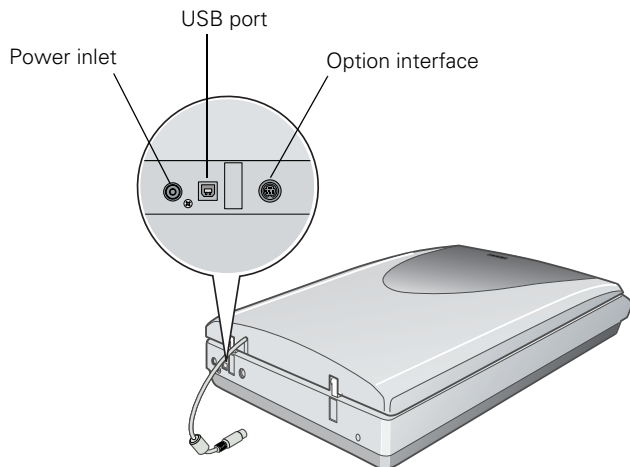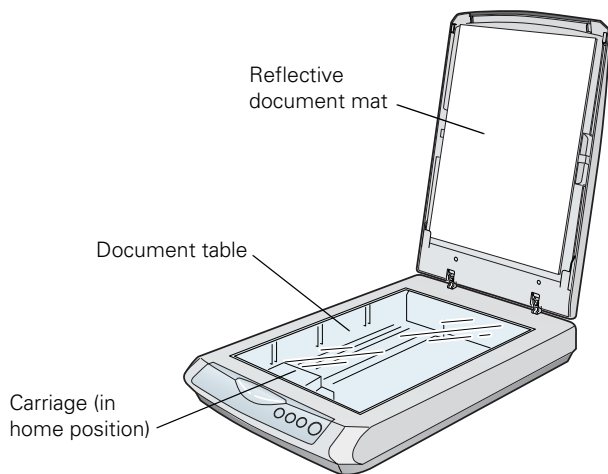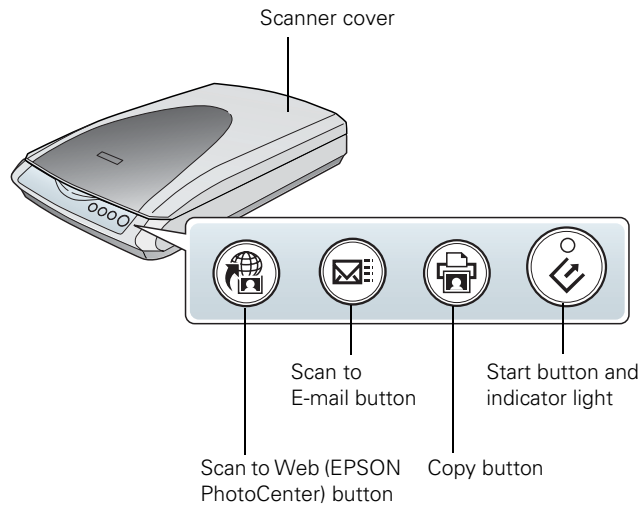# UPDATE

6/26/03

This package provides a new scanner product section to be added to the *EPSON Product Information Guide*. The table of contents of this section is listed below.
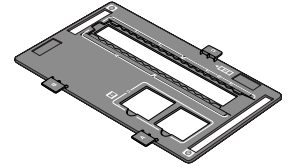
EPSON Perfection® 1670 Photo

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Scanner cover

Scan to Web (EPSON PhotoCenter) button

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Copy button

Start button and indicator light

Reflective document mat

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Carriage (in home position)

Power inlet

USB port

Option interface

The EPSON Perfection 1670 Photo also comes with a holder for 35 mm film and slides.

Scanner Specifications

Basic Specifications

Scanner type	Flatbed, color
Photoelectric device	Color CCD line sensor
Effective pixels	13600 × 18720 pixels at 1600 dpi, 100% scaling
Maximum document size	US letter or A4 size (8.5 × 11.7 inches [216 × 297 mm]); the reading area can be specified from your software
Scanning resolution	1600 dpi (main scan); 3200 dpi with sub scan resolution*

* The maximum hardware resolution of 1600 × 3200 dpi is achieved using EPSON's Micro Step Drive™ technology.

Output resolution	50 to 12,800 dpi (50 to 6400 dpi in 1 dpi increments; 12,800 dpi performed with zoom function)
Scanning speed	7.68 msec/line at 1600 dpi (A4) 5.12 msec/line at 600 dpi (A4)
Color separation	RGB color filters on CCD
Pixel depth	16 bits per pixel per color internal 1, 8, 16 bits per pixel per color external
Line art settings	Fixed threshold
Digital halftoning	AAS (Auto Area Segmentation), enable/ disable selectable 3 error diffusion modes (A, B, and C) and 4 dither patterns (A, B, C, and D) for bi-level and quad-level data
Gamma correction	1 type for user-defined
Color correction	1 type for user-defined (only user-defined color correction is available in EPSON Scan)
Interface	USB 2.0 (Type B receptacle connector)
Light source	White cold cathode fluorescent lamp
Reliability	10,000 cycles of carriage movements (main unit MCBF)

Dimensions	Width: 10.8 inches (275 mm)
	Depth: 16.5 inches (419 mm)
	Height: 3.4 inches (86 mm)
Weight	Approx. 6.8 lb (3.0 kg)

Electrical

Input voltage range	AC 100 to 120 V
Rated frequency	50 to 60 Hz
Rated input current	0.5 A
Power consumption	17 W (operating mode), 15 W (standby mode, 5.5 W sleep mode)

Note: Check the label on the back of the scanner for voltage information.

Environmental

Temperature	Operation: 41 to 95 °F (5 to 35 °C) Storage: –13 to 140 °F (–25 to 60 °C)
Humidity (without condensation)	Operation: 10% to 80% Storage: 10% to 85%
Operating conditions	Ordinary office or home conditions; avoid extreme dust, direct sunlight, and strong light sources.

Approvals

Safety	UL 1950
	CSA C22.2 950
EMC	FCC part 15 subpart B class B
	CSA C108.8 class B

USB Interface

Interface type	Universal Serial Bus Specification Revision 2.0
Electrical	Full Speed mode: 12 Mbit/s, Hi-speed mode: 480 Mbit/s, Universal standard Serial Bus Specification Revision 2.0
Connector type	One receptacle (Type B)

Option Interface Connector

Output voltage	15.2 V; 50 to 60 Hz

Initialization Methods

The scanner can be initialized (returned to a fixed set of conditions) in the following ways:

Hardware initialization	❑ The scanner is plugged in.
	❑ The USB cable is unplugged from the USB port on the scanner.
Software initialization	❑ Software sends the ESC @ (initialize the scanner) command.
	❑ The scanner receives a Bus Reset from the USB interface.

AC Adapter Specifications

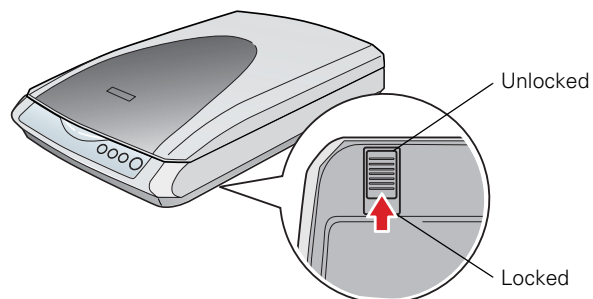| Rated input	AC 100 to 120 V, 50 to 60 Hz
Rated output	DC 15.2 V, 1.2 A
Temperature	Operation: 41 to 95 °F (5 to 35 °C)
Safety	UL 1950 or UL60950 CSA C22.2
EMC	FCC part 15 subpart B class B CSA C108.8 class B

Film Adapter Specifications

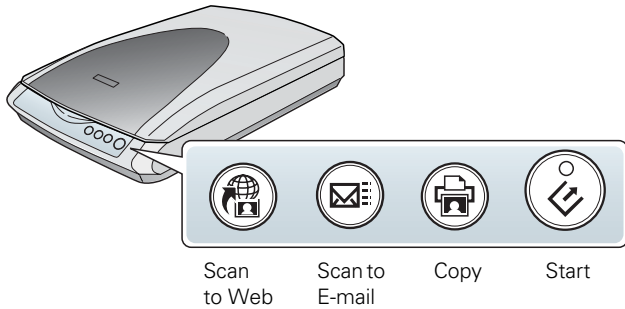| Electrical	Supplied voltage: DC 15.2V Rated current: 0.3 A
Transparencies size	35-mm film strip 3 frames 35-mm slide, 2 frames
Readable area	1.9 × 4.9 inches (49 × 125 mm)

Unlocking the Scanner

Be sure to unlock the scanner before using it. Slide the transportation lock to the unlock position:

If you need to transport the scanner, see page 6.

Scanner Buttons

Scan to Web   Scan to E-mail   Copy   Start

The scanner's buttons let you perform one-touch scanning with EPSON Smart Panel.™

✧ Start	Press the ✧ Start button on the scanner to start EPSON Smart Panel (default).
🖶 Copy	Press the 🖶 Copy button to automatically scan and print an image.
✉ E-mail	Press the ✉ E-mail button to scan your image and send it as an e-mail attachment.
🖳 Scan to Web	Press the 🖳 Scan to Web button to scan an image and upload it to the EPSON photo-sharing site, EPSON PhotoCenter℠

Scanner Light

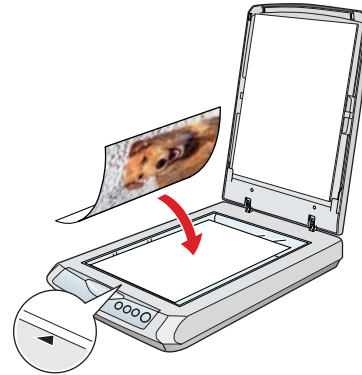The scanner has one indicator light (on the ✧ Start button), which indicates the status of the scanner.

Light	Color	Status
On	Green	The scanner is ready to scan images.
Flashing	Green	The scanner is initializing or is busy scanning.
Flashing	Red	The transportation lock may not be released. Unlock the scanner, then restart your computer.
		If this does not eliminate the error, one of the following may be the problem and you need to consult your dealer or EPSON:
		❏ The fluorescent lamp needs to be replaced.
		❏ The scanner is malfunctioning.
Off	—	The scanner is off or the AC adapter is unplugged.

Using EPSON Smart Panel

Follow these steps to use EPSON Smart Panel to scan documents or photos:

1. Place the original document(s) face down on the document table.

2. Do one of the following to open the Smart Panel:

    ❏ Press the ✧ Start button on your scanner.

    ❏ Click the 📧 EPSON Smart Panel icon on the desktop.

    ❏ On a Macintosh® you can also open the Apple® menu and select EPSON SMART PANEL.

    NOTE The ✧ Start button is set to open EPSON Smart Panel by default. However, you can assign the ✧ Start button to automatically open any of the Smart Panel applications.

3. Click the icon for your desired scanning application. The window for that option appears and lets you adjust settings for your scan. Follow the on-screen steps for each option.

Keep the following in mind when using Smart Panel:

❑ If you select Reprint Photos or Copy Center, make sure your printer is turned on and the correct paper type and size is loaded in your printer.

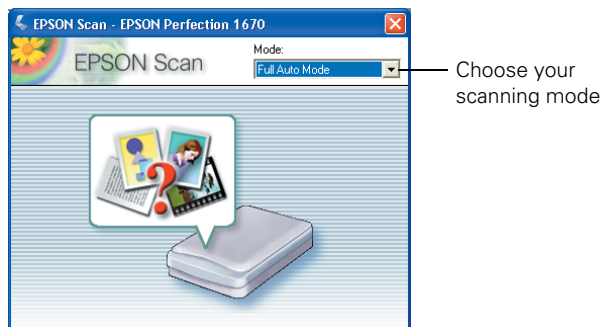❑ Scan to E-mail requires a MAPI-compliant e-mail program (AOL is not MAPI compliant).

For instructions on using each of the Smart Panel applications, click ? on the Smart Panel screen or see the electronic manual for EPSON Smart Panel.

Selecting the Scanning Mode in EPSON Scan

EPSON Scan provides three scanning modes:

❑ Full Auto Mode allows the software to automatically select the best settings for your scan.

❑ Home Mode lets you adjust some of the basic settings before you scan.

❑ Professional Mode gives the greatest control over individual settings. You can sharpen, correct, or enhance your images before scanning.

Choose the scanning mode from the pull-down list at the top of the window

Choose your scanning mode

To change settings in Full Auto Mode, click the Pause button, then click Options. If you're using Home or Professional Mode, the options window automatically appears; select the settings you want to use for your scan.

NOTE The selected mode and settings remain in effect until they are changed again.

For more information, see the on-screen *Reference Guide*.

Restoring Color in Photos

If you have faded photos or negatives, you can use the Color Restoration setting in your software to improve the color of your scan. You can select this setting in Smart Panel or in EPSON Scan.
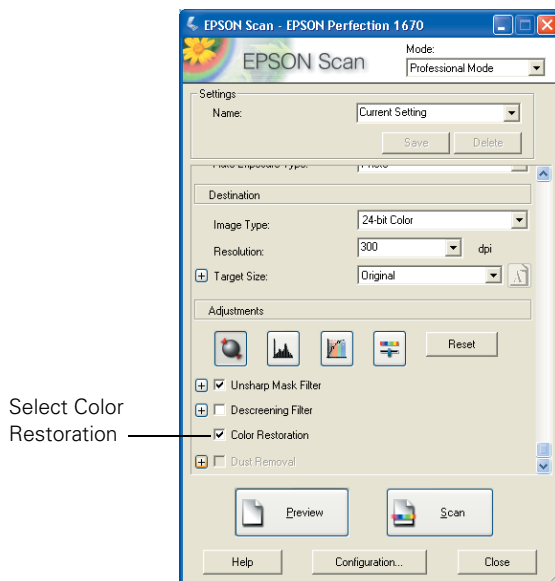
Smart Panel

To select the Color Restoration setting, open Smart Panel and select RePrint Photo. You see the screen below. Click the Color Restoration icon.

Select Color Restoration

EPSON Scan

Color Restoration is available in Home and Professional Modes.

To select Color Restoration, start EPSON Scan. You see a screen similar to this:
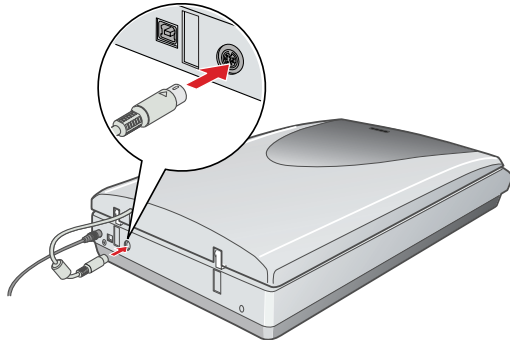

Select Color Restoration

Click the Preview button at the bottom of the screen. Then select the Color Restoration checkbox. (If you're using Professional Mode, you may need to scroll to the bottom of the screen.)
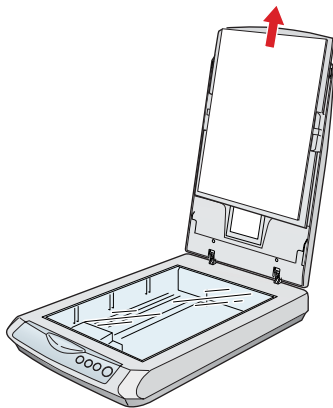
Placing Film on the Scanner

The scanner cover has a built-in transparency unit. To scan negative film or slides, you need to remove the reflective document mat from the cover and place the film in a holder on the scanner glass.
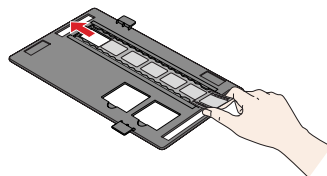
1. Make sure the transparency unit cable is connected to the back of the scanner.

2. Lift the scanner cover all the way up and slide the reflective document mat up and off the scanner cover.
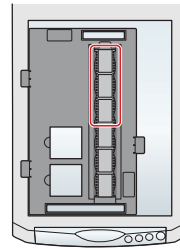

3. Slide the negative strip into the film holder with the film's shiny base side facing down.

4. Place the film holder in the correct position for your film type. If you are scanning slides, place the holder on the scanner first, then place the slides in the holder.

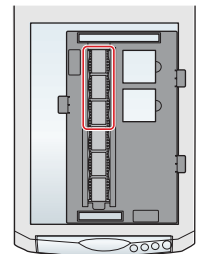   Be sure to match the letter on the film holder tab with the corresponding letter on the scanner.
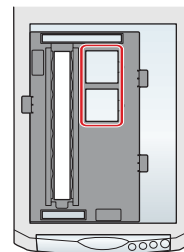

Negatives:

(**A**) If you are scanning the first 3 frames of the negative strip, place the film holder against the left edge of the scanner.

(**B**) For the last 3 frames, rotate the position of the film holder and place it against the right edge of the scanner.

Slides (C)
Place the holder on the scanner glass, then put the slides in the holder.

NOTE Make sure the narrow calibration window at the top of the film holder is clean and uncovered to ensure an accurate scan.

5. Close the scanner cover.

TIP Make sure there is no dust on the slides or negatives. You can select the ⊞ ☑ Dust Removal Dust Removal setting in EPSON Scan to improve your scan.

If your scanned image is upside down, you can use the Rotate buttons in EPSON Smart Panel (not available in all Smart Panel applications) or in Preview mode in EPSON Scan. You can also rotate the image in most image editing applications.
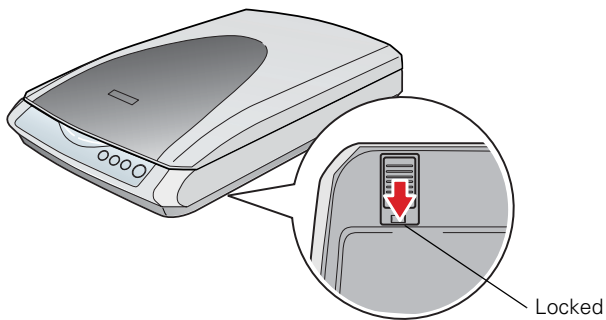
Transporting the Scanner

Before transporting the scanner over a long distance or storing it for an extended period, you need to lock the scanner's carriage to prevent damage. Follow these steps:

1. Plug in the scanner and wait until the carriage moves to the home position (nearest the buttons). When the indicator light remains on (green), unplug the scanner.

2. If the optional interface cable is attached, disconnect it.

3. Slide the transportation lock to the locked position to secure the carriage.

Locked

Caution: Do not turn the scanner over; this may damage it.

4. Attach the protective materials and repack it in the original box.

Related Documentation

CPD-16153	EPSON Perfection 1670 Photo *Start Here* poster
CPD-16155	EPSON Perfection 1670 Photo scanner software CD-ROM
CPD-16154	Notices booklet
—	*Scanner Reference Guide* (HTML)
PL-PERF1670P	EPSON Perfection 1670 Photo Parts Price List