# NEXTSTEP for Intel Processors

**Title:** Bus Logic BT-747 SCSI Controller
**Entry Number:** 1118
**Last Updated:** <<Date November 15, 1995>>

**Product Vendor:**
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**Keywords:** Bus Logic, 747, SCSI, EISA

# Overview:

The Bus Logic BT-747 line of SCSI controllers provides a bus-mastering EISA SCSI interface for NEXTSTEP for Intel Processors.

**Release 3.2 and 3.3**

The BT-747C requires the Bus Logic SCSI driver, now available from NeXTanswers via anonymous FTP (ftp.next.com) or email (nextanswers@next.com). Request NeXTanswers documents 1685_BusLogicSCSIDriver.pkg.compressed and 1686_BusLogicSCSIDriver.ReadMe.rtf. This driver ships with the NEXTSTEP Release 3.3 User CD package.

While other models in the BT-747 line have been used successfully with the Bus Logic SCSI driver by our customers, the driver was written specifically for the BT-747C, and this

is the only model tested by NeXT. If your card is a different model and does not work with the Bus Logic SCSI driver, use the Adaptec 154x SCSI driver instead. This driver is available in two versions: the original version on the NEXTSTEP Release 3.2 CD, and Update 1, available on NeXTanswers as documents 1521_Adaptec154xDriver.pkg.compressed and 1520_Adaptec154xDriver.ReadMe.rtf, or for Release 3.3 in the Release 3.3 User package. The update provides enhanced functionality and bug fixes. If you are using either version of the Adaptec driver, see the note about firmware restrictions under "Known Problems" below. If you are installing a system with the update, request document 1541_Installation_Requiring_Adaptec_Driver_Update.rtf as well.

**Release 3.1**
The only driver which supports the BT-747 line under NEXTSTEP Release 3.1 is the Adaptec 154x driver which ships on the NEXTSTEP CD. See the note about firmware restrictions under "Known Problems" below.

# Setup and Installation:

If you plan to use the BT-747 with a pre-installed system, first obtain the Bus Logic SCSI driver, then install and configure the driver according to the instructions in its ReadMe file.

You can use the default driver settings.

If you are installing a system with the BT-747, you will need to use the Bus Logic SCSI driver as a loadable boot driver. This requires a NEXTSTEP-formatted floppy with the plain driver, BusLogicSCSIDriver.config, in the /usr/Devices folder. You can create such a floppy yourself if you have access to a working NEXTSTEP system, or obtain one from NeXT Technical Support.

Remove jumper **W8** to disable the BT-747's integrated floppy controller.

A working system with a Bus Logic BT-747 SCSI controller at NeXT had the following settings:

**Board Specification**
BT-747S/BT-747D ASSY 1002012-01 Rev A1
BIOS version 4.50
Firmware version 3.31

**EISA Configuration Utility Setup**
BusLogic 32 Bit Bus Master EISA-to-SCSI Host Adapter (v1.90)

```
  BusLogic Host Adapter Configuration
     Host I/O Port Address                  330h -default
     Host Interrupt Request                 INT11 Edge -default
     Host Bios (16KBytes) Address           0D8000h*
     ISA DMA Channel Emulation              DMA Channel 5 -default
     EISA Bus Burst Cycles                  Enable
  SCSI Configuration
     Host Adapter SCSI ID                   ID = 7 -default
     SCSI Parity                            Enable -default
     Disk Drive Capacity                    Disk < 1 GB -default **
     Adapter Initiate Sync Negotiation      Enable
     Maximum Sync Data Rate Allowed         10 MBytes/sec - FAST SCSI
***
     Floppy Subsystem                       Disable Floppy -default
```

** This address may need to be modified to avoid conflict with other resources .*

*** Modify accordingly.*

**** Reduce to 5MB/sec if cables attached to the card are of low signal quality (e.g. too long) or for SCSI troubleshooting purposes.*

If the BT-747 is at the end of the SCSI bus, be sure to terminate it. See the manual provided with the Bus Logic BT-747 to find out how to actively terminate it.

# Known Problems:

**Releases 3.1, 3.2, and 3.3:**

- While the integrated floppy controller on the BT-747 may work, it is not officially supported under NEXTSTEP Releases 3.1 and 3.2.

- You may need to cold boot some computers to successfully reset the Bus Logic card. The problem has been observed when NEXTSTEP attempts to configure the device drivers during the boot process. (To cold boot your computer, shut it down normally, turn the power off, wait three seconds, then turn the power on.)

- Improper SCSI termination can cause strange, unreproducible errors. For maximum reliability be certain that the first and last devices on the SCSI bus are terminated. For more information on this topic see NeXTanswers document 1109_SCSI_Setup.

**Releases 3.1, 3.2**

- If you are using the Adaptec 154x SCSI driver because you are using NEXTSTEP Release 3.1 or because the Bus Logic SCSI driver does not support your card, you will need to change your Bus Logic BIOS and firmware to the following versions:
  BIOS: 4.50
  firmware: 3.31
  Bus Logic technical support will assist you with this.

**Release 3.3**

- For NEXTSTEP Release 3.3, no specific firmware version is required. NeXT successfully tested firmware version 3.37.

  See NeXTanswers document 1771_BusLogic_family_Driver_Overview.rtf

**See also:**
1109_SCSI_Setup
1362_Bus_Logic_BT-54x_SCSI_Adapter.rtfd
1520_Adaptec154xDriver.ReadMe.rtf

1521_Adaptec154xDriver.pkg.compressed
1541_Installation_Requiring_Adaptec_Driver_Update.rtf
1547_Bus_Logic_BT-445_SCSI_Adapter.rtfd
1685_BusLogicSCSIDriver.pkg.compressed
1686_BusLogicSCSIDriver.ReadMe.rtf
1771_BusLogic_family_Driver_Overview.rtf