

Fuji Acros Film—

TAKEN BEYOND THE ZONE SYSTEM

by **Fred Newman**

Neopan 100 Acros is a relatively new black-and-white film by Fujifilm.

In this age of digital photography, it's really nice to see a new film available, especially a black-and-white one.

It is available in 35mm (36 exposure), 120 and 4x5 (in Quickload 20-sheet packages). I have worked with Acros in all three sizes.*

Film qualities

When I choose a film, I look for one that is very friendly for printing highlights. I want a characteristic curve that's a straight line or has a slight shoulder (the curve slopes downward a little). Fuji Acros has the curve shape I'm looking for. There are three other medium-speed films to compare Acros with: Kodak T-Max 100, Ilford FP4+ and Ilford Delta 100. The film curve of Acros has the combination of shadows, midtones and highlights that I like best of the four. I find this film's separation of highlights very pleasing, and its shadow separation is very good.

Of the medium-speed films, Acros is most comparable to T-Max 100 and Ilford Delta 100. All three have more modern emulsions. The four medium-speed films I've mentioned are all fine films; each has its fans. I prefer the Acros first, followed by T-Max 100. These are my personal choices and the reasons are not quite scientific—the differences in tonal qualities between these medium-speed films are very slight, and personal preferences play a large part in the decision. In general, I find Acros to be just a bit more fine-grained than the other films. I've read articles in which some photographers came to another conclusion—this is a very subjective call.

* For sheet film users, the Quickloads are a bit more expensive than in the usual film box. The main advantage is convenience and better control of dust than loading your own film holders.



Old Car, shot with Fuji Acros.

Your best bet would be to compare Acros to the film you're presently using by photographing the same scene with both films, making prints as similar as possible, then comparing them side-by-side.

Beyond the Zone System process

I tested Acros to determine how to best expose and develop it. All the film testing I've done since the early 1990s has used the "Beyond the Zone System" (BTZS) method—it's the quickest, most efficient way to find your developing times and film speeds for any film. The basic reference for understanding BTZS methods is *Beyond the Zone System*, 4th edition, by Phil Davis (as well as his BTZS Video Workshop and BTZS Workshops).

I used five rolls/sheets of film for each film test. Each roll/sheet is exposed to a 21-step step tablet for a specific time and intensity of light. This is similar to making a contact print. The step tablet (emulsion down) is placed on top of the film (emulsion up) in a contact-printing frame and exposed under an enlarger. A typical exposure setting for 100 speed film would be 0.4 seconds.

The light intensity is usually measured with an incident meter set at 4.0 EV (with the dome removed, using the EV-exposure value scale and the film speed set at ISO 100). Light intensity is regulated by raising/lowering the enlarger head to cover the area of the contact-printing

frame and adjusting the f-stop of the enlarging lens.

After exposing the five rolls/sheets of film, each is processed for five different times: 4, 5.5, 8, 11 and 16 minutes. Once the film is processed, read each of the densities of the 21 steps on each sheet of film and enter the values into the Plotter program (recently upgraded to Windows). Thanks to this program, testing films and papers is a much easier task. With the Plotter program you no longer have to hand-draw curves and graphs. The Plotter program plots each individual film curve, the family of film curves, film developing times and film speeds.

Development

I used Ilford's film developer DDX for the three film tests. I like this developer because it's a liquid (I prefer this to mixing powders), and because it lasts for many months if I store it in small glass bottles. This has become my new favorite/standard film developer**. I diluted the DDX 1+9 (one part DDX and 9 parts water) at 75° F (I live in Arizona, where most of us process film at 75°). All processing was done in a Jobo processor. The roll film was processed in the 2500 series tanks and reels, while the sheet film was processed in a 3010 drum.

We will be looking at two of the graphs

** Another developer I recommend for Acros film is D-76. Similar to T-Max 100, Acros has a magenta sensitizing dye, making it best to use fresh fixer and hypo clearing agent to remove the magenta dye.

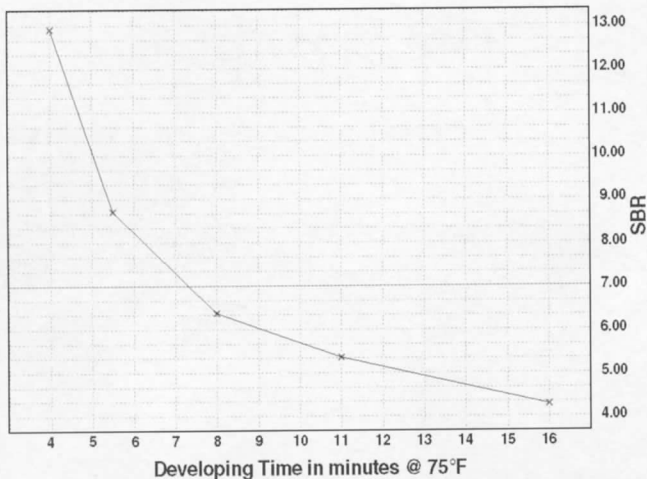


Figure 1a. Fuji Acros 35mm – SBR
(Subject Brightness Range) vs. Development Time

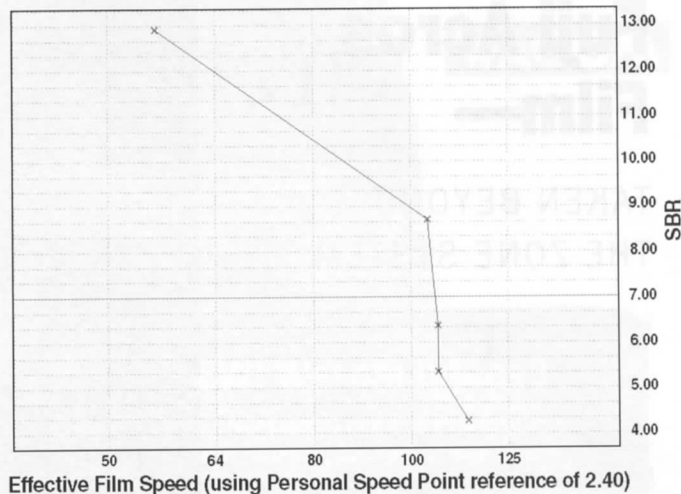


Figure 1b. Fuji Acros 35mm – SBR
(Subject Brightness Range) vs. EFS (Effective Film Speed)

produced by the Plotter program: Subject Brightness Range (SBR) vs. Developing Time in Minutes and SBR vs. Effective Film Speed. SBR is the difference between the light intensities of the shadows and the highlights, expressed in the number of stops. When you look at these graphs you'll see a solid horizontal line at SBR 7. This represents 7 stops, a normal contrast subject, while an SBR of 8 would represent a scene with one more stop of contrast than normal. Going the other way, an SBR of 6 would be a scene with one stop less contrast than a normal scene.

The two graphs for Acros 35mm (figures 1a and 1b) reveal that development time for a normal scene is 7:20 and the film speed is 100. So we'd set our camera meter for 100 and develop that roll of film for 7:20. For Acros 120, normal (7 stops) development time is 7:35 with a film speed of 100. Acros 4x5 has a normal development time of 7:30, with a film speed of 100. These graphs provide more information for sheet film users since each sheet can be individually developed to match the contrast of the scene.

With roll film, it's most useful to try to work in the normal 7-stop range. On days

when the light is very flat, you can try using SBR 6. If you're photographing a contrasty scene, you might check the graphs for SBR 8, though some photographers object to the greater film grain caused by increased development time. Pushing and pulling roll film works best when you shoot the entire roll in similar lighting.

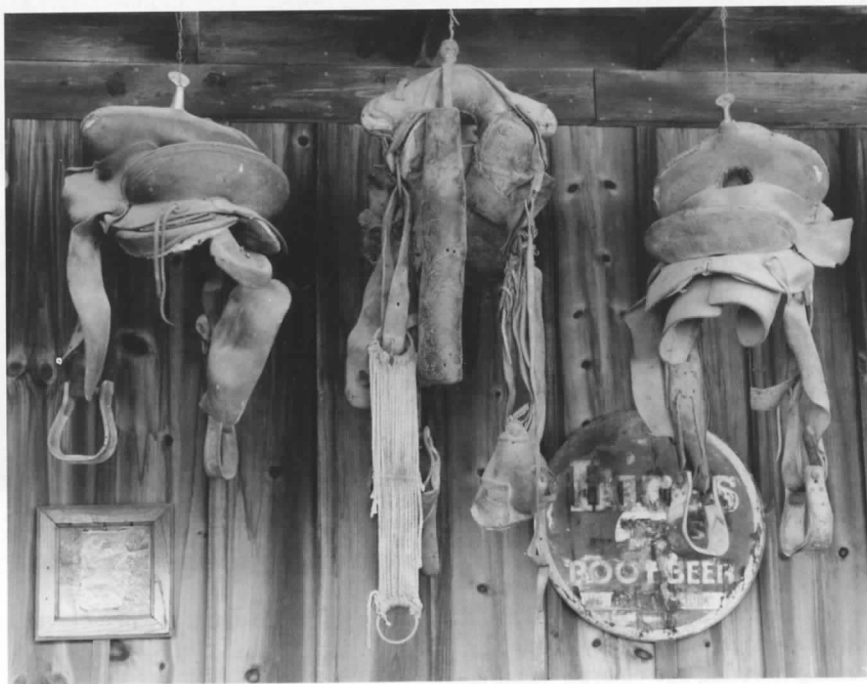
You'll find that when you test your film—or as I call it, “do your homework”—your negatives should be better and a lot easier to print. This is the main reason for testing film.

Conclusion

When I first got involved in photography, I lived in New York and used to go to the photography exhibits at the Museum of Modern Art. I came to realize there were many wonderful photographs in their collection and that each photographer used different films, papers and camera formats. There is no magical film, paper and camera combination—there are actually many.

I've found Fuji Acros to have good tonal qualities and reciprocity characteristics; I've been very pleased with the results. Perhaps you will be too. ■

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Saddles, shot with Fuji Acros.