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# CHAPTER 1 INTRODUCTION

This manual describes to configure the ATC-5000 mainboard for different environments. It's an overview of the layout and features of the mainboard, and also provides information for you to change the configuration or system environment.

This manual is divided into two sections :

- PART ONE** includes page A and two chapters as following:  
Page A contains layout diagram of the mainboard.  
Please refer to it when you configure the system.
- Chapter 1** is an overview of the mainboard features and packing contents.
- Chapter 2** describes how to upgrade and to change hardware configurations such as memory size, CPU type, and lists of jumper settings and connectors.
- PART TWO** includes chapter 3 which contains Award BIOS description..
- Chapter 3** is the user's guide of the Award BIOS setup utility and Flash ROM BIOS. The menu shown in this chapter are the default settings.

Your system dealer will set up the mainboard according to your demand of the computer. It means that the current settings of your mainboard may not be the same as the defaults shown in this user's manual. If you need to change your configuration, please ask your dealer first. Be sure this will not void your system warranty, or ask your dealer to do it for you.

## **REMARK**

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# 1-1 SYSTEM FEATURES

- 🖥️ Intel Pentium (P54C) CPU operating at 90MHz to 200MHz  
ie. Intel Pentium MMX™ 166~233MHz, AMD K5, AMD K6,  
Cyrix 6x86MX™, 6x86L.
- 🖥️ INTEL 82430TX PCIset.
- 🖥️ Using four 72-pin SIMM sockets, provides two banks of 64-bit  
wide path up to 256MB addressing page mode DRAMs.
- 🖥️ Using two 168-pin DIMM sockets for 3.3V SDRAM or EDO  
DRAM module.
- 🖥️ Supporting two types of DRAM including EDO (Extended Data  
Out), or FPM (Fast Page Mode).
- 🖥️ Built-in 256KB or 512KB PB SRAM on board
- 🖥️ Supporting four PCI bus master revision 2.1, 5V interface  
compliant and three 16-bit ISA slots.
- 🖥️ Dual Master IDE connectors support Ultra UMA/33 (33MB/sec  
transfer rate), up to four devices in two channels for connection  
of high capacity hard disk drive, CD-ROM, tape backup etc..
- 🖥️ AT style keyboard connector and PS/2 mouse connector.
- 🖥️ SMC Ultra Multi-I/O chipset, integrated Keyboard controller.  
Supporting Infrared transfer (IrDA TX/RX) connection.  
One FDC port supports two devices up to 2.88MB  
Two 16550A fast UARTs compatible serial ports  
One EPP/ECP mode parallel port
- 🖥️ Supporting Dual channel USB connection.
- 🖥️ Built-in Switching Voltage Regulator
- 🖥️ Supports ACPI Power Management - OSPM (OS directed  
power management)
- 🖥️ Optional ATX power connector support Soft-OFF Control.
- 🖥️ PCB Dimension is 220mm x 260mm (8.66" x 10.24") with four  
layers designed.

## 1-2 SOFT-OFF CONTROL (option)

The mainboard design supports Soft-Off Control feature through the SMM code in the BIOS under Windows 95, Windows 3.1x, and MS-DOS operation system environment. It needs to use ATX power supply. (please contact your supplier for this option)

Firstly, you should connect power switch cable (provided by ATX case supplier) to the connector JP7 (next to system BIOS socket) on the mainboard.

In Windows 95, if you would like to soft power off the system, you just choose “shutdown the computer ?” in “Shut Down Windows“ from Windows 95, then push the Power Switch\* (on ATX case), then system will be in soft off status directly. If you would like to restart the system, just press the button of the power switch, and the system will be power on.

\* Default value (Power management of BIOS screen) is “Instant-off“, you can change to ‘Delay 4 Sec.’, then you should push the Power Switch at least 4 seconds otherwise the system will be under SMI mode only.

In Windows 3.1x or MS-DOS, you should copy the program of “down.com” (you can find it in the diskette of IDE driver) into hard drive. When you would like to power off the system, just run this “**down.com**”, then the system will be shutdown and stay in standby status.

Note : If you will leave your system several days, we suggest you use hardware mechanical power off to shutdown your system.

## 1-3 CHECK LIST OF THE PACKING

The mainboard comes securely packed in a durable box and shipping carton. If any of the above items are missing or damaged, please contact your supplier.

Each mainboard containing:

<u>Q'TY</u>	<u>Description</u>	
1	Mainboard	: ATC-5000.
1	Diskette	: Enhanced IDE driver (3.5").
1	Cable	: Enhanced IDE connector.
1	Cable	: F.D.D. connector.
1	Cable	: Serial port.
1	Cable	: Serial/Parallel.
1	Manual	: User`s manual.

NOTE : Leave the mainboard in its original packing until you are ready to install it.

# CHAPTER 2 INSTALLATION

## 2-1 INSTALLATION PROCEDURE

Before installing the computer, please prepare all components such as CPU, DRAM; peripherals such as hard disk devices, keyboard, CD-ROM drive; and accessories such as cables. Then, install the system as following :

1. Plug CPU, heat sink, cooling fan, and DRAM modules in the mainboard.
2. Set jumpers based on your configuration.
3. Plug add-on cards in PCI/ISA slots.
4. Connect cables to peripherals, power supply..
5. Make sure all components and devices are well connected, turn on the power and setup System BIOS based on your configuration.
6. Install peripheral, add-on card drivers and test them.
7. If all of above procedures are success, turn-off the power then plug all of them into your computer case.

## **2-2 CPU INSTALLATION**

ATC-5000 supports one Pentium level CPU.

It can auto detect single or dual CPU voltage power supply type without jumper setting. For installation, please notice CPU pin 1 must align with the ZIF socket 7 Pin 1 location. Before you install or upgrade your CPU, please read CPU guide from CPU manufacturer to make sure the CPU voltage specification. Then choose the right installation in section 2-2-1 based on your CPU type/brand and follow the description to setup jumpers. If your CPU is not in the list of 2-2-1, please refer to 2-2-2 and 2-2-3 for installation.

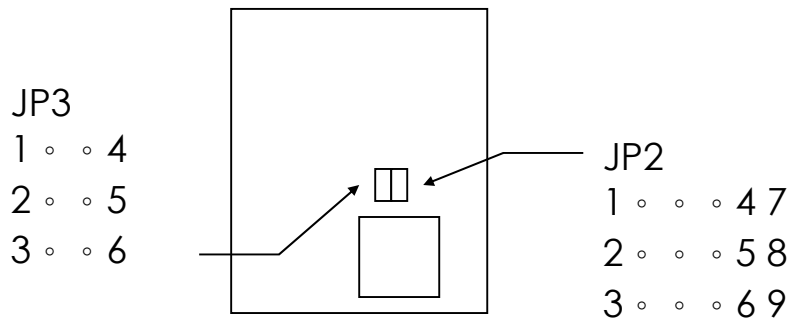
## 2-2-1 CPU TYPE SELECTION

### A. INTEL PENTIUM CPU (P54C)

※ **P54C VRE : 3.400V ~ 3.600V** (The fourth line of the mark on the under-side of the processor contains a code that identifies the voltage level type. V is VRE, S is standard. )

<b>JP6</b>
1-2

INTERNAL CPU CLOCK	JP3	JP2	Ext.x Frq.
120MHz	1-2, 5-6	2-3, 4-5	60x2.0
133MHz	1-2, 4-5	2-3, 4-5	66x2.0
150MHz	1-2, 5-6	2-3, 5-6	60x2.5
166MHz	1-2, 4-5	2-3, 5-6	66x2.5
180MHz	1-2, 5-6	1-2, 5-6	60x3.0
200MHz	1-2, 4-5	1-2, 5-6	66x3.0



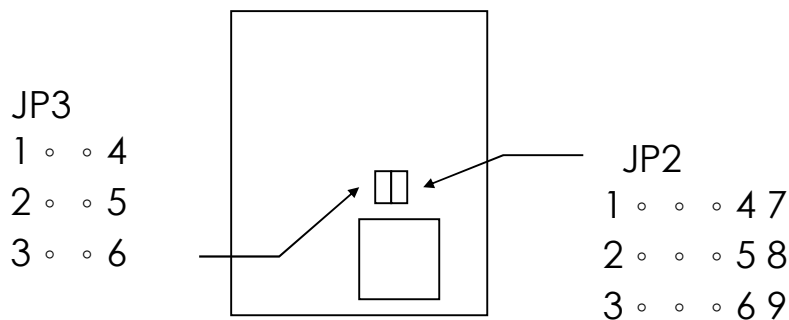
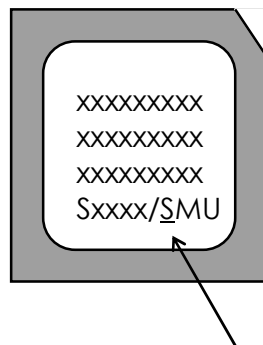


※ **P54C STD : 3.135V ~ 3.600V** (The fourth line of the mark on the under-side of the processor contains a code that identifies the voltage level type. V is VRE, S is standard. )

<b>JP6</b>
3-4

INTERNAL CPU CLOCK	JP3	JP2	Ext.x Frq.
120MHz	1-2, 5-6	2-3, 4-5	60x2.0
133MHz	1-2, 4-5	2-3, 4-5	66x2.0
150MHz	1-2, 5-6	2-3, 5-6	60x2.5
166MHz	1-2, 4-5	2-3, 5-6	66x2.5
180MHz	1-2, 5-6	1-2, 5-6	60x3.0
200MHz	1-2, 4-5	1-2, 5-6	66x3.0

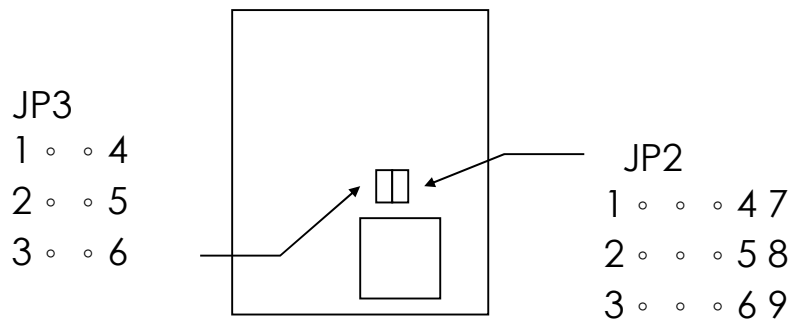
Intel Pentium CPU, the first letter after '/' denotes voltage type.



## B. INTEL PENTIUM MMX™ CPU (P55C)

<b>JP6</b>
9-10

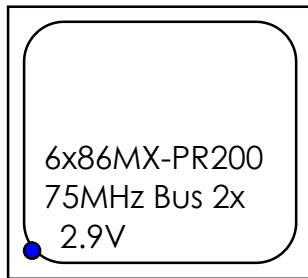
INTERNAL CPU CLOCK	JP3	JP2	Ext.x Frq.
166MHz	1-2, 4-5	2-3, 5-6	66x2.5
200MHz	1-2, 4-5	1-2, 5-6	66x3.0
233MHz	1-2, 4-5	1-2, 4-5	66x3.5



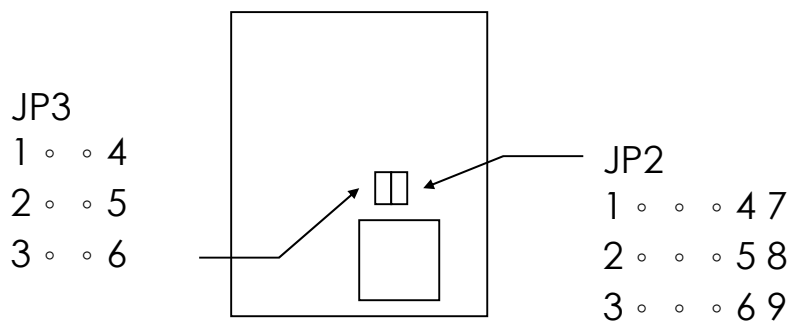
## C. Cyrix 6x86MX CPU

<b>JP6</b>
7-8

INTERNAL CPU CLOCK	JP3	JP2	Ext.x Frq.
PR150 @60 Bus 2x	1-2, 5-6	2-3, 4-5	60x2.0
PR166 @66 Bus 2x	1-2, 4-5	2-3, 4-5	66x2.0
PR166 @60 Bus 2.5x	1-2, 5-6	2-3, 5-6	60x2.5
PR200 @66 Bus 2.5x	1-2, 4-5	2-3, 5-6	66x2.5
PR200 @75 Bus 2x	2-3, 4-5	2-3, 4-5	75x2.0



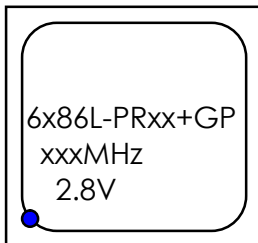
The bottom line of the mark on the processor contains a code 2.9V that identifies the voltage level type. The second line will show the bus MHz and Clock Multiplier for jumper setting.



## D. Cyrix 6x86L CPU (dual voltage)

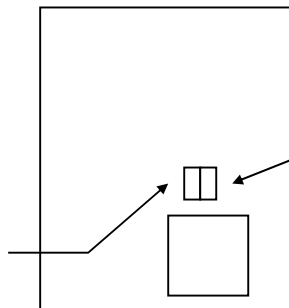
<b>JP6</b>
9-10

INTERNAL CPU CLOCK	JP3	JP2	Ext.x Frq.
PR150+ @ 120MHz	1-2, 5-6	2-3, 4-5	60x2.0
PR166+ @ 133MHz	1-2, 4-5	2-3, 4-5	66x2.0
PR200+	2-3, 4-5	2-3, 4-5	75x2.0



The mark on the processor is shown as a sample on the left. The code-name 6x86L is dual voltage mode processor.

JP3  
1 . . 4  
2 . . 5  
3 . . 6



JP2  
1 . . . 4 7  
2 . . . 5 8  
3 . . . 6 9

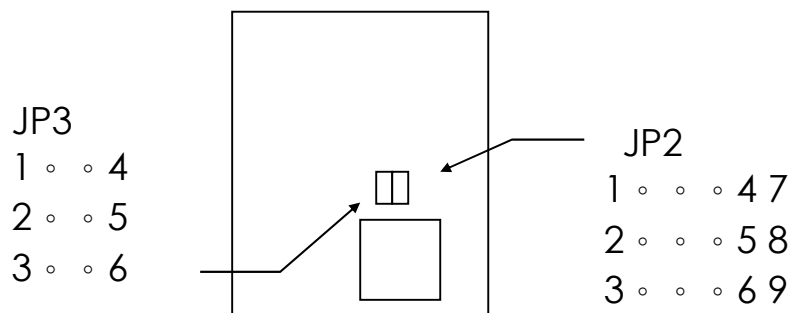
## E. AMD-K5 CPU

<b>JP6</b>
1-2

INTERNAL CPU CLOCK	JP3	JP2	Ext.x Freq.
PR90	1-2, 5-6	1-2, 4-5	60x1.5
PR100	1-2, 4-5	1-2, 4-5	66x1.5
PR120	1-2, 5-6	1-2, 4-5	60x1.5
PR133	1-2, 4-5	1-2, 4-5	66x1.5
PR166	1-2, 4-5	2-3, 5-6	66x2.5

## F. AMD-K6 CPU

INTERNAL CPU CLOCK	JP6	JP3	JP2	Ext.x Freq.
K6-166 ALR	7-8	1-2, 4-5	2-3, 5-6	66x2.5
K6-200 ALR	7-8	1-2, 4-5	1-2, 5-6	66x3.0
K6-233 ANR	5-6	1-2, 4-5	1-2, 4-5	66x3.5

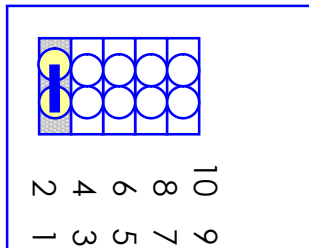


## 2-2-2 CPU VOLTAGE SETTING

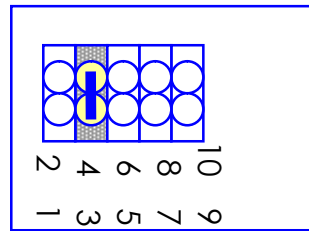
ATC-5000 can auto detect single or dual CPU voltage supply type without jumper setting. JP6 is used for various CPU voltage value types, please refer to CPU's marking on/under CPU.

**※CPU Core Voltage Type : JP6**

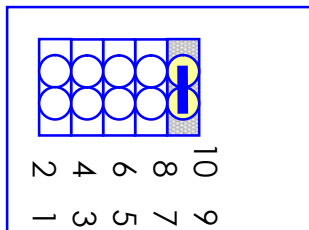
INTEL VRE(P54C)



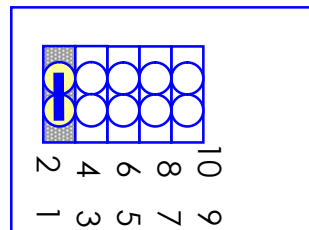
INTEL STD(P54C)



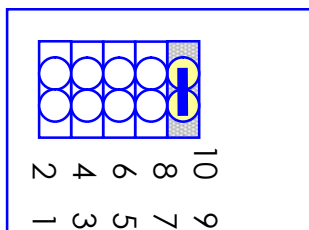
INTEL MMX™ (P55C)



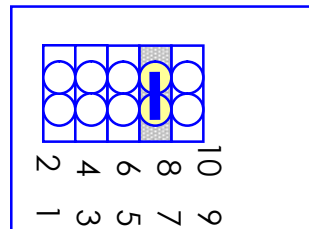
AMD K5



CYRIX 6x86L

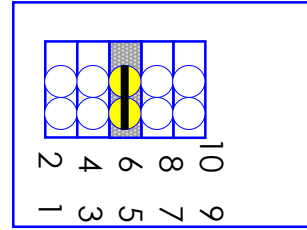
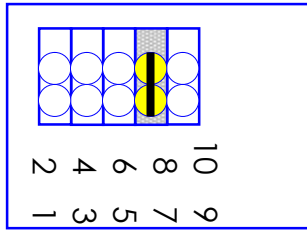


CYRIX 6x86MX



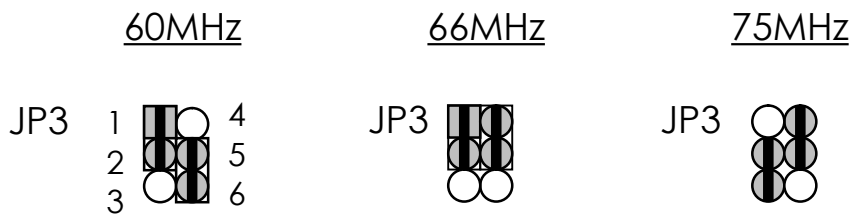
AMD-K6/166,200 ALR

AMD-K6/233 ANR

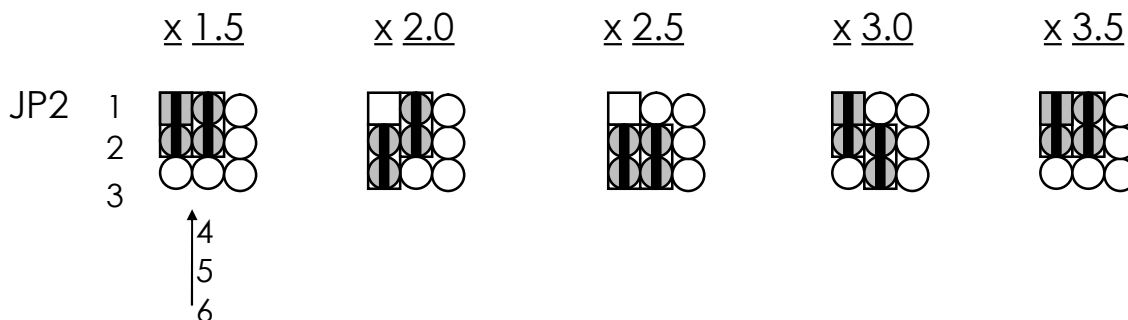


### 2-2-3 CPU CLOCK SETTING

EXTERNAL CPU CLOCK	JP3
60(MHz)	1-2, 5-6
66(MHz)	1-2, 4-5
75(MHz)	2-3, 4-5



INTERNAL CPU CLOCK	JP2
INTEL EXTERNAL CLOCK X 1.5	1-2, 4-5
INTEL EXTERNAL CLOCK X 2.0	2-3, 4-5
INTEL EXTERNAL CLOCK X 2.5	2-3, 5-6
INTEL EXTERNAL CLOCK X 3.0	1-2, 5-6
INTEL EXTERNAL CLOCK X 3.5	1-2, 4-5



### 2-3 SYSTEM MEMORY INSTALLATION

ATC-5000 provides four 72-pin SIMM sockets for system memory expansion from 4MB to 256MB. These four SIMMs are arranged to two banks, Bank0 (SIM 1, 2) and Bank1(SIM 3, 4), please refer to page A. Each bank provides 64-bit wide data path.

The mainboard accepts Fast Page Mode DRAM, and EDO Mode (Extended Data Out) DRAM, with a speed no slower than 70 nanosecond. You should plug DRAM modules into two sockets (same bank) or four sockets at one time. Each pair of modules in the same bank must be the same size, type, and speed; no matter single-side or double-side module. Please plug in Bank 0 firstly if you only have 2 modules. The mainboard supports mixing of EDO and fast page mode DRAM among different banks, please plug EDO in Bank 0.

Also this mainboard provides two optional 168-pin DIMM sockets for 3.3V SDRAM or 3.3V EDO DRAM expansion. You should plug SDRAM/DRAM module into each DIMM sockets (as a bank) or two sockets at one time.

**CAUTION:** It's not recommended to install the 3.3V SDRAM and 5V EDO or Fast Paged mode memory within a system. The 72-pin DRAM cannot work with 168-pin DRAM in the same time. Changing EDO/FPM DRAM to SDRAM, you don't have to adjust jumper setting or BIOS value, nor change SDRAM to EDO/FPM DRAM. (※ Please make sure the SDRAM plugged-in fully, to prevent contact loss.)

## ※ System Memory Combinations Options ※



<b>BANK0 SIM 1, 2</b>	<b>BANK1 SIM 3, 4</b>	<b>Total Memory SIM 1- 4</b>
<b>4MBx2</b>	<b>-</b>	<b>8MB</b>
<b>-</b>	<b>4MBx2</b>	<b>8MB</b>
<b>8MBx2</b>	<b>-</b>	<b>16MB</b>
<b>-</b>	<b>8MBx2</b>	<b>16MB</b>
<b>4MBx2</b>	<b>4MBx2</b>	<b>16MB</b>
<b>4MBx2</b>	<b>8MBx2</b>	<b>24MB</b>
<b>8MBx2</b>	<b>4MBx2</b>	<b>24MB</b>
<b>16MBx2</b>	<b>-</b>	<b>32MB</b>
<b>-</b>	<b>16MBx2</b>	<b>32MB</b>
<b>8MBx2</b>	<b>8MBx2</b>	<b>32MB</b>
<b>4MBx2</b>	<b>16MBx2</b>	<b>40MB</b>
<b>16MBx2</b>	<b>4MBx2</b>	<b>40MB</b>
<b>8MBx2</b>	<b>16MBx2</b>	<b>48MB</b>
<b>16MBx2</b>	<b>8MBx2</b>	<b>48MB</b>
<b>32MBx2</b>	<b>-</b>	<b>64MB</b>
<b>-</b>	<b>32MBx2</b>	<b>64MB</b>
<b>16MBx2</b>	<b>16MBx2</b>	<b>64MB</b>
<b>4MBx2</b>	<b>32MBx2</b>	<b>72MB</b>
<b>32MBx2</b>	<b>4MBx2</b>	<b>72MB</b>
<b>8MBx2</b>	<b>32MBx2</b>	<b>80MB</b>
<b>32MBx2</b>	<b>8MBx2</b>	<b>80MB</b>
<b>16MBx2</b>	<b>32MBx2</b>	<b>96MB</b>
<b>32MBx2</b>	<b>16MBx2</b>	<b>96MB</b>
<b>32MBx2</b>	<b>32MBx2</b>	<b>128MB</b>
<b>64MBx2</b>	<b>-</b>	<b>128MB</b>
<b>-</b>	<b>64MBx2</b>	<b>128MB</b>

- continue -

<b>4MBx2</b>	<b>64MBx2</b>	<b>136MB</b>
<b>64MBx2</b>	<b>4MBx2</b>	<b>136MB</b>
<b>8MBx2</b>	<b>64MBx2</b>	<b>144MB</b>
<b>64MBx2</b>	<b>8MBx2</b>	<b>144MB</b>
<b>16MBx2</b>	<b>64MBx2</b>	<b>160MB</b>
<b>64MBx2</b>	<b>16MBx2</b>	<b>160MB</b>
<b>32MBx2</b>	<b>64MBx2</b>	<b>192MB</b>
<b>64MBx2</b>	<b>32MBx2</b>	<b>192MB</b>
<b>64MBx2</b>	<b>64MBx2</b>	<b>256MB</b>
<b>*128MBx2</b>	<b>-</b>	<b>256MB</b>
<b>-</b>	<b>*128MBx2</b>	<b>256MB</b>

\* Please confirm this with your supplier firstly.

## **2-4 SRAM INSTALLATION**

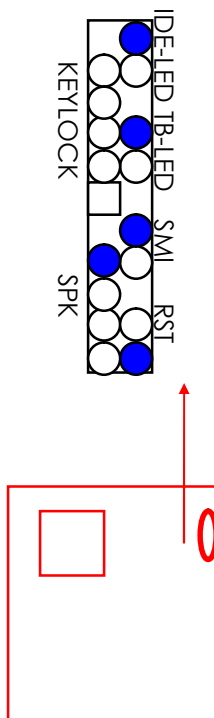
ATC-5000 is built-in 512KB/256KB Sync. Pipeline Burst SRAM on board.

## **2-5 OTHER JUMPERS AND**

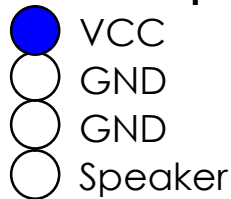
# CONNECTORS DESCRIPTION

When you plug a cable into the following I/O connectors, you should have the pin 1 edge of the cable aligned with the pin 1 end of the connector.

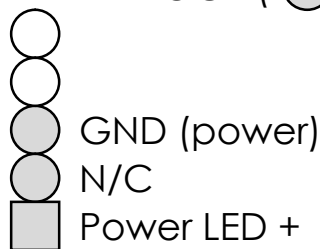
**CONN1** : speaker, power LED, reset, SMI, turbo LED, and IDE LED connectors.



## SPK : speaker



## KEYLOCK ( ● Power LED connector)



## RST : Reset connector



## SMI : SMI lead

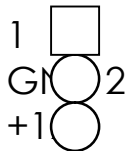
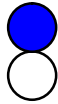


## TB-LED : Turbo LED indicator

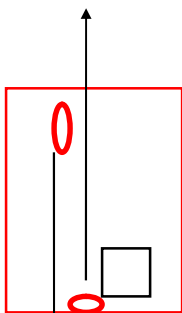


## IDE-LED : IDE devices indicator LED

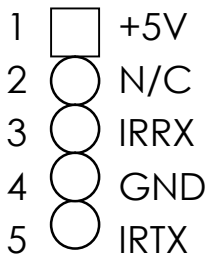
**connector.** IDE-LED stays ON indicates +5V on-board IDE devices in operation. If GND plug wire into wrong connector, color



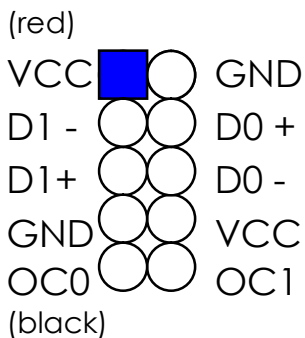
**FAN1** : CPU cooling fan connector. Wire with +12V voltage (most likely red wire) must be plugged into pin2, and GROUND wires (most likely black wires) must be plugged into pin1 and/or pin3. please confirm the wire color representation with your supplier.



**CAUTION:** Plug wire into wrong connector will DAMAGE fan and mainboard.

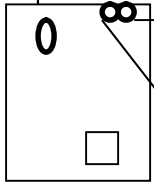


**IR1** : Infrared module connector.

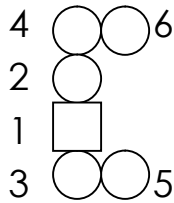


**USB1** : USB connector; Universal Serial Bus;this is used to connect USB devices through an optional dual head cable with a iron plane. OC0 and OC1 are used to mention the status of the USB power supply lines.

**CAUTION:** Plug wire into wrong connector will DAMAGE USB devices and mainboard.

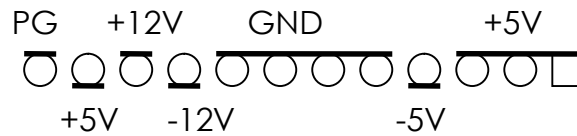
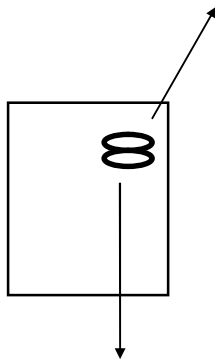
**USB**  

**KB1 : 5-pin AT style keyboard connector.**

**PS/2 Mouse:** connector, which is used to connect an optional cable.

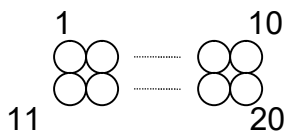


pin1 : data  
 pin2 : N/C  
 pin3 : GND  
 pin4 : VCC  
 pin5 : clock  
 pin6 : N/C

**PW1 : +5 Voltage power supply connector.(P8,P9)**



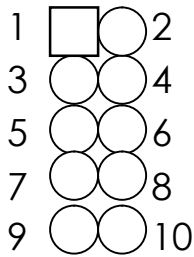
**PW2 : ATX mode +3.3/5/12V power supply connector.(optional)**



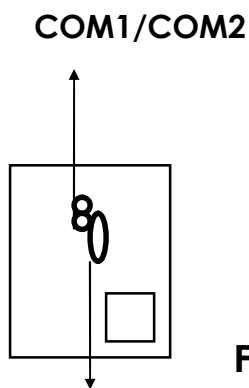
1	3.3V	6	+5V	11	3.3V	16	GND
2	3.3V	7	GND	12	-12V	17	GND
3	GND	8	PWRGD	13	GND	18	-5V
4	+5V	9	5VSB	14*	PS_ON	19	+5V
5	GND	10	+12V	15	GND	20	+5V

\* PS\_ON : Soft-Off power control

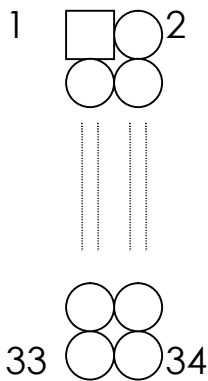
**COM1/COM2** : these two connectors are used to connect serial port cables.



pin	signal name
1	DCD
2	Serial In
3	Serial Out
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI
10	N/C

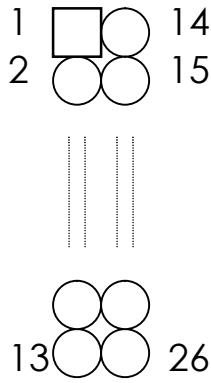


**FDC** : this connector is used to connect floppy disk drive through cable.



pin	signal	pin	signal
2	RWC-	20	STEP-
4	reserved	22	Write Data
6	FDEDIN	24	Write Gate
8	Index-	26	Track 00-
10	Motor EnableA-	28	Write Protect-
12	Drive Sele.B-	30	Read Data-
14	Drive Sele.A-	32	Side 1 Sele.-
16	Motor EnableB-	34	DisketteChange
8	DIR-		
All of odd pins are ground(except pin 5)			

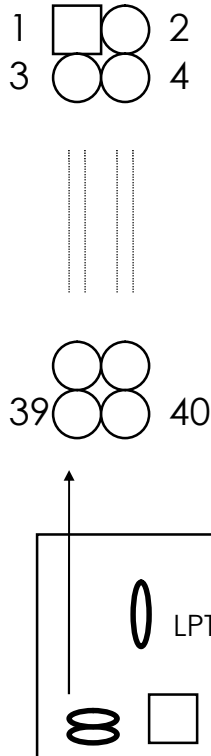
**LPT** : this connector is used to connect parallel



port cable.

pin	signal	pin	signal
1	STROBE-	10	ACK-
2	Data Bit 0	11	BUSY
3	Data Bit 1	12	PE
4	Data Bit 2	13	SLCT
5	Data Bit 3	14	Auto Feed-
6	Data Bit 4	15	ERROR-
7	Data Bit 5	16	INIT-
8	Data Bit 6	17	SLCT IN-
9	Data Bit 7	26	N/C
pin18 -- pin25 are ground			

**IDE1/IDE2** : these two connectors are used to connect max. 4 devices through IDE cable.



pin	signal	pin	signal
1	Reset IDE	21	DDRQ0(1)
2	GND	22	GND
3	Host Data 7	23	I/O Write-
4	Host Data 8	24	GND
5	Host Data 6	25	I/O Read-
6	Host Data 9	26	GND
7	Host Data 5	27	IORDY
8	Host Data 10	28	N/C
9	Host Data 4	29	DDAK0-(1-)
10	Host Data 11	30	GND
11	Host Data 3	31	IRQ14*
12	Host Data 12	32	IOCS16-
13	Host Data 2	33	Addr 1
14	Host Data 13	34	N/C
15	Host Data 1	35	Addr 0
16	Host Data 14	36	Addr 2
17	Host Data 0	37	ChipSele. 1P-
18	Host Data 15	38	ChipSele 3P-
19	GND	39	Activity
20	Key	40	GND

\*  
IDE1: pin31 is IRQ14;  
IDE2: pin31 is IRQ15  
or MIRQ0

## 2-6 IDE DRIVER INSTALLATION

### Setup for Windows 95 : (Windows 95 version 950/950a/950b)

1. Starting Windows 95
2. Select "START", "RUN".
3. Install INF.EXE before you install IDE driver, please refer to readme file.
4. Type "A:\WIN95\SETUP.EXE".
5. Restart computer, then follow the instructions on your screen to install new IDE driver we offer in the 3.5" diskette
6. Exit Windows 95, turn power off; then turn power on.

After installation, the screen will show a yellow ! , please ignore it.

(The other platforms please refer to readme file.)

Make sure your HDD should follow ATA standard, and your CD-ROM should follow ATAPI standard. When you plug-in the IDE devices, please plug your first and second devices into IDE 1 port (Master then Slave), then plug third and fourth devices into IDE 2 port. If you have CD-ROM drive, please set it behind hard disk devices as the last device. For example, if you have 2 HDDs and 1 CD-ROM, you should set HDD1 and HDD2 in IDE1 Master and Slave, set CD-ROM in IDE 2 Master. Some of the brands devices combination may not work under this sequence, you can try to re-arrange the devices sequence, or contact your vendor.

Primary Master	Primary Slave	Secondary Master	Secondary Slave	
ATA				no ATAPI
ATA		ATAPI		disk & CD-ROM
ATA	ATAPI			use only one cable
ATA		ATAPI	ATAPI	CD-ROM and a tape or two CD-ROMs

## CHAPTER 3 AWARD BIOS



# SETUP

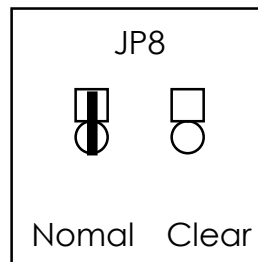
This chapter explains the system BIOS setup, and how to update new BIOS. All BIOS screens showed in the following pages are default values, your system dealer will set up these values according to your demand of computer.

ATC-5000 uses Flash ROM to make BIOS easier to be updated by the floppy disk-based program and to committe Microsoft Windows 95 plug & play feature.

The update CMOS process is mechanical power off (or unplug the power cord) to ensure there is no power to the mainboard, firstly. Set JP8 to 'open', then the CMOS is cleared. Reset is set JP8 to 'close', power on the power switch (or plug the power cord).

close	NORMAL *
open	CLEAR CMOS

\* is default setting



## 3-1 UPDATE BIOS PROCEDURES

If the BIOS needs to be updated, it can be obtained on a diskette from your system supplier. The BIOS diskette includes 3 files:

“awdflash.exe” -- BIOS update utility program  
“awdflash.doc”  
“(update BIOS filename with version number).bin”

The update procedures are as following:

1. Boot the system to DOS mode in a normal manner.
2. Insert the updated diskette to drive A (or B).
3. Change working directory to floppy drive, A or B, which contains the update BIOS diskette. -- Type “a:\” or “b:\”, “ENTER”.
4. Run the BIOS update utility -- Type “awdflash”, “ENTER”.
5. Type “(update BIOS file name with version number).bin”, ENTER.
6. Type “N” when the screen displays the message : " Do you want to save BIOS (Y/N) ?".
7. Type “Y” when the screen shows the message : " Are you sure to program (Y/N) ?".
8. Follow instructions displayed on the screen. DO NOT remove the update BIOS diskette from the floppy drive nor turn the system power off until the BIOS update is completed.
9. Turn the system power on and test your system working properly or not.

## **3-2 AWARD SYSTEM BIOS CONFIGURATION SETUP**

The following pages explain how to set up the system configuration (CMOS) under the AWARD BIOS. The SETUP program is stored in the Read-Only-Memory (ROM) on the mainboard. Enter the SETUP procedure, press the <Del> key when the system is booting up. The following main menu will appear. Please select " STANDARD CMOS SETUP" to enter the next screen.

ROM PCI/ISA BIOS (2A59IA29-S672)  
 CMOS SETUP UTILITY  
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
ESC: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type .....	

The section on the bottom of the main menu explains how to control this screen. The other one section displays the items highlighted in the list.

**This screen records some basic hardware information, and set the system clock and error handling. These records can be lost or corrupted if the on-board battery is failed or weak.**

ROM PCI/ISA BIOS (2A59IA29-S672)  
 CMOS SETUP UTILITY  
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
ESC: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type .....	

ROM PCI/ISA BIOS (2A59IA29-S672)  
 STANDARD CMOS SETUP  
 AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Fri, Feb 14 1997	
Time(hh:mm:ss) : 13 : 7 : 14	
HARD DISKS TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR	
MODE	
Primary Master : Auto	0 0 0 0 0 Auto
Primary Slave : Auto	0 0 0 0 0 Auto
Secondary Master : Auto	0 0 0 0 0 Auto
Secondary Slave : Auto	0 0 0 0 0 Auto
Drive A : 1.44M, 3.5 in.	Base Memory : 640K
Drive B : None	Extended memory : 64512K
Floppy 3 Mode support : Disabled	Other Memory : 384K
Video : EGA/VGA	-----
Halt On: All Errors	Total Memory : 65536K
ESC : Quit	↑↓→←:Select Item PU/PD/+/- : Modify
F1 : Help	(Shift) F2 : Change Color

**Date**

mm is month, dd is date, yy is year.

date	from 1 to 31
month	from Jan. to Dec.

year	from 1900 to 2099
------	-------------------

**Time**

hh is hour, mm is minute, ss is second.

hh	from 0 to 23 (24-hour military -time)
mm	from 1 to 59
ss	from 1 to 59

**Primary Master**

**Primary Slave**

**Secondary Master**

**Secondary Slave**

The categories identify the types of 2 channels that have been installed in the computer. There are 45 predefined types and 4 user definable types are for Enhanced IDE BIOS. Type 1 to 45 are predefined. Type 'user' is user- definable. Press PgUp/PgDn to select a numbered hard disk type or type the number and press <Enter>. If you select 'Auto' BIOS will auto-detect the HDD & CD-ROM Drive at the POST stage and showing the IDE for HDD & CD-ROM Drive. If you select 'user', you will need to know the information listed below. Enter the information directly from the keyboard and press <Enter>. This information should be from your hard disk vender or dealer. If the controller of HDD interface is ESDI, the selection shall be 'Type 1'; is SCSI, the selection shall be 'None'. If the device has not been installed select 'NONE' and press <Enter>.

Type	drive type
SIZE	automatically adjusts
CYLS	number of cylinders
HEAD	number of heads
PRECOMP	write precom
LANDZ	landing zone
SECTOR	number of sectors
MODE	mode type

**Drive A**

**Drive B**

The category identifies the types of floppy disk drive A or drive B that have been installed in the computer.

None	No floppy drive installed
360K, 5.25 in	5.25" PC-type 360KB capacity
1.2M, 5.25 in	5.25" AT-type 1.2MB capacity
720K, 3.5 in	3.5" double-side 720KB capacity
1.44M, 3.5 in	3.5" double-side 1.44MB capacity
2.88M, 3.5 in	3.5" double-side 2.88MB capacity

**Floppy 3 mode support**

This is the Japanese standard floppy drive. The standard stores 1.2MB in a 3.5" diskette

**Video**

The category selects the type of video adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select the type in Setup.

**Halt On**

The category determines whether the computer will stop if an error is detected during power up.

No errors	When the BIOS detects a non-fatal error the system will be stopped and you will be prompted
All errors	The system boot will not be stopped for any error that may be detected
All, But Keyboard	The system boot will not stop for a keyboard error, it will stop for all other errors
All, But Diskette	The system boot will not stop for a disk error, it will stop for all other errors
All, But Disk/Key	The system boot will not stop for a disk or keyboard error, it will stop for all other errors

**Memory**

The category is display-only which is determined by POST (Power On Self Test) of the BIOS. **Base Memory** The value of the base

memory is typically 512K or 640K based on the memory installed on the mainboard.

**Extended Memory** How much extended memory is present during the POST. This is the amount of memory located above 1MB in the CPU's memory address map.

**Other Memory** This refers to the memory located in the 640K to 1024K address space. The BIOS is the most frequent user of this RAM area since this is where it shadows RAM.

**This screen is a list of system configuration options. Some of them are defaults required by the mainboard's design, others depend on the features of your system.**

ROM PCI/ISA BIOS (2A59IA29-S672)

CMOS SETUP UTILITY

AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
<b>BIOS FEATURES SETUP</b>	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
ESC: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift) F2 : Change Color
Virus, Protection, Boot Sequence	

ROM PCI/ISA BIOS (2A59IA29-S672)

BIOS FEATURES SETUP

AWARD SOFTWARE, INC.

Virus Warning : Disabled	Video BIOS Shadow : Enabled
CPU Internal Cache : Enabled	C8000-CBFFF Shadow : Disabled
External Cache : Enabled	CC000-CFFFF Shadow : Disabled
Quick Power On Self Test : Enabled	D0000-D3FFF Shadow : Disabled
Boot Sequence : A, C, SCSI	D4000-D7FFF Shadow : Disabled
Swap Floppy Drive : Disabled	D8000-DBFFF Shadow : Disabled
Boot Up Floppy Seek : Enabled	DC000-DFFFF Shadow : Disabled
Boot Up NumLock Status : On	
Boot Up System Speed : High	
Typematic Rate Setting : Disabled	
Typematic Rate(Chars/Sec) : 6	
Typematic Delay(Msec) : 250	Esc : Quit ↑↓→←:Select Item
Security Option : Setup	F1 : Help PU/PD/+- : Modify
PCI/VGA Palette Snoop : Disabled	F5 : Old Values (SHIFT)F2 : Color
Assign IRQ for VGA : Enabled	F6 : Load BIOS Defaults
OS select for DRAM>64MB : Non-OS2	F7 : Load Setup Defaults
Report No FDD for WIN 95 : NO	

**Virus Warning**

When this item is enabled, the BIOS will monitor the boot sector and partition table of the hard disk drive for any attempt at



modification. If an attempt is made, the BIOS will halt the system and the following error message will appear. Many disk diagnostic programs which attempt to access the boot sector table can cause the above warning message. If you will be running such a program, we recommend that you first disable Virus Protection beforehand.

**! WARNING !**

Disk boot sector is to be modified  
Type 'Y' to accept write or 'N' to abort write  
Award Software, Inc.

Enabled	Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.
Disabled	No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

**CPU**

**Internal Cache**

**External Cache**

These two categories speed up memory access. However, it depends on CPU/ chipset design. The default value

**Quick Power On Self Test**

is 'enabled'. This category speeds up Power On Self Test after you power up the computer. If you set Enabled, BIOS will shorten or skip some check items during POST.

**Swap Floppy Drive**

This item allows you to determine whether enable the swap floppy drive or not.

**Boot Up Floppy Seek**

During POST, BIOS will determine if the floppy disk drive installed is 40 tracks (360K) or 80 tracks (720K, 1.2M, 1.44M)

Enabled	BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks
Disabled	BIOS will not search for the type of floppy disk drive by track number

**Boot Up NumLock Status**

This allows you to determine the default state of the numeric keypad. By default, the system boots up with NumLock on.

**Boot Up System Speed**

Selects the default system speed - the normal operating speed at power up.

**Typematic Rate Setting**

This determines if the typematic rate is to be used.

When disabled, continually holding down a key on your keyboard will generate only one instance.

**Typematic Rate (Chars/Sec)**

When the typematic rate is enabled, this section allows you select the rate at which the keys are accelerated.

6	6 characters per second
8	8 characters per second
10	10 characters per second
12	12 characters per second
15	15 characters per second
20	20 characters per second
24	24 characters per second
30	30 characters per second

**Typematic Delay (Msec)**

When the typematic rate is enabled, this section allows you select the delay between

when the key was first depressed and when the acceleration begins.

250	250 msec
500	500 msec
750	750 msec
1000	1000 msec

**Security Option** This category allows you to limit access to the system and Setup, or just to Setup

System	The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt
Setup	The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt

To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

**PCI/VGA**  
**Palette Snoop**

It determines whether the MPEG ISA/VESA VGA cards can work with PCI/VGA or not.

Enabled	When PCI/VGA working with MPEG ISA/VESA VGA Card
Disabled	When PCI/VGA not working with MPEG ISA/VESA VGA Card

**OS Select for  
DRAM > 64MB**

This item allows you to access the memory that over 64MB in OS/2

**Video BIOS  
Shadow**

Determines whether video BIOS will be copied to RAM. However it is optional depending on chipset design. Video Shadow will increase the video speed.

**C8000 - CBFFF  
Shadow  
DC000 - DFFFF  
Shadow**

These categories determine whether option ROMs will be copied to RAM. An example of such option ROM would be support of onboard SCSI.

**This screen controls the setting for the chipset on the mainboard.**

ROM PCI/ISA BIOS (2A59IA29-S672)

CMOS SETUP UTILITY

AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
ESC: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift) F2 : Change Color
AT Clock, DRAM Timmings .....	

ROM PCI/ISA BIOS (2A59IA29-S672)

CHIPSET FEATURES SETUP

AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	
DRAM Timing	: 60ns	
DRAM Leadoff Timing	: 10/6/3	
DRAM Read Burst (EDO/FP)	: x222/X333	
DRAM Write Burst Timing	: x222	
Fast EDO Lead Off	: Disabled	
Refresh RAS# Assertion	: 4 Clks	
Fast RAS to CAS Delay	: 3	
DRAM Page Idle Timer	: 2 Clks	
DRAM Enhanced Paging	: Enabled	
Fast MA to RAS# Delay	: 1 Clks	
SDRAM (CAS Lat/RAS-to-CAS)	: 3/3	
SDRAM Speculative Read	: Disabled	
System BIOS Cacheable	: Disabled	
Video BIOS Cacheable	: Disabled	Esc: Quit :Select Item
8-bit I/O Recovery Time	: 1	F1 : Help PU/PD/+/-:Modify
16-bit I/O Recovery Time	: 2	F5 : Old Values (Shift)F2 :Color
Memory Hole At 15M-16M	: Disabled	F6 :Load BIOS Defaults
PCI 2.1conpliance	: Disabled	F7 :Load Setup Defaults

**Auto**

**Configuration**

Pre-defined values for DRAM, cache..timing according to CPU type & system clock.

When this item is enabled, the pre-defined items will become SHOW-ONLY.

**DRAM Timing**

The DRAM speed is controlled by the DRAM timing Registers. The timings programmed into this register are dependent on the system design.

**DRAM RAS# Precharge Time**

DRAM must continually be refreshed or it will lose its data. Normally, DRAM is refreshed entirely as the result of a single request. This option allows you to determine the number of CPU clocks allocated for the Row Address Strobe to accumulate its charge before the DRAM is refreshed. If insufficient time is allowed, refresh may be incomplete and data lost.

**Fast RAS# to CAS# Delay**

When DRAM is refreshed, both rows and columns are addressed separately. This setup item allows you to determine the timing of the transition from RAS to Column Address Strobe (CAS).

**DRAM Read Burst (EDO/FP)**  
**DRAM Write Burst Timing**

This sets the timing for burst mode read (or writes) from DRAM. Burst read and write requests are generated by the CPU in four separate parts. The first part provides the location within the DRAM where the read or write is to take place while the remaining three parts provide the actual data. The lower the timing numbers, the faster the system will address memory.

**ISA Bus Clock**

This item allows you to select the PCI clock type. Choices are PCI CLK/3; PCI CLK/4

**System BIOS**  
**Cacheable**

When enabled, accesses to the system BIOS ROM addressed at F0000H-FFFFFFH are cached, provided that the cache controller is enabled.

**Video BIOS**  
**Cacheable**

As with changing the system BIOS above, enabling the Video BIOS cache will cause access to video BIOS addressed at C0000H to C7FFFH to be cached, if the cache controller is also enabled.

**8-bit I/O**  
**Recovery Time**

The recovery time is the length of time, measured in CPU clocks, which the system will delay after the completion of an I/O request. This item allows you to determine the recovery time allowed for 8-bit I/O. Choices are from NA, 1 to 8 CPU clocks.

**16-bit I/O**  
**Recovery Time**

This item allows you to determine the recovery time allowed for 16-bit I/O. Choices are from NA, 1 to 4 CPU clocks.

**Memory Hole At**  
**15M-16M**

In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory below 16MB.

**This screen controls the 'green' features of this mainboard.**

**\* are only enabled under ATX power environment**

ROM PCI/ISA BIOS (2A59IA29-S672)  
 CMOS SETUP UTILITY  
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
ESC: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift) F2 : Change Color
Sleep Timer, Suspend Timer, .....	

ROM PCI/ISA BIOS (2A59IA29-S672)  
 POWER MANAGEMENT SETUP  
 AWARD SOFTWARE, INC.

Power Management : Disabled	*Reload Global Timer Events*
PM Control by APM : Yes	IRQ {3-7, 9-15}, NMI : Disabled
Video Off Method : V/H SYNC +Blank	Primary IDE 0 : Disabled
Video Off After : Standby	Primary IDE 1 : Disabled
Doze Mode : Disabled	Secondary IDE 0 : Disabled
Standby Mode : Disabled	Secondary IDE 1 : Disabled
Suspend Mode : Disabled	Floppy Disk : Disabled
HDD Power Down : Disabled	Serial Port : Enabled
Throttle Duty Cycle : 62.5%	Parallel Port : Disabled
ZZ Active in Suspend : Disabled	
VGA Active Monitor : Enabled	
CPU FAN Off In Suspend : Enabled	
Resume by Ring* : Enabled	Esc: Quit ↑↓→← :Select Item
*Break Events From Suspend*	F1 : Help PU/PD/+/- : Modify
IRQ 8 Clock Event : Disabled	F5 : Old values (Shift) F2: Color
	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

**Power Management**

This category allows you to select the type (or degree) of power saving and is directly



related to the following modes : **Doze;**  
**Standby; Suspend; HDD Power Down.**

Disabled	No power management. Disables all 4 modes
Min. Power Saving	Minimum power management. Doze =1hr.; Standby=1hr.; Suspend=1hr.; HDD Power Down=15min
Max. Power Saving	Maximum power management only available for <b>SL CPU's</b> .Doze=1min.; Standby=1min.;Suspend=1min.;HDD Power Down=1min
User Defined	Allows you to set each mode indivi-dually. When not disabled, each of the ranges are from 1min. to 1hr. except for HDD Power Down which ranges from 1 to 15min. and disable

**PM Control**  
**by APM**

When enabled, an Advanced Power Management device will be activated to enhance the Max. Power Saving Mode and stop the CPU internal clock. If the Max. Power Saving is not enabled, this will be present to NO.

**Video Off**  
**Method**

This determines the manner in which the monitor is blanked.

V/H SYNC + Blank	This selection will cause the system to turn off the vertical and horizontal sync. ports and write blanks to the video buffer
Blank Screen	This option only writes blanks to the video buffer
DPMS	Initial display power management signaling

*The Following 4 modes are Green PC power saving function which are only user configuration when 'User Defined' power management*

*has been selected.*

**Doze Mode**

When enabled and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices still operate at full speed

**Standby Mode**

When enabled and after the set time of system inactivity, the fixed disk drive and the video would be shut off while all other devices still operate at full speed

**Suspend Mode**

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off

**HDD Power Down**

When enabled and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active

**Wake Up Events In Doze & Standby**

**Power Down & Resume Events**

**IRQ3 ~ IRQ15**

These are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything which occurs to a device which is configured as **On**, even when the system is in a power down mode. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ (Interrupt ReQuests) to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service. When set off, activity will neither prevent the system from going into a power management mode nor awaken it.

**This screen configures the PCI Bus slots.**

ROM PCI/ISA BIOS (2A59IA29-S672)  
CMOS SETUP UTILITY  
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
ESC: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift) F2 : Change Color
IRQ Settings, Latency Timers, .....	

ROM PCI/ISA BIOS (2A59IA29-S672)  
PNP/PCI CONFIGURATION  
AWARD SOFTWARE, INC.

PNP OS Installed : No	PCI IDE IRQ Map to : PCI-AUTO
Resources Controlled by : Auto	Primary IDE INT# : A
Reset Configuration Data : Disabled	Secondary IDE INT# : B
	Esc: Quit    ↑↓→← :Select Item
	F1 : Help        PU/PD/+/- : Modify
	F5 : Old Values    (Shift) F2: Color
	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

**Resource**  
**Controlled by**

The Award Plug and Play BIOS has the capacity to automatically configure all of the

boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play OS such as Windows 95 Choices are Auto and Manual

**Reset Configuration Data**

This item allows you to determine reset the configuration data or not.

**PCI IRQ Activated By**

This sets the method by which the PCI bus recognizes that an IRQ service is being requested by a device. Under all circumstances, you should retain the default configuration unless advised otherwise by your system's manufacturer. Choices are Level and Edge

**PCI IDE IRQ Map To**

This allows you to configure your system to the type of IDE disk controller in use. If you have equipped your system with a PCI controller, changing this allows you to specify which slot has the controller and which PCI interrupt (A,B,C,D) is associated with the connected hard disk. Select 'PCI Auto' allows the system to automatically determine how your IDE disk system is configured.

**This section page includes all the items of IDE hard drive and Programmed Input/Output features. See also Section "Chipset Features**

**Setup”.**

ROM PCI/ISA BIOS (2A59IA29-S672)  
 CMOS SETUP UTILITY  
 AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
ESC: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type .....	

ROM PCI/ISA BIOS (2A59IA29-S672)  
 INTEGRATED PERIPHERALS  
 AWARD SOFTWARE, INC.

IDE HDD Block Mode : Disabled	Onboard Parallel Port : 378H/IRQ7
IDE Primary Master PIO : Auto	Parallel Port Mode ECP
IDE Primary Slave PIO : Auto	ECP Mode Use DMA : 3
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	
Onboard FDC Controller : Enabled	Esc: Quit ↑↓→← :Select Item
Onboard Serial Port 1 : Auto	F1 : Help PU/PD/+/- : Modify
Onboard Serial Port 2 : Auto	F5 : Old Values (Shift) F2: Color
UART 2 Mode : Standard	F6 : Load BIOS Defaults
	F7 : Load Setup Defaults

**IDE HDD Block Mode**

This allows your HD controller to use the fast block mode to transfer data to and from your

## HD drive

Enabled	IDE controller uses block mode
Disabled	IDE controller uses standard mode

### **IDE Primary Master/Slave PIO IDE Secondary Master/Slave PIO**

PIO - Programmed Input/Output, it allows the BIOS to tell the controller what it wants and then let the controller and the CPU perform the complete task by themselves. This simpler and more faster. Your system supports five mods, 0 - 4, which primarily differ in timing. When **Auto** is selected, the BIOS will select the best available mode.

### **On-Chip Primary PCI IDE On-Chip Secondary PCI IDE**

This setup item allows you either to enable or disable the primary/secondary controller. You might choose to disable the controller if you were to add a higher performance or specialized controller.

### **PCI Slot IDE 2nd Channel**

This item allows you designate an IDE controller board insert into one of the physical PCI slots as your secondary IDE

Enabled	External IDE controller designated as the secondary controller
Disabled	No IDE controller occupying a PCI slot

CMOS SETUP UTILITY  
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP BIOS FEATURES SETUP CHIPSET FEATURES SETUP POWER MANAGEMENT SETUP PNP/PCI CONFIGURATION LOAD BIOS DEFAULTS LOAD SETUP DEFAULTS	<b>INTEGRATED PERIPHERALS</b> SUPERVISOR PASSWORD USER PASSWORD IDE HDD AUTO DETECTION SAVE & EXIT SETUP EXIT WITHOUT SAVING
ESC: Quit <span style="float: right;">↑↓→←:Select Item</span> F10: Save & Exit Setup <span style="float: right;">(Shift) F2 : Change Color</span>	
Time, Date, Hard Disk Type .....	

ROM PCI/ISA BIOS (2A59IA29-S672)  
CMOS SETUP UTILITY  
AWARD SOFTWARE, INC.

Hard Disks	Type	Size	CYLS	HEAD	PRECOMP	LANDZ	SECTOR	MODE
Primary Mster :								
Select Primary Master Option (N=Skip) : N								
<u>Options</u>	<u>Size</u>	<u>CYLS</u>	<u>Head</u>	<u>PRECOMP</u>	<u>LANDZ</u>	<u>Sector</u>	<u>Mode</u>	
2(Y)	1337	648	64	0	2594	63	LBA	
1	1339	2595	16	65535	2594	63	NORMAL	
3	1338	1297	32	65535	2594	63	LARGE	
Note : Some Oses (like SCO-UNIX) must use "Normal" for installation ESC : Skip								

**The last step is 'save and exit'. If you select this item and press 'Y', then these records will be saved in the CMOS memory on**

the mainboard. It will be checked every time when you turn your computer on.

ROM PCI/ISA BIOS (2A59IA29-S672)  
CMOS SETUP UTILITY  
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
ESC: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift) F2 : Change Color
Time, Date, Hard Disk Type .....	

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	SUPERVISOR PASSWORD
CHIPSET FEATURES SETUP	USER PASSWORD
POWER MANAGEMENT SETUP	IDE HDD AUTO DETECTION
PNP/PCI CONFIGURATION	SAVE & EXIT SETUP
LOAD BIOS DEFAULTS	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	SAVE to CMOS and EXIT (Y/N):Y
ESC: Quit	↑↓→←:Select Item
F10: Save & Exit Setup	(Shift) F2 : Change Color
Auto-Configure HDD: Sector, Cylinder, Head .....	

## **LOAD BIOS DEFAULTS**



When your mainboard has problems and need to debug or troubleshoot the system, you can use this function. The default values loaded only affect the BIOS Features Setup, Chipset Features Setup, Power Management Setup and PNP/PCI Configuration Setup. There is no effect on the Standard CMOS Setup. To use this function, select it from main menu and press <Enter>. A line will appear on the screen asking if you want to load the BIOS default values. Press <Yes> and

<Enter>

then the BIOS default values will be loaded.

### **LOAD SETUP DEFAULTS**

This allows you load optimal settings which are stored in the BIOS ROM to get better performance. The default values loaded only affect the BIOS Features Setup, Chipset Features Setup, Power Management Setup and PNP/PCI Configuration Setup. There is no effect on the Standard CMOS Setup. To use this function, select it from main menu and press <Enter>. A line will appear on the screen asking if you want to load the Setup default values. Press <Yes> and <Enter> then the Setup default values will be loaded.

### **SUPERVISOR PASSWORD / USER PASSWORD**

This allows you to set the password. the mainboard defaults password disabled.

**Enter/Change password** : Enter the current password, at the prompt key-in your new password (up to eight alphanumeric characters), press <Enter>. At the next prompt, confirm the new password by typing it and press <Enter> again.

**Disable password** : Press <Enter> key instead of entering a new password when the 'Enter Password' dialog box appears. A message will appear confirming that the password is disable.

If you set both supervisor and user passwords, only the supervisor password allows you to enter the BIOS SETUP program.

**CAUTION** :If you forget your password, you must disable the CMOS by turning power off and set JP8 'open'. Then reload the system.

### **IDD HDD AUTO DETECTION**

This allows you to detect IDE hard drives' parameters and enter them into 'Standard CMOS Setup' automatically.

If the auto-detected parameters displayed do not match the ones that should be used for your hard drive, do not accept them. Press <N> to reject the values and enter the correct ones manually on the Standard CMOS Setup screen.

### **SAVE & EXIT SETUP**

This allows you to save the new setting values in the CMOS memory and continue with the booting process. Select what you want to do, press <Enter>.

### **EXIT WITHOUT SAVING**

This allows you to exit the BIOS setup utility without recording any new values or changing old ones.

※ Control Key Description ※

UP ARROW	↑	Move to previous item
DOWN ARROW	↓	Move to next item
LEFT ARROW	←	Move to the item in the left hand
RIGHT ARROW	→	Move to the item in the right hand
Esc KEY	Esc	Main Menu : Quit and not save changes Setup menu : Exit current page and return to main menu
PgUp KEY		Increase the numeric value or make changes
PgDn KEY		Decrease the numeric value or make changes
F1 KEY	Help	General help
F2 KEY	< Shift > +F2	Change color from total 16 colors
F5 KEY	Old Value	Restore the pervious CMOS value from CMOS
F6 KEY	Load BIOS default	Load the default CMOS value from BIOS default table
F7 KEY	Load setup default	Load Setup default
F10 KEY	Save & Exit Setup	Save all the CMOS changes and Exit setup, only for Main Menu

# APPENDIX A

## ※※TECHNICAL SUPPORT REQUEST FORM※※

If the mainboard doesn't function properly, please complete the following information and return it to your system dealer. If the further information is needed, please attach this separating sheets.

**Model No :** ATC-5000      **Date of Purchase :** \_\_\_\_\_

**Serial No :** \_\_\_\_\_

### HARDWARE :

	BRAND	MODEL	SPEED	Q'TY
CPU				
SIM Module				
PB SRAM on Board				
TAG SRAM				
Sync. SRAM Module				

SIMM : \_\_\_\_\_ MB ( \_\_ EDO, \_\_ FastPage)

Hard Disk Interface Controller : \_\_ \_\_ IDE, \_\_\_\_ SCSI

Hard Disk Brand : \_\_\_\_\_, Model : \_\_\_\_\_, Capacity : \_\_\_\_\_

Display Controller Brand : \_\_\_\_\_, Model : \_\_\_\_\_

Controller Chip Brand : \_\_\_\_\_, Model : \_\_\_\_\_

AWARD SYSTEM BIOS: Version \_\_\_\_\_ Date Code \_\_\_\_\_

### Other Add-on Cards Information:

Add-on Card	Bus Interface	Model	Remark

**Error Description :**