

# NEXTSTEP for Intel Processors

**Title:** Booting from CD-ROM

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## Overview

It is possible to boot from a release CD-ROM disc and *not* be required to initialize or upgrade the hard disk drive. You will have the ability to view, copy, move, etc. files, run programs, and perform other similar operations.

## Solution

While you can't boot a full NEXTSTEP environment (Workspace Manager, et al.), you can boot single-user from the CD-ROM installation disc.

### Intel (i386) architecture

Insert the CD-ROM disc and the boot floppy and boot the system. On the i386 architecture, booting starts from the floppy drive and continues to the CD-ROM.

At the boot: prompt type:

```
boot: mach_kernel -s
```

Follow any instructions (it may appear as though an install or upgrade is being performed; be patient) until the UNIX command line prompt is displayed. If you are asked which disk to install NEXTSTEP to, then you must have made a mistake at the boot prompt.

## NeXT (m68k) architecture

Use <Command><Command><~> after power-on to get to the ROM monitor and type the following:

### *For Non-Turbo systems with internal floppy*

Insert the boot floppy and type:

```
NeXT> bfd -s
```

### *For Non-Turbo systems with SCSI floppy*

Insert the boot floppy and type:

```
NeXT> bsd(n,0,0) sdmach -s rootdev=sdn
```

Where n is the unit number of the floppy drive. In this scenario, it may be helpful to have the CD-ROM drive set to a higher SCSI address than the SCSI floppy.

### *For Turbo systems*

Turbo systems have the ability to boot directly off the CD-ROM drive without assistance from the floppy drive.

```
NeXT> bsd(n,0,0) sdmach -s rootdev=sdn
```

Where n is the unit number of the CD-ROM drive.

## All architectures

Mounting a hard disk

Note that when booted single user from a CD-ROM, the file system is mounted read-only.

Certain functions may not be available. This state can be somewhat alleviated by mounting /tmp on another available disk. Use the -n option with the mount command to prevent writing to /etc/mstab (which fails, obviously). As an example:

```
# mount -n /dev/<device> /tmp
```

where <device> is the disk you wish to mount (eg. sd0a, hd0a).

Once in single-user mode, you can still run the CD-ROM build disk scripts by running the rc scripts:

```
# sh /etc/rc
```

## Copying & Editing.

Under Release 3.3, you can use ditto(8) to perform a copy of an entire directory, preserving links and setuid and setgid modes. pico(1) is a simple text editor that ships with 3.3 for those that find vi(1) confusing. See the man pages for information on these commands.

## See Also

1469\_Recovering\_Data\_Files\_from\_a\_Hard\_Drive