



# Tech Info Library

## Power Macintosh: SCSI Termination Explained (1/96)

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Security: Everyone

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TOPIC -----

This article explains the differences between the internal SCSI termination on Power Macintosh 8100 series computers and Power Macintosh 7500, 8500, and 9500 series computers.

DISCUSSION -----

Power Macintosh 8100 series and Power Macintosh 7500, 8500, and 9500 series computers have dual-channel asynchronous SCSI interfaces, which results in two separate SCSI buses: an internal/external SCSI bus, Bus 1, and an internal SCSI bus, Bus 0. However, the specifications and configurations of the two buses differ slightly.

### Power Macintosh 8100 Series Computers =====

#### Bus 1 -----

Bus 1 consists of a 50-pin flat ribbon cable with two 50-pin connectors on the end of the cable. The CD-ROM drive, if installed, occupies the first connector. The second connector has a 50-pin terminator connector installed on it. To add a second SCSI device to Bus 1, you must remove the 50-pin terminator connector and install a terminated SCSI device.

Bus 1 has automatic termination, which means that circuitry on the logic board senses whether or not there are any external SCSI devices attached. If there are no external SCSI devices connected, the logic board automatically terminates itself at the 50-pin logic board connector, thus terminating both ends of the SCSI chain.

Once an external SCSI device is connected to the 25-pin external connector, the circuitry senses the device and disables termination at the 50-pin logic board

connector. The computer then relies on the external SCSI device to provide the proper termination.

Bus 0

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Bus 0 is a completely separate SCSI bus with its own SCSI controller. This bus has a 50-pin flat ribbon cable with two 50-pin connectors on it. Power Macintosh 8100 series computers ship with the internal hard drive connected to this SCSI bus. The internal hard drive is terminated, which terminates the SCSI bus.

Unlike Bus 1, Bus 0 does not have automatic termination because it is exclusively an internal SCSI bus. If additional devices are added to Bus 0, only the last device should contain termination resistors.

Power Macintosh 7500, 8500, and 9500 Series Computers

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Bus 1

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Unlike Bus 1 in Power Macintosh 8100 computers, there are no devices attached internally to Bus 1 in Power Macintosh 7500, 8500, and 9500 series computers.

Bus 1 has automatic termination, which means that circuitry on the logic board senses whether or not there are any external SCSI devices attached. If there are no external SCSI devices connected, the logic board automatically terminates itself at the 50-pin logic board connector, thus terminating both ends of the SCSI chain.

Once an external SCSI device is connected to the 25-pin external connector, the circuitry senses the device and disables termination at the 50-pin logic board connector. The computer then relies on the external SCSI device to provide the proper termination.

Bus 0

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Bus 0 is a completely separate SCSI bus with its own SCSI controller. On Power Macintosh 7500, 8500, and 9500 series computers, Bus 0 provides Fast SCSI communications up to 10 MB per second.

This bus has a 50-pin flat ribbon cable with two 50-pin connectors on it. Power Macintosh 7500, 8500, and 9500 series computers ship with the internal hard drive and CD-ROM drive connected to this SCSI bus. The internal hard drive is terminated, which terminates the SCSI bus.

Unlike Bus 1, Bus 0 does not have automatic termination because it is exclusively an internal SCSI bus. If additional devices are added to Bus 0, only the last device should contain termination resistors.

For additional information on dual-channel SCSI or Fast-SCSI in Power Macintosh series computers, see these related Tech Info Library articles:

"Power Macintosh 7500, 8500, 9500 Series: SCSI-2 Compliance"

"Dual-Channel Asynchronous SCSI Interface: An Overview"  
Specific Macintosh: Specifications

Article Change History:

29 Jan 1996 - Updated technical information.

04 Dec 1995 - Reviewed for technical accuracy and added 8500 information.

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