V54 Cold Lamp Color

Designed especially for Black and White Photography.

Aristo Grid Lamp Products, Inc. has produced a new cold light tube especially designed for use with variable contrast (VC) papers. -- It is available now to replace tubes in existing units and is expected to become standard on new units.

Printing with VC paper has presented problems for some cold light owners, because some older tubes emitted so much blue light that contrasts obtained with VC filter sets were greatly skewed toward the high end, and low contrast was unavailable. An exception was the Aristo W55 tube, which I standardized on some years ago. Using Ilford VC filters and fresh Ilford Multigrade FB paper, it provided a range of contrasts from grade 0 to a low grade 6, although the highest contrasts are squeezed close together.

The V54 brings together in one tube the narrow band blue and green phosphors used in the two tubes of the Aristo variable contrasts lights such as the VCL4500. This gives a stronger green component than most cold light tubes - its unfiltered light looks green, and it is 1-1/3 stops faster than my W55 with a #00 filter. Speeds are almost the same with a #5 filter.

Using the method for finding approximate contrast describe in my article “Saving time and Paper” [in this issue], I investigated the contrast obtained with the V54 compared to the W55. The Ilford VC filter set was supplemented by CC20Y and CC40Y filters to fill the contrast gap between the #0 and #00 filters (see Figure 1).

The highest and lowest contrasts were nearly the same with both tubes, but the spacing was much better with the V54. Filters #0 through #3 produced much lower contrast with the V54, resulting in less bunching of contrasts at the high end. One anomaly I found is that filters #3½ and #4 produced essentially the same contrast using the V54 tube. This result persisted through two trials with slightly differing exposures. Ignoring the #3½ filter, however, the remaining contrasts are remarkably uniformly spaced - all half grade intervals except 1/3 grade between filters #4½ and #5.

I repeated the procedure with the new Ilford Multigrade IV FB paper (results not displayed). The contrasts were much more evenly spaced with the V54 because the contrast produced with the #0 filter was about 1½ grades lower, spreading out all of the higher contrasts. Increments were about a half grade for filters #0 - 3 and 1/3 grade for filters # 3 - 5. The total range from filter #00 to #5 was a little greater than the V54.

I tried using a 50M color correction filter with the #5 filter on Multigrade FB to see if this would yield more contrast than a #5 alone. There was no discernible difference.

It's worth remembering that the method I used for determining exposure scale, and relating it to contrast grade, is approximate (although I doubt that errors exceed 1/3 grade). However, results can vary much more with aged paper, since it doesn't take many months to see a significant contrast loss in paper stored at room temperature. I did the Multigrade FB comparisons described above twice - first with a box that had aged before I got it, and second with a box that went into my freezer as soon as the store got it from Ilford. The first paper yielded contrasts ½ grade lower than the second. In my experience, variations from box to box of fresh Multigrade FB have been much smaller than between boxes kept for various lengths of time without cold storage.

There has been much consternation of late because some VC papers that are able to produce very high contrast have some ultra-violet sensitivity. Since enlarging lenses aren't designed to bring UV light to a focus in the same plane as visible light, unsharp prints may result. Using Multigrade FB, a 240nm f/5.6 El-Nikkor (which attenuates UV) and my old W55 tube, the only evidence of such a focus shift I've seen was that the plane of best focus was about 3/16 inch lower with the #5 filter than with the lower numbered filters. Consequently, when I needed to burn in a local area with a higher contrast. I have been using the #4 ½ filter, which presumably has enough yellow filtration to eliminate the UV light. I couldn't detect any focus shift with the V54, comparing #3 and #5 filters.

The Aristo V54 tube is an important and welcome development for those who want to use a cold light source for printing variable contrast paper.

-Howard Bond

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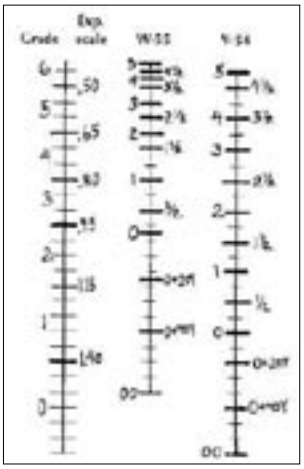

Figure 1. Contrasts obtained from the same box of Ilford Multigrade FB, using Ilford VC Filters, Dektol, and Aristo W55 and V54 Cold Light Tubes.