



## Technical Summary

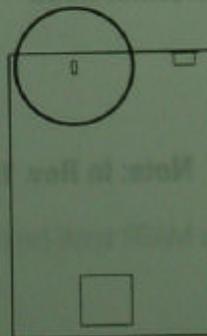
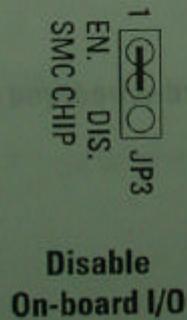
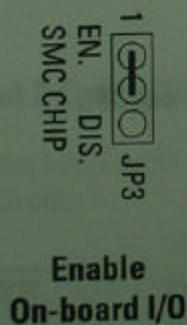
The first part of this section summarizes the mainboard's specifications and explains L2 external cache. The second part explains how to set up the optional PCI-SC200 SCSI Interface card.

### Jumper Setting Summary

#### On-board Multi I/O Selector: JP3

This jumper controls the on-board SMC 37C665GT Super I/O chip. When set to Enable, the I/O ports on the board are functional.

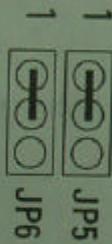
JP3		
<b>Enable</b>	1&2	Default
<b>Disable</b>	2&3	



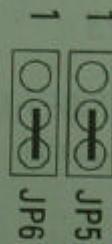
**Flash Eprom Read/Write Selector: JP5 & JP6**

This jumper selects between Normal Operation (Programming Disabled) mode and Programming Enabled mode for the BIOS flash EPROM.

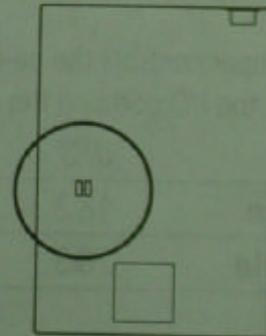
	<i>JP5</i>	<i>JP6</i>	
<b>Normal Operation</b>	1&2	1&2	Default
<b>Programming Enabled</b>	2&3	2&3	



**No Programming &  
Normal Read**



**Enable  
Programming**

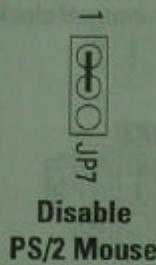
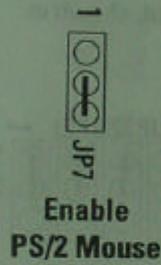


**Note: In Rev. 1.3 JP6 is hard-wired, you only set JP5**

**PS/2 Mouse Port Selector: JP7**

This jumper controls the on-board PS/2 Mouse lead connector. When set to Enable, the port is active and uses IRQ12.

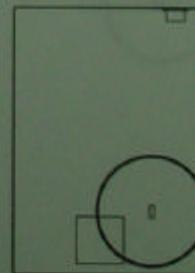
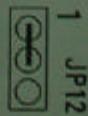
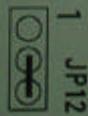
JP7		
Disable	2&3	Default
Enable	1&2	



**Level 2 Cache Size: JP12**

Set this based on the size of the installed cache. For Pipelined Burst SRAM select 256KB only.

JP12	
256KB	2&3
512KB	1&2



256KB Cache      512KB Cache

### CPU Clock Speed Selector: JP20, JP21, JP22 & JP23

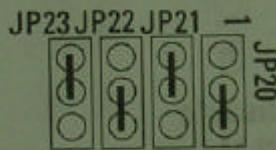
Set these according to the CPU's external clock speed.

	JP20	JP21	JP22	JP23
<b>66MHz</b> (100MHz P24C)	2&3	2&3	1&2	2&3
<b>60MHz</b> (90MHz P24C)	2&3	1&2	2&3	1&2
<b>50MHz</b> (75MHz P24C)	1&2	1&2	1&2	2&3

Note: CPUs are normally listed by their *internal* clock speed, shown in parentheses above.



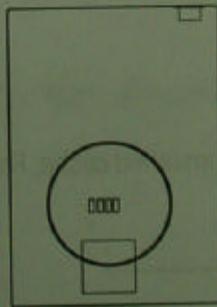
66MHz



60MHz



50MHz



**Level 2 Cache Size: JP25**

Use the default setting for 75MHz and 90MHz Pentium CPUs.

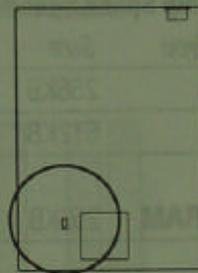
	<i>JP25</i>	
<b>CPU Int. Clock = Ext. Clock x 1.5</b>	Open	Default
<b>CPU Int. Clock = Ext. Clock x 2</b>	Short	



**1.5 x  
Ext. Clock**



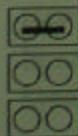
**2 x  
Ext. Clock**



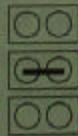
**Voltage Regulator Output Selector: JP29, JP30 & JP31**

This jumper sets the voltage supplied to the CPU.

	<i>JP29</i>	<i>JP30</i>	<i>JP31</i>
<b>3.4V</b>	Short	Open	Open
<b>3.5V</b>	Open	Short	Open
<b>3.6V</b>	Open	Open	Short



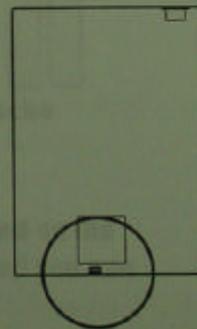
3.4V JP29  
3.5V JP30  
3.6V JP31



3.4V JP29  
3.5V JP30  
3.6V JP31



3.4V JP29  
3.5V JP30  
3.6V JP31



**3.4 Volt**

**3.5 Volt**

**3.6 Volt**

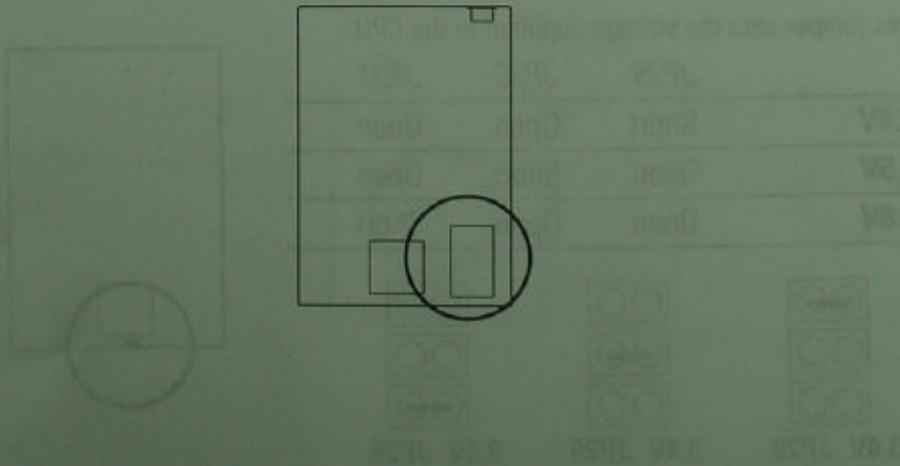
## Level 2 Cache Options

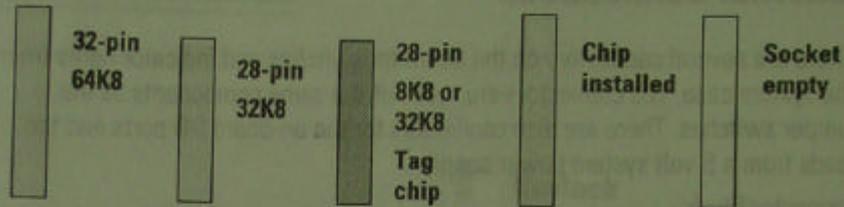
**Cache Type & Size:** See jumper section for settings, and below for other specifications.

This mainboard supports "Pipeline Burst" and standard SRAM. The two types can not be used at the same time, so one or the other will already be installed on the board.

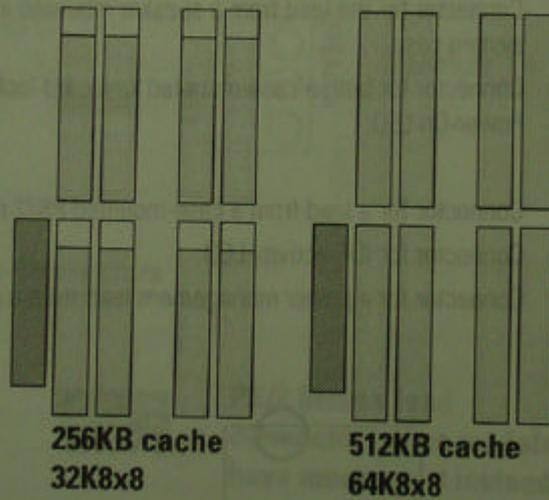
### Cache Chip Speed Specifications

<i>Cache Type</i>	<i>Size</i>	<i>Data Chip Size</i>	<i>Tag Chip Size</i>
<b>SRAM</b>	256KB	32K8x8pcs	8K8 or 32K8x1pc
	512KB	64K8x8pcs	32K8x1pc
<b>Burst SRAM</b>	256KB	32K32x2pcs or 32K36x2pcs	8K8, 16K8 or 32K8x1pc





**Note: 28-pin chips use the 32-in sockets**



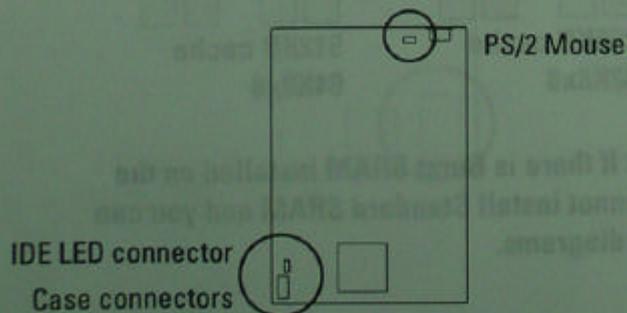
**IMPORTANT: If there is Burst SRAM installed on the board you cannot install Standard SRAM and you can ignore these diagrams.**

### External Connections

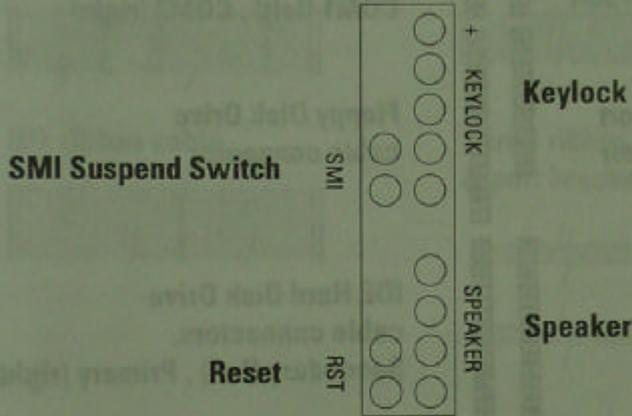
There are several connectors on the board for switches and indicator lights from the system case. The connectors are made of the same components as the jumper switches. There are also connectors for the on-board I/O ports and the leads from a 5-volt system power supply.

Connector Block:

SMI Switch	Connector for the lead from a case-mounted Suspend switch.
Reset Switch	Connector for the lead from a Reset switch mounted on the system case.
Speaker	Connector for the lead from a speaker mounted inside the system case.
KeyLock	Connector for both a case-mounted keyboard lock and a Power-On LED.
PS/2 Mouse	Connector for a lead from a case-mounted PS/2 mouse port.
IDE LED	Connector for IDE activity LED.
SM Out	Connector for a power management lead from a green device.



Case Feature Connectors



Other Feature Connectors



**PS/2 Mouse lead connector (some models may have mouse port instead)**

**IDE LED JP27**

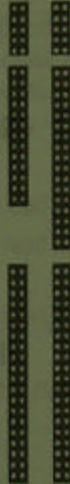


**IDE LED activity light connector**

### I/O Port Connectors

Pin1 is the upper left-hand pin on each port connector

**Parallel Port  
cable connector**



**Serial Port cable connectors,  
COM1 (left) , COM2 (right)**

**Floppy Disk Drive  
cable connector**

**IDE Hard Disk Drive  
cable connectors,  
Secondary (left) , Primary (right)**

When you connect a ribbon cable to any of these I/O connectors, you must orient the cable connector so that the Pin 1 edge of the cable is at the Pin 1 end of the on-board connector. The Pin 1 edge of the ribbon cable is colored to identify it.

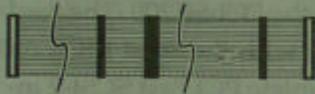
### **Port & Controller Cables**

The mainboard comes with the following cables:

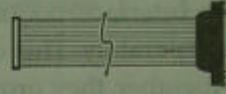
- 2 serial port ribbon cables attached to one mounting bracket
- 1 parallel port ribbon cable with mounting bracket
- 1 IDE ribbon connector cable
- 1 floppy disk drive ribbon connector cable

## Connector and Port Cables

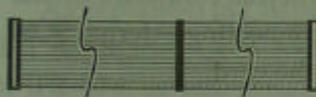
### Floppy Drive ribbon cable



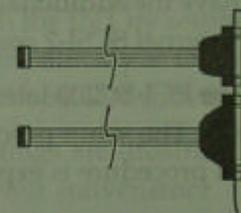
### Parallel ribbon cable



### IDE ribbon cable



### Serial ribbon cables & port bracket



## Connecting A Power Supply

The system power supply connector is for a 5-volt power supply. To connect the leads from the power supply, you should first make sure the power supply is unplugged. Most power supplies have two leads. Each lead has six wires, two of which are black. Orient the connectors so the black wires are in the middle.

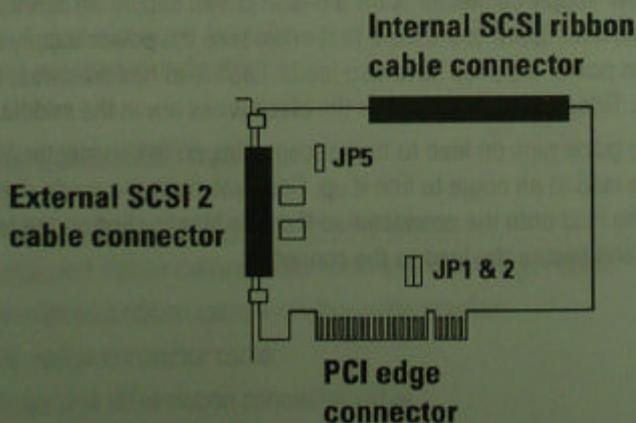
Align the plastic guide pins on lead to their receptacles on the connector. You may need to hold the lead at an angle to line it up. Once you have the guide pins aligned, press the lead onto the connector so that the plastic clips on the lead snap into place and secure the lead to the connector.

### ***The PCI-SC200 SCSI Interface Card***

Your mainboard may have come with an optional SCSI (Small Computer System Interface) controller card, the PCI-SC200. The card is also available separately. This card works with the SCSI BIOS on the mainboard. Together, they provide a complete PCI Fast SCSI-2 interface. With the card installed in your system you can connect SCSI devices installed in your system case to the internal connector on the card. You also have the additional option of connecting external SCSI devices to the external SCSI-2 connector on the card.

If you get the PCI-SC200 later on as an option, you will need to install it yourself. The setup procedure is explained here. The basic card installation procedure is explained at the end of Chapter 2.

### ***The PCI-SC200 SCSI Interface Card***



**Setting Up the PCI-SC200**

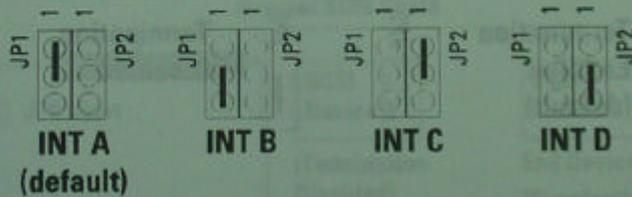
There are two jumper settings you may need to make on the card to set it up. One setting assigns the PCI INT interrupt, the other sets the card's termination.

**Setting the INT Assignment**

As explained in Chapter 2, any PCI card you install must use PCI INT A. On the PCI-SC200, you assign the INT by setting jumper JP1 or JP2. The default setting for the card already is INT A, so you do not need to change the setting to use the SC-200 with this mainboard.

The INT assignment jumper settings are illustrated below. The settings are printed on the card for your convenience.

**JP1 & 2: Interrupt settings**



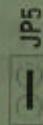
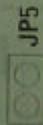
### Terminator Settings

SCSI devices are connected together in a "chain" by cables. Internal devices connect to the PCI-SC200 with a fifty-pin flat ribbon cable. External devices connect to the external port with a SCSI-2 cable. If there is more than one internal or external device, additional devices are connected with cables to form a "daisy chain". The SCSI chain must be "terminated" at both ends, or the devices in the chain will not work properly.

Many SCSI devices use a set of terminating resistors to terminate the device. The PCI-SC200 has "active" termination that you set using jumper JP5. If you need to terminate the PCI-SC200, you do it by setting the jumper. There are two settings, terminated and unterminated, as shown below.

#### JP5: Terminator setting

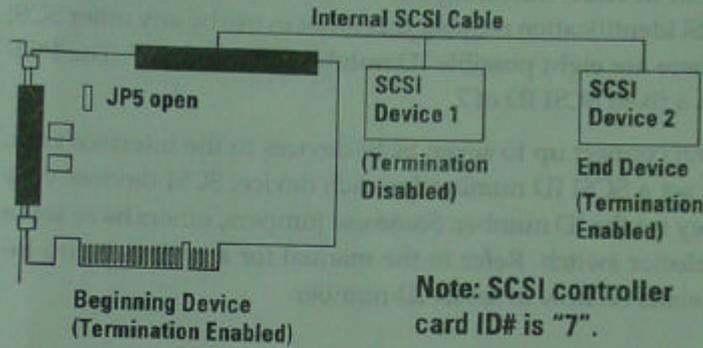
Termination  
Enabled  
(default)



Termination  
Disabled

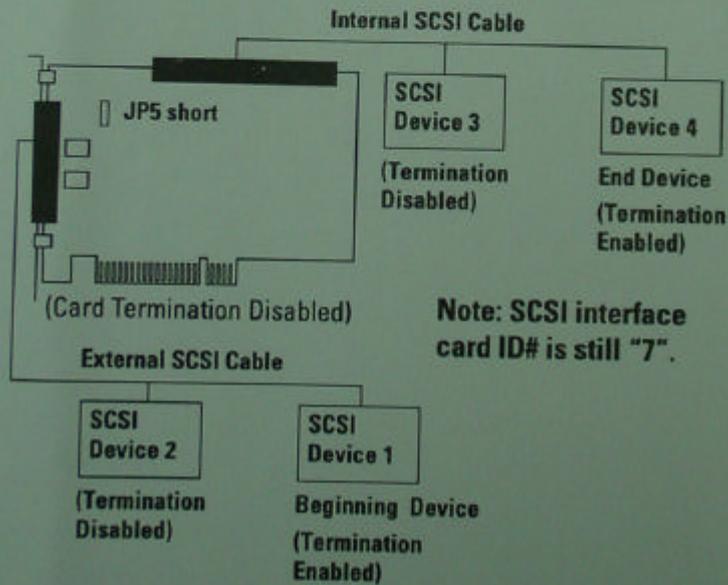
Decide whether or not you need to terminate the PCI-SC200 based on its position in the SCSI chain. Only the devices at each end of the chain need to be terminated. If you have *only* internal or *only* external devices connected to the PCI-SC200, then you *must* terminate the PCI-SC200. If you have *both* internal and external devices connected, you *must not* terminate the card. The figures on the next page illustrate these requirements.

**Example 1: Only internal or only external devices connected**



**Note: SCSI controller card ID# is "7".**

**Example 2: Both internal and external devices connected**



**Note: SCSI interface card ID# is still "7".**

### SCSI ID Numbers

All SCSI devices, including the PCI-SC200 interface card must have a SCSI identification number that is not in use by any other SCSI device. There are eight possible ID numbers, 0 through 7. The PCI-SC200 has a fixed SCSI ID of 7.

You can connect up to seven SCSI devices to the interface card. You must set a SCSI ID number for each device. SCSI devices vary in how they set the ID number. Some use jumpers, others have some kind of selector switch. Refer to the manual for any device you install for details on how to set its ID number.

