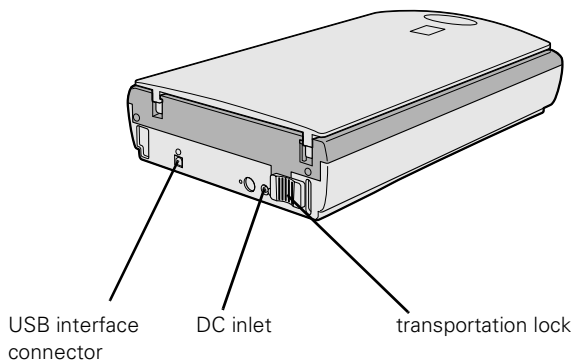
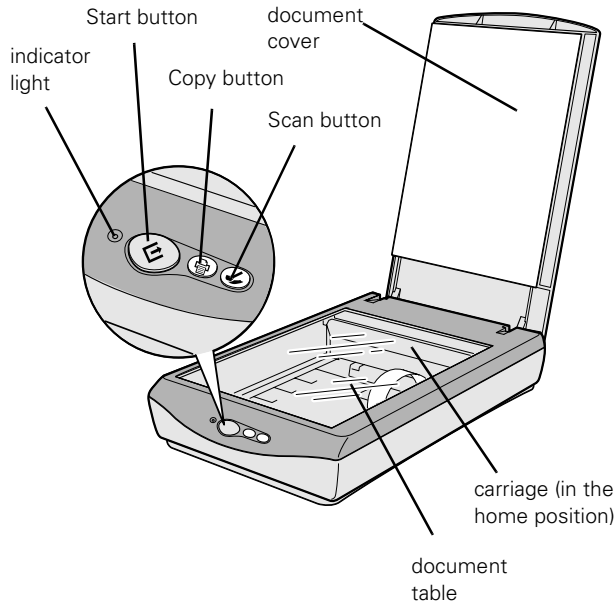


Scanner Parts



Maximum hardware resolution* 600 dpi (main scan) × 2400 dpi (sub scan)

* The maximum hardware resolution of 600 × 2400 dpi is achieved using EPSON's Micro Step Drive™ technology.

Maximum interpolated resolution 9600 × 9600 dpi

Speed (600 dpi, draft mode) Color: 16 msec/line
Greyscale: 5.3 msec/line

Output resolution 72 to 9600 dpi

Command level ESC/I-D1

Zoom 50 to 200% in 1% increments

Pixel depth Color: 12 bits/pixel (input)
8 bits/pixel (output)

Brightness 7 levels

Line art settings 1 bit/pixel

Digital halftoning Error diffusion: 3 modes (A, B, C)
Dither (resident): 4 modes (A, B, C, D)
Dither (user-defined): 2 modes (A, B)

Gamma correction 1 type for user-defined

Color correction 1 type for user-defined

Interface USB (Type B receptacle connector)

Light source White cold cathode fluorescent lamp

Reliability 30,000 cycles of carriage movements (main unit MCBF)

Dimensions Width: 10.6 inches (26.9 cm)
Depth: 17.1 inches (43.5 cm)
Height: 3.7 inches (9.3 cm)

Weight Approx. 6.2 lb (2.8 kg)

Electrical

Specification	
Input voltage range	DC 24 V
Rated current	0.8 A
Power consumption	Approx. 17 W

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

Scanner Specifications

Basic Specifications

Scanner type Flatbed, color
 Photoelectric device Color CCD line sensor
 Effective pixels 5100 × 7020 pixels at 600 dpi, 100% scaling
 Maximum document size US letter or A4 size (8.5 × 11.7 inches [216 × 297 mm])
 Optical resolution 600 dpi

Environmental

Temperature Operation: 41 to 95 °F (5 to 35 °C)
 Storage: -13 to 140 °F (-25 to 60 °C)

Humidity Operation: 10% to 80%
 (without Storage: 10% to 85%
 condensation)

Operating Ordinary office or home conditions; avoid
 conditions extreme dust, direct sunlight, and strong
 light sources. Make sure the outlet
 provides enough power.

Safety Approvals

120 V model

Safety standards UL 1950
 CSA C22.2 No. 950
 EMC FCC part 15 subpart B class B
 CSA C108.8 class B

230 V model

Safety standards EN 60950
 EMC EN 55022 (CISPR Pub 22) class B
 AS/NZS 3548 class B

CE marking

230 V model Low Voltage Directive 73/23/EEC
 EN 60950
 EMC Directive 89/336/EEC
 EN 55022 Class B
 EN 50082-1
 IEC 60801-2
 IEC 60801-3
 IEC 60801-4

USB Interface

Interface type Universal Serial Bus Specification
 Revision 1.1

Configuration

Element	Description
Configuration	Characteristics: Self-powered Remote wake up feature: Not supported Maximum power consumption from VBUS: 2mA (5V)
Interface	No alternate setting Number of endpoints used by this interface (excluding endpoint 0): 2 Class: Vendor specific
Endpoint 1	Bulk IN transfer Maximum data transfer size: 64 byte
Endpoint 2	Bulk OUT transfer Maximum data transfer size: 64 byte
String Descriptor	Language ID: US English 1: Manufacturer: "EPSON" 2: Product: "Perfection 640U"

Electrical standard Full Speed mode (12Mbit/s) of
 Universal Serial Bus Specification
 Revision 1.1

Connector type One receptacle (Type B)

Connector pin arrangement

Pin number	Signal	Connector
1	VCC	
2	-DATA	
3	+DATA	
4	GND	

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

Hardware initialization	<ul style="list-style-type: none"> * The scanner is plugged in. * The USB cable is unplugged from the USB port on the scanner.
Software initialization	<ul style="list-style-type: none"> * Software sends the ESC @ (initialize the scanner) command. * The scanner receives a Bus Reset from the USB interface.

AC Adapter Specifications

Basic Specifications (Model A110B)

Temperature	5 to 35 °C (41 to 95 °F)
Dimensions	58 × 108 × 34 mm
Weight	Approx. 250 g (without AC plug)

Electrical

Input voltage range	100 to 120 V (AC 100 V MDL)
Rated input current	0.7 A (input AC 100 V)
Rated output	DC 24 V, 0.8 A
Rated frequency	50 to 60 Hz
Input frequency range	49.5 to 60.5 Hz



Safety Approvals

CE marking



230 V model	Low Voltage Directive 73/23/EEC EN 60950
	EMC Directive 89/336/EEC EN 55022 Class B EN 50082-1 IEC 60801-2 IEC 60801-3 IEC 60801-4

Using EPSON Smart Panel

Follow these steps to use EPSON Smart Panel to scan your document or photo:

- Place your original document(s) face down on the document table.
- Do one of the following to open the Smart Panel:
 - Press the  Start button on your scanner.
 - Click the  Smart Panel icon on the Windows taskbar.
 - Open the Apple menu and select EPSON SMART PANEL.



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


If you have a modem and e-mail service, you can send photos or documents that you've scanned.

Optical character recognition (OCR) converts a scanned text image into text that you can edit in a word processing program.

The control panel on your computer screen allows you to make copies of printed pages and photos.

Automatically scans your image and then opens it in PhotoDeluxe, which guides you through steps to create a print project.

Automatically scans your image and then opens it in any supported application program.

Select EPSON Smart Panel or a Smart Panel application to use with the  Start button.

- 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.

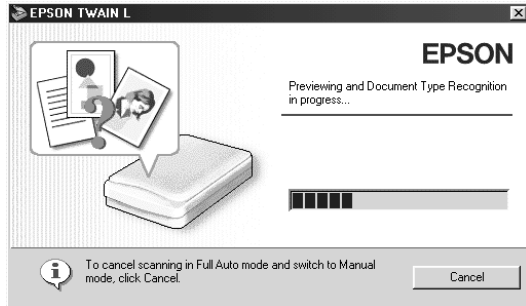


If you select Copy or Photo Print, make sure your printer is turned on and the correct paper type and size is loaded in your printer. You can use Photo Print only with an EPSON Stylus® Color or EPSON Stylus Photo printer.

For detailed instructions on using each of the Smart Panel applications, read your electronic manual for EPSON Smart Panel.

Using EPSON TWAIN

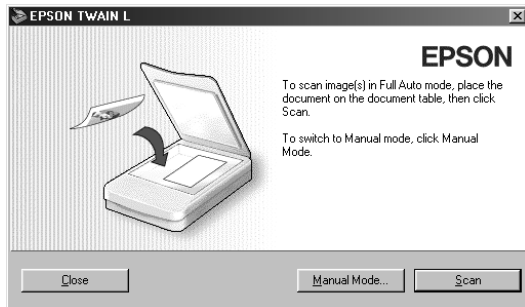
When you scan with EPSON TWAIN, you see the Automatic Scanning window.



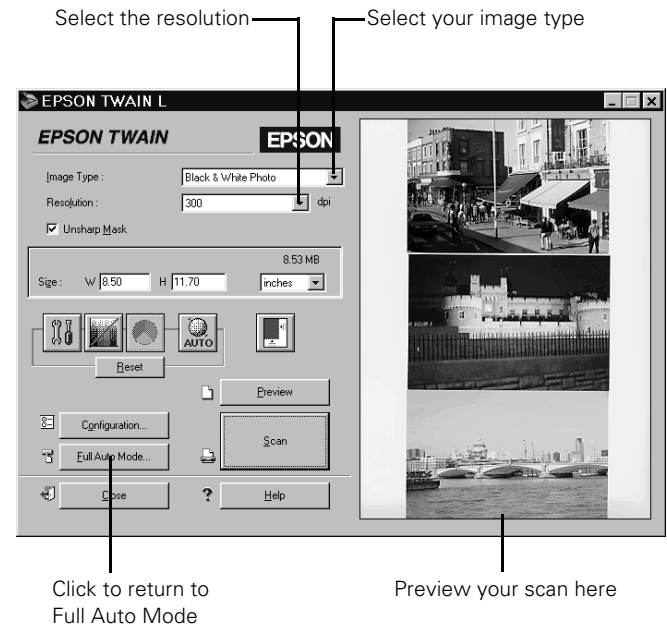
If you want, you can let the TWAIN driver automatically scan your document. It detects what type of document you're scanning and automatically chooses the optimum settings for your scan.

To scan in manual mode and adjust your scan settings, click **Cancel**.

You see the following window:



Click **Manual Mode** to open the EPSON TWAIN L settings dialog box:



4. Make the changes you want to adjust the image, then click the **Scan** button.

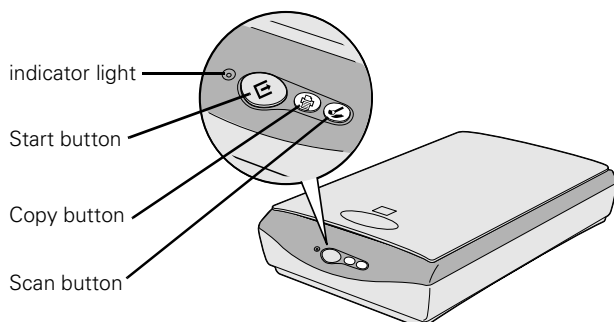
To switch back to Full Auto mode, click the **Full Auto Mode** button.






Depending on the image you want to scan, you may not get the expected scanned image. In this case, scan the image in Manual mode.

Light and Buttons

The scanner has one indicator light and three buttons. Light status and button functions are described in the tables below.



Scanner buttons

Button	Function
 Start	Lets you scan directly to EPSON Smart Panel or a Smart Panel application.
 Copy	Scan directly to the Copy utility in EPSON Smart Panel and print on your EPSON ink jet printer.
 Scan	Scan directly to Adobe PhotoDeluxe.

Scanner indicator light

Light	Color	Status
Flashing	Green	The scanner is initializing or busy scanning.
On	Green	The scanner is ready to scan images.
On	Red	The scanner has received incorrect commands from your scanning software. When this error occurs, try to rescan the document. The scanner returns to normal when it receives correct commands. Normally you do not need to reset the scanner when this type of error occurs.
Flashing	Red	The scanner may not be properly connected to the computer. Unplug the scanner and USB connector, and then plug them back in. If this doesn't eliminate the error, one of the following may be the problem: <input type="checkbox"/> The fluorescent lamp needs to be replaced. <input type="checkbox"/> The scanner is malfunctioning. Consult your dealer or EPSON.
Off	—	The scanner or AC adapter is unplugged..

Related Documentation and CD-ROMs

CPD-10852	EPSON Perfection 640U <i>Scanner Basics Reference Guide</i> (HTML) EPSON Smart Panel <i>User's Manual</i> (PDF)
TM-640/1240	EPSON Perfection 640U/1240U Service Manual
PL-PERF640	EPSON Perfection 640U Parts List
CPD-10853	Scanner Software CD-ROM
CPD-10863	Adobe® PhotoDeluxe® CD-ROM