Black & White Printing Tips

Back to Tips & Techniques

Making a black and white print is governed by a number of factors, one being the quality of the negative. In an ideal world all negatives would be perfect with good contrast and information in both highlights and shadows. However, it is not a perfect world and the best negative on any roll of film exposed is usually the one that is somewhat less than perfect and consequently needs some darkroom work at the printing stage. The following tips are some of the techniques and methods I have used in the past 20 years of printmaking. Use them as a starting point and modify to suit your own judgement and taste.

The Negative

Generally, negatives can be divided into three categories, or levels of contrast - normal, high and low. Normal and high contrast negatives can usually be printed using either normal grades of paper or by split grade printing. Low contrast negatives require a different approach. I will start with some general tips on method and discipline in the darkroom and which apply to any type of negative. The second part of these hints will deal with split grade printing and getting a print out of those low contrast or"thin" negatives.

Exposure

Correct exposure is essential in print making. Therefore never guess the exposure you intend to give a print, always make a test strip. A correctly made test strip is an important reference in producing a high quality black and white print. Keep the increments of time used for each step as short as possible and the information gained from the test strip will be more precise. Using a soft pencil I sometimes mark each division on the test strip as I expose it to help me see the steps more clearly. Never choose the first or the last increment on a test strip for you will have no reference point, and will not know if a shorter or longer exposure would have been better.

Development

Ensure that the developer is maintained at it's correct working temperature during any printing session otherwise consistency will suffer. Manufacturers information relating to time, temperature and dilution is a good starting point, but remember that different results and effects can be obtained by changing these factors. When experimenting, change only one factor at a time to ensure that you know how it will affect the final print. For example, increasing exposure and reducing development is likely to produce a slight warming of the image colour.

Fixing the Print

Fixing the print, especially fibre paper, is a critical stage. Do not overuse the fixer solution, to do so will risk the print being insufficiently fixed and liable to irreversible staining. Over use of the fixer can also result in other salts, which are difficult to wash out, being built up in the fibres of the paper. I fix my fibre prints for exactly one minute in double strength fixer (1+4 for Fotospeed FX20 and Ilford Hypam) and have had no staining problems in the 15 years I have used this method. Another benefit is that this method reduces washing time.

Washing Prints

To ensure archival permanence it is essential that fibre prints are properly washed. In conjunction with the fixing sequence outlined above I have used the following procedure to wash my prints for the past 15 years.Having fixed the print as described I transfer it to a holding tray which has a slow trickle of water passing through from a hose attached to a tap. After 5 minutes I transfer the print into a hypo eliminator bath (Fotospeed WA50 Wash Aid 1+9 or Ilford Washaid 1+4) for the time recommended by the manufacturer (10 minutes). Finally, the print is transferred into an archival washer for 20 minutes. Should you not have an archival print washer, then use a tray for print washing, but remember that each time you add a print to those partially washed already in the tray, they will be affected by the fixer going into the tray. Therefore, when using a tray for washing it is advisable to wash in batches.

Split Grade Printing

This is a method of printing using variable contrast paper and more than one grade on the same print. Five years ago I devised a method using only grades 0 and 5 where the soft grade deals with highlights and the hard grade adds contrast and richness to the lower values. High contrast negatives give the best results for the system works on the basis that the density of the negative acts as a mask when adding the hard filtration on exposure. The basic procedure in making prints using this method is as follows:-

Dial in the grade 0 filtration (100 Yellow on a colour head) and expose a test strip in the normal way. When developed examine and decide on the correct exposure for the highlight. Ignore the contrast and the density of the dark values and shadows. Place a second test strip on the base board and expose the whole strip for the time selected. Leave the test strip in place, dial out grade 0, dial in grade 5 (maximum Magenta on a colour head) and make a second series of test strip exposures over the already exposed strip. Develop the test strip and examine. You will see the density in the lower values has been established and the contrast increased. Select the strip you feel gives the result you like and expose the whole sheet of paper to the grade 0 and grade 5 times chosen. Using this method the contrast of the final print can be manipulated by careful control of the exposures given to soft and hard filtration. More soft filtration means lower contrast while increasing the hard filtration will result in higher contrast.

Printing Thin Negatives

Split grade printing will not work when the negative is “thin” or low in contrast. The low contrast is partly due to under exposure and perhaps insufficient development. I have found the best way to print such a negative is to use grade 5 (maximum magenta on a colour head) only combined with careful control of time. Grade 5 gives maximum separation to the thin areas of a low contrast negative and careful timing enables you to give the precise exposure to achieve maximum black through the thinnest part of the negative.

Drying Fibre Prints

Before drying fibre prints it is essential to get as much of the surface water from both sides of the print by either the use of a squeegee or by wiping both surfaces with absorbent material ensuring that when you change sides you also dry the base material so as not to carry water to the already dried side.

Once this is done then the print should be laid face down on preferably a drying screen or if a drying screen is unavailable then on a clean lint free material. It is most important that the print is emulsion side down since this will ensure that the print dries as flat as possible. The print should be allowed to dry naturally to minimise the curl of the print.

After the print is dry then you can place the print(s) under a heavy book or similar to complete the flattening process. If you have acess to a dry mount press then even better. Give it one minute on medium to high heat with the print between two pieces of white museum board.