

How Do I Connect Devices?



You love MacBook Air because it doesn't require you to be a genius to accomplish basic, everyday tasks. Got a new mouse? Just plug it into the USB port and it's ready to use within seconds. Nice! Unfortunately, there are some devices that are more ornery and require a bit of extra effort on your part to get them connected and configured. In this chapter, I take you through a few such devices, including an external display, printer, fax, digital camera, scanner, and camcorder.

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Using an External Display

If you have an extra external display — a monitor, television set, or projector — just lying around, you can connect it to MacBook Air in various scenarios:

- **As an alternative display.** You can use the external display instead of MacBook Air's built-in monitor.
- **As a desktop extension.** You can use the external display to extend the MacBook Air desktop.

Fortunately, both of these connection types are *plug-and-play* (meaning once you plug in and turn on the external display, MacBook Air recognizes the new device right away). That's the good news. The bad news is that although using an external monitor is plug-and-play, the *plug* part isn't as straightforward as you might like because there are many different ways to connect a MacBook Air to a display. The next few sections provide you with the details you need to make things happen.

Understanding external display connections

To connect MacBook Air and an external display, you need to know the various ways these connections can occur. On the MacBook Air itself, the display connection is the Micro-DVI port shown in figure 1.1.

You can use the Micro-DVI port to connect MacBook Air to external displays that use three connector types: DVI (digital video interface), VGA (video graphics array), and video.

DVI connections

The standard video connection type on most LCD monitors and on some televisions and projectors is DVI. That sounds simple enough but, unfortunately, external displays such as LCD monitors and televisions can use different DVI connectors. There are actually three types:

- **DVI-A.** This connector works with only analog signals (see figure 1.2).



1.1 MacBook Air comes with a Micro-DVI port for connections to external displays.



1.2 A DVI-A connector.

**Note**

What's the difference between single-link and dual-link? DVI uses a transmitter to send information along the cable. A single-link cable uses one transmitter, while a dual-link cable uses two transmitters. This means that dual-link connections are faster and offer a better signal quality than single-link connections.

- **DVI-D.** This connector works with only digital signals and it comes in single-link and dual-link versions (see figure 1.3). The Micro-DVI to DVI adapter that comes with MacBook Air uses a dual-link DVI-D connector.
- **DVI-I.** This connector works with both analog and digital signals and comes in single-link and dual-link versions (see figure 1.4).

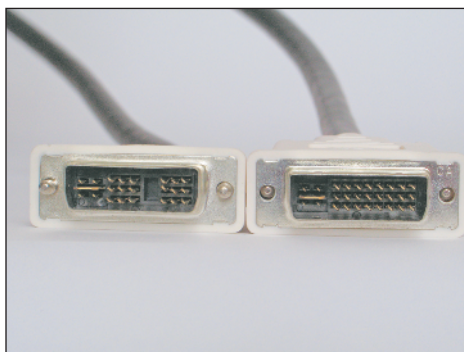
As you can see, each type of DVI connector uses a slightly different pin arrangement. When you're matching your external display, DVI cable, and MacBook Air DVI adapter, you need to make sure that they all use the same type of DVI connector.

To connect MacBook Air's Micro-DVI port to a DVI port on an external display, use the Micro-DVI to DVI adapter that comes with the MacBook Air package. (If you can't find yours, you can buy one from the Apple Store or a Mac dealer for about \$19.) The Micro-DVI to DVI adapter uses a DVI-D connector, which is either good news or bad news depending on your external display port:

- **DVI-D port.** This is good, because it probably means you have a DVI-D cable, which connects to both the adapter and the display. In this case, the adapter is all you need.
- **DVI-I port.** This isn't so good, because it probably means you have a DVI-I cable, and that cable won't fit the adapter's DVI-D connector. In this case, the adapter on its own won't cut it. To solve the problem, you either need to buy a DVD-D cable, or you need to hunt down a DVI-D to DVI-I adapter so you can use your DVI-I cable.



1.3 DVI-D single-link (left) and dual-link (right) connectors.



1.4 DVI-I single-link (left) and dual-link (right) connectors.



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A dual-link DVI connector plugs in to (and works with) a single-link DVI port. Unfortunately, the reverse isn't true; that is, you can't plug a single-link DVI connector into a dual-link DVI port. Note, too, that a DVI-D connector can plug into a DVI-I port, but a DVI-I connector won't fit into a DVI-D port.



Note

In high-tech cable and port connections jargon, a connector with pins is described as *male* and a connector with holes is described as *female*. The Micro-DVI to DVI adapter has a female DVI connector, which means you can't plug it directly into an external display's DVI port, because it is also female. In other words, you need to run a DVI cable — which is male on both ends — between the adapter and your external display.

VGA connections

All CRT monitors and many LCD monitors and projectors come with a VGA connector, shown in figure 1.5.

To connect MacBook Air to an external display that only offers a VGA connector, use the Micro-DVI to VGA adapter, shown in figure 1.6, which comes in the MacBook Air box.



1.5 VGA connectors are standard on CRTs and common on LCDs.

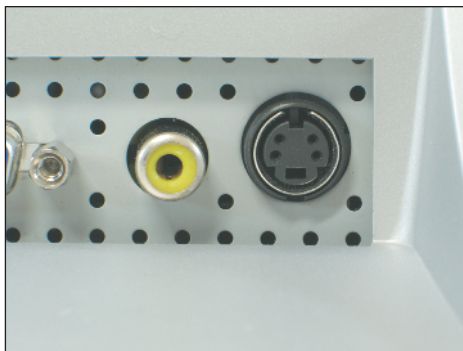


1.6 Use the Micro-DVI to VGA adapter to connect the MacBook Air Micro-DVI port to an external display's VGA port.

Video connections

If your external display is a television or projector (or even a VCR), it likely has either a Composite (yellow RCA) connector or an S-Video connector; both are shown in figure 1.7.

To connect MacBook Air to an external display that only offers either Composite or S-Video connectors, use the Micro-DVI to Video adapter, shown in figure 1.8. This adapter is available from the Apple Store or most Apple retailers.



1.7 Composite (left) and S-Video (right) connectors are common on televisions, projectors, and VCRs.



1.8 Use the Micro-DVI to Video adapter to connect your MacBook Air to an external display's Composite or S-Video port.

Setting the external display mode

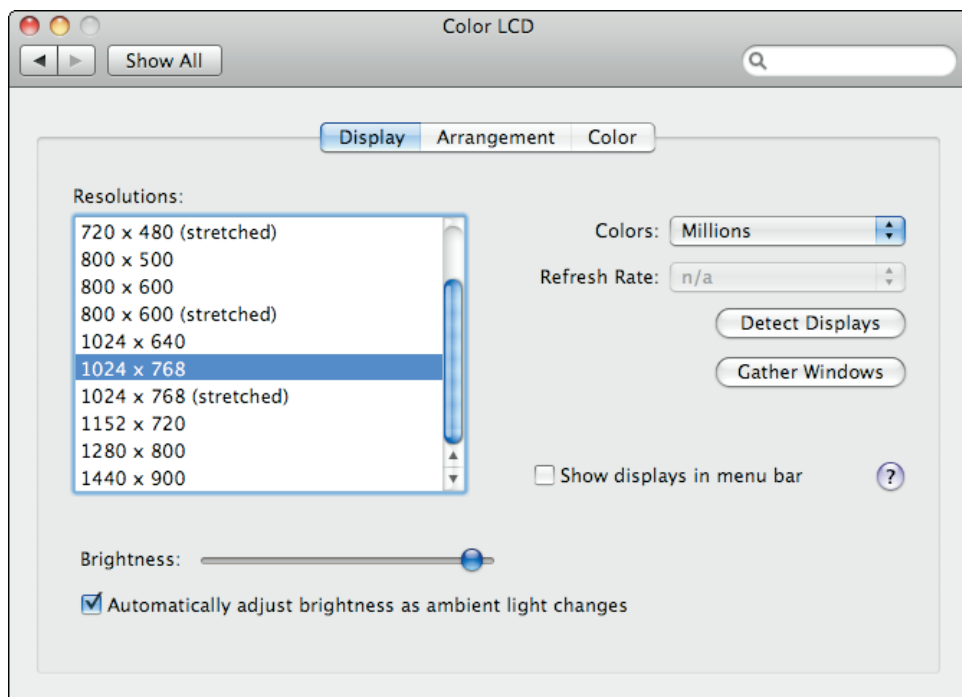
The hard part about using an external display is getting the correct cables and adapters and ensuring they fit into the appropriate connectors, particularly on the display. Once you've got that set, however, the rest is a breeze because as soon as you connect the external display and turn it on, MacBook Air recognizes it and starts using it. That's more like it!

How you use the external display depends on what you want to do with it. MacBook Air gives you two choices:

- **Video mirroring.** This external display mode means that the same image that appears on the MacBook Air's main or built-in display also appears on the external display. This is useful if you want to use a larger monitor to work with MacBook Air, or if you want to show MacBook Air's desktop on a projector so that other people can see it.
- **Extended desktop mode.** This mode means that MacBook Air's desktop is extended onto the external display. This is useful if you need more screen real estate to display your programs. For example, you can have your main application open on one display and an application that you're monitoring — such as Mail, iChat, or Safari — on the other display.

To switch between these external display modes, follow these steps:

1. **Click System Preferences in the Dock.** The System Preferences window appears.
2. **Click the Displays icon.** The display preferences appear, and you see one set of preferences for each screen. Figure 1.9 shows the preferences for the main display, and a similar window appears for the secondary display.

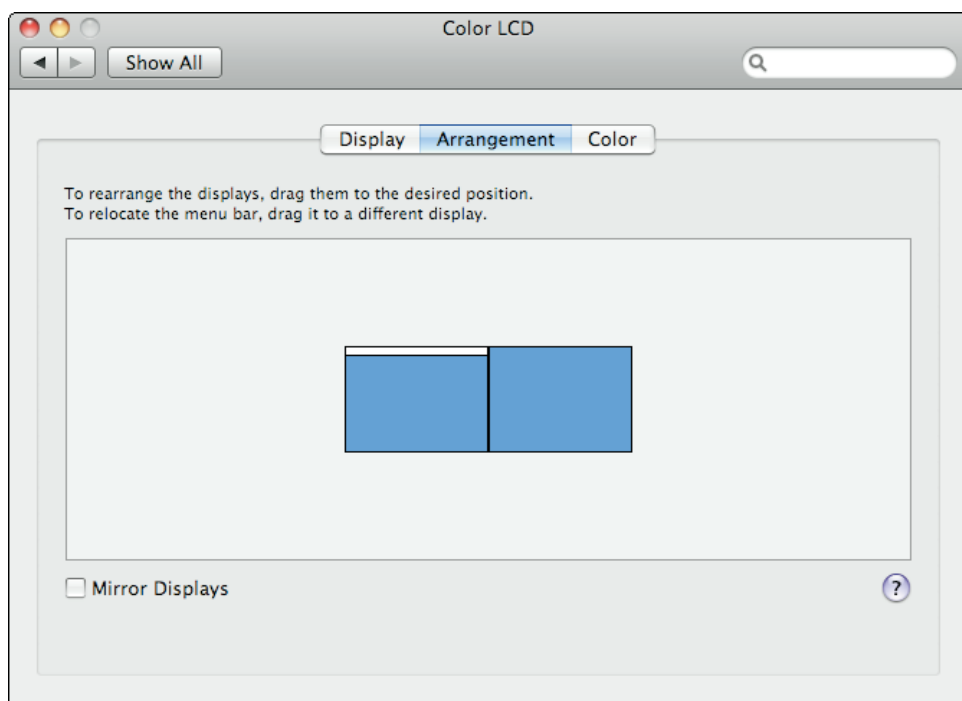


1.9 The preferences for the main display. A similar window appears with preferences for the secondary display.

3. Click the Arrangement tab to select the external display mode.

- a. To turn on video mirroring, select the Mirror Displays check box.
- b. To turn on extended desktop mode, deselect the Mirror Displays check box.

4. If you turned on extended desktop mode, use the objects in the Arrangement tab to configure the screen layout (see figure 1.10). To set the relative screen positions, click and drag the screen icon to the positions you prefer. To set the location of the menu bar, click and drag the white strip to the screen you prefer.



1.10 Use the objects in the Arrangement tab to configure the screen layout in extended desktop mode.



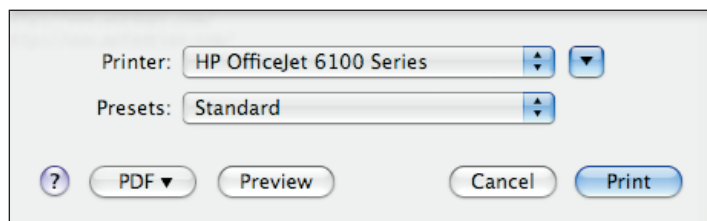
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After you connect your external display, you should calibrate the display so that the colors of images appear correctly. To calibrate a display, open its display preferences, select the Color tab, and then click Calibrate. This launches the Apple Display Calibrator Assistant, which takes you step by step through the calibration process.

Connecting and Sharing a Printer

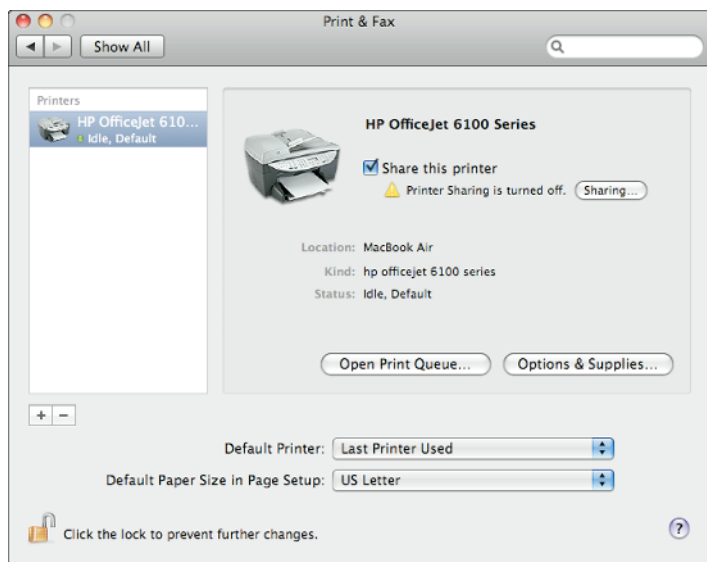
Nine times out of ten — it's probably more like 99 times out of a 100 — connecting a printer to MacBook Air is a no-brainer: You plug it in to the USB port, turn it on, and presto! — MacBook Air and your printer have already become fast friends and you can start printing right away. How can you be sure? There are a couple of ways to tell:

- **In any application that supports printing, choose File ⇨ Print.** In the dialog box that appears, you should see your printer's name in the Printer list, as shown in figure 1.11.



1.11 If MacBook Air and your printer are getting along famously, the printer appears in the Printer list.

- **Click System Preferences in the Dock, and then click Print & Fax.** In the Print & Fax preferences that appear, you should see your printer's name in the Printers list, as shown in figure 1.12.



1.12 If MacBook Air recognized your printer, it appears in the Printers list in the Print & Fax preferences.

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Surprisingly, Windows doesn't have a monopoly on annoying behavior. One of the senseless things that OS X does is set the default printer to whatever printer you used or added most recently. To fix this, choose System Preferences ⇨ Print & Fax, then use the Default Printer list to choose the printer you want to use as the default.

Connecting a printer manually

What happens on those rare occasions when MacBook Air doesn't recognize your printer? In that case, you need to do a bit more legwork and install the printer manually. Here's how it's done:

- 1. Connect and turn on the printer if you haven't done so already.**
- 2. Click System Preferences in the Dock, click Print & Fax, and then click the + icon.**

MacBook Air displays the list of connected printers.

**Note**

You can also display the list of connected printers from any application that supports printing. Choose File ⇨ Printer, open the Printer list, and then select Add Printer.

- 3. In the Printer Browser's list of available printers, choose your printer.**
- 4. In the Print Using list, choose Select a driver to use and then choose your printer if it is in the list that appears.** Skip to Step 6.
- 5. If you don't see your printer in the list, you need to install the printer driver by hand as follows:**
 - a. If you have an external CD or DVD drive connected to MacBook Air (if you're using a Remote Disc as described in Chapter 2), insert the disc that came with your printer.

**Note**

If you don't have an external optical drive or a printer disc, or if the disc doesn't contain MacBook Air drivers, visit the printer manufacturer's Web site and download the drivers you need.

- b. Choose Other in the Print Using list.
 - c. Open the printer disc (or the folder where you downloaded the printer driver), choose the printer driver, and then click Open.
- 6. Click Add.** Your printer is now connected.

Adding a shared network printer

If MacBook Air is part of a network, you have a big advantage. You can connect a printer to one computer, and the other computers on the network can then use that computer for printing. That saves you big bucks because you don't have to supply each computer with its own printer.

To use a shared network printer, you must first add it to MacBook Air's list of printers. Follow these steps if the printer is shared on another Mac (see the next section for Windows printers):

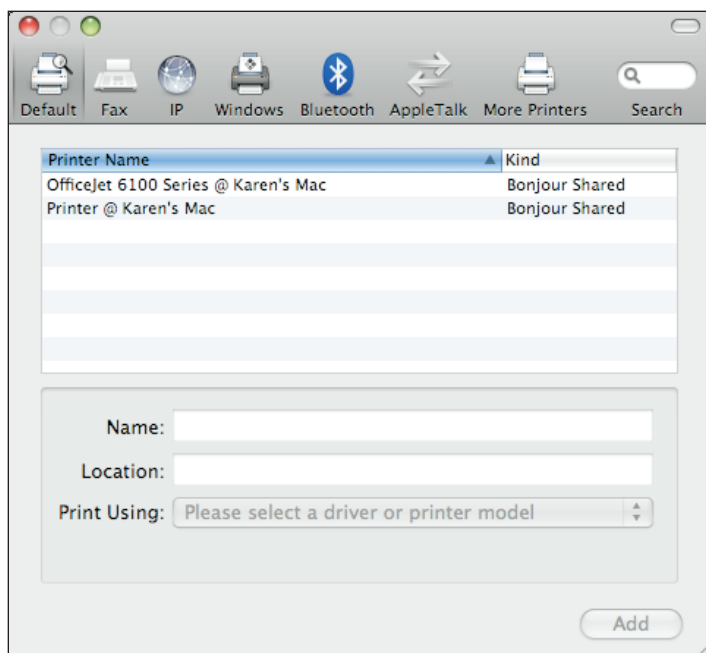
1. **Click System Preferences in the Dock, click Print & Fax, and then click the + icon.**

MacBook Air displays the list of connected printers.

2. **In the Printer Browser's list of printers, select the shared printer you want to use.**

Make sure you select a printer where the Kind column displays Bonjour Shared, as shown in figure 1.13.

3. **Click Add.** You can now use the shared network printer.



1.13 Be sure to select a printer that has Bonjour Shared in the Kind column.

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If you can't get drivers for the printer (annoyingly, many printer manufacturers don't bother writing Mac drivers), you may still be able to use the printer by choosing Generic PostScript Printer in the Print Using list.

**Note**

You can also display the list of connected printers from any application that supports printing. Choose File ⇨ Printer, open the Printer list, and then select Add Printer.

Adding a shared Windows network printer

If the shared printer you want to use is part of a Windows network, follow these steps to add it to MacBook Air's list of printers:

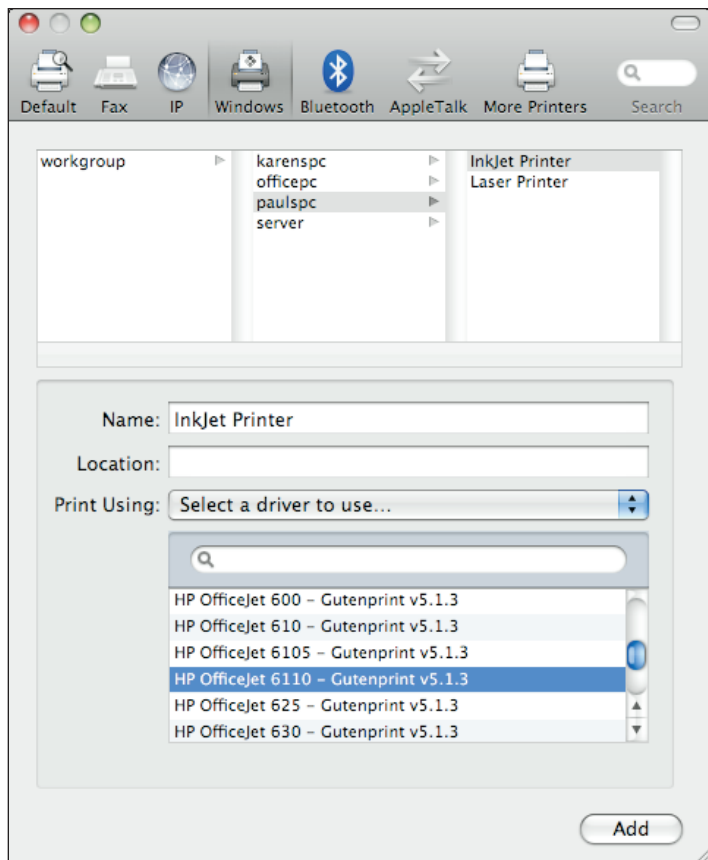
1. **Click System Preferences in the Dock, click Print & Fax, and then click the + icon.**

MacBook Air displays the Printer Browser.

**Note**

You can also display the Printer Browser from any application that supports printing. Choose File ⇨ Printer, open the Printer list, and then select Add Printer.

2. **Click the Windows tab to display the list of Windows workgroups on your network.**
3. **Choose the workgroup that contains the computer you want to work with.**
4. **Click the computer with the shared printer you want to add.**
5. **Log on to the Windows computer.**
6. **Click the shared printer you want to use.**
7. **In the Print Using list, choose Select a driver to use and then choose the printer in the list that appears.** Figure 1.14 shows an example.
8. **Click Add.** You can now use the shared Windows printer.



1.14 You can add a shared printer from a Windows computer.

Sharing your printer with the network

If you have a printer connected to MacBook Air and you'd generously like other folks on your network to use it, you can share it by following these steps:

- 1. Click System Preferences in the Dock.**
- 2. Click the Sharing icon.** The Sharing preferences appear.
- 3. Select the Printer Sharing check box.**

4. **Click Show All.**
5. **Click the Print & Fax icon.** The Print & Fax preferences appear.
6. **Click the printer you want to share and then select the Share this printer check box.**
Your printer is now shared with the network.

Connecting and Sharing a Fax

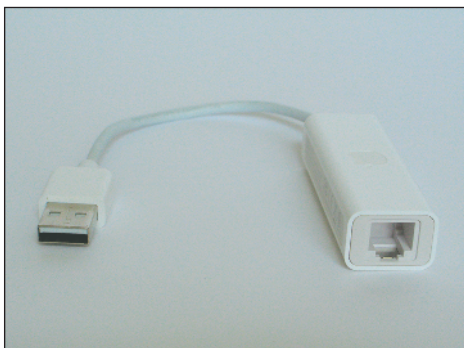
Even in this age of e-mail, instant messaging, and chat, the need to fax things comes up surprisingly often. Dedicated fax machines bit the electronic dust many years ago, and no wonder: Fax modems enable you to send and receive faxes from the comfort of MacBook Air. For this to work, you need to connect a fax modem to MacBook Air. In the following sections, I show you how to do this three different ways.

Connecting a fax modem to MacBook Air

MacBook Air doesn't come with a built-in fax modem, so you need to connect an external fax modem — such as the almost too-cute Apple USB Modem shown in figure 1.15 — to MacBook Air.

Once you've connected the modem, follow these steps to add it to MacBook Air's list of printers and faxes:

1. **Click System Preferences in the Dock, click Print & Fax, and then click the + icon.** MacBook Air displays the Printer Browser.



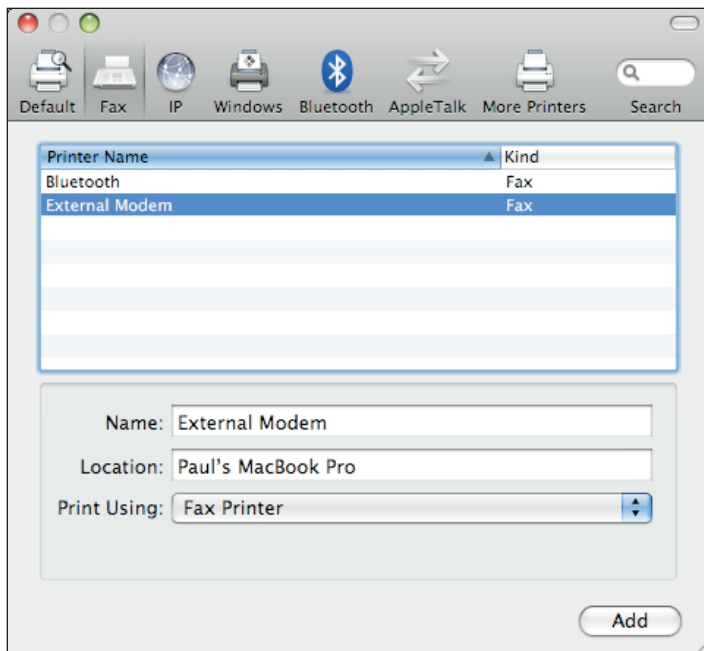
1.15 You can connect the Apple USB Modem to MacBook Air to add faxing capabilities.



Note

You can also display the Printer Browser from any application that supports printing. Choose File ⇨ Printer, open the Printer list, and then select Add Printer.

2. **Click the Fax tab.** A list of attached faxing devices appears, as shown in figure 1.16.
3. **Click the device you want to use for faxing.**
4. **Click Add.** Your fax is now connected to MacBook Air.



1.16 Click the Fax tab to see your attached faxing devices.

Adding a shared network fax

To use a shared network fax, you must first add it to MacBook Air's list of printers and faxes. Follow these steps:

1. **Click System Preferences in the Dock, click Print & Fax, and then click the + icon.**
MacBook Air displays the Printer Browser.



Note

You can also display the Printer Browser from any application that supports printing. Choose File ⇨ Printer, open the Printer list, and then select Add Printer.

2. **Click the Fax tab.** A list of attached faxing devices appears, as shown earlier in figure 1.16.
3. **Select the shared fax you want to use.** Be sure to select a fax where the Kind column displays Bonjour Shared.
4. **Click Add.** You are now ready to use the shared network fax.

Sharing your fax with the network

If you have a fax modem connected to MacBook Air and you'd like other folks on your network to use that fax, you can share it by following these steps:

1. **Click System Preferences in the Dock.**
2. **Click the Sharing icon.** The Sharing preferences appear.
3. **Select the Printer Sharing check box.**
4. **Click Show All.**
5. **Click the Print & Fax icon.** The Print & Fax preferences appear.
6. **Click the fax you want to share and then select the Share this fax check box.** Your fax is now shared with the network.

Connecting Imaging Devices

MacBook Air is a graphics powerhouse. You should take advantage of that power by connecting various imaging devices, including digital cameras, digital camcorders, and document scanners. Most of these devices connect without a hassle, but there are a few things you need to watch out for and a few extra steps you need to follow to make sure each works as it should. In the next few sections, I take you through all this.

Connecting an imaging device

Connecting an imaging device to MacBook Air is mostly a straightforward bit of business that begins with attaching the device:

- **Digital camera or camcorder.** Attach a USB cable to the camera and to the USB port on MacBook Air.

- **Scanner.** Attach a USB cable to the scanner and to the USB port on MacBook Air. Note, too, that you must also install the software that came with the scanner. This installs the scanner device driver as well as the scanning application — sometimes called the TWAIN software — that operates the scanner.



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Many digital camcorders require a FireWire connection, but MacBook Air doesn't come with a FireWire port. One solution would be to purchase a FireWire to USB adapter cable, which connects to the camcorder's digital video FireWire port on one end, and to MacBook Air's USB port on the other. Another solution is to purchase a hub that combines both USB and FireWire ports.

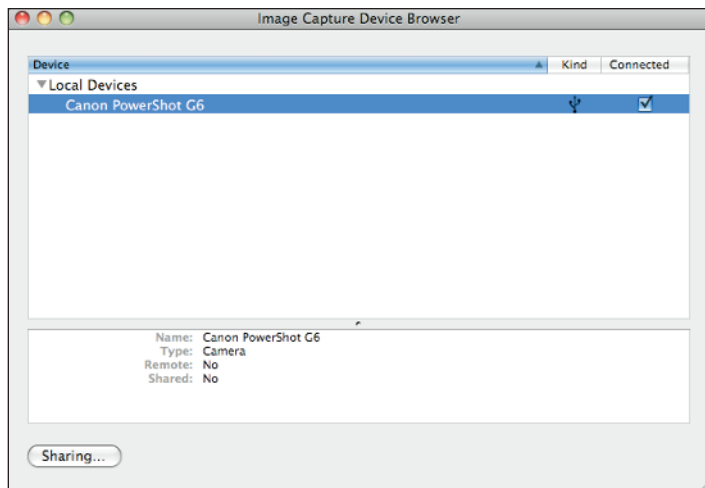


Caution

Most FireWire-compatible digital camcorders are compatible with MacBook Airs, but not all. For example, most Sony digital camcorders don't work with MacBook Airs. If you're looking to buy a camcorder, be sure to do some research on the Web to make sure the camera you want is MacBook Air-friendly.

For most digital cameras and camcorders, MacBook Air will immediately connect to the device and perhaps even offer to download images (via iPhoto) or video (via iMovie). However, with some cameras and most scanners, you need to perform some extra steps to complete the connection:

1. **In Finder, choose Applications ⇨ Image Capture.** The Image Capture program appears.
2. **Choose Devices ⇨ Browse Devices (or press ⌘+B).** Image Capture displays a list of available devices.
3. **If necessary, double-click the branch containing the device you want to connect.** For example, to connect a scanner, open the TWAIN devices branch.
4. **Choose the device you want to work with.**
5. **If you're working with a scanner, select the Use TWAIN software check box to use the device's application to scan images rather than Image Capture.**
6. **Select the check box in the device's Connected column, as shown in figure 1.17.** The device is now connected.



1.17 Some imaging devices — particularly scanners — require a few extra steps to complete the connection.

Connecting to a network imaging device

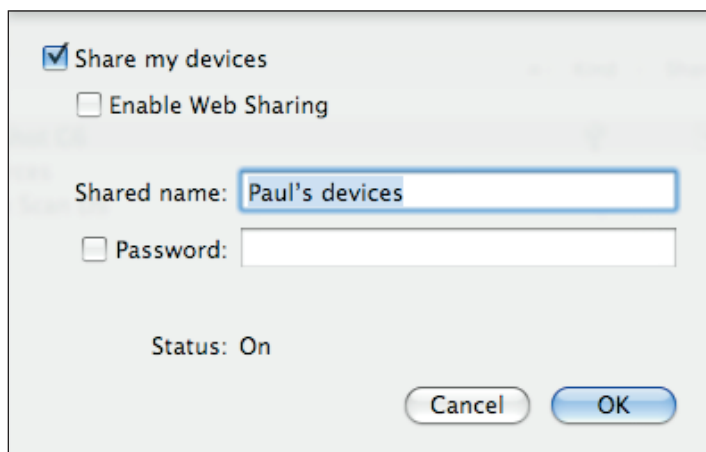
When you set up a network, you might expect to share devices such as a printer and a DVD drive, but did you know that you can also share imaging devices? This is a great feature because it enables you to view and download a camera's pictures, import a camcorder's video, or operate a scanner, all without having any of these devices connected directly to MacBook Air. Follow these steps to connect to a shared imaging device:

- 1. In Finder, choose Applications ⇨ Image Capture.** The Image Capture program appears.
- 2. Choose Devices ⇨ Browse Devices (or press ⌘+B).** Image Capture displays a list of available devices.
- 3. Double-click the Remote Image Capture devices branch.**
- 4. Double-click the branch that contains the imaging device you need.**
- 5. Choose the device you want to work with.**
- 6. Select the check box in the device's Connected column.** The network device is now connected.

Sharing an imaging device

If you have a digital camera, digital camcorder, or scanner connected to MacBook Air, you can share that device with your network pals. Here are the steps to follow:

1. **In Finder, choose Applications ⇨ Image Capture.** The Image Capture program appears.
2. **Choose Devices ⇨ Browse Devices (or press ⌘+B).** Image Capture displays a list of available devices.
3. **Click Sharing.**
4. **Select the Share my devices check box, as shown in figure 1.18.**



1.18 Select the Share my devices check box to share one or more of MacBook Air's imaging devices with your network.

5. **Edit the Shared name if you feel like it.**
6. **If you want folks to enter a password to use the devices, select the Password check box and then type your password.**
7. **Click OK.** The Image Capture Device Browser window now appears with a Shared column.
8. **For each device you want to share, select the check box in the device's Shared column.**

