Appendix B. Jumpers, Switches, and Pin Assignments

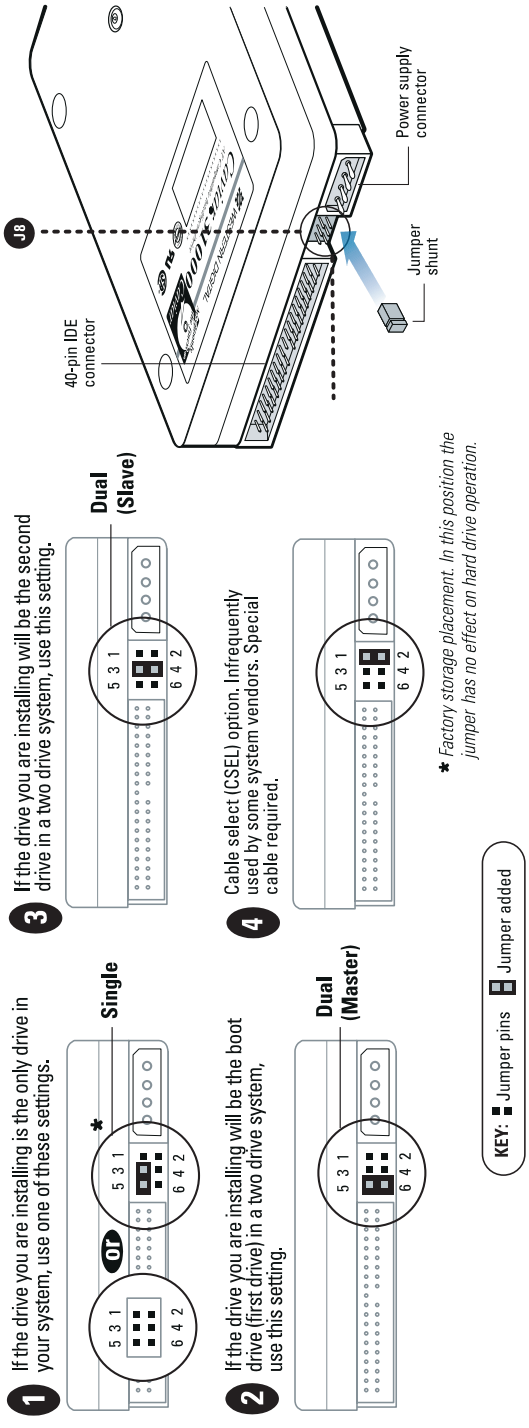
Jumpers and switches on the SBC and hard drives allow you to customize the operation of your computer.

Some jumpers cover two of three pins on a 3-pin block. Other jumpers are installed across two pins on a 2-pin block or are not installed. To change the position of a jumper on a 3-pin block, do the following.

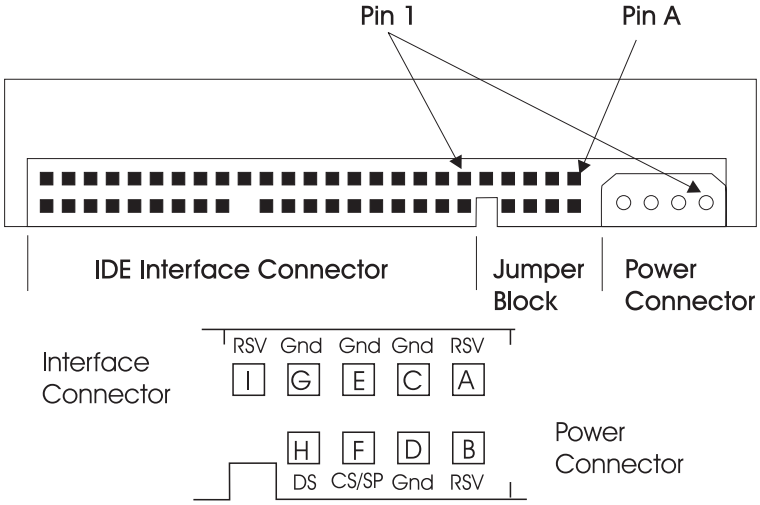
1. Turn off the computer and disconnect the power cord.
2. Remove the system unit cover.
3. Remove all components needed to gain access to the jumper.
4. Lift the jumper straight off the pin block.
5. Align the holes in the bottom of the jumper with the center pin and the pin that was not covered previously.
6. Slide the jumper fully onto these pins.
7. Reassemble the components that were removed, and install the system unit cover.
8. Reconnect the system unit power cord.

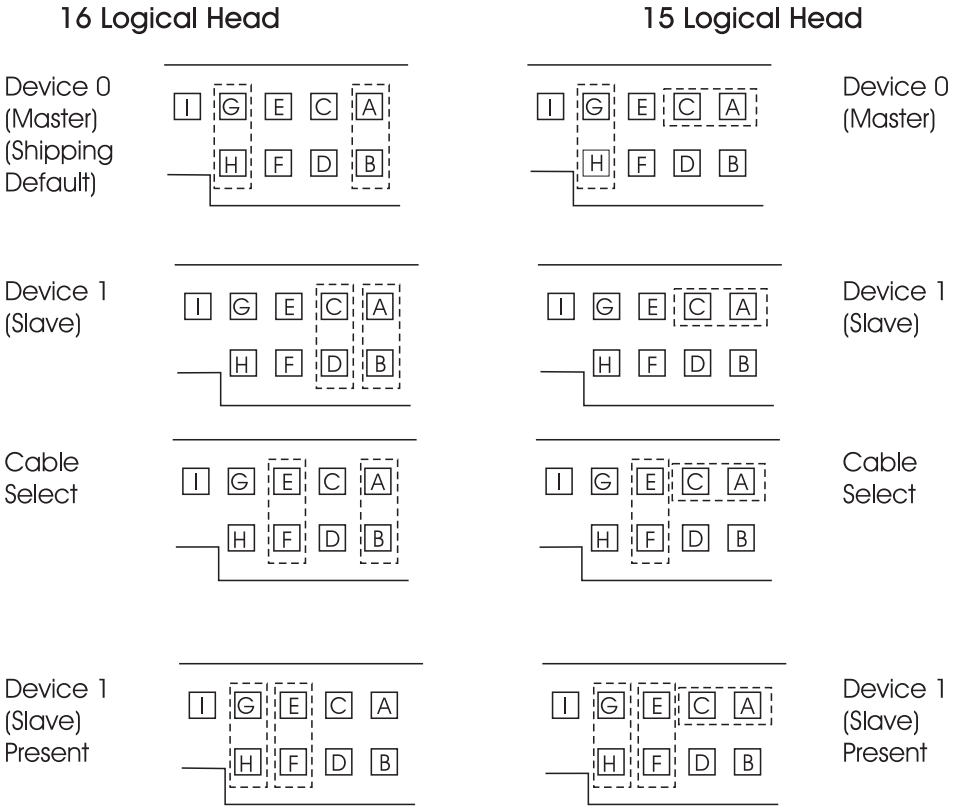
Hard Disk Drive Jumper Settings

Hard disk drives use jumpers to configure the drives as the master or the slave. If your drive matches the following illustration, use the information in the drawing to set the jumpers.



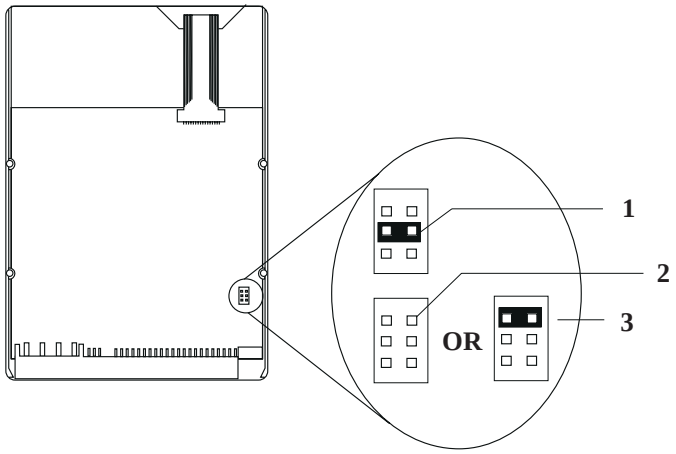
If your drive matches the following illustration, use the information in the illustration to set the jumpers.





If your drive matches the following illustration and is operating as the master drive, set the jumper to setting 1.

If your drive is operating as the slave drive, set the jumper to either setting 2 or setting 3. (Setting 3 is recommended because it allows you to store the jumper for use in the future.)



Backplane Connectors

The following illustration shows the connectors on the backplane.

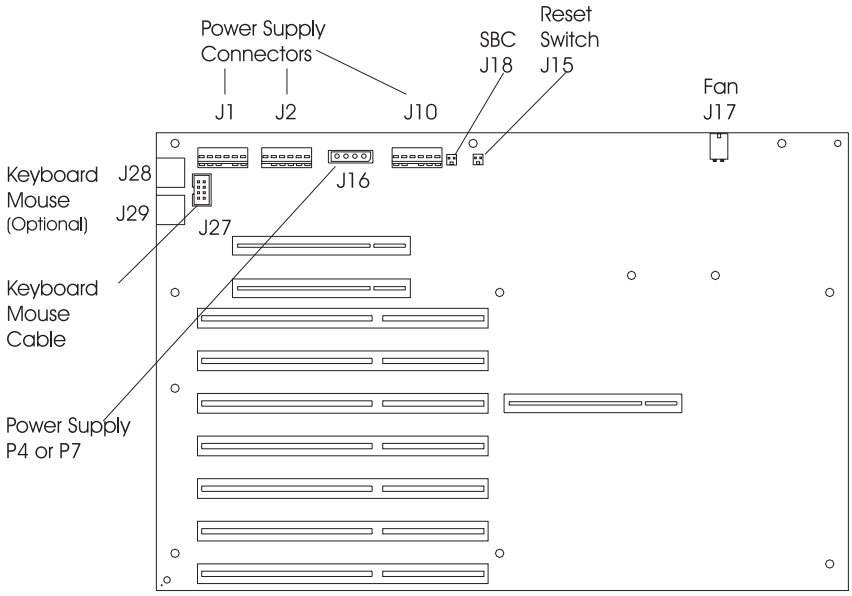


Table B-1. PCI-Bus Expansion-Slot Assignments		
PCI Bus	**Expansion Slots**	**Comments**
0	1, 2	Primary bus—slot 2 is not bus-master-capable
1	8, 9, 10, 11	
2	12,13	
Note: All PCI connectors are bus-master-capable except the connector in slot 2.		

SBC Connectors

The following illustrations show the connectors on the SBCs as used in the 7563 Passive Backplane System.

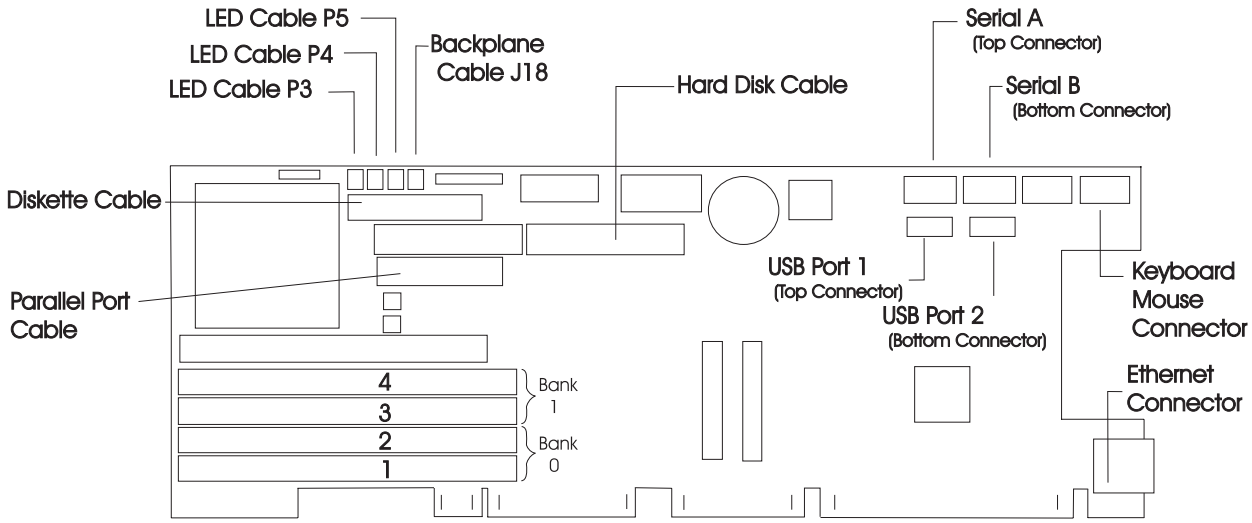
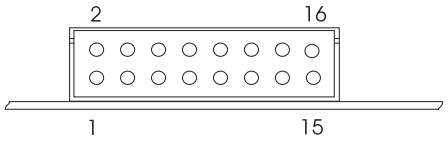


Figure B-1. Connectors on the 586U and 586EU SBCs

SBC Settings

The following jumper settings select the input voltage for the microprocessor. The jumpers are installed in the external power connector, as shown.



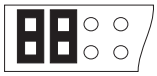
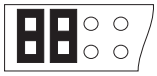
Microprocessor	Jumper Settings
Classic Pentium	
Pentium with MMX	
K6-2	

Figure B-2. Processor Voltage Selection Jumpers

Table B-2. Configuration Switch Definitions

Switch	Description
1	CPU speed 0
2	CPU speed 1
3	CPU speed 2
4	Enable RS-232
5	Auto boot
6	CPU/PCI clock speed 0
7	CPU/PCI clock speed 1
8	Disable video
9	Reserved

Table B-3. Processor/Bus Speed Selection Switches

Switch Number					Multiplier	Bus Frequency	Processor Frequency	SBC Notes
1	2	3	6	7				
Intel Pentium Processors								
Off	Off	Off	Off	On	1.5x	50 MHz	75 MHz	1, 5
Off	Off	Off	On	Off	1.5x	60 MHz	90 MHz	1, 5
On	Off	Off	Off	On	2.0x	50 MHz	100 MHz	2, 5
Off	Off	Off	On	On	1.5x	66 MHz	100 MHz	1, 5
On	Off	Off	On	Off	2.0x	60 MHz	120 MHz	2, 5
On	Off	Off	On	On	2.0x	66 MHz	133 MHz	2, 5
On	On	Off	On	Off	2.5x	60 MHz	150 MHz	2, 5
On	On	Off	On	On	2.5x	66 MHz	166 MHz	2, 5
Off	On	Off	On	On	3.0x	66 MHz	200 MHz	2, 5
Off	Off	Off	On	On	3.5x	66 MHz	233 MHz	3, 5
AMD K6-2 Processors								
On	Off	Off	On	On	2.0x	66 MHz	133 MHz	4, 5
On	On	Off	On	On	2.5x	66 MHz	166 MHz	4, 5
Off	On	Off	On	On	3.0x	66 MHz	200 MHz	4, 5
Off	Off	Off	On	On	3.5x	66 MHz	233 MHz	4, 5
On	Off	On	On	On	4.0x	66 MHz	266 MHz	4, 5
On	On	On	On	On	4.5x	66 MHz	300 MHz	4, 5
Off	On	On	On	On	5.0x	66 MHz	333 MHz	4, 5
Off	Off	On	On	On	5.5x	66 MHz	366 MHz	4, 5

Notes:

1. For Classic Pentium processors only.
2. For Classic Pentium processors or Pentium processors with MMX.
3. For Pentium processors with MMX only.
4. The AMD processors are supported in special applications only. Contact your IBM representative or your place of purchase.
5. Refer to Figure B-2 on page B-7 for processor voltage selection.

Serial Port Pin Assignments

Table B-4. Serial Port Pin Assignments

RS-232 Serial A, Serial B		RS-422/485 Serial B
Pin 1	Carrier detect	Transmit data (–)
Pin 2	Receive data	Receive data (–)
Pin 3	Transmit data	Transmit data (+)
Pin 4	Data terminal ready	Receive data (+)
Pin 5	Ground	N/C
Pin 6	Dataset ready	N/C
Pin 7	Request to send	N/C
Pin 8	Clear to send	N/C
Pin 9	Ring indicate	N/C