EXP8049

User's Manual

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RMA FORM

1.1A

CHAPTER 1 INTRODUCTION

1.1 OVERVIEW

The *EXP8049* is complemented by a 512KB second level Write-Back cache providing workstation level computing performance, and SIMM sockets support up to 64MB of DRAM.

The *EXP8049* motherboard offers outstanding I/O capabilities. Four PCI Local Bus slots provide a high bandwidth data path for data-movement intensive function such as Graphics. Three ISA slots complete the I/O mix.

The *EXP8049* Baby-AT motherboard provides the foundation for cost effective, high performance, highly expandable platforms which deliver the latest in CPU and I/O technologies.

1.2 SYSTEM FEATURES

 Supports INTEL 486SX, DX, DX2, DX4, P24T, P24D, S-SERIAL AMD DX, DX2, DXL, DX4 CYRIX SX, DX, DX2
 Supports H/W GREEN/WAKE UP Switch
 Supports 4 System States for Power Saving : ON/DOZE /STANDBY/SUSPEND
 Supports L1/L2 Write Back/Write Through Cache Feature

□ Supports 3 MASTER PCI Bus & 1 SLAVE PCI Bus

1 ExpertBoard □ Supports 128KB/256KB/512KB Cache Size □ Supports 72pin SIM MODULES □ Supports SMI/SMM/PMU/APM Power Controllers □ Enchanced PCI IDE on Board □ Supports 2S1P, Floppy on Board □ BIOS has been Hardware Integrated with Enhanced IDE Driver for Best Hard Disk Performance □ Supports Parallel Port EPP/ECP Mode **1.3 SYSTEM SPECIFICATIONS** INTEL 486SX/DX/DX2/DX4/P24T/P24D Processor : 486CPU CYRIX CX486 SX/DX/DX2 486CPU AMD DX/DX2/DX4/DXL 486CPU CPU Clock : 25/33/40/50 MHz CPU Up to 64MB Memory : Memory Configuration : 1MB/2MB/4MB/8MB/16MB/32MB/64MBSRAM Configuration : 128KB/256KB/512KB BIOS Subsystem : PHOENIX\AMI BIOS I/O Subsystem No. Slot : Three 16-bit ISA Bus and Four PCI Bus Dimension : 9.2" X 8.8" , 2/3 Baby AT Size

Additional Features

Miscellaneous Connectors : Reset Button, Internal Battery, Turbo SW, Flash LED(Turbo LED) for Power Green Board Design : Four-layer Implementation for Low Noise Operation

SOFTWARE CPU TYPE	LANDMARK V2 0	POWER METER V1.7 MIPS	NORTON V8.0 CPU SPEED
	V 2 • U		CLO PLED
INTEL DX-	111.35MHz	14.7MIPS	72.0
33MHz			
AMD DX-40MHz	133.77MHz	17.6MIPS	86.5
INTEL DX2-	167.64MHz	19.4MIPS	99.3
50MHz			
INTEL DX-	167.64MHz	21.9MIPS	108.4
50MHz			
INTEL DX2-	222.69MHz	25.8MIPS	132.0
66MHz			

1.4 SYSTEM PERFORMANCE

1.5 EXP8049 BOARD LAYOUT





CHAPTER 2 INSTALLATION

Before the system is ready to operate, the hardware must be set up for various functions of the system. To set up the *EXP8049* motherboard is a simple task. The user only has to set a few jumpers, connectors and sockets.

2.1 DRAM INSTALLATION

The *EXP8049* main board can support expanded memory from 1MB to 64MB. Either 1MB, 2MB, 4MB, 8MB,16MB, 32MB, SIM Modules can be used on the *EXP8049* motherboard.

■ The board layout below shows the locations of the DRAM memory banks :





The motherboard consists of four memory banks, SM1, SM2, SM3 or SM4 .

TABLE 1

				TOTAL
SM1	SM2	SM3	SM4	MEMORY
4MB	None	None	None	4MB
4MB	4MB	None	None	8MB
4MB	4MB	4MB	None	12MB
8MB	4MB	None	None	12MB
8MB	8MB	None	None	16MB
16MB	None	None	None	16MB
16MB	4MB	None	None	20MB
16MB	4MB	4MB	None	24MB
16MB	4MB	4MB	4MB	28MB
16MB	16MB	None	None	32MB
16MB	16MB	4MB	None	36MB
16MB	16MB	4MB	4MB	40MB
16MB	16MB	16MB	None	48MB
16MB	16MB	16MB	4MB	52MB
16MB	16MB	16MB	16MB	64MB
32MB	32MB	None	None	64MB

2.2 SRAM INSTALLATION





128K		256K ♣		512K	
TAG RAM	DATA RAM	TAG RAM	DATA RAM	TAG RAM	DATA RAM
U26	U22-U25	U26	U22-U25	U26	U22-U25
8KX8	32KX8	32KX8	64KX8	32X8	128KX8
	JP16	Ĺ	IP1 ●● JP16		P1 ▶● IP16 ●●

Default Setting



2.3 CPU INSTALLATION

INTEL 486SX & UMC U5S CPU TYPE







INTEL 487SX CPU TYPE









INTEL & AMD CPU TYPE (486DX, 486DX2, AMD486DX4-100)

JP14 & JP31

3.3V or 5V Vottage Selector. Please set the correct voltage according to the CPU reguired voltage specification. Incorrect setting of this voltage

selector may damage or render the CPU invaild operation.



INTEL 486SX-S CPU TYPE







INTEL 486DX-S/486DX2-S/OVERDRIVE CPU TYPE



























3.3V or 5V Vottage Selector. Please set the correct voltage according to the CPU reguired voltage specification. Incorrect setting of this voltage

selector may damage or render the CPU invaild operation.

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FREQUENCY SETTING



Default Setting





CPU POWER VOLTAGE

Default Setting



¹ SLAVE PCI SLOT 🔿 PCI 4

3



2.4 OTHER JUMPER SETTING



EXP8049 User's Manual

DESCRIPTION

JUMPE

R

GREEN FUNCTION OPTION

.708		For Monitor Power	
		For VGA H-Sync	
	$ \begin{array}{c} 2 & 4 \\ \bullet \\ 1 & 3 \end{array} $	For VGA V-Sync	
JP12	Modem Ring-In Signal Connector		
JP13	External Switch (Sleep or Wake Up)		

COLOR/MONO SELECTION

JP7	9 3 2 1 1	3 2 1
	Mono	Color

Default Setting

CONNECTO	PIN OUT	SIGNAL NAME
R		
J6 :	1	Power LED
KEY LOCK	2	Not Used
	3	Ground
	4	Keyboard Inhibitor
	5	Ground
J7 :	1	+5V DC
SPEAKER	2	Data Out
	3	Data Out
	4	Data Out
J3 :	1	Ground
RESET	2	Reset In
J4 :	1	+Anode
TB-LED	2	-Cathode
J5 :	Normal	●● Turbo Spetd
TURBO		
SWITCH		
KB1:	1	Keyboard Clock
KEYBOARD	2	Keyboard-Data
CONNECTOR	3	Space
	4 E	Ground
51 4 50	1	
PI & PZ :	1	Power Good
CONNECTOR	2	+3V DC
CONNECTOR	4	-12V DC
	5.6.7.8	Ground
	9	-5V DC
	10,11,12	+5V DC
J1	•	1-2 Clear CMOS
		1-4 External Battery
	1 2 3 4	Connector
		(1: Ground)
		(4: External Battery
		Power In)
J2	On Board IDE	

CONNECTOR DESCRIPTION



1	
	LED
IDE1	On Board IDE
	Connector
FDC1	Floppy
	Connector
PRN1	Printer
	Connector

Default Setting

PRINTER PORT

JP2	In E	CP Mode	e (JP2 is used for Parallel Port
	DMA	Acknow]	ledge Input)
	1-2	DMA Cł	nannel 1
	3-4	DMA Cł	nannel 3
	In S	tandard	d Printer Mode
	5-6	Open	Printer as Input/Output Port
		Clos	Printer as Output Port
		е	(Default)
JP3	In E	CP Mode	e for Parallel Port DMA request
4	outp	ut	
	1-2	DMA Cł	nannel 1
	3-4	DMA Cł	nannel 3

CHAPTER 3 SYSTEM BIOS SETUP

PHOENIX BIOS SYSTEM CONFIGURATION SETUP

Use the *EXP8049* to record changes in your hardware and to control its special features. The Setup program uses a number of menus in which you can specify changes to your hardware and turn the special features on or off.

1. To start the *EXP8049* Setup program, take the following steps:

Press to enter SETUP program While turning on or rebooting your system. The Phoenix BIOS for EXP8049 displays this message:

2. The Main Menu which looks like this appears: Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.



	MAIN MENU
	 System Setup Fixed Disk Setup Advanced System Setup Boot Options Security and Anti-Virus Green PC Features Load ROM Default Values Load Values from CMOS Save Values to CMOS
↑↓ Move F1 Help & Exit	Enter Select ESC Exit F10 Save

- Select an option by moving the highlight with your up-and-down arrow keys and press. <Enter>.
- 4. After making your changes, select Save Values to CMOS to make them operative. Press <Esc> to exit the setup program. The following pages describe each one of these selections.

3.1 SYSTEM SETUP MENU

Selecting **"System Setup"** on the Main Menu displays this menu:

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

	SYSTEM SETU	UP
System Tim System Dat	e:	[13:59:20] [10/19/1994]
Video Syst	em:	[EGA / VGA]
System Mem Extended M	lory: lemory:	640 KB 7168 KB
Diskette D 1/4"]	rive A:	[1.2 MB, 5
Diskette D	rive B:	[Not Installed]
Keyboard:		[Installed]
↑↓ Move	ESC Exit	PgUp Previous
Value F5 Pre	evious Configu	ration
F1 He	lp	PgDn Next Value
F6 Det	fault Configura	ation

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3.2 FIXED DISK SETUP

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

		MAIN MENU	
	•	System Setup Fixed Disk Setup Advanced System Setup Boot Options Security and Anti-Virus Green PC Features Load ROM Default Values Load Values from CMOS Save Values to CMOS	
↑↓ Move F1 Help & Exit		Enter Select ESC Exit F10 Sa	ave

Selecting **"Fixed Disk Setup"** on the Main Menu displays this menu:

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

FIXED DISK SETUP							
(None)							
IDE Adapter 0 Slave (None)							
Large Disk Access Mode: [DOS]							
↑↓ Move Enter Select							

F1	Help	ESC	Exit	F10	Save	
& Ex	it					

Selecting either option and pressing <Enter> displays a menu like this:

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

	IDE ADAPTER 0 MAS	STER (C: 545 MB)
	Autotype Fixed Disk:	[Press Enter]
D	Туре:	[User] 545
	Cylinders: Heads: Sectors/Track: Write Precomp: Multi-Sector Transfer LBA Mode Control: 32 Bit I/O:	[1057] [16] [63] [None] rs: [16 Sectors] [Disabled] [Disabled]
	Transfer Mode:	[Standard]
↑↓ F1 kit	Move Enter Help ESC Ex	Select it F10 Save &



3.3 ADVANCED SYSTEM SETUP

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

MAIN MENU					
 System Setup Fixed Disk S Advanced Sys Boot Options Security and Green PC Feator Load ROM Defitional Values Save Values 	Setup Stem Setup A Anti-Virus Atures Fault Values from CMOS to CMOS				
↑↓ Move Enter Selec F1 Help ESC Exit Exit	fl0 Save &				

Selecting " Advanced System Setup" from the Main Menu displays the following menu:

3.3.1 Integrated Peripherals

Selecting " Integrated Peripherals " from the Advanced Setup menu displays a menu like the one shown here. The actual features displayed depend on the capabilities of your system's hardware.

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.





	• PCI Devices		
↑↓ Move F1 Help	Enter Select ESC Exit	F10	Save &

Choose an option and press <Enter>. See the following pages for a description of each feature and its options.

INTEGRATED PERIPHERALS						
COM Port 1: [3F8/COM1:IRQ4]						
COM Port 2:	[2F8/COM2:IRQ3]					
LPT Port:	[378/LPT1]					
On -Board Floppy:	[Enabled]					
Parallel Port:	[Standard Mode]					
	(★ Note)					
FDC AB Change:	[Disabled]					

NOTE: You can choose the EPP/ECP mode if your external device supports EPP/ECP feature.

3.3.2 Memory Cache

Selecting " **Memory Cache** " from the Advanced Setup menu displays a menu like the one shown here. The actual features displayed depend on the capabilities of your system's hardware.

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

ADVANCED SYSTEM SETUP

Warning!



Items on	this menu, if set incorrectly, could cause your system to malfunction.
	 Integrated Peripherals Memory Cache Memory Shadow Advanced Chipset Control PCI Devices
↑↓ Move F1 Help Exit	Enter Select ESC Exit F10 Save &

Choose an option and press <Enter>. See the following pages for a description of each feature and its options.

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MEMORY CACHE					
SRAM Read: SRAM Write:	[1 ws] [0 ws]				



DRAM Read:	[Normal]
DRAM Write:	[Normal]
Cache Cycle Check:	[Fast]
ATCLK Selection:	[CLK2/4]
Polling Clock:	[14.318 MHz]
↑↓ MoveESC Exit Value F5 Previous Conf: F1 Help PgDn N Default Configuration	PgUp Previous iguration ext Value F6

ATCLK SELECTION					
CPU Frequency	ATCLK				
25MHz	7.19MHz				
33MHz	CLK2/4				
40MHz	CLK2/5				
50MHz	CLK2/6				

3.3.3 Memory Shadow

Select	ing	"Memory	Sha	idow"	from	the	Ad	vanced
Setup	menu	displays	а	menu	like	the	one	shown

here. The actual features displayed depend on the capabilities of your system's hardware.

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

ADVANCED SYSTEM SETUP
Warning! Items on this menu, if set incorrectly, could cause your system to malfunction. • Integrated Peripherals • Memory Cache • Memory Shadow • Advanced Chipset Control • PCI Devices
↑↓ Move Enter Select F1 Help ESC Exit F10 Save & Exit

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

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MEMORY SHADOW			
System Shadow:	[Enabled]		
Video Shadow:	[Enabled]		
Shadow Memory Regions::			
C800 - CFFF:	[Disabled]		
D000 - D7FF:	[Disabled]		
D800 - DFFF:	[Disabled]		
E000 - E7FF:	[Disabled]		
E800 - EFFF:	[Disabled]		
↑↓ Move ESC Exit	PgUp Previous		
Value F5 Previous Configur	ration		

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3.3.4 Advanced Chipset Control

Selecting "Advanced Chipset Control" from the Advanced System Setup menu displays a menu like the one shown here.

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

ADVANCED SYSTEM SETUP			
Warning! Items on this menu, if set incorrectly, could cause your system to malfunction.			
 Integrated Peripherals Memory Cache Memory Shadow Advanced Chipset Control PCI Devices 			
↑↓ Move Enter Select F1 Help ESC Exit F10 Save & Exit			

Technicians use this menu to change the values in the chipset registers and optimize your system's performance.

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

ADVANCED CHIPSET CONTROL

On Chip IDE Controller: [Enabled] On Board 15M Memory as ISA Range:	
[Disabled]	
PCI IRQ Level/Edge Selection: [Edge]	
CPU to PCI Write Merge: [Disabled]	
CPU to PCI Write Buffer: [Enabled]	
CPU to PCI Fast Back to Back: [Disab	.ed]
CPU to PCI Burst Write Buffer: [Disab	ed]
Fast Dynamic Memory Cycle: [Enabled]	
Fast Dynamic I/O Cycle: [Disabled]	
CPU Cycle: Memory Sample Point: [1 wait	.]
PCI to CPU Write Buffer: [Enabled]	
PCI to CPU Write Burst to Memory:	
[Enabled]	
PCI Master Write Buffer Full: [Retry	
PCI Master Write HADSJ Delay: [Norma]	.]
PCI to CPU Read Buffer: [Disabled]	
PCI to CPU Read Burst from Memory:	
[Disabled]	
Internal Cache Feature: [Write	7
Through]	
External Cache: [Enabled]	
External Cache Feature: [Write Bac]	c]



Shadow Cacheable:	[Disabled]	
↑↓ Move ESC Exit Value F5 Previous Configura F1 HelpPgDn Next Va	PgUp Previous ation alue F6	5
Default Configuration		

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ADVANCED CHIPSET CONTROL						
D - 1	VESA Master	Cycl	e Delay AI	DSJ: [1	Jon	-
Del	ay ADSJ] PCI Bridge	Ready	Syn. Mode	e: [S	Syn.]	
	Hidden Refr	esh:		[Enabled	1]	
	HITMJ Timin	.g:		[4t]		
	RAS to CAS Delay:			[4t]		
	I/O Recover	y:		[Disable	ed]	
	On - Chip I	/0 Re	covery:	[Disable	ed]	
	ISA I/O Wait State:			[1 ws]		
	ISA Memory Wait State:			[1 ws]		
	Refresh Period:			[60 us]		
	W/S in 32-bit ISA:		[8t]			
	Delay Inter	nal A	DSJ:	[Disable	ed]	
$\uparrow\downarrow$	Move	ESC	Exit	PgUp	Previ	ous

Value F5 Previous Configuration F1 HelpPgDn Next Value F6 Default Configuration

NOTE: The contents of this menu depends on the chipset installed on your motherboard, and chipsets vary widely. Consult your dealer or the <F1> help screens before changing the items on this menu. Incorrect settings can cause your system to malfunction.

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3.3.5 PCI Devices

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ADVANCED SYSTEM SETUP
Warning! Items on this menu, if set incorrectly, could cause your system to malfunction.
 Integrated Peripherals Memory Cache Memory Shadow Advanced Chipset Control PCI Devices
↑↓ Move Enter Select F1 Help ESC Exit F10 Save & Exit

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

PCI DEVICES	
Base I/O Address:	[3000]
Base Memory Address:	[0080000000]
Multimedida Mode:	[Disabled]
Parity:	[Disabled]
NCR SCSI at AD17 PCI Device:	[Disabled]
Enable Device:	[Disabled]
Enable Master:	Value:
Use Default Latency Timer	[Yes]
Latency Timer Value:	[0040]
IRQ line:	[9]

1

↑↓ Move ESC Exit PgUp Previous Value F5 Previous Configuration F1 HelpPgDn Next Value F6 Default Configuration

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PCI DEVICES	
PCI Device , Slot #1 Enable Device:	[Disabled]
Enable Master Use Default Latency Timer V	[Disabled] alue: [Yes]
IRQ Line:	[0040] [None]
PCI Device, Slot #2: Enable Device: Enable Master: Use Default Latency Timer	[Disabled] [Disabled] Value: [Yes]
Latency Timer Value: IRQ Line:	[0040] [None]
PCI Device, Slot #3: Enable Device: Enable Master: Use Default Latency Time	[Disabled] [Disabled] r Value: [Yog]
Latency Timer Value: IRQ Line:	[0040] [None]
PCI Device, Slot #4: Enable Device: Enable Master:	[Disable∳] [Disabled]



Use Default Latency Time	er Value:
Latency Timer Value:	[0040]
IRQ Line:	[None]
↑↓ Move ESC Exit	PgUp Previous
Value F5 Previous Configuratio	on
F1 HelpPgDn Next Valu	e F6
Default Configuration	

NOTE: The number of PCI device slots depends on motherboard specifications. When you install PCI IDE card on any PCI slot, you must set that slot's IRQ line [14] and [Enabled Device] [Enable Master] items must set Enable.

3.4 BOOT OPTIONS

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

	MAIN MENU
• • • •	System Setup Fixed Disk Setup Advanced System Setup Boot Options Security and Anti-Virus Green PC Features Load ROM Default Values Load Values from CMOS Save Values to CMOS
↑↓ Move F1 Help Exit	Enter Select ESC Exit F10 Save &

Selecting **"Boot Options"** from the Main Menu displays this menu:

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

BOOT OPTIONS			
Boot Sequence: [A:then C:] Summary Screen: [Enabled]			
↑↓ Move ESC Exit PgUp Previous Value F5 Previous Configuration F1 HelpPgDn Next Value F6			



Default Configuration

3.5 SECURITY AND ANTI-VIRUS

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		MAIN MENU	
	• • • • • •	System Setup Fixed Disk Setup Advanced System Setup Boot Options Security and Anti-Virus Green PC Features Load ROM Default Values Load Values from CMOS Save Values to CMOS	
↑↓ Move F1 Help & Exit		Enter Select ESC Exit F10	Save

Selecting " **Security and Anti-Virus"** from the Main Menu displays a menu like this:

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

SECURITY AND ANTI-VIRUSSupervisor Password isDisabledUser Password isDisabledSet Supervisor Password[Press Enter]Set User Password[Press Enter]Password on Boot[Disabled]Diskette Access:[Supervisor]Fixed Disk Boot Sector:[Normal]



↑↓ Move Enter Set/Change Password F5 Previous Configuration F1 HelpESC Exit F6 Default Configuration

"Supervisor Password is" shows whether supervisor password is set or not. "User Password is" shows whether user password is set or not. Setting Supervisor Password requires a password on entering Setup. The passwords are not case sensitive. Pressing <Enter> at either Set Supervisor Password or Set User Password displays a dialog box like this:

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

SET SUPERVISOR PASSWORD							
Enter New Password: [Re-enter New Password: []]						
Enter Accept							

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

SET USER PASSWORD							
Enter New Password: Re-enter New Password:	[[]]				
Enter Acc	ept						

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٦

NOTICE

Changes have been saved.

[Continue]

Fixed Disk Boot Sector: [Normal]

This option when "write protect" will prevent virus from writing to the boot sector. Note when "write protect" is selected, this may cause failure installing OS/2 and windows NT. Default option as "Normal".

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3.6 GREEN PC FEATURES

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	MAIN MENU	
	 System Setup Fixed Disk Setup Advanced System Setup Boot Options Security and Anti-Virus Green PC Features Load ROM Default Values Load Values from CMOS Save Values to CMOS 	
↑↓ Move F1 Help & Exit	Enter Select ESC Exit F10 S	ave

Selecting " Green PC Features" on the main menu displays an information window like this:

GREEN PC FEATURES	
Power Saving Mode:	[Disabled]
System Doze Timer:	[1 min]
System Standby Timer:	[2 min]
System Suspend Timer:	[5 min]
Wakeup System During Suspen	d:
Walacom Wine at (beau);	[Disabled]
Wakeup Time at (nour):	[0 nr]
Wakeup IIme at (minute). Hard Dick Standby Timer:	
Video Standby Timer:	[Disabled]
VGA WILN POWER DOWN FE	[Standard]
Advanced Power Management	Setup Madag bui
System Enters Power Down/Wakeu	p Modes by.
VGA Access Event:	[Off]
IRQ I	(Keyboard):
	(COM2) · Opl
TRO 4	(COM2): OII]
TRO 5	(Alt
Printer):	[Off]
IRQ 6	(Diskette):
[On]	
IRQ 7	(Printer):
[On]	
IRQ 9	(IRQ2 Redir):
[Off]	Ţ
IRQ10	(Reserved):
[Off]	(D
TKÖTT [OEE]	(Reserved):

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```
(PS/2 Mouse):
    IRQ12
        [On]
   IRQ14
                                  (Fixed Disk):
        [On]
   IRQ15
                                  (Reserved):
        [Off]
   DMA1 (LAN Card):
                                  [On]
   DMA3 (LAN Card):
                                  [On]
   LPT IO Addrerss:
                                  [On]
   VESA Master Event:
                                  [Off]
\uparrow\downarrow Move
               ESC Exit
                                PgUp
                                        Previous
Value F5 Previous Configuration
       F1 HelpPgDn Next Value
                                    Fб
Default Configuration
```

3.7 LOAD ROM DEFAULT VALUES

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NOTICE
Default values have been loaded.
[Continue]

3.8 LOAD VALUES FROM CMOS

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd.

NOTICE

Previous values have been loaded.

[Contin	nue]
---------	------

3.9 SAVE VALUES TO CMOS

Phoenix BIOS Setup - Copyright 1985-94 Phoenix Technologies Ltd

NOTICE

Changes have been saved.

[Continue]

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RMA FORM

When	the	motł	nerk	board	l Ca	an no	t woi	ck we	ell,	ple	ase	fill
up tł	is .	form	to	desc	crik	pe re	lated	l si	tuat	ions	. If	the
space	: is	not	enc	ough	to	use,	you	can	atta	ach	sepa	irate
paper	.											

MODEL:	MODEL NO:
HARDWARE	
CPU: Brand	, Model, Speed
CO-PROCESSOR: Brand	, Model ,
Speed MHz	
SIMM: Brand,	Speed ns, Q'ty
pcs, Total MB	
CACHE: Brand	, Speedns, Total
K	
TAG RAM: Brand	, Speedns
BIOS DATE CODE:	_
SYSTEM SPEED RUNNING	MHz
VIDEO CARD: Chip	, RAM, VGA Mode
Bus	(ISA, VESA or PCI)
OTHER ADD-ON CARDS:	
SOFTWARE	
OPERATING SYSTEM	VERSION
SOFTWARE	PROGRAM
BIOS SETUP: DRAM Wait	State CACHE Wait
If you change BIOS changes:	SETUP, please describe the
<a> error	

	HANG UP		NO	SCREEN	FLOPPY	R/W
ERF	ROR					
	HARD DISK R/W	ERR	.OR		PA	RITY
MEN	IORY ERROR					
					0	THER

 $<\!\!\!B\!\!>$ error messages on your screen (please show us the whole sentence)

<C> PROBLEM DESCRIPTION