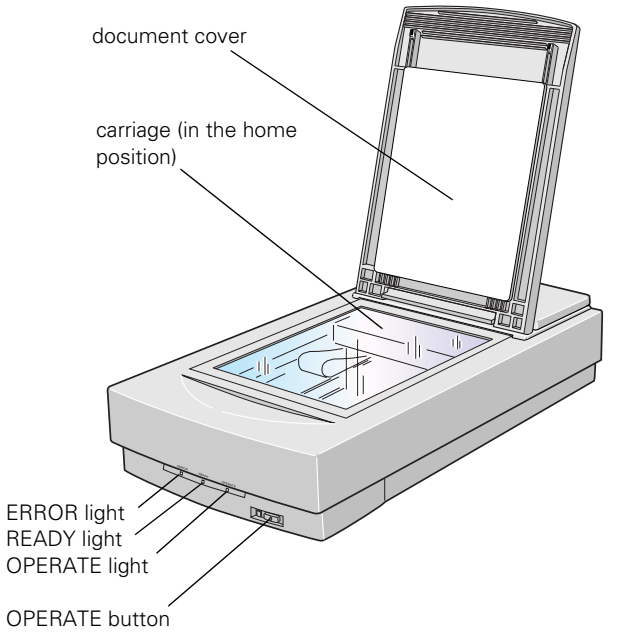
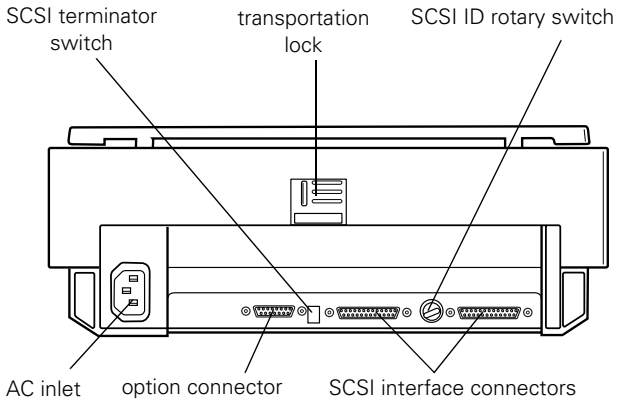
Scanner Parts





Scanner Specifications

The EPSON Expression 800 is a 36-bit professional graphics scanner designed to deliver superior results for artists, graphics professionals, and business graphics users.

Basic Specifications

Scanner type	Flatbed, color
Photoelectric device	Color CCD line sensor
Effective pixels	6800 × 9360 pixels at 800 dpi, 100%
Maximum document size	US letter size or A4 (8.5 × 11.7 inches [216 × 297 mm]) (The reading area can be specified from software.)
Optical resolution	800 dpi
Maximum hardware resolution*	800 dpi (main scan) × 3200 dpi (sub scan)

* The maximum hardware resolution of 800 × 3200 dpi is achieved using EPSON's Micro Step™ Drive technology.

Maximum software resolution	12800 × 12800 dpi with interpolation
Speed (800 dpi, draft mode)	Color: 7.5 ms/line Monochrome (bi-level): 7.5 ms/line
Color separation	RGB color filters on CCD
Command level	ESC/I-B8
Reading sequence	Monochrome: One-pass scanning Color page sequence: One-pass scanning (R, G, B) Color byte sequence: One-pass scanning (R, G, B) Color line sequence: One-pass scanning (R, G, B)
Zoom	50% to 200% in 1% increments
Pixel depth	Color: 12 bits per pixel input, 1 to 12 bits per pixel output Grayscale: 10 bits per pixel input, 8 bits per pixel output
Brightness	7 levels
Line art settings	Fixed threshold TET (Text Enhancement Technology, enable/disable selectable)
Digital halftoning	AAS (Auto Area Segmentation, enable/disable selectable) 3 halftoning modes (A, B, and C) and 4 dither patterns (A, B, C, and D) for bi-level and quad-level data
Gamma correction	2 types for CRT display 3 types for printer 1 type for user-defined

Color correction	1 type for CRT display 3 types for printer output (available in color byte sequence mode and color line sequence mode) 1 type user-defined
Interface	Two SCSI 2 (50-pin half-pitch connectors)
Light source	White cold cathode fluorescent lamp (Xenon)
Reliability	MCBF 100,000 cycles of carriage movements (main unit)
Dimensions	Width: 13.0 inches (332 mm) Depth: 22.1 inches (562 mm) Height: 5.3 inches (134 mm)
Weight	Approx. 18.7 lb (8.5 kg)

Electrical

Specification		
Input voltage range	100 to 240 VAC; universal autoswitching	
Rated frequency	50 to 60 Hz	
Input frequency	49.5 to 60.5 Hz	
Rated current	0.8 A at 100 to 120 V	0.4 A at 220 to 240 V
Power consumption	Approx. 40 W	
Insulation resistance	10 mΩ at 500 VDC (between AC line and chassis)	

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 dust, direct sunlight, or strong light. Be sure the outlet provides enough power.

Safety Approvals

120 V

Safety standards
UL 1950 with D3
CSA C22.2 No. 950 with D3
EMC FCC part 15 subpart B class B (USA)
CSA C108.8 class B (Canada)

230 V

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

CE marking

Low Voltage Directive 73/23/EEC
EN60950

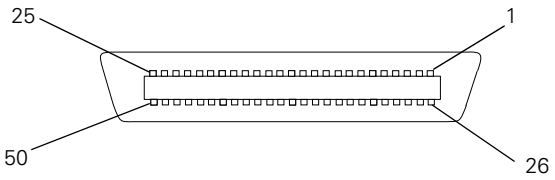
EMC Directive 89/336/EEC
EN 55022 Class B
EN 61000-3-2
EN 61000-3-3
EN 50082-1
IEC 801-2
IEC 801-3
IEC 801-4

SCSI Interface

Interface type	ANSI Standard X3.131-1994 (SCSI-2)
Functions	BUS FREE phase ARBITRATION phase SELECTION/RESELECTION phase COMMAND phase (the Logical Unit Number is fixed at 0 and the Command Link Function is not supported) DATA phase DATA IN phase DATA OUT phase STATUS phase MESSAGE phase MESSAGE IN phase MESSAGE OUT phase ATTENTION condition RESET condition
Logic level	TTL compatible
Electrical standard	ANSI Standard X3.131-1994 (SCSI-2)

ID Setting	Selectable from 0 to 7 (factory setting: 2); asterisk (*) setting is only used when transporting scanner
Terminator	Internal terminator selectable (enable/ disable)
Connector type	Two 50-pin half-pitch connectors

Connector pin arrangement



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

Hardware initialization	When the scanner is turned on. When the scanner receives a SCSI Reset signal from the SCSI interface.
Software initialization	When the software sends the ESC @ (initialize the scanner) command. When the scanner receives a SCSI Bus Device Message.

Optional Transparency Unit Specifications

The transparency unit (B813152) allows you to scan positive and negative transparent materials—35 mm slides, 35 mm filmstrips, and film up to 8.5 × 11.7 inches in size. In addition to four film guides, it comes with a reflective document mat that allows you to alternate between scanning transparent materials and normal reflective (paper) documents.

Basic Specifications

Dimensions	Width: 12.8 inches (324 mm) Depth: 21.3 inches (540 mm) Height: 3.6 inches (92 mm)
Weight	11 lbs (5 kg)
Maximum read area	8.5 × 11.7 inches (216 × 297 mm)
Electrical	*Power supply:* (supplied from the scanner) 24 VDC 5 VDC *Power consumption:* 24 VDC: 0.6 A 5 VDC: 0.1 A
Resistance to electrical noise (static electricity)	case: 10 kV or less metal: 7 kV or less
Reliability	MCBF 100,000 cycles
Temperatures	*Operation* 41 to 95 °F (5 to 35 °C) *Storage* –4 to 140 °F (-20 to 60 °C)
Humidity (without condensation)	*Operation* 10% to 80% *Storage* 10% to 85%
Operating conditions	Ordinary office or home conditions; avoid extreme dust, operation under direct sunlight, and strong light sources.
Safety approvals	UL 1950 CSA C22.2 No. 950 EN 60950 IEC 950
EMC	FCC Part 15 subpart B class B CSA C108.8 class B AS/NZS3548 Class B
CE Marking	Low Voltage Directive 73/23/EEC EN60950 EMC Directive 89/336/EECEN55022 Class B EN50082-1 IEC 801-2/801-3/801-4
Document specifications	Transparencies up to 8.5 × 11.7 inch film (negative film, positive film) 35 mm strip film (negative, positive) 35 mm slides (negative, positive) Brownie size strip film

Optional Auto Document Feeder Specifications

The auto document feeder (B813162) allows you to automatically load multi-page documents into your scanner.

Basic Specifications

Dimensions	Width: 12.2 inches (310 mm) Depth: 20.8 (528 mm) Height: 3.6 inches (92 mm)
Weight	9.9 lbs (4.5 kg)
Feeder type	Sheet through, face up loading, face down ejecting, roller friction
Document feeding	Pages are center aligned, fed face up from the top of the stack, ejected face down
Feeder capacity	30 sheets of 21 lb (80 g/m^2) paper; Letter, A4 or smaller
Ejecting capacity	100 sheets
Multiple sizes	Unavailable; all documents in the stack must be the same size
Connector	15-pin DIN male
Operating temperatures	*Operation* 41 to 95 °F (5 to 35 °C) *Storage* –4 to 140 °F (–20 to 60 °C)
Humidity (without condensation)	*Operation* 20% to 85% *Storage* 95% or less
Operating conditions	Ordinary office or home conditions; avoid extreme dust, direct sunlight, and strong light.
Reliability	Load/eject: 100,000 sheets (MCBF) Hinge: 30,000 cycles (MCBF)
Electrical	Power supply (supplied by the scanner): 24 VDC ± 10% 5 VDC ± 10% Power consumption: approximately 22 W Insulation resistance: 10 mΩ or more at 500 VDC (between AC line and chassis) Dielectric strength: 1000 VAC per minute (between AC line and chassis) Resistance to static electric noise: Casing: 10 kV Metal: 7 kV
Safety approvals	UL 1950 CSA C22.2 No. 950 EN60950 (VDE) IEC950 (ROSTEST, PSB)
EMC	FCC Part 15 Subpart B Class B CSA C108.8 Class B AS/NZS3548 Class B
CE Marking	Low Voltage Directive 73/23/EEC EN60950 EMC Directive 89/336/EEC EN55022 Class B EN50082-1 IEC 801-2/801-3/801-4

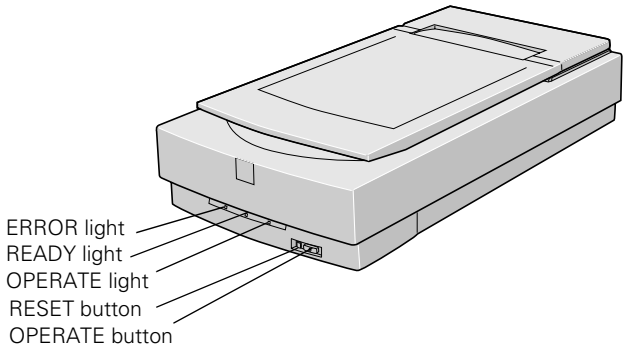
Document Specifications

Size	Letter, Legal, A4, B5, 3 × 6 inch (check-size)
Thickness	0.0028 to 0.0063 inch (0.07 to 0.16 mm)
Weight	99.2 to 242.5 lb (45 to 110 kg)
Paper quality	High-quality bond or thermal paper, ink jet paper (fine and super-fine)
Document type	Documents printed with impact printers, laser printers, or facsimile machines

Don't use the following paper types: transparencies, tracing paper, coated paper (such as photo quality and glossy paper), labels, multipart forms, carbon paper, or paper with staples, holes, rips, curls, or folds.

Lights and Buttons

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



Scanner indicator lights

Light	Light status	Color	Scanner status
OPERATE	○	Green	Initializing or busy scanning
	●	N/A	Scanner is turned off
READY	○	Green	Ready to scan images
	Ö (flashing)	Green	Scanning in progress
ERROR	○ Ö (rapidly flashing)	Red	An error has occurred

○ = on, ● = off, Ö = flashing

Error conditions

ERROR light	READY light	Error type
○	○	Command error: The scanner has received incorrect commands from the scanning software. Try rescanning.
●	Ö	Interface error: Make sure the scanner is securely connected to the computer, then press RESET.
Ö	Ö	Fatal error: Make sure the transportation lock is released, then press RESET.
●	●	Option error: There's a problem with the TPU or ADF unit. Consult your EPSON dealer.

Scanner buttons

Button	Function
⏻ OPERATE	Turns the scanner on and off.
RESET	Resets the scanner after an error. (Pressing this button while scanning is in progress stops the scanner and may cause an error.)

Transporting the Scanner

When you transport the scanner a long distance or store it for an extended time, follow the steps below to secure the carriage:

1. Make sure the transportation lock on the back of the scanner is in the UNLOCK position.
2. Locate the SCSI ID rotary switch on the back of the scanner. Align the dot on the switch with the asterisk (*) setting.
3. If you're using a transparency unit or auto document feeder, remove it and replace the scanner cover.
4. Turn on the carriage and wait until the carriage moves to the home position (toward the back of the scanner). Then turn off the scanner.
5. Slide the transportation lock to the LOCK position.

If the carriage doesn't automatically return to the home position, slowly raise the front of the scanner and hold it up until the carriage comes to rest in the home position. Then slide the transportation lock to the LOCK position.

Transporting the Transparency Unit

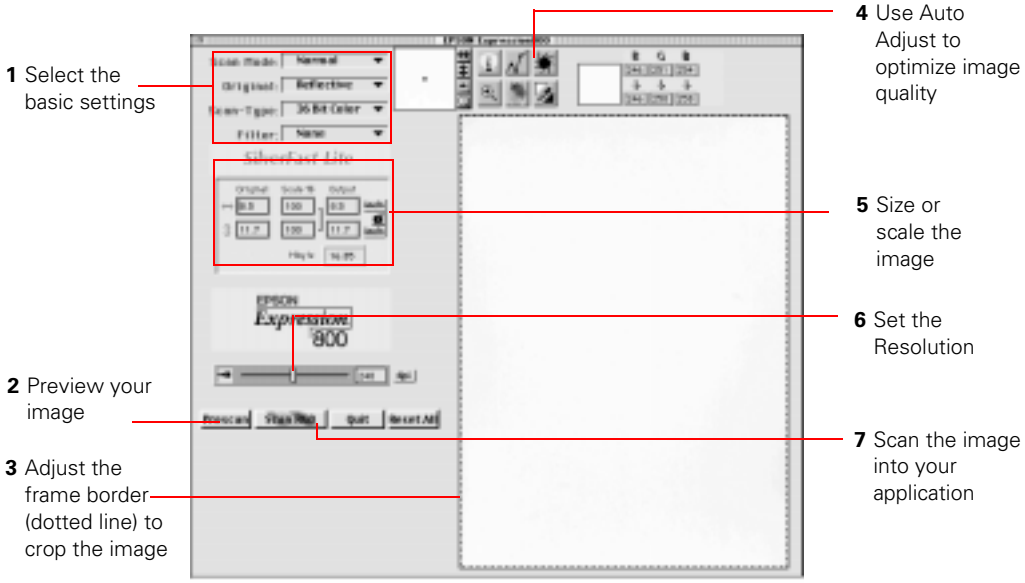
After you've removed the transparency unit from the scanner, prepare it for shipping as follows:

1. Slowly raise the front of the transparency unit to allow the lamp assembly to slide to the back of the unit. Wait until the lamp assembly comes to rest.
2. Reinstall the transparency unit's shipping screw in the hole marked CLAMP.

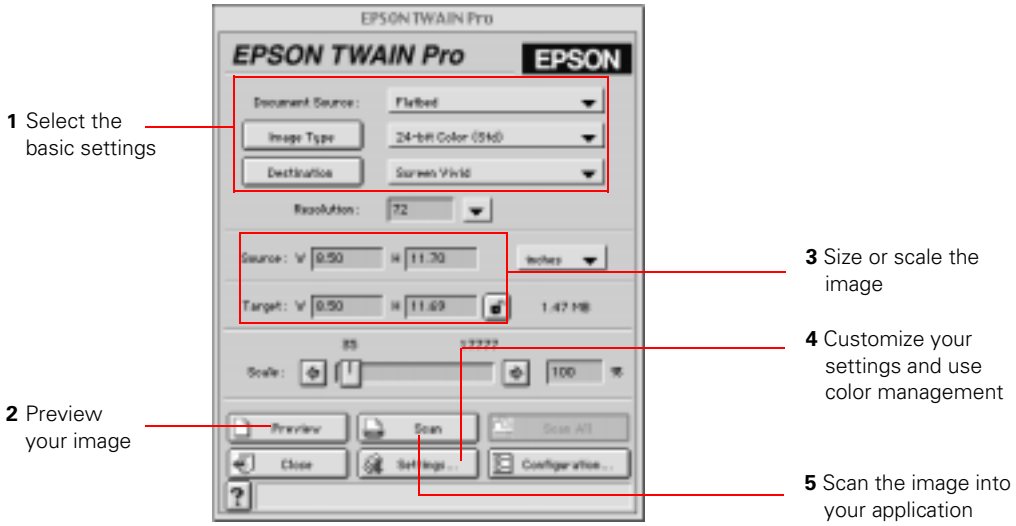
Selecting a Driver and Settings

Here is a brief overview of the scanning steps using LaserSoft® SilverFast™ Lite and EPSON TWAIN Pro. In both of the following illustrations, the Macintosh interface is shown; the Windows steps are the same.

If you select **Expression 800 (32-bit)** (Windows) or **Expression800** (Macintosh) as your scanner source, you see the SilverFast Lite window:



If you select **EPSON TWAIN Pro(32-bit)** (Windows) or **EPSON TWAIN Pro** (Macintosh) as your scanner source, you see the EPSON TWAIN Pro window.



Here are some recommended settings for different types of scans.

Image type	Recommended driver	Recommended driver options	Scanning resolution for printing*
Photograph	SilverFast Lite	Filter: None or Sharpen	300 dpi
Polaroid® photograph	SilverFast Lite	Original: Spectra® Polaroid or 600 Polaroid	300 dpi
Magazine	SilverFast Lite	Filter: Descreening	300 dpi
Newspaper (text only)	EPSON TWAIN Pro	Image Type: OCR**	300 or 400 dpi***
Text for OCR	EPSON TWAIN Pro	Image Type: OCR**	300 or 400 dpi***
Text with images	EPSON TWAIN Pro	Image Type: Line Art B/W option: Auto Area Segmentation	300 or 400 dpi ***
Line art	SilverFast Lite	Filter: Sharpen	300 to 3200 dpi
35 mm film (negative)	SilverFast Lite	Original: 35 mm or Neg. Transparency	300 to 3200 dpi
35 mm slide or 4 × 5 transparency (positive)	SilverFast Lite	Original: Pos. Transparency	300 to 3200 dpi

* If the final output is for on-screen viewing (for example, on a web page), select 72 dpi for your resolution.

** Automatically selects Text Enhancement Technology (TET) as your B/W option.

*** If you are enlarging your image, you must manually increase the resolution (dpi) proportionally to maintain the resolution of your original.

Photoshop 5.0 LE Macintosh Configuration Tips

To avoid memory problems on the Macintosh when using the scanner with Photoshop 5.0 LE, follow these recommendations:

1. Set Preferred memory in Photoshop 5.0 LE to twice the suggested memory size. (Select the Photoshop 5.0 LE desktop icon, then select **File**, **Get Info**.)
2. Turn Virtual memory OFF. (From the Apple icon, select **Control Panel**, **Memory**.)
3. Assign a scratch disk. (Start Photoshop 5.0 LE, then select **File**, **Preferences**, **Plug-ins & Scratch Disks**.)
4. Restart your Macintosh.

See the electronic Photoshop 5.0 LE manual on your Photoshop 5.0 LE CD-ROM for detailed information.

Scanner Bundle Kits

The scanner is available in three models: Executive, Artist, and Professional. The Professional model includes a transparency unit.

Check with EPSON for information about the configuration of each scanner bundle kit.

Related Documentation

CPD-7758	Setting Up and Using Your Scanner
ETP1298-00	EPSON TWAIN Pro User's Guide (pdf)
LSL1298-00	LaserSoft SilverFast Lite User's Guide (pdf)
EX8001298-00	EPSON Expression 800 Reference Guide (pdf)
TM-EXPR800	EPSON Expression 800 Service Manual
PL-EXPR800	EPSON Expression 800 Parts Price List