Scanner Parts

Scanner Specifications

Basic Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scanner type</td>
<td>Flatbed, color</td>
</tr>
<tr>
<td>Photoelectric device</td>
<td>Color CCD line sensor</td>
</tr>
<tr>
<td>Effective pixels</td>
<td>20,400 x 28,080 pixels at 2400 dpi, 100% scaling</td>
</tr>
</tbody>
</table>

Maximum document size: US letter or A4 size (8.5 x 11.7 inches [216 x 297 mm])

Optical resolution: 2400 dpi

Maximum (sub scan) resolution: 2400 dpi x 4800 dpi hardware resolution

* The maximum hardware resolution of 2400 x 4800 dpi is achieved using EPSON's Micro Step Drive™ technology.

Maximum interpolated resolution: 12,800 dpi

Output resolution: 50 to 12,800 dpi (50 to 6400 dpi in 1 dpi increments, 12,800 dpi performed with zoom function)

Speed (2400 dpi, draft mode): Color: 11.0 msec/line, Grayscale: 3.8 msec/line

Command level: ESC/I (B8), FS

Zoom: 50 to 200% in 1% increments

Pixel depth: 16 bits per pixel

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 error diffusion modes (A, B, and C) and 4 dither patterns (A, B, C, and D) for bi-level and quad-level data

(2 downloadable dither patterns)

Gamma correction: 2 types for CRT display

3 types for printer output

1 type for user-defined

Color correction: 1 type for CRT display

3 types for printer output

1 type for user-defined (only user-defined color correction is available in EPSON TWAIN)

Interface: USB (Type B receptacle connector)

IEEE 1394 (FireWire™)

Light source: White cold cathode fluorescent lamp

Reliability: 30,000 cycles of carriage movements (MCBF)

Dimensions: Width: 12.0 inches (30.4 cm)

Depth: 18.7 inches (47.6 cm)

Height: 4.8 inches (12.2 cm)

Weight: Approx. 12.8 lb (5.8 kg)
**Electrical**

- Input voltage range: 100-120 VAC
- Rated input current: 0.45 A
- Power consumption:
  - Operating: Approx. 23 W
  - Power saving mode: approx. 7 W

*Note: Scanners sold outside the US market may operate at a different voltage. 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:
  - Operation: 10% to 80%
  - Storage: 10% to 85%
- Operating conditions: Ordinary office or home conditions; avoid extreme dust, direct sunlight, and strong light sources.

**Safety Approvals**

- Safety: UL 1950, CSA C22.2 No. 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
- Connector type: One receptacle (Type B)
- Configuration:
  - Full Speed mode (12 Mbit/s) and High Speed mode (480 Mbit/s), Universal Serial Bus Specification Revision 2.0

**FireWire Interface**

- Interface type: IEEE 1394a-2000 compatible
- Data transfer: Half-duplex data / strobe differential serial
- Synchronization: Clock synchronization with DS-Link
- Encoding/Decoding: DS-Link
- Logic level: 3.3. V
- Power class: Power class code 100
- No power supply from external sources
- Fitted with a repeat function with bus power

**Transparency Unit**

- The transparency unit is built into the scanner lid.
  - Electrical: Supply voltage: DC 24 V ±10% V
    - Rated current: 0.5 A
  - Document: Positive or negative film in the following specifications sizes:
    - 35 mm strips
    - 35 mm slides
    - 120/220 (6 × 9-cm) film
    - 4 × 5-inch film
  - Readable area: 4 × 9 inches (102 × 230 mm)
Scanning Transparencies and Film

Before scanning transparent documents, you need to remove the scanner’s reflective document mat; this exposes the scanner’s transparency unit (light source), which is built into the lid. If you’re scanning slides or film strips, you’ll also need to use one of the film holders.

Using the Transparency Unit

To use the transparency unit, remove the reflective document mat by grasping the top of the mat and sliding it up gently, as shown.

Make sure the cable for the transparency unit is plugged into the round connector. If not, turn off the scanner, then connect the cable as shown.

Using Film Holders

Film has two sides, a shiny base side and a dull emulsion side. The base side of the film has the film maker’s name and film ID numbers printed on it. Always place the shiny base side down.

To scan 35-mm film strips, 4 × 5-inch film, or 120/220 (6 × 9-cm) film, place the film in the correct holder, as shown:

Place the holder with the film onto the scanner. Make sure the white triangle on the holder points to the upper-right corner of the scanner.
If you’re scanning 35-mm slides, set the holder on the scanner first, then place the slides in the holder.

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 Smart Panel icon on the desktop.
   - On a Macintosh, you can also open the Apple menu and select EPSON SMART PANEL.

   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 Copy or Photo Print, 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; however, you can select Scan to File, then use your email software to attach the file to your message.)

For instructions on using each of the Smart Panel applications, see the online help for EPSON Smart Panel.
Selecting TWAIN Settings

If you need to manually adjust the settings in EPSON TWAIN, follow the guidelines shown at right. The illustration shows the preferred order in which settings should be adjusted. Detailed descriptions are given in the electronic Reference Guide.

The most important thing to remember when scanning is to select the correct image type and resolution for your scan.

1. Select basic settings:
   - Document Source
   - Image Type
   - Destination
   - Resolution

2. Preview your image

3. Automatically set the scan area for your image using Auto Locate

4. Size or scale the image

5. Customize your exposure and use color management

6. Scan the image into your application

7. Close EPSON TWAIN

Indicator Light

The indicator light (next to the Start button) indicates the status of the scanner, as described below.

<table>
<thead>
<tr>
<th>Light</th>
<th>Color</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>Green</td>
<td>The scanner is ready to scan images.</td>
</tr>
<tr>
<td>Flashing</td>
<td>Green</td>
<td>The scanner is initializing (warming up) or is busy scanning.</td>
</tr>
<tr>
<td>Flashing</td>
<td>Red</td>
<td>Check the following, then turn your scanner off and back on to reset it:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Make sure the transportation lock is turned to the unlocked position. See the Start Here sheet for details.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Make sure the scanner is properly connected to your computer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If you are scanning transparencies, make sure you’ve removed the reflective document mat. If this does not eliminate the error, the fluorescent lamp may need to be replaced or the scanner may have another problem. Consult your dealer or EPSON.</td>
</tr>
<tr>
<td>Off</td>
<td>—</td>
<td>The scanner is unplugged or turned off.</td>
</tr>
</tbody>
</table>

Related Documentation

- CPD-12888 EPSON Perfection 2450 PHOTO Start Here poster
- CPD-12887 EPSON Perfection 2450 PHOTO Scanner Basics
- CPD-12889 EPSON Perfection 2450 PHOTO scanner software CD-ROM
- — Reference Guide (HTML)
- — EPSON Smart Panel User’s Manual (HTML)
- TM-PERF2450 EPSON Perfection 2450 PHOTO Service Manual
- PL-PERF2450 EPSON Perfection 2450 PHOTO Parts List