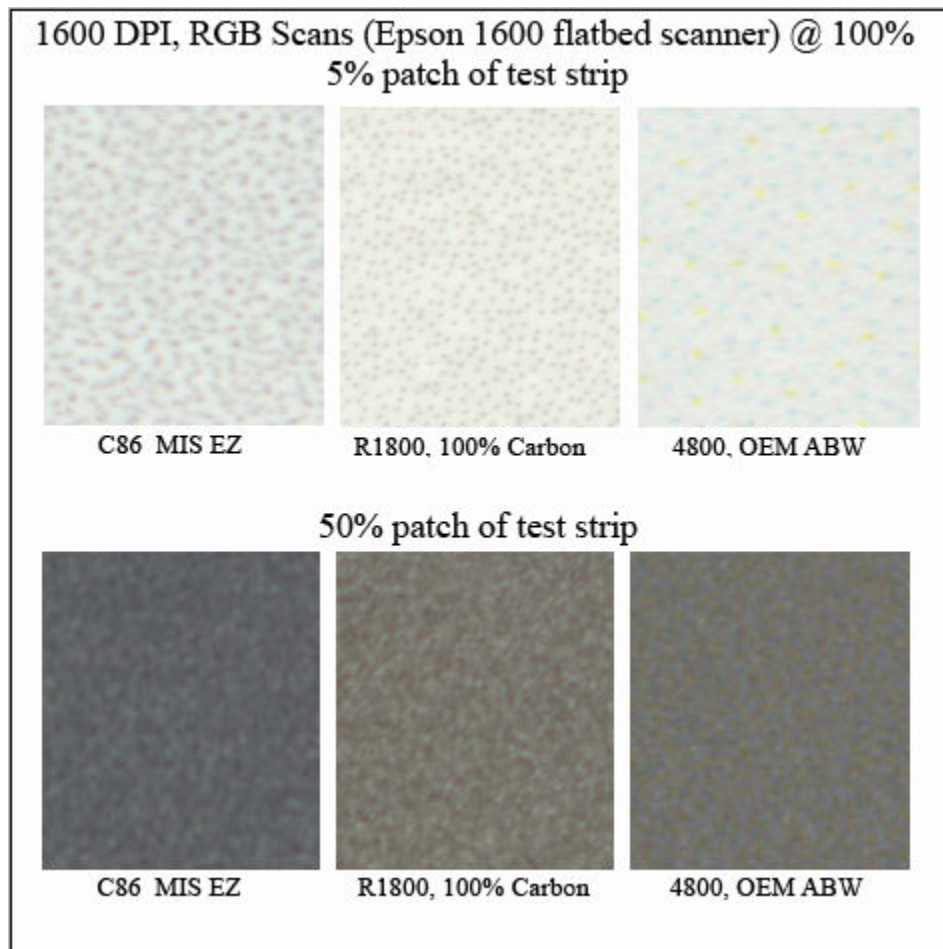


## R1800 Image Structure and Smoothness

The goal here is to use only relatively neutral MIS Eboni matte black, avoiding the use of any dilute, warm carbon inks, and thus also eliminating the need for any color pigments to cool the warm dilute carbon image.

With no dilute inks being used, the first major question is, of course, whether the 1.5 pl dots of high-density Eboni MK can give a smooth image. The answer may vary for different people and uses. Seeing sample prints is the best way to answer the question, but high resolution scans might also help quantify the relative smoothness of various printing approaches.

The 1600 DPI scans below show the highly magnified image structures of the R1800 with 100% carbon, C86 with MIS EZ B&W ink, and Epson 4800 (K3) using its ABW mode. The actual scanned areas are only 1/10 inch high.



For the comparison above, Epson's PremierArt (205 gsm) "Scrapbook" paper was used for the carbon print. Epson states that this is its "most archival paper." Because making the most archival print is one goal of this approach, this most

archival paper seems like a logical paper to use for comparison. It also feeds very well in printers and is readily available, including in 12 x 12 inch sizes used by those involved in scrap-booking. Epson Enhanced Matte was used for the 4800 "Advanced B&W" mode print.

These scans largely speak for themselves. Looking at sample test strips, at the viewing distance of 14 inches which Kodak uses as its standard (see <http://www.kodak.com/global/en/professional/support/techPubs/e58/e58.jhtml>), I judge the R1800 highlights as among the best I've seen. The 1.5 pl dots are virtually invisible. On the other hand, the R1800 midtones do show a very fine grained image structure when perfectly smooth digital-file test strips are examined closely. In actual prints at normal viewing distance and on appropriate paper these look quite smooth. (For a rough comparison to the graininess of film enlargements, see <http://www.paulroark.com/BW-Info/Grain.pdf>.) A traditional B&W film shooter and printer will probably never notice the very fine grain structure. On the other hand, those who value the ultimate in midtone smoothness or glossy printing might prefer one of the other B&W approaches. For my uses and tastes, the R1800 100% Eboni prints are excellent, and, all things considered, the medium of choice for fine art B&W photography and any use where maximum longevity is a major factor. Note also that paper choice also affects smoothness.

## Paper Feed Issues

**Thick papers** may not be quite as smooth as those under 300 gsm, at least in letter size prints.

Epson's PremierArt "Scrapbook" (205 gsm, dual sided) paper is not only said to be their most archival but it is also one of the smoothest printing papers. For larger prints, the UltraSmooth and Premier Art 270 as well as the 205 version from Premier Art are related papers that can be used. The 270, however, is as thick as I recommend going with this group of papers, at least in letter size. See [http://www.premierimagingproducts.com/pm\\_smoothhp.php](http://www.premierimagingproducts.com/pm_smoothhp.php) for Premier Art paper information.

In at least some R800s, thick paper will not feed at all.

**Narrow paper borders** may tend to cause the very edges of the image to print less smoothly, particularly on thicker papers. As has been seen with some other printers, the R1800 is best when both sets of its rollers are engaged. Images sized at 9 x 7 and centered on letter size paper show very good results even with a magnifier; 11 x 14 inch images on 13 x 19 inch paper have been excellent. For technical, aesthetic, handling and durability reasons, I prefer an ample paper border around the image.