In the previous chapter, a straight print was made with an exposure combination using the extreme contrast filters. Although not shown here, an equivalent print can be made with a single exposure using the magenta and yellow filtration of a colour head. However after some thought, it is increasingly obvious that Split-Grade printing, as a printing approach, offers more opportunities for creative local control of contrast and tonality than any other technique. This assertion is worded carefully, since one requires the twin objectives of the degree of control and the ease with which it can be applied. For me, the realisation of this was a revelation in a decade of printing. This chapter will show how sophisticated Split-Grade printing may change your printing habits too.

In this chapter, we avoid the use of graphs, for it is the practical application that is being investigated. Having cre-

fig.1 The final print of Castle Acre priory in Norfolk, England.
ated a work print, we consider what manipulations during and after the two exposures can bring expression to an otherwise literal interpretation.

Additive Exposure
Here is every printer’s dilemma: Once you expose paper to light, you cannot remove its effect. So to enhance an existing latent image one can only add light to it. It is impossible to increase local tonal separation in say a shadow area that is already dense and dull, or alternatively add a sparkle to highlights already with sufficient print tone, without reaching for the bleach bottle.

Conversely, it is easy to dull down borders or distracting highlights with a selective soft burn-in or flash exposure. This exposure will affect the pale tones without adding much density to the mid-tones and even less to the shadows. To get significant separation in any tone, one has to use the highest contrast available, normally filter 5. Using a filter 5 setting to print in large areas of a normal contrast negative is not the sort of thing that comes naturally to mind. In practice, the fears of leaving telltale marks can be overcome with a few simple precautions.

Kilfane Waterfall
This simple example shows how a basic Split-Grade print can be enhanced by painting in shadow and mid-tone details with filter 5. Fig. 2 is a straight print of a 35 mm XP2 negative, developed in normal C41 conditions of Kilfane waterfall in Ireland. The combination of weak lighting and the characteristic low-contrast negative requires a hard setting for the basic print.

Here the customary two test strips indicated a combination of 8 seconds with filter 00 and 35 seconds with filter 5, approximately equivalent to a single filter 4 exposure. This combination was chosen to give a hint of detail in the highlights and good depth to the deepest shadow. Obviously, more traditional methods could have been used to make the basic print. Fig. 2 has an overall contrast and exposure setting to capture the information on the negative and map it to the tonal range of the printing paper. Note how the central portion of this straight print lacks conviction and the highlights are weak on the wet rock and splashing water.

In fig. 3, a burn-in exposure through filter 5 was applied to add depth and bite to the wet rocks as well as enhance the details in the water and weed. The extra 1/2-stop exposure was checked with a test strip. A foot switch attached to the enlarger timer allowed both hands to mask the right and left hand sides of the print during the exposure.

Note how the hard setting adds tone to the blacks and mid tones without darkening the critical highlights. Apart from the weak central details, the highlights near the top and sides of the print also draw the eye from the main image.

To suppress these distracting details a soft setting was used to darken the light print tones without blocking the shad-
ows. Four separate graduated exposures were made with filter 00, fanning a piece of wavy card, to progressively mask off each edge of the print.

This waterfall print is a simple example of using an additional hard exposure to add depth to weak shadows, as well as details to light tones. The print only uses filter 00 and filter 5 but it still does not make use of the unique feature of Split-Grade printing, one which is not present with additive, multiple grade exposures techniques on variable contrast paper.

Further Controls
The easiest way to objectively describe the unique feature of Split-Grade printing is to consider the following:

During the main exposure, there are two, not one, opportunities to dodge key areas of the print at different filter settings. This ability to selectively hold back soft and hard exposures gives almost total local contrast control. This level of control is very difficult to achieve on a conventional print with add-on exposures unless you build up a print like a jigsaw puzzle.

Clearly not all prints require this degree of manipulation but it is surprising, once you have this opportunity in one’s armoury, how often it is used. The next step is to evaluate another working print which needs rather more manipulation. Fig. 4 is a straight print of an XP2 negative, taken in Castle Acre priory in Norfolk, England. In this print, there are several select areas of concern. To make the following evaluation easier to follow, it makes sense to consider the shadow, mid-tone and highlight areas in turn.

Enhancing Shadows
When we take a photograph and reproduce it literally, we immediately notice how dense and impenetrable the shadows are, compared with our visual recollection of the scene. This is the difference between the flexibility of our eyes and brain and the limitations photographic material properties. To some extent we can overcome this problem by printing our shadows at a higher effective contrast, either by lowering the overall density of the shadows from the shoulder of the paper characteristic, printing it at higher effective grade setting or both.

In the first case, we run the risk of losing the maximum black and in the second of leaving stark highlight details. As a note of caution, it is wise not to overdo the effect, for by ‘shadows’ we have to assume that the majority of the print tones are dark, with small patches of light. If these patches become too large or dominant, the overall effect will be coarse and clumsy.

The straight print of Castle Acre was made at 14 seconds with filter 00 overlaid by 10 seconds through filter 5, judged to give good gradation in the mid-tones. In this print, the shadowy area of the rafters has only a hint of detail. As the print is made with a combination of ‘hard’ and ‘soft’ exposures, we know that the hard exposure puts in the shadow detail and the soft fills in the empty highlights.

Putting the main advantage of Split-Grade printing to use, in fig. 5 the ‘soft’ exposure is held back in the area of the rafters for most of its exposure time. The effect is to add substance to the roof structure by lifting the lighter tones in that area without upsetting the deep shadow tones.

The effective grade of the rafters is now equivalent to a filter 4 exposure. The rest of the print is still equivalent to filter 2 setting. Manipulation with soft contrast settings is considerably more tolerant of poor technique. In the fig. 5 print, no exact masks were used but even so, the mask was moved a little so no telltale halos would result during the exposure.

Later on, these new details created at the extreme edges of the print, can be toned down with an additional classic soft-grade edge-burn, to prevent the line of the rafters leading the eye out of the picture.


Creating Mid-tone Definition

For many, mid-tones are the key to a picture. If you consider the human face, most of the tones are mid-tones, with just a few nuances of tonal extremes to add interest. We hear various adjectives like ‘muddy’ mid-tones or ‘lacking separation’ to describe lacklustre prints. If we consider fig.4 again, the flagstone floor in the foreground is rather lacking in crisp detail. With the right emphasis, the cracks of the flagstone will lead the eye into the picture.

If we take a look at the floor, the basic exposure has already given a basic mid-tone for the flagstones and so, if we are going to add more detail, we need to lighten the floor during the basic print to avoid these tones getting too dark. In this case, since we wish to make the cracks appear darker than they are in fig.4, yet keep the tones of the stones the same, we lightly dodge the stones during the main soft exposure through filter 00 and then subsequently add the detail with additional exposure with a filter 5 setting to the floor. Since this additional hard exposure has more effect on dark tones than light, it enhances the tonal separation of the flagstones, yet only adds the slightest additional tone to the stones themselves.

The final print is shown in fig.1. In this print, I divided the soft exposure into two. I alternatively shaded the roof and floor with my hands. The rafters were a little overdone before, but it made the point. Then, another 4-seconds (1/2 stop) through filter 5 was added to the flagstones. I used a penny-sized hole in a piece of card as a mask to burn in the area just under the window. Even here, with a high-contrast filter burn-in exposure, no obvious edges can be seen, since the tones most affected by the hard exposure are the cracks and texture of the flagstones. Just to make sure, the card was kept in constant motion, effectively fading the burn-in effect towards the edges of the floor.

Adding Highlight Detail

Last but not least, we consider the lightest areas of the print. In fig.5, the flare behind the windows is just attacking the subtle tree shadows. In fig.1, the glazing bars have better density and detail, put in with some simple burning. In both cases, we require more substance to the precious highlights and to the glazing bars. This is accomplished with either a small additional exposure with filter 2, or if you prefer two equal exposures through filter 00 and 5. Traditionally, one might just have used ‘soft’ to burn in the highlights, but by using a hard setting, it is possible to pep up the glazing bars and add detail to the window frame.

Each window received another 1/4 stop more exposure through filter 00, extending to the window surrounds and a similar amount with filter 5 through a penny sized hole in a piece of card to the flared area. In each case, the masking was crude but by avoiding straight edged masks and by keeping the mask on the move, no telltale marks can be detected in the final print.

The second dodging opportunity mentioned earlier, namely dodging during the hard exposure, preferentially lightens darker tones and reduces tonal separation in light areas. Clearly, it is a useful tool to equalise the shadow densities in a print. Sometimes it is easier to dodge and burn using simple masks rather than make a complex mask for one operation. With a complex mask, the ability to move it about during the exposure is restricted, and it increases the chance of telltale boundaries.

An example of this can be seen in the bottom right corner of fig.1. Here, during the main filter 5 exposure, this small dark area was lightly dodged to lighten the shadow density. Later when burning down the flagstone shadow detail, I could stray across the corner of the fireplace without creating an empty black blob on the print. Selective dodging during the filter 5 exposure could have been used to lighten some areas of the priory walls, without creating distracting highlights.

Practical Considerations

The continual swapping of grades and exposure times can be tiring after a while. An under-lens filter kit and a dual channel timer can ease the situation. In themselves, they do not alter the quality of the final result but go some way to improve the darkroom experience. Some of the programmable models will even remember the separate sequences of exposures for each of the filters. This can be especially convenient when a limited print run is made.

f/stop timing is not obligatory, but as described in the chapter on f/stop printing, it is very useful for judging test prints and keeping a constant ratio of the main exposures and burn-in exposures, especially if the proof is at one size and the print is at another. Here, a single test strip can determine the effective exposure increase for the new enlarger height and the previously derived print map showing the extra exposures in stops is still valid.

With Split-Grade printing, since the basic print is made with two separate exposures, the printer has the opportunity to raise or lower the contrast in select areas of the print by selectively masking the print during the hard and soft contrast exposures. Having made these two exposures, subsequent burning down with the extreme soft and hard grades allows further control over local contrast, with in many cases easier masking conditions.

Split-Grade printing, like many other printing techniques, is a tool to be used selectively when the situation demands. For some, the abolition of contrast settings is a liberating experience but even then, not all prints require the full versatility that Split-Grade printing can offer. With the almost universal adoption of VC papers, many photographers use this technique without even realising it.