Scanning Film with a Flatbed Scanner

Zolt Levay BPC CoC September 3, 2020

- Flatbed scanner with transparency function
- · Scanning software: from hardware vendor or 3rd party (SilverFast is one example)
- Example: Epson V700 Photo (6400ppi native resolution)
 - Postive film (transparency) color/B&W
 - Negative film color/B&W (SW inverts, removes color mask)
 - Film holders: 35mm, medium format (120/6cm), large format (4x5, 8x10)



Transparency unit includes a separate light source above film with sensor below.

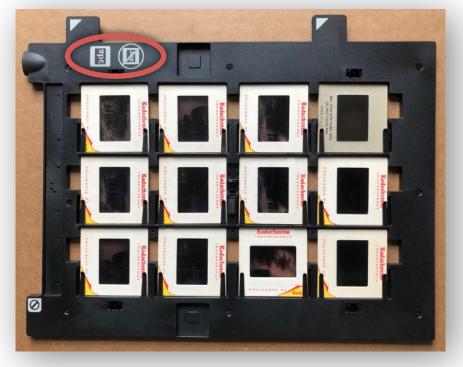
Epson V700 Photo scanner: letter-size flatbed scanner with full-size transparency unit

Film holders (film area guides)

- Hold film physically secure, flat, and registered to scanner area
- Allow scanning software to register and locate frames (potentially)



35mm film strip film holder, note guides for positioning film, emulsion side up.

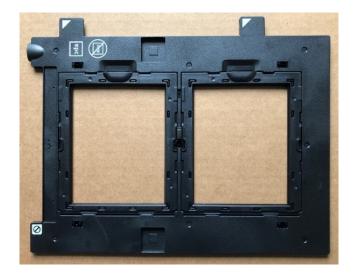


35mm slides in 2x2-inch mounts

Additional film guides



120 (6cm) film strips





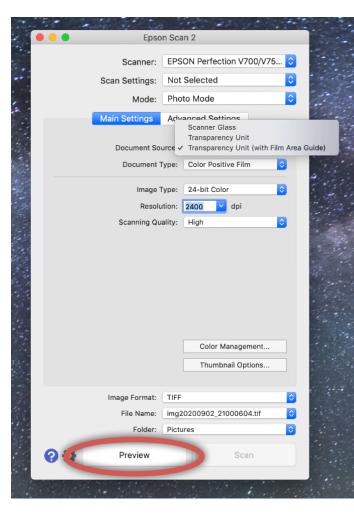


8x10-inch sheet

Software

- · Select primary scanning options
 - Mode
 - Color/b&w
 - Resolution
- Pre-scan to view photos
- · Select frames to scan
- Pre-process
- · Scan: save to file
- Post-process (as a raw file)

Example: Epson Scan 2 with V700 scanner



Main Epson Scan 2 dialog

Important options

- Document source: Transparency Unit with Film Area Guide
- Document Type: film type: color neg., color pos., B&W neg.
- Image Type: output file bit depth, color or b&w
- Resolution: scanning resolution on film frame, can opt to specify output image resolution

Numerous other options under Advanced Settings to process while scanning: sharpening, color correction, descreening, dust removal. Or can apply in post-processing.

Some scanners include hardware-level "Digital ICE" technology to remove scratches and other blemishes during scanning.

Press "Preview" to pre-scan and view frames

Scanning

•••			Ep	son Scan 2			
	Scanner:	EPSON Perfection V700/V75	📦	Thumbnail			\times
	Scan Settings:	Not Selected	🔁 🐴				
	Mode:	Photo Mode					
	Main Settings	Advanced Settings	Q				
	Document Sou	rce: Transparency Unit (with					
	Document Ty	ype: Color Positive Film	•				
	Image Ty	ype: 24-bit Color	3				
	Resolut Scanning Qua	ion: 2400 💙 dpi lity: High		2			
	Scanning Qua	inty: High					
		Color Management					
		Thumbnail Options					
	Image Format:	TIFF		Input Image	Out	put Image	
		img20200902_20591537.tif		0.98 ×	1.37 in.	0.98 x 1.37 in.	
	Folder:	Pictures		Resolution 240	00 dpi Re	Zoom 100 🕃 % solution 2400 dpi	
00	Preview	Scan				rored Output	
			Scan (Count: 3		23.20 MB R: -	G: - B: -

Result of Preview: panel of pre-scanned images to process and select for scanning

- Select one or more frames to scan with marquee(s)
- Pre-process (Advanced Settings)
- Note "Color Management" options to apply scanner color profile to output images
- Press "Scan" to perform scan and save to output file(s)
- Process in photo editing software (Lightroom, Photoshop, etc.) as with a raw file

Black & White negative film (6x6cm 120)

• • •		Epson Scan 2		
Scanner: EPSON Perfe	action V700/V75 文 📃 Thumbna			$\mathbf{ imes}$
Scan Settings: Not Selected	1 🖸 🚠		· · ·	
Mode: Photo Mode		* • • •	с ·· т	
Main Settings Advanced Se	Q			
Document Type: B&W Ner Image Type: 18-bit 0r Resolution: 3200 Scanning Quality: High				
Image Format: TIFF			Output Image	
File Name: img20200903_		2.30 x 2.34 in.	2.30 × 2.34 in. Zoom 100 🖗 %	
Folder: Pictures		Resolution 3200 dpi	Resolution 3200 dpi	
Preview	Scan		Mirrored Output	
	Scan Count: 1		110.22 MB	

Additional processing options

