Review

Epson
EXPRESSION 1600 SCANNER

A high res flatbed scanner from Epson that delivers exceptional detail. Barrie Smith runs some originals across it .

'Prosumer' film scanners able to process 35mm negs and trannies have now reached the 4000 dpi level, with prices sitting around the three grand plateau. For their part, consumer-style flatbed scanners with an optical resolution of around 300 x 600 dpi can now be picked up for around $160 or even less. It is only when you need a dash more res, some decent bit depth, an extended density range and some decent internal mechanisms that the price begins to rise to the $1000 mark and over.

Rationally speaking, you really don't need a flatbed with resolution over 300 dpi if your flat art is going to be reproduced 1:1 in a magazine such as this. But if you need to squeeze out some detail in an original there may be a need to go higher.

The Epson Expression 1600 A4 scanner certainly answers these needs with an optical resolution of 1600 x 1600 dpi, 12-bit depth and D-Max of 3.3. The scanner also has an unusual mode where a sub scan produces a 3200 dpi scan by using a 'half stepping' mode, capturing additional detail at twice the optical resolution.

This unit is the first to offer (optional) FireWire connectivity as well as standard SCSI and USB interfaces. The 1600 also has a dual focus mechanism that permits the focal distance to be changed to 2.5mm above the glass scan bed, enabling scans of mounted slides or 3-D objects.

The first thing you must face is that at this level the whole business gets deadly serious and can become a monster. The files are huge.

A finely engraved Mauritius banknote was used as the test target. Its area was 14 x 8 cm approx. It was scanned with the Epson 1600, connected to a 300 MHz PowerMac via a USB port. The first scan was made at the top optical res of 1600 dpi. Time taken: 13 mins, including four minutes taken up in writing the file to the hard drive. File size: a 253 MB TIFF. A 3200 dpi scan would have reached over a Gigabyte and taken 40–50 minutes!

To provide some trial pics for this story an area of one quarter of the note was scanned. The end result was startling. Fine detail, excellent gradation, so much so that the texture of the paper was rendered in such clarity that the fibres interleaved with the note's ink impressions. A super scanner.

Scan Times

The short answer to these long scan times is that a FireWire connection (not available at test time) or even a SCSI link would have been preferable, as well as access to a faster CPU (let's start at 500 MHz) and a rapid hard drive.

Extras

An Automatic Document Feeder (ADF) is also available and lets operators make unattended scans of multiple documents.

A transparency unit can be purchased separately. This has frames for 35mm film strips, trannies, 6x6 cm strips and 4x5 film as well as a method of scanning 'non-standard' film originals.

At 1600 dpi resolution see how the paper texture is captured in extreme detail.

Mauritius banknote scanned in full at 1600 dpi.

Supplied

Software supplied with the 1600: Epson TWAIN Pro, TWAIN Pro for Networks, Adobe Photoshop 5.0 LE, Adobe Acrobat Reader, NewSoft Presto! PageManager, Xerox TextBridge Classic OCR.

Windows 2000 also supports IEEE 1394/FireWire. Drivers will be available in the coming months.

Specs

Document size: 216 x 297 mm.
Light source: Xenon gas fluoro.
Scanning resolution: 1600 dpi (3200 with micro step).
Effective pixels: 13,600 x 18,720 pixels at 100%.
Data rates: up to 400 Mbs.
Bit depth: 12-bits.
D-Max: 3.3.
Zoom: 50–200% in 1% increments.
Brightness: seven levels.

Price

The Epson Expression 1600 is $1999. The Macintosh bundle with FireWire is $2499. The 20-page document feeder is $1280. Transparency unit is $670. All prices are RRP pre GST.

Contact: Epson Australia (02) 9903 9000.

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