

PM-9100

PENTIUM® 75MHz to 233MHz

On-Board 64bit UMA Video & 3D Sound

PCI, Ultra DMA/33 & High Speed Multi I/O

Super TX3 Chipset System Board

Amptron®

TX₃™

A symbol of value!™

User's Guide
Revision 2.0

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CPU_s SUPPORTED

- Intel® Pentium® P54C (75MHz to 200MHz)
- Intel® Pentium® with MMX™ Technology P55C (166MHz to 233MHz)
- Cyrilx®/IBM® 6x86MX, 6x86L, 6x86 (PR120 to PR233)*
- AMD™ K6 (166MHz to 300MHz), & K5 (PR75 to PR166)
- IDT WinChip C6™ (180MHz to 225MHz)
- High Performance Super TX3 Chipset
- Switching voltage regulator supports 3.5, 3.3, 3.2, 2.9, 2.8 & 2.2 volt processors

MEMORY

- Up to 384MB of main memory in 4 auto banking 72-pin SIMM slots for Fast Page Mode or EDO DRAM, and 2 168-pin DIMM sockets for SDRAM, Fast Page Mode DRAM, or EDO DRAM modules.

CACHE

- On-Board 512KB Pipeline Burst Cache
- Up to 128MB Cacheable Main Memory Size

ENHANCED IDE CONTROLLER

- Two PCI EIDE Interfaces for up to four EIDE devices in two channels. Individually supports PIO Mode 0 to 4 and Ultra DMA/33 for all four devices - all four devices may have different PIO modes and performance will be optimized for each device

ON-BOARD VIDEO

- High Performance 64-Bit GUI accelerator with excellent video playback capability
- UMA(Unified Memory Architecture) allow sharing of system memory up to 4MB with video buffer for resolution up to 1024 X 768

ON-BOARD SOUND

- SB 16/PRO compatible with DirectSound 3D support
- HRTF 3D Positional Audio Technology with full duplex stereo
- Supports 44.1K digital audio-in (SPDIF)
- Windows®NT/98/95/3.1 and MS-DOS supported by drivers

BUS ARCHITECTURE

- Four 32-bit PCI Local Bus Slots with Master Mode
- Three 16-bit ISA Bus Slots
- (1 PCI & ISA slot are shared)

ON-BOARD I/O CONTROLLER

- On-Board Interfaces for High Speed Multi-I/Os
- Two 16550 Fast Serial Ports, One SPP, EPP & ECP Mode Capable Parallel Port
- One Floppy Drive Connector, One PS/2-type Mouse Header.

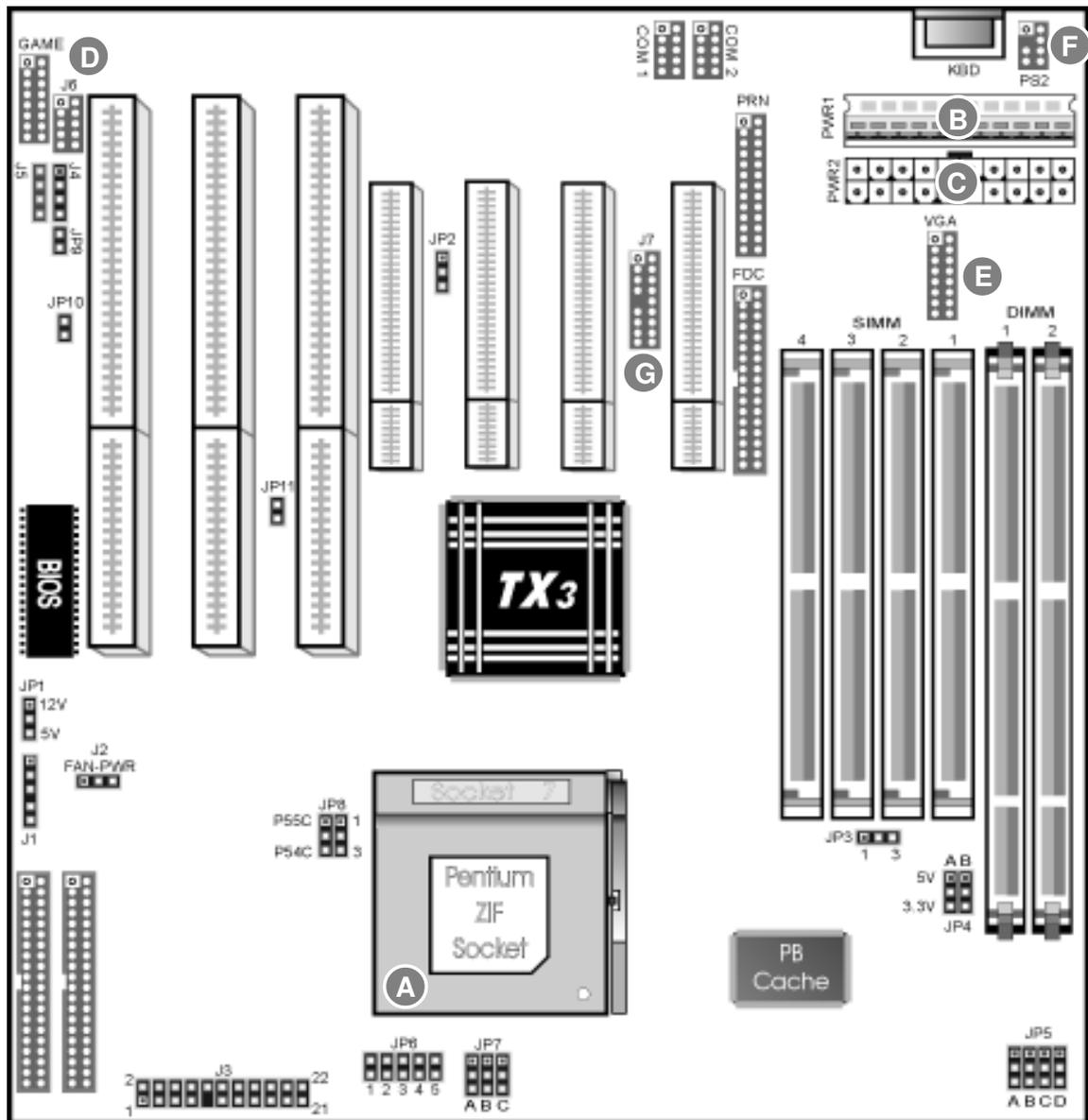
POWER MANAGEMENT FEATURES

- AT/ATX dual power connectors - supports the following ATX power functions when ATX power supply is used: Power Switch, Modem Ring-On, RTC Soft-On
- SMM/SMI Power Management with APM Software Interface, & ACP Interface

BIOS FEATURES

- AMI "Plug and Play" Flash ROM for easy BIOS upgrades

* DUE TO THE "ABOVE INDUSTRY STANDARD" 75MHZ CPU BUS SPEED (37.5 MHZ PCI BUS SPEED) REQUIRED BY THE IBM/CYRIX PR200+/PR233MX CPUS, CAUSING TIMING DIFFICULTIES WITH THE PCI BUS (33 MHZ STANDARD) AND THE MEMORY SUB-SYSTEMS, IT IS POSSIBLE THAT THESE PROCESSORS MAY CAUSE SYSTEM CRASH OR OTHER ABNORMALITIES. OUR TEST HAD SHOWN THAT MOST OF OUR BOARDS CAN ACCOMMODATE THESE PROCESSORS WITHOUT ANY PROBLEM, HOWEVER, USING THESE PROCESSORS IS CONSIDERED ON A "AT-YOUR-OWN-RISK" BASIS.

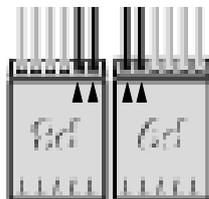


A ZIF SOCKET

Plug the processor into this socket. Make sure the cpu is correctly aligned before you insert it.

B AT POWER SUPPLY CONNECTOR

Plug the dual connectors from the power supply directly into the board connectors. On most power supplies, you must orient the black (ground) wires such that all the black wires on both connectors are in the middle.



C ATX POWER SUPPLY CONNECTOR

Plug the single 20 pin connector into the board connector. It should only fit in one direction.

D SOUND PRO & GAME CONNECTORS

Plug a standard 5-pin female DIN keyboard connector into this port.

E VGA CONNECTOR

Plug the VGA connector into this header.

F PS/2 MOUSE HEADER

Plug a PS/2 mouse connector plug into this header.

G ATX FORM CARD HEADER

An optional bracket with USB, PS/2 mouse & infrared plugs into here.

BE SURE YOU KNOW WHAT YOU ARE DOING!

•It's easy to get overly excited about your purchase, and to jump right into installing the system board into your case. Too many times, people fail to read the manual or insist on installing it themselves, only to find out later that they've permanently damaged their motherboard and as well as their components. Though this manual will make installation seem like a fairly simple procedure, it is not. So, if you're not a technophile or have little or no computer knowledge, consider asking your vendor or a trained technician to install this board.

SET JP5, JP6, JP7 & JP8 TO CONFIGURE THE BOARD FOR YOUR CPU

•It's fairly easy to forget a jumper or two, so before you power on your system, make sure to check & double check your settings so that you don't prematurely burn out your CPU.

INSERT THE CPU INTO THE ZIF SOCKET

•Pull up the handle and insert the CPU with the dotted corner aligned with the corner of the ZIF socket that looks like its missing a pinhole. Plug it in and pull down on the handle.

INSTALL YOUR MEMORY INTO THE CORRECT SOCKETS

•Insert your memory into the corresponding DIMM or SIMM sockets. Follow the instructions outlined in the memory section of this manual.

INSTALL THE MAINBOARD ONTO THE SYSTEM CHASSIS

•Make sure the mainboard is properly grounded and mounted into the case. Take time to do this properly as it makes the installation of your cards and cables easier.

CONNECT AND INSTALL YOUR CARDS & I/O CABLES

•Be sure your cables and cards are properly oriented and plugged in firmly. See the helpful hint page for tips on connecting your i/o cables.

CONNECT YOUR CASE LED & SWITCH CABLES TO THE BOARD

CONNECT THE POWER SUPPLY CABLES TO THE BOARD

•See the mainboard diagram page for tips on connecting your power cables.

POWER ON AND GO INTO BIOS AND SETUP YOUR SYSTEM

•Press during memory check phase of POST and see the BIOS setup pages of this manual for more details on setting up your system's configuration. If you get a blank screen, refer to the troubleshooting section for some tips on solving this problem.

GET YOUR OPERATING SYSTEM UP AND RUNNING

•Bootup your OS and see if the board and all your peripherals are recognized and working.

USE THE ENCLOSED CD-ROM FOR IDE, VGA, USB & SOUND DRIVERS

•The drivers for these options of the motherboard can be found the following locations:

IDE - (CD-ROM LETTER):\BOARDS\IDE

VGA - (CD-ROM LETTER):\BOARDS\VGA

USB - (CD-ROM LETTER):\BOARDS\USB

SOUND - (CD-ROM LETTER):\BOARDS\SOUND\CM18330

CLOSE UP YOUR CASE

JP1 - BIOS Voltage Setting

PIN	DESCRIPTION
-----	-------------

Factory Setting - Do Not Change

J7 - Optional ATX Form Card Bracket

PINS	DESCRIPTION
------	-------------

1, 10	+5V (Dual USB Connector <i>Pins 1-4, 10-13</i>)
2, 11	DATA -
3, 12	DATA +
4, 13	Ground
5	+5VDC (PS/2 Mouse Connector <i>Pins 5-6, 15-16</i>)
6	Mouse Clock
15	Mouse Data
16	Ground
7	Ground (Infrared Connector <i>Pins 7-9, 17-18</i>)
8	Reserved
9	+5VDC
17	IR Out
18	+5V

J4, J5, J6, JP9, JP10

PIN	DESCRIPTION
-----	-------------

J4/J5	Analog Audio (Sony/Panasonic Pinout) - Connect to CD-ROM
J6 & Game	Sound and Game Connectors (Line-In, Mic, Line-Out & Game)
JP9	Microphone Type Jumper (Open = Normal, Closed = Special)
JP10	Digital Audio - Connect to CDROM depending on drive

VGA - VGA Connector

PIN	DESCRIPTION	PIN	DESCRIPTION
-----	-------------	-----	-------------

1	Red	10	Ground
2	Green	11	Not Connected
3	Blue	12	DDC DATA
4	Not Connected	13	H Sync
5, 6, 7, 8	Ground	14	V Sync
9	Vcc	15	DDC CLK

J2 FAN POW - Fan Power Connector

PIN	DESCRIPTION
-----	-------------

1	Not Connected
2	+12V
3	Ground

J3 RST - Reset Switch Connector

PIN	DESCRIPTION
17	Signal
18	Ground

J3 HD-LED - HDD LED Connector

PIN	DESCRIPTION
15	VCC
16	Signal

J3 STANDBY-LED - Standby LED

PIN	DESCRIPTION
21	Signal
22	Ground

J3 KEYLOCK - Keylock & Power LED

PIN	DESCRIPTION
2	LED Output
4	Not Connected
6	Ground
8	Keylock
10	Ground

J3 SPK - Speaker Connector

PIN	DESCRIPTION
1	Data Out
3	Not Connected
5	Ground
7	+5V

J3 TB-LED - Turbo LED Connector

PIN	DESCRIPTION
13	Signal
14	Ground

J3 TB-SW - Turbo Switch Connector

PIN	DESCRIPTION
Keep Open - Always Turbo	

JP2 - CMOS RAM Discharge Selector

PIN	DESCRIPTION
1-2	Normal Mode (default)
2-3	Clear CMOS

JP3 - Internal VGA Option

PIN	DESCRIPTION
1-2	Disable
2-3	Enable

JP4 - DIMM Voltage Selector

JP4A	JP4B	DESCRIPTION
1 - 2	1 - 2	5V
2 - 3	2 - 3	3.3V (default)

JP5 (A, B, C) - CPU External Clock

JP5A	JP5B	JP5C	DESCRIPTION
2 - 3	2 - 3	2 - 3	50MHz
1 - 2	2 - 3	2 - 3	55MHz
2 - 3	2 - 3	1 - 2	60MHz
2 - 3	1 - 2	2 - 3	66MHz
1 - 2	2 - 3	1 - 2	75MHz

JP5(D) - PCI Clock Jumper

PIN	DESCRIPTION
1-2	CPU CLK / 2
2-3	33 MHz

JP6 - CPU Core Voltage Selector

1	2	3	4	5	DESCRIPTION
OFF	OFF	OFF	OFF	OFF	2.2V
OFF	OFF	OFF	OFF	ON	2.8V
OFF	OFF	OFF	ON	OFF	2.9V
OFF	OFF	ON	OFF	OFF	3.2V
OFF	ON	OFF	OFF	OFF	3.3V
ON	OFF	OFF	OFF	OFF	3.5V

JP7 (A, B, C) - CPU Clock Multiplier

JP7A	JP7B	DESCRIPTION	JP7A	JP7B	JP7C	DESCRIPTION
1 - 2	1 - 2	1.5X	2 - 3	1 - 2	2 - 3	4.0X
2 - 3	1 - 2	2.0X	2 - 3	2 - 3	2 - 3	4.5X
2 - 3	2 - 3	2.5X				
1 - 2	2 - 3	3.0X				
1 - 2	1 - 2	3.5X				

CPU Configuration Quick Reference													
CPU TYPE	CPU	JP5 - CPU Ext. CLK				JP6 - CPU CORE VOLT.					JP7 MULTI		
		A	B	C	D	1	2	3	4	5	A	B	
INTEL® PENTIUM® P54C	90	2 - 3	2 - 3	1 - 2	1 - 2	ON	OFF	OFF	OFF	OFF	1 - 2	1 - 2	
	100	2 - 3	1 - 2	2 - 3	1 - 2	ON	OFF	OFF	OFF	OFF	1 - 2	1 - 2	
	120	2 - 3	2 - 3	1 - 2	1 - 2	ON	OFF	OFF	OFF	OFF	2 - 3	1 - 2	
	133	2 - 3	1 - 2	2 - 3	1 - 2	ON	OFF	OFF	OFF	OFF	2 - 3	1 - 2	
	150	2 - 3	2 - 3	1 - 2	1 - 2	ON	OFF	OFF	OFF	OFF	2 - 3	2 - 3	
	166	2 - 3	1 - 2	2 - 3	1 - 2	ON	OFF	OFF	OFF	OFF	2 - 3	2 - 3	
	180	2 - 3	2 - 3	1 - 2	1 - 2	ON	OFF	OFF	OFF	OFF	1 - 2	2 - 3	
	200	2 - 3	1 - 2	2 - 3	1 - 2	ON	OFF	OFF	OFF	OFF	1 - 2	2 - 3	
INTEL® PENTIUM® MMX™ P55C	166	2 - 3	1 - 2	2 - 3	1 - 2	OFF	OFF	OFF	OFF	ON	2 - 3	2 - 3	
	200	2 - 3	1 - 2	2 - 3	1 - 2	OFF	OFF	OFF	OFF	ON	1 - 2	2 - 3	
	233	2 - 3	1 - 2	2 - 3	1 - 2	OFF	OFF	OFF	OFF	ON	1 - 2	1 - 2	
CYRIX®* 6x86 (3.5V)	PR166+	2 - 3	1 - 2	2 - 3	1 - 2	ON	OFF	OFF	OFF	OFF	2 - 3	1 - 2	
	PR200+	1 - 2	2 - 3	1 - 2	2 - 3	ON	OFF	OFF	OFF	OFF	2 - 3	1 - 2	
CYRIX®* 6x86L	PR166+L	2 - 3	1 - 2	2 - 3	1 - 2	OFF	OFF	OFF	OFF	ON	2 - 3	1 - 2	
	PR200+L	1 - 2	2 - 3	1 - 2	2 - 3	OFF	OFF	OFF	OFF	ON	2 - 3	1 - 2	
CYRIX®* 6x86MX	PR166	2 - 3	1 - 2	2 - 3	1 - 2	OFF	OFF	OFF	ON	OFF	2 - 3	1 - 2	
	PR200	1 - 2	2 - 3	1 - 2	2 - 3	OFF	OFF	OFF	ON	OFF	2 - 3	1 - 2	
	PR233	1 - 2	2 - 3	1 - 2	2 - 3	OFF	OFF	OFF	ON	OFF	2 - 3	2 - 3	
AMD™ K5 (3.5V)	PR133	2 - 3	1 - 2	2 - 3	1 - 2	ON	OFF	OFF	OFF	OFF	1 - 2	1 - 2	
	PR150	2 - 3	2 - 3	1 - 2	1 - 2	ON	OFF	OFF	OFF	OFF	2 - 3	2 - 3	
	PR166	2 - 3	1 - 2	2 - 3	1 - 2	ON	OFF	OFF	OFF	OFF	2 - 3	2 - 3	
AMD™ K6	166	2 - 3	1 - 2	2 - 3	1 - 2	OFF	OFF	OFF	ON	OFF	2 - 3	2 - 3	
	200	2 - 3	1 - 2	2 - 3	1 - 2	OFF	OFF	OFF	ON	OFF	1 - 2	2 - 3	
	233	2 - 3	1 - 2	2 - 3	1 - 2	OFF	OFF	ON	OFF	OFF	1 - 2	1 - 2	
	266	2 - 3	1 - 2	2 - 3	1 - 2	OFF	OFF	OFF	OFF	OFF	2-3	1-2	2-3
	300	2 - 3	1 - 2	2 - 3	1 - 2	OFF	OFF	OFF	OFF	OFF	2-3	2-3	2-3
IDT C6™	200	2 - 3	1 - 2	2 - 3	1 - 2	ON	OFF	OFF	OFF	OFF	1 - 2	2 - 3	

THIS "CPU CONFIGURATION QUICK REFERENCE" DOES NOT ENCOMPASS ALL POSSIBLE CPU CONFIGURATIONS. IF THE CPU YOU PLAN TO USE DOES NOT APPEAR ON THE LIST, YOU MAY STILL USE THE INDIVIDUAL JUMPERS (JP6, JP7, JP8) INFORMATION ON THE PREVIOUS PAGE TO SET IT UP. HOWEVER, YOU MUST OBTAIN ALL THE RELEVANT INFORMATION BEFORE YOU PROCEED.

*THE CYRIX 6X86 PROCESSOR SETTINGS ALSO REFER TO THE IBM 6X86 FAMILY OF PROCESSORS

YOUR CYRIX 6X86 & 6X86MX PROCESSORS MAY HAVE DIFFERENT CLOCK MULTIPLIER AND VOLTAGE SETTINGS, DEPENDING ON THE MODEL OF THE PROCESSOR. CHECK THE PROCESSOR'S LABEL FOR MORE DETAILS.

MAKE SURE YOU HAVE ALSO CONFIGURED JUMPERS JP8 AS WELL AS THE JUMPERS IN THE CHART ABOVE SO THAT YOUR BOARD HAS BEEN PROPERLY SETUP FOR YOUR PROCESSOR.

JP8 - CPU Type Selector

JP8A	JP8B	DESCRIPTION
1 - 2	1 - 2	Dual Voltage Intel P55C, AMD K6, 6x86L & 6x86MX
2 - 3	2 - 3	Single Voltage Intel P54C, IDT C6, AMD K5, 6x86

Memory Configurations

	BANK 0		BANK 1		BANK 0	BANK 2
	SIMM1	SIMM2	SIMM3	SIMM4	DIMM1	DIMM2
1	4MB-32MB	4MB-32MB	NONE	NONE	NONE	NONE
2	NONE	NONE	NONE	NONE	8MB-64MB	NONE
3	4MB-32MB	4MB-32MB	4MB-32MB	4MB-32MB	NONE	NONE
4	NONE	NONE	NONE	NONE	8MB-64MB	8MB-64MB
5	4MB-32MB	4MB-32MB	NONE	NONE	NONE	8MB-64MB
6	NONE	NONE	4MB-32MB	4MB-32MB	8MB-64MB	8MB-64MB
7	64 - 128MB	64-128MB	NONE	NONE	NONE	8MB-64MB
8	64 - 128MB	64-128MB	4MB-32MB	4MB-32MB	NONE	NONE
9	NONE	NONE	64-128MB	64-128MB	8MB-64MB	8MB-64MB

MEMORY CONSIDERATIONS

- Bank 0 (SIMM1 & SIMM2), and Bank 0 (DIMM1) can not be occupied at the same time.
- If on-board VGA is being used, memory must be installed in either one of the Bank 0.
- The mainboard supports the above memory configurations but we do not recommend the mixed mode DRAM usage.
- If FP DRAM is used on Bank 0, set the "VGA Frequency" in "Advanced Chipset Setup" to "55MHz".
- The speed of all SIMMs and DIMM modules have to be faster than 70ns
- Uses Fast Page Mode or Extended DATA Out (EDO) for the SIMM sockets
- Uses Fast Page Mode, Extended DATA Out (EDO) or Synchronous DRAM (SDRAM) for the DIMM sockets.
- Hold down the <Home> key for more than 5 seconds before powering on the system, if using the SDRAM of 2T CAS Latency.

VGA Memory Size Usage

RESOLUTION	1MB	2MB	3MB	4MB
640x480x8bpp	YES	YES	YES	YES
640x480x24bpp	YES	YES	YES	YES
800x600x4bpp	YES	YES	YES	YES
800x600x8bpp	YES	YES	YES	YES
800x600x16bpp	YES	YES	YES	YES
800x600x24bpp*	YES	YES	YES	YES
1024x768x4bpp	YES	YES	YES	YES
1024x768x8bpp	YES	YES	YES	YES
1024x768x16bpp		YES	YES	YES
1024x768x24bpp*			YES	YES

- The above chart shows the amount of DRAM used by the VGA accelerator depending on the resolution and color depth.

*If you want to run these resolutions, you will need 60ns EDO or faster DRAM.

The advanced power management functions described in the following will not be available unless an ATX power supply is being used.

PWR2 - ATX Power Supply Connector

PIN	DESCRIPTION
1	3.3V
2	3.3V
3	Ground
4	+5V
5	Ground
6	+5V
7	Ground
8	Power OK
9	5VSB
10	+12V
11	3.3V
12	-12V
13	Ground
14	PS-On
15	Ground
16	Ground
17	Ground
18	-5V
19	+5V
20	+5V

J1 (4-5) - OVERRIDE POWER BUTTON CONNECTOR

- When the system is off, push the power button to turn the system on.
- When the system is on, push the power button rapidly to switch the system to the Suspend mode and by pushing and holding the button for more than 4 seconds, it will turn the system completely off.
- When the system is in the Suspend mode, push the power button rapidly to turn the system on.

WINDOWS 95 SHUT DOWN

- If ATX Power is used, the "It is now safe to turn off your computer" message will not be shown when you are shutting down the computer.

MODEM RING POWER-ON

- While in soft-off/suspend state, if an external modem ring-up signal occurs, the system wakes up and can be remotely accessed.
- Make sure that the Resume On Ring option is set to ENABLED in the BIOS.

After you have configured the mainboard and have assembled the components, turn on the computer and run the software setup to ensure that the systems information is correct.

WARNING

- Due to the frequent upgrades of the AMI WINBIOS, this manual may not include descriptions of all the features available to you in your current BIOS.
- Do not change the settings in the BIOS unless you know EXACTLY what you are doing or when told to do so by a trained technician. Changing any of the BIOS settings, may affect the performance of your system and can also cause your system to hang.

INSTALLING A NEW BIOS

- When installing a new BIOS into this mainboard, JP2 must be set to the clear CMOS position for a moment. Replace the jumper back to the normal position before flashing the bios. You can also hold down the <END> key and then power on to clear the CMOS.

ENTERING THE WINBIOS SETUP

- When the computer is POSTing during bootup (going through a series of diagnostic checks), hit the key when prompted to enter the BIOS setup screen.

DEFAULT SETTINGS

- There are two default values for the BIOS:

Optimal - The optimal default values provide the optimum settings for all devices and system features.

Best Performance - The best default values provide the best performance settings for all devices and system features but it may cause your system to be unstable.

PRIMARY MASTER & SLAVE, SECONDARY MASTER & SLAVE

•Choose these icons to configure the hard disk drive named in the option. When you click on an icon, the following parameters are listed: Type, LBA/Large Mode, Block Mode, 32-bit Mode and PIO Mode. All parameters relate to IDE drives except Type.

FLOPPY DRIVE A,B

•Choose the Floppy Drive A or B icon to specify the floppy drive type. The settings are 360KB 5¹/₄", 1.2MB 5¹/₄", 720KB 3¹/₂", 1.44MB 3¹/₂".

1ST, 2ND, 3RD, 4TH BOOT DEVICE

•Set these options to select the boot sequence from different booting devices.

BOOT SECTOR VIRUS PROTECTION

•Any attempt to write in the boot sector and partition table of your hard disk will be enabled when this is ENABLED. The DISABLED setting is defaulted because your operating system may have problems with it.

QUICK BOOT

•When this option is set to ENABLED, the BIOS skips many of the POST diagnostic steps so that bootup is faster.

PS/2 MOUSE SUPPORT

•When this option is set to ENABLED, the BIOS supports a PS/2 type mouse.

PASSWORD CHECK

•This option specifies the type of BIOS password protection that is implemented. The settings are:

*Setup - The password prompt appears only when an enduser attempts to run BIOS setup.
Always - A password prompt appears every time the computer is powered on or rebooted.*

•The BIOS password does not have to be enabled. The enduser sets the password by choosing the password icon on the BIOS setup screen.

INTERNAL CACHE

•Set this option to ENABLED to enable the Internal CPU cache.

EXTERNAL CACHE

•Set this option to ENABLED to enable the external L2 cache.

ON-BOARD USB

•Set this option to ENABLED to enable the USB functions of the chipset.

ON-CHIP VGA

•Set this option to ENABLED to enable the VGA features of the chipset.

VGA SHARED MEMORY SIZE

•When ON-CHIP VGA is set to ENABLED, the system must share memory with the VGA.

VGA FREQUENCY

•Set this option to select the frequency of the VGA shared memory. Choose 55MHz for Fast Page Mode DRAM, 65MHz for EDO DRAM. SDRAM will be synchronized with the system clock.

POWER MANAGEMENT/APM

- Set this option to ENABLED to enable power management and APM features.

GREEN PC MONITOR POWER STATES

- This option specifies the power state that the green PC compliant video monitor enters when BIOS places it in a power saving state after the specified period of display inactivity has expired.

VIDEO POWER DOWN MODE

- This option specifies the power conserving state that the VESA VGA video subsystem enters after the specified period of display inactivity has expired.

HARD DISK POWER DOWN MODE

- This option specifies the power conserving state that the hard disk drive enters after the specified period of hard drive inactivity has expired.

PLUG AND PLAY AWARE OS

- Set this option to YES if the operating system in this computer is PnP-aware.

OFFBOARD PCI IDE CARD

- This option specifies if an offboard PCI IDE controller adapter card is installed in the computer. You must specify the PCI expansion slot on the motherboard where the offboard PCI IDE controller is installed. This disables the onboard PCI IDE controller. You must also specify the IRQs for this PCI IDE card.

PCI SLOT 1/2/3/4 IRQ PRIORITY

- These options specify the priority IRQ to be used for any PCI devices installed in PCI expansion slots 1 through 4.

IRQ 4, 5, 7, 9, 10, 11, 12, 14, 15

- These options allow you to reserve IRQs for legacy (non-PnP) ISA adapter cards.

ONBOARD FDC

- This option allows you to enable the floppy drive controller on the motherboard.

ONBOARD SERIAL PORT 1 & 2

- This option specifies the base I/O port address of serial port 1 & 2

ONBOARD PARALLEL PORT, MODE, & IRQ

- This option specifies the base I/O port address, type (Normal, Bi-Dir, EPP or EPP/ECP), and IRQ of the parallel port on the motherboard.

ONBOARD IDE

- This option specifies the channel used by the IDE controller on the motherboard.

ONBOARD SOUND PRO

- Set this option to enable the Sound Pro functions of the motherboard.

WHAT TO DO FIRST...

•The most overlooked and common problems are actually the easiest to solve. Even if you are the most seasoned of all computer technophiles and you can tell Bill Gates a thing or two, make sure you double check the following three most frequently repeated mistakes:

- (1) The power cable is not plugged firmly into the power supply in the back of the computer. Or the motherboard is not connected to the power supply.
- (2) You've got ide, floppy, serial, parallel, scsi cables that are either not plugged in firmly into the respective ports or they are plugged in "backwards."
- (3) Your jumpers for the cpu bus speed, clock multiplier, or voltage are not properly configured.

IF YOU STILL ARE HAVING PROBLEMS...

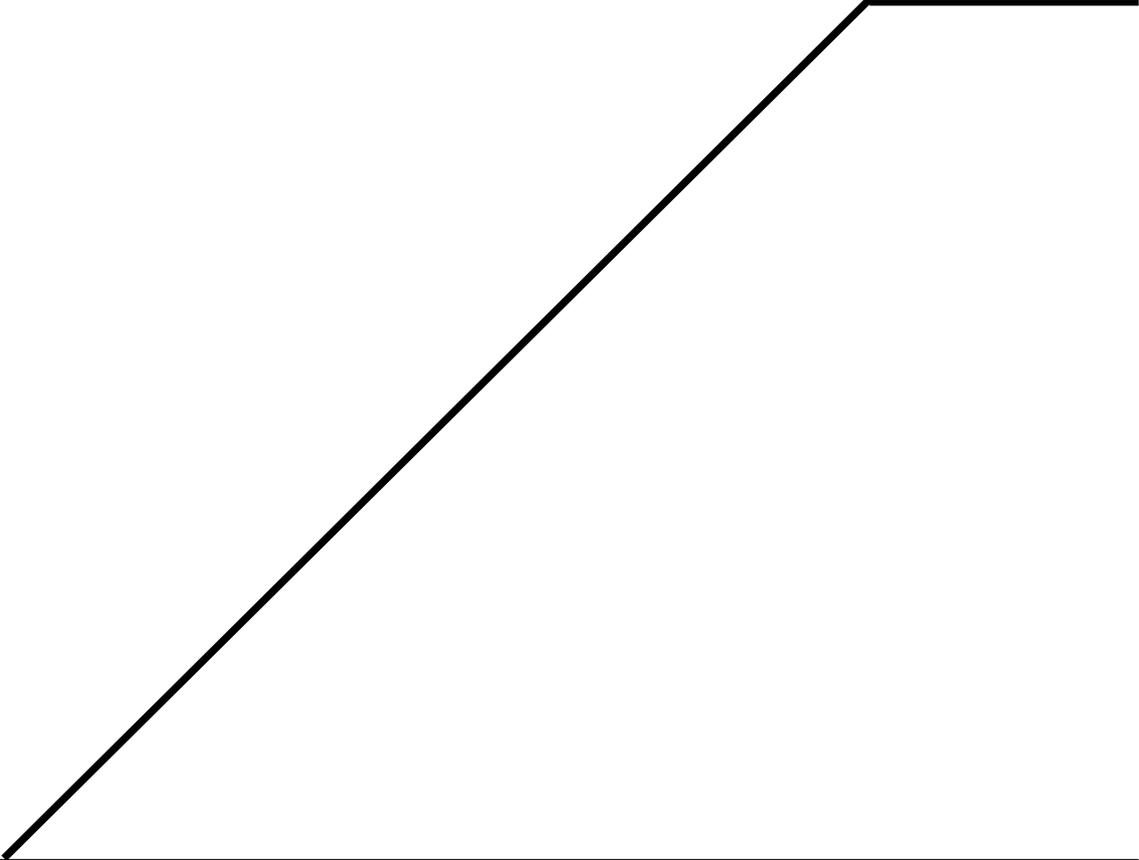
•The best way to solve any of your computer problems is to "start all over again." You've probably accumulated many peripherals every since you've got your computer. So basically remove all your cards except for the video card and your hard drive controller (if you have a SCSI hard drive or if you don't have an on-board i/o controller) and reboot your system.

•If you still get error messages after this reboot, try booting in "safe" mode per Windows 95 or try configuring your system with the most basic drivers i.e. vga instead of svga etc. If your problem is resolved, then it is most likely not a motherboard problem and the source of the crashes is due to one of your cards. See the next paragraph for suggestions on how to solve these problems. If the problem is not resolved then check your bios and reset the CMOS to factory defaults. You do this by hitting the specific hotkey (del or some other key prompted for when you boot up) during the memory check period of "bootup." Then select the function of resetting CMOS to factory defaults. Exit, save changes, and it will reboot. Other things that you can try if this doesn't help is to check the configuration of the motherboard and making sure the jumpers correctly match the components you've put on it i.e. cpu type and clock speed, type and size of cache etc. check your manual for what the correct jumper settings are. You can also check your memory, by booting your system with the minimal number of memory chips (1 for 486/5x86, 2 for Pentiums) and rotating them and rebooting after each rotation to see if you can successfully restart your system. You can also try turning off your external cache via your bios and seeing if that is the problem.

•Basically, the best technique for troubleshooting is to change one setting and then rebooting, until you can get it to work.

•Once you're at this step you need to place one of your other cards in, one at a time and reboot after each installation of the card and its specific drivers. Do this until all your cards are in or until your system crashes or freezes again. If it crashes, then you will know that it has to do with that card. So "start all over again" by taking out all cards except for the video card and your hard drive controller and placing that particular card with the problem into your system. If it works then, it is probably a compatibility or configuration problem between two or more of your cards, so go back and check their IRQs, DMAs, I/O addresses, and make sure to contact the manufacturer for the latest drivers and ask for their tech support.

•Most problems with your computer can be traced to factors other than your motherboard and it is simply a matter of getting the right drivers or configurations from your peripheral manufacturer and you'll be on the right track in no time.



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