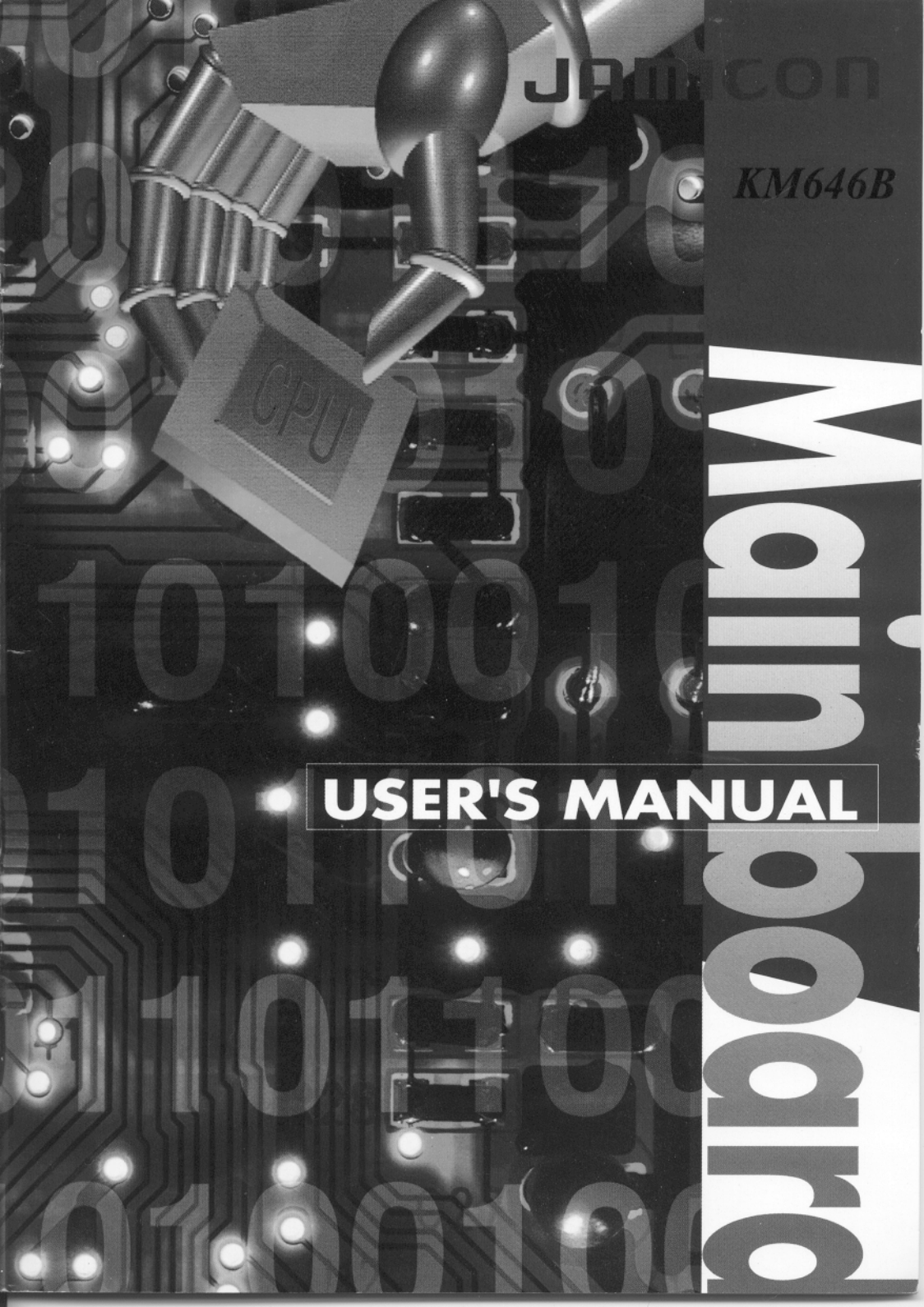

JAMICON
KM646B
Mainboard
USER'S MANUAL
CPU

CONTENTS

1 INTRODUCTION

1.1 Overview

This 646BX mainboard is a full-featured IBM PC/AT™-compatible board that supports the PCI local bus and current and future models of the high-performance Pentium® II/Celeron™ CPU.

The board's control logic provides high-speed performance for the most advanced multi-user, multitasking computer applications available today. The board employs SDRAM Memory Modules (DIMMs) for maximum memory up to 512MB.

This mainboard is fully compatible with thousands of applications developed for IBM PC/AT™-compatible personal computers. The Peripheral Component Interconnect (PCI) local bus is a high-performance 32-bit bus that lets you add highly integrated peripheral controller components, peripheral add-on boards, and processor/memory systems.

In addition, the Industry Standard Architecture (ISA) bus slots allow you to choose from 8- or 16-bit industry-standard add-on boards. A floppy disk drive controller, IDE hard disk drive controller, serial ports (16550 UART), and parallel port (with EPP and ECP modes) are included so that peripheral devices can be easily connected without using the expansion slots.

The Accelerator Graphic Port (A.G.P.) interface slot is another feature of this mainboard. The AGP interface enables 3D applications which do not require exorbitant information storage so that images may be refreshed and at the same time will leave enough storage space to support texture mapping, z-buffering and alpha blending. It also allows 3D applications to run faster and look better on the mainstream price point PCs.

1.2 Features

This 646BX AGPset mainboard offers the following advanced features:

CPU

- Intel Pentium® II processors at 233MHz ~ 450MHz
- Intel Celeron™ processors at 266MHz ~ 400MHz

Memory

- Provides 4 DIMM up to 512MB
- "Table Free" DRAM configuration
- Suports ECC for single-bit error correction and multiple-bit error detection

I/O Slots

- Three 16-bit ISA slots
- Four 32-bit Bus Master PCI local bus slots
- One AGP slot

BIOS

- Licensed Award Flash "Plug & Play" BIOS
- Supports Soft Power On/Off and Modem Ring Wake-Up
- PC97 compliant with ACPI and InstantOn

Onboard Super I/O

- Onboard peripheral ports:

— Parallel port with bi-directional lines: supports Enhanced Parallel Port (EPP) and Extended Capabilities Port (ECP)
— One IrDA IR port

- Supports 2 onboard PCI IDE interface, mode 1 to 4 Ultra DMA/33 hard disk driver, and floppy disk interface
- Supports PS/2 mouse, PS/2 keyboard, and 2 USB ports
- Supports CPU hardware Green function
- ACPI (Advanced configuration Power Management Interface)
- Supports Ring On (external modem only) and Wake-On-LAN
- Supports Keyboard/Mouse Power-On 300mA 5V (stand-by) ATX Power is required]
- Onboard SB-Link Header for Sound Feature connector

1.3 Unpacking the Mainboard

This mainboard comes in a sturdy cardboard shipping carton, which should contain the following items:

- This 646BX Mainboard
- This User's Guide
- Utility Diskette
- CPU Retention Clip
- Cable Set

Follow the precautions below while unpacking the mainboard and do remember to leave the mainboard in its original package until you are ready to install it.

1. Before handling the mainboard, ground yourself by touching an unpainted portion of the system's metal chassis.

HARDWARE SETUP

This chapter shows you how to do the hardware setup of this mainboard. Besides the proper procedures listed below, this section also discusses how to install Slot 1 and set the jumper switch settings and connectors on the board.

Step 1: Slot 1 Installation Procedures
Step 2: CPU Type Configuration
Step 3: Memory Installation
Step 4: Making connections through connectors
Step 5: Running the system

Go to Chapter 3 for BIOS setup after completing the above procedures.

Slot 1 Installation Procedures

This mainboard provides a non-boxed Pentium II/Celeron CPU retention set to secure the CPU on this board. Make sure that the Pentium II/Celeron CPU is the right position when you install it to the board.

Insert the CPU into the retention clip and notice that the heat sink is on the left hand side of the board. Lock the two latches on the sides of the CPU to secure the CPU.

1.5 Main Board Layout with Default Settings

The system clock of this mainboard is set by BIOS.

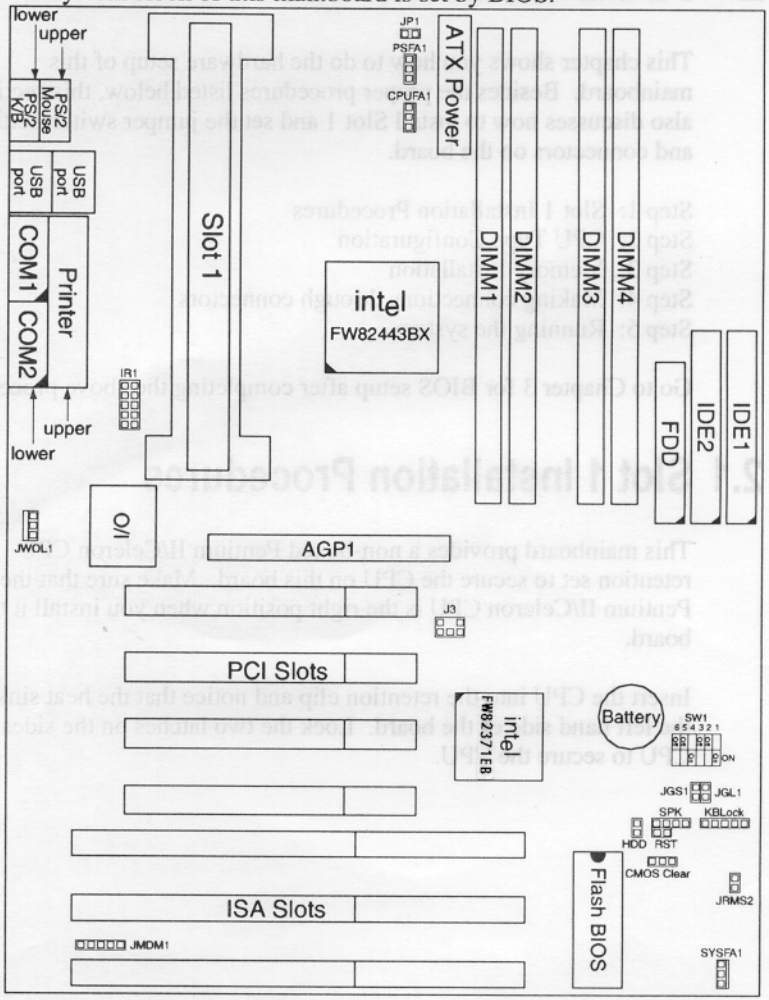
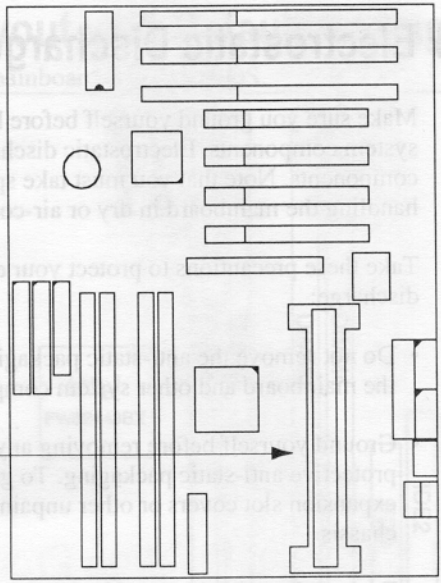


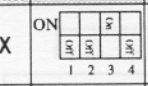
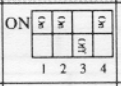
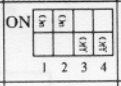
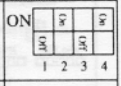
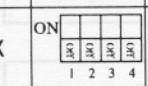
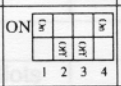
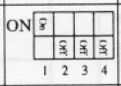
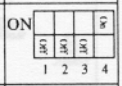
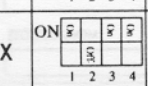
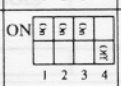
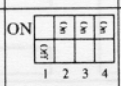
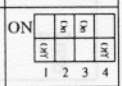
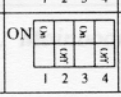
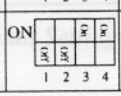
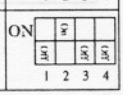
Figure 1–1. Mainboard Default Settings



2.2 Jumper Settings

This section shows you how to configure your system.

SW1: 1~4 – CPU Multiple Selector

Clock Multiplier	SW1: 1~4	Clock Multiplier	SW1: 1~4	Clock Multiplier	SW1: 1~4	Clock Multiplier	SW1: 1~4
1.5X		3X		5X		7X	
2X		3.5X		5.5X		7.5X	
2.5X		4X		6X		8X	
		4.5X		6.5X		Reserved	

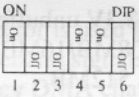
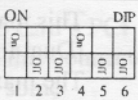
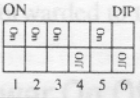
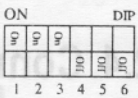
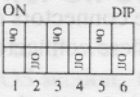
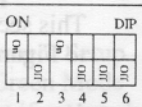
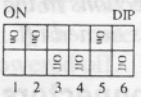
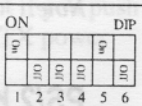
SW1: 5 – Bus Clock Selector

SW1: 5	Description
	CPU Clock 100MHz and PCI Clock 33.3MHz
	CPU Clock 66.6MHz and PCI Clock 33.3MHz

SW1: 6 – Reserved

SW1: 6	Description
	Factory default is Off.

SW1 CPU Settings

CPUs	SW1: 1~6	CPUs	SW1: 1~6
Intel PII-233		Intel PII-350	
Intel PII-266/Celeron-266		Intel PII-400/Celeron 400	
Intel PII-300/Celeron-300		Intel PII-450	
Intel PII-333/Celeron-333		Intel Celeron 366	

JBAT: Battery and CMOS Clear

Clear the CMOS memory by shorting this jumper momentarily, then remove the cap to retain new setting.

CMOS Discharge	JBAT
Standard (default)	
Clear CMOS	

JP1: Keyboard Power On

	Functions
Short (Default)	Enable the Soft Power On function
Open	Disable the Soft Power On function

2.3 Memory Configuration

This mainboard supports 168-pin 3.3V unbuffered type 4 DIMMs (Dual Inline Memory modules) of 8MB/16MB/32MB/64MB/128MB. The maximum memoryDIMMs is 512MB.

2.4 Connectors

This section describes some of the connectors on the mainboard. Refer to Figure 1–1 for the location of these connectors.

Note: Before making any connections to the board, make sure that the power to the system is turned off.

PS/2 Keyboard/Mouse Connectors

A six-pin female PS/2 keyboard connector and a six-pin female PS/2 mouse connector are located at the rear of the board. Plug the keyboard/mouse jacks into these connectors.

ATX Power – Power Supply Connector

The motherboard provides an ATX power supply connector. It is a twenty-pin male header connector. Plug the connector from the power directly onto the board connector while making sure the pin1 is in its position.

ATXSW – ATX Power Switch

This switch pin is used to control ATX power controller. Push this button to turn on the system, and if, push and hold this button longer than 4 seconds, the system will be turn off automatically, and also, there is another alternative in the CMOS setup section which allows you to turn off the system immediately.

JMDM – Wake Up on Modem

This jumper is designed to wake up the system while it is in suspend mode if a phone signal is coming in.

J3 – SB-Link Connector

This 5-pin connector is used for plugging the PCI Audio card's PCI request/grant sideband signals connector into. Through this connector requests for legacy DMA channel support as needed by some soundcards are forwarded to the PCI Bus.

JRMS2 – Power On Off and Green Switch

If the setup is set to "Power 4sec" in the Power Management Setup section under BIOS section, the system will enter the Green Mode when the power on/off switch is being turned on/off, but if you push and hold the switch for more than 4 seconds then the ATX power supply will be powered off.

JWOL1 – Wake Up on LAN

Attach a 3 pins connector from the LAN card which supports the Wake-On-LAN (WOL) function. This function lets users wake up the connected computer through the LAN card.

IR1 – IR Connector

The system board provides a 10-pin infrared connector—IR1 as an optional module for wireless transmitting and receiving.

JGS1 – External SMI Connector

SYSFA1, CPUFA1, PSFA1: CPU FAN Connectors

These 3-pins connectors provide 12V power for the CPU, and chasis cooling fans which match the pin assignment of these connectors.

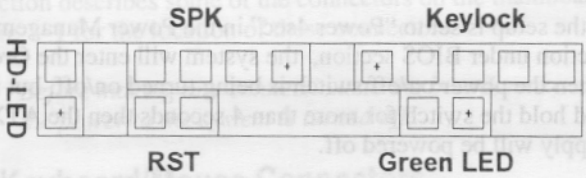
FAN Name	Functions
SYSFA1	System Fan Connector
CPUFA1	CPU FAN Connector
PSFA1	Power Fan Connector

JCL1 – Green LED Connector

LED will light on when the green switch is pushed on.

JFP1 – Pannel Connector

This connector contains: Keylock & Power Led Connector, Hard Disk Activity LED, Reset Switch, and Speaker Connector.



HDD – Hard Disk Activity LED

This connector connects to the hard disk activity indicator light on the case.

3 AWARD BIOS SETUP

The ROM chips of your mainboard are configured with a customized Basic Input/Output System (BIOS) from Award Software Inc. The BIOS is a set of permanently recorded program routines that give the system its fundamental operational characteristics. It also tests the computer and determines how the computer reacts to specific instructions that are part of programs.

The BIOS is made up of codes and programs that provide the device level control for the major I/O devices in the system. It contains a set of routines (called POST, for Power-On Self Test) that check out the system when you turn it on. The BIOS also includes CMOS Setup programs, so no disk-based setup program is required. CMOS RAM stores information for:

- the date and time
- the memory capacity of the mainboard
- the type of display adapter installed
- the number and type of disk drives installed.

The CMOS memory is maintained by a battery installed on the mainboard. By using the battery, all memory in CMOS can be retained when the system power switch is turned off.

Use the CMOS Setup program to modify the system parameters to reflect the options installed in your system and to customize your system as desired. For example, you should run the Setup program after you:

- replace the battery
- install another disk drive
- receive an error code at startup
- use your system after not having used it for a long time

- find the original setup missing.

Run the CMOS Setup program after you turn on the system. On-screen instructions explain how to use the program.

3.1 Entering the CMOS Setup Program

1. Turn on or reboot the system. After a series of diagnostic checks, the following message will appear:

   PRESS <DEL> TO ENTER SETUP

2. Press the <DEL> key and the main program screen appears as in figure 3–1.

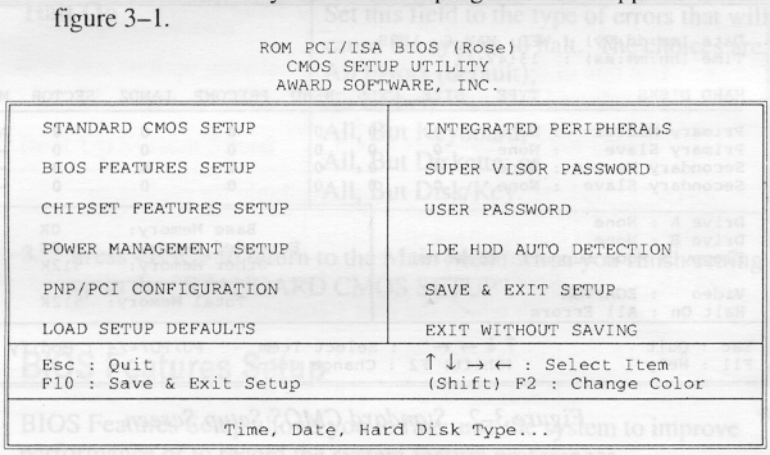


Figure 3–1. Main Program Screen

3. Use one of the arrows on the keyboard to select an option and press <Enter>. Modify the system parameters to reflect the options installed in the system.

4. Return to the Main Menu anytime by press <ESC>.

5. In the Main Menu, "SAVE AND EXIT SETUP" saves the changes and reboots the system, and "EXIT WITHOUT SAVING" ignores the changes and exits the program.

Standard CMOS Setup

Standard CMOS Setup records some basic system hardware configuration and sets the system clock and error handling. Use this option to change configuration values when changing the system hardware setup or when the data stored in the CMOS memory gets lost or damaged.

Run the Standard CMOS Setup as follows:

1. Choose "STANDARD CMOS SETUP" from the Main Menu and a screen depicted in Figure 3–2 appears.

```
                    ROM PCI/ISA BIOS
                 STANDARD CMOS SETUP
                AWARD SOFTWARE, INC.

Date (mm:dd:yy) : WED, MAY 6, 1998
Time (hh:mm:ss) :  13:47:41

HARD DISKS          TYPE   SIZE  CYLS  HEAD  PRECOMP  LANDZ  SECTOR  MODE
Primary Master    : None     0     0     0        0      0       0   AUTO
Primary Slave     : None     0     0     0        0      0       0   ----
Secondary Master  : None     0     0     0        0      0       0   ----
Secondary Slave   : None     0     0     0        0      0       0   ----

Drive A : None                          Base Memory:      0K
Drive B : None                      Extended Memory:      0K
Floppy 3 Mode Support: Disabled       Other Memory:     512K

Video   : EGA/VGA                      Total Memory:     512K
Halt On : All Errors

Esc : Quit          ↑ ↓ → ←   : Select Item     PU/PD/+/- : Modify
F11 : Help          (Shift) F2 : Change Color
```

Figure 3–2. Standard CMOS Setup Screen

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/– keys.

A short description of screen options (Figure 3–2) follows:

Date (mm:dd:yy)	Set the current date.
Time (hh:mm:ss)	Set the current time.
Primary/Secondary Master/Slave	This field records the specifications for all non-SCSI hard disk drives installed in the system. Refer to the respective documentation on how to install the drivers.

Drive A/B	Set this field to the types of floppy disk drives installed in the systems. The choices are: 360KB, 5.25 in.; 72KB, 3.5 in.; 1.44MB, 3.5 in.; (default) 2.88MB, 3.5 in.; or None.
Video	Set this field to the type of video display card installed in the system. The choices are: Monochrome; CGA 40; VGA/EGA (default); or CGA 80.
Halt On	Set this field to the type of errors that will cause the system to halt. The choices are: All Errors (default); No Errors; All, But Keyboard; All, But Diskette; or All, But Disk/Key.

3. Press <ESC> to return to the Main Menu when you finish setting up in the "STANDARD CMOS SETUP".

BIOS Features Setup

BIOS Features Setup allows you to fine tune the system to improve performance or to record the system feature preferences.

Run the BIOS Features Setup as follows:

1. Choose "BIOS FEATURES SETUP" from the Main Menu, and a screen depicted in Figure 3–3 will appear.

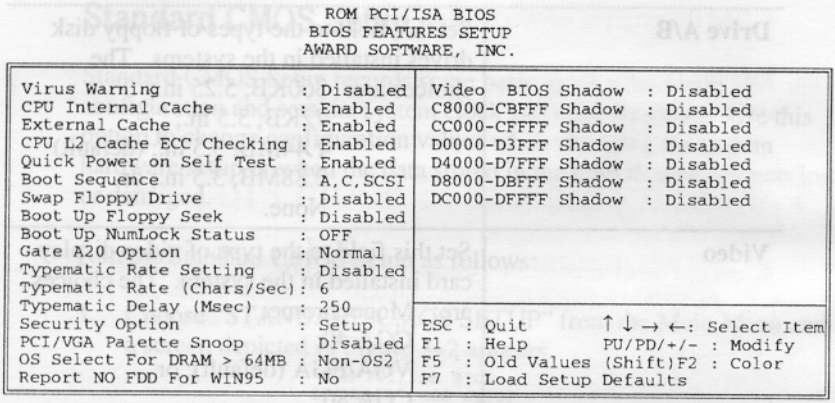


Figure 3–3. BIOS Features Setup Screen

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/– keys. An explanation of the <F> keys follows:

<F1>:	"Help" gives options available for each item.
Shift <F2>:	Changes color.
<F5>:	Resets the previous values. These values are the values with which the user started the current session.
<F6>:	Loads all options with the BIOS default values.
<F7>:	Loads all options with the Setup default values.

A short description of screen options (Figure 3–3) follows:

Virus Warning	Choose Enabled or Disabled (default).
CPU Internal Cache	Choose Enabled (default) or Disabled. This option allows the enabling or disabling of the CPU internal cache.
External Cache	Choose Enabled (default) or Disabled. This option allows the enabling or disabling of the external cache memory.

Quick Power On Self Test	Choose Enabled (default) or Disabled. This option speeds up the Power On Self Test routine.
Boot Sequence	Choose "C: A, SCSI" (default), or others. This option determines which drive to engage first for the operating system.
Swap Floppy Drive	Choose Enabled or Disabled (default). This option swaps floppy drive assignments when enabled.
Boot Up Floppy Seek	Choose Disabled (default) or Enabled.
Boot Up NumLock Status	Choose On (default) or Off. This option activates the NumLock function at boot-up time.
Boot Up System Speed	Choose High (default) or Low.
Gate A20 Option	Choose Fast (default) or Normal. This option allows the RAM to access the memory above 1MB by using the fast gate A20 line.
Typematic Rate Setting	Choose Enabled or Disabled (default). Enable this option to adjust the keystroke repeat rate.
Typematic Rate (Chars/Sec)	Range between 6 (default) and 30 characters per second. This option controls the speed of repeating keystrokes.
Typematic Delay (Msec)	Choose 250 (default), 500, 750, or 1000. This option sets the time interval for displaying the first and the second characters.
Security Option	Choose System or Setup (default). This option is used to prevent unauthorized system boot-up or use of BIOS Setup.

Assign IRQ for VGA	Choose Enabled or Disabled (default).
OS Select for DRAM > 64MB	Choose Non-OS2 (default) or OS2.
Video BIOS Shadow	Enabled (default): maps the VGA BIOS to system RAM for greater performance. Disabled: No mapping of the VGA BIOS to system RAM.
C8000–CBFFF to DC000–DFFF Shadow	These options are used to shadow other expansion cards' ROM.

3. Press <ESC> and follow the screen instructions to save or disregard the changes.

Chipset Features Setup

Chipset Features Setup changes the values of the chipset registers. These registers control the system options. Modification other than the default value should first have chipset knowledge.

Run the Chipset Features Setup as follows:

1. Choose "CHIPSET FEATURES SETUP" from the Main Menu and a screen depicted in Figure 3–4 appears.

```
                    ROM PCI/ISA BIOS
                CHIPSET FEATURES SETUP
                AWARD SOFTWARE, INC.

Auto Configuration          : Enabled
EDO DRAM Speed Selection    : 60ns
EDO CASX# MA Wait State     : 2
EDO RASX# Wait State        : 2
SDRAM RAS-to-CAS Delay      : 3
SDRAM RAS Precharge Time    : 3
SDRAM CAS Latency Time      : 3
SDRAM Precharge Control     : Disabled
DRAM Data Integrity Mode    : Non-ECC
System BIOS Cacheable       : Disabled
Video BIOS Cacheable        : Disabled
Video RAM Cacheable         : Disabled
8 Bit I/O Recovery Time     : 1
16 Bit I/O Recovery Time    : 1
Memory Hole At 15M-16M      : Disabled
Passive Release             : Disabled
Delay Transaction           : Disabled
AGP Aperture Size (MB)      : 64

ESC : Quit      ↑ ↓ → ←  : Select Item
F1  : Help      PU/PD/+/- : Modify
F5  : Old Values (Shift)F2 : Color
F6  : Load BIOS Defaults
F7  : Load Setup Defaults
```

Figure 3–4. Chipset Features Setup Screen

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/– keys.

A short description of screen options (Figure 3–4) follows:

Auto Configuration	Enable this option (strongly recommended) and the system automatically sets all options on the left side of the screen (except cache update mode & BIOS cacheable). **If this option is Enabled you must boot from Turbo mode.**
DRAM Speed Selection	Choose 60ns (default) or 50ns.
MA Wait State	Use the default setting.
EDO RAS# to CAS# Delay	Use the default setting.
EDO RAS# Precharge Time	Use the default setting.
EDO DRAM Read Burst	Use the default setting.
EDO DRAM Write Burst	Use the default setting.
DRAM Data Integrity Mode	Choose Non-ECC (default) or ECC according to the DRAM type you have.
CPU-TO-PCI IDE Posting	Use the default setting.
System BIOS Cacheable	Disabled: The ROM area F0000H-FFFFFH is not cached. Enabled: The ROM area F0000H-FFFFFH is cacheable if cache controller is enabled.

Video BIOS Cacheable	Disabled: The video BIOS C0000H-C7FFFH is not cached. Enabled: The video BIOS C0000H-C7FFFH is cacheable if cache controller is enabled.
Video RAM Cacheable	Use the default setting.
8Bit I/O Recovery Time	Use the default setting.
16Bit I/O Recovery Time	Use the default setting.
Memory Hole At 15M-16M	Choose Enabled or Disabled (default). Some interface cards will map their ROM address to this area. If this occurs, you should select Enabled, otherwise use Disabled.
Passive Release	Use the default setting.
Delayed Transaction	Use the default setting.
AGP Aperture Size	AGP could use the DRAM as its video RAM. Choose the DRAM size that you want it to be used as video RAM. The range is from 4MB to 256MB.
SDRAM RAS-to-CAS Delay	Use the default setting.
SDRAM RAS Precharge Time	Use the default setting.
SDRAM CAS Latency Time	Use the default setting.
Auto Detect DIMM/PCI Clk	Use the default setting.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Power Management Setup

Power Management Setup sets the system instructions power saving functions.

1. Choose "POWER MANAGEMENT SETUP" from the Main Menu and a screen depicted in Figure 3–5 will appear.

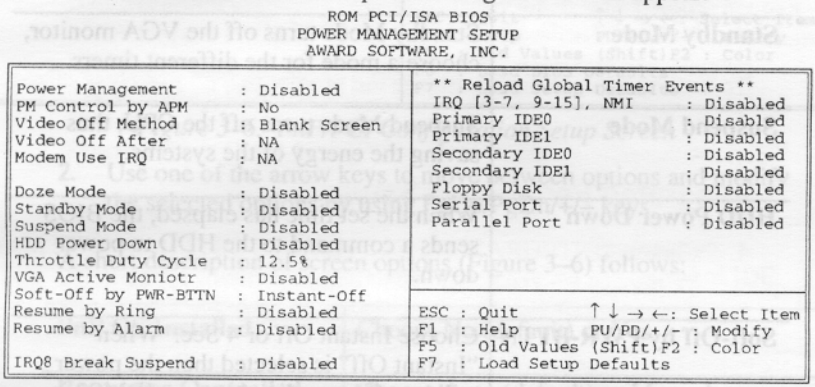


Figure 3–5. Power Management Setup Screen

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/– keys.

A short description of screen options (Figure 3–5) follows:

Power Management	Choose Max, Saving, User Define, Disabled (default), or Min. Saving.
PM Control by APM	Choose Yes (default) or No. Choose Yes if the operating system has APM functions, choose No otherwise.
Video Off Method	Choose Blank Screen (default), DPMS, or V/H Sync+Blank. You can choose either DPMS or V/H Sync+Blank when the monitor has the Green function. Choose Blank when the monitor has no Green function.

Video Off After	Choose Standby (default), Doze, N/A, or Suspend. This function determines the timing of the monitor closed down functions.
Doze Mode	This option sets the CPU speed down to 33 MHz to conserve power.
Standby Mode	Standby Mode turns off the VGA monitor, choose a mode for the different timers.
Suspend Mode	Suspend Mode turns off the CPU, thus saving the energy of the systems.
HDD Power Down	When the set time has elapsed, the BIOS sends a command to the HDD to power down.
Soft-Off by PWR-BTTN	Choose Instant Off or 4 Sec. When "Instant Off" is selected then the power will be off immediately when JRMS2 is pushed off. If "4sec" is selected, the system will enter green mode if the JRMS2 button is pushed and released right away, and if push and hold on for more than 4 seconds, the system is powered off.
Wake-Up Event	Set these IRQs individually. Activity detected from any enabled IRQ channel (ON) will wake up the system.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

PnP/PCI Configuration Setup

PnP/PCI Configuration Setup configures the PCI bus slots. Run the PnP/PCI Configuration Setup as follows:

1. Choose "PNP/PCI CONFIGURATION SETUP" from the Main Menu and a screen depicted in Figure 3–6 will appear.

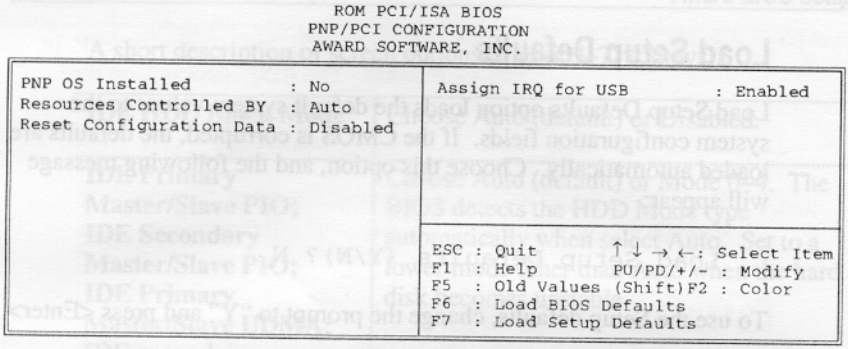


Figure 3–6. PnP/PCI Configuration Setup Screen

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/– keys.

A short description of screen options (Figure 3–6) follows:

PnP OS Installed	Choose No (default) or Yes.
Resources Controlled By	Choose Auto (default) or Manual.
Reset Configuration Data	Choose Enabled or Disabled (default).
Assign IRQ for USB	Choose Enabled (default) or Disabled. Enabled: Add one IRQ to USB controller. Deisabled: Remove IRQ from USB controller. The system will have extra IRQ for other devices but the USB controller will still not disabled (only IRQ was removed.)

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Load Setup Defaults

Load Setup Defaults option loads the default system values to the system configuration fields. If the CMOS is corrupted, the defaults are loaded automatically. Choose this option, and the following message will appear:

```
Load Setup Defaults (Y/N)? N
```

To use the Setup defaults, change the prompt to "Y" and press <Enter>.

Integrated Peripherals Setup

1. Choose "INTEGRATED PERIPHERALS SETUP" from the Main Menu, and a screen depicted in Figure 3–7 will appear.

```
                    ROM PCI/ISA BIOS
                INTEGRATED PERIPHERALS
                AWARD SOFTWARE, INC.

IDE HDD Block Mode          : Enabled
IDE Primary Master PIO      : Auto
IDE Primary Slave PIO       : Auto
IDE Secondary Master PIO    : Auto
IDE Secondary Slave PIO     : Auto
IDE Primary Master UDMA     : Auto
IDE Primary Slave UDMA      : Auto
IDE Secondary Master UDMA   : Auto
IDE Secondary Slave UDMA    : Auto
On-Chip Primary PCI IDE     : Enabled
On-Chip Secondary PCI IDE   : Enabled
USB Keyboard Support        : Disabled
Imit Display First          : PCI Slot

POWER ON Function           : Mouse Left

KBC Input Clock             : 8 MHz
Onboard FDD Controller      : Enabled
Onboard Serial Port 1       : 3F8/IRQ4

Onboard Serial Port 2       : 2F8/IRQ3
UART Mode Select            : Normal

Onboard Parallel Port       : 378/IRQ7
Parallel port Mode          : SPP

ESC : Quit          ↑ ↓ → ←: Select Item
F1  : Help          PU/PD/+/- : Modify
F5  : Old Values    (Shift)F2 : Color
F7  : Load Setup Defaults
```

Figure 3–7. Power Management Setup Screen

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp/PgDn/+/– keys.

A short description of screen options (Figure 3–7) follows:

IDE HDD Block Mode	Choose Auto (default) or Disabled.
IDE Primary Master/Slave PIO; IDE Secondary Master/Slave PIO; IDE Primary Master/Slave UDMA; IDE secondary Master/Slave UDMA	Choose Auto (default) or Mode 0~4. The BIOS detects the HDD Mode type automatically when select Auto. Set to a lower mode other than Auto when the hard disk becomes unstable.
On-Chip Primary/Secondary PCI IDE	Enabled (default): Turns on the on-board IDE function. Disabled: Turns off the on-board IDE function.
USB K/B Support	Use the default setting.
Onboard FDD Controller	Choose Enabled (default) or Disabled. Choose Disabled when you use an ISA card with FDD function, or, choose Enabled to use the onboard FDD connector.
Onboard Serial Port1	Choose COM1/3F8 (default), COM2/2F8, COM3/3E8, COM4/2E8, or Disabled. Do not set COM port 1 & 2 to the same value except Disabled.
Onboard Serial Port2	Choose COM1/3F8, COM2/2F8 (default), COM3/3E8, COM4/2E8, or Disabled.
UR1/2 Mode	Choose Normal (default), ASK IR, or IrDA. The following item will be displayed when choosing either ASK IR or IrDA: UR1 (or 2) Duplex Mode : Half
Onboard Parallel Port	Choose the printer I/O address: 378H (default), 3BCH, 278H, Disabled.

Parallel Port Mode	Choose ECP/EPP, SPP (default), EPP, or ECP mode. The mode depends on the external device that connects to this port.

3. Press <ESC> and follow the screen instructions to save or disregard your settings.

Password Setting

This option allows the user to set the system password. To set the password:

1. Choose "Password Setting" in the Main Menu and press <Enter>. The following message appears:

   `"Enter Password:"`

2. When running this option for the first time, enter the password (up to 8 characters) and press <Enter>. For security, the screen will not display the entered characters.

3. After entering the password, the following message appears prompting for the confirmation of the password:

   `"Confirm Password:"`

4. Enter the same password again to confirm the password and press <Enter>.

5. Move the cursor to Save & Exit to save the password.

6. To delete the password entered before, choose the `"Password Setting"` and press <Enter>. This will delete the old password.

7. Move the cursor to Save & Exit to save the option, otherwise the old password will still be stored when you turn on the machine the next time.

8. Press <ESC> to exit to the Main Menu.

Note: *If you forget or lose the password, the only way to access the system is to clear the CMOS RAM by shorting J7 across pin2*

and 3. All setup information will be lost and you will need to run the BIOS setup program again.

IDE HDD Auto Detection

IDE HDD Auto Detection detects the parameters of an IDE hard disk drive and automatically enters them to the Standard CMOS Setup Screen.

After selecting this option, the screen prompts for a selection of a specific hard disk for Primary Master after you select this option. Enter "Y" to confirm the acceptance of the hard disk detected by the BIOS. Press <Enter> to check next hard disk. This function checks up to four hard disks. User can press the <ESC> after the <Enter> to skip this function to return to the Main Menu.

Save & Exit Setup

Save & Exit Setup saves all modifications specified into the CMOS memory. Highlight this option on the Main Menu and the following message will appear:

```
SAVE to CMOS and EXIT (Y/N)?  Y
```

Press <Enter> key to save the configuration changes.

Exit Without Saving

Exit Without Saving exits the Setup utility without saving the modifications specified. Highlight this option on the Main Menu and the following message will appear:

```
Quit Without Saving (Y/N)?  N
```

To quit without saving, change the prompt to "Y" and press <Enter> key to exit.

3.2 FLASH ROM Utility

This section shows you how to update your BIOS program.

Step 1: Make sure your operating environment is DOS (not windows DOS session) and remove every configured driver by renaming the config.sys and autoexec.bat, then reboot.

Step 2: Use the command in c prompt, such as:

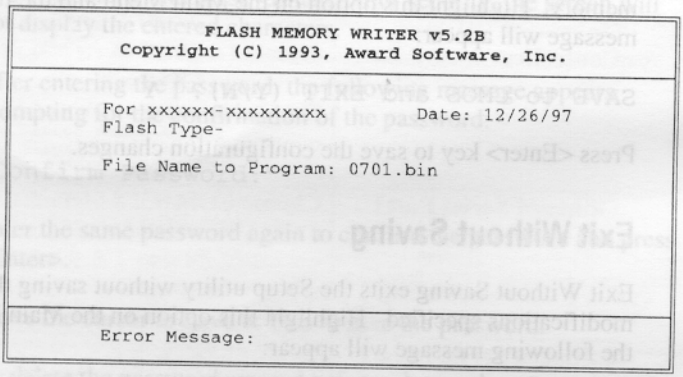
```
AWDFLASH <path>0701.bin
```

or

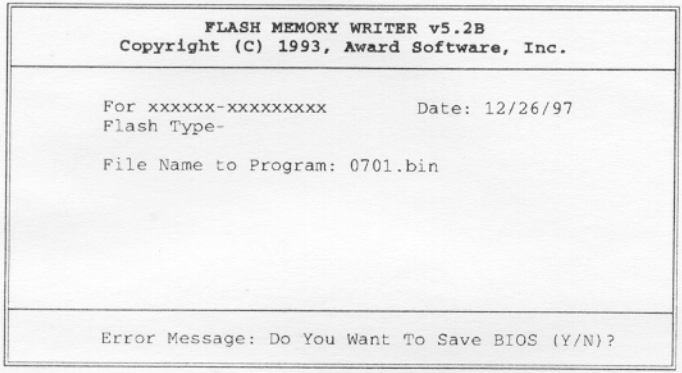
```
AWDFLASH
```

then type file name later.

The following screen will appear:



Step 3: Select Y or N when the utility asks to save the older version of BIOS or not. Go to Step 4 if select Y, otherwise enter the file name to save, then go to Step 4.



Step 4: Make sure that you really need to update your system BIOS, then press Y to go on, otherwise stop it.