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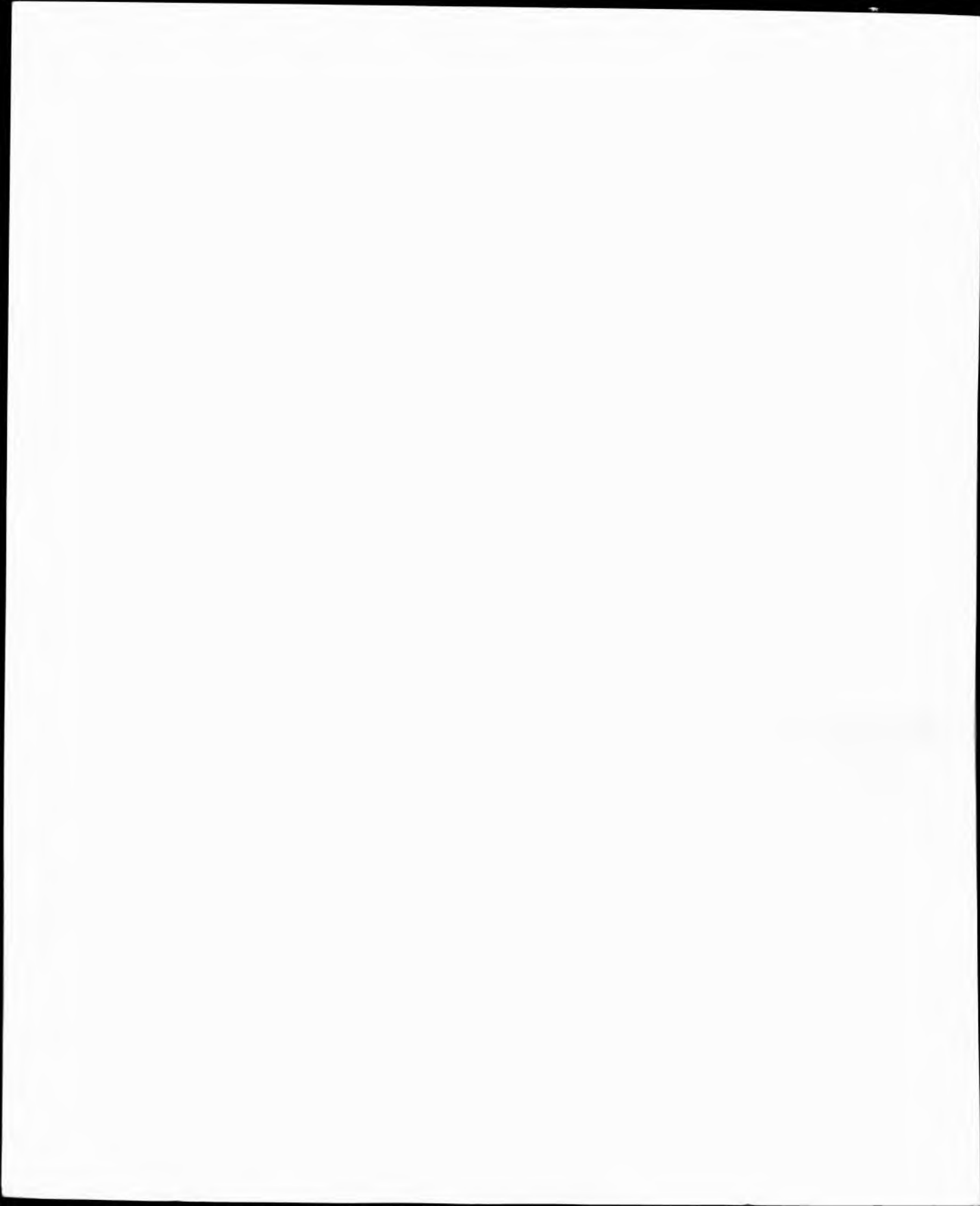
BeOS

BE
OPERATING
SYSTEM

User's Guide

RELEASE

4.5



BeOS User's Guide Release 4 and 4.5

BeOS Release 4 and 4.5

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Registration and Support

On the Web

The answers to most of the questions that you have about the BeOS and Be Inc. can be found at our web site:

<http://www.be.com>

Some locations within the web site that you may want to make a note of are:

<http://www.be.com/users/registration.html>

Go here to register your copy of the BeOS. Registering entitles you to discounts on future releases.

<http://www.be.com/support>

The **Support** section provides customer service and technical support. You'll find a wealth of Frequently Asked Questions (FAQs), software updates, documentation, and other information.

<http://www.be.com/support/assist>

This is a list of links to other areas of the web site that can help you with customer service and technical support.

<http://www.be.com/support/assist/custsupport.html>

This takes you to the **Support Request** form, which you use to request help on a specific topic.

<http://www.be.com/aboutbe/contactingbe.html>

This is a list of other ways—web site locations, e-mail addresses, phone numbers—to contact Be.

Through E-mail

If you want to report a problem or have a question but you can't get to the web, send e-mail to one of our support addresses. Please include as much information about the problem as possible, such as the configuration of your system, what you were doing, what happened, what you expected to have happen and why, and anything else about your configuration or problem that you think we should know.

For questions regarding installation, usage, configuration, and compatibility of the BeOS, BeBox, or other technical questions that are not about programming for the BeOS, send mail to:

`custsupport@be.com`

For questions about obtaining any of our products, send mail to:

`custservices@be.com`

By Phone

If you'd prefer to speak to someone about the BeOS, you can call us. Our U.S. Support Center, which handles all BeOS support, is available Monday through Friday, between 6 AM and 6 PM (Pacific time) at:

(972) 389-3740

By Post

If you'd like to write to us, send your letters to:

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Menlo Park, CA 94025

To write to our European offices, send to:

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Introduction

This edition of the *BeOS User's Guide* accompanies the BeOS™ Release 4 and 4.5 for Intel, Power Macintosh, and BeBox. It includes these chapters:

Chapter 1, "BeOS Basics." Explains the essentials of the BeOS user interface, including booting the system, the BeOS desktop, windows, and menus; the **Deskbar** and **Tracker**, **Replicants**, mounting disks, and system queries.

Chapter 2, "Be Application Basics." Tells you about BeOS applications, and working with files and text.

Chapter 3, "Connecting to the Network." Provides detailed information about configuring your BeOS system for networking.

Chapter 4, "Using Network Services." Covers what you need to know about using Internet services with the BeOS, including the World Wide Web, the **PoorMan** web server, e-mail, and **BeMail**.

Chapter 5, "Customizing the BeOS." Explains how to use BeOS preferences to customize the look and operation of your computer.

"Appendix A: The Mouse and Keyboard." A guide to the mouse, keyboard, and keyboard shortcuts.

"Appendix B: Miscellaneous." Summarizes screenshots and compressing, decompressing, and archiving files.

"Appendix C: The BeBox Guide." BeBox-specific user information.

"Appendix D: Working with the Mac OS Tools." Discusses working across platforms. Includes information on Macintosh TrueType fonts, and transferring files with Netfinder.

In addition to this guide, you can also refer to the following:

- Your computer's owner's guide. The owner's guides show you how to set up the computer before you install the BeOS. They also include details about the computer's ports and other features.
- The Installation Guide, which accompanies the BeOS CD-ROM, both as a printed booklet and as an electronic document on the Mac OS™ portion of the BeOS CD-ROM.

Keyboard Conventions Used in This Guide

- The Be Book, the reference to the Be API, is available in HTML format on the BeOS CD-ROM. The same information is also published in the *Be Developer's Guide*, available from O'Reilly (ISBN: 1-56592-287-5).
- The Be World Wide Web site <http://www.be.com/>, for more information about Be, Inc., and the BeOS.
- Specific information on installation and BeOS usage questions and answers can be found in the support section of the Be web site: <http://www.be.com/support/>.
- The Release Notes and other last minute documentation found on the BeOS CD.

Keyboard Conventions Used in This Guide

All keyboard references are based on the standard PC 104-key keyboard:

- **Alt** is the shortcut key
- **Ctrl** is the “other” key
- The **Windows** key is the option key

For complete information see “Appendix A: The Mouse and Keyboard.”

Text Conventions Used in This Guide

Different font styles are used in the text of this guide to make certain features easily identifiable:

- Applications, preferences, and window names: **Tracker** application, **Network** preferences, **Query Result** window
- Individual file and folder names and folder directory paths: **/home** folder, **/boot/home/config/settings/ppp**.
- Menu names or items in a menu: the **File** menu, the **Print** command
- User interface element: **Add...** a new network card interface, or **Modify...** or **Remove** an existing one
- Key names: press **Alt+O** to open a file
- Glossary term: *multihoming, network adaptor card*
- Code (or computer voice): `gzip file_name`
- Links (URLs): <http://www.be.com/support/>

1 BeOS Basics

This chapter shows you how to start up and shut down the BeOS, describes the fundamentals of the user interface, takes a look at the **Deskbar** and **Tracker** applications, and tells you how to search for files and folders. Chapter 2, “Be Application Basics,” begins where this one leaves off, covering the basic techniques you use with Be applications. Later chapters describe the applications that come with the BeOS.

This document assumes that you are familiar with the general operation and features of a computer at the user level—that you know what the mouse and keyboard do, what a window is, how to use a menu, and so on.

This chapter includes the following:

Section	Page
Booting the BeOS	page 18
Shutting Down the BeOS	page 21
Getting to Know the BeOS Workspace	page 23
A Look at BeOS Windows	page 24
Working with Menus	page 25
The Deskbar	page 28
Working with the Tracker	page 30
Replicants	page 36
Finding Files and Folders	page 37
Mounting Disks	page 37

⇔ **NOTE:** The BeBox is supported for BeOS releases until January 1, 2000. For BeBox-related information not included in the main chapters of this guide, see “Appendix C: The BeBox Guide.”

Booting the BeOS

After installing the BeOS you're ready to boot from your hard disk. (If you haven't installed yet, see the installation booklet that came with your **BeOS Release 4.5** CD.) Make sure there's no CD with BeOS system software inserted in a drive connected to your computer, and then boot the BeOS:

- **BeOS for Intel.** Look for the **BeOS Launcher** icon on your Windows desktop (the BeOS installer copies it to your **C:** drive at **C://BeLaunch/BeOSLauncher**). Double-click the icon to launch the BeOS.
- **BeOS for PowerPC.** Double-click the **BeOS_Launcher** application (in the **BeOS Mac Tools** folder on the Macintosh hard disk, which you copied from the BeOS CD as described in the Installation Guide) or choose BeOS when the OS selection dialog appears during startup.

When you boot, the BeOS logo appears briefly as the computer starts to load the Be system software, including the **Deskbar** and **Tracker** applications. Together, **Deskbar** and **Tracker** serve as the BeOS file management and navigation tool, used for arranging and opening files, starting applications, and so on.

Booting on Intel

The **Boot Loader** is the all-purpose application for setting preferences and options at the start of the boot process. To get into the **Boot Loader**, press and quickly release the space bar when the BeOS splash screen appears. Use the arrow keys to highlight the different options in the **Boot Loader**, and the Enter key to select an option. The **Boot Loader** screen looks like this:

```
BeOS Release 4.5
Boot Loader

Select new boot volume (Current: BeOS R4)
Select safe mode options
Select fail-safe video mode (Current: Default)

Continue booting
```

Selecting a Boot Volume

Select new boot volume is highlighted when the **Boot Loader** screen opens. If you want to change your boot volume from the current one that's shown, press Enter and in the next screen use the arrow key to highlight **Rescan for bootable partitions**. If there are other bootable partitions, you'll get a list to select from; if not, the current volume is highlighted and you should choose **Return to main menu**.

Booting Options

The sections that follow describe some **Boot Loader** options you can try if you have trouble booting.

Safe Mode Options

If you can't boot, restart your system and go into the **Boot Loader** (press and quickly release the space bar). Highlight **Select safe mode options**, and press Enter. This brings up a menu, with **Safe mode** highlighted; pressing Enter selects **Safe mode** and all the other options in the list (except **Enable console debugging**, explained below). Return to the main menu and continue booting; your monitor will be in grayscale (if you'd prefer color see "Fail-safe Video Mode: Booting in Color with an Unsupported Graphics Card," below). A dialog tells you that you've disabled "nonvital system services."

Enable console debugging lets you see serial output for the initial part of the boot cycle. You'd choose this if you can't boot and can't troubleshoot the problem; you can read the serial output to a technical support person to help identify where in the boot process your system hangs.

- ⇒ **NOTE: Advanced safe mode options** allows the entry of additional driver-specific options not included in the main **Safe mode** menu. Unless you know exactly what you're doing you should not use **Advanced Safe mode**.

Fail-safe Video Mode: Booting in Color with an Unsupported Graphics Card

There are two scenarios for using **Boot Loader's Select fail-safe video mode**:

- If your screen comes up in grayscale after a normal boot (that is, you haven't checked **Safe mode**), you may have an unsupported graphics card. You can reboot, go into the **Boot Loader** (press the space bar quickly when the splash screen first appears), and choose **Select fail-safe video mode** to run in a color mode that's not card specific.
- If you're booting in **Safe mode** but want to view in color, choose **Use fail-safe video mode** from the **Safe mode** options menu, then return to the main menu and choose **Select fail-safe video mode**.

You'll see a list of screen resolutions to choose from; pick one that's reasonable for your monitor—probably between 800x600x15 and 1024x768x16 (the numbers represent screen *width x height x bits per pixel*); higher resolutions slow down your system. The first choice is **Standard VGA**, which is grayscale mode. After you choose a resolution, return to the main menu and continue booting. The result is slower than it would be if the BeOS had a driver for your card, but it's faster than if you were running in grayscale, and you'll probably like it better.

- ⇒ **NOTE: Select fail-safe video mode** may or may not appear in the **Boot Loader**, depending on your video card. If you have one of the newer, VESA-2 compliant cards you will see **Select fail-safe video mode**; with older cards you probably won't.

Booting on PPC

You set the boot volume—your choice of a disk or partition to boot the BeOS from—during installation. There are two ways to change your boot volume after installation: by using the **Boot** preference application, or in the *boot menu screen*.

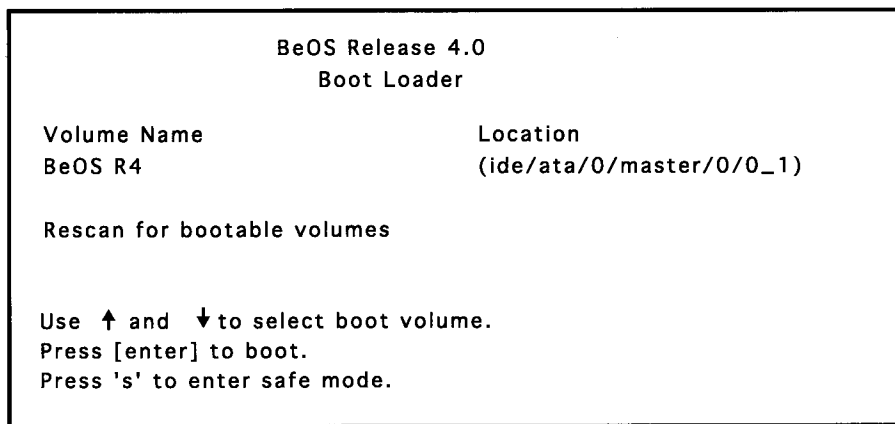
Boot Preference Application

The **Boot** preference app lets you select the volume from which you launch the BeOS. This is meaningful only if you have the BeOS installed on more than one partition. To learn how to use **Boot**, see “Setting the Boot Volume with the Boot Manager (Intel) or the Boot Preference (Mac/PPC)” in Chapter 5, “Customizing the BeOS.”

Boot Menu Screen

You can also change the boot volume in the *boot menu screen*. To see this screen, you need to interrupt the boot sequence by double-clicking the **BeOS_Launcher** and immediately holding down the **Control** key.

The boot menu screen looks like this:



The screen lists each bootable volume by its device name and by its volume name. Use the arrow keys to select a boot disk and press **Enter** to make the selection take effect. The boot process then continues.

Troubleshooting: Booting in Safe Mode

If you're having trouble booting it may be because your other hardware (network card, sound card, modem, and so on) is not supported by the BeOS. You may be able to work around the problem by trying a “safe boot”:

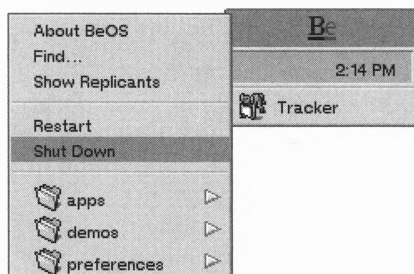
- First, bring up the boot menu screen, as explained above.
- Highlight the volume you want to boot and press “s” to toggle into safe mode.
- You’ll see a list of items with checkboxes.
- The only item you should check is the first one, **Safe mode**. Press **Enter** to check the option.
- To continue with the boot sequence, use the arrow keys to highlight **Continue safebooting from “diskname”** and then press **Enter**. If you want to return to the boot menu screen, highlight **Cancel** and press **Enter**.

After the BeOS is booted, a panel with further instructions will be displayed. If you still have trouble, send e-mail to BeOS Customer Support: custsupport@be.com.

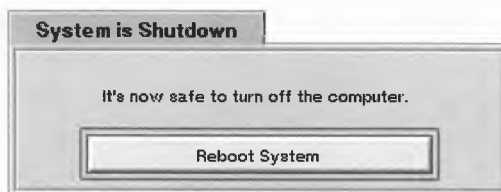
Shutting Down the BeOS

Before you turn off the computer you should shut down the BeOS to give applications a chance to clean up after themselves.

1. Save files you are currently working in.
2. Click on the **Be** logo in the **Deskbar** to bring up the **Be Menu**, then choose **Shut Down** or **Restart**.

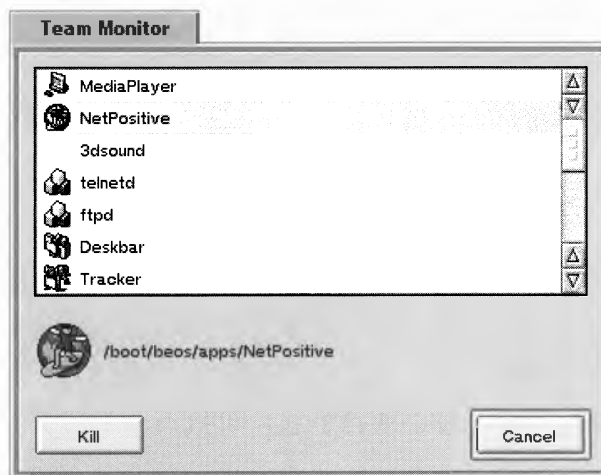


3. If there are tasks in progress (copying or moving files, emptying the trash, etc.), a dialog asks you to confirm shut down/restart when they are complete.
4. Eventually, you’ll see a message that it’s safe to turn off the computer, or click the **Reboot System** button. If you want to reboot immediately press **Enter** to restart the BeOS. (If you chose **Restart**, this message does not appear.)



The Team Monitor

If an application or server is causing problems, but the trouble falls short of a system crash, you can use the **Team Monitor** to kill a single, troublesome application or server without having to reboot. For example, if an application freezes, press **Control+Alt+Delete** (the **Del** key on the numeric keypad or the **Delete** key above the arrow keys) to bring up a selection window that shows all currently running apps and servers. Highlight the application you want to kill (only applications and servers that are currently running appear in the selection window), and press **Kill**, then press **Cancel** (you must cancel the **Team Monitor** window to continue working). If killing one or more apps or servers doesn't free up your system, press **Control+Alt+Delete** again to forcibly reboot.



Resetting the BeOS

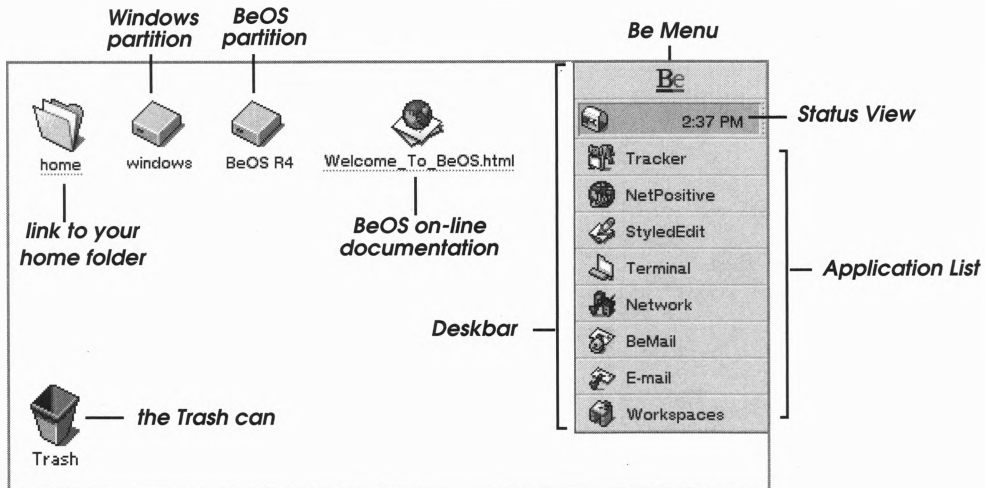
If your computer crashes, you'll need to restart or "reset" the BeOS:

- **BeOS for Intel.** Press **Control+Alt+Delete** (the **Del** key on the numeric keypad or the **Delete** key above the arrow keys).
- **BeOS for PPC.** Press **Control+Command+Power On**.
- **On a BeBox (or other hardware).** Press the **Reset** and **Interrupt** buttons. Check your computer's user manual for the location of these buttons.

⇒ **CAUTION:** If you reset the computer without choosing **Restart** or **Shut Down** first, you risk losing data. In particular, you'll lose changes made to documents since you last saved them.

Getting to Know the BeOS Workspace

Familiarize yourself with the Be workspace as it appears in this screen:



Appearing on the desktop when you boot the BeOS:

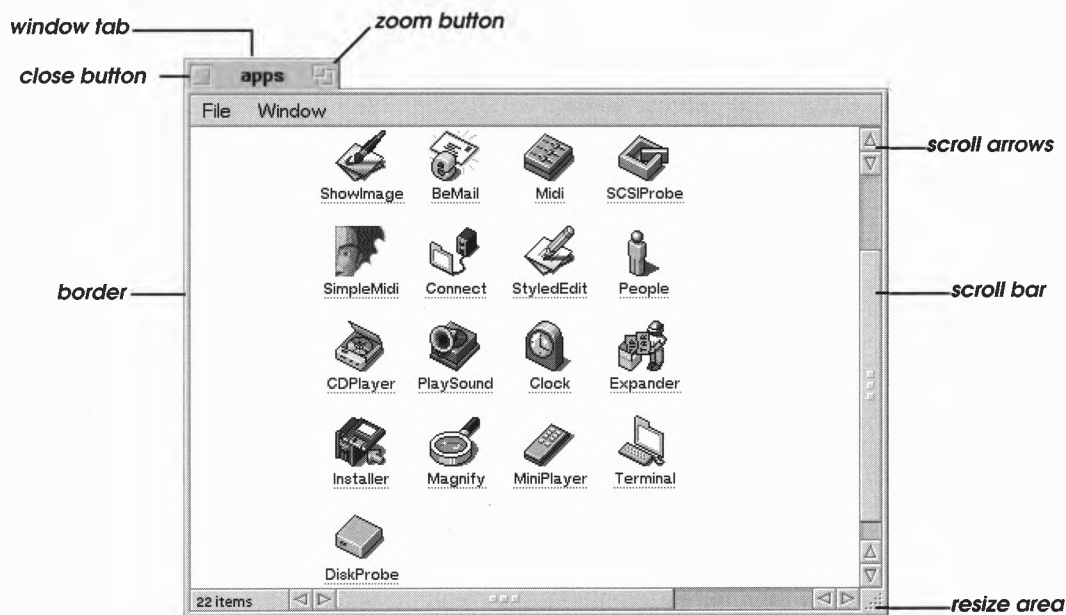
- An icon that represents the BeOS partition that you installed on your hard drive. This is where the Be file system lives.
- An icon representing the Windows or Mac partition of your hard drive. You can read and write the files on this “foreign” partition, but you can’t run Windows or Mac applications.
- A link to your **home** folder. This contains, among other things, a **query** folder for system queries you generate with the **Find** feature, a **mail** folder, and a **SampleMedia** folder with test files to use with applications.
- **Welcome_To_BeOS.html** is a link to the online documentation.
- The **Trash** icon. This is where you drag files that you want to dispose of.
- The **Deskbar**, which is explained in its own section below.

Like most operating systems, the BeOS presents documents (and other data) in *windows*, and lets you operate on the data through direct manipulation (typing, cut/copy/paste, etc.) and through the use of *menus*. Before looking at specific parts of the BeOS, such as the **Deskbar** and **Tracker**, we’ll glance at how windows and menus look and behave on the BeOS.

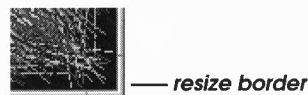
A Look at BeOS Windows

The windows that the BeOS presents are similar to those of other operating systems. For one thing, they're square. And you can move them, resize them, close them (and so on), using techniques that should be familiar to anyone who's touched a computer in the last ten years. This section provides a very brief look at a typical BeOS window, and tells you how to manipulate it.

Be windows look like this:



- **Moving and Resizing.** To move a window, drag it by its tab or border. To resize it, grab the resize area and drag. On windows that have scroll bars, the resize area is the square between the scroll bars (as shown above); on other windows, it's simply part of the window's border.
- **Zooming.** You can also resize a window by clicking its zoom button. This resizes the window so it's big enough to display everything it contains (without spilling off the screen). Click the zoom button again to return the window to its previous size and location.
- **Hiding and unhiding.** To hide a window, double-click its window tab anywhere except in the close or zoom button. When a window is hidden, its icon in the application's **Window List** (in **Deskbar**) is gray; to unhide the window, click on the grayed-out icon. (The **Window List** is described and illustrated later in the "The Deskbar," later in this chapter.)
- **Closing.** You close a window by clicking the close button. For most applications, closing the app's final window automatically quits the app.



- **Sliding the window tab.** A unique feature of Be windows is that you can slide the window tab across the top of the window. You do this by holding down the **Shift** key and then dragging the tab.



shift drag slides the window tab

The BeOS has a notion of an *active window*. Many windows can be open but only one window can respond to your actions, such as pressing keys on the keyboard. This *active window* is the one that's frontmost on your screen and has a yellow tab. (The tabs of all other windows are gray.) To make a window active, click its tab, border, or, for most windows, anywhere inside it. When you start up a new application or switch applications, the frontmost window in the new application is usually the active window.

⇔ **NOTE:** If you've used the **Mouse** preference to turn on Focus follows mouse, the active window will be whatever window the mouse is pointing to. In focus-follows-mouse mode, the active window may not be frontmost, but it *will* have a yellow tab.

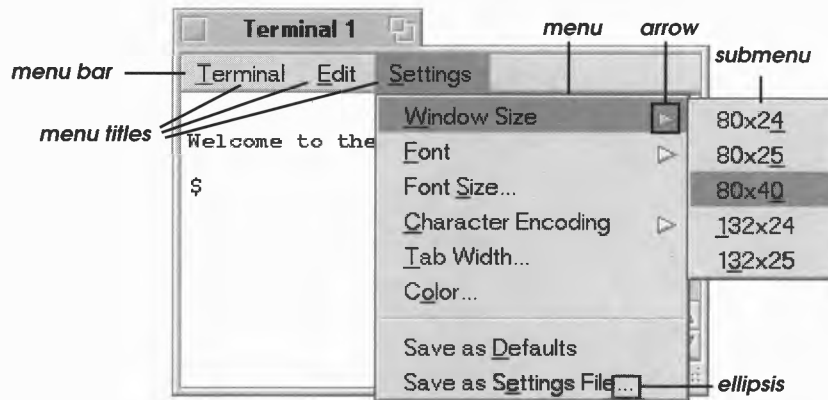
Working with Menus

Menus are pop open palettes of commands. BeOS menus aren't much different from menus on other operating systems—if you've used a computer before, you shouldn't have any trouble using the Be menus.

This section describes the default look and behavior of Be menus. To customize the menus on your computer, see the "Menu" in Chapter 5, "Customizing the BeOS."

Windows and Menu Bars

Almost all windows have a *menu bar*, a grey bar at the top of the window that contains some number of menu titles. Click on a title and the menu it corresponds to pops open, displaying its commands. An



arrow to the right of a command indicates a submenu. If a command title has an ellipsis ("...") at the end, it indicates that if you choose the command, an additional panel will appear

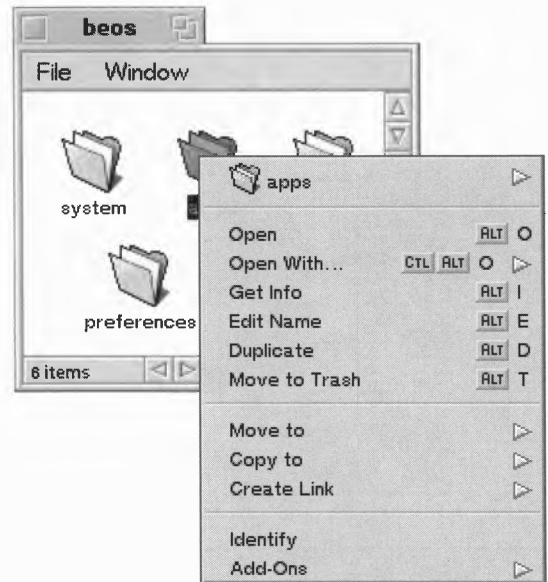
To select a command from a menu, simply click on it—the command is executed and the menus go away. To dismiss a menu without choosing anything, hit **Escape**. If you have submenus open, you have to hit **Escape** for each one.

The menu shown above was opened by clicking (i.e., pressing and releasing the mouse). You can also *drag* through a menu: Press on a menu title and drag through the menu, releasing the mouse when it's pointing to the command that you want. Submenus automatically open and close as you drag over them. To dismiss the menu(s) without choosing a command, simply drag the mouse outside the bounds of the menu and release.

Context Menus

Many items that appear on the desktop and in Be applications have *context menus* associated with them. A context menu is an object-specific menu that's displayed when you press (mouse-and-hold) on the object; it takes a moment for the menu to appear—long enough for the system to realize that you're not going to double-click the object. You can pop open a context menu immediately by pressing with the second mouse button, or by holding down **Control+Alt** when you press with any button.

An object that has a context menu doesn't give you any visual indication that the menu exists—you learn which ones do mostly by experience. Most objects presented by **Tracker** and **Deskbar** *do* have context menus. For example, if you press a file icon inside a Tracker window, you'll see the context menu shown here.

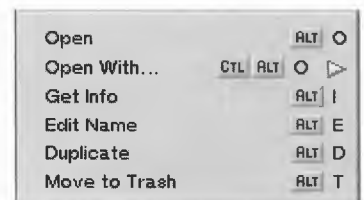


Shortcuts and Triggers

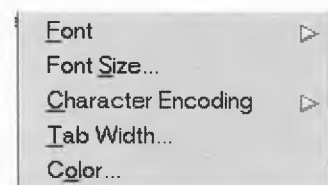
BeOS menus can also be operated from the keyboard, through *shortcut keys* and *trigger letters*.

- A *shortcut key* is an **Alt+letter** combination that's assigned to a specific menu command (or, on a Macintosh-based machine, **Command+letter**). Some shortcuts specify additional modifier keys, such as **Shift** or **Control**. Pressing the keyboard shortcut when the menu is closed chooses that command. The shortcuts for a menu's command are shown along the right side of the open menu. Not every command needs to have a shortcut. Keep in mind that the shortcuts only work when the menu is closed.
- A *trigger letter* is a single character that's assigned to a command. By pressing a trigger letter, you invoke the associated command. Trigger letters are underlined in a menu's title or in a menu item, and only work when the menu is open.

Some aspects of a menu's look and behavior can be modified through the **Menu** preference.



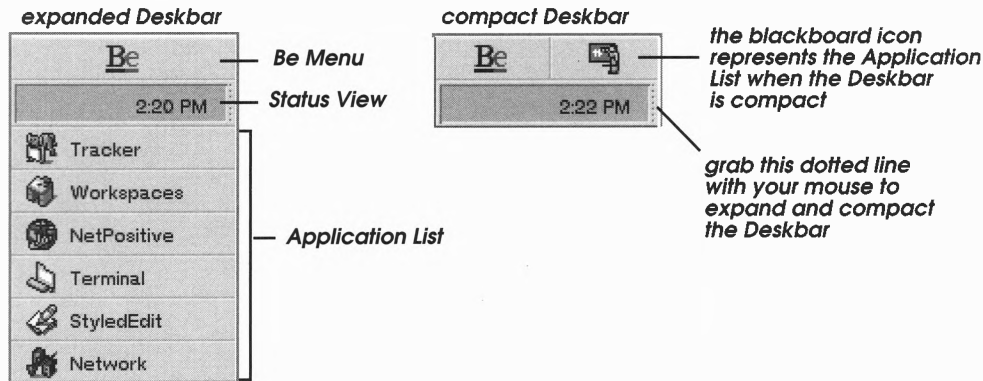
shortcut keys



trigger letters

The Deskbar

The **Deskbar** is a roster of system services and applications. It contains **Be Menu** items, the **Status View**, and a list of all running applications. When you start the BeOS, the **Deskbar** appears in the upper-right corner of the screen. To move it to any of the four corners or to spread it across the top or bottom of the screen, grab the dotted border at the right of **Status View**. This is easier to see than to describe:

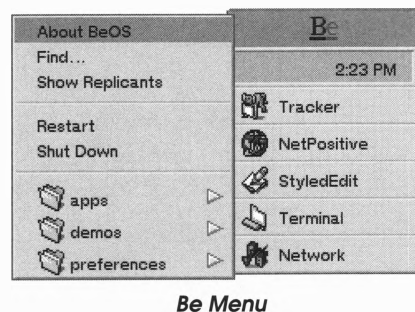


When it's lying along a side of the screen (as opposed to spread across the top or bottom), the **Deskbar** can appear expanded (the default) or compact. To compact the **Deskbar**, press the dotted line and drag up. When the **Deskbar** is compact, a blackboard icon next to the **Be Menu** represents the **Application List**. Clicking on the blackboard pops open the list of running applications.

The Be Menu

The **Be Menu** opens when you click the Be logo in the **Deskbar**. The **Be Menu** contains:

- **About BeOS.** Basic system information and credits.
- **Find.** The system query application, described in detail in "Finding Files and Folders" in this chapter.
- **Show/Hide Replicants.** The *replicants* mechanism lets you "clone" views and drop them into other applications. The **Show/Hide Replicants** menu item displays or hides the replicant's handles, or *dragers*. See "Replicants" in this chapter for more information.
- **Restart/Shut Down.** These were described in "Bootting the BeOS," above.
- The folders listed at the bottom of the **Be Menu** comprise the "shortcut" list—folders and files that you want to keep at your fingertips. By default, the list contains the **apps**, **preferences**, and



demos folders. You can add your own items to this list, as explained in the chapter “Customizing the BeOS.”

Status View

The **Status View** initially shows the time. Click on the time and it changes to the date. (To set the **Time** preference, see “Time (and Date)” in Chapter 5, “Customizing the BeOS.”)



Status View



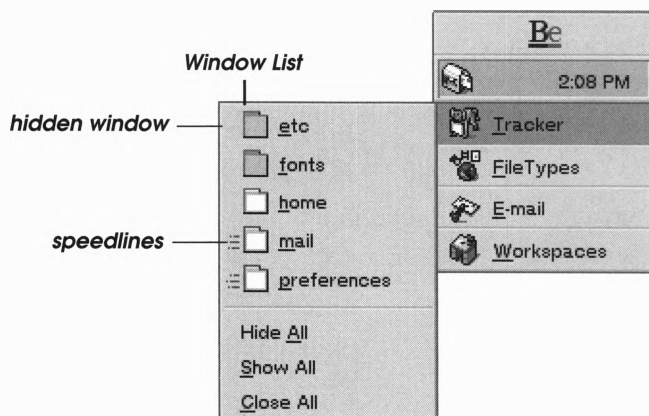
Certain system services add icons to the **Status View** to tell you that they're running, and to give you access to their menus. For example, the mailbox icon shown above is added by the *mail daemon* (the background service that sends and delivers e-mail). Clicking on the mailbox icon pops up a list of mail commands (the commands themselves are explained in a later chapter).

The Application List

The **Application List** shows all currently running applications. The application is always visible in **Deskbar**'s expanded form; when **Deskbar** is contracted, you pop open the list by clicking the blackboard icon. Clicking on an application in the list “activates” that application and brings one of its windows to the front of the screen.

Each application has its own **Window List** which you can see by clicking and holding the app's icon. The **Window List** lets you select individual windows, and also lets you show, hide, and close all windows in an application

Windows that are hidden are grayed out; click on the gray icon to make the window reappear on the desktop. “Speedlines” next to a window icon indicate that the window is in a different workspace than the current one; clicking on the icon takes you to that workspace.



Working with the Tracker

The **Tracker** application is the BeOS file system navigation and file management interface. **Tracker** windows present the contents of individual folders. The next sections explain how **Tracker** windows are set up (“Looking at Tracker Windows”), how to use the windows to navigate the file system (“Navigating in Tracker Windows”), and explores some of the things that **Tracker** lets you do to files and folders (“Tracker Basics”).

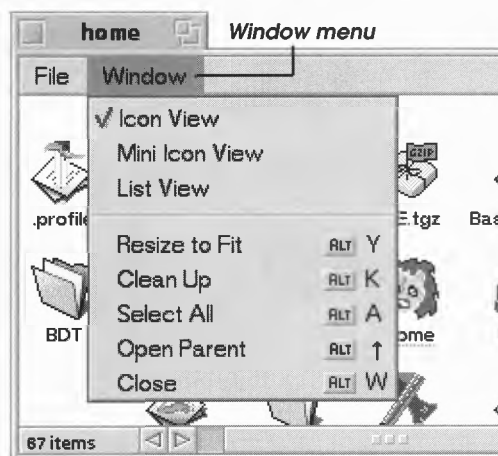
Looking at Tracker Windows

When you double-click a folder, a new **Tracker** window opens on the screen. The window can display its contents—the files and folders it contains—as icons, mini-icons, or as a “list view.” You change modes by choosing an option from the **Window** menu.

Icon and Mini Icon View

In **Icon View** and **Mini Icon View**, you can move an icon within the window by dragging it to the location you want. If more than one icon is selected, they all move when you drag.

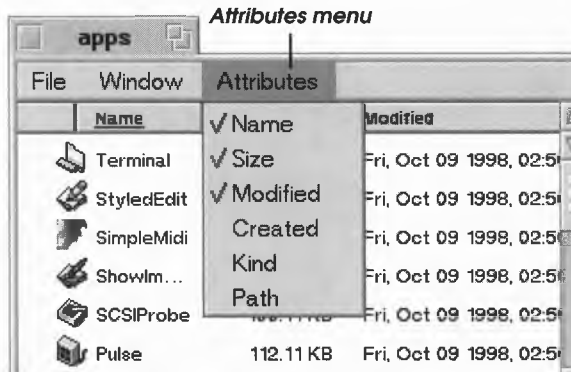
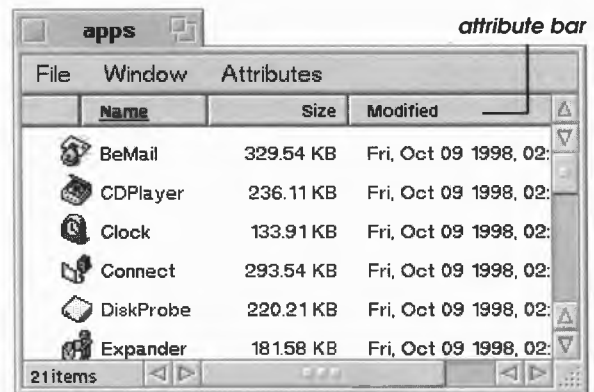
Some of the commands in the **Window** menu arrange the icons in a grid. Choose **Clean Up** to align each icon in the window to the nearest location in the grid. If you hold down the **Shift** key, **Clean Up** changes to **Clean Up All**, which sorts the icons in the window in alphabetical order.



List View

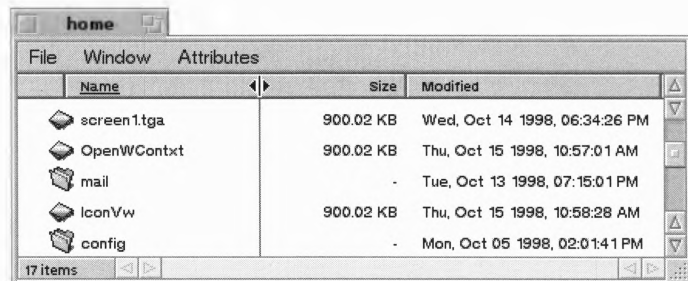
In **List View** mode, the **Tracker** window displays its contents in a vertical list, and additional facts, or *attributes*, are given for each item. The names of the attributes are listed in the window's *attribute bar*.

The window displays an **Attributes** menu. This menu lets you select the attributes you want to display. The full list of attributes depends on the type of files the window contains, but some common attributes (name, size, modification date) are available to all files. You can also pop open a copy of the **Attributes** menu by right-clicking in the attribute bar.



Moving and Resizing Attribute Columns

To change the order of the attributes, click on an attribute in the attribute bar and drag it to another location. You can resize an attribute's column by pressing and dragging the divider between two of them and dragging to the size you want. A special cursor and a blue line indicate that you're in resize mode.



To move an attribute drag it where you want it; drag it out of the attribute bar to remove it.

Sort Order

Initially, items in **List View** are sorted alphabetically by name—in attribute-speak, the “name” attribute is the *primary sort field*. If you click on an attribute it becomes the primary sort field and the items in the list are sorted accordingly. Also, the attribute you clicked is now underlined. To set a secondary sort field, **Shift**+click on another attribute. A dotted underline indicates the secondary field. Click a second time on either attribute to sort in reverse order.



Navigating in Tracker Windows

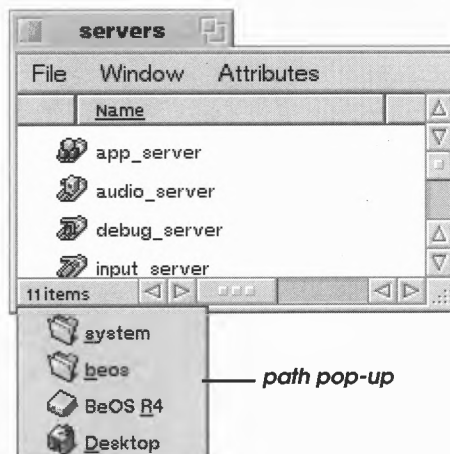
Like most modern operating systems, the BeOS is based on a hierarchical file system that uses the metaphor of folders (or directories) to help you organize and keep track of your files. Within the hierarchy, every folder has a parent folder. There are three ways to open the parent of the **Tracker** window that you're currently working in:

- By choosing **Open Parent** from the **Window** menu.
- By pressing **Alt+up arrow**.
- By using the *path popup*, as described below.

Click the lower-left edge of a folder window (the area that shows the number of items the folder contains). This displays the *path popup*, a list that describes the succession of nested folders—the “parent path”—to your current folder. You can open any folder from the path popup by selecting it.

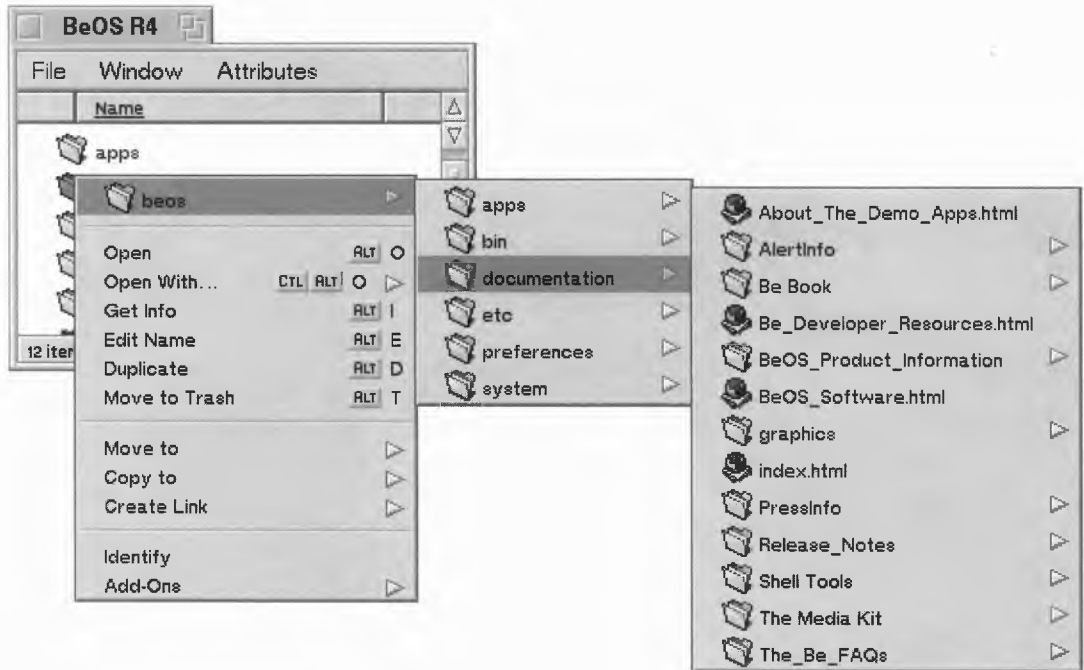
If you hold down the **Windows** key when opening a parent folder, the original folder closes when the parent opens.

You can “descend” the file hierarchy simply by double-clicking a folder within your current **Tracker** window. This opens a new window for



the “child” folder, in which you can double-click another folder, and so on. Again, if you hold down the **Windows** key while opening a new **Tracker** window, the old window closes.

You can also descend the hierarchy by using the context menu that pops open when you press and hold the mouse on a folder icon. The context menu shows the standard **File** menu commands, plus, at the top of the menu, an item that represents the folder that you pressed the mouse on. Move the mouse over the item and another menu appears that shows the folder’s contents. You can select a file or folder in this menu, or descend some more by moving your mouse over yet another folder, and so on.



For information on keyboard navigation of **Tracker** windows, see “Keyboard Shortcuts” in “Appendix A: The Mouse and Keyboard.”

Tracker Basics

Some of this information will already be familiar to you from other operating systems, but some is BeOS-specific.

Getting Information About an Item

To get information about an item in a **Tracker** window, select it and choose **Get Info** from the **File** menu. Most context menus also have a **Get Info** command.

Working with the Tracker

The information you receive depends on the item: Disk information is about storage capacity and free space. File information is about size, creation, modification date, and location in the file system. For applications, you get this same information, plus a version number.

Renaming Items

To rename an item in a **Tracker** window, click on the name and type, or select the item and choose **Edit Name** from the **File** menu. You can use up to 255 characters—anything but a forward slash (“/”)—and any name not already used in that folder.

If you change your mind about renaming a file or folder while editing its name, press the **Escape** key to restore the original name.

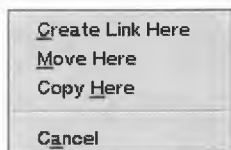
- ⇔ **WARNING:** Do NOT rename the */beos* folder located on the boot disk or the BeOS will no longer work.

Moving, Copying, and Linking

You can move items from one folder to another by dragging them into the window or onto the icon of the destination folder.

- ⇔ **NOTE:** If the destination folder is on a different volume, the item is copied instead of moved.

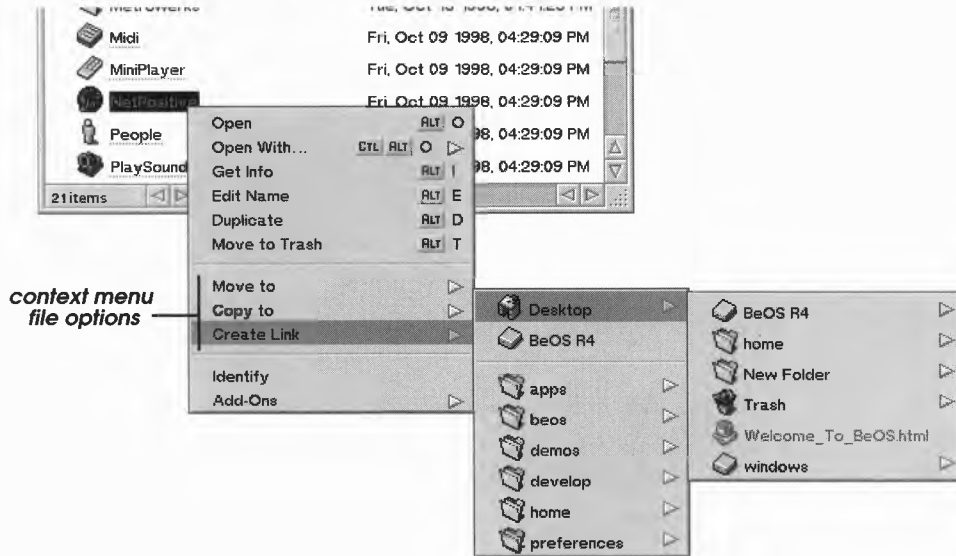
If you want to copy an item rather than move it, hold down the **Windows** key while you drag the item. This forces a copy whether the destination is on the same volume or not. You can also copy an item (into the same folder) by selecting it and choosing **Duplicate** from the window's **File** menu. The duplicate has the same name as the original, but with “copy” appended. If you make multiple copies of the same item, “copy 2,” “copy 3,” etc., is added to the name.



file options menu

If you hold down the **Control** key when you're dragging a file or folder icon, you'll see the *file options menu*. Choose from one of the options to create a link to (which we'll explain in a moment), move, or copy the file (or cancel).

The context menu that you get when you press and hold on an icon presents a similar array of file options. In addition, it lets you navigate the file hierarchy to search for the destination folder at the same time.



If you're copying or moving a lot of files, a **Status** window shows the progress of the task. You can click the **Stop** button to stop a task in midstream, but whatever you've done so far is not undone.

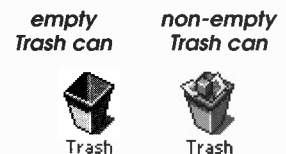
Creating a Link

A link is a “dummy” file that points to an actual file or folder. The link file displays the same icon that represents the real item. To show that it's a link, the link's filename is underlined. A link is a handy way to create a shortcut to a file, folder, or application that you frequently use. You can put a link anywhere, but they often live on the desktop.



Deleting Items

You delete files, folders, and other items by dragging them into the **Trash**. You can also choose **Move to Trash** from the **File** menu or from object's context menu. You can also highlight an item and press the **Delete** key (not the **backspace** key). When the **Trash** can isn't empty, it displays rubbish.



Items in the trash aren't actually deleted until you *empty* the trash.

If you decide not to delete something, double-click the **Trash** icon and drag it out of the **Trash** window that opens up.

Replicants

When you want to remove items permanently, choose the **Empty Trash** command from the **File** menu in the **Trash** window, or from the **Trash** icon's context menu. You should empty the trash periodically, because eventually it can take up a lot of disk space.

Tracker Add-ons

Add-ons are applications that can perform operations on individual files or on a set of files; they're a way of adding things to a program that weren't included when it was written. Three types of **Tracker** add-ons come preinstalled with the BeOS: **Backgrounds**, **FileTypes** (both explained in this guide's chapter on preferences, "Customizing the BeOS"), and **Zip-O-Matic**.

Zip-O-Matic

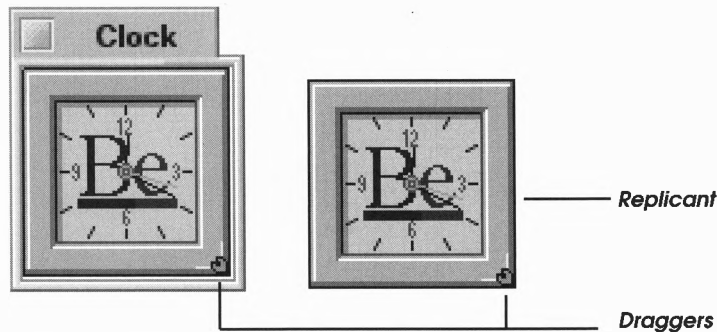
Zip-O-Matic lets you compress and archive multiple files into a single file (it replaces **MakeArchive**). To use **Zip-O-Matic**, highlight the files or folders you want to compress and right-click to open a context menu, then highlight **Add-Ons** (at the bottom of the menu) and click **Zip-O-Matic**; a status window shows the progress of creating the archive.

You can also use **Zip-O-Matic** by right-clicking on the desktop to bring up context menu, then choosing **Add-ons>Zip-O-Matic**. A **Zip-O-Matic** window pops up that tells you to drag the files onto it that you want to zip.

There are also many third-party **Tracker** add-ons (along with third-party application add-ons) available from BeWare (<http://www.be.com/beware/Add-Ons.html>) for doing such things as viewing archives, expanding and compressing files, viewing file attributes, searching file contents, and so on.

Replicants

A replicant is a component of an application that you can "clone" so that it resides inside another application. To replicate an item, open the **Be Menu** in the **Deskbar** and choose **Show Replicants**. This creates hand-like *draggers* on items you can replicate. Grab by the dragger to place the replicant anywhere you want, including the desktop.



Currently, you can replicate the **Clock** application and **NetPositive** web pages. For more on web page replicants, see “NetPositive as a Replicant—Live Desktop Pages” in the chapter “Using Network Services.”

To delete a replicant, right-click on the dragger; a popup menu gives you the option to delete.

Mounting Disks

Mounting disks makes their contents available to the operating system. Use the **Mount** command in the desktop context menu or in the context menu that appears when you press on the icon of any mounted volume. In both context menus, all available disks appear in the **Mount** menu popup; disks that are already mounted have a checkmark beside them. Both menus also give you the option of mounting all attached disks with the **All Disks** command.

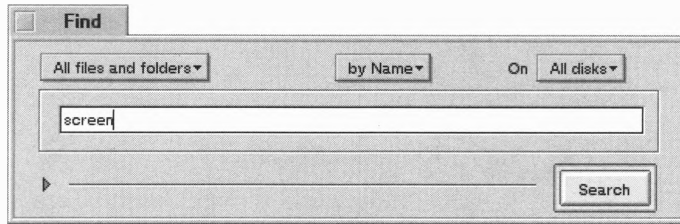
If you click **Settings**, you'll see the **Disk Mount Settings** panel, which lets you specify automounter settings—which disks you want mounted on your desktop.

Finding Files and Folders

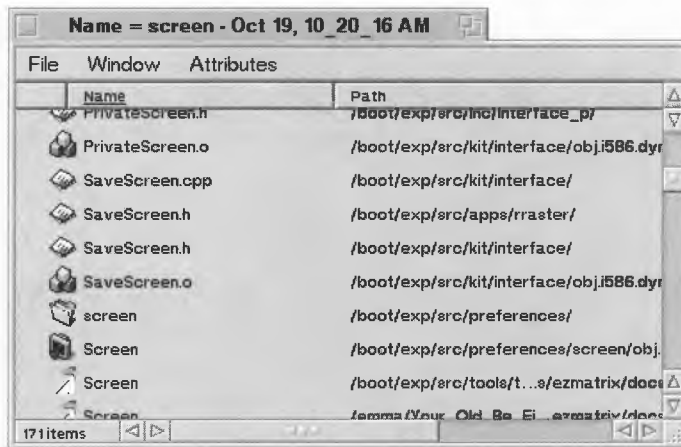
You use the **Find** command in the **Be Menu** to search for files, folders, and other items in the Be file system. You can also search for such things as e-mail or the names of audio CD tracks you enter in the **CDPlayer** application.

Finding Files and Folders

When you choose **Find**, the **Find** panel opens; there you specify the attributes of the thing you're looking for.



The **Find** panel shown here is prepared to search for any file or folder that has the word “screen” in its name. The search is performed on all disks (including Mac or Windows volumes). Click the Search button and a window opens and starts to fill with items.

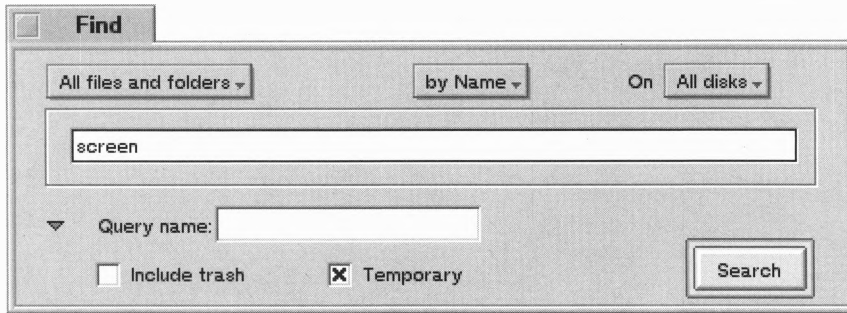


As shown here, the window (a **Query Result** window) looks a lot like a **Tracker** window, except the background is gray, and it only works in **List View**. (In fact, the window is created by **Tracker**.) You can double-click the files and folders that are listed in the window, move them, copy them—you can do just about anything you would do in a “normal” **Tracker** window.

The **Find** panel lets you modify your search, or *query*, in these ways:

- The top-left popup lets you choose the type of item you want to find (“All files and folders,” “E-mail,” “Bookmark,” etc.)
- The center popup lets you choose one of three search techniques: You can search by name, by attribute, or by formula. The attribute search is the most powerful—it lets you ask for files of a certain age, size, and so on. The formula search, in which you type in a logical expression (such as *name='*screen*'*) is the most flexible, but is also the clumsiest and hardest to understand.
- The right popup lets you restrict your search to a particular volume.

Toggle the **Find** panel's little grey arrowhead, and you'll see more choices.



- The Query name: field lets you name the query that you're creating so you can run it again later. You don't have to name your queries—usually you only do this for queries that you run by habit. For example, if you regularly check your disk for large files, or for e-mail of a certain age (so you can prune it), you would want to name these queries.
- The Include trash checkbox tells the **Find** mechanism to rummage through the **Trash** can. By default it avoids that rubbish.
- Checking the Temporary check box means your search results will be saved only for a certain system-set period of time. If you want to save your query uncheck Temporary.

Saving and Editing Queries

Queries are saved as files in the **home/queries** folder, either under the names that you gave them, or using the default names that the query mechanism gives them. When you double-click a query file, the query is re-run—it's as if you opened the **Find** panel, typed in the query criteria, and hit Search.

To edit a query, select a query file in the **home/queries** window and select **Edit Query** from the **File** menu (**Alt+G**). This brings up the **Find** panel that's filled in with the query's criteria; you can then change the criteria. The **Query Result** window also has an **Edit Query** item in its **File** menu. This lets you bring back the **Find** panel for a query that you've just run.

To delete a query, drag it into the trash, just like any other file.

2 Be Application Basics

This chapter introduces the techniques you use when working with the applications that Be supplies. Many of these techniques, such as how you launch and quit an app, or how you open and save files, can be applied to third-party applications, as well. Native BeOS applications are in the **/apps** folder located on your boot volume. As a convenience, the folder is included in **Deskbar's Be Menu**, as explained in "The Deskbar," in Chapter 1, "BeOS Basics." For some specific information on applications that are new or modified in Release 4.5 see the User Release Notes on your BeOS Release 4.5 CD (**/boot/beos/documentation/User's Guide/Release Notes/index.html**).

This chapter contains:

Section	Page
Working with BeOS Applications	page 41
Working with Files	page 43
Working with Text	page 45

Working with BeOS Applications

Here's how you launch, switch between, and quit applications. Keep in mind that because the BeOS is multitasking, you can run many applications at the same time.

Launching an Application

The obvious ways to start an application are by **(a)** double-clicking its icon, **(b)** selecting the icon (in a **Tracker** window) and choosing **Open** from the **File** menu, or **(c)** selecting the icon and pressing **Enter**.

You can also launch an application by opening a file: Opening a file automatically launches the *preferred app* for that file. (To set the preferred app use **FileTypes**, explained in “FileTypes” in the chapter “Customizing the BeOS.”)

When an application is running, its name is added to the **Application List** in the **Deskbar**. When you select an app in the **Application List**, you can see its open and hidden windows as explained in “The Application List” in “Be Application Basics.”

The Active Application and Switching Apps

While all running applications are “active,” in the sense that they can all be doing work at the same time, the application in the frontmost window (with the yellow tab) is referred to as the *active application*, and responds to keyboard actions.

- ⇔ The exception to the active window being frontmost occurs if you check the **Focus Follows Mouse** checkbox in the **Mouse** preferences panel. In that case, the active window is the one the mouse is pointing to, whether it's frontmost or not. For more information see “Mouse” in the chapter “Customizing the BeOS.”

Switching Between Applications

You can switch easily between applications by clicking in an open window belonging to the application you want to switch to. In addition, you can use the **Deskbar's Application List** or you can use the **TwitcheR** application, as explained below.

The TwitcheR

TwitcheR lets you see and switch between running applications and their windows. To bring up the **TwitcheR**, press and hold **Control**, and then press and release **Tab**. The **TwitcheR** window looks like this:



With **Control** still held down, successive **Tab**s (or **left/right arrows**) will cycle through your open applications. The **up/down arrows** will cycle through an app's windows. To switch to the app (and window therein) that **TwitcheR** is pointing to, simply release the **Control** key. The application's window comes to the front on your desktop; if the window is in another workspace, you're taken to that workspace.

Quitting an Application

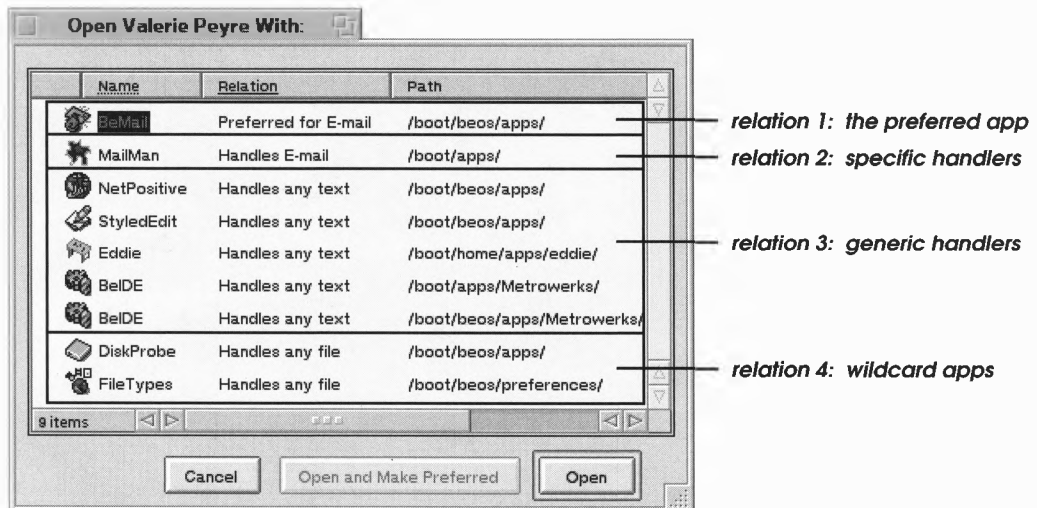
To quit an application, you can (a) choose the **Quit** menu command, generally found in the **File** menu, (b) type **Alt+Q**, the shortcut key for **Quit**, or (c) close the app's last open window—most applications are designed to quit when all their windows have been closed. If you're running a full-screen application such as the **Dominoes** demo or many games, pressing **Alt+Q** is the only way to quit.

Working with Files

If you've ever turned on a computer, chances are you already know how to open a file, create a new one, save it, and close it. Here's some additional information for handling files in the BeOS.

The “Open With” Window

When you open a file, the application that's designated as the file's preferred application is told to display the file's contents. However, there are times when you may want to use some other application to view the file. To get a list of candidate applications, select a file in a **Tracker** window and choose the **Open With** command in the **File** menu. An **Open With** window is displayed that shows all the applications the system thinks it can use to open the file.



The applications are divided into four “relations,” by their aptness for opening the file:

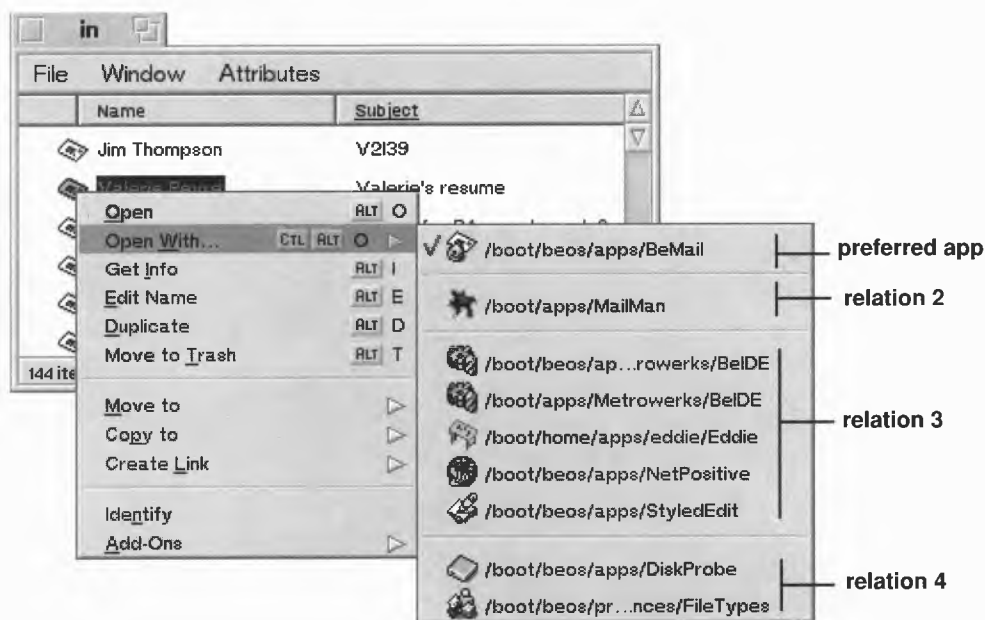
- The first relation always contains the *preferred application* (only).

- The second relation shows all applications that handle the file's "specific" type.
- The third relation shows applications that know how to handle the file's generic type. Examples would be video applications that open any MPEG file, or applications that open any type of text file, whether the text is in a word processing file or source code file.
- The fourth relation are wildcard applications that will try to open *any* file.

If you select an application other than the preferred one, the **Open and Make Preferred** button becomes live. This button makes the application you choose the preferred app to open this file and all other files of the same type. Selecting an app in the list and choosing **Open** uses the chosen app without changing the identity of the preferred application.

⇒ **NOTE:** If the system can't identify the type of file you're trying to open, the **Open With** window will list *all* applications, and list as them as "Does not handle file." If you choose one of these apps, an overly cautious dialog warns you that the application you've selected to open your file doesn't support the file.

You can also get to the **Open With** list by popping open a file's context menu. The four relations are divided graphically:



Opening a File by Dragging and Dropping

You can drag a file onto an application icon to open it in that application. If the application is able to open the file, its icon is highlighted. Drag and drop is a good way to open a file in an application that isn't the preferred app, because it doesn't reset the preferred app. For example, let's say you want to edit an HTML document. Rather than double-click the icon, which would launch **NetPositive**, you would drop it onto the **StyledEdit** application.

When you drag a file and hold it over an app that *doesn't* know how to open the file, the app's icon doesn't highlight, and the app won't open the file. To force the app to accept the file, hold down the **Control** key when you drop the file icon.

Working with Text

The following sections summarize working with text on the BeOS.

Selecting and Editing Text

You select text to change it or to edit it in some arrangement of the **Cut**, **Copy**, and **Paste** commands. For information on mouse and keyboard shortcuts see "Text Selection and Editing Shortcuts" in "Appendix A: The Mouse and Keyboard."

Deleting Text

The simplest way to delete text is to press the **Backspace** key (located at the right end of the number row on the keyboard), which erases text to the left of the insertion point, character by character. (Depending on the keyboard you're using, the **Backspace** key may be labeled "Delete," "Backspace," or may have a left-pointing arrow.) A second **Delete** key, which in the extended keyboard is located between the letter section and the number keypad and above the directional arrows, erases text to the right.

Clippings

Clippings is a BeOS feature that lets you make a persistent file of text that you drag out of an open document. You create a clipping file by selecting text and dragging it to the desktop, where it appears as a file named "Clipping from *filename*," where *filename* is the name of the file that the text was dragged from. You can drag the clipping file into any text editor application that accepts drag and drop. What happens when you do this depends on the application you drop the clipping file into. If

Working with Text

you drop it into a **StyledEdit** window, it appears as the original selected text; if you drop it into a **Terminal** window you'll see the directory path to the clipping file.

To delete a clipping, drag its icon to the trash.

3 Connecting to the Network

This chapter explains how to set up your computer so it can access the Internet in either of two ways. It also explains how to set up your computer to work in a stand alone network.

This chapter covers the following topics:

Section	Page
Before You Start	page 47
Connecting to the Internet	page 49
Network Preferences	page 49
Setting Up a Stand Alone Network	page 53
Dial-up Networking: Connecting by Modem	page 55
Setting Up BeOS for Both Stand Alone Network and Modem-Based Internet Use	page 57

Before You Start

This section lists the network hardware that's recognized by the BeOS, and defines some of the terms that are used throughout this document.

Hardware

To connect to a network, you need a *network adaptor card*. This is the card that you plug into your computer, and to which you connect your Ethernet or modem cable. The BeOS supports the following cards:

- **PCI Network Adapter Card**. These cards are inserted into one of the PCI slots on your computer.
 - DEC 21040/21041-compatible cards
 - 3COM EtherLink XL (3C900, 3C905, 3C905B)
 - Intel EtherExpress (Intel only)
- **ISA Network Adapter Card**. These cards plug into the ISA slots of Intel-based and BeBox systems.
 - NE2000-compatible cards for Intel and BeBox
 - 3COM EtherLink II-compatible cards for BeBox
- **Power Macintosh On-Board Networking**. This comes bundled with Power Macintosh-compatible computers that have built-in Ethernet networking.

BeOS does not currently support software modems or PCI modems. BeOS for Power Mac supports external modems only. BeOS for Intel supports both internal and external modems.

For the most up-to-date list of hardware that's compatible with the BeOS, go to [<http://www.be.com/support/>](http://www.be.com/support/).

Terms

The following terms are used throughout this chapter. Although you don't need to know precisely what they mean, you should at least be familiar with the ballpark they play in.

- **Internet Service Provider (ISP)**. An ISP is a company that provides access to the Internet. Typically, the ISP lets your computer access the World Wide Web and provides e-mail services.
- **Internet Protocol (IP) address**. An IP address is a set of four numbers, each ranging from zero to 255, separated by periods; for example, **192.168.0.67**. Every computer connected to the Internet must have a unique IP address.
- **Host name and domain name**. A host name and domain name are, taken together, a human-readable version of your IP address. The host name is the name of your computer; the domain name identifies the company, ISP, or other organization that your computer is "attached" to. For example, in the name **fido.be.com**, "fido" is the name of a computer within the domain "be.com".
- **Domain Name Server (DNS)**. A DNS is a computer that knows how to convert IP addresses into host/domain names. If there's a DNS machine on your network, you can access other machines by

their host/domain names—for example, DNS lets you specify **www.be.com** in a **NetPositive** browser window. Without DNS, you would tell **NetPositive** to take you to **207.126.103.9**.

- **Dynamic Host Configuration Protocol (DHCP)**. A DHCP server is a machine that can answer all your Internet address questions for you. DHCP makes configuring your computer easier—you don't have to supply an IP address, for example—but not all computers have access to DHCP.
- **Point to Point Protocol (PPP)**. PPP is how you get on the Internet if you're using a modem (as opposed to connecting to the Ethernet). If you use PPP, you don't need to specify an IP address for your computer. Instead, you have to supply the phone number, user name, and password that you use to connect your modem to the net. You get this information from your ISP.
- **Gateway (aka "router")**. A gateway is another computer, identified by IP address, through which your computer transmits data from your local network out to a larger network or the Internet.
- **Subnet mask**. This is an IP address that's used to locate your local network. In most cases, the subnet mask is **255.255.255.0**.

Connecting to the Internet

There are two ways to connect to the Internet: By Ethernet or by modem. The first two things you do when preparing your computer to connect to the Internet apply to both camps:

1. Connect your network hardware—network adapter cards, modems, cables—to your computer, following the instructions that came with the computer or network hardware.
2. Gather IP address information from your network administrator or ISP.

Where you go next depends on which method you're using to connect to the network:

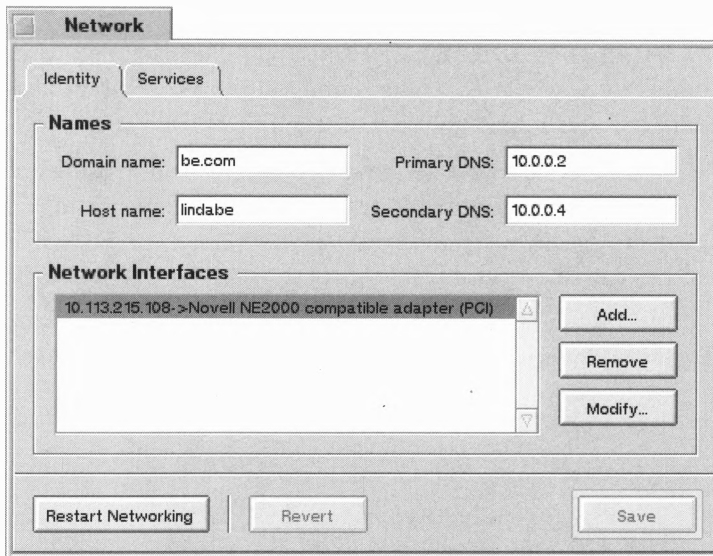
- If you connect via Ethernet, use the **Network** preferences application to configure your network interface, as explained in "Network Preferences."
- If you connect by modem, you use the **DialUpNetworking** preference, as explained in "Dial-up Networking: Connecting by Modem."

Network Preferences

If you're connecting to the Internet through the Ethernet, you use the **Network** preferences application to configure your network connection. If you're connecting through a modem, you should go to the section "Dial-up Networking: Connecting by Modem."

Network Preferences

When you launch **Network**, you see this window:



Identity

The **Identity** tab is where you identify your computer and manage the interfaces to your computer's network cards.

Names

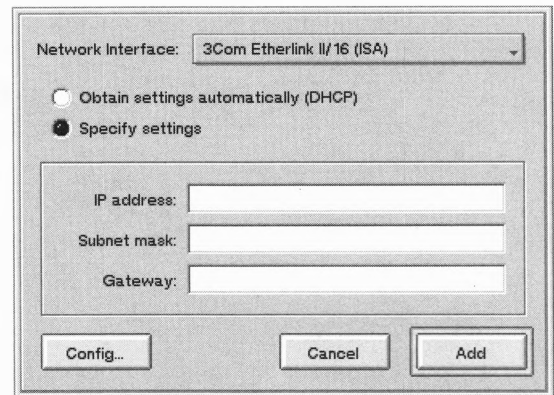
The **Names** section ask for information that identifies your computer as a node on the Internet. You typically get this information from your ISP or your network administrator. If you're creating a stand-alone network, see the section "Setting Up a Stand Alone Network" for instructions on what to fill in here.

Network Interfaces

The **Network Interfaces** section lets you **Add...** a new network card interface, or **Modify...** or **Remove** an existing one. When you add a new interface, it's listed in the scroll view in the body of the section.

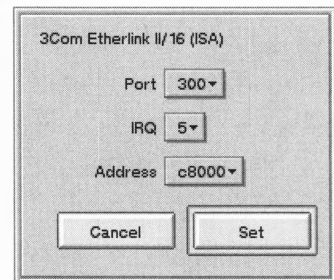
To add a new interface, do this:

1. Click **Add...** to bring up the network interface dialog, shown here.
2. Find your network card in the **Network Interface:** popup list. If you don't know what your card is, you may be able to figure it out by opening up your computer and looking at the card—or you can just guess.
3. Fill in the IP address information. If there's a DHCP server on your network, click **Obtain settings automatically (DHCP)** and let the system get the numbers for you. Otherwise, click **Specify settings** and fill in the information yourself.



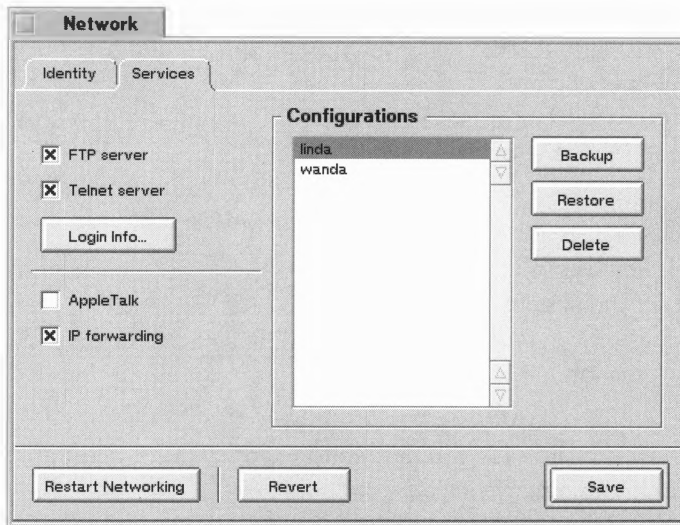
⇒ **NOTE:** If DHCP can't get all the information for you, switch to **Specify settings**, fill in the missing info, and then switch back to **Obtain settings automatically (DHCP)**.

4. If you click the **Config** button you'll see your network card's **Port:** and **IRQ:** numbers and its internal address (this is *not* the same as the IP address). The defaults are port 300, IRQ 5, and address c8000, which work in most cases. You can change these, but unless you know what you're doing you probably shouldn't. Note that for some cards, the **Address:** setting doesn't appear.
5. When you're done playing with the interface configuration, click **Add** (back in the Network Interface dialog).



Services

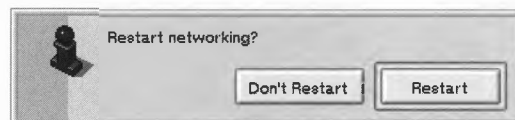
Use the **Services** tab of **Network** preferences to refine your network configuration:



- **FTP Server.** If you want other computers to be able to download files from your BeOS system, check this box. Then click **Login Info...** and enter a name and (optionally) a password, and press **Done**.
- **Telnet server.** Check this box if you want to allow users to log in to your BeOS from a remote computer. If you haven't already entered a user name and password, click **Login info...** and do it now. (The Telnet and FTP servers use the same user name and password.)
- **AppleTalk.** Check this if you want to print to an AppleTalk printer.
- **IP Forwarding.** This is often referred to as *multiboming*, because it requires two network cards or interfaces. Check this if you have one local area subnet connected to another. The other systems on your local network should use your IP address as their gateway (or router) address.

Saving, Restarting, and Testing the Network

When you're done configuring the **Network** preferences, click **Save**. Saving tells the system to record your settings. When you **Save**, a dialog will ask you if you want to restart networking—you almost certainly do.



If you want to restart networking using the **Network** window's current configuration, but you don't want the settings recorded permanently, click **Restart Networking** instead of **Save**.

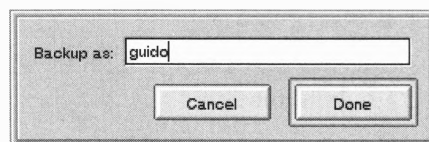
- ⇒ **NOTE:** Restarting networking interrupts currently running network operations, such as retrieving mail or downloading a web page.

Your BeOS system is now configured for accessing the Internet. To test the connection, launch **NetPositive** and try to connect to a known web site (such as www.be.com). If the connection is refused (and you should try a few different sites just to make sure the trouble is on your end), click **Restart Networking** again. If you still have no luck, check all your settings in the **Identity** tab.

Backing Up and Restoring Network Configurations

Once you set up your system for networking, you can name the configuration and save it so you can restore it later. This is particularly convenient if you have more than one configuration and you want to quickly switch between settings.

To save a configuration, click the **Backup** button in the **Configurations** portion of the **Services** tab. This window appears:



In the **Backup as:** field, name the configuration and press **Done** to save it.

To restore a configuration highlight it in the **Configurations** list and click **Restore**. The restored configuration replaces the current settings. The new configuration doesn't take effect until you restart networking.

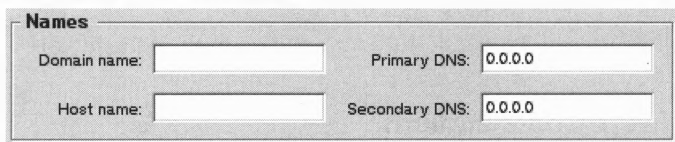
Setting Up a Stand Alone Network

You may want to connect your BeOS system to other computers in a stand alone Ethernet network. Those "other computers" can be running BeOS, Windows, MacOS, or a Unix-based operating system.

Setting Up a Stand Alone Network

A set of IP addresses have been set aside specifically for stand alone networks. To configure your BeOS system for a stand alone network do this:

1. Bring up the **Network** preference, and fill in the **Name** fields (in the **Identity** tab) so the **Domain name:** and **Host name:** fields are empty, and the two **DNS:** fields are 0.0.0.0, as shown here:



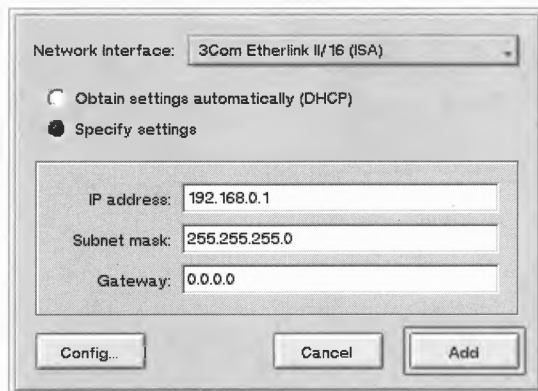
Names

Domain name: Primary DNS:

Host name: Secondary DNS:

2. **Add...** a new network interface.
3. In the Network Interface dialog, find your network card, choose **Specify settings** and enter the following values:
 - The **IP address:** is **192.168.0.N**, where *N* is a number between 1 and 254 (inclusive).
 - The **Subnet mask:** is **255.255.255.0**.
 - The **Gateway:** is 0.0.0.0

Unless you configure one of the computers on your network to act as a DNS, you won't be able to reach the other computers by name. You'll have to use their IP addresses instead.



Network Interface: 3Com Etherlink II/16 (ISA)

☐ Obtain settings automatically (DHCP)

☒ Specify settings

IP address:

Subnet mask:

Gateway:

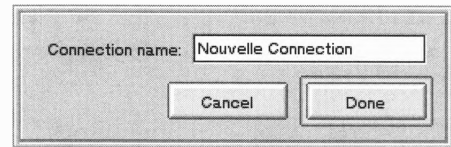
Config... Cancel Add

Dial-up Networking: Connecting by Modem

If you make your network connection by modem, use the **DialUpNetworking** preferences. When you launch the app, you see this window:



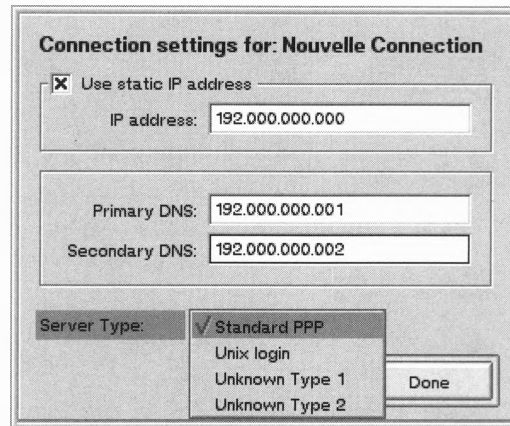
1. Open the **Connect to:** popup and choose **New**.
2. Type the name of the new connection in the panel that appears and click **Done**.
3. Back in the **Dial-Up Networking** window, type the phone number, user name, and password that you



Dial-up Networking: Connecting by Modem

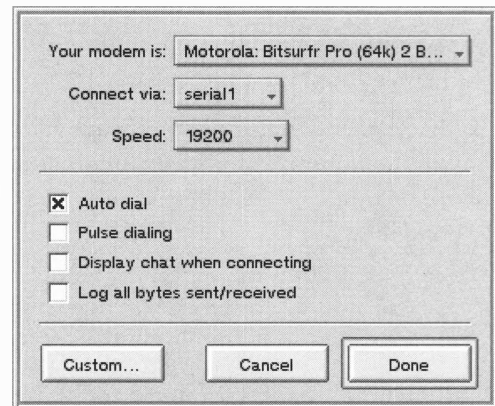
use to connect to the network, as supplied by your ISP. Check **Save Password** if you don't want to enter your password each time you connect.

4. Click **Settings** to bring up the connection settings panel.
5. Check **Use static IP address** and type in your IP address. If you don't check this, the IP address will be configured dynamically via PPP.
6. Enter a **Primary DNS:** and **Secondary DNS:** address. These addresses are not configured dynamically.
7. Choose a **Server Type:** from the popup. Unless you know your ISP has a Unix login, choose **Standard PPP**.



8. Click **Done**.
9. Back in the **Dial-up Networking** window, click **Modem** and in the panel that appears select your modem type, the serial port that your modem is connected to (1 or 2), and modem speed.

10. If **Auto dial** is enabled, whenever you attempt a net connection to an address not on your LAN (local area network), the net server automatically dials out for you. Even with **Auto dial** checked, if any Ethernet interface you've added in **Network** preferences defines a gateway, auto-dialing will not occur. Check **Pulse Dialing** if you love rotary phones; check **Display chat when connecting** if you want the connection panel to display the progress of your dial-up connection; check **Log all bytes sent/received** if you think you'll need a binary dump of everything sent and received over PPP. This is handy if you need to debug your modem connection.



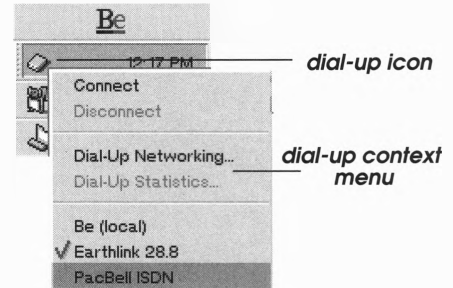
11. Click **Done** after you've made your selections in the modem panel.
12. When you return to the **Dial-up Networking** window, click **Connect** to start your connection.

You can have multiple connections, either to several ISPs or different accounts within an ISP. The configurations that you create are stored as "connection files" in `/boot/home/config/settings/ppp`. For easy access, you may want to place links to these files on the desktop. Double-clicking a connection file (or link) will automatically start the connection. Pointing **NetPositive** at a web site,

checking your mail, or performing any other web-accessing activity will automatically start the connection as well.

To delete a connection file, choose **Delete** from the **Connect to:** popup, or simply throw the file in the trash.

Making a dial-up connection places a dial-up icon in the **Deskbar's Status View** that remains until you disconnect. Movement in the icon indicates traffic flow. You can press on the icon for a context menu that lets you select one of your saved connections and either connect or disconnect.



Setting Up BeOS for Both Stand Alone Network and Modem-Based Internet Use

You may want both a stand alone network and a modem connection to the Internet. This is common in small businesses or home office situations where multiple systems are connected, and only the BeOS system has a modem connected. You'll want to communicate with both the local systems and outside network services.

To set this up, do the following:

1. Use **Network** to set up an Ethernet-based network interface for the stand alone network. Add a network interface for the appropriate Ethernet connector as if you were setting up a stand alone network (see "Setting Up a Stand Alone Network" on page 53).
2. Use **DialUpNetworking** to configure a modem connection.
3. Save and restart networking.

Once you complete this configuration, your BeOS system will be active on both network interfaces. You can communicate with devices on your local network through the Ethernet interface. Whenever you attempt to access a service that's not on your stand alone network, the BeOS initiates a PPP connection. While connected to the outside network by modem, you can still communicate with any device on your local network.

4 Using Network Services

This chapter discusses four types of network services on the BeOS:

- *World Wide Web.* Accessing web pages with **NetPositive** and setting up your own web server with the **PoorMan** application.
- *File sharing.* Accessing file servers and using your BeOS system as a file server.
- *E-mail.* Using the **BeMail** application and **E-mail** preferences.

If you haven't already configured your BeOS system for using the Internet, see Chapter 3, "Connecting to the Network."

This chapter discusses the following:

Section	Page
World Wide Web Services	page 59
The PoorMan Web Server	page 68
E-Mail	page 71
BeMail	page 75

World Wide Web Services

You can browse the web with the BeOS **NetPositive** application, and set up a simple personal web server with the **Poor Man** application. Both applications live in the `/boot/apps` folder.

Using NetPositive

This is the **NetPositive** browser window:



- Menus are described in “Browser Window Menus” below.
- The **Location:** field shows the URL of the current page; type a new URL into this field and press **Return** or **Enter** to go to that site.
- Navigation buttons (**Back**, **Forward**, **Stop**, **Reload**, **Home**) to the right of the location field let you flip through web pages that you’ve visited during the current **NetPositive** session.
- The status area shows the destination of the hyperlink the cursor is currently pointing to. It also shows the progress of a page download.
- The replicant dragger lets you drag the current web page as a replicant. (See “Tracker Add-ons” in the chapter “BeOS Basics” and “NetPositive as a Replicant—Live Desktop Pages” in this chapter.)
- The SSL (“**S**ecure **S**ocket **L**ayer”) padlock appears locked if you’re in a site that is secure for sending credit card or personal information, and unlocked (open) if the site isn’t secure.

Browser Window Menus

Not all of **NetPositive**'s menus and commands are described in this section—many are already familiar or self-explanatory. The elements described here are either of particular note or are used so frequently that they deserve mention. **NetPositive**'s preferences are described separately in “Setting NetPositive Preferences” below.

Go Menu

The **Go** menu keeps a consecutive list of pages visited in **NetPositive**; click any page to return to it. To set how long to keep pages in this list see “General Preferences” in “Setting NetPositive Preferences” below.

Bookmarks Menu

Use **Bookmarks** to add the current web page to your bookmark list. You can edit bookmarks by choosing **Show Bookmarks**. This brings up the **Bookmarks** window, where you can rename, organize into folders, and delete bookmarks.

View Menu

Document Encoding refers to the language encoding of an HTML page. If you want to read a Japanese (or Cyrillic, Greek, etc.) web page, you must set **Document Encoding** to Japanese; if you look at a Japanese web site with **Document Encoding** set to **Western**, you'll see that the site is illegible. You set the font that's used for a particular language in the preferences panel, as described below in “Display Preferences.” For languages with more than one document encoding, all encodings use the same font preference.

- ⇔ **NOTE:** To view Japanese web pages, or pages created for any multibyte character language, you need to install a font that contains the language's characters.

Context Menus

The web page display contains two types of context menus. The context menu for any part the page that isn't a hyperlink contains these commands:

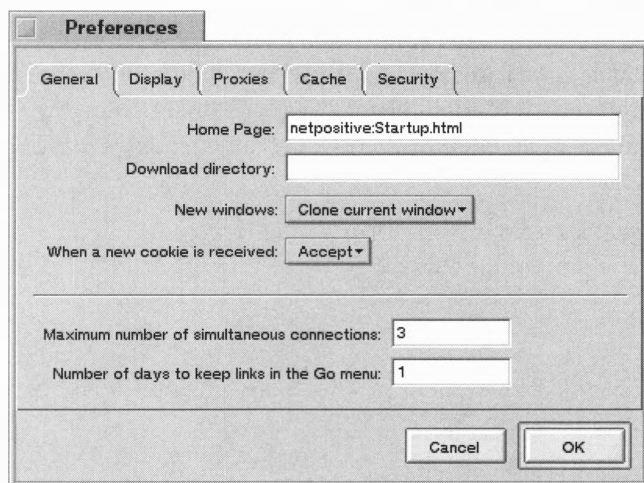
Command	Does this
Back	Takes you back to the previous page.
Forward	Takes you forward one page.
Add This Page To Bookmarks	Adds the current page to the bookmark list.
Bookmarks	Refers to pages added as bookmarks; selecting a bookmark takes you to that page.

The context menu for a hyperlink contains these commands:

Command	Does this
Open This Link	Opens the hyperlinked page.
New Window With This Link	Opens the hyperlinked page, and puts the contents in a new window (rather than replacing the contents of the current window). Clicking the middle button on a 3-button mouse is a shortcut to this command.
Add Link To Bookmarks	Adds the hyperlinked page to the bookmark list.
Save This Link As...	Opens the hyperlink and saves the contents to disk (rather than display it in a window).
Copy Link Location	Copies the URL of the hyperlink to the clipboard.

Setting NetPositive Preferences

Click the **Edit > Preferences** command to see the **NetPositive** preferences.



General Preferences

The **General** preference sets these attributes:

- **Home Page:** Set to the page you want to open when you launch **NetPositive**.

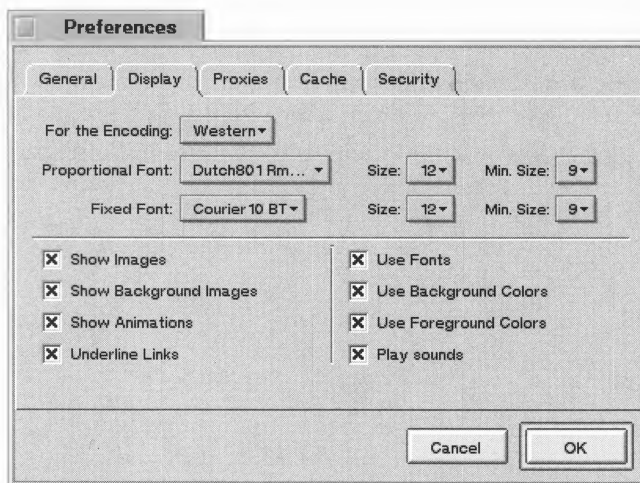
⇒ **NOTE:** If you connect to the Internet by modem via PPP, consider leaving the default home page (netpositive:Startup.html) or else point to an HTML file on disk—or leave the home page blank.

If you use a remote site as a home page, when you start **NetPositive**, the system tries to make a PPP connection to download that page. You might not want to do this each time you open **NetPositive**.

- **Download directory:** Set to the folder where you want your web downloads to go. If you leave this blank, a **Save** window appears each time you download a file.
- **New windows:** A popup list gives you three choices for what happens when you open a new window: **Clone current window**, **Open home page** (the one you enter in the **Home Page:** text field), or **Open blank page**.
- **When a new cookie is received:** Cookies are very common and very small bits of persistent data a server can send to be stored on your hard drive for later retrieval by that server when you return to that site again. An example would be the contents of your shopping cart from a site where you've selected items to buy. This preference gives you the security option of accepting the cookie, rejecting it if you don't like the idea of having someone's prints on your hard drive, or being asked before you do either.
- **Maximum number of simultaneous connections:** (per window). Lets you set the number of simultaneous Internet connections to make from one window. This matters if you're using **NetPositive** over a slow link, like a modem, or running on slow hardware.
- **Number of days to keep links in the Go menu:** The **Go** menu saves recent links. You can decide how long to save them, or set this field to zero to turn the **Go** menu off.

General settings take effect immediately.

Display Preferences

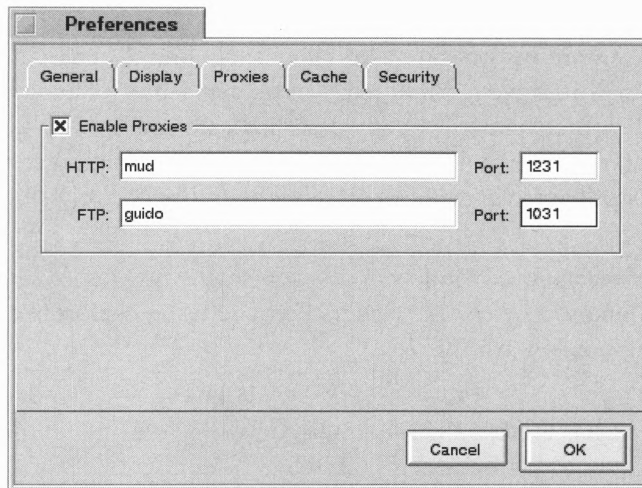


Display preferences are fairly self-explanatory, although **For the Encoding:** needs some deciphering. This setting remembers your font preference—the **Proportional Font:** setting below it—on a per document

encoding basis. That is, you set each language encoding type (Western, Japanese, etc.) in the **For the Encoding:** popup with a certain font and size. When you go to a page in Greek (and assuming your document encoding is set to Greek), you'll see the page in Greek, in the font settings you make here.

Display settings take effect immediately.

Proxies

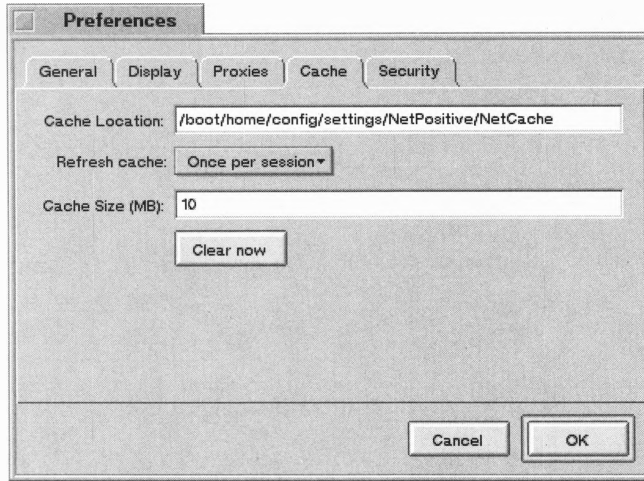


You'd probably use **Enable Proxies** only if you have a proxy server for special caching, or possibly for security reasons if you have a firewall—if you want to run your HTTP connections through a different server than the one you're actually connecting on.

To set this preference, check **Enable Proxies**, and fill in either a host name or IP address for **HTTP:** and/or **FTP:**. The FTP proxy should point to an HTTP proxy, since **NetPositive** only understands how to proxy through HTTP. You'll need to get the **Port:** information from either your system administrator or your Internet Service Provider.

You need to restart **NetPositive** to make your proxy settings take effect.

Cache



The cache is temporary storage for web pages. The default **Cache Location:** is `/boot/home/config/settings/NetPositive/NetCache`. You should change this only if you want to put the cache on a different disk.

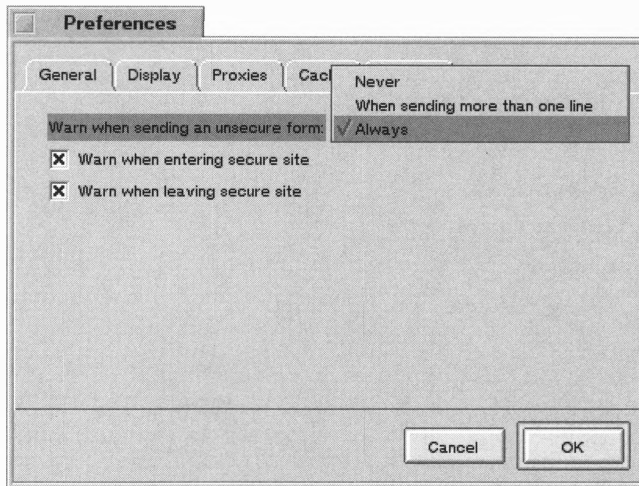
Refresh cache: lets you choose how often (or never) to ask the server of a cached page if the page has been updated compared to what's in the cache. This lets you keep cached pages as current as the refresh setting you choose.

You can leave **Cache Size (MB):** at the 10 MB default, unless you're really squeezed for disk space and need to make it smaller. Set a larger cache if you're a heavy browser and want to reduce network traffic.

The **Clear Now** button deletes all the files currently in the cache.

You need to restart **NetPositive** to make **Cache** settings take effect.

Security



These are your security options:

- **Warn when sending an unsecure form:** (Always, Never, When sending more than one line). Set this preference according to whether you want to be warned (or not) before sending an unsecure—that is, unencrypted—form, such as a credit card number.
- **Warn when entering secure site:** and **Warn when leaving secure site:**. You can ask for a message panel that's displayed whenever you enter and/or leave a secure site.

NetPositive as a Replicant—Live Desktop Pages

NetPositive is replicant-enabled, which means you can put cloned web pages into other applications or documents, or on your desktop. The replicant has no window tab, border, or menu bar, but otherwise acts much like a regular **NetPositive** page:

- You move it by the dragger and resize it with the resize tab in the lower-right corner.
- You can go to other web sites through links or by typing into the **Location:** field.
- Bookmarks are available via the context menus.
- You can drag text, image, and HTML files onto the replicant.

The replicant remains active even if you quit **NetPositive**. If you put a **NetPositive** replicant on the desktop, the replicant will automatically “launch” and download its page when you reboot the BeOS.

For more information on replicants, see “Tracker Add-ons” in Chapter 1.

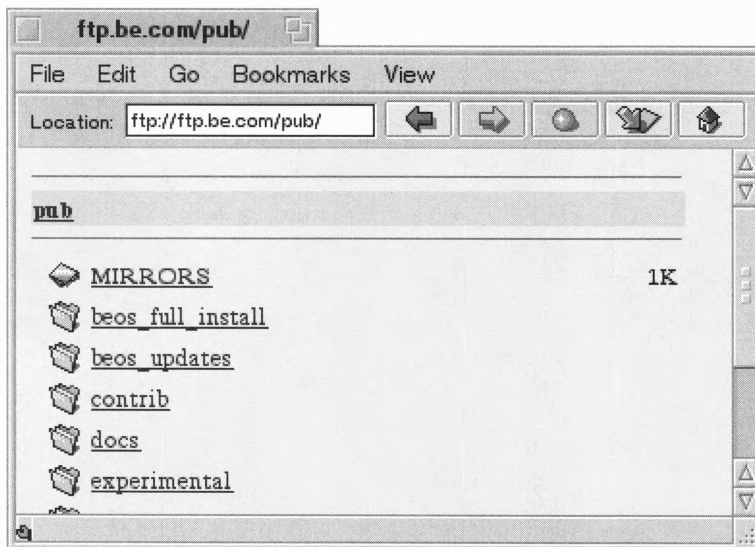
Using NetPositive with Proxy Servers

If you connect to the network at work or school, you may have a proxy server for Internet access. A proxy server is a security device, filtering information that passes in and out of a network. If you've been unable to reach a web server outside your organization, it's possible that your network administrator has set up a proxy server.

For information on configuring **NetPositive** with a proxy server see "Proxies" in "Setting NetPositive Preferences" above.

Accessing a Network File Server with NetPositive

To access an FTP server from **NetPositive**, type the file server's URL into the URL field and press **Enter**. For example, if you type **ftp://ftp.be.com/pub/**, you see the contents of Be's public file server:



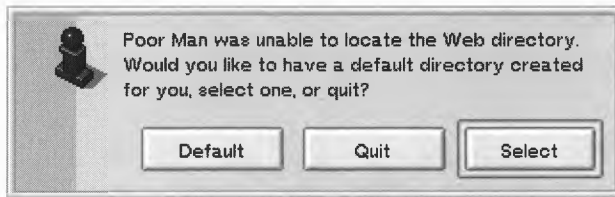
To download a file click a hyperlink. A status window shows the download's progress. To cancel the download, close the status window. You can download multiple pages at the same time. Downloads are saved to a folder you set in the **General** section of your **NetPositive** preferences (see "General Preferences"). If you don't set a download directory, a **Save** window appears for each download. If you download a compressed or archived file, **NetPositive** automatically launches the **Expander** application to expand or unarchive the file.

The PoorMan Web Server

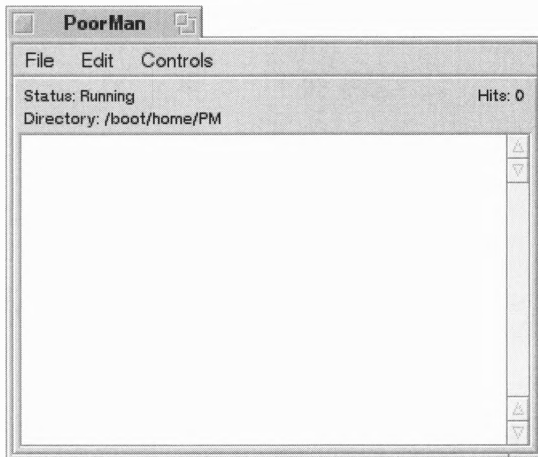
The **PoorMan** application lets you create your own web site. **PoorMan** handles HTML pages, graphics, and other web-based information with minimal set up and hassle. It's ideal for small, personal servers and for prototyping web sites.

Setting Up PoorMan

When you launch **PoorMan** for the first time, you see this alert:



For now, pick **Default** and move on. **PoorMan**'s main window then appears:



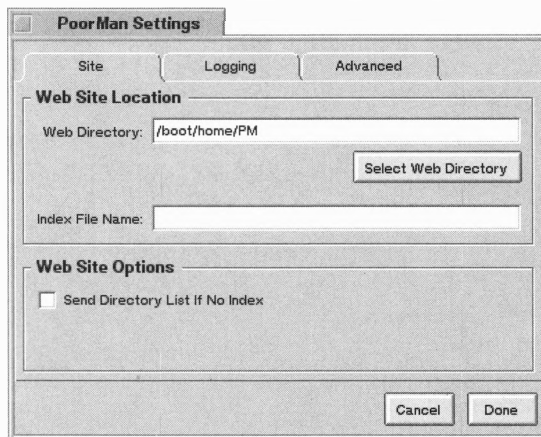
- **Status:** tells you if your server is running. Unless you turn off **Controls > Run Server**, the server should be running.
- **Directory:** initially shows **/boot/home/PM** as the default folder where your web server resides (the result of picking **Default** in the initial alert). "Selecting a Directory Folder and Index File Name" below tells you how to reset the directory (and why you should) and how to change the index file, if you wish.
- **Hits:** counts the number of times your web site has been accessed. You can zero this out with **Controls > Clear Hit Counter**.

PoorMan must be running for the web server to be active. When you close the **PoorMan** window or quit the application, your web server goes down with it.

To log into your server, a user simply points his browser at your IP address or your domain name (given that his **Domain Name Server** knows how to make the conversion between the name and IP the address). Note that **PoorMan** doesn't change the rules of the network game—it can't provide access to a computer that is otherwise protected. For example, it won't let a user breach a firewall or other protective coating.

Setting PoorMan Preferences

You can run **PoorMan** with the default configuration, but it's preferable to configure a few additional settings. These sections describe the configuration options found in the **PoorMan Settings** dialog, accessed via **Edit > Preferences**.



Selecting a Directory Folder and Index File Name

To prevent outside access to other folders on your system, it's a good idea to set a directory folder on your hard disk to use as the root directory of your web server. Place all your web pages and graphics in this folder.

In the **PoorMan Settings** window, in the **Web Site Location** portion of the **Site** tab, either type in the text field to change the directory setting or click **Select Web Directory** and choose from a file selection window. Your selection will appear in **PoorMan**'s main window

The index file is the one that comes up automatically when someone connects to your web site without asking for a specific document. The default index file is named **index.html**. To use a different file, type another file name in the **Index File Name:** text field. *Don't* type in an entire path name—just supply the name of the file within your web directory that you want new connections to go to.

Web Site Options

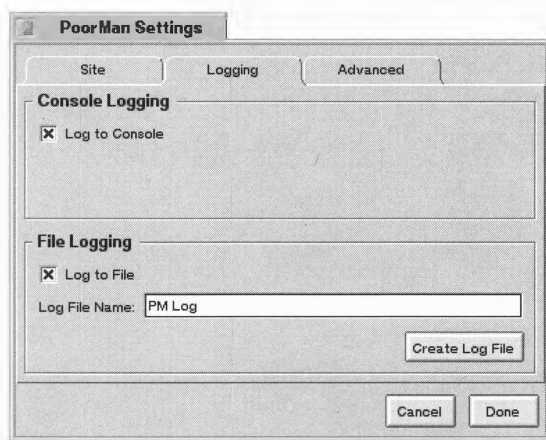
In the bottom half of the **Site** tab is a checkbox for **Send Directory List If No Index**. If there isn't an index file (whatever its name) but **Send Directory List...** is checked, someone logging on will get a list of the files in your web directory. If the box isn't checked and no index file name is given, anyone logging onto your server will get an error message in their web browser.

Click **Done** when you finish making changes in the **Site** tab to make your settings effective.

Logging Web Site Information

The **Logging** tab of the settings panel gives you two options:

- **Log to Console**. Check this if you want the **PoorMan** console (in the main window) to display a message whenever someone connects to your server, or downloads pages.
- **File Logging**. Check **Log to File** to send the log to a file; you name the file in the **Log File Name:** field. Alternatively, click **Create Log File** to bring up a file selection window where you can select an existing file or type in the name of a new one.



In addition, the **File** menu in **PoorMan**'s main window has commands that let you write the current state of the log as a file.

Connection Options

A slider in the **Advanced** tab in the **Poor Man Settings** window lets you specify the number of connections that your server can support at the same time. The maximum number is 200; the default is 32. How high you set this option is determined by your network capacity and your machine's speed.

If you change the number of connections a dialog asks if you want to restart the server. Restarting while people are connected (that is, a file is currently being downloaded), breaks their connections.

The Controls Menu

The **Controls** menu in **PoorMan**'s main window has four commands:

- **Run Server** lets you toggle your server on and off.
- **Clear Hit Counter** lets you zero out the **Hits** field in the main window.
- **Clear Console Log** lets you clear out accumulated access information in the console.
- **Clear Log File** lets you erase the contents of your log file.

E-Mail

This section tells you how to set up your e-mail environment and describes where the BeOS stores e-mail messages. The **BeMail** application, which lets you read and write e-mail, is described in the next major section, "Checking for Mail."

The E-mail Preferences Application

To set up your e-mail environment, you make a visit to the **E-mail** preferences app. **E-mail** tells the *mail daemon*—the service that actually moves mail from your computer to your mail host (and vice versa) how and when it should run. Launch **E-mail** and you see this window:

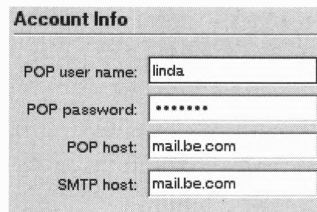
Account Info		Mail Schedule	
POP user name:	<input type="text" value="linda"/>	Check mail:	<input type="button" value="Continuously"/>
POP password:	<input type="password" value="*****"/>	Every:	<input type="button" value="5 Minutes"/>
POP host:	<input type="text" value="mail.be.com"/>	From:	<input type="button" value="9:00"/> <input type="button" value="AM"/>
SMTP host:	<input type="text" value="mail.be.com"/>	To:	<input type="button" value="5:00"/> <input type="button" value="PM"/>
User Settings		Mail Notification	
Real name:	<input type="text" value="LA"/>	<input checked="" type="checkbox"/>	Show status window
Reply to:	<input type="text" value="linda@be.com"/>	<input checked="" type="checkbox"/>	Beep when new mail arrives
Default domain:	<input type="text"/>	<input checked="" type="checkbox"/>	Autolaunch mail_daemon
<input type="button" value="Check Now"/>		<input type="button" value="Revert"/> <input type="button" value="Save"/>	

The information you enter in this window tells the BeOS where to find your mail server on the network, your name and password, and other mail-related options. Most of this information comes from your Internet Service Provider, or your network administrator.

The sections below describe each of the four parts of the **E-mail** preference.

Account Info

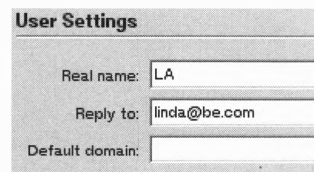
- **POP user Name:** Your POP (**P**ost **O**ffice **P**rotocol) name is usually the first part of your e-mail address (for example, “user” in **user@company.com**).
- **Pop password:** If you don’t enter a password, you’re asked for one whenever you make a mail connection.
- **POP host:** and **SMTP host:** These fields are the Internet domain names or IP addresses of the servers that handle your mail. POP is for incoming mail; SMTP (**S**imple **M**ail **T**ransfer **P**rotocol) for outgoing. If **POP host:** and **SMTP host:** are left blank, the services are disabled. If you just want to send mail, set the SMTP host and leave POP blank. The POP and SMTP hosts are usually the same server, but they don’t have to be.



User Settings

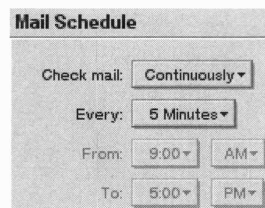
All of these settings are optional.

- **Real name:** field lets you stamp outgoing mail with your real name (rather than just the e-mail address).
- **Reply to:** is the e-mail address that you want responses to the mail that you send to be sent back to. In most cases, this is the same as your “local” e-mail address, but it doesn’t have to be.
- **Default domain:** is the domain field that’s tacked onto the end of any outgoing mail that doesn’t otherwise have a domain name. For example, if you set the default domain to “be.com” and then send a message to “fido,” the mail is sent to “fido@be.com”.



Mail Schedule

These popups let you set how often the mail daemon should automatically check for mail. When the daemon performs its check, it downloads new incoming mail from the POP host to your computer, and uploads outgoing messages from your computer to the SMTP host.



- ⇔ **WARNING:** If you connect to your network through **Dial-up Networking**, checking mail automatically will start a network connection, which may require a phone call.

Mail Notification

- Check **Show status window** to put a **Mail Status** window on your desktop (shown below). The **Mail Status** window shows how many new and unread messages you have, lets you check for new incoming messages, and displays the status of mail as it's sent and received. If you check **Log** the window expands to show you the details of mail access.
- **Beep when new mail arrives**. Check this box to set a system beep to announce new incoming mail.
- **Autolaunch mail daemon**. Check this box to start mail services automatically when you start the BeOS. You should generally always have this turned on. When the mail daemon is running, a mailbox icon appears in the **Deskbar's Status View**.



mail status window

All Done

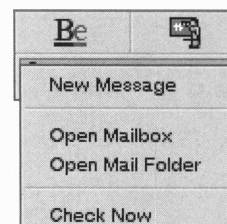
When you finish configuring mail preferences, press **Save**. Press **Check Now** to check for new messages immediately.

Mailboxes and Checking for New Mail

The BeOS defines the `/boot/home/mail` directory as the repository for mail. Incoming mail messages are placed in `/boot/home/mail/in`. Messages that you send are placed in `/boot/home/mail/out`. If you create your own "mailbox" folders—into which you sort your incoming mail, for example—you're encouraged to place them in `/boot/home/mail` alongside the folders that Be creates.

The easiest way to open one of the mailbox folders is to pop up the mailbox icon's context menu (in **Deskbar's Status View**).

- **Open Mailbox** opens the incoming mail folder (`/boot/home/mail/in`).
- **Open Mail Folder** opens the "parent" mail folder (`/boot/home/mail`).



The In Mailbox

When you open the incoming mailbox (as a **Tracker** window) you'll see that the **Attributes** list has been augmented to include **E-mail** attributes.

The **E-mail** attributes include the sender's **Name**, the **Subject** of the message, the e-mail address it was sent **To** (that's you), and so on. Note that the **Priority** attribute is user-editable; you can use this field to prioritize your mail. Note also that the **Name** of the file is not the same as the e-mail **Name**. The file name must be unique—the e-mail name doesn't have to be.

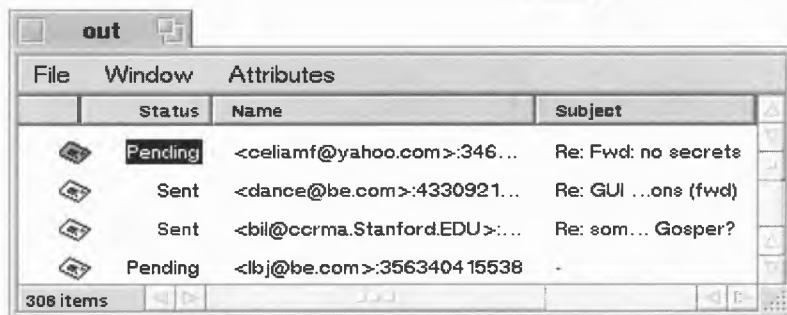
You can modify the set of attributes that the window displays just as in any **Tracker** window.

For more information on **Tracker** window attributes, see "Working with the Tracker" in Chapter 1.



The Out Mailbox

A notable feature of the out mailbox is the **Status** attribute. When you send mail (through **BeMail**) you get to decide if you want the message sent right away, or if it should sit in the out mailbox and wait for the mail daemon to perform its automated check. Messages that have been sent are marked as **Sent**; messages that are waiting to be sent are marked as **Pending**:



Checking for Mail

There are a number of ways to check for new mail:

- Wait for the mail daemon to perform its automated check.
- Press **Check Now** in the **Mail Status** window or in the **E-mail** preferences window.
- Choose **Check Now** from the mailbox context menu in **Deskbar's Status View**.

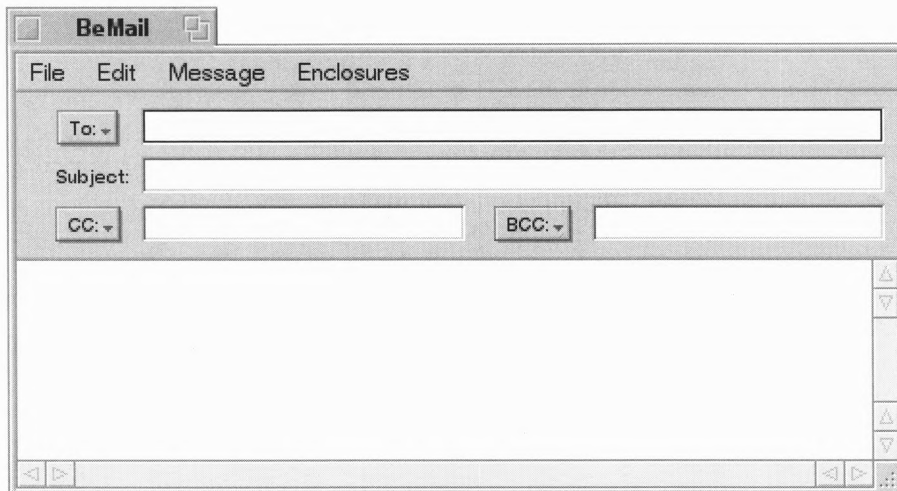
Each of these methods also sends **Pending** mail at the same time.

BeMail

BeMail is the BeOS mail-reading and -sending application. This section describes the features of the **BeMail** application.

Creating an E-mail Message

To create a new e-mail message with **BeMail**, simply launch the app. A new message window will open:



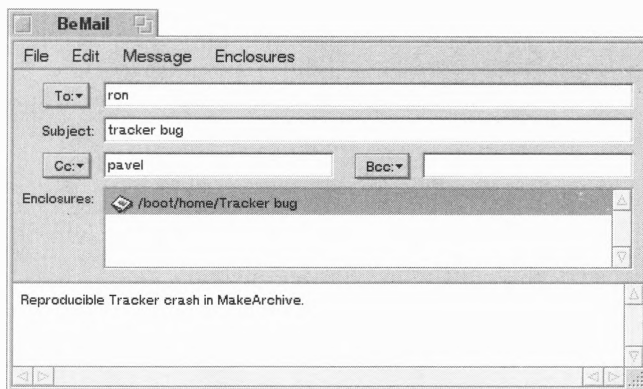
You can also get a new message window by choosing **New Message** in the mailbox context menu, or by choosing **File > New Mail Message** in an existing **BeMail** message window.

In the message window, you fill in the recipient's address in the **To:** line, the subject in the **Subject:** line; **CC:** and **BCC:** are carbon copy and blind carbon copy recipients, respectively. Notice that the **To:**, **CC:**, and **BCC:** fields are popups. When you pop up one of these fields, you see a list of **People** groups—these are group definitions that you create with the **People** application. This lets you send a message to a group of people without having to type in each individual e-mail address.

The body of the message is, of course, entered in the lower part of the window.

Adding an Enclosure

To attach a file (or “enclosure”) to a message, drag the file into the message window; an **Enclosures** section opens with your file in it. You can also add an enclosure by choosing **Enclosures > Add**.



Sending

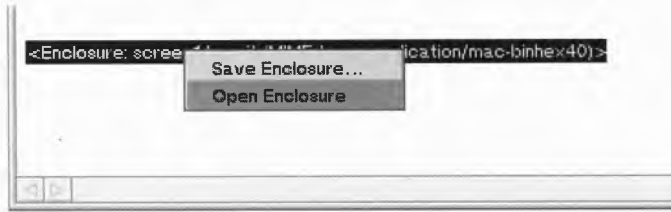
When you're ready to send your message, choose **Send Now** or **Send Later** from the **Message** menu. As described in the “E-Mail” section, if you choose send later, the message is queued in the out mailbox and will be sent the next time the mail daemon checks for mail.

Reading Mail

You read incoming mail (or an old outgoing message) simply by clicking on the message. **BeMail** automatically launches and displays the message. When you're done reading it, you can easily get to the next message in the mailbox through these keyboard shortcuts:

- **Alt+up/down arrow** closes the current message and opens the previous/next message (with no annoying window flashing—it all happens within the same window). These are shortcuts for **Message > Previous Message** and **Message > Next Message**
- **Alt+T** moves the current message to the trash and opens the next message (short for **Message > Move to Trash**).

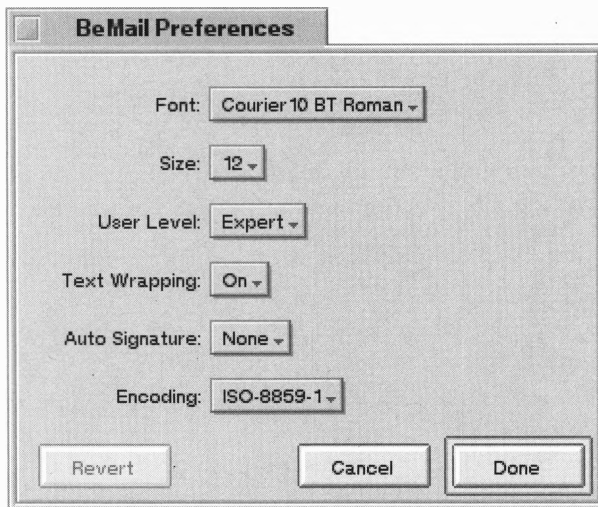
Receiving an Enclosure



If you receive mail with an enclosure attached, right-click on the enclosure line and a popup appears that lets you open the enclosure or save it. If you choose **Save**, a file selection window lets you direct the enclosure to the folder where you want to save it.

Fine-tuning BeMail

The **Preferences** command in the **Edit** menu brings up the **BeMail** preferences window:



- The **Font:** and **Size:** fields set the family and size of font that's used to display the text of e-mail messages.
- **User Level:** is either **Expert** or **Beginner**. Beginners are asked more questions than experts—questions such as whether you really want to throw a message away when you move it to the trash.
- **Text Wrapping:** turns text-wrapping on and off.
- The **Auto Signature** popup menu lets you set the "signature" that's automatically appended to every message that you send. Create a signature is described below.
- **Encoding:** sets the character encoding that's used to display message text.

Signatures

To create a new e-mail signature, choose **Edit > Signatures**, then type and save the signature. You can now select the signature from the **Auto Signature** popup, and it will be added to all your outgoing mail. The signature also appears in **Add Signature** in the **Edit** menu, so if you prefer, you can add a signature you create manually by choosing that command.

5 Customizing the BeOS

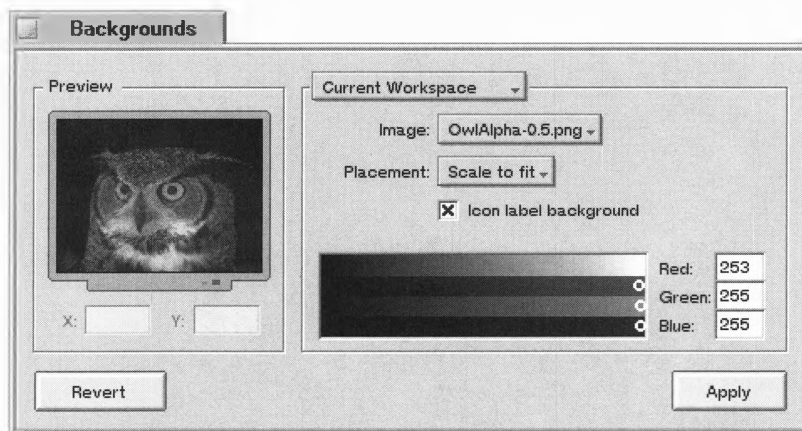
You can customize the look and feel of your computer with BeOS preference applications. The applications discussed in this chapter live in the **/boot/preferences** directory, and can most easily be found by popping open the **Be Menu** and choosing the **Preferences** command.

Section	Page
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DataTranslations	page 82
Devices (Intel only)	page 83
DriveSetup	page 87
FileTypes	page 92
Fonts	page 97
Joysticks	page 98
Keyboard	page 99
Keymap	page 100
Media	page 101
Menu	page 105
Mouse	page 106
Network	page 107

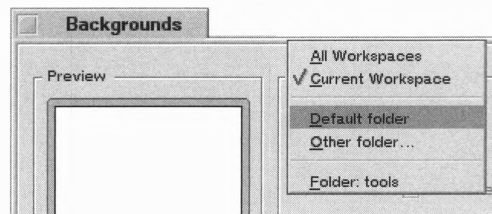
Section	Page
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Backgrounds

Backgrounds lets you set the background color or image for the desktop and a background image for **Tracker**'s folder windows. Note that the window must be in either **Icon View** or **Mini Icon View** if you want to set and image:



The popup above the right-hand section of the panel lets you set the background that you're applying the settings to. The two **Workspaces** commands apply the settings to the current workspace, or to all workspaces. The two **folder** commands apply the settings to all **Tracker** folders (**Default**), or to a specific folder (**Other**). When you add a background



to a specific folder, the name of the folder is added to the **Folder:** list so you can retrieve the settings later.

To set a background color, choose **None** from the **Image:** popup and use the color control sliders to set the color that you want.

To set a background image, drop the image file into the **Preview** box, and choose a placement option from the **Placement:** popup (the **Center** and **Scale to Fit** placements apply only to desktop backgrounds, not to folders). If you choose the **Manual** setting, the **X:** and **Y:** fields will display the coordinates of the image's origin (upper-left corner). To move the image, simply drag it into the **Preview** screen, or type in the **X:** and **Y:** fields.

The **Icon label background** box, if checked, applies the chosen color to the boxes that contain the labels of icons that appear on the desktop. If it's unchecked, the label boxes are transparent. In either case, the label text color is either black or white—whichever is more legible given the icon label color.

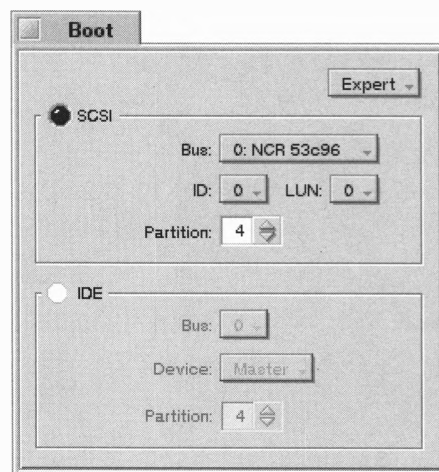
If you're setting a background color (as opposed to a background image), the **Icon label background** checkbox is disabled and the label backgrounds are transparent. Again, the icon label color is decided on the basis of legibility.

Setting the Boot Volume with the Boot Manager (Intel) or the Boot Preference (Mac/PPC)

You can choose the BeOS volume that you boot from when you install the BeOS on an Intel machine, or using the **Boot** preference (shown here) after installation on a PPC. This is useful only if you have the BeOS installed on more than one volume mounted on your computer, or on more than one disk connected to it.

On Intel you set your preferred boot volume in the **Boot Manager**, which appears near the end of the installation procedure (see the Installation Guide that comes with this release for more information on the Boot Manager).

On PPC, the **Easy/Expert** popup lets you choose the boot volume by name (**Easy**) or by its “bus” address (**Expert**). If you're booting from a SCSI hard disk, leave the **LUN:** (Logical Unit Number) set at 0.



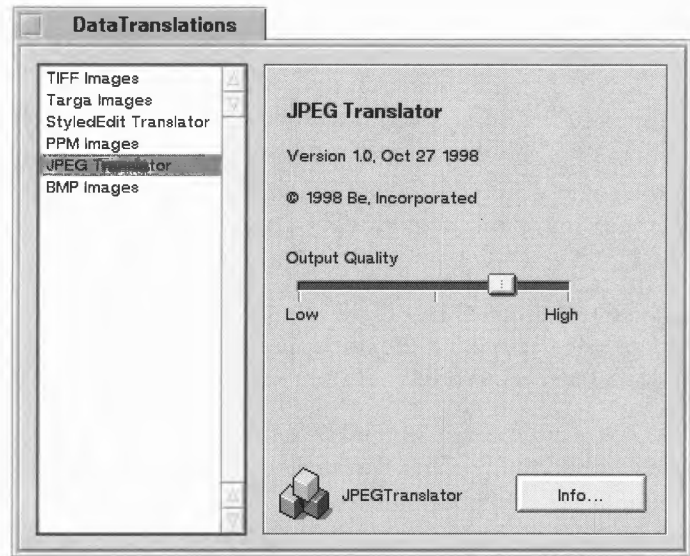
PPC Expert mode panel

DataTranslations

Data translators let you open or save a file as a particular type. For example, if you want to look at a GIF file, you need a GIF translator on your system to open the file.

The **DataTranslations** window shows you which translators you have on your system, and, if they have settings (not all do), lets you adjust them. For example, the JPEG translator lets you adjust the output quality of the image.

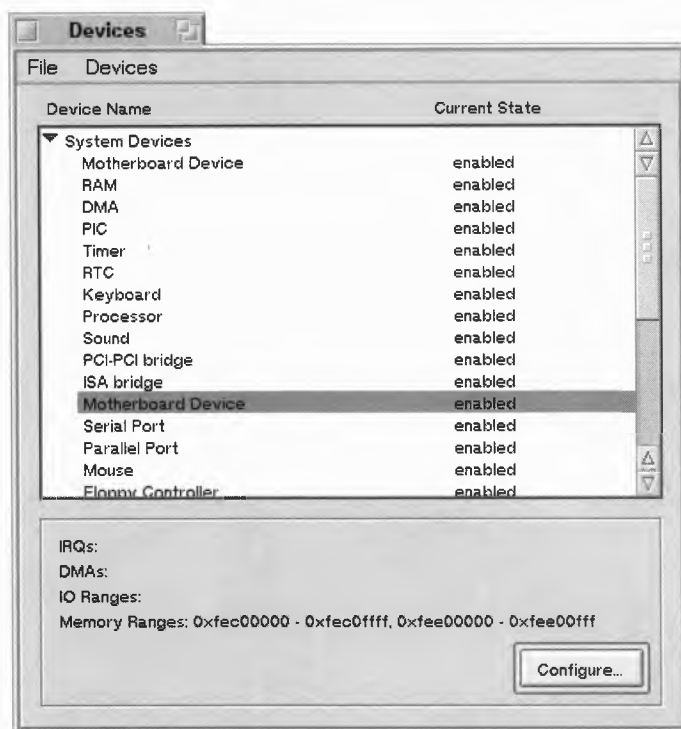
The BeOS ships with TIFF, Targa, StyledEdit, JPEG, and BMP translators. Other applications (such as **Gobe Productive**) add translators to your system when you install them. To add a translator on your own, drag it into the **DataTranslations** window.



Devices (Intel only)

The **Devices** preference lets you add, configure, and disable hardware devices. The **Devices** panel lists all hardware devices (modems, various cards, mouse, keyboard, etc.) on your computer. In addition to using the **Devices** scrolling window to see what devices you have, you can highlight a device, click **Configure**, and go to the **Info** tab of the panel that opens for basic information about the device. This includes whether or not it's enabled, the type of device it is, which bus it's on (ISA or PCI), whether or not a resources conflict exists, and so on.

The information you see in **Devices** is not always reliable—devices sometimes appear to be enabled when they're not. If you have a device that shows up in the list as enabled, but that isn't working, check "Troubleshooting Device Configuration Problems" below.



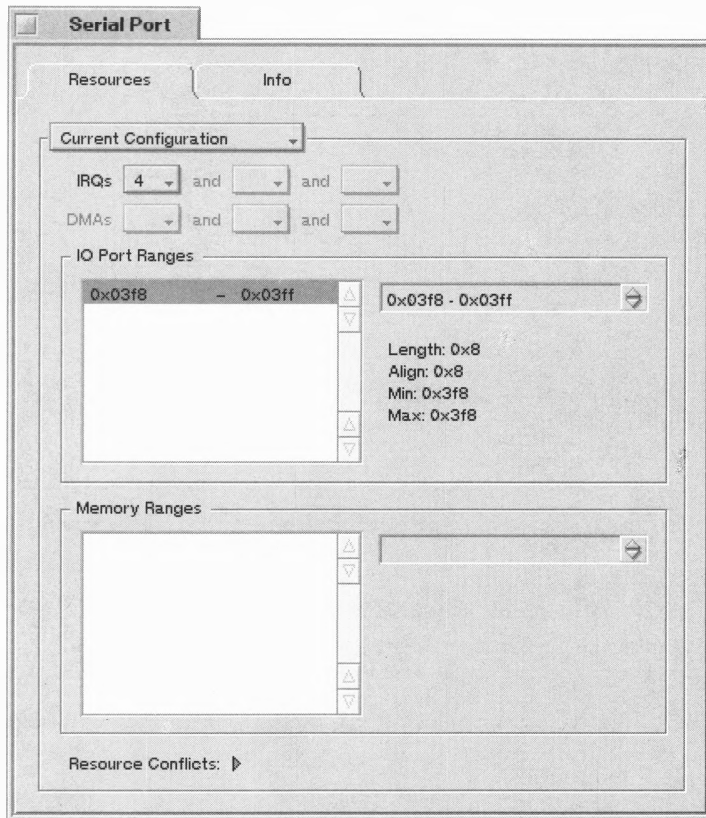
Configuring Devices

All devices have system resources associated with them. These resources are IRQs (interrupt requests), DMAs (direct memory access), I/O ports, and memory. Devices cannot generally share resources (with the exception of PCI devices, which can share IRQs with each other). When you boot, your system's configuration manager configures all the devices in or attached to your computer so they don't conflict with each other; that is, they don't try to share each other's resources.

Sometimes the configuration manager doesn't manage things successfully, and one or more devices on your system will either turn up as disabled (you'll know it's disabled because it appears in red in the devices list) or just won't work. There are several reasons why this typically occurs:

- There are more devices on your system than it has resources to support (i.e., there's a resource conflict).
- There's an unknown device (or devices) on the system.
- The configuration manager isn't smart enough to figure out the device configuration.

Identifying Resource Conflicts



Resource conflicts should occur only between ISA and plug and play devices. There are two perspectives from which to view such conflicts when they occur—from the point of view of the device or from the point of view of the resource:

- To identify the conflict by way of the device, double-click on the disabled device in the **Devices** scrolling list to pop open a device resources and info window. Then toggle open the **Resources Conflicts** section of the window (at the bottom) to see which resources are in conflict.

- To identify the conflict by way of the resource, select **Devices>Resource Usage (Alt+U)**. The **Resource Usage** window opens at the **IRQ** tab with the devices that are in conflict showing in red.

The troubleshooting section that follows tells you how to deal with some device configuration

problems you might run into.

Troubleshooting Device Configuration Problems

Problem: *Missing driver.*

If a device shows up as enabled in the **Devices** list but is not working, the problem may be that you don't have a driver for it. This is often the case with sound card failure.

Problem: *Resource conflict—more devices on the system than it has resources to handle.*

If something's not working and you've checked that it's connected properly, open **Devices** to check to see if it's disabled. The usual reason a device is disabled is because of a resource conflict. If the disabled device is one you want to use, you'll need to disable another device, or reconfigure the disabled device or the conflicting device, to free up resources for it. You can disable serial and

parallel port devices in the BIOS (how you do this is different for every BIOS, so check your computer user guide for specifics). To disable a plug and play device, highlight it in the devices list (under **ISA/Plug and Play Devices**) and double-click on it. In the resources and info panel that appears, click the **Current Configuration** button in the upper-left of the **Resources** tab. If the device is one that can be disabled, **Disable Device** will be active and you can click it to do the job.

It's also possible that a device that's not working (the mouse won't move, the keyboard doesn't work) won't show up as disabled on the **Devices** list. This may also be a resource conflict. Try disabling other devices to free up resources and see if that fixes the problem.

Problem: *Unknown device.*

If you have any jumpered devices (ISA, non-plug and play cards; generally, older devices) on your system, it may not be able to recognize them. Do you have an old modem, sound card, or Ethernet card? If so, you must tell your configuration manager about it in **Devices** preferences. For all unknown devices other than internal modems, go to **Devices>Add Jumpered Device>Custom** and fill in the panel that asks you for information about the device. (You'll need to get this information from the guide that came with the device.) If you don't know all the resources a device uses, just fill in the ones you do know.

If the unknown device is an internal modem go to **Devices>Add Jumpered Device>Modem** and select a serial port from the popup in the configuration panel that appears. You may have to tweak the settings used for the modem, particularly the IRQ. If you want to do that, double-click on the new jumpered device and change the settings manually.

Just as with resource conflicts, if a device doesn't show up in red in the **Devices** list but isn't working, it may be in conflict with a jumpered device. In that case, choose **Devices>Add Jumpered Device>Custom** and create a new device in the panel that appears, then reboot.

Problem: *Not-so-smart configuration manager.*

If the device doesn't appear in red in the **Devices** list, and probably is not a jumpered device, it may not be working because it incorrectly believes that it can use a certain resource (probably, but not always, an IRQ). To test this, force the device to use a different IRQ. There are two ways to do this:

- Create a jumpered device that uses that particular resource with **Devices>Add Jumpered Device>Custom** and reboot to make it take effect.
- Explicitly set the device's configuration by clicking the **Configure...** button and entering configuration information in the **Resources** tab of the panel that appears; reboot to make your changes take effect.

You can also try to see if there's any way to use all devices without having to disable any of them. Choose **Devices>Resource Usage (Alt+U)** to see what resources all your devices are using, then highlight a device, click the **Configure...** button to bring up its configuration information, and see if you can reconfigure the device to fit by hand. If this doesn't work, you'll have to decide which devices you need less and disable them while you're working in BeOS.

Problem: *There aren't enough IRQs for all your plug and play devices.*

Try setting the Plug and Play OS to “no” in your computer’s BIOS settings—if it’s there. To find out how to get into your computer’s BIOS, read the user guide that came with it.

Adding Devices

In general, you should only need to add jumpered devices to your system. These are older, ISA-based cards that your system’s configuration manager cannot recognize. Your config manager should automatically configure any newer, PCI-based hardware.

To add a jumpered device:

1. Get the following information from the user guide that came with the device: IRQ, DMA, I/O range, and memory range. You must have all of this information before you can proceed.
 2. Choose **Devices>Add Jumpered Device>Custom** to bring up the an “Untitled Device” panel.
If the jumpered device is an internal modem (external “plug and play” modems are automatically detected by the system—you don’t have to specifically add them), choose **Devices>Add Jumpered Device>Modem**. In the small configuration panel that appears, select a port for the internal modem from the popup, and click **Add**.
 3. For devices other than internal modems type a name (preferably the specific name of the device) in the **Device Name** field of the “Untitled Device” window; this name appears in the panel’s yellow tab as you type it.
 4. Select the type of jumpered device in the **Device Type** popup.
 5. Check the **IRQ** and **DMA** setting according to the information in your device’s user guide.
 6. To set **IO Port Ranges**, click the **Add** button. In the box that pops up, type in (or use the **up/down arrow buttons**) the IO port range information for your device. You can add as many devices as you want, but you must add each one separately, returning to **Devices>Add Jumpered Device** as often as you need to.
 7. Click the **Add** button in the **Memory Ranges** section and enter the appropriate information in the box that pops up, then click **Done** to return to the new device window.
- ⇒ **NOTE:** You can add multiple IO port ranges and memory ranges to a single device, but you have to add them one at a time, clicking **Add** again to bring up the range entry box as often as you need to.
8. Reboot your computer. If it hangs, move on to “Troubleshooting Jumpered Devices,” below.

Troubleshooting Jumpered Devices

If your computer hangs on reboot after you’ve added a jumpered device, reboot in “safe” mode:

1. Reboot, and when the BeOS splash screen appears, press the **spacebar** briefly and wait for the **Boot Loader** screen to come up.

2. Use the arrow keys to highlight **Select safe mode options** and press Enter, then press Enter again to select **Safe mode**. Arrow down to **Return to main menu** and press Enter, then choose **Continue booting** and press Enter again. The system boots in fail-safe video mode, with a grayscale screen.

Alternatively—without going into “safe” mode—you can edit the jumpered device’s settings by clicking the **Configure...** button and changing the settings in the **Resources** tab in the resource and info window. You can also delete the device by highlighting it in the **Devices** window scrolling list and choosing **Devices>Delete Jumpered Device**.

DriveSetup

- ⇔ **WARNING:** It’s possible to lose data accidentally in **DriveSetup** (by initializing a drive, for example). Pay attention to warning dialogs to avert a catastrophe.

DriveSetup lets you work with any type of drive supported by the BeOS. You can mount, unmount, format, partition, eject, and initialize disks connected to your computer.

Some important terms to remember:

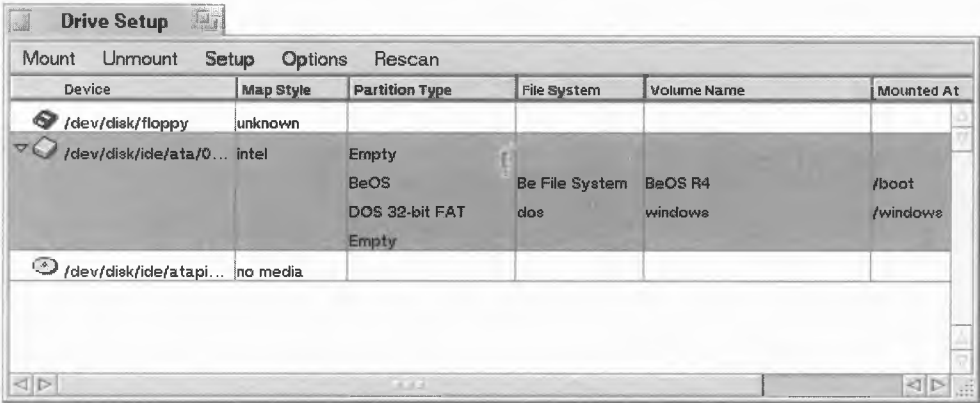
- A *disk drive* is a physical device; e.g., a SCSI or IDE hard drive.
- You can *partition* a disk into multiple *volumes*.
- A *volume* is a logical device. A single hard drive can have *multiple volumes*; e.g., one for Windows or Mac OS and one for the BeOS.

DriveSetup Features

The **Drive Setup** window shows the drives currently attached to the system, whether mounted or not. The window below shows three drives connected to the computer: a floppy, a hard drive, and a CD

DriveSetup

drive. A small triangle appears next to partitioned drives with multiple volumes. Click the triangle to see all the volumes on that drive.



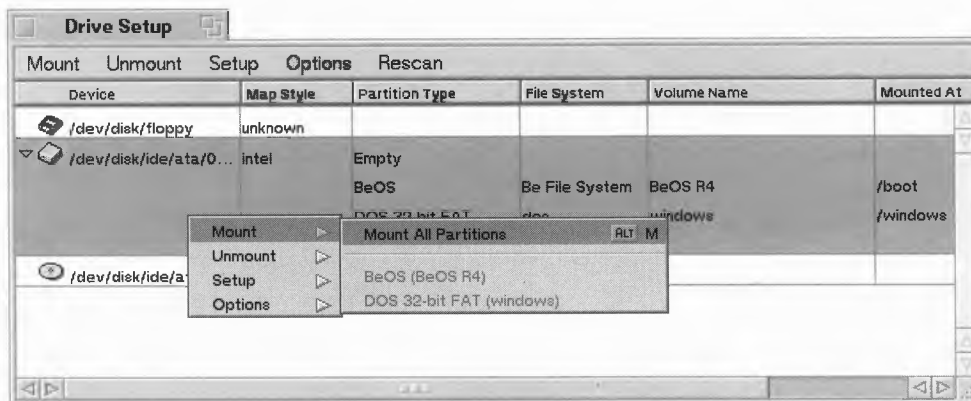
The table below identifies and describes the information displayed in the **Drive Setup** window:

Name	Shows this
<u>Device</u>	Lists the SCSI, IDE, or floppy drive devices you can mount on this computer.
<u>Map Style</u>	Identifies the partition style. Currently the BeOS supports two styles: Apple and Intel.
<u>Partition Type</u>	The specific partitions on a given volume. The BeOS recognizes BeOS, DOS 16-bit and 32-bit, Macintosh HFS (Hierarchical File System), ISO 9660, and “ofs” (Old Be File System) partitions.
<u>File System</u>	Shows the specific file system for each volume.
<u>Volume Name</u>	The name for each volume on a drive.
<u>Mounted At</u>	Shows the path to the mounted volume.
<u>Size</u>	Shows the size of each device and/or volume (doesn't appear in the screenshot).

Mounting and Unmounting Volumes

Mounting means displaying a drive or volume on your desktop. A volume must be mounted for you to be able to read it and write to it. To mount a volume:

1. Launch **DriveSetup**.
2. Select the device you want to mount: e.g., floppy, CD, Zip drive, etc.
3. Select the **Mount** menu (or pop up the context menu on the drive you want to mount). You can choose to mount all partitions or a specific type of volume.



To unmount a volume, follow the same steps, selecting the **Unmount** menu.

Partitioning a Disk

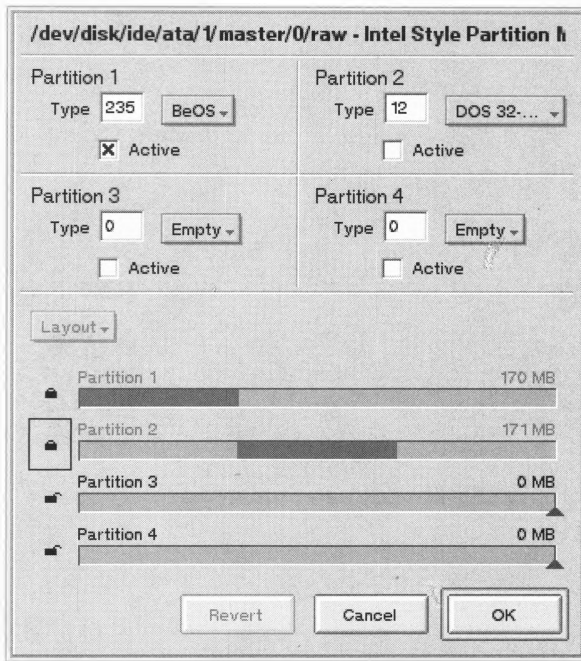
- ⇔ **WARNING:** Partitioning a disk destroys all the data on it! Back up data you want to keep before partitioning the disk.

DriveSetup can create multiple partitions on a disk, except floppy disks (which are too small to partition) and read-only media like CD-ROMs. You partition your hard drive to allocate a portion of it to the BeOS. You can create either Intel- or Apple-style partitions in **DriveSetup**.

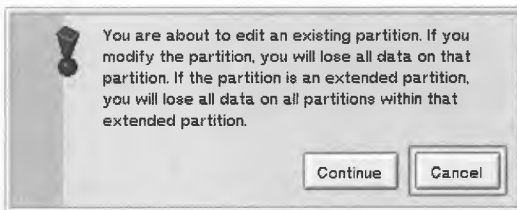
- ⇔ **NOTE:** The drive or volume you want to partition must be unmounted.

Creating Intel-Style Partitions

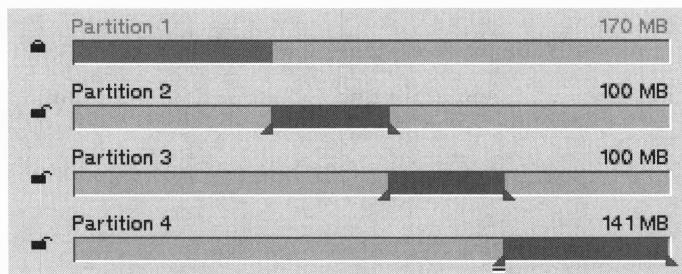
1. In the **DriveSetup** panel, choose **Partition** from the **Setup** menu. The **Partition Map** panel lets you create as many as four partitions.



2. Set the partition type in the top part of the **Partition Map**, using the **Type** popup list, or enter the number manually, if you know it.
3. Check the **Active** box of the partition you want to make active; only one partition can be active at a time.
4. Set the layout of your partitions in the bottom part of the window. Click the **Layout** button to choose from four preset configurations. You can also set the partition size manually by dragging the sliders in each partition bar. The minimum partition size for the BeOS is 200 MB.
5. The lock icons at the left end of the partition bars are there to keep you from accidentally losing data in partitions that you don't wish to modify. Click the icon to unlock it. A dialog warns that you may lose data if you modify the partition.



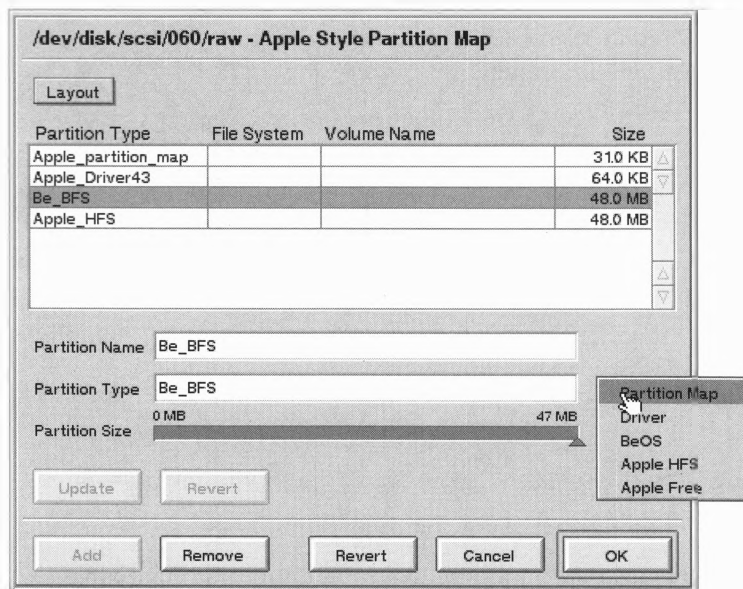
As further protection against losing data, the color of the partition bar changes from blue to red when the change you're making to a partition's size is about to cause you to lose data.



- After you've configured the partitions, click **OK** to partition the drive. To use your new partitions, you have to mount them.

Creating Apple-Style Partitions

- In **DriveSetup**, choose **Partition** from the **Setup** menu.



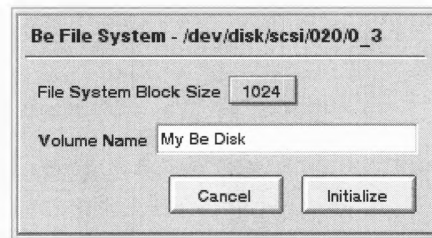
- In the **Partition Map** panel that appears, click the **Layout** button to choose one of four preset configurations. You can alter preset configurations by clicking on a preset partition and changing the name, type, or size.

- ⇔ **WARNING:** Use only one of the preset partition types in the popup menu or your partition will not be recognized by the BeOS or MacOS.
3. To change the partition size move the slider left to increase or right to decrease the size. If you change the size, you should click update to see the new sizes of all the partitions.
 4. You can also add or remove partitions with the **Add** and **Remove** buttons at the bottom of the window. After you configure the partitions, click **OK** to partition the drive. A dialog warns that you may lose all the data on your disk; continue only if you are sure you want to erase the disk.

Initializing a Disk

Initializing a disk prepares it for data in a certain file system format; e.g., Mac HFS, DOS, BeOS. You must initialize a new BeOS partition before you can write data to it:

1. In **DriveSetup**, select the disk or volume to initialize and unmount it.
2. Select **Initialize** from the **Setup** menu. Your initialization choices are **Be File System**, **dos** (Intel machines), **Mac HFS**, **ISO 9660**, or the **Old Be File System**.
3. A dialog that lets you name the volume and set the file system block size appears. The default size is 1024; this gives the best performance in most cases. If you are an expert and will have only a few very large files, you might want to increase the system block size.



Formatting a Disk

- ⇔ **WARNING:** Formatting a disk destroys all data on that disk. Back up data you want to keep before formatting the disk.

Formatting is a time consuming, low-level process. You should attempt it only if initialization fails.

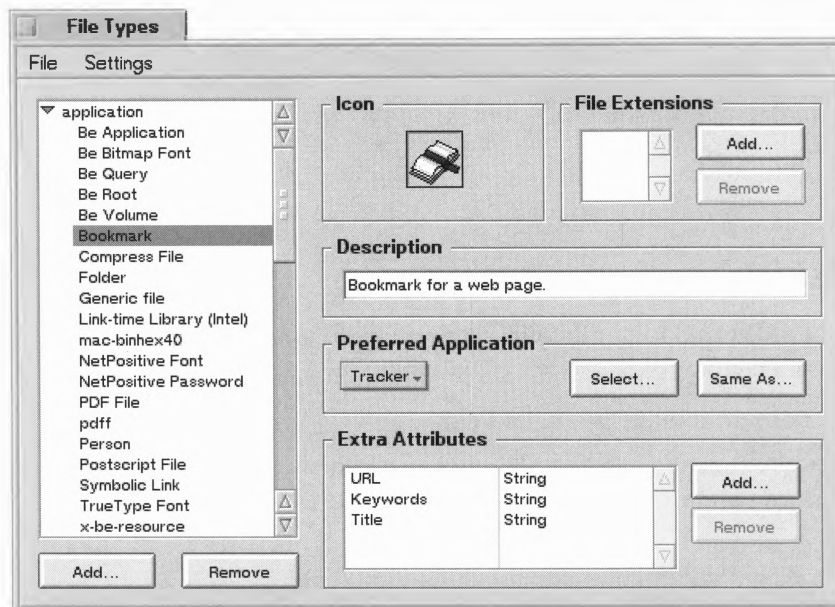
1. In **DriveSetup**, select and unmount the disk you want to format.
2. Select **Format** from the **Setup** menu. In the warning dialog that appears click **Format** to proceed.

FileTypes

A file's *file type* describes the data that the file contains. File types are used by the system—and **Tracker** in particular—to figure out how to deal with a file. For example, the file type determines

which application opens a file when you double-click it. **FileTypes** lets you change the characteristics that pertain to a particular file type, and also lets you set the file types of specific files.

When you launch **FileTypes** you see this window:



The left side of the window is a scrolling list of all the file types known to your system. File types are broken into broad categories (**application**, **audio**, **image**, and so on). The system adds new file types automatically when you install new applications; you can also manually add and remove types from the list via the dialogs accessed through the **Add...** and **Remove** buttons beneath the scrolling list.

A file type is associated with the icon that appears in the **Icon** box. Double-clicking in the **Icon** box (which will be empty if the type doesn't yet have an icon) launches the **Icon-O-Matic** application which lets you create and modify icons (as explained in “Editing an Icon” in this chapter).

The **File Extensions** section displays the file name extensions (such as “.html”, “.gif”, and so on) that are associated with a file type. If a file doesn't have a file type assigned to it already, the system will look at the file's extension to try figure out what the type should be. After the type is assigned, the file's extension is ignored (by the file-typing mechanism).

The file type **Description** is a human-readable description of a file type.

The **Preferred Application** is the app that's launched when you double-click a file of the given type. See “The FileType Add-on” section, immediately below, for a description of ways to do this.

The **Extra Attributes** section lists the additional attributes that are associated with a file type. A **Tracker** window knows how to display these extra attributes when it's in **List View** mode, as explained in “List

View” in Chapter 1. Although you can add and remove attributes yourself, it’s best to leave these operations to applications and the system.

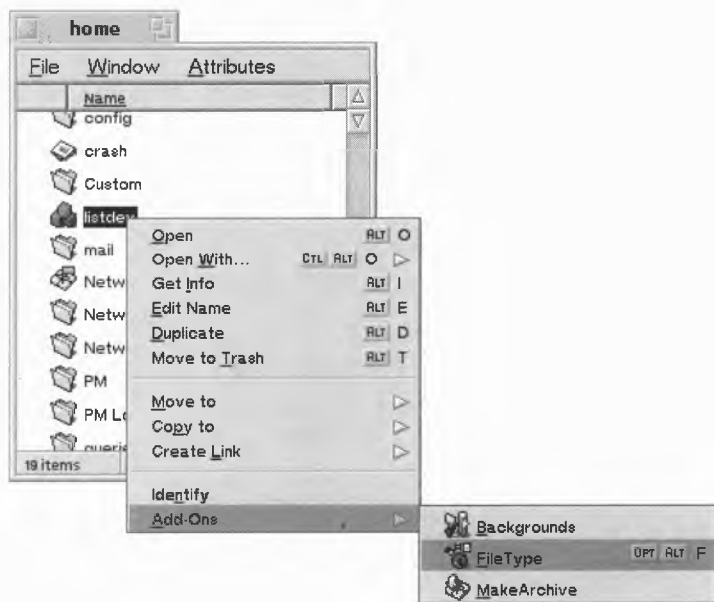
Opening a File

You can examine the file type of a specific file by choosing the **File > Open** command, or by dropping a file icon (or set of icons) onto the **File Types** window. The additional window that opens (after you choose the file) is identical to the window that opens when you use the **FileType** add-on in **Tracker**, as explained in the next section.

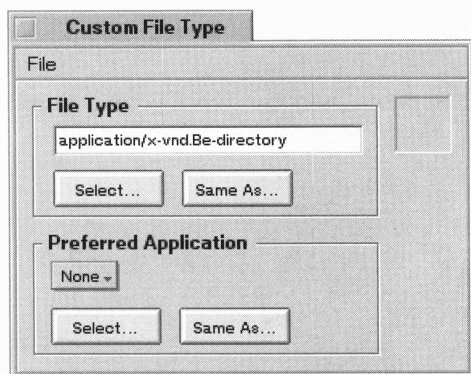
The FileType Add-on

Another way to access **FileTypes** is to use the **FileType** add-on in a **Tracker** window. The add-on is a convenient way to change the file type, or other characteristic, of a specific file:

1. Open a **Tracker** window and select one or more files.
2. Select **Add-Ons > FileType** from the window’s **File** menu or from the file’s context menu. (The context menu method is shown here.)



The **File Type** window appears:



⇔ **NOTE:** Changes you make in this window apply to *all* files that you selected in the **Tracker** window.

In the **File Type** section is the file type associated with the file(s). There are four ways to change the type:

- Enter (as text) the file type in the text field.
- Click **Select...** and choose a type from the list of all types known to the system.
- Click **Same as...** to make the type of this file the same as some other file (which you choose from the file selection panel that's displayed).
- Drag and drop a file onto the **File Type** section of the panel; the file that you're examining assumes the type of the dropped file.

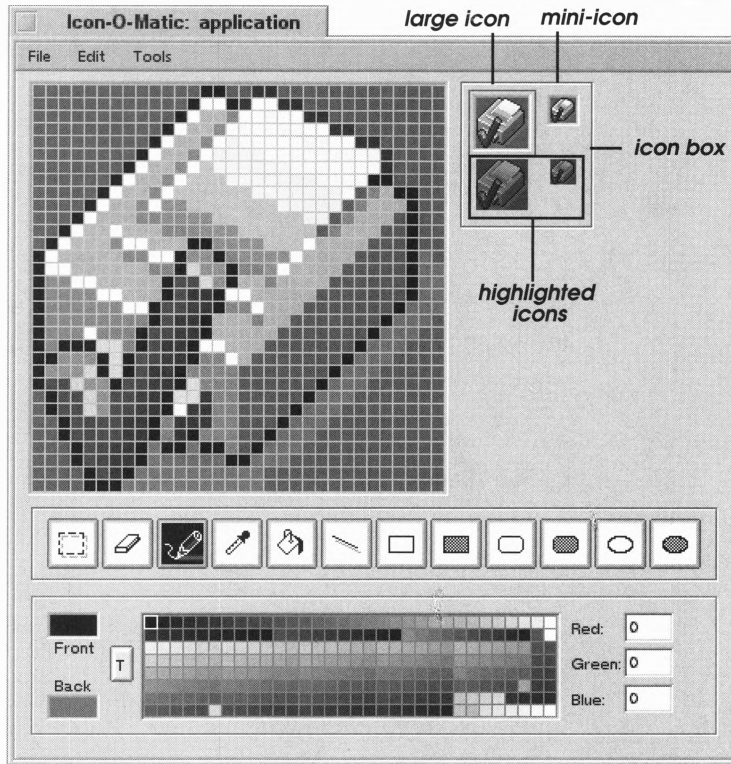
The **Preferred Application** section of the dialog lets you associate a particular application with the file(s) in one of these ways:

- Choose an application from the popup menu.
- Click **Select...** to bring up a file selection panel, and choose an application by locating it in the file system.
- Make it the same as the application associated with another file via the **Same as...** button.
- Drag and drop the desired application onto the **Preferred Application** section of the window.

The box on the right side of the window displays the file's icon (if it has one). To create a new icon or edit the existing one, double-click inside the box to launch the **Icon-O-Matic** application, which is explained in the next section.

Editing an Icon

Double-clicking inside the **Icon** box in the **File Types** or **File Type** add-on window launches the **Icon-O-Matic** icon editor, where you can create and edit the icon that's associated with a file type or with a specific file. Note that if the file or file type doesn't have an icon associated with it when you double-click the icon box, a dialog will ask you if you want to create one; click **New Icon** to continue.

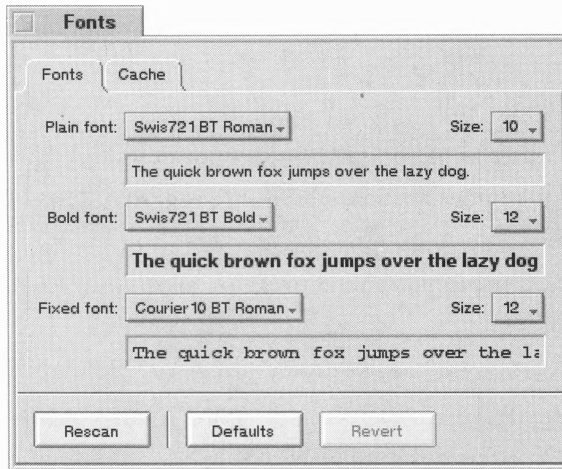


The window lets you create both a large icon and a mini-icon. Click on the large or mini-icon in the icon box on the right to switch between the icons (the red outline indicates the icon that you're currently working on). To automatically generate a mini-icon from a large icon, grab the large icon (within the icon box) and drop it on the mini-icon.

The highlighted versions of the icons are automatically generated—you can't create your own versions.

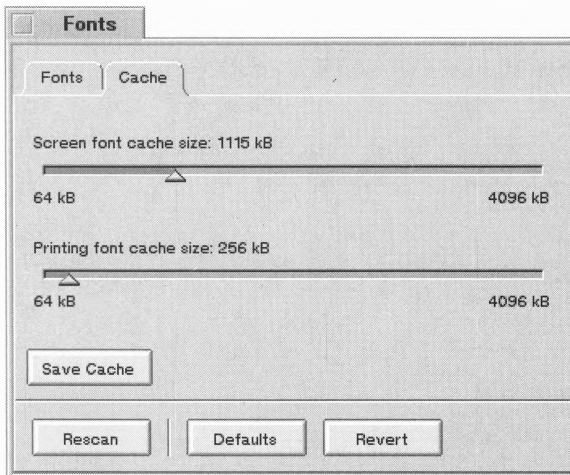
Fonts

Fonts lets you set the system fonts and the size of the font caches.



There are three types of system fonts: plain, bold, and fixed-spaced. Individual fonts have additional popups that let you choose among style options available for that font. You can set the size, from 9 to 12 points, with the **Size:** popup.

Click the **Cache** tab to set the size of your font caches:



- **Screen font cache size:** determines how much RAM is allocated to hold font bitmaps. A large cache mean faster screen redraws, but less RAM available for applications.

- **Printing font cache size:** determines how much RAM is allocated to printer fonts. A large cache means faster printing, but less RAM available for applications. You need a **Printer Font Cache** only if you print to HP LaserJet-compatible printers.

Adding Fonts

The BeOS includes a TrueType font renderer, which displays TrueType fonts in almost any size. The standard set of TrueType fonts included with the BeOS is stored in `/boot/beos/etc/fonts/ttfonts`. These are the default system fonts; you should not change them.

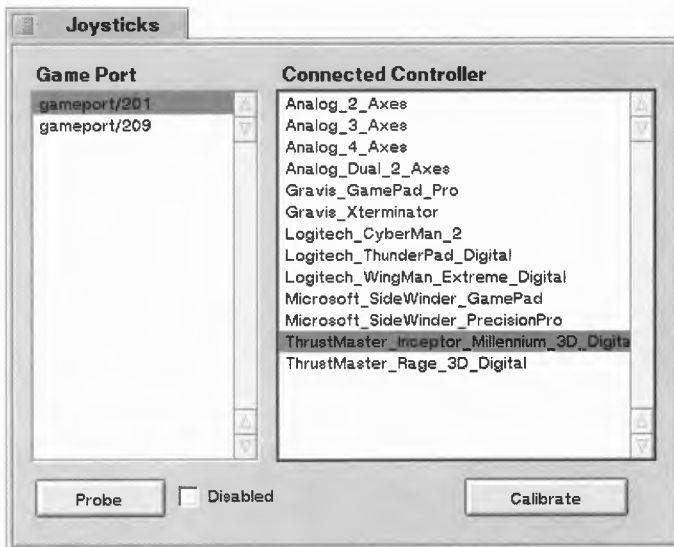
You can purchase or download additional TrueType fonts in Windows (*not* Macintosh) format and add them to the BeOS:

1. Place the fonts in the `/boot/home/config/fonts/ttfonts` folder.
2. To tell the BeOS to look at your new fonts, click the **Rescan** button in the **Fonts** window. Or just reboot—the fonts are automatically rescanned when you start up the BeOS.

To add PostScript fonts, make a new **psfonts** folder in `/boot/home/config/fonts`, and put your fonts there. Rescan or reboot, as you would for TrueType fonts.

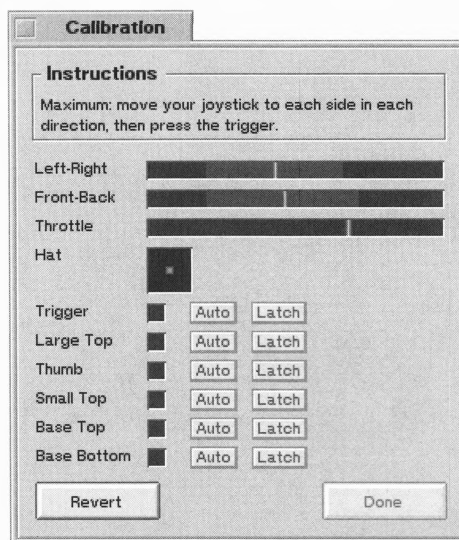
Joysticks

Joysticks configures the joysticks that you have plugged into your computer.

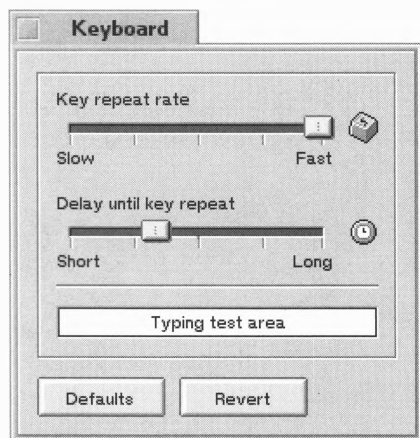


The **Game Port** list shows the available ports on your computer, with the port your joystick is plugged into selected. **Probe** will automatically attempt to figure out what kind of controller you have when you select a game port. If **Probe** can't identify your controller, you can select it manually from the **Connected Controller** list.

After your joystick is identified, click **Calibrate** to display the window where you fine tune your joystick. Text at the top of the panel instructs you in the art of calibrating your joystick (the window's appearance depends on the type of joystick you have).



Keyboard

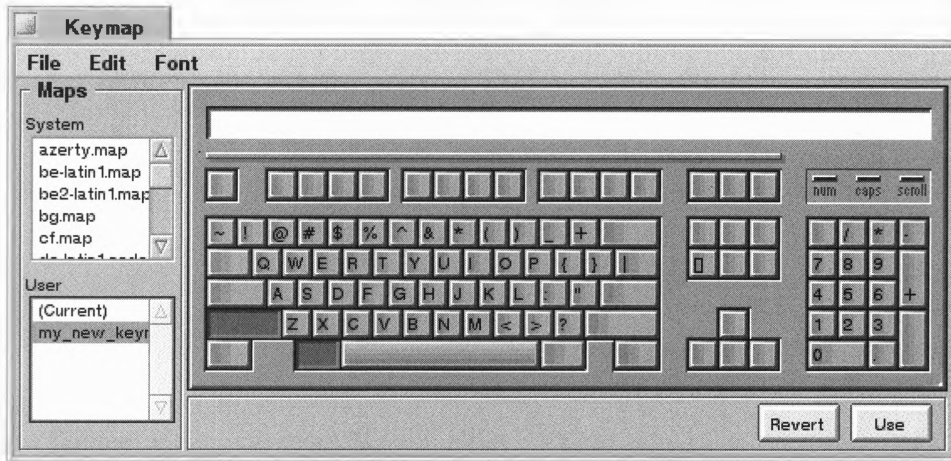


Keyboard lets you set the delay between a key press and the subsequent key repeat, and lets you set the rate at which the key is repeated. New settings take effect immediately.

Click **Revert** to restore your current key-repeat settings. Click **Defaults** to restore the settings that were in effect when you installed the BeOS.

Keymap

Keymap shows you the current *keymap*—the characters you see on-screen when you press each key.



You can select a system keymap and type on the keyboard or click keys in the **Keymap** window to see the resulting character in the field at the top of the window. Each keymap is made up of nine tables that show how the “character” keys are mapped when different modifier keys are held down (the default display is with no modifiers). To see a particular modifier key map, hold down a modifier key or combination of keys (**Shift**, **Windows/Option**, **Alt**) when you click or press a character key.

Different fonts map characters to different keys. You can choose a font from the **Font** menu to see that font’s mapping. This is a useful way to look for characters you don’t use often, such as bullets, accents, or other special characters.

You can change the keymap to support different languages or keyboard layouts. The BeOS comes with a number of preconfigured keymaps to choose from in the scrolling **Maps** list. To customize a keymap or create your own:

1. Choose any user or system keymap.
2. Click **File** and **Save As...** and enter the name of your new keymap.
3. Make sure the keymap is being saved to `/boot/home/config/settings/keymap`.
4. To make the keymap selected in the **Keymap** window active, click the **Use** button in the lower-right corner.
5. The new keymap is displayed in the **User** list.

You can customize a keymap by using the second mouse button to drag a character key from one position to another. When you do this, all the modifier mapping tables move with the key.

To revert to the default keymap, choose one of the standard **System** keymaps.

⇔ **NOTE:** Selecting a new keymap may change the shortcut key in the **Menu** preferences.

Media

The **Media** preferences panel combines **Audio** and **Video** prefs; it's where you configure settings for both. You need a sound card for audio applications, and generally you need one to get sound with video applications, though some video cards have audio chips. You need a video capture card and some video output hardware or application software to use the **Video** preferences.

Audio

Audio replaces the old **Sound** preference (which has been deleted) and considerably enhances its capabilities. When you open **Media** prefs, you'll see a list of video and audio headings on the left-hand side of the panel; highlighting a heading brings up its corresponding settings panel on the right.

- Highlight **Audio Settings** to see a panel that lets you choose your default input/output audio device. What you'll see in the input/output popups reflects the type of sound card you have (if you see the message "This hardware has no controls," you don't have a sound card); unless you have more than one card you'll see only one choice for input and one for output. You should check the **Enable Real-Time Audio** check box if you want to improve audio performance, but only if you have RAM to burn, because, as the panel explains, "It [real-time audio] achieves optimum performance by using more RAM." **Real-Time Audio** is set to "on" by default in systems with 64 MB of RAM or more; it is set to "off" in systems with less than 64 MB of RAM. Checking **Show Volume Control on Deskbar** puts a **Media** icon in the Status Bar immediately. Once the icon is active, you can click on it to pop up a slider interface that lets you control system volume; when the control panel appears continue to hold down the mouse button and drag the slider to change volume. Right-click on the icon to pop up a menu that lets you open **Media** or **Sounds** preferences or the **MediaPlayer** directly.

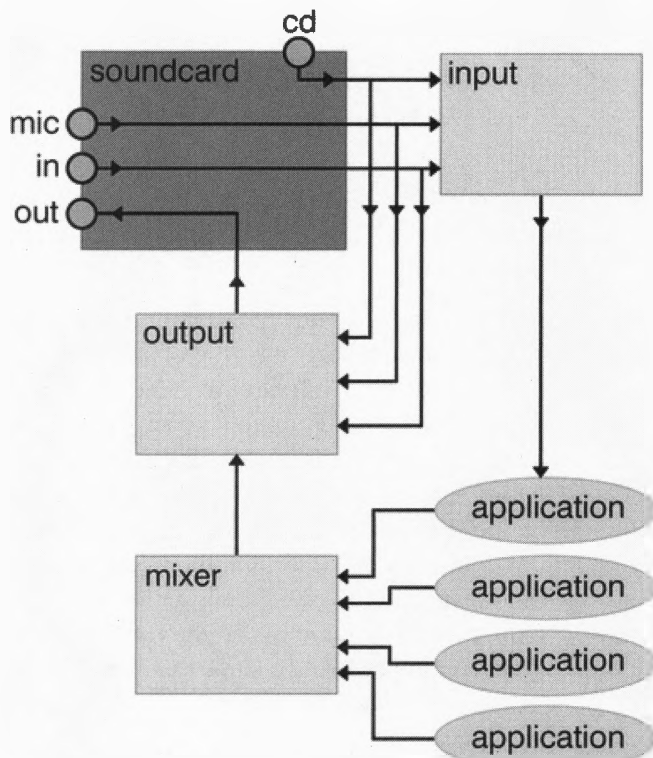
Click the **Restart Media Server** button to make your changes take effect (except for **Show Volume Control on Deskbar**).

- ⇔ **NOTE:** If you don't have enough RAM and CPU capacity to **Enable Real-Time Audio**, the box will be grayed out, and the text will explain the minimum requirements necessary for real time.
- Highlight **Audio Input** in the settings list to select your input source (CD, line in, microphone, and microphone + 20 decibels) and its volume (gain).
 - Highlight **Audio Output** and either check **Mute** if you want no output to a certain piece of hardware, or leave **Mute** unchecked and set your output volume(s) with the sliders.
 - Highlight **Audio Mixer** if you want to mix sound from different applications. Each time you launch another application, the **Audio Mixer** panel expands to add another control.

You also set the volume for your system beep, or mute it, here. You'll see either one or two volume sliders depending on whether your input source is mono or stereo.

Old Programs applies to audio applications that were compatible with BeOS Release 3. Applications that were recompiled to run with R4, but not with the new Media Kit appear under **Old Programs** as one application.

The illustration below represents the **Audio** preference settings schematically, as input and output would flow with a typical sound card.



- Your sound card, into which you plug your CD drive, is in the upper-left corner (“in” on the sound card might also appear as “line” or “line in” for connections to other inputs than the microphone and CD drive). The sound card is the entry point for all external sound sources, and the exit point (via headphones or speakers) for all sounds.
- Sound input leaving the sound card passes to input (represented by the **Audio Input** panel in **Audio** preferences), where you choose the sound source that will go to your application(s), and also set the gain level (volume) of that sound (to the application—this gain setting has nothing to do with output). Many sound cards take “0” to mean “normal input level,” and any larger number to mean

“additional boost for the input signal”; consequently, a “0” level setting might not necessarily result in silence.

Sound from the sound card also passes directly to output (represented by the **Audio Output** panel in **Audio** prefs), where you decide which input sources—CD, Line in (on some cards labelled “AUX”), BeOS, and Microphone—will be heard as output (by muting them or not), and at what level (volume). This is what you will hear from your speakers or headphones.

- Sound input flows via sound-generating applications to the mixer (represented by the **Audio Mixer** panel in **Audio** prefs), which is where you set the relationships between different sounds in an application (or multiple applications) by setting their gain levels and by muting them or not.
- Mixed sound goes to output, where you decide (or you’ve already decided) on muting and sound levels you want to hear in your headphones or speakers.

Video

The **Video** preference is new in this release. You need to configure this preference if you have a video capture card, to which you’re connecting a video camera, a VCR, or your cable TV line, in order to view, record, or save data from one of those sources. This release has support for video capture cards based on the Bt848, Bt878, and Bt879 chips. For a regularly updated list of video cards that use these chips, see <<http://www.be.com/products/beosreadylist.html>>.

- In the **Media** preferences, highlight **Video Settings** (in the list on the left-hand side of the panel). This is where you choose your default input/output video device. What you see in the input/output popups reflects the type of video capture card and video output hardware and software you have; unless you have more than one of each you’ll see only one choice for input and one for output. You should check the **Enable Real-Time Video** check box if you want to improve video performance, but only if you plenty of RAM, because real time requires lots of RAM (as explained in the panel). **Enable Real-Time Video** is set to “off” by default. After you make your selections in this panel click the **Restart Media Server** button to make your selections take effect.
- Next, highlight **Video Input** to choose the configuration options for your video capture card. Again, the controls you’ll see depend on the type of card you have. The information here is based on settings for Bt848 cards.

In the **Controls** tab, choose your video source from the **Video Input** popup. Some possible options are **Composite 1** and **2** (RCA standard jacks), **Tuner** (TV or cable), and **SVideo** jack, but the four choices you actually have reflect the names you set in the **Input Names** tab (see below). Choose a setting from the **Channel** popup if your video source is a tuner or cable TV. Choose your audio source, or mute, from the **Audio Input** popup. (It’s often necessary to connect your video card to your sound card to get audio; see the installation instructions that came with your video card for more information.) You can adjust the **Brightness**, **Contrast**, **Saturation**, and **Hue** sliders by referring

to the image in your video window (you must be running your video application software to see a video window).

The **Video Input Options** tab is where you set **Default Image Size** and **Default Colors**. Your application should specify what these are. The additional four checkbox settings in this tab are filters. To summarize them briefly, **Luma Coring** (luminance) reduces anti-aliasing artifacts; **Chroma Comb** (chrominance) enhances color consistency; **Gamma** automatically corrects screen brightness; and **Error Diffusion** tries to remove visual anomalies and static. These settings are checked “on” by default.

The **Input Names** tab lets you identify video and audio inputs 1-4 with the actual inputs you’ve connected them to; for example, if your **Video 1** input is connected to **Tuner**, you can make that connection explicit in the **Input Names** tab.

You configure the **Hardware Setup** tab according to your terrestrial location and the hardware you’re using. The **Video Format** for the U.S., for example, is NTSC-M. The manufacturer of your video capture card can use any one of several **Tuner** brands; the most common is Phillips, but check your card to be sure. Set **Tuner Locale** according to the method of broadcast transmission in your local area. **Audio Mux Type** (“mux” is short for “multiplexor”) applies to a video card that has multiple inputs but selects one output; 99% of cards are type “0” (the default), but if you don’t get sound output from that setting, try “2” and, if you still get no sound, try “10.” **Audio Format** (visible only if your card supports it), like **Video Format**, is location specific.

Menu

Menu lets you change the appearance and behavior of menus throughout the BeOS. Most importantly, it lets you set the system-wide *shortcut key*—this is the key that you use in combination with a character to “silently” perform a menu command.



The settings in the Font preference are.

Setting

Lets you do this

Font

Choose a font and style.

Font Size

Choose a font size.

Click to Open

If checked, lets you open a menu or submenu by clicking the menu's title; if unchecked you can only drag through menus.

Always Show Triggers

If checked, triggers for menu titles, commands, and other menu items are always visible and can be activated by pressing the trigger letter.

Color Scheme

Set the colors that are used in menus.

Separator Style

Choose the type of separator that's used to group commands in a menu.

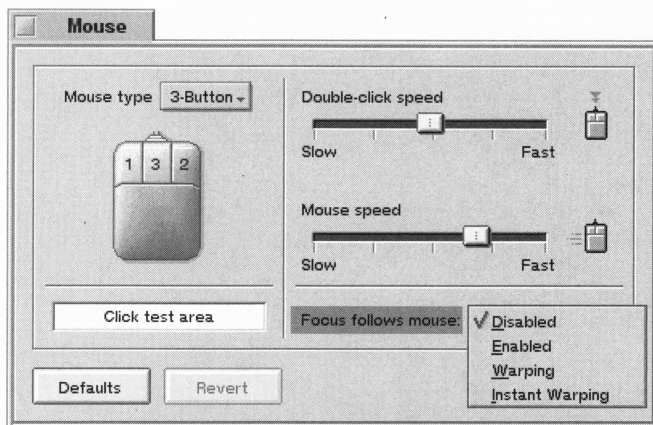
Key as Shortcut Key

Choose **Alt** or **Control** ("Ctl") as your shortcut key. (On Macintosh, the **Alt** key appears as the Apple "cloverleaf.")

Menu changes are enforced when you launch an application. For example, if you change the menu font size, the applications that are currently running aren't affected, but all subsequently launched applications will display the change.

Mouse

Mouse lets you tell the system how many buttons are on your mouse, and lets you set the mouse's double-click speed, the speed with which it moves the cursor, and whether window focus should follow the mouse:



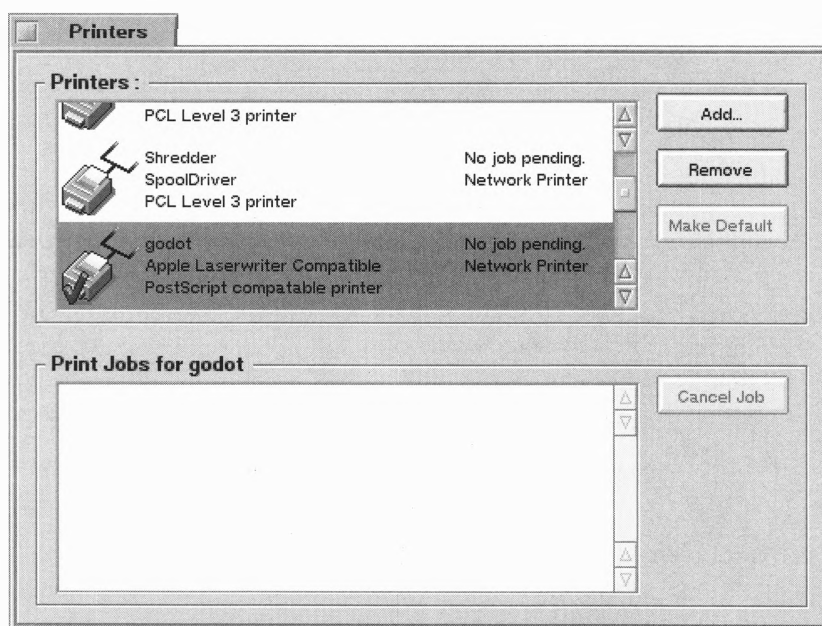
- Set double-click speed with the **Double-click speed** slider; test your setting in the **Click test area**.
 - Use the **Mouse Speed** slider to set how fast the cursor moves across the screen when you move the mouse.
 - You can set the number of buttons on the mouse you use with the **Mouse type** popup, and rearrange the default order of the mouse buttons with the individual button popups.
 - The **Focus Follows Mouse** setting affects the cursor and it's relationship to windows on the desktop. The **Focus Follows Mouse** popup gives you four choices:
 - **Disabled** (the default) means the frontmost window is live; clicking in another window brings it to the front and makes it the live window.
 - **Enabled** means the window the cursor is over is live; with **Enabled** checked, you click once in a window's tab or the thin outer window frame to toggle between applications.
 - **Warping** causes the cursor to move to an application you're toggling to (the target app).
 - **Instant warping** is the same as **Warping**, but faster; you don't see the cursor move to the target app.
- ⇒ **NOTE:** A single-button mouse can emulate a three-button mouse: Press **Ctrl+Alt** while clicking the mouse button to emulate the second mouse button, and **Ctrl+Win** while clicking to emulate the third mouse button.

Network

The Network preferences is explained in Chapter 3, “Connecting to the Network.”

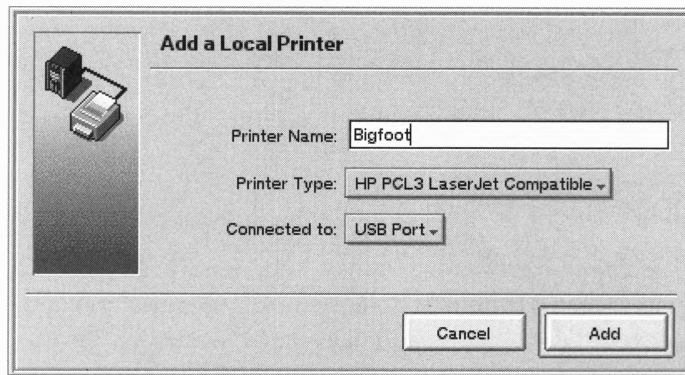
Printers

The **Printers** preference lets you add, remove, and select a default printer in the top part of the **Printers** panel (**Printers**) and check the status of your print job and other jobs pending on your machine for that printer in the bottom part (**Print Jobs for** [name of selected or default printer]).



To add a printer click **Add...**, then choose whether you want to add a local or network printer in the panel that appears and click **Continue**. You can print to an Appletalk network printer without running **World o' Networking** (explained below); to print to any other type of network printer you must be running **World o' Networking**.

If you choose **Local Printer** and click **Continue**, a window opens that asks



for a printer name, type (there's a **Preview** option in the **Printer Type** popup, covered momentarily), and connection method (there's also a **Print to file** option, which we'll get to in a minute); with network you're asked for a printer name and type. Supply the required information and click **Add** to add your printer to the **Printers** portion of the preference panel; click **Make Default** if you want this as your default printer.

If you want to print to a non-Appletalk network printer, you must be running **World O' Networking** (aka **WON**, the network sharing interface included in the R4.5 **/optional/experimental** directory). With **WON** running, when you choose to add a network printer you'll be asked in the **Add a Network Printer** dialog for a **Network printer path**. If you know the path to the printer, you can type it in. Otherwise, click the **Browse...** button to open a selection window that shows what's on the network and choose your printer there to set the path.

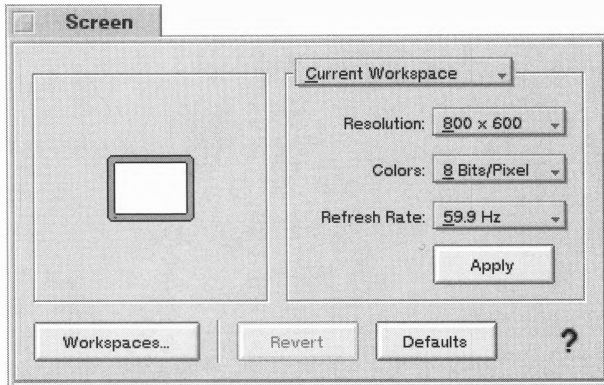
To remove a printer, highlight it and click **Remove**. Note that in the **Tracker**, when you click on a network printer that's already configured, the **Printers** pref opens with that printer selected, so you can see pending jobs, make it the default printer, remove it.

You'd probably use **Print to file**, in combination with an Apple Laserwriter-compatible printer, to send PostScript output to a file. **Print to file** in combination with other printer types produces output to a file in the page description language of the specified printer.

Print Preview—a virtual, onscreen printer that lets you view print output onscreen, and make decisions about font, layout, and so on, without wasting paper—was added in Release 4. You access it in R4.5 by choosing **Add** in the **Printers** panel; this brings up the **Add a Local or Network Printer** dialog, where you choose **Local Printer** and then click **Continue**. The **Add a Local Printer** dialog opens; choose **Preview** from the **Printer Type** popup, and you'll be able to review onscreen what your print output will look like on paper.

Screen

Screen lets you set your monitor's screen resolution, bits per pixel, and refresh rate.



The **Current Workspace/All Workspaces** popup lets you choose the scope of the settings that you're about to apply. After you click **Apply** a dialog appears that asks you to confirm your choice. If you don't confirm within some amount of time (about seven seconds), the screen reverts to its former settings. Note that you can adjust the refresh rate in .1 Hz increments by pressing the **Left/Right arrow** keys on the keyboard—this technique is useful when you're fine-tuning for the best-looking refresh rate. When adjusting the refresh rate in this manner, the confirmation dialog doesn't appear.

Initially, the BeOS displays a 640x480, 8-bit, 60.1 Hz screen. If your graphics card and monitor can accommodate a higher resolution, more colors per pixel, or a faster refresh rate, you should change these settings (see the WARNING below).

For detailed information about what kinds of graphics cards work with the BeOS, see the Be web site (<http://www.be.com/products/beosreadylist.html>).

- ⇐ **TIP:** To solve most screen problems press **Alt+Control+Shift+F12** to restore all default settings except desktop color (this shortcut works at any time, even when **Screen** isn't running, though the default settings aren't saved unless **Screen** is running).
- ⇐ **WARNING:** You can do serious damage to a monitor if you select a resolution, number of colors per pixel, or refresh rate the monitor isn't designed to support. Read the manuals that came with your monitor and graphics card to find out what combinations of settings are safe for the monitor. An alert dialog that appears before your changes take effect gives you a chance to cancel a setting you're unsure of before implementing it.

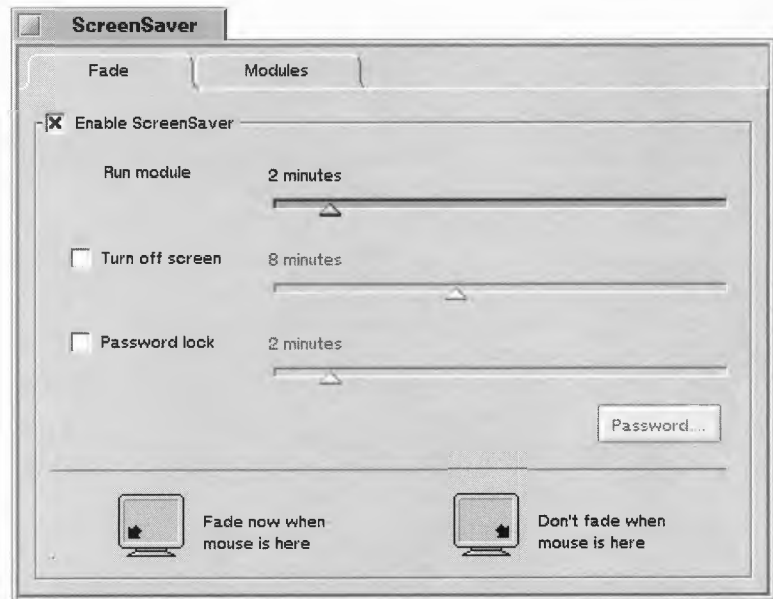
Adjusting the Screen Size and Position

When the **Screen** window is active, you can adjust the size of the screen image on the monitor by holding down the **Shift** key while pressing the arrow keys. The **Up/Down arrow** keys resize the screen vertically, and the **Left/Right arrow** keys resize it horizontally. You can adjust the position of the screen image by holding down the **Control** key and pressing the arrow keys.

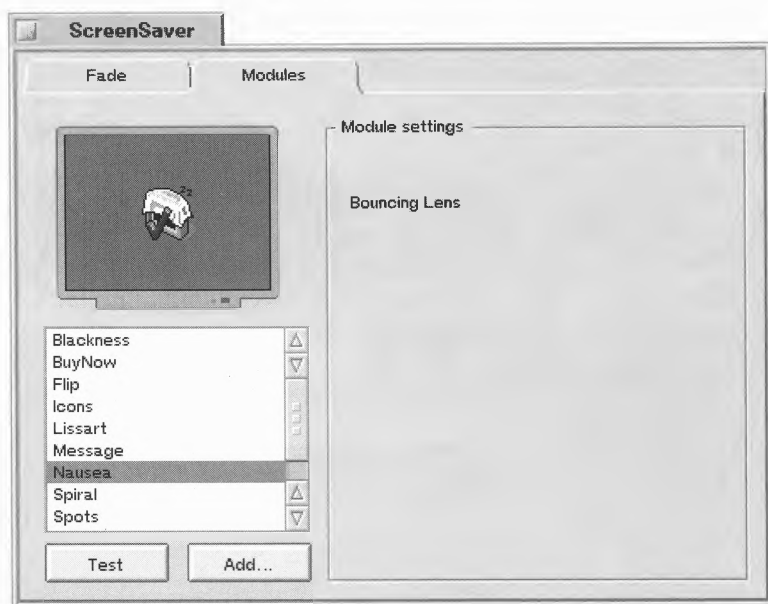
ScreenSaver

Open **ScreenSaver** preferences and check **Enable ScreenSaver** at the top left of the panel's **Fade** tab. Set the **Run module** slider for the length of time you want the screen to remain idle before the module starts. Check **Turn off screen** and set the slider if you want your screen turned off after some amount of idle time. Check **Password lock** and the time for it to take effect if you want password protection on your monitor.

You can also use the monitor icons at the bottom of the **Fade** tab to set when you want to fade to the screensaver or not, depending on the location of your mouse.



Now go to the **Modules** tab and choose a screensaver from the list (click **Test** to try it out).

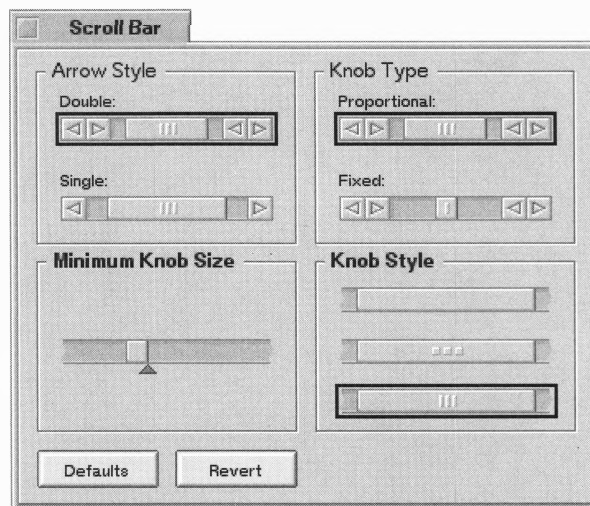


You can add a screensaver in `/boot/home/config/add-ons/screensaver`.

ScrollBar

ScrollBar lets you set the look and feel of your window's scroll bars:

Choose the **Arrow Style**, **Knob Style**, and **Knob Type** you prefer. Drag the green arrow to adjust the minimum scroll knob size. Click **Defaults** to return all the settings to the way they were when you first installed the BeOS. The settings you make in the **ScrollBar** window affect windows when you next open them.



Time (and Date)

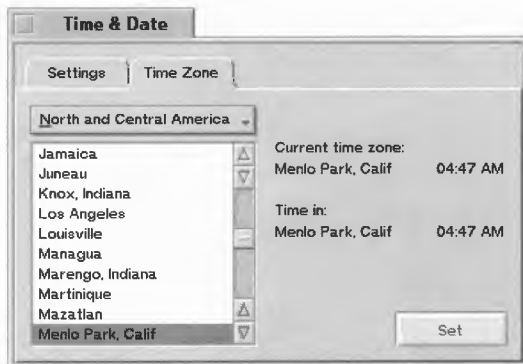
You set the date and time with **Time**:

In the **Settings** tab you can set the date by highlighting each element in the date bar and clicking the up or down arrows; to set the day of the month only, click in the calendar. You can set the time by highlighting elements in the time bar and clicking up or down, but it's more entertaining to drag the clock hands around.

If you are running the BeOS on a computer on which you also plan to run Windows, leave the setting on **Local Time**. The reason for this is that Windows sets the computer's internal clock to the local time in your time zone. If you change the BeOS preference to **GMT**, adjust the time, and then run Windows on your computer, the Windows desktop clock will be incorrect. If you then reset the time in Windows so the desktop clock shows the correct time, the time when you next run the BeOS will be incorrect.

⇒ **NOTE:** The BeOS handles Daylight Savings Time automatically, so you don't need to remember to fall back or spring ahead.

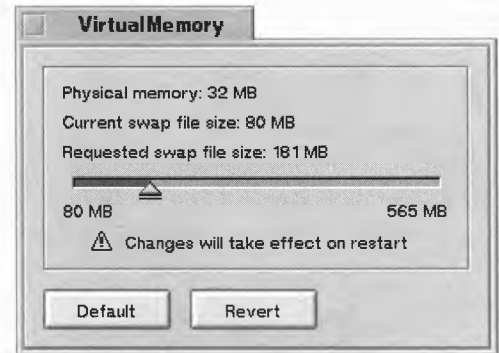
The default **Time Zone** setting is for Menlo Park, California. If you're in a different time zone, change this setting and click **Set**. This sets the correct time for your zone in the **Settings** tab.



VirtualMemory

VirtualMemory lets you set the amount of disk space that's used to augment the physical RAM on your system:

The **VirtualMemory** window displays the amount of installed RAM (**Physical Memory**;) and the amount of hard drive space allocated to virtual memory (**Current Swap File Size**;) . You can't change the physical memory (at least not from software), but you can change the virtual memory size—simply drag the slider around (or **Tab** to highlight the slider and use the arrow keys to adjust it in 1 MB increments). You have to reboot to make your change take effect.

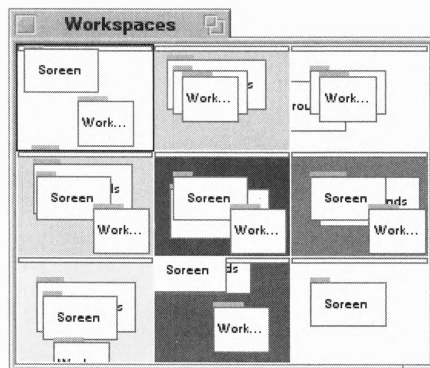


The amount of virtual memory that you can request is based on the amount of free space on your boot disk. **VirtualMemory** may restrict the size of the swap file that you request.

Workspaces

Workspaces is an interface to the different working areas, or *workspaces*, that you have set up. The default number of workspaces is nine but you can have as many as 32; you set this number in **Screen** preferences. Each workspace can hold its own set of windows that you're working in. You use different workspaces to organize your work—productivity apps in one workspace, audio/visual in another, mail in a third, and so on.

When you launch **Workspaces**, a “workspace map” is displayed; the windows in each workspace are represented in miniature:



workspace 1
workspace 2
workspace 3

workspace 4
workspace 5
workspace 6

workspace 7
workspace 8
workspace 9

Workspaces

To switch to another workspace, click in a “pane” in the **Workspaces** window, or press **Alt+Fn** (function key *n*) where *n* is a number between 1 and 9: **Alt+F1** takes you to the first workspace, **Alt+F2** takes you to the second, and so on. As displayed in the **Workspaces** window, workspaces are numbered left-to-right and top-to-bottom, as shown above.

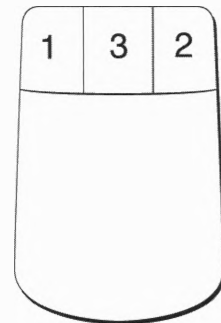
You can move a window from one workspace to another by dragging its miniature representation in the **Workspaces** window. When you open a folder that’s already open in another workspace, the window is brought into your current workspace, and is removed from the workspace it was in. However, if you select a window from the **Deskbar’s Window List**, you’re taken to the workspace that the window is open in (“remote” windows are indicated by “speedlines” in the **Window List**).

Appendix A: The Mouse and Keyboard

Using the Mouse

The BeOS recognizes one-, two-, and three-button mice. By default, the left button is the first button; the right button is the second; and the middle button is the third.

To reset the button order, use the **Mouse** preferences (see “Mouse” in Chapter 5, “Customizing the BeOS”).



Simulating a Multiple-button Mouse

A single-button mouse can simulate a two- or three-button mouse.

On a PC keyboard (including a Windows keyboard), the key combinations, based on the 104-key Windows keyboard, are these:

- **Control+Alt+click** simulates the second mouse button.
- **Control+Win+click** simulates the third mouse button.

Use the **Mouse** preferences to adjust the timing of multiple clicks and set the cursor's movement speed. These are the basic mousing terms used in this guide:

This	Means To Do This
Move	Move the mouse without pressing a mouse button.
Click	Press and quickly release a mouse button without moving the mouse.

Which Key, Which Keyboard?

Press	Press and hold down a mouse button without moving the mouse.
Drag	Press and hold down a mouse button while moving the mouse.
Double-click	Press and release a mouse button twice in quick succession.
Double-click and drag	Like a double-click, but hold down a mouse button instead of releasing it the second time, then move the mouse.

Which Key, Which Keyboard?

This table shows the equivalent keys for different keyboards.

Windows keyboard (104 keys)	PC keyboard (101 keys)	PPC (Mac) keyboard (105 keys)
<u>Alt</u>	<u>Alt</u>	<u>Command</u>
<u>Left/Right Windows</u> key	<u>Right Alt</u>	<u>Option</u>
<u>Left/Right control</u>	<u>Left/Right control</u>	<u>Left/Right control</u>
<u>Backspace</u>	<u>Backspace</u>	<u>Delete</u>
<u>Menu</u> key	(no equivalent)	(no equivalent)
(above arrow keys)	<u>Delete</u> (above arrow keys)	<u>Del</u> (above arrow keys)
<u>Enter</u> (main keyboard)	<u>Enter</u> (main keyboard)	<u>Return</u>
<u>Enter</u> (numeric keypad)	<u>Enter</u> (numeric keypad)	<u>Enter</u> (numeric keypad)

Choosing a Shortcut Key

Menu preferences lets you choose a shortcut key—that is, the key you use to invoke a shortcut. What's available to choose from depends on your keyboard.

Shortcut key	Windows keyboard (104 keys)	PC keyboard (101 keys)	(Mac) keyboard (105 keys)
<u>Alt</u>	<u>Alt</u> means both the right and left shortcut key.	<u>Alt</u> as the shortcut key applies to left <u>Alt</u> only; right <u>Alt</u> is the <u>Option</u> key.	N/A

Shortcut key	Windows keyboard (104 keys)	PC keyboard (101 keys)	(Mac) keyboard (105 keys)
<u>Control</u>	<u>Control</u> means both the right and left <u>Control</u> keys work as the shortcut key.	<u>Control</u> means both the right and left <u>Control</u> keys work as the shortcut key.	<u>Control</u> means both the left and right <u>Control</u> keys work as the shortcut key.
<u>Command</u> key	N/A	N/A	<u>Command</u> or <u>Control</u> means both the left and right <u>Command</u> and <u>Control</u> keys work as the shortcut key.

For simplicity, a 104-key keyboard with Alt as the shortcut key is used throughout the user guide.

Keyboard Shortcuts

System Shortcuts

Action or key combination	Means
<u>Alt+Escape</u>	Activate/deactivate (but not open/close) the first menu in a window.
<u>Escape</u>	Cancel (available, but not all applications use it).
<u>Tab</u>	Change keyboard focus to the next item in a window or panel.
<u>Alt+Tab</u>	Change keyboard focus to next group of controls (e.g., in a preferences panel); does this by highlighting first control in the group.
<u>Control+Tab</u>	Bring up the Twitcher app, which lets you switch apps with the keyboard. If you make Control your shortcut key, use <u>Alt+Tab</u> to bring up the Twitcher .
<u>Win+Tab</u>	Force a jump to the next control, if inputting text.
<u>Return</u>	Press a default button.
<u>Spacebar</u>	Activate or toggle the current control (button, checkbox, etc).

⇔ **NOTE:** The addition of the Shift key to some combinations will perform the action in reverse.

Tracker Shortcuts

Several **Tracker** shortcuts include both keyboard and mouse action.

Action or key combination

Click an item.

Click and drag across one or more items.

Type one or more letters.

arrow

Shift+ mouse click or drag. If you drag with the mouse, release the button before releasing the Shift key.

Shift+ letter

Alt+O or Return/Enter

Alt+D

Win+double-click

Win+drag

Alt+Up Arrow

Alt+Down Arrow

Alt+Win+Up arrow

Alt+Win+Down arrow

Alt+F

Alt+Y

Means

Select the item.

Select the items you drag across.

Select the item that starts with that letter or letters.

Select the next item in the direction of the arrow. You can also select **Tracker** window items using Tab and Shift+Tab, as described in "System Shortcuts."

Select or deselect additional items.

Select or deselect additional items.

Open the selected item.

Duplicate the selection.

Close current directory before performing an action.

Copy a selection to a new location rather than move it.

Close the current folder and open its parent.

Open any highlighted folder.

Close the current folder and open its parent.

Close the current folder and open the selected folder.

Open Find dialog—initiate a query.

Resize to fit.

Application Shortcuts

This is a summary of the most common application shortcuts:

Action or key combination	Means
<u>A</u> lt+N	Open new application window.
<u>A</u> lt+O	Open a file or folder.
<u>A</u> lt+S	Save current work in a file.
<u>A</u> lt+ <u>S</u> hift+S	Save a file by a different name.
<u>A</u> lt+Z	Undo work since last save.
<u>A</u> lt+ <u>S</u> hift+Z	Redo last undo.
<u>A</u> lt+W	Close application window.
<u>A</u> lt+ <u>S</u> hift+P	Open Page Setup preferences for printing.
<u>A</u> lt+P	Print.
<u>A</u> lt+Q	Quit the application; same as Close if only one application window is open.
<u>A</u> lt+W	Close the current window; quit the app if only one application window is open.

Menu Navigation and Selection Shortcuts

The table summarizes keyboard and mouse shortcuts for navigating menus and selecting items:

To	Do this
Open a menu	<ul style="list-style-type: none"> Click the menu title and release the mouse, or click the menu title and hold the mouse button, or press <u>A</u>lt+<u>E</u>scape and type the menu title's trigger letter or use arrows. or, press the <u>M</u>enu key on a Windows keyboard.
Navigate a menu	<ul style="list-style-type: none"> Drag the mouse through menu items, or press the <u>U</u>p /<u>D</u>own arrow in an open menu.
Choose a menu item	<ul style="list-style-type: none"> Click the item with the mouse, or type the item's trigger letter (if it has one), or select an item by dragging with the mouse or using the arrow keys, then press <u>E</u>nter /<u>s</u>pacebar.

To	Do this
Close a menu	<ul style="list-style-type: none">• Choose an item, or• click elsewhere in the window, or• press the Escape key.

File and Document Management Shortcuts

Key combination	Means
Alt+O	Open the selected file or document.
Alt+N	Open a new file or document.
Alt+S	Save the current file or doc; same as “Save As” for a file not previously saved.
Alt+Shift+S	Save As, or save the current file/doc in a new file.
Alt+P	Print.
Alt+Shift+P	Open the Page Setup dialog.

Text Selection and Editing Shortcuts

These apply to word processors, text editors, and terminal emulators..

Keyboard/Mouse combination	Means
Click	Select an insertion point.
Double-click	Select a word.
Triple-click	Select a paragraph.
Drag across text	Select a character at a time.
Double-click and drag	Select whole words at a time.
Triple-click and drag	Select whole paragraphs at a time.
Shift	Extend or reduce a range of selected text.

Keyboard/Mouse combination	Means
<u>Control</u> + <u>Shift</u> + <u>arrow</u>	Select one space to the left or right of the cursor (with left/right arrow keys) or a line above or below the cursor (up/down arrow keys).
<u>Alt</u> + <u>A</u>	Select all.
<u>Alt</u> + <u>Z</u>	Undo; redo if multiple undo not available.

The following text-editing shortcuts are based on the Clipboard feature. Affected text can be moved between windows in one application or between windows in different applications.

Key combination	Means
<u>Alt</u> + <u>X</u> ,	Cut the selected text.
<u>Alt</u> + <u>C</u>	Copy the selected text.
<u>Alt</u> + <u>V</u>	Paste the selected text to the right of the cursor.

Document Navigation Shortcuts

These shortcuts apply generally to word processors, text editors, and terminal emulators, though some apply only to text documents.

Action or key combination	Means
<u>Left arrow</u>	Move the cursor left.
<u>Right arrow</u>	Move the cursor right.
<u>Up arrow</u>	Move the cursor up.
<u>Down arrow</u>	Move the cursor down.
<u>Control</u> + <u>Left arrow</u>	Move the cursor back one word.
<u>Control</u> + <u>Right arrow</u>	Move the cursor forward one word.
<u>Control</u> + <u>Up</u> / <u>Down arrow</u>	Skip by paragraphs.
<u>Home</u>	Move the cursor to the beginning of the line.
<u>End</u>	Move the cursor to the end of the line.

Keyboard Shortcuts

Action or key combination	Means
---------------------------	-------

<u>Page up/down</u>	Move the cursor up/down one page (screen).
---------------------	--

<u>Control+Home</u>	Move the cursor to the beginning of the doc.
---------------------	--

<u>Control+End</u>	Move the cursor to the end of the doc.
--------------------	--

<u>Control+Page Up/Down</u>	Move the cursor to the top or bottom of current page without moving the page.
-----------------------------	---

Document Viewing Shortcuts

These shortcuts apply to read-only documents, such as HTML, Adobe PDF files, manpages, etc.

Key combination	Means
-----------------	-------

<u>Left/Right arrow</u>	Scroll left/right.
-------------------------	--------------------

<u>Up/Down arrow</u>	Scroll up/down.
----------------------	-----------------

<u>Alt+Left/Right arrow</u>	Go to the previous/next document (in a browser).
-----------------------------	--

List View Shortcuts

These shortcuts apply to List Views in **Tracker** windows, mail/news readers, music playlists, and so on.

Action or key combination	Means
---------------------------	-------

<u>Up arrow</u>	Select the previous item to currently selected one; select first item in the list if there is no highlighted selection.
-----------------	---

<u>Down arrow</u>	Select the next item from the currently selected one; select the last item in the list if there is no highlighted selection.
-------------------	--

<u>Alt+Right arrow</u>	Expand a folder, thread, menu, etc.
------------------------	-------------------------------------

<u>Alt+Left arrow</u>	Collapse a folder, thread, menu, etc.
-----------------------	---------------------------------------

<u>Return</u> or <u>space bar</u>	Activate the selected item(s).
-----------------------------------	--------------------------------

<u>Alt+A</u>	Select all.
--------------	-------------

Letter keys	Move to the closest alphabetic match.
-------------	---------------------------------------

Action or key combination	Means
<u>T</u> ab	Move to the next item in order.
<u>S</u> hift+ <u>T</u> ab	Move to the previous item.
<u>S</u> hift+click	Select contiguous items as the mouse is dragged.

Miscellaneous Shortcuts

Key combination	Means
<u>C</u> ontrol+ <u>T</u> ab	Holding down <u>C</u> ontrol while pressing quickly on <u>T</u> ab cycles through the open applications without bringing up the Twitcher application switcher interface.
<u>A</u> lt+ <u>F</u> 1- <u>F</u> 12	Pressing <u>A</u> lt+a numbered function key switches to that number desktop in the Workspaces application.

Appendix B: Miscellaneous

Taking a Screen Shot

There are two ways to take a screen shot in the BeOS: Press the **Print Screen** key or **Alt+Shift+3**. The screen shot appears in the **/boot/home** folder on your boot disk. All screen shots are in targa format. You can open the screen shot by double-clicking the file or by dragging it onto the **ShowImage** application.

Adding Drivers

Third-party software drivers should install themselves correctly without your help. For informational purposes only, drivers always live in the **/boot/beos/system/add-ons/kernel/drivers/bin** folder. The actual driver binary goes into **.../drivers/bin**. The driver's installation process creates a *symlink* that points back to **.../drivers/bin**. The symlink directory hierarchy parallels the actual hierarchy a driver creates when it names its devices. The purpose of this is to cut kernel overhead when it scans for drivers; it only needs to search in **.../add-ons/kernel/drivers**, instead of scanning through all the drivers in **/bin**.

For example, if you install a Parallel Slingshot driver (a fictional driver), the Parallel Slingshot binary goes into **.../drivers/bin**; its symlink goes into **.../drivers/dev/parallel slingshot**.

Appendix C: The BeBox Guide

Be, Inc., will continue to support BeBox hardware until January 1, 2000. This appendix contains information about installing the BeOS on a BeBox, along with general pertinent usage information.

You install BeOS Release 3 the same way you've installed previous releases. Before you install, however, follow these steps to upgrade the boot ROM:

1. Boot from the Release 4.0 CD.
 2. In the `/beos/etc` folder, you'll see the **ROMUpdater** application and a file named `bebox_bootmain.image`.
 3. Press the **Control** key and drag the `bebox_bootmain.image` icon onto the **ROMUpdater** icon.
 4. A dialog tells you when the boot ROM has been upgraded.
 5. Reboot and proceed with the installation.
- ⇔ **NOTE:** While it's no longer absolutely necessary to update the boot ROM, bug fixes in Release 4 will make booting a more pleasant experience if you do update.

Using Floppy Disks with the BeBox

You can reliably read/write to floppy disks on the BeBox. These types of floppies will work:

- Standard MS-DOS formatted 720K and 1.4MB disks
- Macintosh HD 1.4MB disks (but not Macintosh 800K disks)
- BFS formatted 720K and 1.4MB disks

Initialization

You can initialize MS-DOS and BFS floppies using the **DriveSetup** application. In the **Setup** menu, choose **Initialize** and then either **Be File System** or **dos....** Note, however, that you cannot initialize Mac HFS floppies on the BeBox; those you wish to mount must already be initialized.

Mounting a Floppy

To access your DOS, BFS, or Mac HFS floppy, insert it in the floppy drive and mount it. You can do this using either **DriveSetup**'s **Mount** command or the **Mount** command in the desktop context menu, or the context menu that appears when you right click on the icon of a mounted volume.

Using Drive Setup

1. Highlight the **/dev/disk/floppy** line in the **DriveSetup** window.
2. Choose **Mount** from the **Mount** menu to mount the initialized disk.
3. A floppy icon will appear on the desktop.

Using a Context Menu

1. Right-click on an open area of the desktop or on the icon of a mounted volume.
2. Choose **Mount** from the context menu that appears, and then choose the floppy.
3. A floppy icon will appear on the desktop.

Appendix D: Working with the Mac OS Tools

The BeOS CD includes two Macintosh programs: **TTConverter**, which converts TrueType fonts for use on the BeOS, and **Netfinder**, which lets you transfer files over the network from the BeOS to the Mac. The following sections examine these tools.

Converting TrueType Fonts

Converting Macintosh TrueType fonts for use on the BeOS is a two-step process:

- Use the **TTConverter** that comes with your BeOS in the Macintosh Utilities folder to convert fonts to BeOS format.
- Install converted fonts in the BeOS

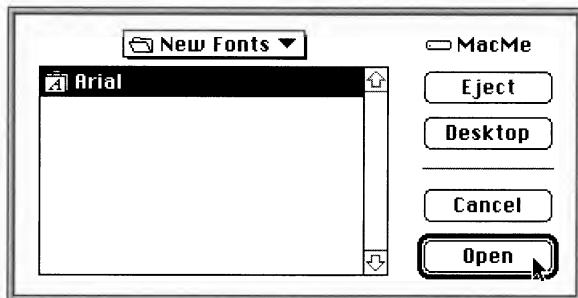
When you install the BeOS, a folder called **Macintosh Utilities** is created on the Macintosh volume. This folder contains **TTConverter**, which converts Macintosh TrueType fonts into a format that the BeOS can use. Most TrueType fonts can be converted using this utility with the exception of Apple's standard fonts that ship with the Mac OS (Chicago, Courier, Geneva, Helvetica, Monaco, New York, Palatino, Symbol, and Times).

- ⇔ **NOTE:** The BeOS uses the same TrueType format as Microsoft Windows. If you acquire new Macintosh fonts, get them in TrueType format, or convert them with the **TTConverter**.

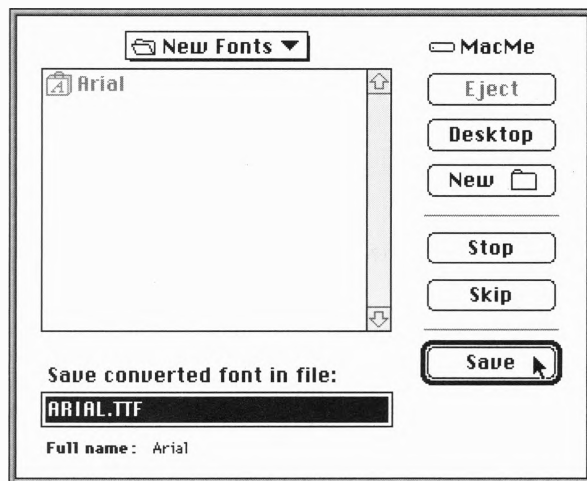
Launching the TTConverter and Converting Fonts

Look for the **TTConverter** in the **BeOS Mac Tools/Mac Utilities** folder, then follow these steps to convert TrueType fonts for use with the BeOS:

1. Double-click on the **TTConverter** icon and select **Convert** from the **File** menu.
2. A dialog let you choose the font you wish to convert (e.g., Arial).



3. You can convert all of the font types associated with a font. An additional dialog lets you save them all or skip the font styles you don't need. Converted files have a filename that ends in .TTF (e.g., ARIAL.TTF, ARIALB.TTF, ARIALI.TTF, ARIALBI.TTF).



Installing Converted Fonts in the BeOS

After you convert the fonts, copy them over to your BeOS volume. Mount your Macintosh volume and copy the .TTF file into `/boot/home/config/fonts/ttfonts`. Once they are there, restart the BeOS to activate the new fonts, or use the **Fonts** preferences application to rescan the installed fonts.

Transferring Files with Netfinder

The BeOS installation CD includes a Mac OS tool called **Netfinder**, which lets you transfer files over the network from the BeOS to a Macintosh. **Netfinder** is shareware. The documentation that accompanies **Netfinder** contains detailed technical information as well as the shareware license.

File transfer involves three steps:

- Setting up your network.
- Turning on Internet file sharing.
- Transferring files with **Netfinder**.

Setting Up Your Network

When setting up the Mac OS for Internet file sharing using the TCP/IP control panel, you should refer to your Mac OS documentation for help. You can also refer to the chapter “Connecting to the Network.” You’ll find the concepts, steps, and basic definitions are very similar. If you’re not connected to the Internet but still want to set up a connection using the Internet protocols, read “Setting Up BeOS for Both Stand Alone Network and Modem-Based Internet Use” in the same chapter.

Turning on File Sharing

Your BeOS system includes a built-in FTP server for serving files to hosts on a TCP/IP network. To allow other computers to see and copy the files on the BeOS, you have to turn on the FTP server:

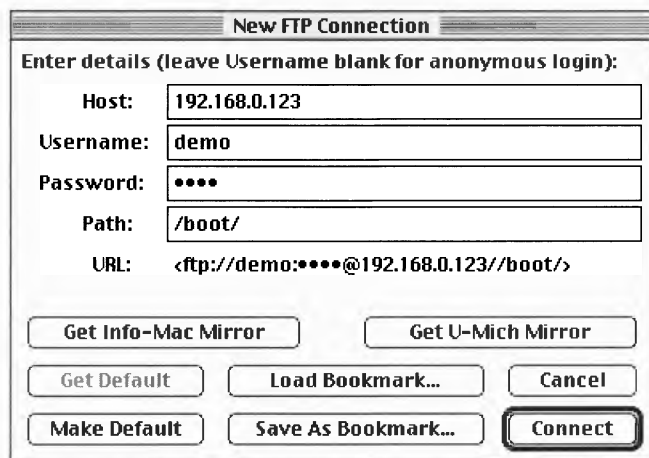
1. Launch the **Network** preferences application.
2. Go to the **Settings** tab.
3. Check the **Enable FTP server** check box.
4. Assign a user name and password.
5. Save your changes and click the **Restart Networking** button.

You are now ready to transfer files.

Using Netfinder for Mac OS to Transfer Files

Netfinder for Mac OS is included on the BeOS CD. To run this application, double-click its icon. Type in the IP address of the BeOS machine to which you wish to connect in the **Host:** field. Enter the user name and password in the appropriate areas. Also be sure to put the “/” in the **Path:** field, which opens

your connection at the root of the volume, making navigation of the remote file system much easier. Click the **Connect** button to activate your connection.



The image shows a 'New FTP Connection' dialog box. It has a title bar with the text 'New FTP Connection'. Below the title bar, it says 'Enter details (leave Username blank for anonymous login):'. There are five input fields: 'Host' with the value '192.168.0.123', 'Username' with the value 'demo', 'Password' with four dots '....', 'Path' with the value '/boot/', and 'URL' with the value '<ftp://demo:....@192.168.0.123//boot/>'. At the bottom, there are seven buttons: 'Get Info-Mac Mirror', 'Get U-Mich Mirror', 'Get Default', 'Load Bookmark...', 'Cancel', 'Make Default', and 'Connect'. The 'Connect' button is highlighted with a thick border.

New FTP Connection	
Enter details (leave Username blank for anonymous login):	
Host:	192.168.0.123
Username:	demo
Password:
Path:	/boot/
URL:	<ftp://demo:....@192.168.0.123//boot/>
Get Info-Mac Mirror Get U-Mich Mirror	
Get Default Load Bookmark... Cancel	
Make Default Save As Bookmark... Connect	

Once connected, you'll see a window with the contents of the volume of the BeOS system. You may now drag and drop files between your Mac OS volumes and the BeOS volume to which you are connected.

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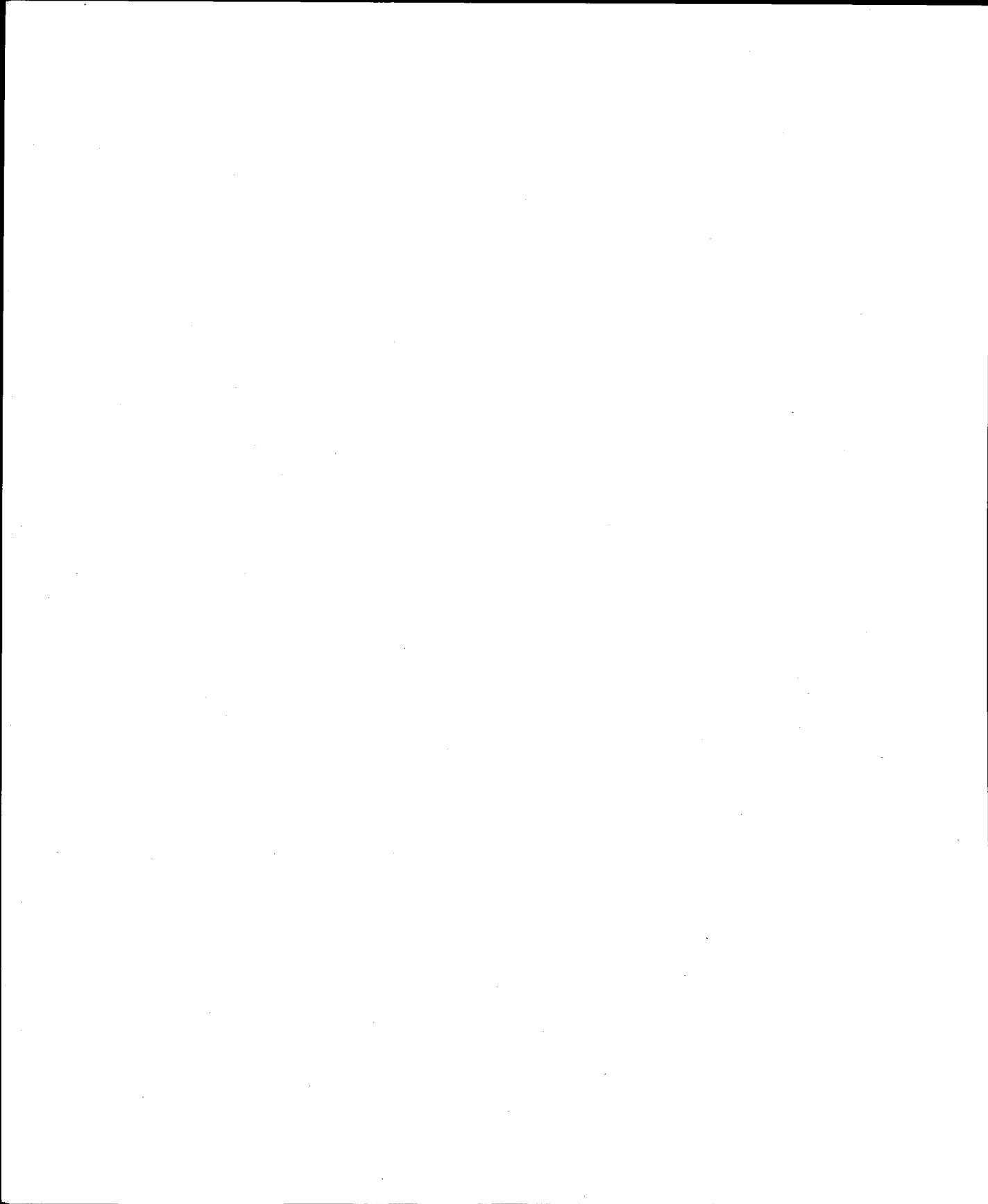
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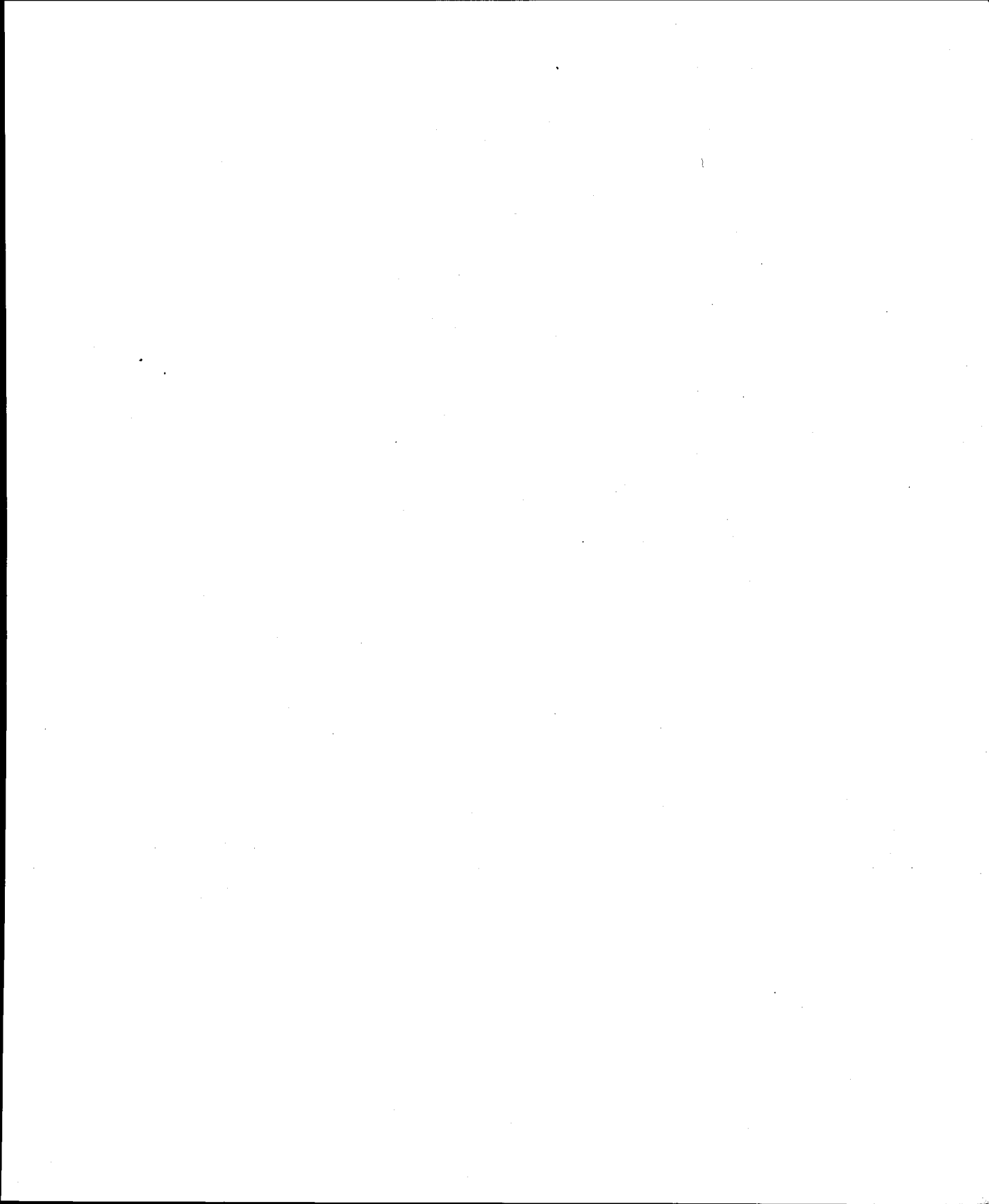
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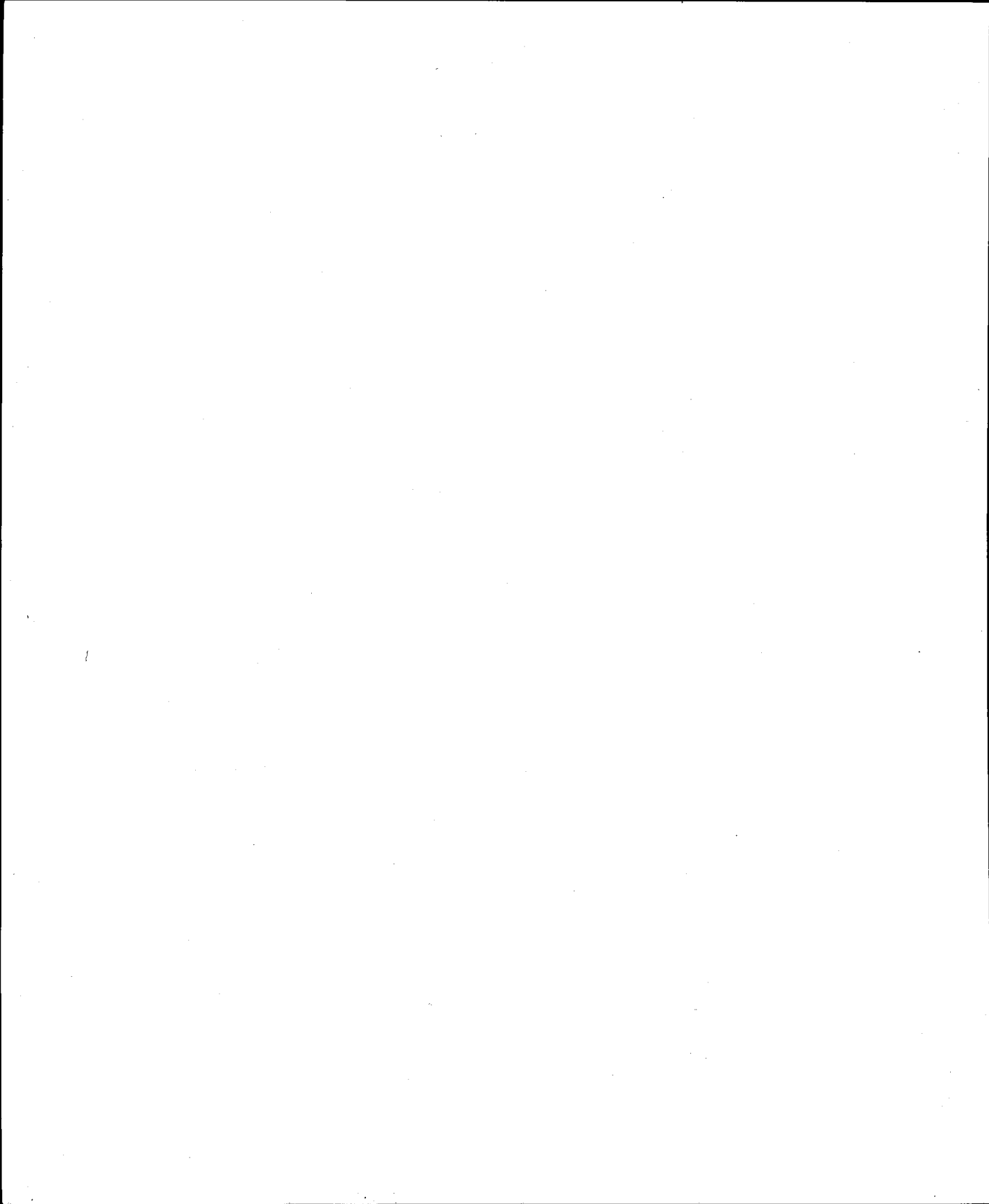
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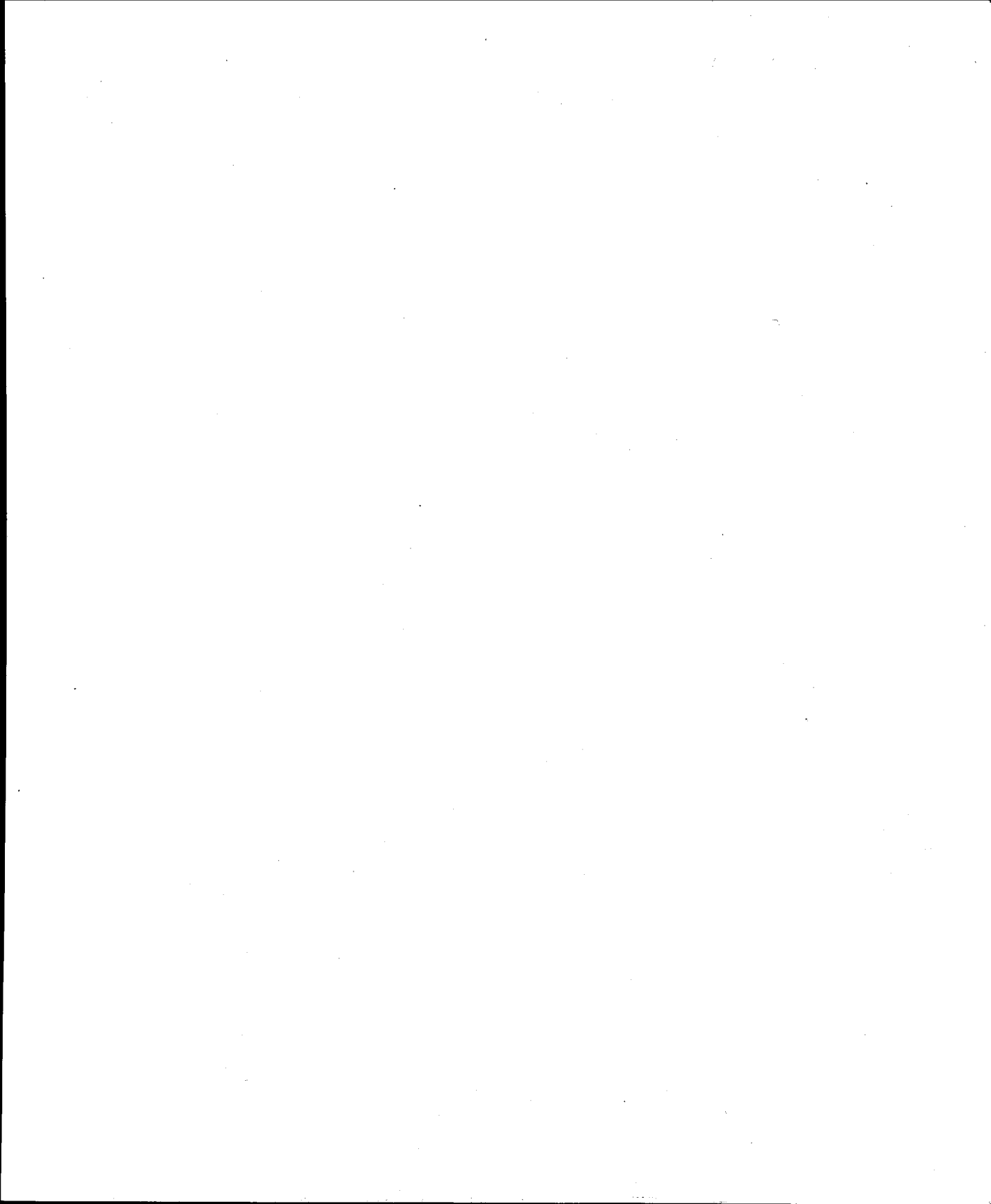
Workspaces

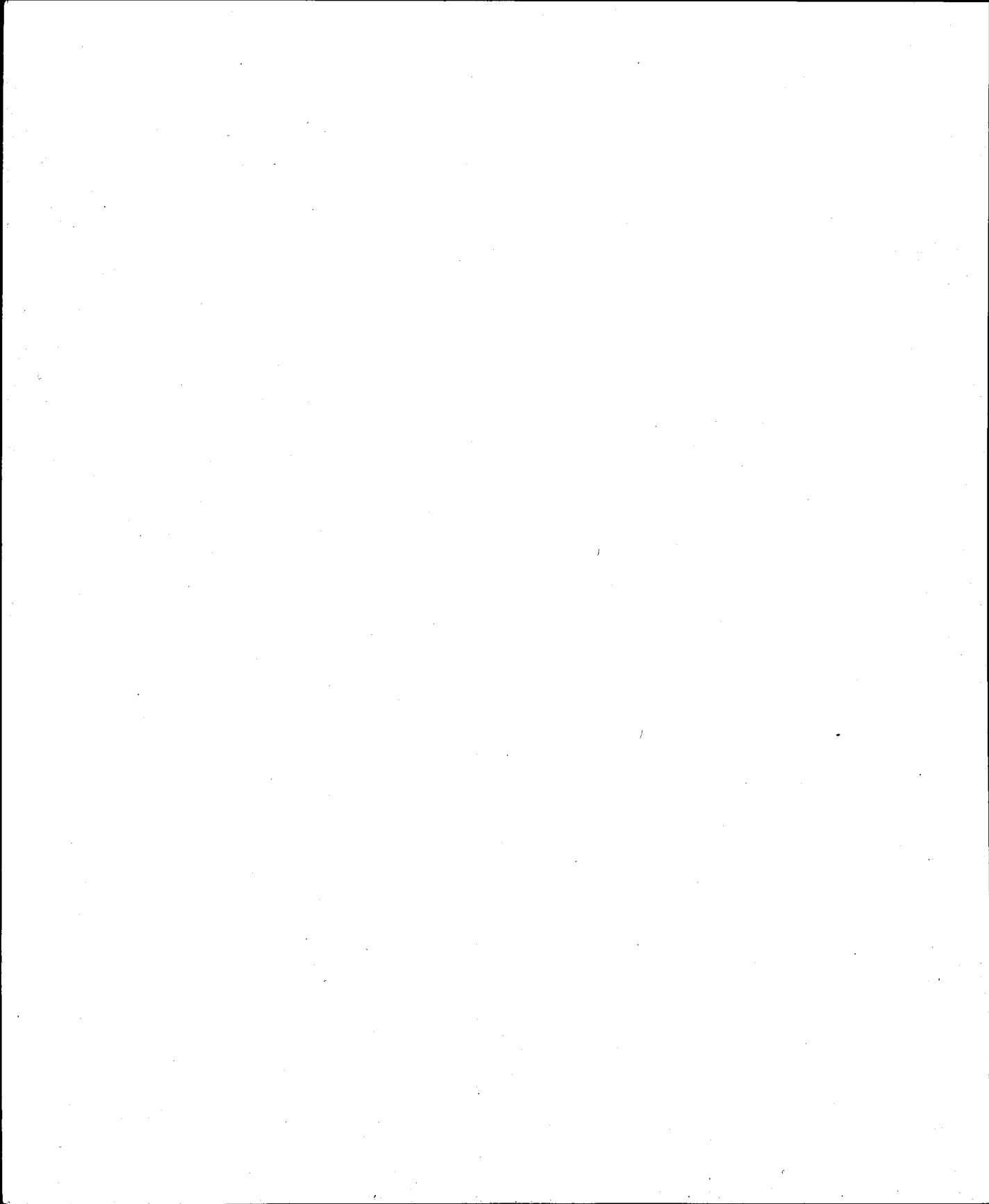
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Have you registered yet?

See REGISTRATION section of the User's Guide for details,
or visit our web site: <http://www.be.com/register>



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