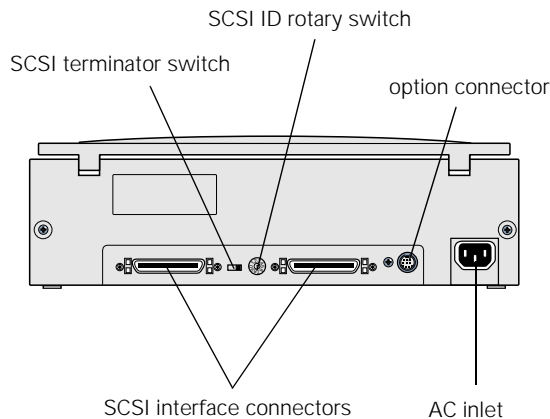
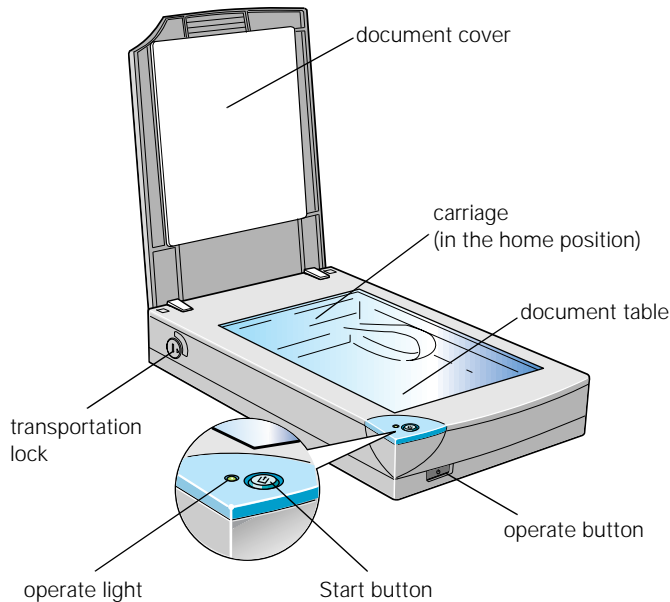


## Scanner Parts



## Scanner Specifications

### Basic Specifications

Scanner type	Flatbed, color
Photoelectric device	Color CCD line sensor
Effective pixels	5100 × 7020 pixels at 600 dpi, 100%

Maximum document size	A4 or US letter size (8.5 × 11.7 inches [216 × 297 mm]) Up to legal size if using the optional auto document feeder (The reading area can be specified from software.)
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Optical resolution 600 dpi

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.

\*\* The maximum hardware resolution for sub scans is 2400 dpi when the width of the document to be scanned does not exceed 4 inches. If the width exceeds 4 inches, the scanning software interpolates the resolution after 1200 dpi.

Maximum interpolated resolution 9600 dpi

Speed (600 dpi, draft mode) Color: 8.1 msec/line  
Monochrome (bi-level): 2.7 msec/line

Output resolution 50 to 9600 dpi  
(50 to 4800 dpi in 1 dpi increments, 4800 dpi reading at 200% produces 9600 dpi reading with 16,368 pixel limit in main scan, 7200 dpi, and 9600 dpi; 7200 dpi and 9600 dpi performed with zoom function)

Color separation By the color filter of CCD

Command level ESC/I-B7

Reading sequence Monochrome: One-pass scanning  
Color page sequence: Three-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, 8 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 for user-defined

**Interfaces** Two SCSI (half pitch 50-pin connectors)

**Light source** White cold cathode fluorescent lamp

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

**Dimensions** Width: 11.3 inches (287 mm)  
Depth: 16.7 inches (425 mm)  
Height: 3.4 inches (88 mm)

**Weight** Approx. 9.9 lb (4.5 kg)

**Electrical**

Specification	100–120 V model	220–240 V model
Input voltage range	AC 90 to 132 V	AC 198 to 264 V ± 10%
Rated frequency	50 to 60 Hz	
Input frequency	49.5 to 60.5 Hz	
Rated current	0.5 A	0.3 A
Power consumption	Approx. 20 W	

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

**Environmental**

**Temperature** *Operation*  
41 to 95 °F (5 to 35 °C)  
50 to 89 °F (10 to 32 °C) when using the auto document feeder  
*Storage*  
–13 to 140 °F (–25 to 60 °C)

**Humidity (without condensation)** *Operation*  
10% to 80%  
20% to 80%, when using the auto document feeder  
*Storage*  
10% to 85%

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

**Safety Approvals**

**120 V model**  
Safety standards UL 1950 with D3  
CSA C22.2 No. 950  
EMI 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**

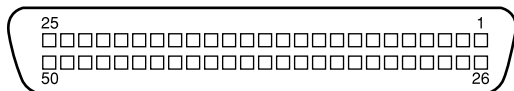
**230 V model** Low Voltage Directive 73/23/EECEN 60950  
EMC Directive 89/336/EECEN 55022 Class B  
EN 61000-3-2  
EN 61000-3-3  
EN 50082-1  
IEC 801-2  
IEC 801-3  
IEC 801-4

**SCSI Interface**

**Interface type** ANSI X3T9.2/375R Revision 10L (SCSI-2)

**Functions** BUS FREE phase  
ARBITRATION phase  
SELECTION/RESELECTION phase  
COMMAND phase (the Logical Unit Number is fixed to 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 X3T9.2/375R Revision 10L (SCSI-2)  
 ID Setting Selectable from 0 to 7 (factory setting: 2)  
 Terminator Internal terminator selectable (enable/disable)  
 Connector type Two half pitch 50-pin connectors  
 Connector pin arrangement



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

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

### Optional Transparency Unit Specifications

The transparency unit (B813132) allows you to scan positive and negative transparent materials—35 mm slides, filmstrips, and film up to 4 × 5 inches in size. It is compact so it can be attached or removed easily when you alternate between scanning transparent materials and normal reflective (paper) documents.

#### Basic Specifications

**Dimensions** Width: 8.8 inches (222.4 mm)  
 Depth: 12.0 inches (305.4 mm)  
 Height: 1.4 inches (36.9 mm)  
**Weight** 1.5 lbs (0.7 kg)  
**Maximum readable area** 3.6 × 4.6 inches (93 × 118 mm, size of 4 × 5-inch film holder opening)  
**Electrical** Supply voltage: DC 24 V 10% V  
 Rated current: 0.5 A  
**Reliability** 10,000 hours

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

**Resistance to electrical noise (static electricity)** panel: 10 kV  
 metal: 7 kV/150 pF, 150 ohm

**Document specifications** Transparencies up to 4 × 5-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 (B813142) allows you to automatically load multi-page documents into your scanner. This document feeder is particularly useful for OCR (optical character recognition) scanning, or for creating an image database. You can load up to 20 legal size (8 1/2 × 14-inches) pages in the auto document feeder.

#### Basic Specifications

**Dimensions** Width: 12.6 inches (319 mm)  
 Depth: 17.8 (451 mm)  
 Height: 5.4 inches (137 mm)  
**Weight** 4.9 lbs (2.2 kg)

# EPSON Perfection 636

Feeder type	Sheet through, face up loading, face down ejecting, roller friction
Loading position	Left side of paper against left side of feeder
Connector	8-pin DIN male
Operating temperatures	<i>Operation</i> 50 to 90 °F (10 to 32 °C) <i>Storage</i> -4 to 140 °F (-20 to 60 °C)
Humidity (without condensation)	<i>Operation</i> 20% to 80% <i>Storage</i> 10% to 85%
Operating conditions	Ordinary office or home conditions; avoid extreme dust, direct sunlight, and strong light.
Reliability	Load/eject: MCBF 20,000 sheets Hinge: MCBF 12,000 cycles
Electrical	Input voltage: DC 24 V ± 10% DC 5 V ± 5% Input current: 24 V: 0.8 A 5 V: 0.2 A
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 CISPR Pub 22 Class B CNS13438 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
Resistance to electrical noise (static electricity)	Casing: 10 kV Metal: 7 kV/150 pF, 150 ohm

## Document Specifications

Feeder capacity	20 sheets of maximum weight 55 gm, thickness less than 0.16 inch (4 mm)
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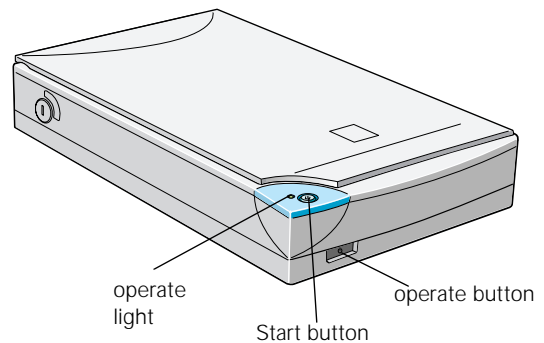
Size	Width: 3.3 to 8.5 inches (85 to 216 mm) Length: 5 to 14 inches (127 to 356 mm)
Thickness	0.0028 to 0.0063 inch (0.07 to 0.16 mm)
Ream weight	110 to 231 lbs (50 to 105 kg)
Weight	58 to 122 g/m <sup>2</sup>
Paper quality	High-quality bond paper, check paper, recycled paper
Applied color	Color and monochrome
Document type	Documents printed with impact printers, laser printers, or facsimile machines



Don't use the following paper types: transparencies, coated paper, labels, carbon paper, or paper with staples, holes, rips, curls, or folds.

## Light and Buttons

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



### Scanner operate light

Light status	Color	Scanner status
◌ (slowly flashing)	Green	Initializing or busy scanning
○	Green	Ready to scan images
◌ (rapidly flashing)	Red or Orange	An error occurred
●	N/A	The scanner is turned off

○ = on, ● = off, ◌ = flashing

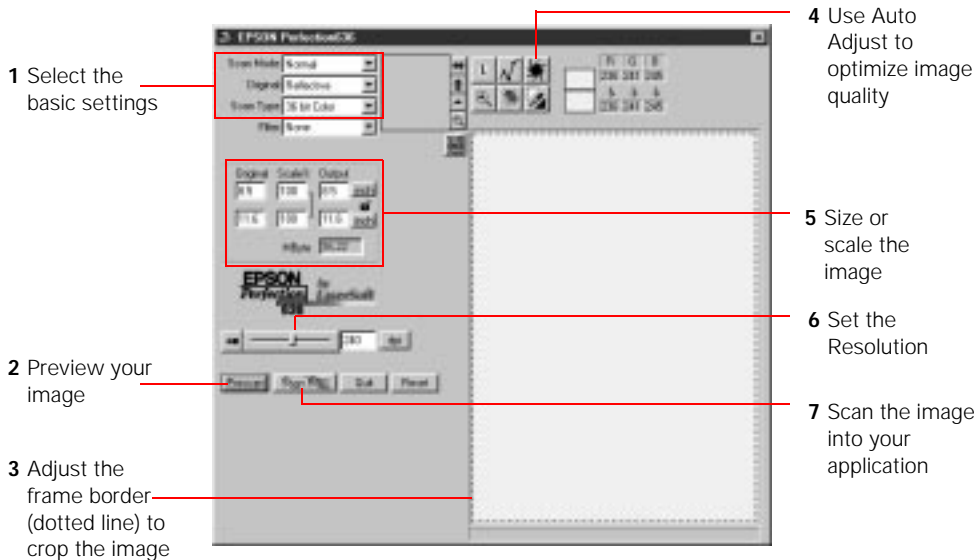
### Scanner button

Button	Function
⏻ Operate	Turns the scanner on and off.
👉 Start	Lets you scan directly to an application with one touch. You must set up the scanner monitor and a compatible application to use this button. See the <i>EPSON TWAIN User's Guide</i> for more information.

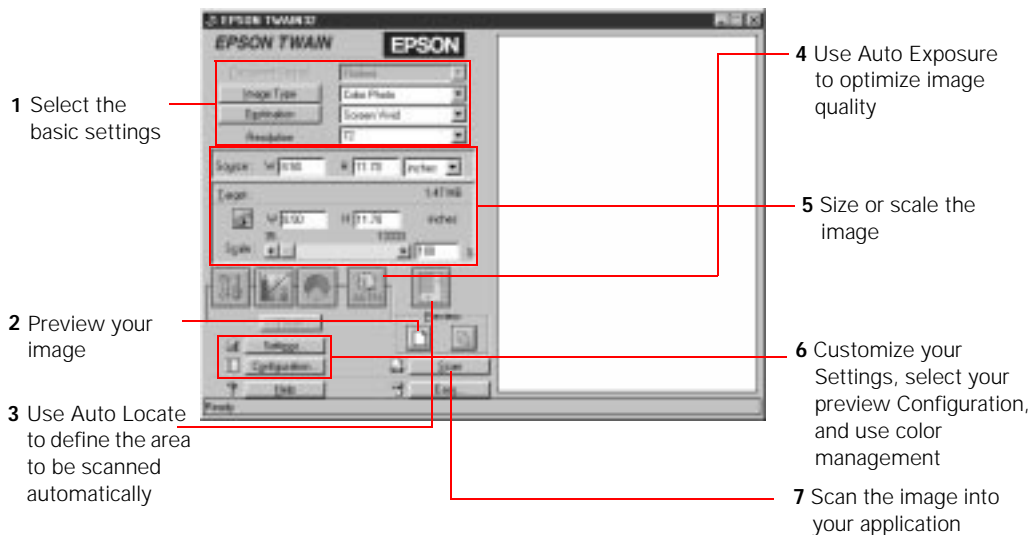
## Selecting a Driver and Settings

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


If you select Perfection 636 (LaserSoft Scan Software for EPSON Perfection 636) as your scanner source, you see the following window:



If you select EPSON TWAIN 3(32-bit) (Windows) or EPSON TWAIN 3 (Macintosh) as your scanner source, you see the EPSON TWAIN window. The following window is the Advanced window; there is also an Easy window with fewer options.



Here are some recommended settings for different types of scans.

Image type	Recommended driver	Recommended driver options	Scanning resolution for printing*
Photograph	LaserSoft	Filter: None or Sharpen	300 dpi
Small photograph to be enlarged	LaserSoft	Photo mode 	300 to 2400 dpi****
Polaroid® photograph	LaserSoft	Original: Polaroid (Spectra® size)	300 dpi
Magazine	LaserSoft	Filter: Descreen	300 dpi
Newspaper (text only)	EPSON TWAIN	Image Type: OCR**	400 dpi***
Text for OCR	EPSON TWAIN	Image Type: OCR**	400 dpi***
Text with images	EPSON TWAIN	Image Type: Copy & Fax (selects AAS)	400 dpi ***
Line art	LaserSoft	Scan Type: 1 bit Line Art (OCR)	300 to 2400 dpi****
35 mm film (negative)	LaserSoft	Original: 35 mm or Neg. Transparency	300 to 2400 dpi****
4 × 5 or Brownie film (negative)	LaserSoft	Original: Neg. Transparency	300 to 2400 dpi****
35 mm slide or 4 × 5 transparency (positive)	LaserSoft	Original: Pos. Transparency	300 to 2400 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.

\*\*\*\* If you are scanning between 1201 and 2400 dpi, EPSON recommends you limit your scan area to 4 × 11.7 inches to maintain true hardware resolution. Above 2400 dpi, you will be using software interpolation to increase the resolution.

## Scanner Bundle Kit

The scanner is available in a bundled kit that includes software for operating the scanner in a Windows® or Macintosh® environment. The kit includes the following:

- EPSON Perfection 636 scanner
- Adaptec® PCI SCSI board
- SCSI cable
- Windows and Macintosh CD-ROMs that include:
  - LaserSoft® Scan Software for EPSON Perfection 636
  - EPSON TWAIN Driver
  - Adobe® PhotoDeluxe® Business Edition (Windows) or Adobe PhotoDeluxe version 2.0 (Macintosh)
  - Brøderbund® The Print Shop® PressWriter™
  - NewSoft™ Presto!™ PageManager for EPSON
  - Xerox® TextBridge® Classic
  - EZ-SCSI driver and utilities (Windows only)
  - Electronic manuals (pdf)

## Related Documentation

CPD-7453	Scanner Basics
ET0998-00	EPSON TWAIN User's Guide (pdf)
L0998-00	LaserSoft for Perfection 636 User's Guide (pdf)
P636R998-00	EPSON Perfection 636 Reference Guide (pdf)
TM-PERF636	EPSON Perfection 636 Service Manual
PL-PERF636	EPSON Perfection 636 Parts Price List
TBD	Auto Document Feeder Service Manual
TBD	Auto Document Feed Parts Price List