Installing or Upgrading to Release 1.1d7 of the Be Software

This booklet shows you how to:

- Convert resources (the icons, application signatures, and other information) of any applications you developed in release 1.1d6 of the Be™ operating system (the Be OS™) to the new format used in release 1.1d7.

  You do this with the **convertres** utility on the *Resource Upgrader* floppy disk, which comes with this booklet.

  Caution: You must upgrade application resources *before* you upgrade to release 1.1d7. If you don't, you'll have to recreate the resources from scratch.

- Upgrade the boot ROM of a BeBox™ that was running release 1.1d6 of the Be OS, so you can install release 1.1d7 on its hard disk.

  You do this with the *Boot ROM Upgrader* floppy disk, which comes with this booklet.

- Install release 1.1d7 of the Be OS on a BeBox.

  You do this with the *Be Operating System* CD-ROM, which comes with this booklet.

- Install or upgrade Metrowerks® CodeWarrior™ 8 and the Be development software on a Macintosh.

  You do this with the *Metrowerks CodeWarrior Tools* CD-ROM, which you get when you purchase CodeWarrior 8 from Metrowerks, and with the *Be Headers and Libraries* floppy disk, which comes with this booklet.

Before You Start

Before you install release 1.1d7 of the Be OS on a BeBox, you need to assemble it, as described in Chapter 1, "Assembling the BeBox," in the *Be User's Guide* (which comes with this booklet).

You may also want to review Chapter 2, "Learning BeBox Basics," in the *Be User's Guide*. Chapter 2 teaches you the basics of working with the BeBox, including turning it on and off safely, using the keyboard and mouse, and working with menus—all things you need to do when following the instructions in this booklet.

Finally, check for any last-minute installation instructions, release notes, or other tips on the Be web site: **http://www.be.com**.

Where to Start

If you have a BeBox that's running release 1.1d6 of the Be OS, start with "Upgrading from Release 1.1d6" on page 3.

If you received an unconfigured BeBox, with a hard disk you added that doesn't yet have the Be OS installed on it, start with "Installing the Be OS" on page 5.

If you received a BeBox with release 1.1d7 of the Be OS already installed on its hard disk, start with "About Release 1.1d7 of the Be OS" on page 8. Then if you want to develop Be applications on a Macintosh, turn to "Installing the Macintosh Development Environment" on page 10.

Upgrading from Release 1.1d6

Before you start the upgrade process, back up any files you don't want to lose (you must initialize—and thus erase—the hard disk before you install release 1.1d7 on it). Back up the files onto a hard disk, onto floppy disks, or onto another kind of removable disk (you can mount disks initialized in release 1.1d6 after you install release 1.1d7). You can also back up your files onto another file system using **ftp**, or into a **tar** archive (for information on **ftp** and **tar**, see "Transferring Files to and from the BeBox," on page 115 of the *Be User's Guide*).

Also keep in mind that installing release 1.1d7 installs a new Be database, so any information you changed or added is lost. This includes information about icons in the dock, window positions, and any changes you made to the database with the applications you wrote. If this presents a significant problem for you, contact Be Developer Support (**devsupport@be.com**) *before* you upgrade.

Convert Your Applications' Resource Files

The Be OS stores the icons and other information about an application in a format called "resources." Release 1.1d6 resources are incompatible with release 1.1d7, so if you created icons and other resources for applications you developed in release 1.1d6, you must convert them to a format that's compatible with release 1.1d7 before you upgrade. You do this with the **convertres** utility, which is on the *Resource Upgrader* floppy disk.

Caution: You must convert your release 1.1d6 applications' resources while you're still running release 1.1d6. **convertres** doesn't run under release 1.1d7 and there's no way to access the resources in release 1.1d6 resource files once you're running release 1.1d7.

In release 1.1d6 of the Be OS, an application's resources were stored in a file that was separate from the application itself: A file with the same name as the application, but with the "._rsc" extension. The **HIDERSRC** environmental variable determined whether these files were visible in the Browser or in the Be shell. For details about resources in release 1.1d6, see Chapter 4, "Developing Be Applications," in the release 1.1d6 edition of the *Be User's Guide*.

In release 1.1d7, an application's resources are part of the application file itself. You can also store application resources in a separate file (where they're not associated with any application), and then copy the resources from the resource file into an application with the **copyres** utility. Creating, editing, and copying resources into application files in release 1.1d7 is described in the section, "Creating Resources for a Be Application," which starts on page 138 of the release 1.1d7 edition of the *Be User's Guide*. (The **HIDERSRC** variable is obsolete in release 1.1.7.)

1. While running release 1.1d6 of the Be OS, insert the *Resource Upgrader* floppy disk in the drive, double-click the BeBox icon in the dock, and choose Mount Floppy from the BeBox window's File menu to mount the floppy disk.

2. Drag the **convertres** utility from the floppy disk to the **/bin** folder on the BeBox boot disk.

3. Start the Terminal application and **cd** to the folder that contains your application. Enter **convertres** *MyAppName* in the Terminal window, replacing *MyAppName* with the name of your application.

   convertres converts the resources in the "._rsc" file associated with your application to the format compatible with release 1.1d7. It saves the converted resources in a file with the same name as your application, but with the ".rsrc" extension.

   Repeat this process for each of the applications you developed in release 1.1d6.

4. Copy the converted resource files (with the ".rsrc" extensions) onto a floppy disk (you can use the *Resource Upgrader* disk—it has lots of room). Then eject the floppy disk and turn off the BeBox.

Upgrade the Boot ROM

If you have a BeBox running release 1.1d6 of the Be OS, you must upgrade its boot ROM—a portion of the Be system software that's stored on a chip on the Be motherboard—before you install release 1.1d7 on its hard disk.

1. With the BeBox turned off, insert the *Boot ROM Upgrader* floppy disk in the floppy disk drive.

2. Turn on the BeBox.

   Messages inform you that the boot ROM chip is being upgraded. When the upgrade is complete, you're instructed to eject the floppy disk.

3. Eject the floppy disk and turn off the BeBox.

You can now use the *Be Operating System* CD-ROM to install release 1.1d7, as described in the next section, "Installing the Be OS".

Installing the Be OS

You install release 1.1d7 of the Be OS onto a hard disk using the *Be Operating System* CD-ROM. If you're upgrading from an earlier release of the Be software, you must first back up any files you want to keep and upgrade the BeBox's boot ROM chip, as described in the previous section.

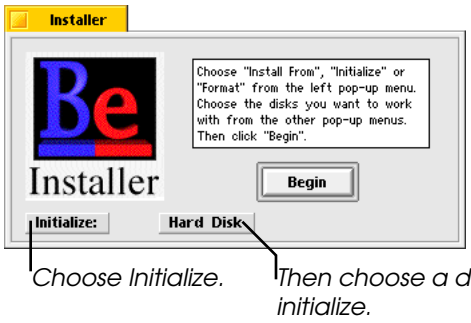
1. If necessary, turn on the CD-ROM drive. Then insert the *Be Operating System* CD-ROM and turn on the BeBox.

2. The Be logo appears on the screen and after a few moments, the Installer application window opens.

   If the Installer window never opens, it may be because the BeBox tried to boot from the hard disk, instead of from the CD-ROM. This causes the Be OS to crash (unless you already have release 1.1d7 installed on the hard disk). Some CD-ROM drives take a long time to get up to speed, so the BeBox may give up on the CD-ROM drive and try to boot from the hard disk. If this happens, turn the BeBox off and on, but as soon as the Be logo starts to appear on the screen, press and hold down any key on the keyboard until the boot selection screen appears. Follow the on-screen instructions to select the **BeOS 1.1d7** CD-ROM as the boot disk. For more information about boot disks and the boot selection screen, see "Selecting a Boot Disk" on page 18 of the *Be User's Guide*.

   Tip: If you're booting from the *Be Operating System* CD-ROM to replace a few essential files on a release 1.1d7 hard disk that's become unbootable, close the Installer window to quit the Installer. After a few moments, the Browser starts and you can copy files from the CD-ROM. However, don't try to run applications or do much else when booted from the CD-ROM: The Be OS counts on being able to write files on the boot disk, and since the CD-ROM is a read-only disk, the Be OS will eventually crash.

3 Choose Initialize from the left pop-up list and the hard disk you want to install the Be OS on from the right pop-up list.



Each disk connected to the BeBox is listed in the right pop-up list.

If you used the disk with the current or previous release of the Be OS, its name is in the list. Otherwise, it's listed by its device name.

Device Name	Description
ide - master	The single IDE disk connected to the BeBox, or the master IDE disk if there are two connected.
ide - slave	The slave IDE disk, if there are two IDE disks connected to the BeBox.
scsi - id *n*	The SCSI drive set to SCSI ID number *n* (*n* can be from 0 through 6)
floppy disk	The disk in the floppy disk drive.

4 Click Begin. Then click Initialize in the panel that warns you that initializing the disk will erase it.

A message in the Installer window tells you when the disk is initialized.

If a message in the Installer window tells you the disk can't be initialized because it needs to be formatted, you can format the disk with the Installer, as described in "Installer" on page 83 of the *Be User's Guide*. Formatting a disk also initializes it.

5 Choose Install From from the left pop-up list and BeOS 1.1d7 (the name of the *Be Operating System* CD-ROM) from the middle pop-up list. Then choose the name of the disk you want to install the Be OS on from the right pop-up list—"NewDisk" since you just initialized it.

Choose Install From. *Choose BeOS 1.1d7* *Choose the disk you want to install the Be OS on.*

6 Click Begin.

The contents of the *Be Operating System* CD-ROM are copied onto the disk you chose. When the installation is complete, a panel asks whether you want to make the disk you just installed on the startup disk (that is, the hard disk the BeBox will use as the boot disk each time you turn on the BeBox) and restart the BeBox.

7 Click Restart to make the disk the startup disk and to restart the BeBox. Or click No to keep the current settings and leave the Installer running, so you can install the Be OS onto another disk.

When you click Restart, the *Be Operating System* CD-ROM is ejected, a message informs you that the installation was successful, and the BeBox restarts, using the disk you installed the Be OS on as the boot disk.

For details about how the BeBox picks a startup disk and how to change the one it picks by default, see "Changing the Boot Disk" on page 111 of the *Be User's Guide*.

If you click No in the panel and decide you'd rather quit, close the Installer window. The Installer quits and after a few moments, the Browser starts. Choose Shut Down from the Browser's main menu and eject the CD-ROM. Don't try to use other applications: The Be OS counts on being able to write files on the boot disk, and since the CD-ROM is a read-only disk, the Be OS will soon crash.

The Installer installs everything from the *Be Operating System* CD-ROM onto a hard disk except the contents of the **/optional** folder. For more information, see the next section, "About Release 1.1d7 of the Be OS".

You can now start using the BeBox. You'll probably be able to figure out how to do a lot of things in the Be OS on your own, but when you have questions, see the *Be User's Guide*. If you want to use a Macintosh to develop Be applications, you need to install the Be development environment, as described in "Installing the Macintosh Development Environment" on page 10.

About Release 1.1d7 of the Be OS

Everything in release 1.1d7 of the Be OS is contained in six folders:

/apps Applications with a window-based user interface—including the Installer, Terminal, Edit, IconWorld, and others. These applications are described in alphabetical order in "Using the Be Applications," which starts on page 65 of the *Be User's Guide*

/bin Programs that don't bring up windows, like **ls**, **tar**, and **df**, which you use in the Terminal application and in shell scripts. In release 1.1d7, dozens of GNU tools have been added to this folder (documentation for these tools is included in the **/documentation** folder).

/develop A preliminary version of the Be development environment for the BeBox, including the BeIDE (the CodeWarrior Integrated Development Environment for the BeBox), Be headers and libraries, and a number of sample applications. The contents of this folder are described in detail in "About the Development Environment on the BeBox" on page 133 of the *Be User's Guide*.

/documentation The HTML edition of *The Be Book*, the reference to the Be API; HTML editions of the documentation ("man pages") for the GNU shell tools; and documentation from Metrowerks for the compiler and linker. See the description of the **/optional** folder on the *Be Operating System* CD-ROM, below, for more information about these documents.

/preferences Applications you use to configure the BeBox to work on a network, to set the screen resolution, and to set other system preferences. These applications are described in alphabetical order in "Using the Preferences Applications," which starts on page 99 of the *Be User's Guide*.

/system The servers, the Browser, fonts, the **Bootscript** file that's run at startup, and other system software.

In addition, you'll see an empty **/tmp** folder, which is created at startup and is used by the Be shell.

In addition to the six folders described above, the *Be Operating System* CD-ROM contains a seventh folder, **/optional**, with over 318 MB of information, tools, and applications. You can mount the CD-ROM and copy what you want from the **/optional** folder onto the BeBox hard disk (see "Mounting a Disk" on page 44 and "Moving and Copying Items" on page 46 of the *Be User's Guide* to learn how). The folders in the **/optional** folder are:

documentation Everything that's in the **/documentation** folder that's installed by the Installer, plus a PostScript edition of *The Be Book* and single-file archives of *The Be Book* and the HTML documentation for the GNU tools. The archives are in UNIX format (with a ".tar" extension), Macintosh format (with a ".sea.hqx" extension), and Windows '95 and Windows NT format (with a ".zip" extension). You can transfer these archives to another computer so you can read or print their contents (see "Transferring Files to and from the BeBox" on page 115 of the *Be User's Guide*).

gnu Sources for the GNU tools in **/bin**.

goodies Area codes, zip codes, a dictionary, a thesaurus, and more.

images Images in TIFF and Be image file formats, which you can open in the ImageViewer application. See "ImageViewer" on page 83 of the *Be User's Guide*.

Metrowerks nub The "nub" for the BeBox you use with the Metrowerks cross-debugger on a Macintosh, plus a "ReadMe" file. Drag this folder into the **/develop** folder on the hard disk if you want to use the nub. Setting up the nub is tricky: Follow the directions in "Using the Metrowerks Cross-Debugger" on page 129 of the *Be User's Guide*.

midi MIDI files you can play using the Midi application (if you have a MIDI synthesizer connected to the BeBox). See "Midi" on page 90 of the *Be User's Guide*.

movies Be movies. See "MessageCenter" on page 90 of the *Be User's Guide* to learn how to watch them.

sounds Sounds, including complete tracks from a selection of Thomas Dolby albums. See "MessageCenter" on page 90 and "PlaySound" on page 94 of the *Be User's Guide* to learn how to listen to them.

third parties Preliminary versions of applications from two Be developers, Ex Algebra and MIPSYS.

A tenth folder, **_optional_install_**, simply tells the Installer not to install the **/optional** folder.

Installing the Macintosh Development Environment

To set up a Macintosh so you can develop applications for the BeBox, you need to install or upgrade Metrowerks CodeWarrior 8 for the PowerPC and install the contents of the *Be Headers and Libraries* disk.

Upgrading CodeWarrior

You use a combination of the applications and tools on the *CodeWarrior 8 Tools* CD-ROM and the Be development software from the release 1.1d7 edition of the *Be Headers and Libraries* disk to develop Be applications on a Macintosh. If you already have a copy of CodeWarrior on your hard disk, you need to upgrade it. If you don't have a copy of CodeWarrior installed, skip to "Installing CodeWarrior 8" on page 11.

Upgrading CodeWarrior 7

If you installed CodeWarrior 7 and an earlier version of the Be development software, delete all of those files from your hard disk and follow the instructions in "Installing CodeWarrior 8" on page 11. (You can't use CodeWarrior 7 to develop software for release 1.1d7 of the Be OS.)

Upgrading CodeWarrior 8

The *CodeWarrior 8 Tools* CD-ROM comes with Be development software that supports developing applications for release 1.1d6 of the Be OS. These files now out of date—you can't use them to develop software for release 1.1d7 of the Be OS. So if you installed CodeWarrior 8 before receiving release 1.1d7 of the *Be Headers and Libraries* disk, you need to remove the release 1.1d6 software and replace it with the new development software. You also need to make sure that you have the CodeWarrior 8 PowerPC compiler and other tools installed (one way to develop Be applications for release 1.1d6 of the Be OS was to use the CodeWarrior 7 compiler with the CodeWarrior 8 IDE).

Note: These instructions assume you installed CodeWarrior 8 using the folder names suggested by the CodeWarrior Gold installation software. If you picked different names, you'll need to interpolate slightly as you follow these steps.

1. Open the **CW8 Gold** folder and then the **Metrowerks CodeWarrior** folder that's inside it.
2. Drag the **BeOS Support** folder and the **MW Debug/Be 1.2b3** application from the **Metrowerks CodeWarrior** folder to the trash.
3. Open the **(Project Stationery)** folder (which is in the **Metrowerks CodeWarrior** folder) and drag the three Be project stationery files to the trash: **BeOD Command-line.**µ, **BeOS Command-line.**µ, and **BeOS Project.**µ.
4. Drag the **CodeWarrior Plugins** folder from the **Metrowerks CodeWarrior** folder on the **CW8 Gold Tools** CD-ROM into the **Metrowerks CodeWarrior** folder on the hard disk. Click OK in the dialog box that asks if you want to replace the existing copy of the folder.

   This ensures there are copies of the CodeWarrior 8 PowerPC compiler and other necessary tools in the **Metrowerks CodeWarrior** folder.

Now you're ready to install the contents of the *Be Headers and Libraries* disk, as described in "Installing the Be Development Software" on page 13.

Installing CodeWarrior 8

The *CodeWarrior 8 Tools* CD-ROM comes with development software for release 1.1d6 of the Be OS. The release 1.1d7 version of the *Be Headers and Libraries* disk contains replacements for all the Be-specific software on the *CodeWarrior 8 Tools* CD-ROM, so you install only a few items from the CD-ROM.

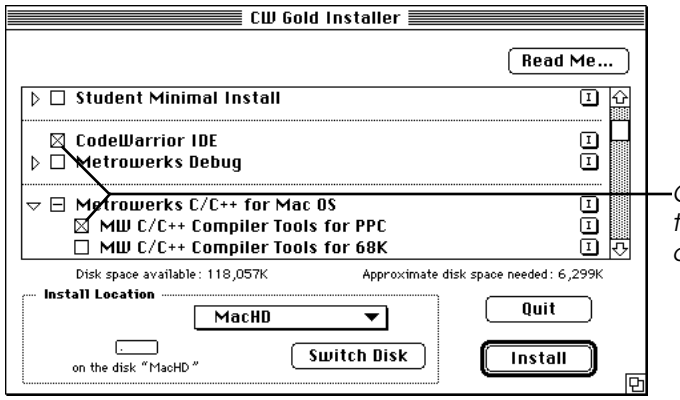
Note: These instructions assume you're installing CodeWarrior 8 Gold. If you're installing another version of CodeWarrior 8, you'll have to interpolate slightly as you follow these steps.

1. Insert the *CodeWarrior 8 Tools* CD-ROM in the CD-ROM drive.
2. Double-click the **CW8 Gold Tools** CD-ROM icon.
3. Double-click **CW Gold Installer**.

4. Click Continue in the banner dialog box and again in the Release Notes dialog box.

   A dialog box lists CodeWarrior installation options.

5. Check only two options: "CodeWarrior IDE," and the "MW C/C++ Compiler Tools for PPC" option that's visible when you click the arrow next to the "Metrowerks C/C++ for Mac OS" option.



   Don't check either of the two Be-specific options: "Metrowerks C/C++ for Be" or "Metrowerks Debug for Be" (the latter visible if you click the arrow next to the "Metrowerks Debug" option): The development software these options install is out of date. You'll install the release 1.1d7 versions when you install the contents of the *Be Headers and Libraries* disk.

6. Use the Switch Disk button and the pop-up list above it to select the folder where you want to install the CodeWarrior software.

7. Click Install.

8. Click Continue in the dialog box that warns you should restart the Macintosh after installing CodeWarrior.

   Any other running applications are quit. A dialog box keeps you informed on the progress of the installation.

9. Click Restart in the dialog box that tells you the installation was successful.

   The Macintosh restarts, and you're ready to install the Be development software from the *Be Headers and Libraries* disk, as described in the next section.

Installing the Be Development Software

The *Be Headers and Libraries* disk contains an archive of release 1.1d7 of the Be header files and libraries, some Be project stationery files, and the Be-compatible version of the Metrowerks cross-debugger for the Macintosh.

1. Insert the *Be Headers and Libraries* disk, double-click the **Be1.1d7.sea** icon, and click Continue.
2. Select the folder where you want to install the development software.

   By default, everything's placed in a folder called **Be1.1d7**.
3. Click Save.

   The archive is uncompressed, installing the Be development software in the folder you specified.
4. When the installation is complete, click Quit.
5. Open the **Be1.1d7** folder.
6. Open the **Metrowerks CodeWarrior** folder (it's in the **CW8 Gold** folder if you used the suggested folder names when you installed CodeWarrior 8).
7. Drag the **BeOS Support** folder, the **MCDB 1.4.1 README** file, and the **MW Cross-debugger for Be 1.4.1** application from the **Be1.1d7** folder into the **Metrowerks CodeWarrior** folder.
8. Open the **BeOS Project Stationery** folder (it's in the **Be1.1d7** folder) and drag the two project stationery files, **BeOS Application Project.**µ and **BeOS Driver Project.**µ, into the **(Project Stationery)** folder in the **Metrowerks CodeWarrior** folder.

   The **Be1.1d7** folder is now empty, except for the empty **BeOS Project Stationery** folder.
9. Drag the empty **Be1.1d7** folder from the hard disk to the trash.
10. Eject the floppy disk.

You're now ready to develop Be applications on the Macintosh, as described in Chapter 4, "Developing Be Software," in the *Be User's Guide*. The section "Developing Be Applications on a Macintosh" on page 127 of the *Be User's Guide* provides a detailed description of the Be development software you installed on the Macintosh.

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