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SYSTEM

Installation Guide

RELEASE

4.5

BeOS Release 4.5: Installation Guide

This document steps you through the procedure for installing BeOS Release 4.5 for Intel, PPC, and BeBox. To install the BeOS you need a partition to install onto; you only need to *create* a partition if this is your first BeOS installation. Read the material below and decide which scenario applies to you, then proceed accordingly:

1. You have one OS or you need to create a partition for the BeOS because you have no spare partitions on your hard drive:
 - For Windows 95/98, see “Creating a BeOS Partition on Windows 95™ and Windows 98™” on page 2.
 - For Windows NT see “Creating a BeOS Partition on Windows NT™” on page 4.
 - For Linux or other operating systems, see “Partitioning for Other Operating Systems” on page 6.
 - For Mac OS see “Creating a Partition on PPC (Macintosh)” on page 7.
2. You have a new drive or you want to completely repartition an existing drive; go to “Partitioning a New Disk or Repartitioning an Old One” on page 6.
3. You have a spare partition where you can install the BeOS. In this case, you just need to initialize the partition for BFS (Be File System) during installation. You can do this during the BeOS installation. Go to page 8 for Intel, or page 17 for PPC/Mac.
4. You’re upgrading from an earlier BeOS release. Proceed with the installation steps for your platform—“Installing BeOS Release 4.5 for Intel” on page 8 or “Installing BeOS R4.5 for PPC (Macintosh)” on page 17.

⇒ **NOTE:** The Release 4.5 CD contains the BeOS for Intel, PPC, and BeBox. The accompanying boot floppy is for Intel systems only.

⇒ **NOTE:** For the most up-to-date hardware compatibility information, check the BeOS Web site:
<<http://www.be.com/products/beosreadylist.html>>.

Partitioning Information

This section tells you how to create a BeOS partition under various operating systems. You only need to repartition if you've never installed the BeOS before; when you finish partitioning proceed according to your platform with either "Installing BeOS Release 4.5 for Intel" on page 8 or "Installing BeOS R4.5 for PPC (Macintosh)" on page 17.

Creating a BeOS Partition on Windows 95™ and Windows 98™

If you're running Windows 95/98, follow these steps to install **PartitionMagic** and create a BeOS partition. After you've done that, install the BeOS as explained in "Installing BeOS Release 4.5 for Intel" on page 8.

- ⇒ **WARNING:** Partitioning your hard drive can destroy all data on it. It's wise to back up your data before you partition.
1. With Windows 95/98 running, put the BeOS Release 4.5 CD in your CD drive. You'll see a progress bar for the **PartitionMagic Special Edition Setup**, followed by the **PartitionMagic** welcome screen. Click **Next** to continue.
- ⇒ **NOTE:** If **PartitionMagic** doesn't appear as soon as the CD has spun up, open the **My Computer** icon and look for the **Beos_tools** icon. Double-click the **Beos_tools** icon to open the CD ROM, then open the Setup folder, and double-click the Setup file to launch the **PartitionMagic** installer.
2. The **Choose Destination Location** screen appears; accept the default location for installing **PartitionMagic** or click the **Browse...** button to select another location, and click **Next**.
 3. The **Select Program Folder** screen pops up; choose a program folder from the scrolling list or accept the default, and click **Next**.
 4. After an installation progress bar, you'll see the **Setup Complete** screen. Click **Finish** to launch **PartitionMagic Special Edition**.
 5. The system reboots, ejecting the BeOS CD. **If the CD doesn't eject, press the eject button and remove it from the computer.**

6. When the computer restarts you'll see the **PartitionMagic Special Edition** screen with the title "**Create BeOS Partition**" near the top of the window. Follow these three steps to create your BeOS partition:

- In the **Drive info for selected partition** section of the screen click **Select Partition** and choose a partition to resize in the selection window that pops up, then click **OK**. If you have only one disk, just click **OK**.

⇒ **NOTE:** You can only resize a primary partition with **PartitionMagic Special Edition**; it will not show extended partitions.

- In the **BeOS partition size** section of the screen, set a partition size by clicking one of the buttons: **500 MB**, **850 MB**, or **1.5 GB**. (500 MB is ample to install the BeOS and optional items included on the CD.)
- Click the **OK** button at the bottom of the screen to create a BeOS partition on your hard drive.

PartitionMagic Special Edition

Create BeOS Partition

To create a BeOS partition, choose a size and click 'OK'. By default, the active partition will be resized to make room for the new BeOS partition. If you want to resize a different partition, click 'Select Partition...'

Drive info for selected partition

Drive Number: 1
 Volume Label/Type: NO NAME
 Drive Letter: C Select Partition...

BeOS partition size

☒ 500 MB
☐ 850 MB
☐ 1.5 GB
☐ Selected free space

Size info for selected partition

	Before Resize	After Resize
Size MB:	2232.5	1732.5
Used MB:	174.0	174.0
Free MB:	2058.5	1558.5

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OK Cancel

Screen 1: PartitionMagic repartitioning window.

Partitioning Information

7. After the BeOS partition has been created, reboot with the BeOS boot floppy and CD inserted, and follow the instructions in “Installing BeOS Release 4.5 for Intel” on page 8.

Creating a BeOS Partition on Windows NT™

If you're running Windows NT, follow these steps to install **PartitionMagic** and create a BeOS partition. When you're done, install the BeOS as explained in “Installing BeOS Release 4.5 for Intel” on page 8.

- ⇒ **WARNING:** Partitioning your hard drive can destroy all data on it. It's wise to back up your data before you partition.
 - ⇒ **ADDITIONAL WARNING:** If you have Windows NT installed on an extended partition *do not* try to create a new primary partition for the BeOS. If you do, you won't be able to boot Windows NT.
1. With Windows NT running, insert the BeOS Release 4.5 CD. The preliminary **PartitionMagic** setup wizard runs automatically.
 2. When the **PartitionMagic Special Edition Setup** screen appears, a dialog explains that you need to make a bootable diskette in order to run the BeOS special edition of **PartitionMagic**. Click **OK**, and have a DOS-formatted blank diskette ready; you'll need it after a few more steps.
 3. Read the **Welcome** screen that appears, then click **Next**.
 4. The **Choose Destination Location** screen appears; choose where you want to install **PartitionMagic** by clicking the **Browse...** button or accept the default, and click **Next**.
 5. The **Select Program Folder** window opens; choose a program folder from the scrolling list or accept the default, and click **Next**.
 6. After an installation progress bar, a **Create Bootable Diskette** screen asks you to insert a DOS-formatted blank diskette for booting into the BeOS special edition of **PartitionMagic**. You can also format the floppy as you go: Insert it in the drive, accept the default path of **drive A:** (unless it's in another drive; in that case, change the path to your floppy drive), click **OK** in the **Information** dialog, click **Start** in the **Format A:** window (the name depends on the drive you're formatting to), click **OK** in the warning about erasing all data on the disk, and click **OK** in the formatting complete dialog.

- ⇒ **WARNING:** Even if the diskette you insert to make your bootable floppy is already formatted, the software will ask you to format it again. This is because of a bug in the **PartitionMagic** installer.
7. Close the **Format A:/** window; a progress bar tracks the creation of the **PartitionMagic** bootable floppy (this takes longer than you might think—about 2-4 minutes, depending on your hardware). Remove and label the floppy when you're asked to by the **Bootable Diskette Created** dialog.
 8. When the **Setup Complete** screen appears click **Finish**. Unless you unchecked the **Setup Complete** option, a **Read Me** window appears with a dialog that reminds you to remove the BeOS CD.
 9. Insert the **PartitionMagic** bootable floppy and reboot the computer.
 10. When a command line window appears; type "createbe" at the A: prompt and press **Enter**; BeOS **PartitionMagic** loads. (If you later want to delete the BeOS type "deletebe" at the same prompt.)
 11. When the program starts you'll see the **PartitionMagic Special Edition** screen with the title "**Create BeOS Partition**" near the top of the window. Follow these three steps to create your BeOS partition:
 - In the **Drive info for selected partition** section of the screen, click **Select Partition**. Choose a partition to resize in the selection window that pops up, then click **OK**. If you have only one disk, just click **OK**.
- ⇒ **NOTE:** You can only resize a primary partition with **PartitionMagic Special Edition**; it will not show extended partitions.
- In the **BeOS partition size** section of the screen, set a partition size by clicking one of the buttons: **500 MB**, **850 MB**, or **1.5 GB**. (500 MB is ample to install the BeOS and optional items included on the CD.)
 - Click the **OK** button at the bottom of the screen to create a BeOS partition on your hard drive.
- ⇒ **NOTE:** For visual aid, see "Create BeOS Partition" screen on page 3.
12. When the progress bars shows the partition has been created, remove the **PartitionMagic** floppy. Insert the BeOS boot floppy and CD and reboot.
 13. Install BeOS Release 4.5 by following the instructions in "Installing BeOS Release 4.5 for Intel" on page 8.

Partitioning for Other Operating Systems

If you have Linux or another operating system, you'll need to create a BeOS partition. The full version of **PartitionMagic** (but not the Special Edition included on the BeOS R4.5 CD) can resize Linux partitions. However you create the partition, keep these guidelines in mind:

- You need a minimum partition of 200 MB to install the BeOS.
- The partition you create must have a type; it can't be free space. If you don't assign a type to the partition when you create it, it remains hidden. A partition's type is a numeric code. The BeOS type code is **0xeb** (in decimal, **235**). If your partitioning tool doesn't let you set the type code (**PartitionMagic** does), you can set it to anything that isn't free space—but remember which partition the BeOS will be in.
- **Back up all data on the disk that you're going to repartition.**

Once you've created a partition for the BeOS, go to "Installing BeOS Release 4.5 for Intel" on page 8.

Partitioning a New Disk or Repartitioning an Old One

If you have a new hard drive with no partitions or you are completely repartitioning an old drive, follow these instructions to create a BeOS partition.

⇒ **WARNING: If you repartition an old drive you will destroy everything on it.**

1. Boot into the BeOS to bring up the **Installer** window. Refer to the first four steps on page 8 (Intel) or the first two steps on page 18 (PPC/Mac) for information on how to do this.
2. In the BeOS **Installer** window, toggle the arrow for **More Options** (below the BeOS logo). In the expanded window, click the **Setup partitions...** button to open **DriveSetup**. After scanning for devices (this takes a few seconds), the **Drive Setup** window appears.
3. In the **Drive Setup** window, highlight the drive you want to partition and choose **Setup > Partition > intel** or **Setup > Partition > apple** (depending on your partition). The **Partition Map** panel will appear.

4. **On Intel**, decide which partition (1-4) you want to put the BeOS on, and choose **BeOS** from the **Type** pop up menu. You can designate more than one BeOS partition, but you can only install onto one at a time. Use the **Layout** popup or the partition sliders to set partition sizes. If you have an existing partition, unlock it by clicking the lock icon. Allow a minimum of 200 MB of disk space for the BeOS. Check the **Active** checkbox for the partition you want to boot into at startup. Click **OK** to make your settings take effect.

On PPC/Mac, use the layout popup, or highlight the partition and use the **Partition Size** slider (allow a minimum of 200 MB of disk space for the BeOS); click **Update** to make the size take effect. You can also name the highlighted partition and change its type in the **Type** popup. Click **OK** to make all changes take effect.

⇒ **NOTE:** If you're going to install another OS on the same disk, install it on Partition 1 and put the BeOS on another partition. Windows, in particular, expects to be installed on the first partition.

5. The **Partition Map** window disappears after you click OK; close the **Drive Setup** window to return to the **Installer**.

For **Intel** rejoin “Installing BeOS Release 4.5 for Intel” on page 8; for **PPC (Macintosh)** rejoin “Installing BeOS R4.5 for PPC (Macintosh)” on page 17.

Creating a Partition on PPC (Macintosh)

If you're installing on a PPC and don't already have a BeOS partition, you'll have to repartition the disk to create one.

To do this, you need a Mac partitioning utility, such as **FWB's Hard Drive Toolkit** or **APS Power Tools**. These let you repartition without destroying existing data (unlike Apple's **Drive Setup**; if you use it, you'll have to reinstall the Mac OS). Follow the instructions provided by your partitioning utility, keeping these facts in mind:

- You need a minimum partition of 200 MB to install the BeOS.
- Be sure to create an Apple HFS volume (this is called Mac OS Standard on v. 8.1 and higher). If your software lets you name the volume at this point, use a name that tells you it's a BeOS

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partition. When you install the BeOS onto this partition, the BeOS **Installer** will convert it to a BeOS partition.

- ⇒ **WARNING: Partitioning your hard drive can destroy all data on it. It's wise to back up all data before you partition.**
- ⇒ **WARNING:** Partitioning some IDE drives with earlier versions of **FWB's Hard Drive Toolkit** software makes some Macintosh hardware unbootable. To be safe, use the latest version of **HDT** (3.0).
- ⇒ **WARNING:** Certain anti-virus software, specifically Symantec's **Norton Anti-Virus** utility, detects the BeOS boot sector as a virus and deletes it. If you run **Norton** or other anti-virus software on a partitioned system that contains the BeOS, you may see a message that asks you if you want to "repair" the suspicious sector. Do **NOT** do so. "Repairing" the BeOS partition will destroy it.

After you've created an Apple HFS (or Mac OS Standard) partition for the BeOS, you're ready to install. Follow the instructions in "Preparing the PPC for Installation" on page 18.

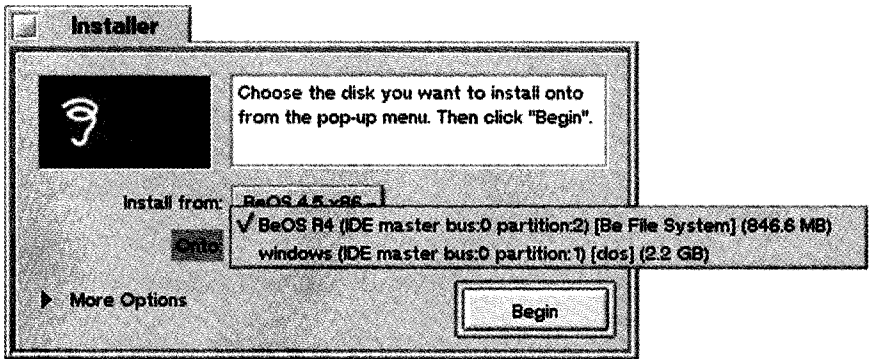
Installing BeOS Release 4.5 for Intel

You're ready to install the BeOS if:

- You've created a partition to install it on, or
 - You want to use an existing partition and you're ready to destroy all data on that partition by initializing it, or
 - You're upgrading from an earlier release.
- ⇒ **WARNING: Back up all data that you want to save.**
1. Turn on or reboot your computer and insert the BeOS R4.5 boot floppy and CD.
- ⇒ **NOTE:** You must use the R4.5 boot floppy. You won't be able to boot into the R4.5 CD with an earlier boot floppy.
2. A splash screen with the BeOS logo appears. If all the icons at the bottom of the screen don't light up, see "Troubleshooting the Intel Boot Process."
 3. If there are no boot problems, the screen will clear to blue, the cursor will appear, and a few moments later the **License Agreement** panel will open. If it doesn't, see "Troubleshooting the Intel Boot Process."

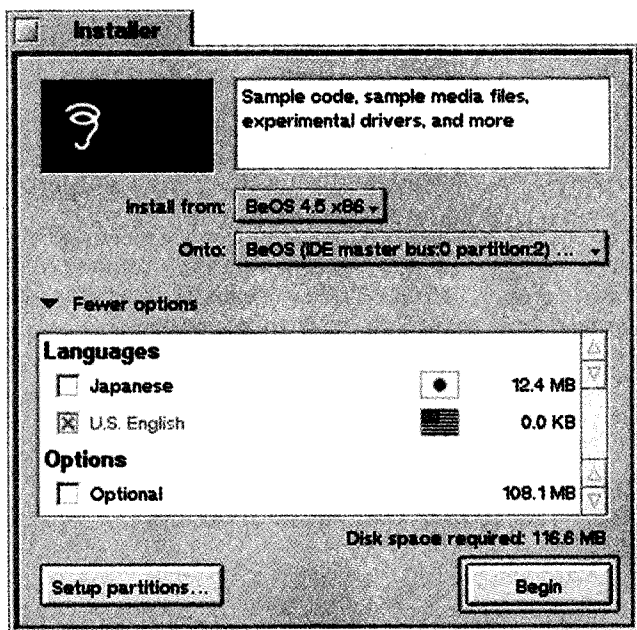
4. Read the agreement and click **Agree**. The **Installer** window appears.
5. Look at the **Onto** selection. When you click in the text area next to **Onto**, a list of your choices of partitions and disks (even if it's only one choice) will pop up. Choose the disk or partition you want to install the BeOS on. If you're upgrading from an earlier release, select your existing BeOS partition; if this is your first installation, select any partition you want (except partition 1).

⇒ **WARNING:** If the partition you select is anything other than a BeOS partition it will have to be initialized to continue the installation. **Initializing will destroy any data on that partition!**



Screen 2: The BeOS Installer window. The Onto popup menu may appear different, depending on your system.

6. Toggle the **More Options** button below the BeOS logo to see the expanded **Installer** window. A list of options appears:
 - Check **Japanese** to install the Japanese input method and fonts. This lets you type Japanese phonetically with Kanji.
 - Check the **Optional** checkbox to install optional files. This includes experimental apps, sample code, various audio/visual sample files, etc.



Screen 3: The BeOS Installer window expanded to show installation options.

7. Click **Begin** to start the installation. An alert asks if you want to initialize the disk (if you've created a partition, initializing affects only the partition, not the entire disk).
 - If this is your first installation, or you're upgrading from Release 3.x, you must click **Initialize** (see the **WARNING** in Step 6).
 - If you're upgrading from R4 you don't need to initialize, but you should **back up your data**.

If you haven't backed up data that you want to save, click **Stop installation**, close the **Installer**, and start over (you'll automatically reboot). If you're prepared to erase your partition, click **Initialize**.

A dialog appears that lets you name your partition (or *volume*) and set its block size. You can name the partition anything but "boot"; reset the block size only if you know what you're doing. Click **Initialize**. **Initializing erases all data on the partition!**

A final alert tells you that you're about to erase all the data on the partition. This is your last chance: If you don't want to erase your data, click **Cancel** (in the alert and in the dialog), otherwise click **Initialize**. **Initializing erases all data on the partition!**

8. You may see another alert that there is not enough room on the destination disk to install BeOS R4.5. In that case, you can...
 - Try installing anyway and see what happens, or
 - Choose a different boot volume, if you have one available, or
 - If you're installing over BeOS R4, reboot into it (remove the R4.5 CD and boot floppy first) and delete any files you don't need.

Once you've solved this problem, continue installing.

9. When the installation finishes, a dialog asks if you wish to install a boot manager. Read "Installing the BeOS Boot Manager on Intel" on page 11 to decide if you do.
10. Quit the **Installer** by clicking **Quit**, and your computer will reboot.

If you can't boot into your new Release 4.5 volume, see "Troubleshooting the Intel Boot Process."

Installing the BeOS Boot Manager on Intel

The BeOS boot manager, **Bootman**, lets you choose which operating system to start each time you boot your computer. It is similar to other boot managers such as PowerBoot, System Commander, and LILO. You should **not** install **Bootman** if any of the following is true:

- You already have a boot manager on your system.
- You may have installed software that extends your BIOS, such as Maxtor's MaxBlast or Ontrack's Disk Manager, and you have a very old computer and an 8 GB or larger drive.
- The BeOS is the only operating system on the computer.

If you've decided to install **Bootman**, read on. Before you begin, have a floppy disk ready to insert when you're asked for one.

1. As soon as the BeOS installation finishes, a dialog asks if you want to install the BeOS **Boot Manager**. Click **Yes** to continue.

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2. After a few seconds, a dialog offers you a choice of **Install** or **Uninstall**. Select **Install** and then click **Next** to continue.
3. The next window lets you save your master boot record (MBR) to the default folder (/home/config/settings/bootman/MBR) or click **Select** to put it in another location. If you save the file to a place other than the default location, **remember where you put it**. Saving the MBR lets you restore your system to its pre-**Bootman** state if you later want or need to do so.
4. The next screen asks if you want to create a rescue disk. If you do (it's a good idea to err on the side of caution), eject the BeOS boot floppy and insert the floppy you have ready for this purpose.
5. Click **Next** to make the rescue floppy. When a dialog tells you it's done, remove the floppy.
6. A new screen shows you the partitions detected on your system. Each partition you select with an "x" in the checkbox will appear in the boot menu each time you boot your computer. You can also edit the partition names here. Click **Next** to continue.
7. In the next window choose the partition you want to boot into at startup from the pop up menu. You can also select the default time you want the system to wait before automatically booting into the default partition. Click **Next**.
8. Now verify the information you've specified so far before the system writes a boot menu to your hard drive. An additional dialog asks if you're sure you want to do this. Click **Yes**.
9. A final screen indicates that **Bootman** has been installed. Click **Done** to return to the **Installer**.
10. Eject any floppy disk that may be in the floppy drive (either the rescue floppy or the BeOS boot floppy) and quit the **Installer**.

Bootman will now boot into the partition you checked in Step 7 above.

Modifying Bootman

You may want to modify your **Bootman** setting if:

- You want to rename your choices (i.e., the volumes) in the **Boot** menu.

- You change any of the operating systems installed on your computer, other than the BeOS.

To modify **Bootman**:

1. With the BeOS running, open a **Terminal** window and type `bootman` at the `$` prompt, then press **Enter**.
2. This brings up the **Be Boot Manager** panel, where you check **Install Boot Menu**, and then click **Next**. Notice that you're not asked if you want to make a rescue floppy; this only occurs the first time you install **Bootman**. If you didn't make a rescue floppy in "Installing the BeOS Boot Manager on Intel" above, it's too late.
3. A window that shows the partitions detected on your system appears. You can type new names for your partitions here, although you can't change their order.
4. Now follow steps 7-9 in "Installing the BeOS Boot Manager on Intel" to finish modifying **Bootman**.

Troubleshooting Bootman

Problem: *You're installing **Bootman** and an alert tells you that your SCSI drivers are not mapped in.*

If you still want to install **Bootman**, reboot, then go into your SCSI BIOS settings (how you access this is different for every machine) and map in the drive you installed the BeOS on. When you've done that, quit, boot into the BeOS with the boot floppy, open a **Terminal** window, and type `bootman` at the `$` prompt to run **Bootman**.

Problem: *You can't boot after you've installed **Bootman**.*

If you made a rescue floppy, insert it into your computer and reboot. The rescue floppy holds your former MBR and booting from it restores your hard drive to the status quo before you installed **Bootman**.

Problem: *You can't boot and you didn't make a rescue floppy.*

If you didn't make a rescue floppy, boot to your hard drive using the BeOS boot floppy. At the splash screen, press the **spacebar**, select your boot volume, and continue booting. When the system is up, open a **Terminal** window and at the `$` prompt type `bootman`. Follow the steps

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through the **Uninstall** procedure that appears. **Uninstall** uses the MBR file you saved to your hard drive when you installed **Bootman**. If you don't remember where you saved your MBR, you can uninstall **Bootman**, boot to your hard drive using the boot floppy and in a **Terminal** window type "writembr".

Troubleshooting the Intel Boot Process

Problem: *The boot process hangs in the splash screen (not all the icons at the bottom of the screen light up).*

Reboot and briefly press the spacebar as soon as the splash screen appears. Use the arrow keys to choose **Select safe mode options**, and in the next screen press Enter to check **Safe mode**, then arrow down to **Enable console debugging** and press Enter to select it. Arrow down to **Continue booting** and press Enter to select it; debugging information will appear down the left side of your monitor. This will help if you continue to have problems and need to explain them to Customer Support. If you can boot successfully in safe mode, your monitor will be in fail-safe (monochrome) graphics mode.

An alternative response if your system hangs in the boot screen is to reboot and press the spacebar briefly when the splash screen appears (before it hangs again). **Select new boot volume** is highlighted in the **Boot Loader** screen. To change your boot volume from the one that's shown, press Enter and in the next screen arrow down through the list of bootable volumes and press Enter for the one you want to choose. If no list appears, this won't solve your problem; try booting in safe mode, as described above.

Problem: *You can't boot with the boot floppy.*

You may be using a Release 3 or 4 boot floppy. You can't boot the R4.5 kernel with an earlier boot loader, which may be on the floppy. Make sure you're using the R4.5 boot floppy.

Problem: *You can't boot from the BeOS R4.5 CD.*

The R4.5 CD is bootable, but your system's BIOS may not let you boot from it. To boot from the CD, first reboot from the 4.5 boot floppy. Then go into the **Boot Loader** and in the boot volume selection menu select **Boot from CD** as your boot volume, and continue booting.

Problem: *You can't boot from the boot floppy or the CD.*

Your computer's BIOS may be set to a default that doesn't let you boot from either the floppy drive or the CD drive—or both. Check your hardware manual to find out how to get into the BIOS. Once there, you'll be instructed on how to enter the BIOS editor where you can change the boot sequence to include the floppy drive and CD drive.

Problem: *When you're installing, after the splash screen goes away the screen remains blank.*

Your video card or some other hardware may not be supported. Reboot from the R4.5 boot floppy and follow the steps described above for booting in safe mode. Continue installing. When you reboot, you may have to enter safe mode again to try to fix your problem with acceptable results, as described in the next few troubleshooting scenarios.

Problem: *You just installed but now you can't boot into your BeOS partition—the splash screen never appears.*

You may not be able to boot because the active partition is not set to a BeOS volume. Try booting from the BeOS boot floppy. If you can boot with the floppy, but can't boot without it, open **DriveSetup** preferences and select the volume you want to boot from. This volume must be on the drive your computer boots from, usually the Master IDE drive on the first IDE chain. In the **Setup...** menu choose **Partition > Intel** to see the **Partition** panel. Use the **Active** checkbox to make the BeOS partition active.

If the active partition is set correctly, but you still can't boot from the hard drive, you'll have to (always) boot off the R4.5 boot floppy. This isn't a disaster—the BeOS is exactly the same regardless of how it's booted—but we apologize for the inconvenience.

Problem: *You've installed, and the splash screen appears but doesn't go away.*

You may have unsupported hardware, a bad BIOS configuration, or some other hardware/firmware problem. Reboot and try rebooting in safe mode (described at the bottom of page 14 above). If you still can't boot, follow these steps again, but select **Don't call the BIOS** when you

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get to the safe mode options. Keep trying the different options until you hit a combination that works.

Problem: *You're able to boot, but after the splash screen goes away the screen remains blank.*

Try resetting your graphics mode by typing **Control+Alt+Shift+F12**. If that doesn't work, follow the instructions for the previous scenario, "You've installed, and the splash screen appears but doesn't go away."

Problem: *You're able to boot, but the screen is monochrome (grayscale) and the mouse movement is jerky.*

You're in "fail-safe" graphics mode, which the BeOS enters automatically when it thinks you're using an unsupported graphics card. Look for a driver for your video card in the "Additional BeOS Hardware Drivers" section of <http://www.be.com/support/updates>. If you find one, download the driver and reboot.

Alternatively, you can use the new VESA mode menu (this menu shows up only if your video card supports it): Reboot, at the splash screen press the spacebar, highlight **Select fail-safe video mode** and press Enter, choose a screen resolution (probably no higher than 1024x768), return to the main menu, and continue booting. This permits color viewing on your monitor, rather than grayscale, although the system will be slower than it would be with the correct video driver.

Problem: *You have more than one BeOS volume, and you're booting into the wrong one.*

If you're not booting in the BeOS volume you want, reboot and press the spacebar at the splash screen. With **Select new boot volume** highlighted, press Enter; in the next screen choose **Rescan for bootable volumes**. If you have more than one bootable BeOS volume, choose a different one from the list that appears and continue booting.

⇒ **NOTE:** This may or may not work, since it's possible that if your currently active partition holds Release 3, you won't be able to boot into Release 4.5 anyway (see immediately below).

Installing BeOS R4.5 for PPC (Macintosh)

Problem: *You have an R4.5 and an R3 partition. After rebooting into R3, you find that you can't reboot into R4.5.*

In some cases, the R4.5 volume becomes unbootable after you've booted into Release 3. To work around this problem, you can either always use the R4.5 boot floppy when you want to boot into Release 4.5, or you can do this:

- Boot into Release 4.5, then open a **Terminal** window and, when you see the "\$" prompt, type this:

```
makebootable -full /boot
```

This will make your Release 4.5 partition bootable until the next time you run Release 3.

Problem: *A device card (sound, network, modem) isn't working.*

You may be using unsupported hardware. For the most current hardware compatibility information go to

<http://www.be.com/products/beosreadylist.html>

If you're using a supported device, make sure it's properly connected. If it still doesn't work, it may have been disabled by the system because of a resource conflict. Open the **Devices** preferences; disabled devices appear in red. If a device that appears disabled in the **Devices** list is one you want to use, you need to disable other devices to free up resources for it. You can disable plug and play devices in the **Devices** window's **ISA/Plug and Play Devices** list.

Installing BeOS R4.5 for PPC (Macintosh)

You're ready to install the BeOS if:

- You've created a BeOS partition with a third-party utility as described in "Creating a Partition on PPC (Macintosh)" on page 7, or
- You understand that you can create a partition during installation as described in "Partitioning a New Disk or Repartitioning an Old One" on page 6, or
- You have a spare partition that you can initialize at Step 5 of "Steps for Installing BeOS R4.5 on PPC or Bebox" below, or

- You're upgrading from an earlier release and don't need to create a new partition.

Preparing the PPC for Installation

1. Boot into Mac OS and insert the BeOS Release 4.5 CD.
2. Open the BeOS Release 4.5 CD, labelled **BEOS_TOOLS**. Open the Macintosh folder, and then the BeOS Mac Tools folder.
3. If you have earlier versions of BeOS files for Macintosh, delete them, particularly the BeOS Mac Tools folder and its contents, and the **OS Chooser** extension, in System Folder/Extensions.
4. Drag the new **_OS_Chooser** extension from the CD into your System Folder/Extensions folder.
5. Delete the old **BeOS Launcher** and replace it with the new **BeOS_Launcher**, which you should put on the desktop.
6. Double-click the **BeOS_Launcher** icon to boot into the BeOS.

⇒ **NOTE:** If you don't boot into the R4.5 CD right away (some CD drives are slow to recognize the CD), reboot and hold down the **shift** key as soon as the Be logo appears, then choose **Rescan for bootable disks** in the boot screen; if the logo doesn't appear try rescanning one more time. Failing that, remove the CD from the drive, reinsert it, and rescan again.

Steps for Installing BeOS R4.5 on PPC or Bebox

Insert the R4.5 CD and follow these steps to install the BeOS:

1. When the **License Agreement** appears, click **Agree**; the **Installer** window will appear.
2. Look at the **Onto** selection. When you click in the text area next to **Onto**, a list of your choices (even if it's only one choice) of a disk or partition (or *volume*) will pop up. Choose the disk or partition you've initialized as BeOS.

⇒ **WARNING:** If the partition you select is anything other than a BeOS partition it will have to be initialized to continue the installation. **Initializing will destroy any data on that partition!**

3. Toggle the **More Options** button below the BeOS logo to see the expanded **Installer** window. A list of options pops open:

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- Check **Japanese** to install the Japanese input method and fonts. This lets you type Japanese phonetically with Kanji.
 - Check the **Optional** checkbox to install the optional files. This includes experimental apps, sample code, various audio/visual sample files, and so on.
 - If you need to create a new partition, such as when you're installing onto a new disk, click **Setup partitions...** in the panel and go to the section "Partitioning a New Disk or Repartitioning an Old One" on page 6.
4. Click **Begin** to start the installation.
 5. An alert asks if you want to initialize the partition (if you've created a partition, initializing affects only the partition, not the entire disk). If this is your first installation click **Initialize**; you don't need to initialize if you're upgrading from an earlier version. If you haven't backed up data you want to save, click **Stop installation** in the alert, close the **Installer** window and start over (you'll automatically reboot). If you're prepared to erase your partition's data, click **Initialize** in the alert.

A dialog appears that lets you name your partition (or *volume*) and set its block size. You can name the partition anything but "boot"; reset the block size only if you know what you're doing.

Click **Initialize**. **Initializing erases all data on the partition!**

Another alert tells you that you're about to erase all the data on the partition. This is your last chance: If you don't want to erase your data, click **Cancel** (in the alert and in the dialog), otherwise click **Initialize**. **Initializing erases all data on the partition!**

6. You may see another alert that tells you there's not enough room on the destination disk to install BeOS R4.5. In that case, you can...
 - Try installing anyway and see what happens, or
 - Choose a different boot volume, if you have one available, or
 - If you're installing over BeOS R4, reboot into it (remove the R4.5 CD first) and trash any files you don't need.

Once you solve this problem, continue with installation until you reach the next step.

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7. When the installation finishes, a dialog asks if you want to make this your startup disk; the choice is yours.
8. Quit the **Installer** by clicking **Quit**, and your computer will reboot. On later reboots the **OS Chooser** panel will let you choose which OS to boot into.



Be Inc. 800 El Camino Real, Suite 400, Menlo Park, California 94025, USA

Be Europe Immeuble Le Linéa, Rue du Général Leclerc, 92047 Paris La Défense Cedex, France

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