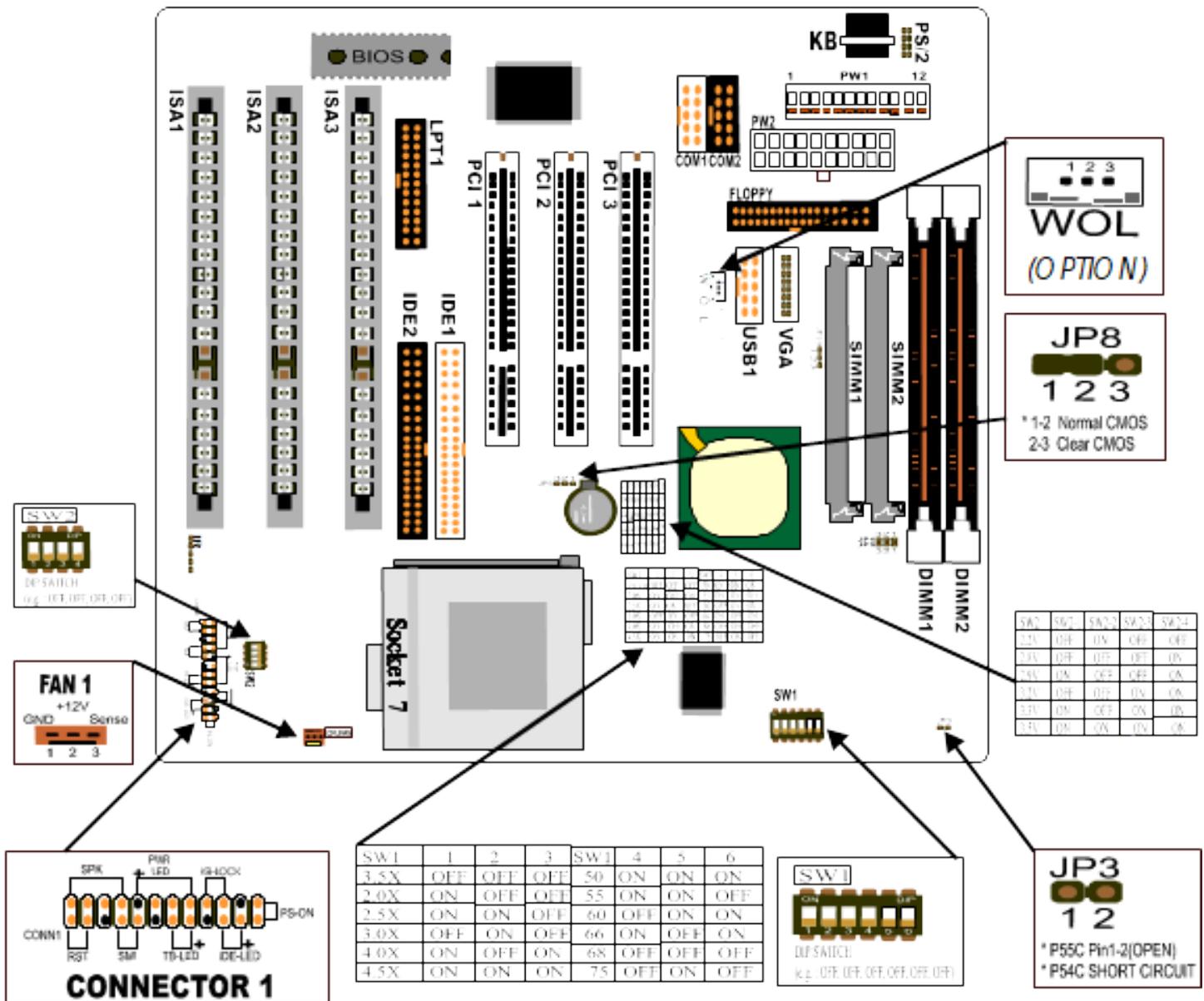


ATC-5300

(VGA on board)

Mainboard Component Location Diagram



Recommend :

1. Users must be set JP3, SW1 and SW2 in the correct settings, before you install the CPU on the mainboard.
2. Because of the VGA on board function. Users must be set JP1, JP2 and JP10 properly.

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HOW TO USE THIS MANUAL

To obtain maximum use from this manual it is suggested:

Read Page A COMPONENT LOCATION DIAGRAM where you find the mainboard layout diagram. Please refer to it when you configure the system.

Read about an overview of the mainboard features, packing contents, and how to upgrade as well as to change hardware configurations such as memory size, CPU type, jumper settings lists and connectors in the following categories:

INTRODUCTION TO THE ATC-5300 MAINBOARD HARDWARE INSIDE THE ATC-5300 MAINBOARD PACKAGE

Chapter 1 Introduction

Chapter 2 Installation

When you have finished reading of both chapter 1 and chapter 2, turn to **Chapter 3 Award BIOS Setup** where you will find the update BIOS procedure and the further information which is stored in the SETUP is the system hardware configuration.

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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INTRODUCTION TO THE ATC-5300 MAINBOARD HARDWARE

Each ATC-5300 mainboard supports or contains the following components:

- ☞ Supports Intel Pentium® (P54C) CPU operating from 75MHz to 200MHz, Intel Pentium MMX™ 166~233MHz (P55C), AMD K5, AMD K6, AMD K6-2 Cyrix 6x86MX™, MII, 6x86L, IDT Win Chip C6.
- ☞ SiS 5598 chipset.
- ☞ Using two 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.
- ☞ Supports VGA on board, the VGA function inside the SiS5598 chipset, to speed up VGA GUI performance and the video playback frame rate. With shared memory area from 0.5MB to 4MB, step by 0.5MB.
- ☞ Built-in Switching Voltage Regulator.(VRM 8.2 SPEC.)
- ☞ Supports CPU core voltage range from 2.0V up to 3.5V.
- ☞ Supports three PCI slots with revision 2.1 interface compliant and three 16-bit ISA slots.
- ☞ Dual Master IDE connectors support Ultra DMA/33, up to four devices in two channels for connecting of high capacity hard drive, CD-ROM disk drive, tape backup etc..
- ☞ Supports the USB (Universal Serial Bus) header.
- ☞ PS/2 mouse header.
- ☞ SMC-FDC37C669 high-speed Super Multi-I/O chipset.
- ☞ Supports 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 printer port.
- ☞ Hardware Dimension is 220mm x 230mm(8.66" x 9.05"); AT Form Factor.

INSIDE THE ATC-5300 MAINBOARD PACKAGE

The ATC-5300 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.

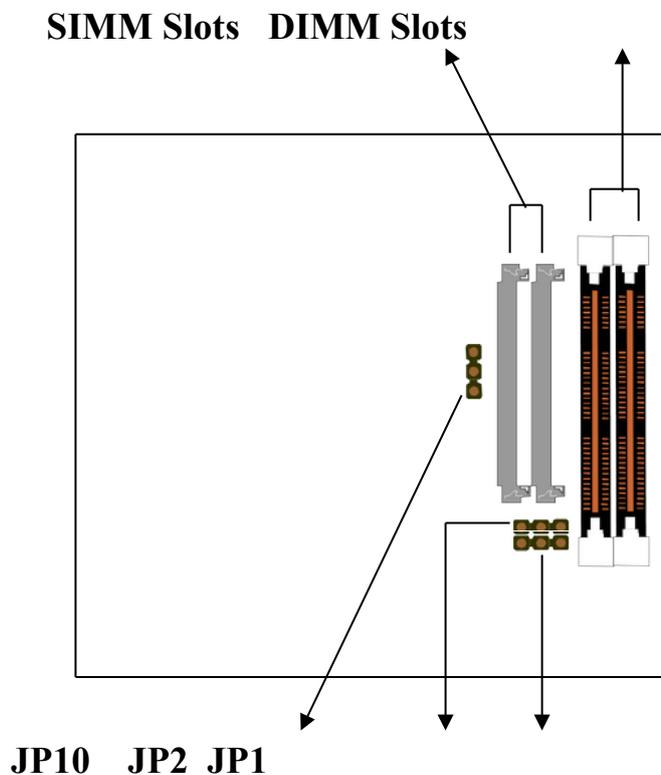
Each ATC-5300 mainboard containing:

<u>Q'TY</u>	<u>Description</u>
1	Mainboard : ATC-5300.
1	CD : Enhanced SiS IDE driver. Award System BIOS driver Update Utility. The SiS 5597/5598 VGA driver.
1	Cable : Enhanced IDE connector.
1	Cable : F.D.D. connector.
1	Cable : Serial port / PS/2 mouse.
1	Cable : VGA cable.
1	Cable : Serial/Parallel.
1	Manual : User`s manual.

CHAPTER 1 INTRODUCTION

Welcome to use the ATC-5300 mainboard, the latest top technology of today's multimedia socket 7 mainboard, along with the varied needs of our computers. Whether you are using A-Trend product for the first time or you are a computer expert, the ATC-5300 mainboard will fit your needs.

ATC-5300 mainboard provides **JP1**, **JP2** and **JP10** where they allow you to set your system to 3D VGA resolution. If your system has plugged VGA card on board, set **JP1**, **JP2** and **JP10** to “**Pin2-3, Pin2-3 and Pin1-2**” position. On the other hand, if your system does not have VGA card on board, set **JP1**, **JP2** and **JP10** to “**Pin1-2, Pin1-2 and Pin2-3**” position.



How to Enable/Disable on board VGA port :

VGA display mode	JP1	JP2	JP10
Disable on board VGA port	Pin2-3	Pin2-3	Pin1-2
Enable on board VGA port	Pin1-2	Pin1-2	Pin2-3

1-1 SOFT-OFF CONTROL

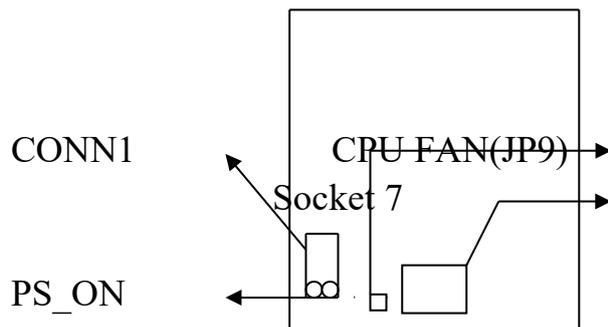
The ATC-5300 mainboard design supports Soft-Off Control feature through the SMM code in the BIOS under Windows 95, Windows 3.1x, and MS-DOS operation system environment. It needs to use ATX power supply.

Firstly, you should connect power switch cable (provided by ATX case supplier) to the PS_ON (CONN1) (next to FAN & socket 7) on the ATC-5300 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.



1-2 Wake-On-LAN (option)

The remote Wake-On-LAN mode of operation is a mechanism that uses Advanced Micro Device Magic Packet technology to power up a sleeping workstation on the network. This mechanism is accomplished when the LAN card receives a specific packet of information, called a Magic Packet, addressed to the node on the network. For additional protection, Secure ON is an optional security feature that can be added to the Magic Packet that requires a password to power up the sleeping workstation. When the LAN card is in remote Wake-On-LAN mode, main system power can be shut down leaving power only for the LAN card and auxiliary power recondition.

The LAN card performs no network activities while in the remote Wake-On-LAN mode of operation-It only monitors the network for receipt of a Magic Packet. If a Magic Packet is addressed to the LAN card on the network, the LAN card wake up the system. If the Secure ON feature has been enabled, the password added to the Magic Packet is also verified prior to waking up the system.

WOL LAN card will provide a 3-pin line to connect the WOL connector on the mainboard.

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 on the mainboard.
2. Set jumpers based on your configuration.
3. Plug add-on cards in PCI/ISA slots.
4. Connect cables to peripheral devices, power supply. **(Especially for VGA connector, to make sure to be VGA on board or VGA on card.)**
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 succeed, turn-off the power then plug all of them into your computer case.

2-2 CPU INSTALLATION

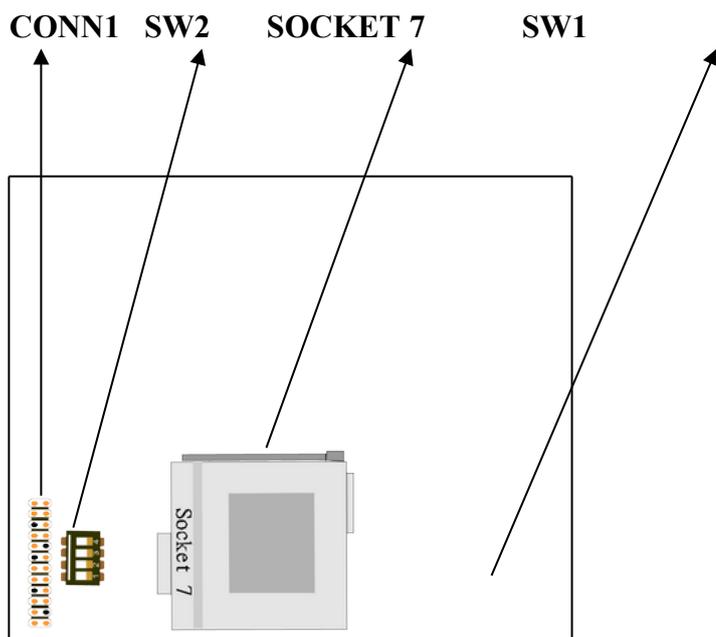
ATC-5300 supports one Pentium level CPU.

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 DIP Switch & Jumpers.

ATC-5300 uses the following DIP Switches of SW1 & SW2 for the user to install CPU easily.

SW1 (1-3) for frequency ratio and SW1 (4-6) for external clock.
SW2 for different CPU voltage value;

The following DIP switches of SW1 & SW2 charts are the effective information for you to setup correct CPU and total system speed, when installing your system with ATC-5300 mainboard :



SW1 Setting

(The setting for CPU host clock)

SW1	SW1-1	SW1-2	SW1-3	SW1	SW1-4	SW1-5	SW1-6
1.5x	OFF	OFF	OFF	50	ON	ON	ON
2.0x	ON	OFF	OFF	55	ON	ON	OFF
2.5x	ON	ON	OFF	60	OFF	ON	ON
3.0x	OFF	ON	OFF	66	ON	OFF	ON
3.5x	OFF	OFF	OFF	50	ON	ON	ON
4.0x	ON	OFF	ON	68	OFF	OFF	OFF
4.5x	ON	ON	ON	75	OFF	ON	OFF

SW 2 Setting

(The setting for CPU core voltage)

Vcore	SW2-1	SW2-2	SW2-3	SW2-4
2.2V	OFF	ON	OFF	OFF
2.8V	OFF	OFF	OFF	ON
2.9V	ON	OFF	OFF	ON
3.2V	OFF	OFF	ON	ON
3.3V	ON	OFF	ON	ON
3.5V	ON	ON	ON	ON

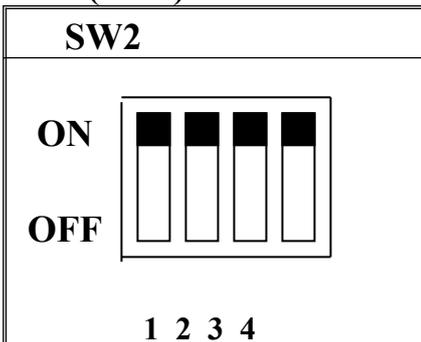
2-2-1 CPU TYPE SELECTION

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.)

JP3 (Pin 1-2)
SHORT

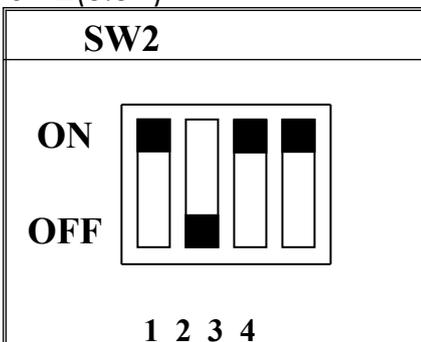
SW2(3.5V)



※ **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.)

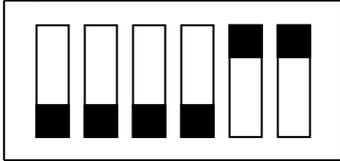
JP3 (Pin 1-2)
SHORT

SW2(3.3V)

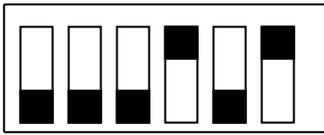


Intel Pentium 90MHz

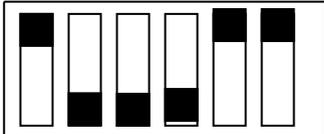
INTERNAL CPU	SW1	Ext.x Frq.
---------------------	------------	-------------------

CLOCK		
90MHz	ON  OFF 1 2 3 4 5 6	60 x 1.5

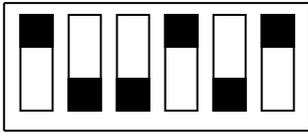
Intel Pentium 100MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
100MHz	ON  OFF 1 2 3 4 5 6	66 x 1.5

Intel Pentium 120MHz

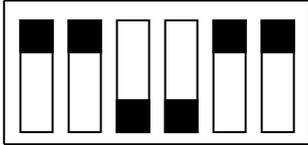
INTERNAL CPU CLOCK	SW1	Ext.x Frq.
120MHz	ON  OFF 1 2 3 4 5 6	60 x 2.0

Intel Pentium 133MHz

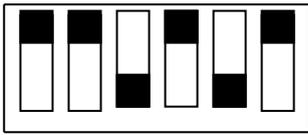
INTERNAL CPU CLOCK	SW1	Ext.x Frq.
133MHz	ON  OFF 1 2 3 4 5 6	66 x 2.0

Intel Pentium 150MHz

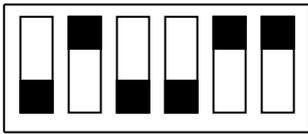
INTERNAL CPU	SW1	Ext.x Frq.
--------------	-----	------------

CLOCK		
150MHz	ON  OFF 1 2 3 4 5 6	60 x 2.5

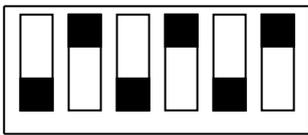
Intel Pentium 166MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
166MHz	ON  OFF 1 2 3 4 5 6	66 x 2.5

Intel Pentium 180MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
180MHz	ON  OFF 1 2 3 4 5 6	60 x 3.0

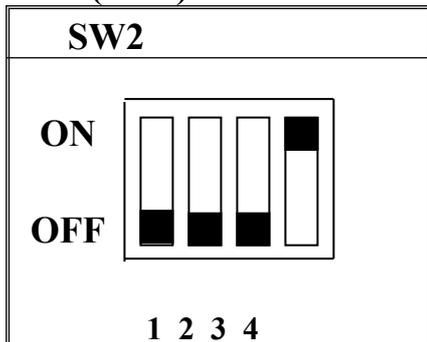
Intel Pentium 200MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
200MHz	ON  OFF 1 2 3 4 5 6	66 x 3.0

B. INTEL PENTIUM MMX™ CPU (P55C)

JP3 (Pin 1 or Pin 2)
OPEN

SW2(2.8V)



B-1. Intel Pentium™ MMX 166MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
166MHz	ON OFF 	66 x 2.5
1 2 3 4 5 6		

B-2. Intel Pentium™ MMX 200MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
200MHz	ON OFF 	66 x 3.0
1 2 3 4 5 6		

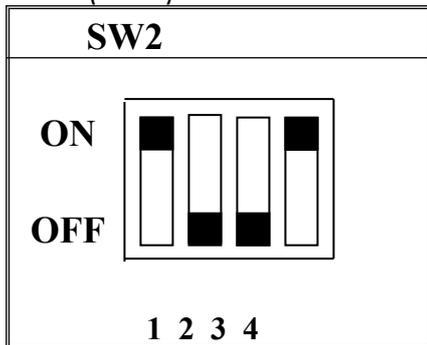
B-3. Intel Pentium™ MMX 233MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
233MHz	ON OFF 	66 x 3.5
1 2 3 4 5 6		

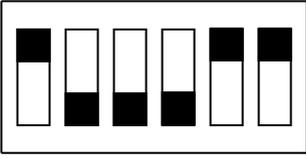
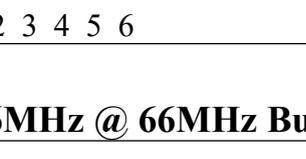
C. Cyrix 6x86MX CPU

JP3 (Pin 1 or Pin 2)
OPEN

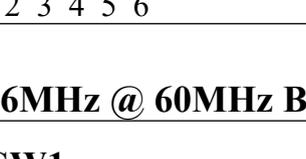
SW2 (2.9V)



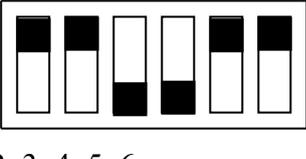
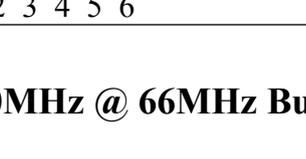
C-1. Cyrix 6x86MX PR150MHz @ 60MHz Bus 2x

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR150MHz	ON  OFF 	60 x 2.0
	1 2 3 4 5 6	

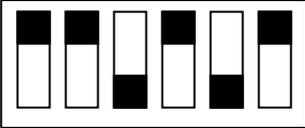
C-2. Cyrix 6x86MX PR166MHz @ 66MHz Bus 2x

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR166MHz	ON  OFF 	66 x 2.0
	1 2 3 4 5 6	

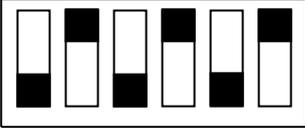
C-3. Cyrix 6x86MX PR166MHz @ 60MHz Bus 2.5x

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR166MHz	ON  OFF 	60 x 2.5
	1 2 3 4 5 6	

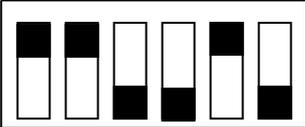
C-4. Cyrix 6x86MX PR200MHz @ 66MHz Bus 2.5x

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR200MHz	ON  OFF 1 2 3 4 5 6	66 x 2.5

C-5. Cyrix 6x86MX PR233MHz @ 66MHz Bus 3x

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR233MHz	ON  OFF 1 2 3 4 5 6	66 x 3.0

C-6. Cyrix 6x86MX PR233MHz @ 75MHz Bus 2.5x

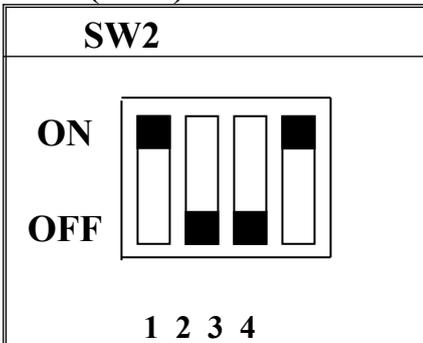
INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR233MHz	ON  OFF 1 2 3 4 5 6	75 x 2.5

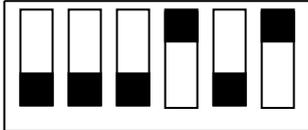
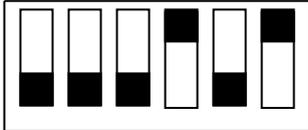
D. Cyrix MII CPU

D-1 Cyrix MII 300MHz @ 66MHz Bus 3.5x

JP3 (Pin 1 or Pin 2)
OPEN

SW2(2.9V)

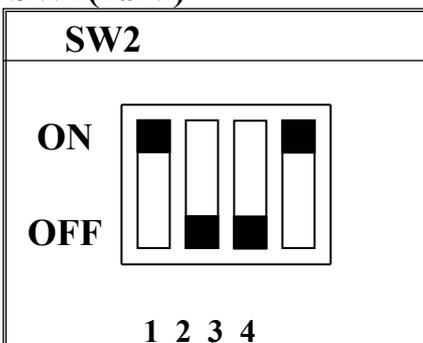


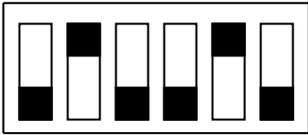
INTERNAL CPU CLOCK	SW1	Ext.x Frq.
MII 300MHz	ON  OFF  1 2 3 4 5 6	66 x 3.5

D-2 Cyrix MII 300MHz @ 75MHz Bus 3x

JP3 (Pin 1 or Pin 2)
OPEN

SW2(2.9V)

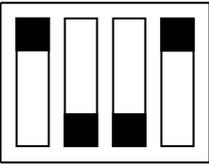


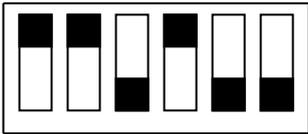
INTERNAL CPU CLOCK	SW1	Ext.x Frq.
MII 300MHz	ON  OFF 1 2 3 4 5 6	75 x 3.0

D-3 Cyrix MII 333MHz @ 83MHz Bus 2.5x

JP3 (Pin 1 or Pin 2)
OPEN

SW2(2.9V)

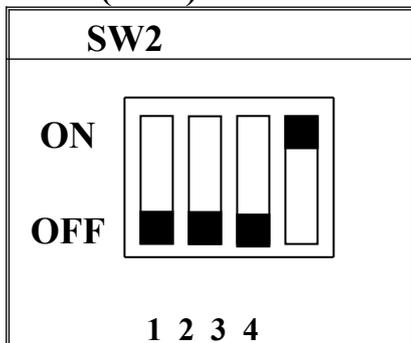
SW2	
ON	
OFF	
	1 2 3 4

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
MII 333MHz	ON  OFF 1 2 3 4 5 6	83 x 2.5

E. Cyrix 6x86L CPU (dual voltage)

JP3 (Pin 1 or Pin 2)
OPEN

SW2 (2.8V)



E-1. Cyrix 6x86L PR150+MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR150+MHz	ON OFF 1 2 3 4 5 6	60 x 2.0

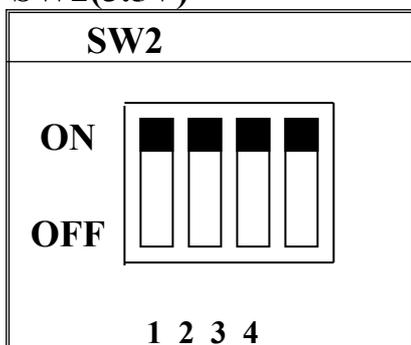
E-2. Cyrix 6x86L PR166+MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR166+MHz	ON OFF 1 2 3 4 5 6	66 x 2.0

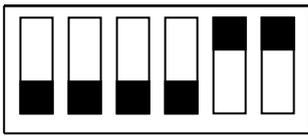
F. AMD-K5 CPU Series

JP3 (Pin 1-2)
SHORT

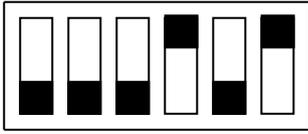
SW2(3.5V)



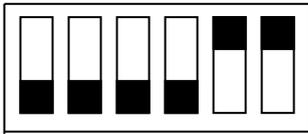
F-1. AMD-K5 PR90MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR90MHz	ON  OFF  1 2 3 4 5 6	60 x 1.5

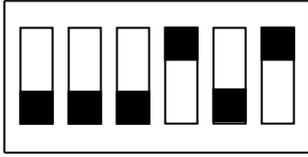
F-2. AMD-K5 PR100MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR100MHz	ON  OFF  1 2 3 4 5 6	66 x 1.5

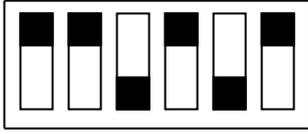
F-3. AMD-K5 PR120MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR120MHz	ON  OFF  1 2 3 4 5 6	60 x 1.5

F-4. AMD-K5 PR133MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR133MHz	ON  OFF 1 2 3 4 5 6	66 x 1.5

F-5. AMD-K5 PR166MHz

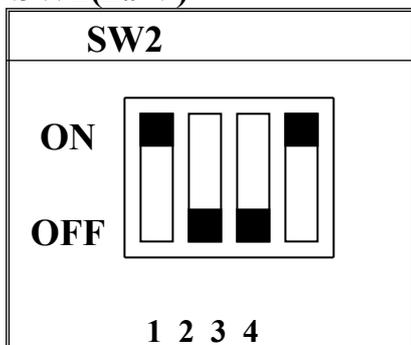
INTERNAL CPU CLOCK	SW1	Ext.x Frq.
PR166MHz	ON  OFF 1 2 3 4 5 6	66 x 2.5

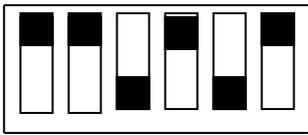
G. AMD-K6 CPU

G-1. AMD-K6 166MHz

JP3 (Pin 1 or Pin 2)
OPEN

SW2(2.9V)

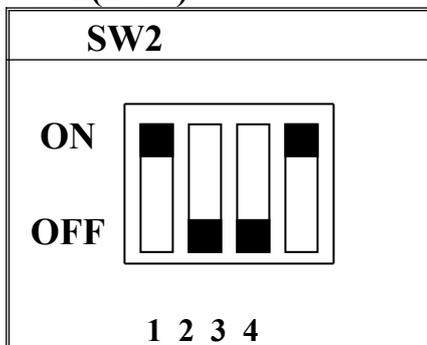


INTERNAL CPU CLOCK	SW1	Ext.x Frq.
166MHz	ON  OFF  1 2 3 4 5 6	66 x 2.5

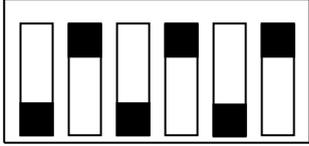
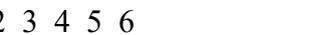
G-2. AMD-K6 200MHz

JP3 (Pin 1 or Pin 2)
OPEN

SW2(2.9V)

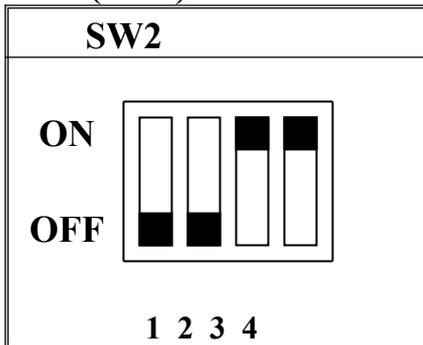


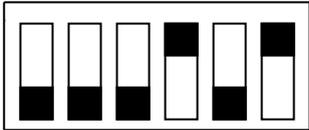
INTERNAL CPU	SW1	Ext.x Frq.
--------------	-----	------------

CLOCK		
200MHz	ON  OFF  1 2 3 4 5 6	66 x 3.0

G-3a. AMD-K6 233MHz

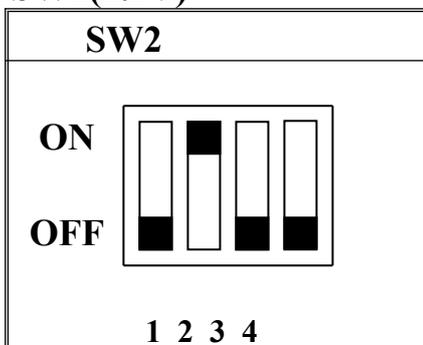
SW2(3.2V)



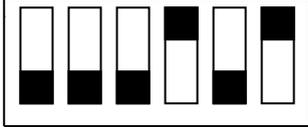
INTERNAL CPU CLOCK	SW1	Ext.x Frq.
233MHz	ON  OFF  1 2 3 4 5 6	66 x 3.5

G-3b. AMD-K6-2 233MHz

SW2(2.2V)

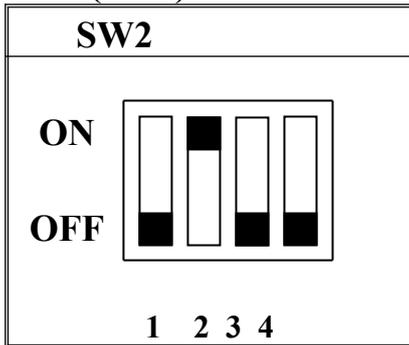


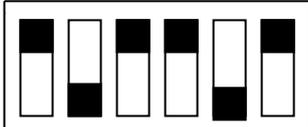
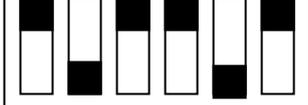
INTERNAL CPU	SW1	Ext.x Frq.
--------------	-----	------------

CLOCK		
233MHz	ON  OFF  1 2 3 4 5 6	66 x 3.5

G-4a. AMD-K6 266 MHz

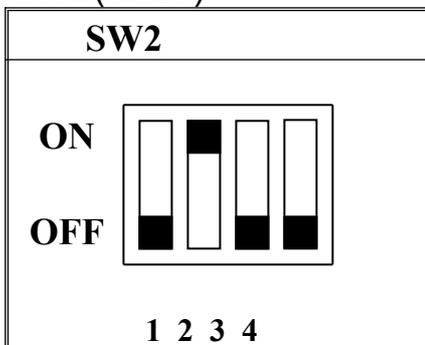
SW2(2.2V)



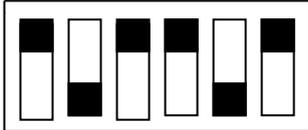
INTERNAL CPU CLOCK	SW1	Ext.x Frq.
266MHz	ON  OFF  1 2 3 4 5 6	66 x 4.0

G-4b. AMD-K6-2 266 MHz

SW2(2.2V)

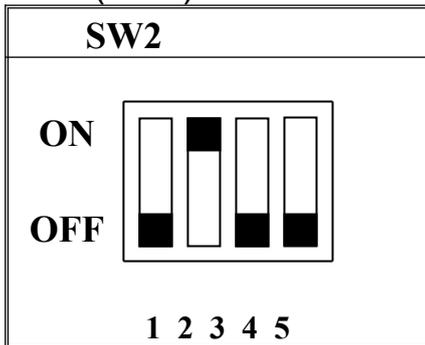


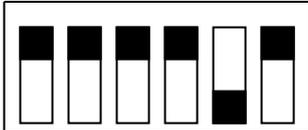
INTERNAL CPU	SW1	Ext.x Frq.
--------------	-----	------------

CLOCK		
266MHz	ON  OFF	66 x 4.0

G-5a. AMD-K6 300MHz

SW2(2.2V)



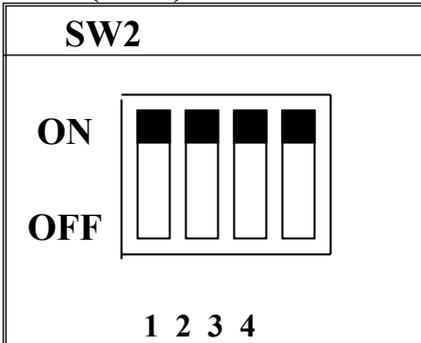
INTERNAL CPU CLOCK	SW1	Ext.x Frq.
300MHz	ON  OFF	66 x 4.5

H. IDT Win Chip C6

※ **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.)

JP3 (Pin 1-2)
SHORT

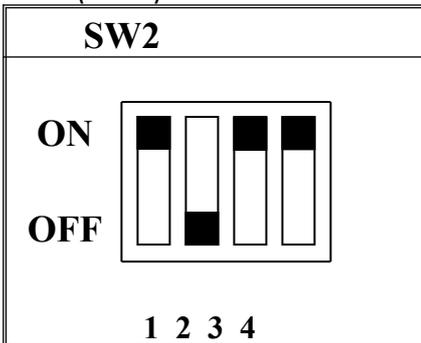
SW2(3.5V)



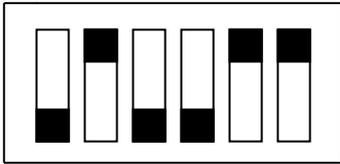
※ **P54C STD : 3.135V ~ 3.600V** (The fourth line of the mark on the under-side of the processor contains a code that identifies the voltage level type. V is VRE, S is standard.)

JP3 (Pin 1-2)
SHORT

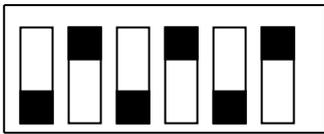
SW2(3.3V)



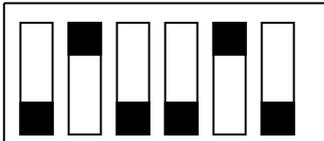
IDT Win Chip C6 180MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
180MHz	ON  OFF 1 2 3 4 5 6	60 x 3.0

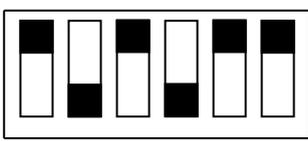
IDT Win Chip C6 200MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
200MHz	ON  OFF 1 2 3 4 5 6	66 x 3.0

IDT Win Chip C6 225MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
225MHz	ON  OFF 1 2 3 4 5 6	75 x 3.0

IDT Win Chip C6 240MHz

INTERNAL CPU CLOCK	SW1	Ext.x Frq.
240MHz	ON  OFF 1 2 3 4 5 6	60 x 4.0

2-3 SYSTEM MEMORY INSTALLATION

ATC-5300 provides two 72-pin SIMM sockets for 5V EDO DRAM and for system memory expansion from 8MB to 256MB. These two SIMMs are arranged to one bank, Bank0 (SIM 1, 2), please refer to page A. This bank provides 64-bit wide data path.

The ATC-5300 mainboard accepts Fast Page Mode DRAM, and EDO Mode (Extended Data Out) DRAM, with a speed no slower than 70 nanosecond. **You can boot up your system by using only single DRAM module.** Each pair of modules in the same bank must be the same size, type, and speed; no matter single-side or double-side module.

Also the ATC-5300 mainboard provides two 168-pin DIMM sockets for 3.3V SDRAM or 3.3V EDO DRAM expansion.

CAUTION: It's not recommended to install the 3.3V SDRAM and 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** ※

BANK0	Total Memory
SIM 1, 2	SIM 1-2
4MBx2	8MB
8MBx2	16MB
16MBx2	32MB
32MBx2	64MB
64MBx2	128MB
*128MBx2	256MB

* Please confirm this with your supplier firstly.

※ System Memory Combinations Options ※

BANK0 DIMM1	BANK1 DIMM2	Total Memory DIMM 1-2
16MBx1	16MBx1	32MB
32MBx1	-	32MB
-	32MBx1	32MB
:	:	:
32MBx1	32MBx1	64MB
64MBx1	-	64MB
-	64MBx1	64MB
:	:	:
64MBx1	64MBx1	128MB
128MBx1	-	128MB
-	128MBx1	128MB
128MBx1	128MBx1	256MB
256MBx1	256MBx1	512MB

2-4 SRAM INSTALLATION

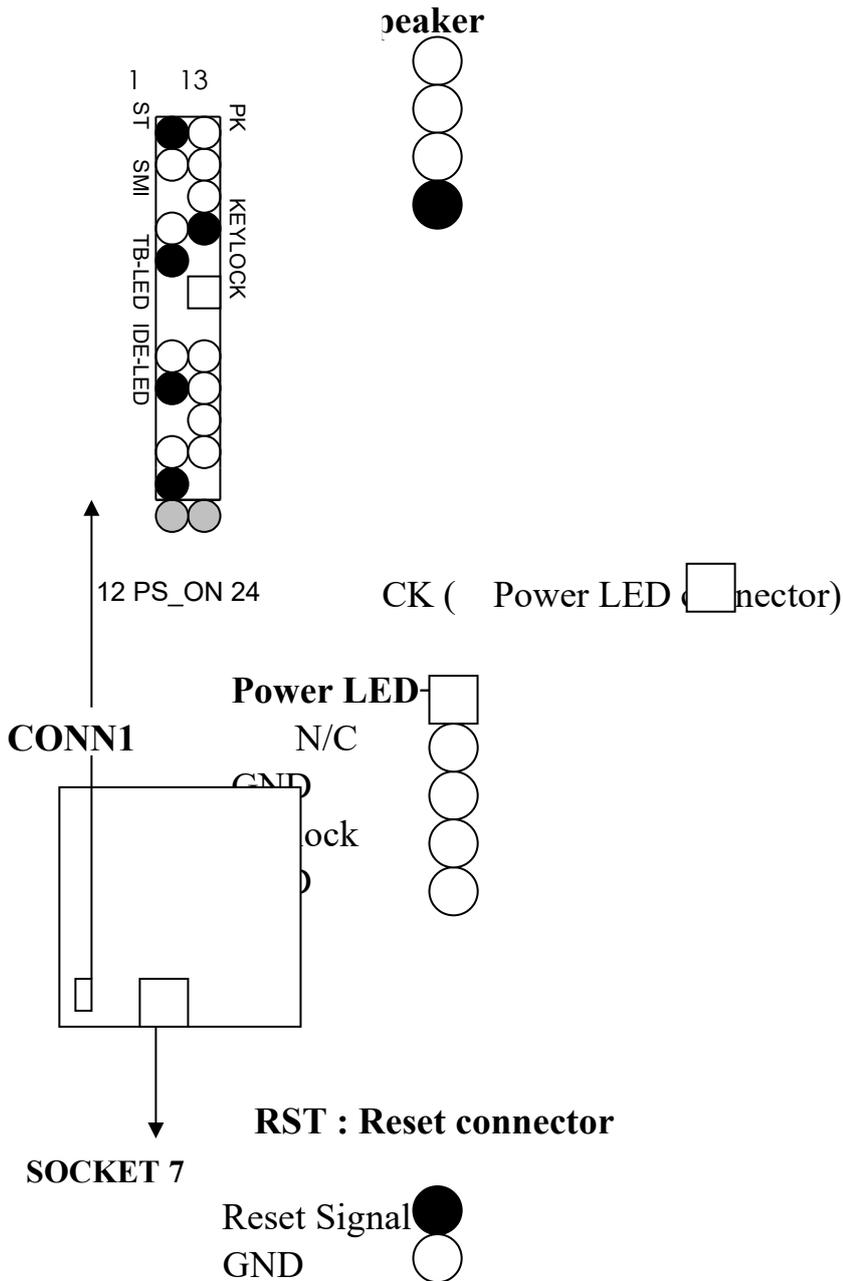
ATC-5300 is built-in 512KB Sync. Pipeline Burst SRAM on board

2-5 OTHER JUMPERS AND

CONNECTORS DESCRIPTION

The locations of the following connectors are indicated in page A. When you plug wires into the following connector of CONN1, you should have the pin 1 edge of the wires align with the pin1 end of the connector.

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



SMI : SMI lead

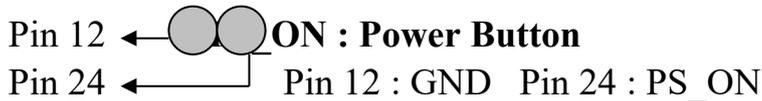


TB-LED : Turbo LED indicator, LED on when system runs higher speed



IDE-LED : IDE devices indicator LED

connector. IDE-LED stays ON indicates signal on-board IDE devices in operation. If plug wires into wrong connector, color of LED will be lighter and the IDE devices can still function properly.

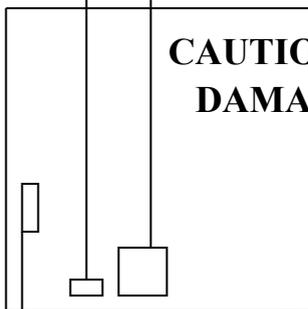


FAN1 : CPU cooling fan connector. Wire +12V

- 1 ID voltage (most likely red wire) must be plugged
- 2 12V into pin2, and GROUND wires (most likely black
- 3 ON SPEED wires) must be plugged into pin1.

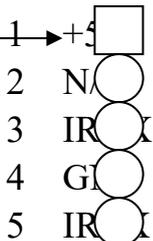
Please confirm the wire color representation with your supplier.

SOCKET 7



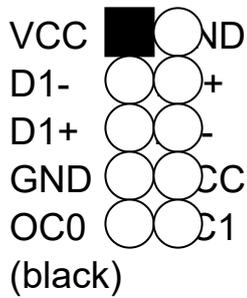
CAUTION : Plug wire into wrong connector will DAMAGE fan and mainboard.

IR1 : Infrared module connector.



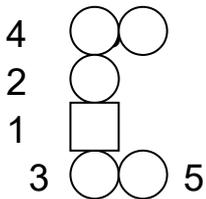
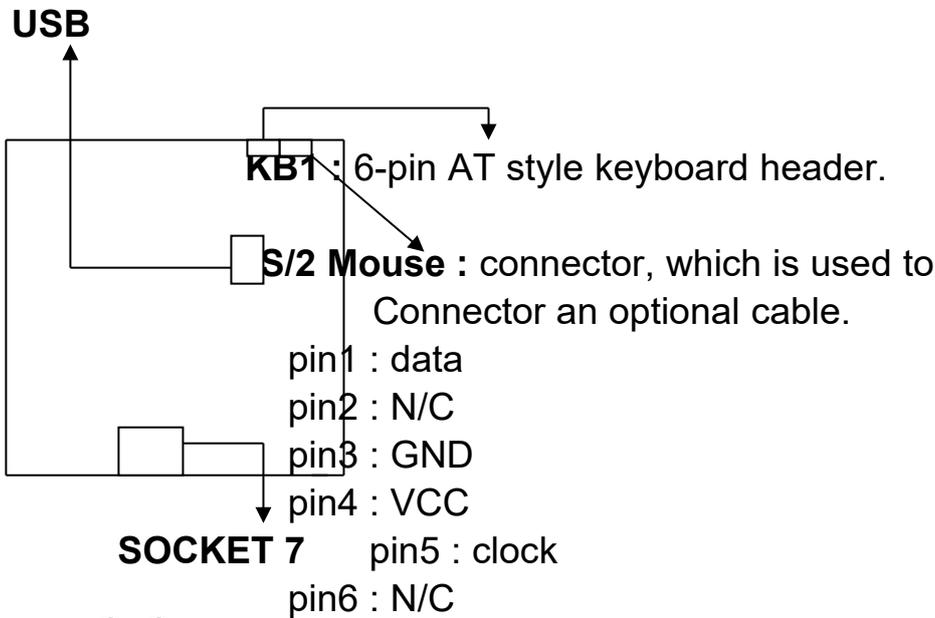
(red)

USB1 : USB connector; Universal Serial Bus; this

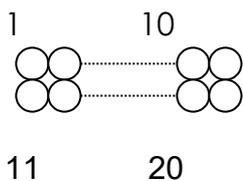
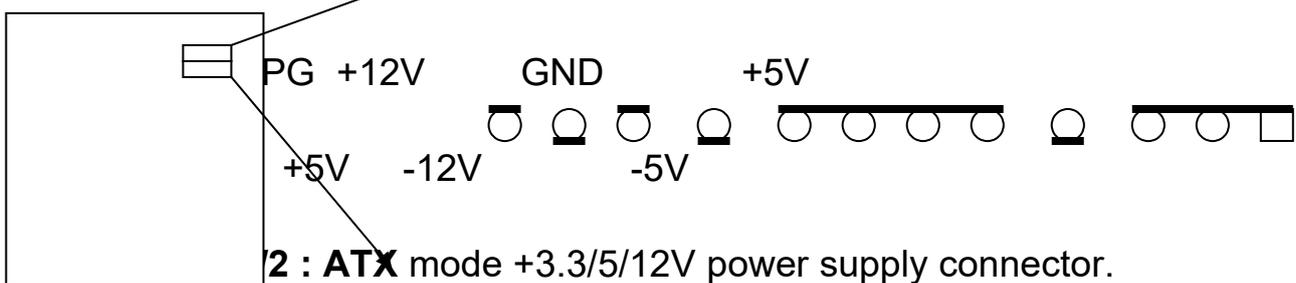


is used to connect USB devices through an optional dual head cable with a iron plane.
 OC0 and OC1 are used to mention the status of the USB power supply lines.

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



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

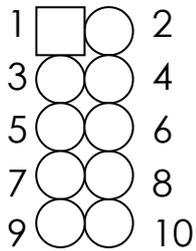


1	3.3V	6	+5V	11	3.3V	16	GND
2	3.3V	7	GND	12	-12V	17	GND
3	GND	8	PWRGD	13	GND	18	-5V
4	+5V	9	5VSB	14*	PS_ON	19	+5V
5	GND	10	+12V	15	GND	20	+5V

*PS_ON : Soft-Off power control

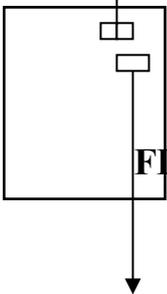
COM1/COM2 : these two connectors are

used to connect serial port cables.

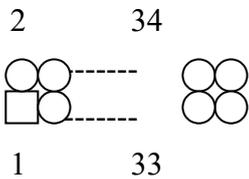


pin	Signal name
1	DCD
2	Serial In
3	Serial Out
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI
10	N/C

COM1/COM2



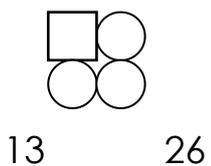
FDC : this connector is used to connect floppy disk drive through cable.

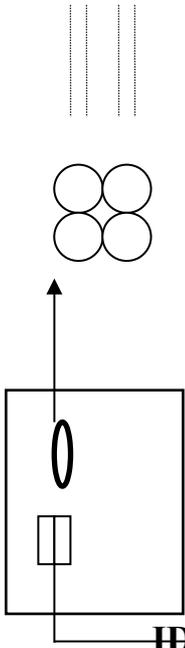


Pin	Signal	pin	signal
2	RWC-	20	STEP-
4	Reserved	22	Write Data
6	FDEDIN	24	Write Gate
8	Index-	26	Track 00-
10	Motor EnableA-	28	Write Protect-
12	Drive Sele.B-	30	Read Data-
14	Drive Sele.A-	32	Side 1 Sele.-
16	Motor EnableB-	34	DisketteChange
18	DIR-		
All of odd pins are ground(except pin 5)			



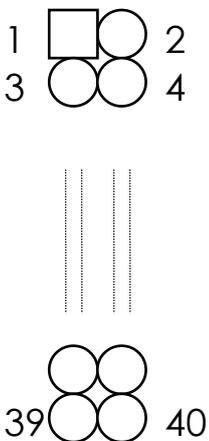
this connector is used to connect parallel port cable.





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



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 IRQ
 14;
 IDE2: pin31 is IRQ 15
 or MIRQ0

2-6 SiS IDE DRIVER INSTALLATION

The IDE driver installation procedure is as following :

Setup for Windows 95/98 :

1. Starting Windows 95/98.
2. Put All-In-One CD into your CD-ROM drive.
3. In "My computer" Windows, click your CD-ROM drive icon twice eg.: (D:) or (E:).
4. Select "Setup", then choose "Bus Master IDE Driver Setup".
5. Select "Install driver", then click "Next".
6. If your HDD(Hard Disk Drive) is Ultra DMA/33, choose DMA, and then choose "Next".
7. Select "Yes, I want to restart my computer now." to restart your computer.

Setup for WinNT :

1. Starting WinNT.
2. Put All-In-One CD into your CD-ROM drive.
3. Pull up "Start" menu, select "Settings", then "Control Panel".
4. In "Control Panel" Windows, select "SCSI Adapter".
5. In "SCSI Adapter" Windows, select "Drivers".
6. Remove all the original IDE drivers.
7. In "SCSI Adapter" Windows, select "Add", then select "Have Disk".
8. Type D:\IDE\NT, select "OK".
9. In "Install Driver" Windows, select "SiS PCI MASTER IDE Miniport Driver", then select "OK".
10. Type D:\IDE\NT, select "continue".
11. Select "Yes" to restart your computer.

2-7 SiS 5597/5598 VGA DRIVER INSTALLATION

Setup for Windows95/98 :

1. Starting Windows95/98.
2. Put All-In-One CD into your CD-ROM drive.
3. Click Start, then Setting, and then Control Panel.
4. Start the "Display" application program.
5. Select the "Setting" page, then select the "Change Display Type" button.
6. Select the "Change" button in the "Adapter Type" area.
7. Select the "Have Disk" button and press "OK"
8. Type D:\VGA\Win95, select "OK".
9. Select "OK" to restart your computer.

Setup for WinNT :

1. Starting WinNT.
2. Put All-In-One CD into your CD-ROM drive.
3. Run Display program where it is located in the Control Panel and select Display.
4. Select Display Type...
5. Select Change... from the display options.
6. Select Have Disk...
7. NT will prompt you for the driver path. If the CD-ROM is in driver "e:", then enter "e:\vga\winnt\winnt40".
8. Select "SiS 5597/5598" and click "OK" button.
9. NT will once again prompt for confirmation, click OK and it will have a dialog box with the message "You are about to install a third-party driver". Click Yes and it will show "The drivers were successfully installed".
10. Click OK button, and select Close in the following dialog box. And it will show "Do you want to restart your computer now".
11. Select Yes and the system will restart.

CHAPTER 3 Award BIOS SEUP

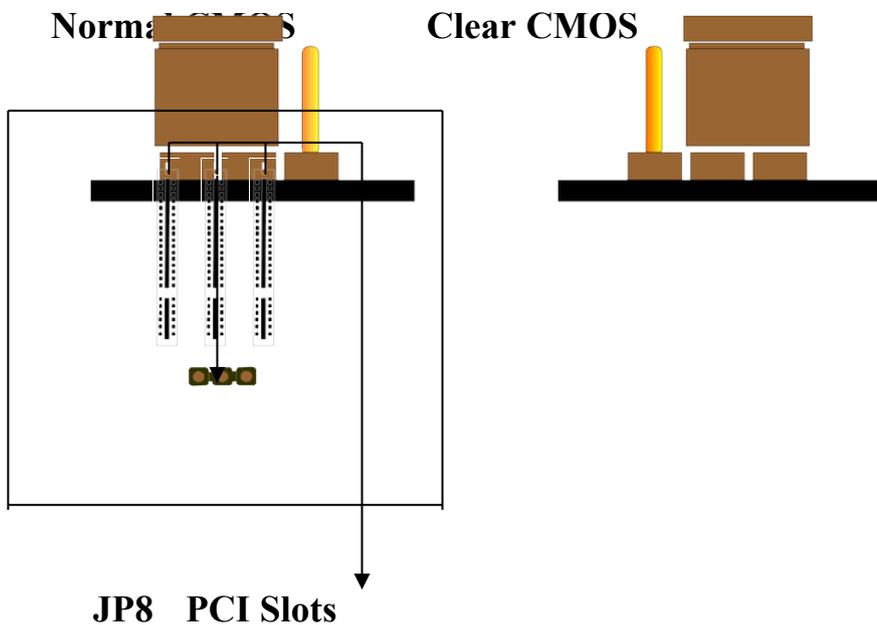
Award BIOS manufacturer provides access to the system BIOS through the hardware and software on each ATC-5300 mainboard. The hardware consists of a Flash ROM and the software is a group of programs that are installed in the ROMBIOS along with all the other data the BIOS must contain.

The ATC-5300 mainboard will require special driver supplied by the manufacturer to update the BIOS SETUP program. It is a good idea to read the next page for details for updated BIOS driver installation or you can ask your system dealer to do it for you.

When the driver has been successfully updated, it is very important to contact your system dealer to change the CMOS settings for your computer. The CMOS settings are shown in the following pages.

NOTE : To clear CMOS you should unplug the power cord, then set 2-3 to clear, put it back to normal position and plug the power cord again.

	JP8
Normal	1-2
Clear	2-3



3-1 UPDATE BIOS PROCEDURES

If the BIOS needs to be updated, you can get a diskette with the updated BIOS from your system supplier. The BIOS diskette includes 3 files:

- “awdfash.exe” -- BIOS update utility program
- “awdfash.doc”
- “(updated 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 updated BIOS diskette. -- Type "a:\\" or "b:\\", "ENTER".
 4. Run the BIOS update utility -- Type "awdf flash", "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
now turn the system power off until the BIOS update is completed.
 9. Turn the power off , clear the data in CMOS according to the procedure
described in the previous page.
 10. Turn the system power on and test your system working properly or not.
- * The "awdf lah" BIOS update utility also can execute from All-In-One CD.

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 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 (ATC-5300)
 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 (ATC-5300)
 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 (ATC-5300)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : 26, Jul 2 1998	
Time(hh:mm:ss) : 9 : 49 : 15	
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 : 130048K
Floppy 3 Mode support : Disabled	Other Memory : 384K
Video : EGA/VGA	-----
Halt On: All Errors	Total Memory : 131072K
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 ‘**Type1**’; 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 (ATC-5300)
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
Virus, Protection, Boot Sequence	

ROM PCI/ISA BIOS (ATC-5300)

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		
Gate A20 Option	: Fast		
Memory Parity Check	: Enabled		
Typematic Rate Setting	: Disabled		
Typematic Rate (Chars/Sec)	: 6		
Typematic Delay (Msec)	: 250		
Security Option	: Setup		
PCI/VGA Palette Snoop	: Disabled	ESC : Quit	↑↓→ : Select Item
Assign IRQ For VGA	: Enabled	F1 : Help	PU/PD/+/- : Modify
OS Select For DRAM > 64MB	: Non-OS2	F5 : Old Values	(Shift) F2 : Color
Report No FDD For WIN 95	: No	F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

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.

Boot Sequence

This category determines which drive is to search first for the disk operating system (i.e. DOS). Default value is A, C, SCSI.

A, C, SCSI	System will first search for floppy disk drive then hard disk drive, and the next is SCSI device.
C, A, SCSI	System will first search for hard disk drive then

	floppy disk drive, and the next is SCSI device.
C, CDROM, A	System will first search for hard disk drive then CDROM drive, and the next is floppy disk drive.
CDROM, C, A	System will first search for CDROM drive then hard disk drive, and the next is floppy disk drive.
D, A, SCSI	System will first search for secondary hard disk drive then floppy disk drive, and the next is SCSI device.
E, A, SCSI	System will first search for third hard disk drive then floppy disk drive, and the next is SCSI device.
F, A, SCSI	System will first search for fourth hard disk drive then floppy disk drive, and the next is SCSI device.
SCSI, A, C	System will first search for SCSI device then floppy disk drive, and the next is hard disk drive.
SCSI, C, A	System will first search for SCSI device then hard disk drive, and the next is floppy disk drive.
C only	System will search for hard disk drive only.
LS/ZIP, C	System will first search for LS120 or IOMEGA (ZIP) drive, and the next is hard disk drive.

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 search 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.

Gate A20 Option

This entry allows you to select how the

gate A20 is handled. The gate A20 is a device used to address memory above 1 Mbytes. Initially, the gate A20 was handled via a pin on the keyboard. Today, while keyboards still provide this support, it is more common, and much faster, for the system chipset to provide support for gate A20.

Normal	Keyboard
Fast	Chipset

Memory Parity Check When this item is enabled, the system will detect memory to access parity error and optionally reports the error in error status register. Whether or not the parity error should be reported in error status register is determined by the error by the error reporting control register.

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

Assign IRQ For VGA When this item is enabled, the system will assign an IRQ for VGA. If this item is disabled, the VGA will not occupy an IRQ; therefore the IRQ of VGA will be released for other usage.

OS Select for DRAM > 64MB This item allows you to access the memory that over 64MB in OS/2.

Report No FDD For WIN 95 For Windows 3.1x user set 'No' (default); for Windows 95 user 'NO' or 'YES'.

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.* L2 cache cacheable size value, refer to page 16.

ROM PCI/ISA BIOS (ATC-5300)

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 Timings	

ROM PCI/ISA BIOS (ATC-5300)

CHIPSET FEATURES SETUP

AWARD SOFTWARE, INC.

Auto Configuration	: Disabled	CPU to PCI Burst Mem. WR	: Disabled
L2 (WB) Tag Bit Length	: 7bits	ISA Bus Clock Frequency	: PCICLK/4
SRAM Back-to-Back	: Disabled	System BIOS Cacheable	: Disabled
NA# Enable	: Disabled	Video BIOS Cacheable	: Disabled
Starting Point of Paging	: 1T	Spread Spectrum Modulated	: Disabled
Refresh Cycle Time (us)	: 15.6	Memory Hole at 15M-16M	: Disabled
RAS Pulse Width Refresh	: 6T	VGA Shared Memory Size	: 2MB
RAS Precharge Time	: 5T	VGA Memory Clock	: 55
RAS to CAS Delay	: 5T	Linear Mode SRAM Support	: Disabled
CAS# Pulse Width (FP)	: 2T		
CAS# Pulse Width (EDO)	: 1T		
RAMW# Assertion Timing	: 3T		
CAS Precharge Time (FP)	: 2T		
CAS Precharge Time (EDO)	: 2T		
SDRAM WR Retire Rate	: X-2-2-2		
SDRAM Wait State Control	: 1WS		
Enhanced Memory Write	: Disabled	Esc: Quit	↑↓→←:Select Item
Read Prefetch Memory RD	: Disabled	F1 : Help	PU/PD/+/-:Modify
CPU to PCI POST Write	: Disabled	F5 : Old Values	(Shift)F2 :Color
		F6 :Load BIOS Defaults	
		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.

L2 (WB) Tag Bit Length This item specifies the size of the TAG address. The value of “7-bit” TAG address is used and the bit 7 of TAG address of each cache line is used to record

whether the line has been modified or not.

The value “8-bit” TAG address is used and internal dirty bit SRAM is served to record whether the corresponding line has been modified. The size of L2 cacheable memory space is also affected by this item. The size of L2 cacheable memory space for 8-bit TAG is doubled in comparison with 7-bit TAG.

SRAM Back-to-Back This item is only for Non-cache system, and Fast Read enabled.

NA# Enable When this item is disabled, system would not assert NA# under any circumstance. When this item is enabled, system asserts NA# for all burst read cycles and I/O cycles.

Starting Point of Paging This item controls when to precharge RAS# after the DRAM cycle that its page miss option is enabled.

Refresh Cycle Time This item controls in how many clocks the system generates a new DRAM refresh request.

RAS Pulse Width Refresh This item controls the RAS# pulse width for refresh cycle.

RAS Precharge Time Defines the length of time for Row Address Strobe is allowed to precharge.

RAS to CAS Delay You can select RAS to CAS Delay time in HCLKs of 2/2 or 3/3. The system board designer should set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed

DRAM or the installed CPU.

CAS# Pulse Width (FP) Defines the length of time for Column Address Strobe.

CAS# Pulse Width (EDO) Defines the length of time for Column Address Strobe.

RAMW# Assertion Timing RAM write enable assertion timing when read cycle followed by write cycle.

CAS Precharge Time (FP) Defines the length of time for Column Address Strobe is allowed to precharge.

CAS Precharge Time (EDO) Defines the length of time for Column Address Strobe is allowed to precharge.

SDRAM WR Retire State This sets the timing for burst mode read (or writes) from SDRAM. 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.

SDRAM Wait State Control This item is read command timing control when read cycle follows after write cycle.

Enhanced Memory Write This item allows you to determine whether to keep the page open until a page/row miss or use additional information to keep the DRAM page open when host may be “sight back”.

Read Prefetch Memory RD Disable or Enable the read prefetch operation.

CPU-To-PCI Post Write Select Enabled to post write cycles from the CPU to the PCI IDE interface. IDE accesses are posted in the CPU to PCI buffers, for cycle optimization
The Choice: Enabled, Disabled.

CPU to PCI Burst Mem. WR Disable or Enable CPU to PCI burst memory write.

ISA Bus Clock Frequency This item allows you to set the ISA bus here. The settings are tied to the speed of the PCI bus. If the PCI bus operates at 33 MHz, a setting of PCICLK/4 would yield an ISA bus speed of approximately 8 MHz, the standard speed of the ISA bus. While most devices operate at higher ISA bus speeds, try a slower bus speed if our ISA device does not function properly a high bus **speed.**

PCICLK/3	PCI clock type
PCICLK/4	PCI clock type

System BIOS Cacheable When enabled, accesses to the system BIOS ROM addressed at F0000H-FFFFFH 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.

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.

VGA Shared Memory Size Select the size of the VGA shared memory. The VGA shared memory is a portion of PCI memory address range dedicated for graphics memory address space.

VGA Memory Clock (MHz) This option is to set the clock speed of VGA memory. The VGA memory range from 40MHz to 70MHz by 1MHz step.

Linear Mode
SRAM Support

This item specifies the addressing mode of CPU burst cycles. The linear is used for Cyrix CPU.

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

ROM PCI/ISA BIOS (ATC-5300)
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 (ATC-5300)
POWER MANAGEMENT SETUP
AWARD SOFTWARE, INC.

Power Management : User Defined	VGA Activity : Disabled
PM Control by APM : Yes	IRQ3 (COM2) : Enabled
Video Off Option : Susp, Stby -> Off	IRQ4 (COM1) : Enabled
Video Off Method : DPMS Supported	IRQ5 (LPT2) : Enabled
Switch Function : Break/Wake	IRQ6 (Floppy Disk) : Enabled
Done Speed (div by) : 2	IRQ7 (LPT 1) : Enabled
Stdby Speed (div by) : 3	IRQ8 (RTC Alarm) : Disabled
MODEM Use IRQ : 3	IRQ9 (IRQ2 Redir) : Enabled
Hot Key Power Off : Enabled	IRQ10 (Reserved) : Enabled
** PM Timers **	IRQ11 (Reserved) : Enabled
HDD Off After : Disabled	IRQ12 (PS/2 Mouse) : Enabled
Doze Mode : Disabled	IRQ13 (Coprocessor) : Enabled
Standby Mode : Disabled	IRQ14 (Hard Disk) : Enabled
Suspend Mode : Disabled	IRQ15 (Reserved) : Enabled
** PM Events **	Esc: Quit ↑↓→← :Select Item
HDD Ports Activity : Enabled	F1 : Help PU/PD/+/- : Modify
COM Ports Activity : Enabled	F5 : Old Values (Shift) F2: Color
LPT Ports Activity : Enabled	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.

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 SL CPU's. Doze=1 min.; Standby=1 min.; Suspend=1 min.; HDD Power Down=1 min
User Defined	Allows you to set each mode individually. 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 Option When enabled, this feature allows the VGA adapter to operate in a power saving mode.

Always On	Monitor will remain on during power saving modes.
Suspend	Monitor blanked when the systems enters the Suspend mode.
Susp, Stby	Monitor blanked when the system enters Suspend or Standby mode.
All Modes	Monitor blanked when the system enters any power saving mode.

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	This option only writes blanks to the

Screen	video buffer
DPMS	Initial display power management signaling

Switch Function This item is set disabled, system will not use external SMI button to wake up . When this item set Break/Wake the system can't use external SMI button wake up.

Done Speed (div by) When the system enters Doze mode, the CPU clock runs only part of the time. You may select the percent of time that the clock runs.

Stby Speed (div by) When the system enters Standby mode, the CPU clock runs only part of the time. You may select the percent of time that the clock runs.

MODEM Use IRQ Name the interrupt request (IRQ) line assigned to the modem (if any) on your system. Activity of the selected IRQ always awakens the system. The choices: NA, 3, 4, 5, 7, 9, 10, 11.

Hot Key Power Off This item is set when hot key (Ctrl+Alt+Backspace) is pressed and system will be suspend or power off.

The Following 4 modes are Green PC power saving function which are only user configuration when 'User Defined' power management has been selected.

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

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 while all other devices still operate full speed.

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

PM Events 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 on a device which is configured as on, even when the system is in a powered down mode. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ(Interrupt ReQueste) to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service. When set to off, activity will neither prevent the system from going into a power management mode nor awaken it.

VGA Activity When enabled, any video active restarts the global timer for Standby mode.

IRQ3/4/5/6/7/8 When enabled, an event occurring on each device listed
9/10/11/12/13/ below restarts the global time for Standby mode.

14/15 IRQ [3-7, 9-15], NMI; Primary IDE 0; Primary IDE 1;
Secondary IDE 0; Secondary IDE 1; Floppy Disk;
Serial Port; Parallel Port.

This screen configures the PCI Bus slots.

ROM PCI/ISA BIOS (ATC-5300)
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 (ATC-5300)
PNP/PCI CONFIGURATION
AWARD SOFTWARE, INC.

PNP OS Installed : No	PCI IRQ Activated By : Level
Resources Controlled By : Auto	PCI IDE IRQ Map To : PCI-AUTO
Reset Configuration By : Disabled	Primary IDE INT# : A
	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	

PNP OS Installed Select 'Yes' if the system operating environment is Plug-and-Play aware (e.g., Windows 95).
The Choice: Yes and No.

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 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 (ATC-5300)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
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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 (ATC-5300)
INTEGRATED PERIPHERALS
AWARD SOFTWARE, INC.

Internal PCI/IDE : Both	Parallel Port Mode : ECP
IDE Primary Master PIO : Auto	ECP Mode Use DMA : 3
IDE Primary Slave PIO : Auto	
IDE Secondary Master PIO : Auto	USB Controller : Enabled
IDE Secondary Slave PIO : Auto	
Primary Master UltraDMA : Auto	USB Keyboard Support : Disabled
Primary Slave UltraDMA : Auto	Power Button Over Ride : Instant Off
Secondary Master UltraDMA : Auto	Ring Power Up Control : Enabled
Secondary Slave UltraDMA : Auto	Power Up by Alarm : Disabled
IDE Burst Mode : Enabled	
IDE Data Port Post Write : Enabled	
IDE HDD Block Mode : Enabled	
Onboard FDC Controller : Disabled	
Onboard UART 1 : 3F8/ IRQ4	
Onboard UART 2 : 2F8/ IRQ3	
Onboard UART 2 Mode : Standard	ESC : Quit ↑↓→ : Select Item
	F1 : Help PU/PD/+/- : Modify
	F5 : Old Values (Shift) F2 : Color
	F6 : Load BIOS Defaults
Onboard Parallel Port : 378/ IRQ7	F7 : Load Setup Defaults

Internal PCI/IDE This item is for deciding which channel of IDE controller can be used.

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.

Primary/Secondary Master/Slave UDMA Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, select Auto to enable BIOS support.
The Choice: Auto, Disabled.

IDE Burst Mode This item is set enabled will use IDE burst read mode.

IDE Data Port Post Write This item is set enabled will use IDE data port post write.

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

Onboard FDC Controller This should be enabled if your system has a floppy disk drive (FDD) installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller, you will need to disable this feature.
The Choice : Enabled, Disabled.

Onboard UART 1 /UART 2 This item allows you to determine access onboard serial port 1/port 2 controller with which I/O address.
The Choice: 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

Onboard UART 2 This item allows you to determine which Infra Red

Mode (IR) function of onboard I/O chip.
The Choice: Standard, ASKIR, HPSIR.

Onboard Parallel Port Select a logical LPT port name and matching address for the physical parallel(printer) port.
The choice : 378H/IRQ7, 278H/IRQ5, 3BCH/IRQ7, Disabled.

Parallel Port Mode Select an operating mode for the onboard parallel port. Select Compatible or Extended unless you are certain both your hardware and software support EPP or ECP mode.
The choice: SPP, ECP+EPP1.7, EPP1.7+SPP, EPP1.9+SPP, ECP, ECP+EPP1.9, and Normal.

ECP Mode Use DMA Select a DMA channel for the port.
Choices are 3, 1.

USB Controller Select "Enabled" if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.
The Choice : Enabled, Disabled.

USB Keyboard Support When this function is enabled, it will support USB keyboard in Win95 2.1 and WinNT 5.0 or above operating system.

Power Button Over Ride Instant-off : When push the power button, the system power will be off immediately. Delay 4 secs : when push the power button, it will enter suspend mode. We need to push the power button and hold for 4 seconds to turn off the power.

Ring Power Up Control Enabled : when system in suspend mode, modem can awake the system.
Disabled : modem cannot awake the modem.

Power Up by Alarm When enabled, two additional lines will be added to the screen : Date (of Month) Alarm; Time (hh:

mm:ss) Alarm to let user set the desired date and time. After power off, the system will automatic power on at the specified date and time.

This section page includes all the items of IDE hard drive and Programmed Input/Output features. See also Section “IDE HDD Auto Detection”.

ROM PCI/ISA BIOS (ATC-5300)
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 (ATC-5300)
 CMOS SETUP UTILITY
 AWARD SOFTWARE, INC.

HARD DISKS TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE

Primary Master :

Select Primary Master Option (N=Skip) : N

OPTIONS SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE

2 (Y)	4310	524	255	0	14847	63	LBA
1	4310	14848	9	65535	14847	63	NORMAL
3	4310	928	144	65535	14847	63	LARGE

Note : Some Oses (like SCO-UNIX) must use "NORMAL" for installation
 ESC : Skip

The last two step is 'save and exit'. If you select this item and press 'N', 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 (ATC-5300)
 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 with 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 disabled.

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 disabled the CMOS by turning power off and set JP8 to 'close'. Then set JP8 to 'open' and 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, and 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-5300 Date of Purchase : _____

Serial No : _____

HARDWARE :

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

SIMM : _____ MB (__ EDO, __ FastPage) DIMM : _____ MB (__ EDO, __ SDRAM)

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 :

160-5300-010000-80630