

HIGH CONTRAST SITUATIONS WITH KODAK T-MAX FILM

COMPILED BY JOHN SEXTON

I have had amazing success handling extremely high contrast situations with Kodak T-Max 100 film and T-Max RS developer. While working on my book, *Places of Power*, I frequently encountered lighting conditions with as much as a 15-stop contrast range. While photographing these industrial interiors, without auxiliary lighting, I have been forced to make exposures ranging into the minutes that included the light sources within the image. Using the procedure described below I have been able to show a tonal difference between the light bulbs and the reflector housings surrounding them – without destroying the shadow and middle-value separation.

This procedure, like many good ideas, arose out of a stupid mistake! When first testing a prototype formula of T-Max developer for Eastman Kodak I made an error in the dilution of the developer. I accidentally diluted the developer to 1/4 the suggested developer strength, and then processed the film for the normal time. As one might expect the negatives were VERY low in contrast. Much to my surprise however, there was little loss of effective film speed. Further experimentation with the diluted T-Max RS developer revealed that it works best (for me) with T-Max 100 film. As I suspected, in order to achieve the “compensating” effect I was hoping for - less development in the highlights relative to the shadows - a reduction in agitation was necessary. With a highly diluted developer, and little agitation to replace exhausted developer in contact with the film emulsion, the developer quickly exhausts in the highlights (dense areas... lots of exposed silver to develop), and continues to work in the shadows (thinner areas... less exposed silver to develop). Thus the shadows and middle-values are adequately developed, while the highlights do not become overly dense.

Over the years I had used extremely dilute developers to handle high contrast situations with tolerable results (HC-110 highly diluted on Tri-X and other films works well), but had encountered film speed losses of up to two full stops. In other words, a film that one might use at EI 200 for normal development would require using EI 40 with the highly dilute developer!

Problems associated with great reductions in contrast include uneven development, great loss of film speed, and often a flattening of the shadows and middle values. The combination of Kodak T-Max 100 film and T-Max RS developer has given me even development (including large areas of sky), minimal film speed loss, and adequate separation in the shadows and middle values - while controlling high contrast situations with great effectiveness. It seems as if this film and developer combination produces an almost “fail safe” negative.

I take the T-Max RS concentrate and ADD the small packet of part B to it. (I do NOT make up a stock solution as Kodak suggests). I dilute 1 part of the above developer concentrate with 15 parts of water. I always use this diluted developer at 75°F. It seems to have improved shadow and middle value at this temperature. Sheet film is tray developed. To maintain the 75°F developer temperature, I run 85°F water underneath the tray. To achieve a “compensating” effect the film is given very little agitation.

In order to keep the films separated, and to ensure even development with reduced agitation, I use my “Slosher.” I use 1,600 cc of T-Max RS at 1+15 in an 11x14” tray to process 6 sheets of 4x5” film. Agitate constantly, but gently, for one minute. During the next minute, agitate for 5 seconds every 30 seconds. Then the film sits still with NO agitation for 2 minutes, followed by 10 seconds of gentle agitation every two minutes for the remainder of the developing time. See the drawing of the Slosher elsewhere in this packet if you are not familiar with it. A roll film “Slosher” can be easily made from plastic rain gutter material available at most hardware stores. The roll of film is taped, emulsion up, onto a thin sheet of plastic, and this is placed in the roll film “Slosher.” Run tests!

Try T-Max 100 at EI-32 (I use EI-64 for Normal development. Develop for 7.5 – 10.5 minutes @ 75°F to start with. The negatives will have a slightly warm color. This is to be expected. It is from the oxidized developer in contact with the emulsion. If dichroic fog (uneven metallic looking coating on film) is evident, immerse the film in Farmers Reducer for 30 seconds and re-wash. Remember, this is an extreme procedure... please practice in your backyard rather than on a “masterpiece.” By the way, print the negatives for evaluation, densitometers get mixed up by the warm colored stain, even when using the blue channel. Best of luck!!!