANAGEMENT SETUP	
IDE Standby Power Down Mode	: Disabled
BIOS Power Management Mode	: Enabled
APM Interface	: Enabled
Standby Timer	: 10 Sec
Suspend Timer	: 10 Sec
EVENT	:
Keyboard Activity	: Enabled
Video Activity	: Disabled
Hdd/Fdd Activity	: Enabled
VESA Master Activity	: Disabled
DMA Activity	: Enabled
IRQ 3 (COM2/LAN) Activity	: Enabled
IRQ 4 (COM1) Activity	: Enabled
IRQ 5 (LPT2) Activity	: Enabled
IRQ 7 (LPT1) Activity	: Enabled
IRQ 9 Activity	: Enabled
IRQ 10 Activity	: Enabled
IRQ 11 Activity	: Enabled
IRQ 12 Activity	: Enabled
Display Adapter Type/method	: Sync. off
Display Off When ? Timeout	: Disabled
Smout value on Stby	: XXXXXX00
Smout Value on Spnd	: XXXXXX00

Note : If different CPUs is used, the display of configuration is difference.

4. Power Saving Mode

SiS 471 MB supports two green modes : Standby mode and Suspend mode.

4.1. Standby mode

For this mode, all kinds of CPU could be used by entering the Power Management and set the BIOS Power Management Mode to Enabled. The system clock will down to 8 MHz if there is no system activity in the redefined time and turn off the display monitor if you setup "Display Off Time When ? Time : Standby.

4.2. Suspend mode

For this mode, the SiS471/MB must use a SMI CPU (SL Enhanced CPU or Cyrix 486DX CPU).You can enter the Power Management and setup BIOS Power Management Mode to Enabled. Enter the time for Suspend timer, and disable Standby timer. The system clock will down to 8 MHz, CPU internal clock down to 0 MHz if there is no system activity in a redefined time. At the same time, system will turn off the display monitor and stop the harddisk mechanism if you set " Display off when ? time out to Suspend.

For these two modes. When the redefined time is reached, the level of jumpers JP74.1 & JP75.1 will change to low which are used to control the green devices such as green add-on cards and CPU cooling fan.

Press any key, mouse movement or other system operation can resume the system to normal mode.

Note :

When using a non-SMI CPU, working in OS/2, Windows NT or UNIX system, the Non-SMI CPU PM must be set to the "chipset" option.

3.9. Default settings

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

Original

Choose the Original icon to return to the system configuration values present in WinBIOS Setup session.

Optimal

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

Fail-Safe

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

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

3.6. Utility

ICON	FUNCTION
Detect Master	Automatically detect & configure Drive C:
Detect Slave	Automatically detect & configure Drive D:
Color Set	Set the color of WinBIOS Setup screen

3.7. Password Setup

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

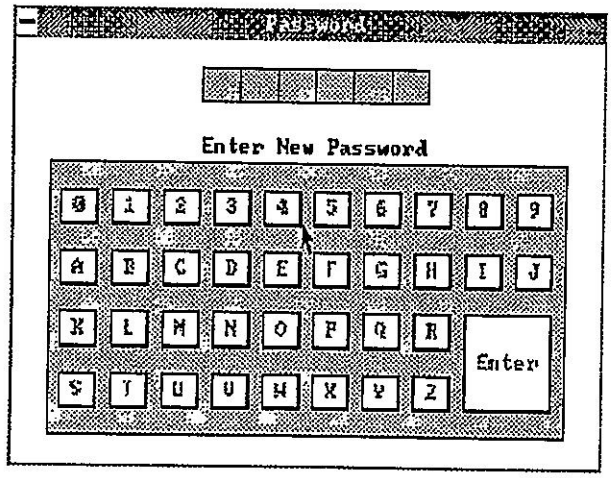


Figure 3-4 The screen of PASSWORD SETUP

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 specific hardware platform.

The password check option is enabled in Advanced Setup figure 3-4 by choosing either ALWAYS (the password prompt appears every time when the system is powered on) or SETUP (the password prompt appears only when WinBIOS setup is run). The password is stored within the CMOS RAM.

Enter a 1-6 character password. The password does not appear on the screen when typed. WinBIOS will ask you to retype the password for confirmation. WinBIOS will then display the following :

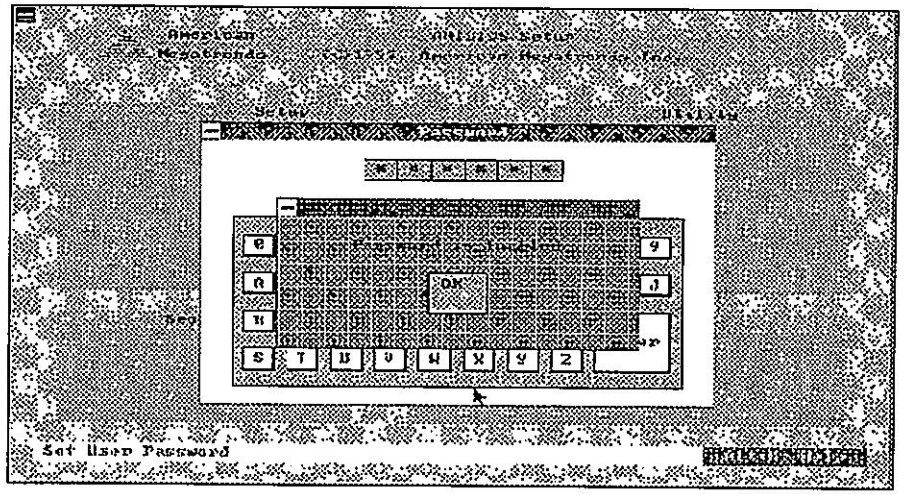


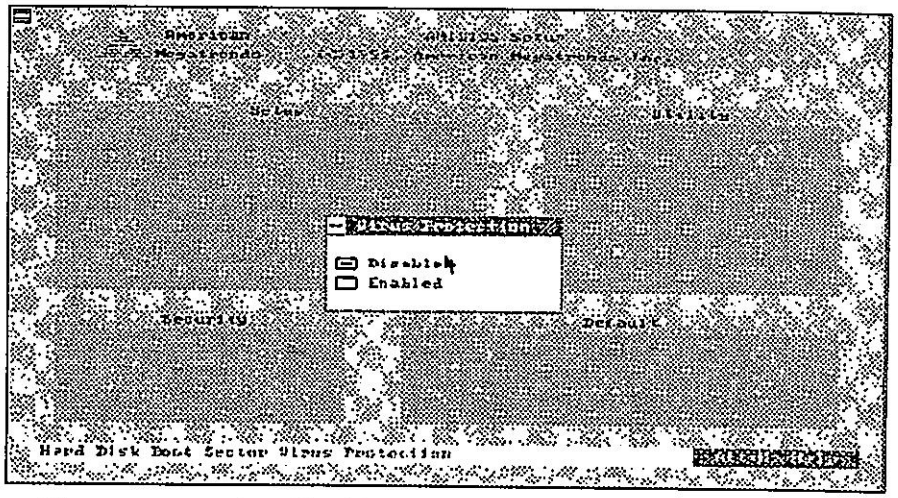
Figure 3-5 The screen of PASSWORD SETUP

If a new password is wanted, select the Password icon from the security section of the WinBIOS Setup main menu, enter the password and press <Enter>. The screen does not display the characters entered. After the current password is entered, enter the new password as prompted and press <Enter>.

If the password confirmation is incorrect, an error message will appear. If the new password is correctly entered, press <Esc> to return to the WinBIOS Setup main menu. The password is stored in CMOS RAM after WinBIOS Setup is completed. The next time the system boots, you are prompted for the password if the password function is present and is enabled.

3.8. Anti-Virus

When this icon was selected from the Security section of the WinBIOS Setup main menu, WinBIOS gives 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 the Anti-Virus icon is selected:



There are two settings "Enabled" and "Disabled". If enabled, the following message appears when a write is attempted to the boot sector. You may have to type N serveral 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 INT13 Hard Disk Drive Service :

Format !!!
Possible VIRUS : Continue (Y/N)? _

You should disable anti-virus protection when you try to format a hard disk drive.

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 type "Y" to 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.

Supplement of V4S471/472P Mainboard

1. Extended Feature

The V4S471/472P mainboard supports AMD Enhanced CPU. The table below lists the jumper settings for the AMD Enhanced CPU:

AMD Enhanced CPU Jumper Settings:

JP8	J11	JP12	JP13	JP18	JP19	JP24	JP25	JP28	JP29	JP33	JP37	U50
1-2	close	1-2.	open	1-2	1-2	4-5	2-3	2-3	1-2,3-4	1-2,3-4	2-3	open

2. Removed Feature

Due to 64K space limitation and support of new features in BIOS Ver 1.1, the "Anti-Virus" function had been removed from BIOS Ver 1.1.