MV045 USER'S MANUAL HiNT 486DX VL-BUS MOTHERBOARD

Foreword

This manual is designed to provide the basic necessary information for the end user to understand and properly use the MV045 main board. The main board ensures superlative performance and complete compatibility with industry standards, which incorporating many technical enhancements. Trademarks WTC is a registered trademark of Win Technologies Co., Ltd. All trademarks belong to their registered owner.

obor o nandar.

Precautions

Make sure you ground yourself before handling the main board or other system components. Electrostatic discharge will damage main board. Note that you must take especial precaution when handling the main board in dry or air-conditioned environments.

The precaution below is to protect the main board from electrostatic discharge.

- * Do not remove the anti-static packaging until you are ready to install the main board and other system components.
- * Ground yourself before removing any system component from its protective anti-static packaging. To ground yourself, grasp the expansion slot covers or other unpainted portion of the computer chassis.
- * Frequently ground yourself while working or use a grounding strap.
- * Handle the main board by the edges and avoid touching its components.

Main board Features

* Hint chipset CS8006 and 82C206

* Support Intel 80486 SX/DX/DX2/DX4/P24T , Cyrix 486 DX/DX2

- * Support AMD 486 DX/DX2/DX4 and UMC 486SX (U5S)
- * Optional 128KB ,256KB , 512KB and 1MB external cache
- * Memory on board expandable to 64MB
- * Dimension : 22 x 25 CM with 4 layer
- * Two 8bit slot , Six 16bit slots with Three VESA slots 1 slave / 2 master
- * Clock generator for system clock
- * Real-time clock with battery back up CMOS memory for system configuration data
- * APM compatible with Power Management Hardware with SMI support
- * Shadow RAM for system / video BIOS
- * Multi source Wake up from Stop Clock and CPU suspend

Jumper and Connectors Reference

Before installing the main board, make sure that the jumper setting are properly set for your configuration. The function of different jumpers are respectively as follows: CPU Type Selector JP12, JP13, JP15, JP16, JP17, JP18, P19, JP20, JP23 CPU Voltage Selector JP33, JP44, JP45, JP46 CPU Clock Frequency Selector ... JP26, JP27 Cache Option JP28, JP30, JP34 Memory Configuration JP39 CMOS Charge / Discharge JP31 VL-BUS Option JP8, JP9

Main board Connectors:

Turbo LED Connector	JP25
Reset Switch Connector	JP7
Speaker Connector	JP3
Keylock and Power LED Connector.	JP1
Keyboard Connector	JP32
Power Supply Connector	JP29
External Battery Connector	JP31

Jumper Caps reference

Red	Jumper	for	Voltage Selector
White	Jumper	for	СРИ Туре
Yellow	Jumper	for	Clock Selector
Blue	Jumper	for	Cache Option
Black	Jumper	for	Other

Jumper Setting for CPU

INTEL CI	PU										
=======	==										
CPU Type	e Sele	ector Wl	hite ju	umper (Cap						
	JP12	JP13	JP15	JP16	JP17	JP18	JP19	JP20	JP23	JP24	
SX-25	1-2	1-2	1-2	1-2	1-2	2-3	1-2	1-2	1-2	OPEN	
SX-33	1-2	1-2	1-2	1-2	1-2	2-3	1-2	1-2	1-2	OPEN	
DX-33	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN	
DX-50	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN	
DX2-50	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN	
DX2-66	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN	
DX4-75	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN	
DX4-100	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN	
CPIL Volt	tano (Selector	r Rod -	iumper	Can						
010 001	cuye .	JCICCCC.	33	Jumper	JP45(TP44) *	JTP46 (JT	P45)*			
SX-25		1-2	.4-5		OPEN	0111)	OPEN	115)			
SX-33		1-2	4-5		OPEN		OPEN				
DX-33		1-2	.4-5		OPEN		OPEN				
DX-50		1-2	.4-5		OPEN		OPEN				
DX2 - 50		1-2	.4-5		OPEN		OPEN				
DX2-66		1-2	4-5		OPEN		OPEN				
DX4-75	(3V)	2-3	.5-6		2-5		OPEN				
DX4-100	(3V)	2-3	,5-6		2-5		OPEN				
	-1- 17		0 - 1 +	¥	11		_				
CPU CIO	CK Fre	equency	JP26	tor ie.	liow j	umper Caj	p JP27				
		A	В	С		A	В	С			
SX-25		2-3	1-2	2-3		2-	3 1-2	1-	2		
SX-33		2-3	2-3	1-2		2-	3 1-2	1-	2		
DX-33		2-3	2-3	1-2		2-	3 1-2	1-	2		
DS-50		OPEN	2-3	OPEI	N	2-	3 1-2	1-	2		
DX2-50		2-3	1-2	2-3		2-	3 1-2	1-	2		
DX2-66		2-3	2-3	1-2		2-	3 1-2	1-	2		
DX4-75		2-3	OPEN	2-3		2-	3 1-2	1-	2		
DX4-100		2-3	2-3	OPEI	N	2-	3 1-2	1-	2		
NOTE: 1	. Some	e Intel	DX4-10)0 used	d 3.3V	CPU, se	t JP45 t	0 3-6.			
2	. Inte	el SX, 1	DX, DX2	2 Non-H	Enhanc	ed CPU,	Set JP27	(A) se	t to 1	-2.	
AMD CPU											
=======					-						
сво дλЪе	e sete	ECTOR WI	nite lu 2 TD1 (unper (јар Тр1	C TD17	тр10	TD1 0	TDOO	трор	TD 2 4
DV-22		JPL. 1_ 2	2 JPL: 1_2	しアL: 1_つ	J J P L 1_2	0 JP1/ 1_2	UF10 1_2 2 4	0 P I 9 1 _ 2	J F Z U 1 - 2	∪ Ľ∠ 3 1_2	ODEN
DV-22		1-2	1-2	1-2	1-2	⊥ – ∠	⊥-∠ ,)-4	⊥ – ∠	⊥ – ∠	⊥ - ∠	OPEN

DX-40	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN
DX2-50	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN
DX2-66	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN
DX2-80	1-2	1-2	I-a	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN
DX4-100	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN
DX4-120	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN

AMD ENHANCED CPU (MODEL CODE: SV8B)

DX2-80	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	CLOSE
DX4-100	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN
DX4-120	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN
DX5-133	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	CLOSE
Note: AMD	Enhanced CF	U has	the sa	me jum	per se	tting for	CPU	Voltage	select	cor and
CPU	Clock Frequ	ency S	Selecto	r.						

CPU Voltage :	Selector Red :	jumper Cap			
	JP33	JP45(JP44)* JP46(JP4	5) *	
DX-33	1-2,4-5	OPEN	OPEN	ſ	
DX-40	1-2,4-5	OPEN	OPEN	[
DX2-50	1-2,4-5	OPEN	OPEN	ſ	
DX2-66	1-2,4-5	OPEN	OPEN	ſ	
DX2-80	1-2,4-5	OPEN	OPEN	[
DX2-66 (3V)	2-3,5-6	2-5	CLOS	E (V8T ONLY)	
DX2-80 (3V)	2-3,5-6	2-5	CLOS	E (V8T ONLY)	
DX4-100 (3V)	2-3,5-6	2-5	OPEN	[
DX4-120 (3V)	2-3.5-6	2-5	OPEN	[
X5-133 (3V)	2-3,5-6	2-5	OPEN	[
NOTE: AMD X5	-133 MEANS AM	D Am-5X86-P75	2-4 CPU Clock F	requency Selector Yellow	N
jumper	Cap				

	JP26							
	А	В	С	А	В	С		
DX-33	2-3	2-3	1-2	1-2	1-2	1-2		
DX-40	1-2	1-2	2-3	1-2	1-2	1-2		
DX2-50	2-3	1-2	2-3	1-2	1-2	1-2		
DX2-66	2-3	2-3	1-2	1-2	1-2	1-2		
DX2-80	1-2	1-2	2-3	1-2	1-2	1-2		
DX4-100	2-3	2-3	1-2	1-2	1-2	1-2		
DX4-120	1-2	1-2	2-3	1-2	1-2	1-2		
DX2-80	1-2	1-2	2-3	2-3	1-2	1-2	(SV8B)	
DX4-100	2-3	2-3	1-2	2-3	1-2	1-2	(SV8B)	
DX4-120	1-2	1-2	2-3	2-3	1-2	1-2	(SV8B)	
X5-133	2-3	2-3	1-2	2-3	1-2	1-2		

CYRIX	CPU

СРИ Туре	Selector	White	jumpe:	r Cap	.тр17	.тр1 8	.TP1 9	.TP20	.тр23	.TP24
	OFIZ	OFIJ	OFIJ	OFIO	UFI/	UFI0	OFIS	0 - 20	0123	OFZ4
DX-40	2-3	2-3	2-3	2-3	1-2	1-2,3-4	2-3	2-3	2-3	OPEN
DX2-50	2-3	2-3	2-3	2-3	1-2	1-2,3-4	2-3	2-3	2-3	OPEN
DX2-66	2-3	2-3	2-3	2-3	1-2	1-2,3-4	2-3	2-3	2-3	OPEN
DX2-80	2-3	2-3	2-3	2-3	1-2	1-2,3-4	2-3	2-3	2-3	OPEN
DX4-100	2-3	2-3	2-3	2-3	1-2	1-2,3-4	2-3	2-3	2-3	OPEN
CX586-100	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN
CX586-120	1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	OPEN
CX586-133	3 1-2	1-2	1-2	1-2	1-2	1-2,3-4	1-2	1-2	1-2	CLOSE
CPU Voltage Selector Red jumper Cap										

	JP33	JP45(JP44)*	JP46(JY45)*
DX-40	1-2,4-5	OPEN	OPEN
DX2-50	1-2,4-5	OPEN	OPEN
DX2-66	1-2,4-5	OPEN	OPEN
DX2-66 (3.45V)	2-3,5-6	2-5	OPEN

DX2-80 (3.45V)	2-3,5-6	2-5	OPEN
DX4-100 (3.45V)	2-3,5-6	2-5	OPEN
CX5S6-100 (3.45V)	2-3,5-6	2-5	OPEN
CX5S6-120 (3.45V)	2-3,5-6	2-5	OPEN
CX586-]33 (3.45V)	2-3,5-6	2-5	OPEN

CPU Clock Frequency Selector Yellow jumper Cap

		JP26		JP27			
	A	В	С	A	В	С	
DX-40	1-2	1-2	2-3	1-2	2-3	1-2	
DX2-50	2-3	1-2	2-3	1-2	2-3	1-2	
DX2-66	2-3	2-3	1-2	1-2	2-3	1-2	
DX2-80	1-2	1-2	2-3	1-2	2-3	1-2	
DX4-100	2-3	2-3	1-2	1-2	2-3	1-2	
CX586-100	2-3	2-3	1-2	1-2	1-2	1-2	
CX586-120	1-2	1-2	2-3	1-2	1-2	1-2	
CX586-133	2-3	2-3	1-2	1-2	1-2	1-2	
NOTE: 1. Cy	yrix CPU typ	pe se	lector i	ncludes TI,	SGS-1	THOMSON	CPU.
2. Sc	ome Cyrix o	r TI	CPU appl	y 4V voltage	e, set	: JP45	to 1-4.

3. SGS-THOMSON CPU applies 5V voltage, set JP33 to 1-2,4-5.

SRAM Configuration

SRAM Configuration is used to configure the external cache of the main board External cache can be configured by using 8K*8,32K*8,64K* 8 and 128K*8 SRAM CHIP. The size of the external cache is configured by the SRAM chip.

128K	.28K Configuration Blue jumper Cap								
JP28 2-3		JP30 1-2,3	3-4,5-	- 6	JP34 OPEN			SII	NGLE BANK
BANK BANK	0. 1:	U28, U27,	U32, U31,	U35, U34,	U38 U37		SRAM 32K * NONE	8	TAG RAM 8K * 8 U20
256K	Соз	nfigu	ratio	n -					
JP28 1-2		JP30 2-3,4	4-5,6-	-7	JP34 OPEN			DOI	JBLE BANK
BANK BANK	0: 1:	U28, U27,	U32, U31,	U35, U34,	U38 U37		SRAM 32K * 32K *	8 8	TAG RAM 8K * 8 U20
256K	256K Configuration								
JP28 1-2		JP30 1-2,3	34,5-0	6	JP34 OPEN			SII	NGLE BANK
BANK BANK	0: 1:	U28, U27,	U32, U31,	U35, U34,	U38 U37		SRAM 64K * NONE	8	TAG RAM 8K * 8 U20
512K Configuration									
IP28 1-2		JP30 2-3	4-5 6-	-7	JP34 3-4		CDAM	DOUI	BLE BANK
BANK BANK	0: 1:	U28, U27,	U32, U31,	U35, U34,	U38 U37		64K * 64K *	8 8	32K * 8 U20
512K Configuration									
JP28 1-2		JP30 1-2,3	3-4,5	- 6	JP34 3-4			SIN	GLE BANK
BANK BANK	0. 1:	U28, U27,	U32, U31,	U35, U34,	U38 U37		SRAM 128K NONE	* 8	TAG RAM 32K * 8 U20

1M Configuration _____ DOUBLE BANK JP28 JP30 JP34 1-2,3-4,5-6 1-2,3-4 1 - 2SRAM TAG RAM 128K * 8 BANK O: U28, U32, U35, U38 32 * 8 U20 BANK 1: U27, U31, U34, U37 128K * 8 MEMORY SELECTOR JP39 (JUMPER CAP BLACK COLOR) Memory Selector is used to select Memory Type as Bank O Two Type of memory: 30 pin RAM Module & 72 pin RAM Module JP39 2-3 SIMM MODULE 30 PINS AS BANK O 1-2,3-4 SIMM MODDLE 30 PINS AS BANK O NOTE: 30 PIN SIMM MOUDLE CAN NOTE BE USED IF 72 PIN AS BANK O Memory Configuration _____ Main board memory can be expanded from 4MB upto 64MB. Memory can be installed by using 1M, 2M, 4M and 16M * 36 SIMM RAM module. 30 PIN 72 PIN MEMORY SIZE SM1-SM4 SM5 SM6 1M * 9 4M 1M * 36/32 1M * 9 1M * 36/23 8M 2M * 36/32 1M * 9 12M 2M * 36/32 1M * 36/32 1M * 36/32 2M * 36/32 1M * 9 2M * 36/32 4M * 9 16M 1M * 9 1M * 36/32 2M * 36/32 4M * 36/32 2M * 36/32 2M * 36/32 20M 1M * 9 4M * 36/32 4M * 36/32 1M * 36/32 1M * 36/32 4M * 36/32 1M * 9 1M * 36/32 4M * 36/32 24M 1M * 9 4M * 9 1M * 36/32 2M * 36/32 4M * 36/32 4M * 36/32 32M 4M * 9 8M * 36/32 36M 8M * 36/32 1M * 36/32 1M * 9 8M * 36/32 4M * 9 4M * 36/32 1M * 36/32 4M * 9 1M * 36/32 4M * 36/32 4M * 36/32 4M * 36/32 1M * 9 8M * 36/32 1M * 36/32 8M * 36/32 1M * 9 1M * 9 4M * 36/32 4M * 36/32 40M 4M * 9 4M * 36/32 48M 4M * 36/32 8M * 36/32 4M * 36/32 4M * 9 8M * 36/32 16M * 36/32 64M 16M * 9

NOTE: SM5 and SM6 is used for DOUBLE SIDED SIMM module. Set JP39 to 1-2,3-4
NOTE: 1M * 9 : 1MB 30 pin SIMM (include 1M h 8)
 4M * 9 : 4MB 30 pin SIMM (include 4M * 8)
 16M * 9 : 16MB 30 pin SIMM (include 16M * 8)
 1M * 36 : 4MB 72 pin Single Side SIMM (include 1M * 32)
 2M * 36 : 8MB 72 pin Double Side SIMM
 4M * 36 : 16MB 72 pin Single Side SIMM (include 4M * 32)
 8M * 36 : 32MB 72 pin Double Side SIMM
 16M * 36 : 64MB 72 pin Single Side SIMM (include 16M * 32)

CMOS Charge / Discharge Black jumper Cap

CMOS Charge / Discharge is used to discharge and charge CMOS.If you discharge the CMOS all the datas will be erased. To discharge CMOS, place a jumper cap in pin 2 and 3, then turn on the power supply for 1 to 2 seconds then turn off the power supply. In this procedure the CMOS is discharged , all the datas in the CMOS is erased. Place the jumper cap in pin 1 and 2 for CMOS charge, then run setup.

Note: JP31 is also used as External Battery Connector

JP31	JP31	JP31
1-2 Charge CMOS	1-3 Discharge CMOS	1-4 External Battery Connector

VL-BUS	Oľ	otion	Black	jumper	Car	>
======						
JP8			JI	29		
OPEN	>	33 MHz	01	PEN	0	W/S
CLOSE	<	33MHz	CI	LOSE	1	W/S

Main board Connectors

Main board has five connectors that will be connected in your computer case front panel. Other connectors for power supply , keyboard and external battery.

JP25 front	Turbor LED connector will be connected in your computer case
	panel. This will light up when the system is running in high speed. (Note the polarity of the LED)
JP1	Keylock and Power LED connector will be connected in your com- puter case front panel. Keylock is used to lock the keyboard. Power LED will light up when you turn on your power supply.
JP3	Speaker connector will be connected in the speaker of your computer case.
JP7	Reset Switch connector will be connected in your computer case front panel. Resetting the system ,it will restart the computer from self-test without turning off the power supply. This connection is always off position.
JP32	Keyboard connector, this is used for inputting signal from the keyboard.
JP31	External Battery connector is used for the external battery. This is used when internal battery is not connected.
JP29	Power Supply connector is connected from the output of the power supply. Most of the power supply has two connectors which will be connected to the main board. Each connector has six wire, two of the wires are black. To connect to the main board, make sure that the black wire is in the middle. Wrong connection will cause damage to the main board.

AWARD BIOS SETUP

Award BIOS has a built-in setup program that allows the users to modify the basic system configuration. This type of information is stored in CMOS so that it retains the setup information when the power is turned off. 1. Turn on or reboot the system. when the below message appears at the bottom of

the screen during the POST (Power On Self Test) press DEL key to enter setup. 2. Press the DEL key to enter the Award BIOS program and the main menu will appear on the screen. 3. Use the arrow key to highlight the item you wish to modify and then press enter. 4. Press <ESC> key at anytime to return to the main menu. 5. In the main menu ,choose "SAVE & EXIT SETUP " to save the changes and reboot the system. Choosing "Exit WITHOUT SAVING " ignore the changes and exit the setup program. STANDARD CMOS Setup _____ This setup includes all the items in a standard compatible BIOS. 1. Choose "STANDARD CMOS SETUP " from the main menu and a Standard CMOS Setup menu will appear on the screen. 2. Use arrow hey to move between items and selected values. Use PgUp/PgDn/-t/keys to modify the selected item. Some items let you key in the value directly. Date (mm/dd/yy) Type the current date. Type the current time. Time (hh/mm/ss) Drive C or D Choose from the standard hard disk types 1 to 46. Type 47 is for user definable. If a hard disk is not installed choose "Not installed". Choose 360KB , 5.25 in. Drive A & B 1.2MB , 5.25 in. 120KB , 5.25 in. 1.4MB, 3.5 in. 2.88MB, 3.5 in. Not installed Video Choose Monochrome Color 40 x 25 Color 80 9 25 3. When you finish, press the <ESC> key to return to the main menu. BIOS FEATURES SETUP _____ This setup includes items of special enhanced features. 1. Choose "BIOS FEATURES SETUP " from the main menu and BIOS Features Setup menu will appear on the screen with the default values. 2. Use arrow key to move between items and selected values. Use PgUp/PgDn/+/keys to modify the selected item. <F> functions are explained below: <F1> Help, gives options available for each item. Shift <F2> Change Color $<\!\!\text{F5}\!\!>$ Get the old values ,for the user to start the current session. Load all option with the BIOS default values. <F6> $<\!F7\!>$ Load all option with the Setup default values. Virus Warning This option enabled/disabled virus earning message if any attempt to write to the boot sector or hard disk partition. CPU internal Cache This option enabled/disabled the CPU internal cache memory. External Cache This option enabled/disabled the external cache memory. Ouick Power On This option enable or disabled the BIOS past POST at boot up. Self Test This option A,C / C, A the computer search the first Boot Sequence drive for the operating system. Swap Floppy Drive This option enabled/disabled the boot up sequence from B to A drives.

Boot Up Floppy Seek This option enabled/disabled the search of floppy disk drive. Boot Up Numlock This option on/off the numlock mode at boot up. Status Boot Up System This option high/low speed that the system sill run at Speed after power on. IDE HDD Block This option enabled/disabled the IDE HDD Block mode Mode function. Not all HDD support this function. Gate A20 Option This option fast for chipset , normal for keyboard use of Gate A20 Memory Parity Check This option enabled/disabled the memory parity check function. Typematic Rate This option enable / disabled the typematic rate Setting function. This option set the rate of character repeat per second. Typematic Rate (Char/Sec) Typematic Delay This option set the delay time between the first and character second displayed. (Msec) Security Option This option system/setup System - each time the system is booted the password prompt appears. Setup - If a password is set , the password prompt only appears if you try to enter the setup program. Video or Adaptor This option enabled/disabled video or adaptor BIOS BIOS Shadow shadow that will copy BIOS code from slower ROM to faster RAM. 3. After you finished the BIOS Features Setup program, press <ESC> to return to

the main menu.

- 1. Choose "CHIPSET FEATURES SETUP " from the main menu and CHIPSET Features Setup menu will appear on the screen with the default values 2. Use arrow key to move between items and selected values. Use PgUp/PgDn/+/-keys to modify the selected item. <F> functions are explained below: <F1> Help, gives options avaliable for each item. Shift <F2> Change Color Get the old values, for the user to start the current session. <F5> Load all option with the BIOS default values. <F6> <F7> Load all option with the Setup default values. This option enabled/disabled the system automaticaily Auto Configuration set option of the chipset register value. Set to Enabled is strongly recommended
- AT Bus Clock This option selects the clock frequency for the AT Bus clock. CLK is 33 MHz and the AT Bus clock set to 1/4 the result is 8 MHz.

Enhanced System This option standard/fast for the Enhanced System Timing Timing.

Cache Scheme	This option WB/WT on board cache working schemed.
Cyrix CPU Cache Scheme	This option WB/WT for Cyrix CPU internal cache working scheme.
Main memory cutoff at 15M	This option enabled/disabled the memory scan only up to 15M.
Video or Adaptor BIOS Shadow	This option enabled/disabled video or adaptor BIOS shadow that will copy BIOS code from slower ROM to faster RAM.

3. After you finished the CHIPSET Features Setup program, press <ESC> to return to the main menu.

POWER MANAGEMENT SETUP

This setup includes the items of power management setup features.

- Choose "POWER MANAGEMENT SETUP " from the main menu and Power Management Setup Features menu will appear on the screen with the default values.
 Use arrow key to move between items and selected values. Use PgUp/PgDn/+/-
- keys to modify the selected item. <F> functions are explained below:

<F1> Help, gives options available for each item. Shift <F2> Change Color <F5> Get the old values .for the user to start the current session. <F6> Load all option with the BIOS default values. <F7> Load all option with the Setup default values.

Power Management	Option are as follows: Disable Global Power management will be disabled. User Define Let's you define time HDD and System will power down.				
	Min Saving Pre-defined timer values of 1 hr and 40 minutes. Max Saving Pre-defined timer values of 10 seconds. Optimize Pre-defined timer values are in reasonable time.				
PM Control by APM	This option yes/no for Advanced Power Management. if APM is used you is used you must run "power.exe" under DOS \-6.0 or later version.				
VGA adaptor Type	This option green/non-green for VGA adaptor type.				
Doze Mode	This option set the time or disabled the doze mode to 8MHz .				
Standby Mode	This option set the time or disabled Standby mode to turn off the cache function.				
Suspend Mode	This option set the time or disabled Suspend mode to enter stop clock.				
HDD Power Down	This option set the time or disabled HDD Power-er Down.				
Power Down Activities xxx accessed	This option enabled/disabled the BIOS monitors' activities, If activity occurs from the enabled item the system will not enter into the green function mode. (power saving)				

LOAD BIOS DEFAULTS

This item loads the BIOS default indicating the most appropriate value of the system parameter which the system would be in minimum performance. Choose this item and the following message appears:

"Load BIOS Defaults (Y/N)? N" To use the SETUP defaults, change the prompt to "Y" and press <Enter >. LOAD SETUP DEFAULTS _____ This item loads the SETUP default indicating the most appropriate value of the system parameter which the system would be in maximum performance. Choose this item and the following message appears: "Load SETUP Defaults (Y/N)? N" To use the SETUP defaults, change the prompt to "Y" and press <Enter>. PASSWORD SETTING _____ This allows you to limit access to the system and setup. 1. Choose "PASSWORD SETTING" in the main menu and press <Enter>. The following message appears on the screen. "Enter Password:" 2. Enter a password and press <Enter>. (If you do not wish to use the password function, just press <Enter> and a "Password disabled" message appears. 3. After you enter your password, the following message appears, prompting you to confirm the new password: "Confirm Password:" 4. Re-enter your password and then press <ESC> to exit the main menu. Important If you forget the password ,the only way to access the system is to resetting CMOS. Note :resetting the CMOS, all setup will lost and you must run BIOS setup program again. IDE HDD AUTO DETECTION _____ This main menu will automatically detect the hard disk type and configure the Standard CMOS setup accordingly. Note : This function is only for valid IDE hard disk. SAVE & EXIT SETUP _____ This function saves the changes of values to the CMOS and exit setup. EXIT WITHOUT SAVING _____ This function abandons all CMOS changes and exit setup. --- end of manual ---Π