

SCSI ADAPTER AND EMULATOR

USER GUIDE





Outbound SCSI Adapter and Emulator User Guide

Outbound Systems, Inc.
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Radio Frequency Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the equipment being affected.
- Increase the distance between this device and the equipment being affected.
- Plug the Outbound equipment into an AC outlet on a circuit different from that of the equipment being affected.
- Consult the dealer or an experienced radio/TV technician for further assistance.

Important: This product was FCC certified under test conditions that included the use of a shielded cable and connectors between the Outbound Laptop and the Outbound SCSI Adapter. It is important that you use the shielded cable provided to reduce the possibility of causing interference to radio, television, and other electronic devices. Changes or modifications to this equipment not expressly approved by Outbound Systems, Inc. could void the user's authority to operate this equipment.

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Introducing the Outbound SCSI Adapter and Emulator

The Outbound SCSI Adapter is an external Small Computer System Interface (SCSI) adapter for the Outbound Laptop System. The SCSI Adapter can be used in two ways: 1) as a conventional Outbound-to-SCSI device connector, and 2) as a SCSI Emulator, enabling any or all of the Outbound's storage devices to appear as SCSI volumes on the desktop of any Apple® Macintosh® computer.

The SCSI Adapter gives Outbound Laptop users the added flexibility of connecting to the wide range of SCSI products available for the Macintosh. In SCSI emulation mode, the SCSI Adapter also allows the Outbound Laptop to become a SCSI disk drive for any Macintosh II, SE, or Plus, thus vastly simplifying file transfers.

The SCSI Adapter is powered by the Outbound Laptop it is plugged into. It will withstand the same environmental conditions as the Outbound Laptop and requires no maintenance.

The SCSI Adapter is designed specifically for use with the Outbound Laptop, the Apple Macintosh, and standard Macintosh SCSI devices; it will not operate with any other brand or model of computer. Because the SCSI Adapter plugs into the Outbound's host connector port, the Outbound cannot be docked to a host Macintosh when the SCSI Adapter is plugged in.

What You Need to Get Started

To use your SCSI Adapter, you'll need an Outbound Laptop, the SCSI Adapter itself, and the expansion cable that came packaged with it.

To use the SCSI emulation capabilities, you'll need the Outbound SCSI Emulator program and a fully functional Macintosh in addition to the SCSI Adapter and cables. Version 1.1 or higher of the Outbound System Software must also be installed on the Outbound Laptop.



Using Other SCSI Devices with Your Outbound Laptop

You can use the SCSI Adapter to access other SCSI devices from your Outbound Laptop. The SCSI Adapter is compatible with the SCSI bus on the Macintosh Plus, Macintosh SE, and Macintosh II families, and Macintosh SCSI peripherals, including disk drives, printers, scanners and other SCSI devices.

To connect the Outbound Laptop to other SCSI devices, follow these steps:

- 1. Make sure that the Outbound Laptop and all devices you want to connect to it are turned off.**
- 2. Connect the SCSI Adapter to the expansion cable that came with it.**

The two ends of the cable are identical and will only plug into the small connector port on the SCSI Adapter.

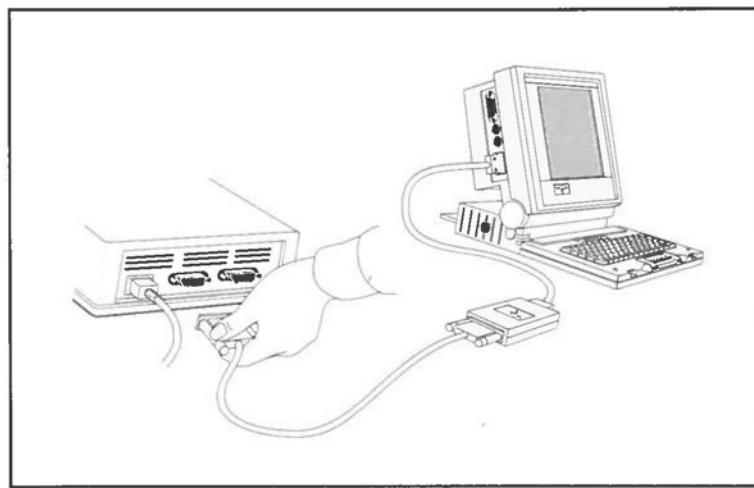


Figure 1. Connecting the Outbound to a SCSI hard drive

- 3. Plug the other end of the expansion cable into the host connector port of the Outbound Laptop.**



4. Connect the SCSI Adapter to a SCSI hard drive or other SCSI device of your choice.

The SCSI Adapter has a standard DB-25 connector (the larger connector) that will work with the standard Macintosh cables supplied with the SCSI device you want to connect to. These standard cables include a "DB-25 to DB-25" type (an identical 25-pin male connection on both ends) or a "DB-25 to Centronics-50" type (a 25-pin male connection on one end and a 50-pin connection on the other). Your Outbound dealer can provide you with these or other cables as needed. Plug the 25-pin connection cable end into the SCSI Adapter and the other cable end into the SCSI device you wish to connect to.

5. Turn on the external SCSI device first and allow it to come to a fully operational state.

6. Turn on the Outbound Laptop.

When the Outbound Laptop has fully booted, the external SCSI device should appear on the desktop (or in the Chooser panel) and should be fully accessible.

7. To disconnect the Outbound Laptop from any SCSI devices, quit all applications in use, then shutdown the Outbound before turning off the other SCSI devices.

At this point all cables may be disconnected.

Accessing the Outbound Laptop from a Macintosh

Use the following steps to access the Outbound from your Macintosh:

- 1. Make sure that the Outbound Laptop and all devices you want to connect to it are off.**
- 2. Connect the SCSI Adapter to the expansion cable that came with it.**

The two ends of the cable are identical and will only plug into the small connector port on the SCSI Adapter.

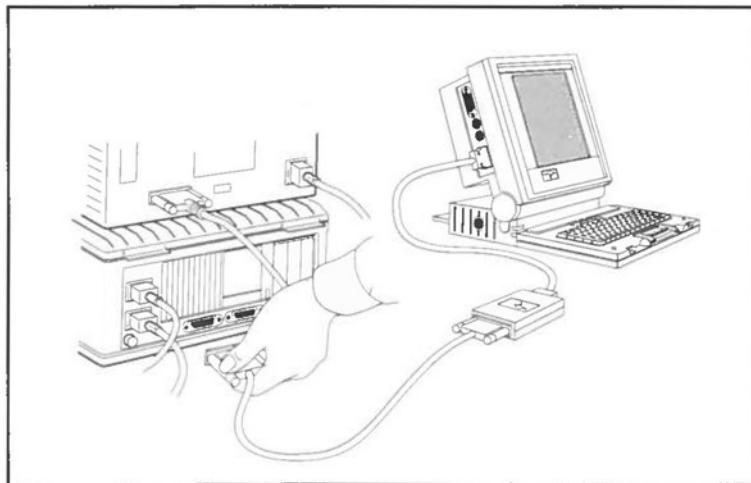


Figure 2. Connecting the Outbound to a Macintosh II.

3. **Plug the other end of the expansion cable into the host connector port of the Outbound Laptop.**
4. **Connect the SCSI Adapter to the Macintosh using a “DB-25 to DB-25” (it has an identical 25-pin connection on each end).**
Your Outbound dealer can provide you with the cables you need. In some instances, you may need to “daisy chain” to the Macintosh via other SCSI devices.
5. **Turn on all other SCSI devices and allow them to reach a fully operational state.**
6. **Turn on the Outbound Laptop and launch the Outbound SCSI Emulator program.**

Do not turn on the Macintosh yet. You will see the startup screen shown in Figure 3.

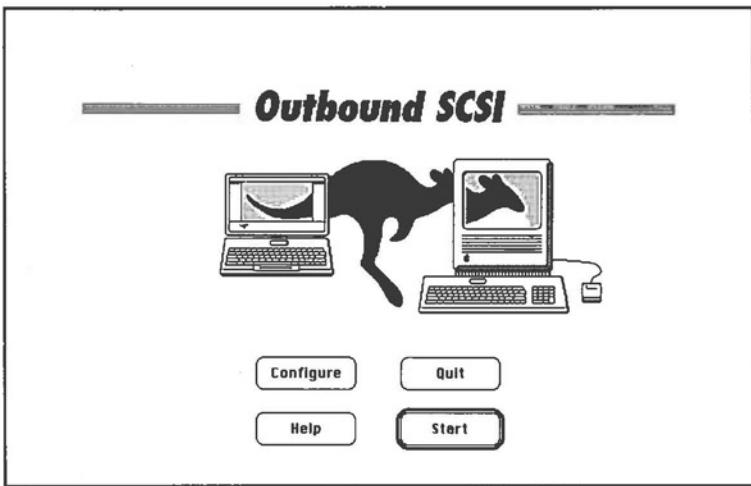


Figure 3. SCSI Emulator

7. Click the “Configure” button.

You will see the “SCSI Bus” screen (shown in Figure 4) where you select the Outbound’s SCSI ID number.

8. Select a unique SCSI ID number for the Outbound by pointing and clicking a vacant “window” of the bus.

If you are not familiar with using SCSI devices, read the section “SCSI Address & Termination Issues.” A set of check boxes in the lower portion of the screen displays the available storage devices on the Outbound Laptop.

9. Click the check box for the storage device you want to appear on the host Macintosh desktop.

By default, all available storage devices are checked, but deselecting any of those devices will prevent them from appearing on the Macintosh desktop.

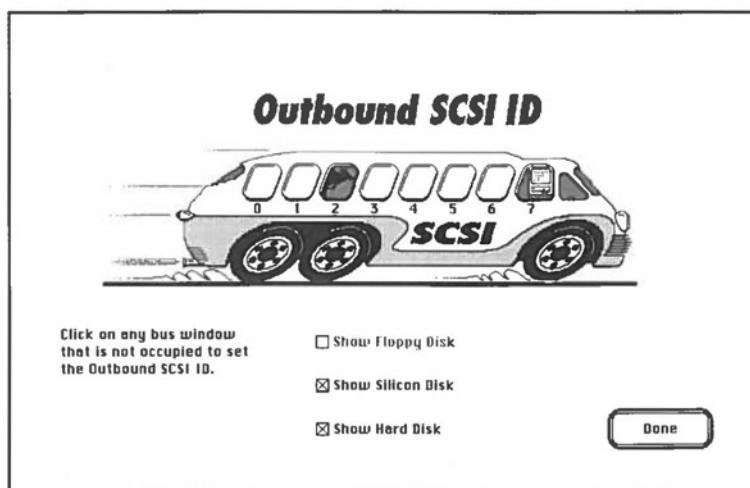


Figure 4. SCSI address selection

10. Click the Done button when you are satisfied with your SCSI configuration.

The configuration information will be saved so there is no need to reconfigure unless you want to attach your Outbound to a different set of SCSI devices.

11. Click the Start button to enter SCSI emulation.

Caution:

Once the Start button is clicked, only the Command and Period keys will be operative, and these will cause the Outbound to shut-down. So, if you are running under MultiFinder, quit all applications and save all files prior to starting the SCSI Emulator or you may lose your data. Also, if your Outbound is running on battery power, note the time remaining on the battery, or connect your Outbound to AC power before running the SCSI Emulator program. You cannot check your remaining battery time once you start the SCSI Emulator.

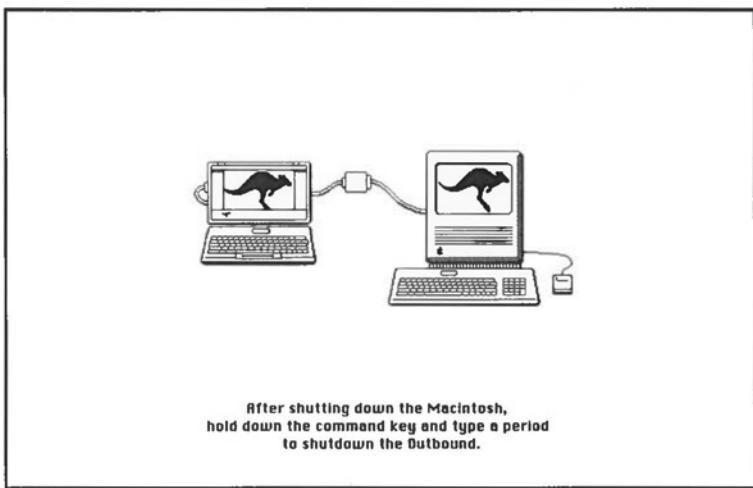


Figure 5. SCSI Emulator when running

12. Turn on the host Macintosh.

All SCSI devices and the Outbound's storage devices should appear on the Macintosh desktop. If all SCSI devices do not appear on the desktop, shutdown the Macintosh and all other SCSI devices, then check the cable connections and verify that all SCSI devices are assigned unique addresses (refer to the section "SCSI Address & Termination Issues").

13. To quit the SCSI emulation mode or disconnect any of the cables, first shut down the Macintosh.

Since quitting the Outbound SCSI Emulator is like turning off a SCSI drive, this should not be done until after the host Macintosh is shut down. Quit from the Outbound SCSI Emulator by simultaneously pressing the Command and Period keys. This turns the Outbound Laptop off. You may now unplug it from its SCSI connections.



SCSI Address & Termination Issues

SCSI addresses

Every SCSI device connected to a computer must have a unique SCSI “address” or SCSI ID. The range of allowable addresses is from 0 to 7. Apple sets the Macintosh SCSI ID number to 7 at the factory; therefore, ID 7 should never be used by any other device. Macintosh II internal hard drives are often set to SCSI ID 0. The Get Info dialog box in the Finder shows the IDs for Macintosh internal SCSI hard drives.

Refer to the documentation for other SCSI devices to determine their SCSI IDs. Or, click on their icons in the Finder and choose “Get Info” from the File menu. Once you know the SCSI ID numbers for all of your connected SCSI devices, you can select a unique SCSI ID for your Outbound Laptop.

Note:

When running the Outbound SCSI Emulator at the configuration screen level, the “invisible SCSI propeller-head guy” will automatically fill in the SCSI addresses of all attached devices that are already powered-up. However, since a Macintosh with an internal SCSI hard drive is turned on after this step, the address of the internal drive will not show up. To avoid SCSI ID conflicts, determine the address of the internal SCSI hard drive before you hook up the SCSI Adapter or launch the Outbound SCSI Emulator program.

SCSI termination

In order to work properly, a SCSI bus must be *properly* “terminated.” When properly terminated, signals on the SCSI cables are clear and data is transferred accurately between SCSI devices. When *improperly* terminated, the signals appear erratically or not at all.

The Outbound SCSI Adapter has sufficient termination to be connected directly to a Macintosh (which may have an internal SCSI drive). If you are using the Outbound SCSI Adapter in conjunction with other SCSI devices, it is important that those devices provide the proper termination. Some SCSI devices require external hardware attachments or modifications to terminate properly. Other SCSI devices provide internal termination that requires no action on your part. Because of the



wide range of termination methods, refer to the individual SCSI device documentation for instructions. If you have further questions, consult your Outbound dealer.

Power Requirements Using the SCSI Adapter

The SCSI Adapter uses electrical power from the Outbound Laptop. Therefore, using the SCSI Adapter will slightly decrease the available operating time when running the Outbound Laptop off of battery power.

To assure that you have sufficient operating time, carry spare charged batteries or plug the Outbound Laptop into AC power whenever possible.

Care & Maintenance

Your SCSI Adapter is designed to be a rugged companion to your Outbound Laptop. However, never operate or expose either machine to extended high or low temperatures, water, excessive dust, or other environmental hazards. Do not drop or otherwise abuse the SCSI Adapter.

With reasonable handling, your SCSI Adapter does not require cleaning or adjustment. However, if you have reason to believe it has received adverse handling, take it to an authorized Outbound dealer.



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