486 MainBoard

User's Manual

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INTRODUCTION

SPECIFICATIONS:

- **CPU:**
  Intel 80486SX/DX/DX2/P23S/P24S/P24D/P24C(80486DX4)/SL-Enhanced,
  AMD Am486™DX/DXL/DX2/SL-Enhanced,
  Cyrix Cx486DX(M6/M7).
  Optional 169/239 pin PGA CPU Socket or 237 PIN ZIF Socket.

- **MEMORY:**
  Up to 128MB on board
  9-Bits SIMM x 4 (1 Bank)
  32-Bits SIMM x 2 (signle Bank = 2 Banks, Double Bank = 4 Banks)

- **CACHE MEMORY:**
  128K/256K/512K (With 32Kx8,64Kx8, 128Kx8 DIP SRAM)

- **I/O SLOTS:**
  ISA bus SLOT x 8 (16bit x 7, 8 bit x 1)
  VESA Local bus SLOTx 3 (Master mode x 2; one is in VESA 1, another is in VESA 2 or VESA 3 optional)

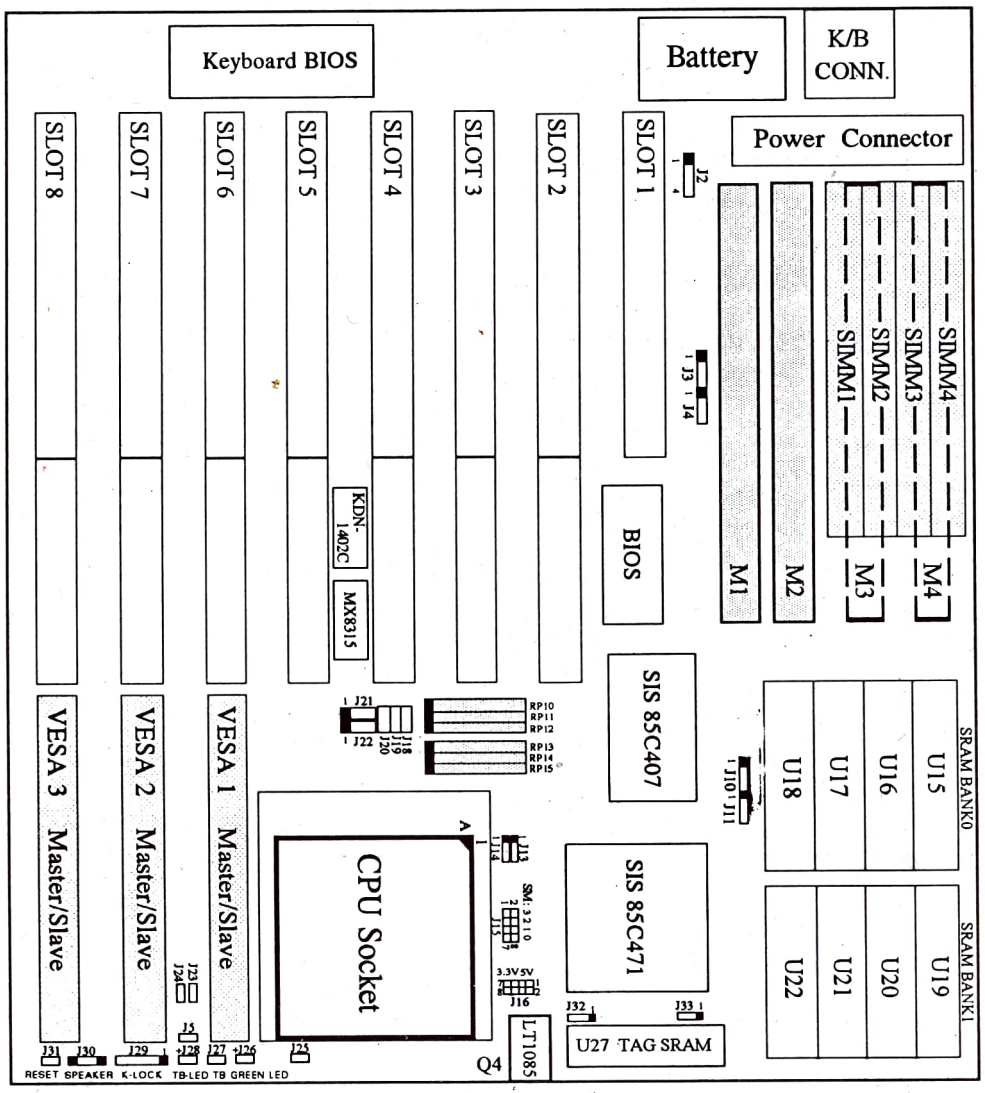
- **BIOS:**
  Award/AMI

- **Green PC:**
  Meet EPA Green PC standard: power consumption under 30W after system enter the standby mode or suspend mode

- **SIZE:**
  220mm x 250mm

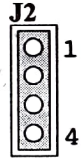
1. HARDWARE SETUP

1-1 MAINBOARD LAYOUT



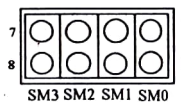
1-2 MainBoard Connector & Jumper Setting

J2 **Battery Connector**



2-3 : Normal
1-4 : External Battery connector
3-4 : Discharge Battery (Clear CMOS Data)

J15 **System Management Output (Reserved for future use)**

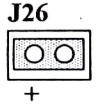


High : Normal
Low : Active
(Pin 2,4,6,8: control pin, Pin 1,3,5,7: GND pin)

J5 **Power Saving switch**

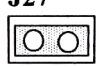
Short : Force system to enter the Doze mode(Normal CPU) or Suspend mode (SL- Enhanced CPU) directiy

J26 **Green LED**



ON : Indicate system is in Doze, Standby or Suspend mode.

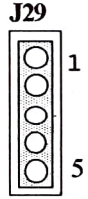
J27 **Turbo Switch**



Short : High speed only
open : Speed change by keyboard
<Ctrl><Alt><--> : Low speed
<Ctrl><Alt><+> : High speed

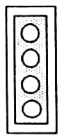
J28 **Turbo LED**

J29 **Key-Lock & Power LED Connector**



1.LED (+)
2.NC
3.GND
4.Key-Lock
5.GND

J30 **Speaker connector**



1. Speaker output
2. NC
3. GND
4. GND

J31 **RESET Switch**

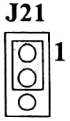
J23 **VL-Bus Clock Setting**

Open : <= 33MHz
Short : > 33MHz (Default)

J24 **VL-Bus Wait State Setting**

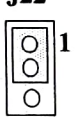
Open : 0 Wait State
Short : 1 Wait State

J21 **CPU Clock Change When System Power Saving**



1-2 : In Suspend mode. (80486DX4)
* 80486DX4 & some VL interface card can't work with 8MHz.
2-3 : In Doze mode. (Normal)

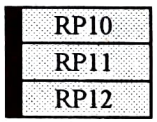
J22 **CPU Clock Adjust**



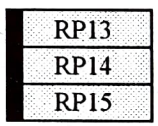
1-2 : Default
2-3 : Reserved (For some special VL interface card that can't working properly with this M/B).

1-3 CPU Type Setting

RP10,11,12,13,14,15 CPU Install (Insert the "0 Ohm" Resister Array)

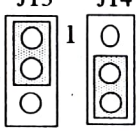


Cyrix Cx486S/S2/DX/DX2(M6/M7)
Intel SL-Enhanced/AMD Am486DXL (Default)
Intel P24D



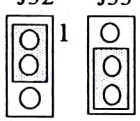
Intel P24D
486DX/DXL/DX2/P24S/P24C(DX4)/M7 (Default)
486SX/P23S/M6

J13 J14



J13	J14		CPU Select
1-2	1-2	:	Intel P24D
2-3	1-2	:	Cyrix M6/M7, AMD-SL (Am486DXL)
1-2	2-3	:	486SX/DX/DX2/DX4/Intel-SL (Default)

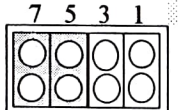
J32 J33



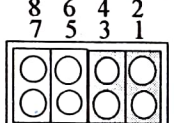
J32	J33		AMD SL-Enhanced CPU Install
1-2	2-3	:	Normal (Default)
2-3	1-2	:	AMD-SL (Am486DXL)

J25		CPU Select
Open	:	P24C (80486DX4)
Short	:	AMD-SL (Am486DXL)

J16 : CPU Working Voltage Select



5-6
7-8 : **3.3V (For 80486DX4)**



1-2
3-4 : **5 V (For Normal CPU)**

Warning : Intel 80486DX4-100MHz CPU is a 3.3 Volt processor. Please DO NOT use it on the standard 5 Volt setting, and also check if there is a REGULATOR (Q4 - LT1085)install in this MainBoard.

1. P23S=486SX SL-Enhanced CPU

   24S=P4S=486DX/DX2 SL-Enhanced CPU.

3. M6=Cyrix Cx486S/S2
4. M7=Cyrix Cx486DX/DX2
5. AMD-SL=AMD Am486DXL (A power saving CPU)
6. P24C=80486DX4
7. To distinguish Intel Non-green CPU from SL-Enhanced CPU, please check the character of the third line label printed on the CPU surface. If you can find the "SA or "SE" character on it, it means that this CPU is SL-Enhanced CPU Otherwise, it is a standard CPU.
8. If you want to use P24C(DX4) CPU, please refer to P23S or P24S CPU's jumper setting of the above CPU type select.

1-4 CPU Clock Select

This MainBoard (GXA486SG) supports two clock generators (optional). The MX8315 and KDN-1401/1402C.

Please refer to 1-1 MainBoard layout to check which one is being used, and adjust the CPU clock as follow

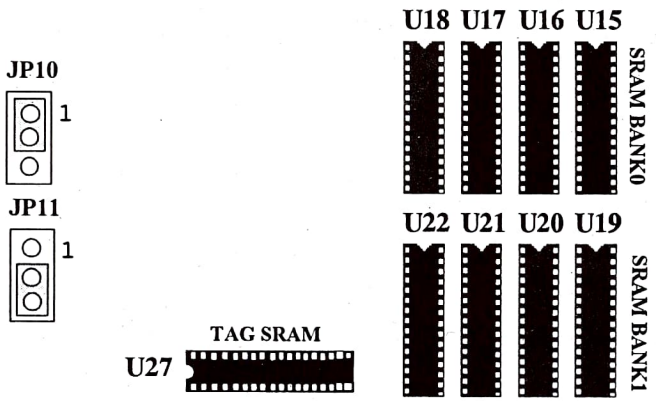
MX8315			
MHz	J18	J19	J20
20	OPEN	OPEN	OPEN
25	OPEN	OPEN	SHORT
33	SHORT	SHORT	SHORT
40	OPEN	SHORT	SHORT
50	SHORT	OPEN	OPEN

TABLE 1. CPU Clock select with MX8315

KDN-1401/2C			
MHz	J18	J19	J20
20	SHORT	SHORT	OPEN
25	SHORT	OPEN	SHORT
33	OPEN	SHORT	SHORT
40	SHORT	OPEN	OPEN
50	OPEN	SHORT	OPEN

TABLE 2. CPU Clock select with KDN-1401/1402C

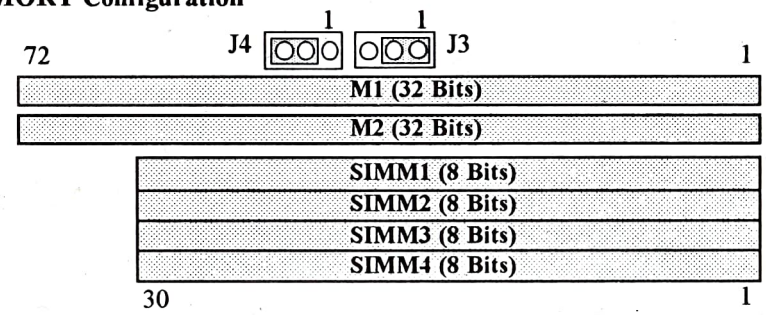
1-5 CACHE Configuration



JP10	JP11	:	CACHE Size Select
1-2	1-2	:	128KB
1-2	2-3	:	256KB
2-3	2-3	:	512KB

CACHE SIZE	TAG SRAM (U27)	DATA SRAM INSTALL	Jumper Setting	
			J10	J11
128KB	8Kx8 SRAM x 1	32Kx8 SRAM x4 U15,16,17,18 (Bank0)	1-2	1-2
256KB	32Kx8 SRAM x 1	32Kx8 SRAM x 8 U15,16,17,18 (Bank0) U19,20,21,22 (Bank1)	1-2	2-3
256KB	32Kx8 SRAM x 1	64Kx8 SRAM x 4 U15,16,17,18 (Bank0)	1-2	2-3
512KB	32Kx8 SRAM x 1	64Kx8 SRAM x 8 U15,16,17,18 (Bank0) U19,20,21,22 (Bank1)	2-3	2-3
512KB	32Kx8 SRAM x 1	128Kx8 SRAM x 4 U15,16,17,18 (Bank0)	2-3	2-3

1-6 MEMORY Configuration



J3 : 32 Bits (72 PIN) SIMM Type

		M1	M2
1-2 :	Single Bank	Bank0	Bank1
2-3 :	Double Bank	Bank0,1	Bank2,3

J4 : 8 Bits (30 PIN) SIMM Bank

	SIMM1,2,3,4
1-2 :	Bank0
2-3 :	Bank2

M1	M2	SIMM1-4	J3	J4	SIZE	M1	M2	SIMM1-4	J3	J4	SIZE
1MB	------	---------	1-2	2-3	1MB	-----	------	1MB x 4	1-2	1-2	4MB
1MB	1MB	---------	1-2	2-3	2MB	-----	------	4MB x 4	1-2	1-2	16MB
4MB	------	---------	1-2	2-3	4MB	-----	------	16MB x 4	1-2	1-2	64MB
1MB	4MB	---------	1-2	2-3	5MB	-----	1MB	256K x 4	1-2	1-2	2MB
4MB	4MB	---------	1-2	2-3	8MB	-----	4MB	256K x 4	1-2	1-2	5MB
16MB	------	---------	1-2	2-3	16MB	-----	4MB	1MB x 4	1-2	1-2	8MB
4MB	16MB	---------	1-2	2-3	20MB	-----	16MB	1MB x 4	1-2	1-2	20MB
16MB	16MB	---------	1-2	2-3	32MB	-----	16MB	4MB x 4	1-2	1-2	32MB
64MB	------	---------	1-2	2-3	64MB	2MB	------	---------	2-3	2-3	2MB
16MB	64MB	---------	1-2	2-3	80MB	2MB	4MB	---------	2-3	2-3	6MB
64MB	64MB	---------	1-2	2-3	128MB	8MB	------	---------	2-3	2-3	8MB
1MB	1MB	1MB x 4	1-2	2-3	6MB	8MB	4MB	---------	2-3	2-3	12MB
4MB	4MB	1MB x 4	1-2	2-3	12MB	8MB	8MB	---------	2-3	2-3	16MB
4MB	4MB	4MB x 4	1-2	2-3	24MB	8MB	16MB	---------	2-3	2-3	24MB
4MB	16MB	4MB x 4	1-2	2-3	36MB	32MB	------	---------	2-3	2-3	32MB
16MB	16MB	4MB x 4	1-2	2-3	48MB	32MB	32MB	---------	2-3	2-3	64MB
16MB	16MB	16MB x 4	1-2	2-3	96MB	2MB	------	1MB x 4	2-3	2-3	6MB
32MB	------	4MB x 4	2-3	2-3	48MB	8MB	------	1MB x 4	2-3	2-3	12MB
32MB	------	16MB x 4	2-3	2-3	96MB	8MB	------	4MB x 4	2-3	2-3	24MB

TABLE 3 MEMORY Configuration table

2. AWARD BIOS SETUP

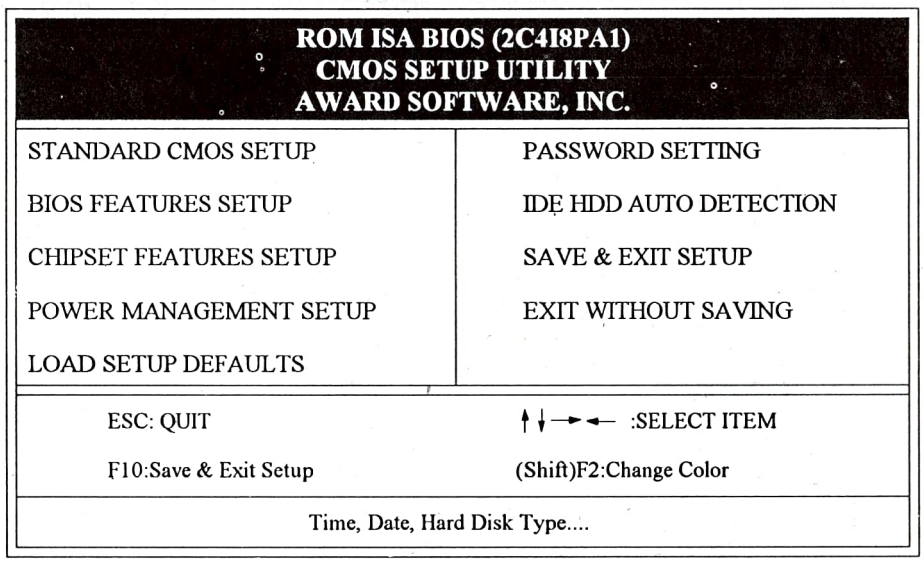


Figure 2-1 CMOS Setup Utility

Award's BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. The data is stored in a battery-backed RAM so that it will retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press <**Del**> immediately will allow you to enter Setup.

Note1: When chose the"AUTO Configuration: Enabled".This BIOS automatically detects the CPU speed. It will auto-configurate the bus frequency, DRAM speed,cache read/write cycle. Please refer Figure 2-4 CHIPSET FEATURES SETUP.

2-4 POWER MANAGEMENT SETUP

By **"POWER MANAGEMENT SETUP"** option from the **CMOS Setup Utility** Menu, one of this two screen below will be displayed. This sample screen contains the manufacturer's default values for the mainboard.

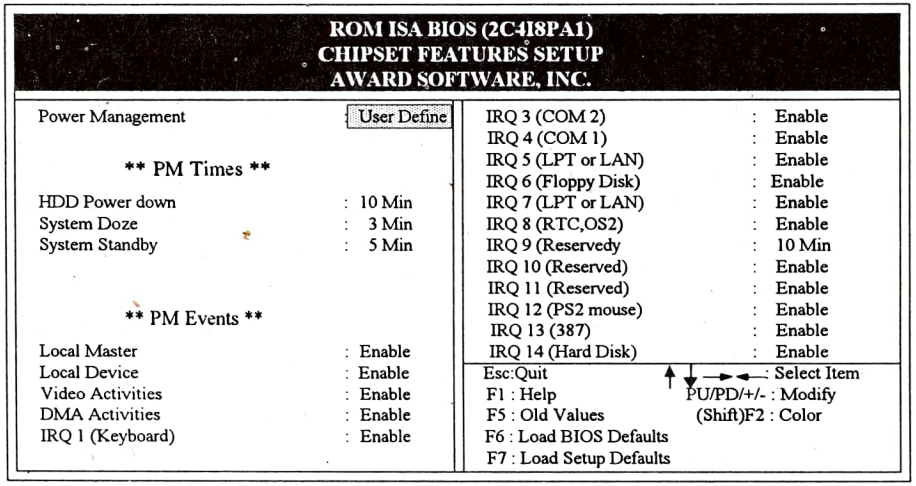


Figure 2-5(1) POWER MANAGEMENT SETUP For Non-SL-Enhanced CPU

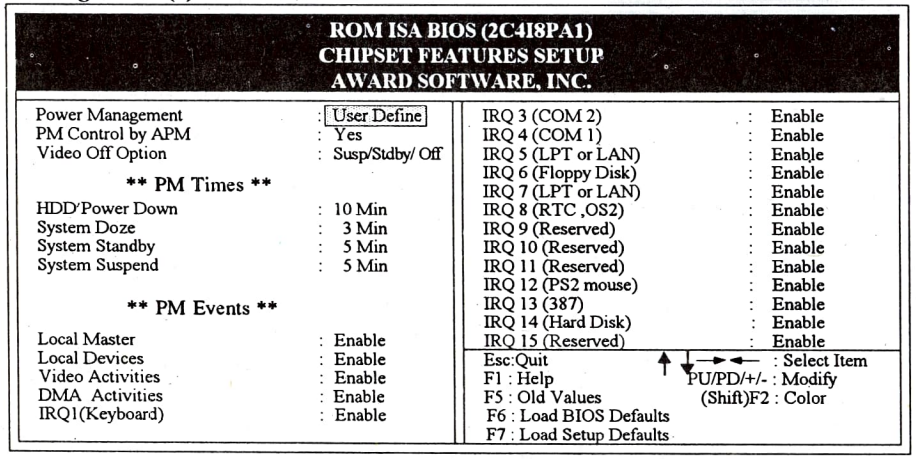


Figure 2-5(2) POWER MANAGEMENT SETUP For Intel SL-Enhanced CPU

2-4-1 Descript the Power Management Setup.

A. Selecting **Power Management** Mode :

a. **Disabled**:The system will operate in NORMAL conditions (Non-GREEN). The Power Management Function will not be function.

b. **Max.saving** :This mode can auto setting power down time-out value to maximum power consumption.

c. **Min.saving** :This mode can auto setting power down time-out value to power consumption.

d. **User define** :Users can define their own proper power down time-out value.

B. Select time out timing base on what you like

a. **HDD Power Down** Timer :
When "Power Management" parameter be set in user defined mode, this HDD power down timer can be set from 1 min. to 15 min.

b. **System Doze** Timer :
The setting rule of this timer same as the first timer, but the setting margin is from 10sec to 10min.

c. **System Standby** Timer :
The setting rule and the setting margin of this timer are same as the second timer. This timer start to count when system Doze timer time out and no "PM events" happened.

d. **System Suspend** Timer :
This function can only be used when Intel SL-Enhanced CPU be used. The setting rule and the setting margin of this timer are same as the second timer. This timer start to count when system standby timer time out and no "PM events" happened .

2-4-2 Describe the Green Function

This board can support "HDD Power Down Mode, Doze Mode and standby mode Green functions base on Non-Intel 486 CPU and Intel Non-SL-Enhanced CPU; Also can support "Suspend Mode" by Intel SL-Enhanced CPU. Following are function description in 4 power down mode.

a. **HDD Power Down Mode**: This mode is independent operation. When system stop reading or wiriting HDD, the timer start to count. After time out, the system will cut off the HDD power and it will not resume until the read or wirte HDD command be executed again.
b. **Doze Mode**: After the system doze timer time out, the system will enter the Doze Mode and the chipset will drop down the CPU clock from nomal working speed to 8 MHz.
c. **Standby Mode**: After the system standby timer time out, the system will enter the standby mode and the CPU keep on remain in 8 MHz working speed, at same time if you can use Intel SL-Enhanced CPU, the screen of the monitor will be blank.
d. **Suspend Mode**: After the system suspend timer time out, the system will enter the suspend mode and the chipset will stop CPU clock. The power consunption in Suspend Mode will lower than standby mode. The screen of monitor keep on remain in blank condition. **(Support SL-Enhanced CPU only)**

PM Events:

AWARD BIOS supports 17 PM Events to be referance by tripple power management mode (Doze, standby & suspend). You can set any of the PM Events to be "Enable". When system detect that the all events which have been enabled don't work any longer. It will start the system Doze timer first if the "Power Management" isn't in "Disabled" condition. Once the system Doze timer time out, the system will implement doze power saving activity and start the system standby timer. After the standby timer time out and there is no any event happened again, the system will enter the standby mode, not only implement the standby power saving activity but also start the system suspend timer. After timer time out , implement suspend power saving activity and the system will remain in suspend mode until any of the event that has been mark "Enable" happened.

2-5 LOAD SETUP DEFAULTS

"LOAD SETUP DEFAULTS" loads the default system values directly from ROM. If the stored record created by the Setup program becomes corrupted (and therefore unusable), these defaults will load automatically when you turn the computer on.

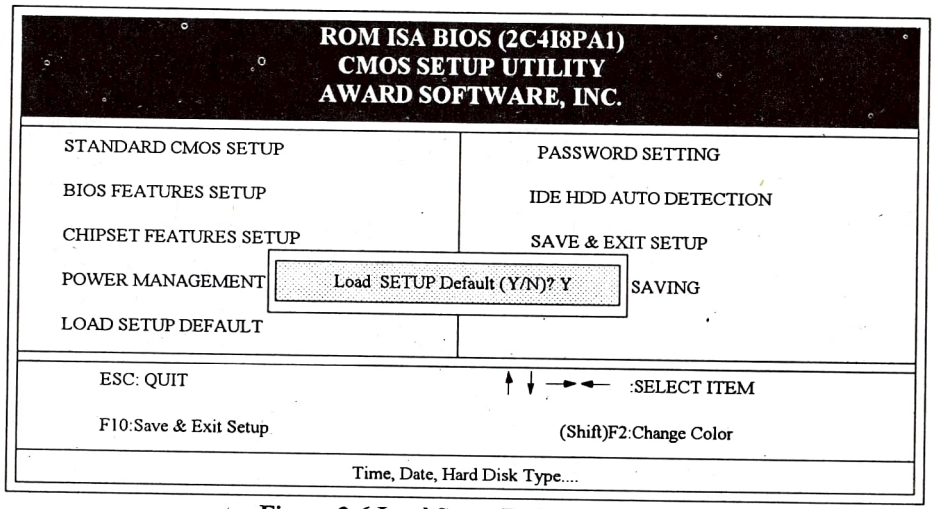


Figure 2-6 Load Setup Defaults Screen

2-6 CHANGE PASSWORD

To change the password, choose the **"PASSWORD SETTING"** option form the Setup main menu and press [Enter].
Please note, You must first select the "Security Option" either "Setup", or "System" in the BIOS FEATURES SETUP (Please refer to Figure 2-3).

1. If the CMOS is bad or this option has never been used, there is default password which is stored in the ROM. The screen will display the following messages:

   Enter Password:

   Press the [Enter] key and continue to change the password.

2. If the CMOS is good or this option has been used to change the default password, the user is asked for the password stored in the CMOS. The screen will display the following message:

   Confirm Password:

   Enter the correct password and continue to change the password.

3. After pressing the [Enter] key (ROM password) or current password (user-defined password), you can change the password stored in the CMOS. The password can be at most 8 characters long.

2-7 AUTO DETECT HARD DISK

"IDE HDD AUTO DETECTION" This utility can AUTO DETECT IDE HARD DISK TYPE,when you unknow the HARD DISK TYPE. You can use this utility, the utility can to help you self-detect correct HARD DISK TYPE.

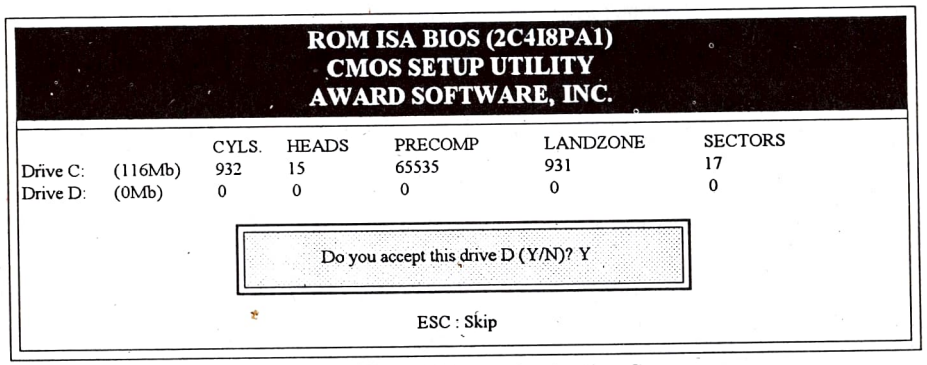


Figure 2-7 IDE HDD Auto Detection Screen

2-8 SAVE & EXIT SETUP

"SAVE & EXIT SETUP" If you select this and press the [enter] key, the values entered in the setup utilities will be recorded in the CMOS memory of the chip set. The microprocessor will check and compare the data when you turn on the system.

2-9 EXIT WITHOUT SAVING

"EXIT WITHOUT SAVING" Selecting this option and pressing the [Enter] key lets you exit the Setup program without recording any new values or changing old ones.

3. AMI BIOS SETUP

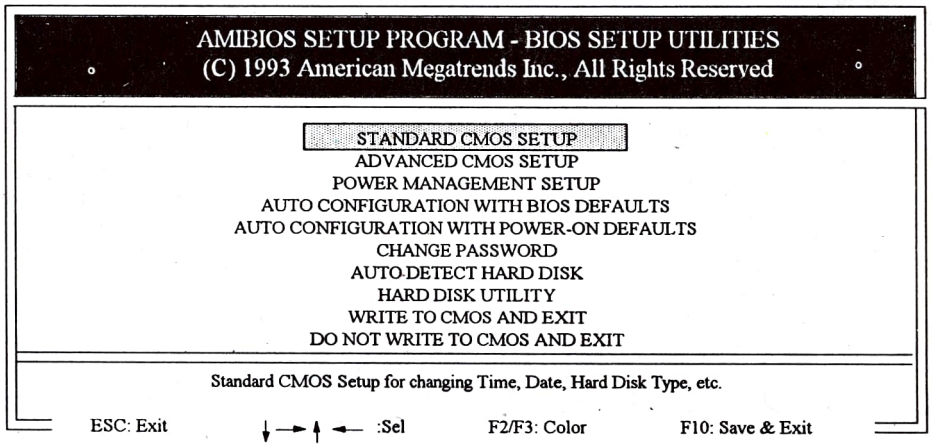


Figure 3-1 Setup Program Initial Screen

AMI BIOS is designed into the motherboard to allow users to configure their systems. At boot-up, after memory tests have been completed, press the **<DEL>** key. The above screen is displayed.

3-1 STANDARD CMOS SETUP

Choose the **STANDARD CMOS SETUP** option from the **INITIAL SETUP SCREEN** Menu (Fig. 3-1) and the below screen is displayed. This standard Setup Menu allows users to configure such system components as date, time, hard disk drive, floppy drive, display, and memory. Once a field is highlighted, on-line help information is displayed in the left bottom of the Menu screen.

AMIBIOS SETUP PROGRAM - STANDARD CMOS SETUP
(C) 1993 American Megatrends Inc., All Rights Reserved

Date(mn/date/year)	: Thu, Mar, 31 1994	Base memory size			:640 KB		
Time(hour/min/sec)	: 22:35:19	Ext. memory size			:23552KB		
		Cyln	Head	WPcom	LZone	Sect	Size
Hard disk C: type	: 17	977	5	300	977	17	41MB
Hard disk D: type	: Not Installed						
Floppy drive A	: 1.2 MB, 5						
Floppy drive B	: Not Installed						
Primary display	: VGA/PGA/EGA						
Keyboard	: Installed						

Sun	Mon	Tue	Wed	Thu	Fri	Sat
20	21	22	23	24	25	26
27	28	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

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

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

Figure 3-2 CMOS Setup Screen

3-2 ADVANCED CMOS SETUP

By choosing the **"ADVANCED CMOS SETUP"** option from the **INITIAL SETUP SCREEN** Menu, the screen below is displayed. This sample screen contains the manufacturer's default values for the mainboard.

AMIBIOS SETUP PROGRAM - ADVANCED CMOS SETUP
(C) 1993 American Megatrends Inc., All Rights Reserved

Typematic Rate Programming	: Disabled	Adaptor ROM Shadow D800, 32K	: Disabled
Typematic Rate Delay (msec)	: 500	Adaptor ROM Shadow E000, 32K	: Disabled
Typematic Rate (Chars/sec)	: 30	Adaptor ROM Shadow E800, 32K	: Disabled
Memory Test Tick Sound	: Enabled	BootSector Virus Protection	: Disabled
Hit <DEL> Message Display	: Enabled	IDE Block Mode Transfer	: Disabled
Hard Disk Type 47 RAM Area	: 0:300	Auto Config Function	: Enable
Wait For <F1> If Any Error	: Enabled	DRAM Speed Option	: Faster
System Boot Up Num Lock	: On	DRAM Write CAS Pulse	: 2T
Numeric Processor Test	: Enabled	DRAM Write Cycle	: 1 W/S
Floppy Drive Seek At Boot	: Disabled	Cache Write Cycle Option	: 2T
System Boot Up Sequence	: A:, C:	Cache Burst Read Cycle	: 1T
System Boot Up CPU Speed	: Low	Bus Clock Frequency Select	: 7.15 MHz
External Cache Memory	: Enabled	Video Cacheable Option	: Enable
Internal Cache Memory	: Enabled	Latch Local Bus Device	: T3
Password Checking Option	: Setup	Local Bus Ready	: SYNC
Video ROM Shadow C000, 32K	: Enabled		
Adaptor ROM Shadow C800, 32K	: Disabled		

ESC: Exit ↓→↑← :Sel (CTRL) PU/PD: modify F1: Help F2/F3: Color
F5: Old Values F6: BIOS Setup Defaults F7: Power-on Defaults

Figure 3-3 Advanced CMOS Setup Screen

3-3 POWER MANAGEMENT SETUP

Choosing the **"POWER MANAGEMENT SETUP"** option from the **INITIAL SETUP SCREEN** menu, the following screen is displayed. This sample screen contains the manufacturer's default values for the motherboard.

AMIBIOS SETUP PROGRAM - ADVANCED CHIPSET SETUP
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BIOS Power Management Mode	: Enabled	Monitor IRQ n	:
APM Interface	: Enabled	IRQ1 (Keyboard)	: Enable
Doze Timer	: 4 Min	IRQ3 (Com 2)	: Enable
Suspend Timer	: 6 Min	IRQ4 (Com 1)	: Enable
HDD Auto Standby Timer	: 10 Min	IRQ5 (Lpt 2)	: Enable
Be DozeState Act. Monitor	:	IRQ6	: Enable
HardDrive Activity	: Enabled	IRQ7 (Lpt 1)	: Enable
KBD/Mouse Activity	: Enabled	IRQ9 (Display)	: Enable
2S/1P Activity	: Enabled	IRQ10	: Enable
Be SpndStage Act. Monitor	:	IRQ11	: Enable
CPU Activity	: Enabled	IRQ12	: Enable
Video Activity	: Enabled	IRQ14 (Harddisk)	: Enable
VESA Activity	: Enabled	IRQ15	: Enable
Memory Activity	: Enabled	Display Off Time	: On Spend
System Wake Up Event	:		
CPU Busy	: Enabled		
VESA Busy	: Enabled		
Memory Access	: Enabled		

ESC: Exit ↓→↑← :Sel(CTRL) PU/PD: Modify F1: Help F2/F3: Color
F5: Old Values F6: BIOS Setup Defaults F7: Power-on Defaults

Figure 3-4 Advanced Chipset Setup Screen

3-4 AUTO CONFIGURATION WITH BIOS DEFAULTS

"AUTO CONFIGURATION WITH BIOS DEFAULTS" loads the default system values directly from ROM. If the stored record created by the Setup program becomes corrupted (and therefore unusable), these defaults will load automatically when you turn the computer on.

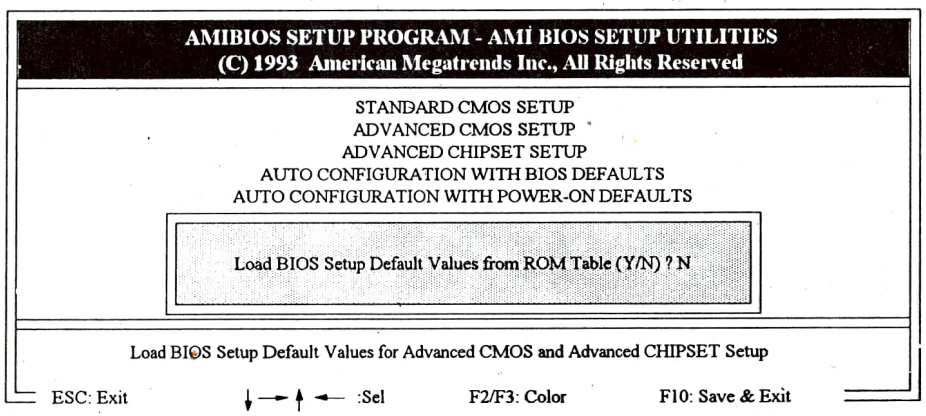


Figure 3-5 Auto Configuration with BIOS Defaults Screen

3-5 AUTO CONFIGURATION WITH POWER-ON DEFAULTS

The **"AUTO CONFIGURATION WITH POWER-ON DEFAULTS"** loads the settings detected when you turn on the computer. If your system is behaving erratically you can use this feature to check for incorrect settings.

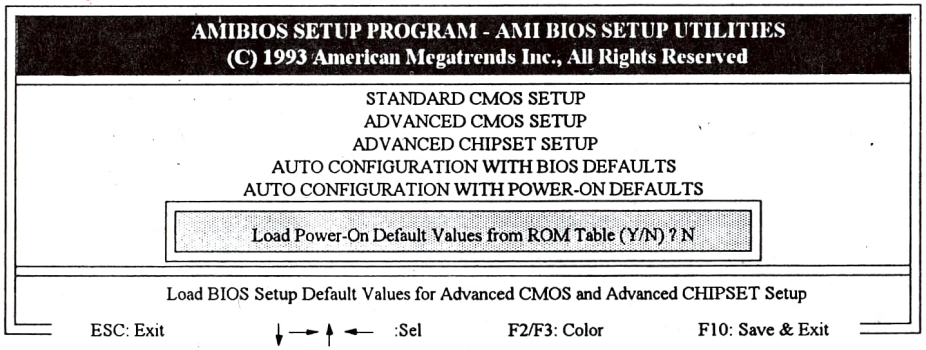


Figure 3-5 Auto Configuration with BIOS Defaults Screen

3-6 CHANGE PASSWORD

To change the password, choose the **"CHANGE PASSWORD"** option form the Setup main menu and press [Enter].

1. If the CMOS is bad or this option has never been used, there is default password which is stored in the ROM. The screen will display the following messages:

   Enter ROM Password:

   Press the [Enter] key and continue to change the password.

2. If the CMOS is good or this option has been used to change the default password, the user is asked for the password stored in the CMOS. The screen will display the following message:

   Enter Current Password:

   Enter the correct password and continue to change the password.

3. After pressing the [Enter] key (ROM password) or current password (user-defined password), you can change the password stored in the CMOS. The password can be at most 6 characters long.

Remember, to enable this feature. You must first select the "Password Checking Option" either "Setup", or "Always" in the ADVANCED CMOS SETUP.

3-7 AUTO DETECT HARD DISK

"AUTO DETECT HARD DISK" This utility can AUTO DETECT IDE HARD DISK TYPE, when you unknow the HARD DISK TYPE. You can use this utility, to help you self-detect correct HARD DISK TYPE.

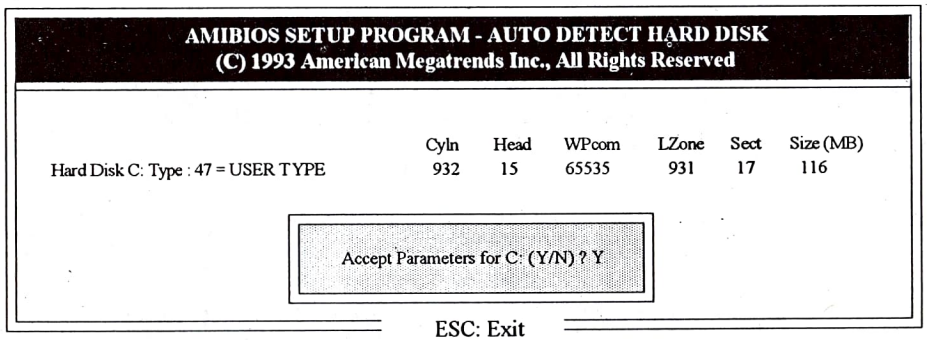


Figure 3-7 AUTO DETECT HARD DISK SCREEN

3-8 WRITE TO CMOS AND EXIT

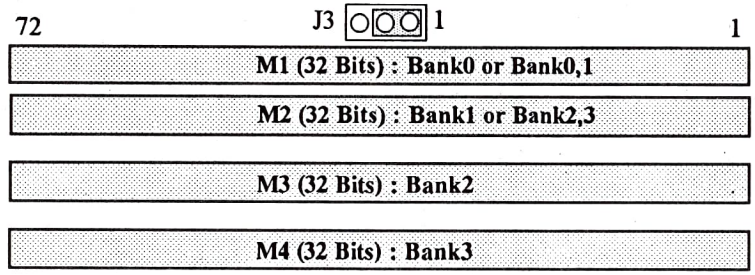
"WRITE TO CMOS AND EXIT". If you select this and press the [enter] key the values entered in the setup utilities will be recorded in the CMOS memory of the chip set. The microprocessor will check this every time you turn your system on and compare this to what it finds as it checks the system. This record is required for the system to operate.

3-9 DO NOT WRITE TO CMOS AND EXIT

"DO NOT WRITE TO CMOS AND EXIT" Selecting this option and pressing the [Enter] key lets you exit the Setup program without recording any new values or changing old ones.

APPENDIX A.

1-7 MEMORY Configuration (72 Pins SIMM X 4)



J3 : 32 Bits (72 PIN) SIMM Type

		M1	M2
1-2 :	Single Bank	Bank0	Bank1
2-3 :	Double Bank	Bank0,1	Bank2,3

M1	M2	M3	M4	J3	SIZE	M1	M2	M3	M4	J3	SIZE
1MB	-----	-----	-----	1-2	1MB	64MB	64MB	-----	-----	1-2	128MB
1MB	1MB	-----	-----	1-2	2MB	2MB	-----	-----	-----	2-3	2MB
1MB	4MB	-----	-----	1-2	5MB	2MB	4MB	-----	-----	2-3	6MB
1MB	1MB	4MB	-----	1-2	6MB	2MB	-----	4MB	4MB	2-3	10MB
4MB	4MB	-----	-----	1-2	8MB	2MB	8MB	-----	-----	2-3	10MB
1MB	1MB	4MB	4MB	1-2	10MB	8MB	-----	-----	-----	2-3	8MB
4MB	4MB	4MB	-----	1-2	12MB	8MB	4MB	-----	-----	2-3	12MB
4MB	4MB	4MB	4MB	1-2	16MB	8MB	-----	4MB	4MB	2-3	16MB
16MB	-----	-----	-----	1-2	16MB	8MB	8MB	-----	-----	2-3	16MB
4MB	16MB	-----	-----	1-2	20MB	8MB	16MB	-----	-----	2-3	24MB
4MB	4MB	16MB	-----	1-2	24MB	8MB	-----	4MB	16MB	2-3	28MB
4MB	4MB	4MB	16MB	1-2	28MB	8MB	-----	16MB	16MB	2-3	40MB
16MB	16MB	-----	-----	1-2	32MB	8MB	32MB	-----	-----	2-3	40MB
4MB	16MB	16MB	-----	1-2	36MB	32MB	-----	-----	-----	2-3	32MB
4MB	4MB	16MB	16MB	1-2	40MB	32MB	16MB	-----	-----	2-3	48MB
16MB	16MB	16MB	-----	1-2	48MB	32MB	-----	16MB	16MB	2-3	64MB
4MB	16MB	16MB	16MB	1-2	52MB	32MB	32MB	-----	-----	2-3	64MB
16MB	16MB	16MB	16MB	1-2	64MB	1MB	16MB	-----	-----	1-2	17MB
16MB	64MB	-----	-----	1-2	80MB	1MB	1MB	16MB	-----	1-2	18MB

TABLE 4. MEMORY Configuration table