

APPLICATION SHEET

POSTER PRINTS

HOW TO MAKE POSTER PRINTS WITH B&W PHOTOGRAPHIC PAPER

Poster prints on photographic paper are made in a similar way to smaller photographic prints but because of their large size, they can be more difficult to handle, so some special techniques and equipment are needed.

SELECTING A NEGATIVE

For your poster print, choose a negative which has been printed before. This first print will help you to work out the exposure and to decide which areas need to be dodged or burnt. Choose a negative that is as perfect as possible: correctly exposed (detail in the shadows), not too contrasty (highlights not too dense), spotlessly clean, and with fine grain to allow a high enlargement factor. Any blemishes in the negative will be magnified on the poster print.

CHOOSING THE PAPER

Any paper can be used, fibre based FB or resin coated RC, but for ease of use, a variable contrast, RC paper is recommended, such as ILFORD MULTIGRADE IV RC DeLuxe. Poster prints usually need a higher contrast than smaller prints, using a variable contrast paper ensures that the appropriate contrast is available to make the poster print. Using water resistant RC papers allows short processing and wash times to be used, and handling the wet paper is much easier.

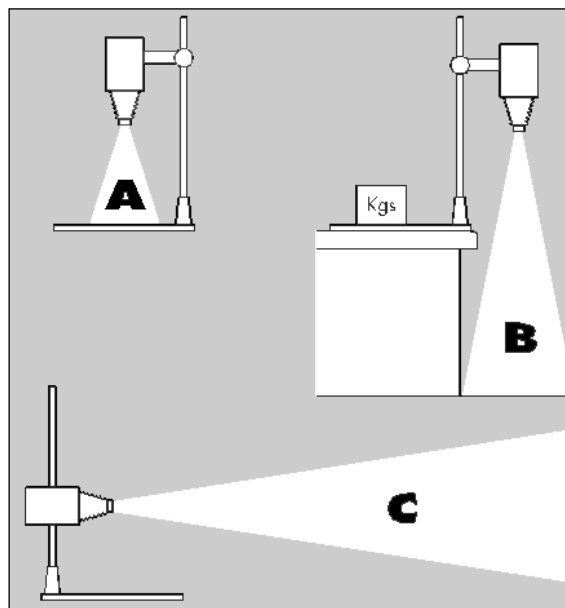
Paper is available in various large cut sheet sizes and long lengths, up to 30m or 50m (98 or 164ft), of wide format rolls in widths up to 142cm (56in).

EXTRA EQUIPMENT

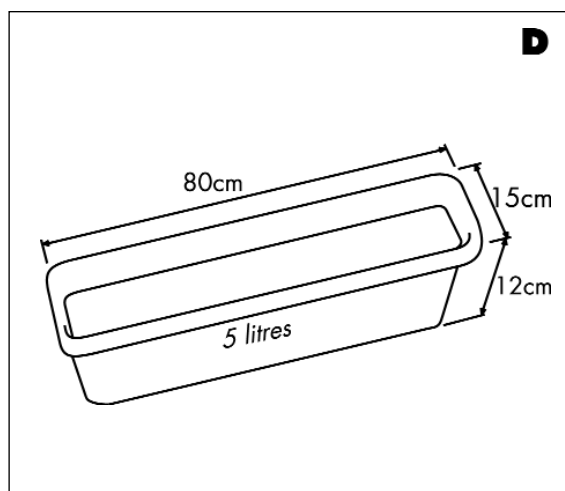
In addition to a normal darkroom set-up, you will need:

- 1 Some means of extending the distance between the negative in the enlarger and the poster paper.

Perhaps the column on your enlarger is tall enough, or you can extend it (see drawing A). Perhaps you can turn the enlarger head around so that it projects onto the floor – this is the easiest method and allows a greater degree of enlargement (see drawing B). Perhaps you can use the enlarger horizontally, projecting the image on a wall or panel (see drawing C).



- 2 Three wallpaper troughs or plant troughs for the processing solutions. Suggested dimensions are 80x15x12cm (32x6x5") with a usable capacity of approximately five litres (1.5 US gallons) (see drawing D). Choose a trough that is long enough to fit the largest poster print you want to process. This is usually determined by the width of the largest roll of paper or cut sheet that you use.



A fourth trough can be used for washing. Alternatively, wash prints in the bath. Plastic gloves, safety glasses and an apron or overall are also needed as you will need to roll and re-roll the poster paper in the processing solutions.

CHECKING YOUR DARKROOM SET-UP

Your usual darkroom will be adequate, provided it is not too cramped for space. A minimum floor area of 2m² (22ft²) is needed for vertical projection. Make sure that the room is completely light-tight.

Safelighting

The safelighting needs to be 100% dependable. Since long exposure times are used (several minutes) instead of an ILFORD 902 light brown safelight, it will be safer to use a dark brown ILFORD 904 or a red ILFORD 906 safelight or to work in complete darkness. A very small amount of stray white light or too much safelighting will fog the paper lowering the contrast of the print giving a grey veil to the highlights.

Enlarger

Ensure the enlarger is correctly adjusted and spotlessly clean.

- 1 Check that the planes of the negative carrier, lens mount, and baseboard/projection panel are all parallel.
- 2 Check that the level of illumination is even across the whole projection surface. Adjust the lamp and condensers if necessary.
- 3 Make absolutely sure that the optical system is totally dust-free (condenser, negative carrier glass, lens).

While these preparations are important for smaller prints, they are absolutely vital when making poster prints as any misalignments or blemishes will be magnified greatly.

Exposure timer

Your exposure timer must be capable of handling times up to about 10 minutes. Alternatively, use a watch or clock with a sweep second hand.

Focus finder

Focusing is critical to get the best results. Ideally, use a focus finder to focus on the grain in the projected image.

Holding the paper flat

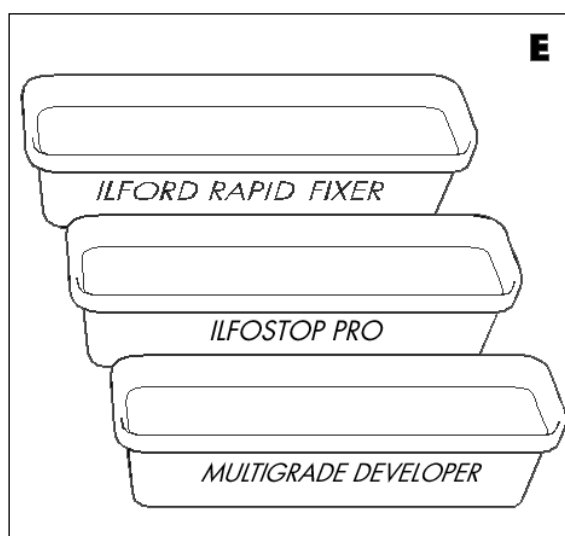
The poster paper needs to be held as flat as possible. When projecting vertically, weights or tape can be used to hold the paper flat. For horizontal projection, use 8 to 10 drawing pins (thumb tacks) and a panel into which they can be easily pushed.

Other useful items

Other useful items include: antistatic cloth, canister of compressed air and soft brush to remove dust particles. On a poster enlargement, a small speck of dust becomes a large blemish. Also useful are: scissors, adhesive tape, and a tape for measuring print dimensions.

GETTING READY FOR PROCESSING

See drawing E. With the long side nearest to you, place the developer trough on the bench. Place the stop bath trough behind it and the fixer trough furthest away. Use the bath for washing, or another trough in conjunction with running water and a syphon system. Some troughs have small drainage holes in the base, and this helps water circulation.



You might like to read through the section 'Processing the poster print' and practise rolling and re-rolling a sheet of ordinary paper in an empty trough before you process your first exposed poster print.

Prepare 5 litres (1.25 US Gallons) of working strength solutions – see the table, or enough to fill your trough to around three quarters full. Make sure you use a generous volume of solution in the troughs, as this will ensure high quality processing.

PROCESSING CHEMICALS

We recommend MULTIGRADE developer, ILFOSTOP PRO stop bath and ILFORD RAPID FIXER for use with MULTIGRADE IV RC Deluxe paper but other chemicals can be used. The following tables give the dilutions.

	Concentrate	Water	Final volume
	ml	ml	ml
MULTIGRADE developer (1+14)	333	4667	5000
ILFOSTOP PRO stop bath (1+19)	250	4750	5000
ILFORD RAPID FIXER (1+4)	1000	4000	5000

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	Concentrate	Water	Final volume
	US fl oz	US fl oz	US fl oz
MULTIGRADE developer (1+14)	11	149	160
ILFOSTOP PRO stop bath (1+19)	8	152	160
ILFORD RAPID FIXER (1+4)	32	128	160

TEST STRIP

Thoroughly clean the negative before placing it in the enlarger.

You will need to make a test strip (about 10x30cm) (4x12") to find out the correct exposure and contrast for the poster print. Position the test strip on the projected image where it will give the most information about the correct exposure. Include important areas of highlights and shadows. You will need a higher contrast for poster enlargements than smaller enlargements.

Expose the test strip in the normal way, bearing in mind that an aperture of f8 is recommended for the final print as it will ensure maximum sharpness across the image. Process the test strip in the same way as the poster print, see the 'Processing summary'.

Proper evaluation of the test strip will greatly enhance the chance of success with the poster print. If you have any doubts, it is better to make a second test strip before going on to the final print. A satisfactory test strip should have a good tonal range between white and black. If the whites are too bright (too much like the paper base), then the exposure has been too short. If the whites are too grey, the exposure has been too long. The easiest way to assess contrast is to examine the blacks on a print whose whites are correctly exposed. If the blacks are too dense and lacking in detail, then contrast is too high. If the blacks are more like greys, contrast is too low.

EXPOSING THE POSTER PRINT

Once the final exposure and contrast has been determined, the poster print can be made. Mark guidelines where you will place the poster paper.

Position the paper against the guidelines. If you are confident the red swing filter on your enlarger is totally safe, you can position the paper using the projected image through the enlarger's red filter.

Some red swing filters are not safe particularly with long exposures. If you are unsure about the performance of your enlarger's red swing filter, test it before you use it.

Hold the paper flat with weights or pins and make the exposure. As an exposure of several minutes is usually needed, switch off the darkroom safelights during the exposure.

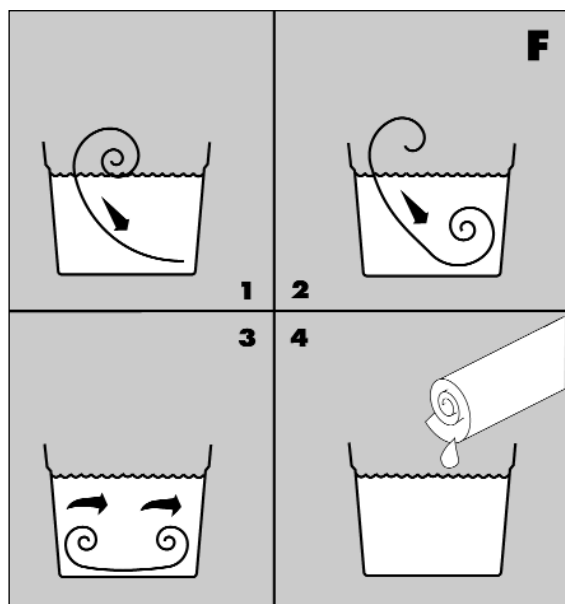
PROCESSING THE POSTER PRINT

Slightly longer processing times than usual are recommended to ensure the poster paper is evenly processed. During processing take care not to contaminate the developer with either stop bath or fixer solution.

Processing summary

Step	ILFORD chemical	°C/°F	Time min
Developer	MULTIGRADE (1+14)	20/68	3
Stop bath	ILFOSTOP PRO (1+19)	18-24/64-75	1
Fixer	ILFORD RAPID FIXER (1+4)	18-24/64-75	3
Washing	Fresh, running water	Above 5/41	5
Drying		About 20/68	30

Roll up the paper with the emulsion on the inside. See drawing F.



- 1 Feed the leading edge of the paper into the developer trough. Start the timer.
- 2 Roll up the paper from the leading edge, while keeping it submerged in the developer. Be careful not to kink the paper.
- 3 Roll up the paper again, this time from the trailing edge, keeping the paper as far as possible under the developer.

Continue rolling up the paper alternately from each end. This ensures that the paper is kept in contact with fresh solution at all times.

- 4 At the end of the development time, shake off any drops of solution and feed the leading edge of the paper into the stop bath trough. Roll and re-roll the paper for 1 minute (rolling it up once or twice in each direction).

- 5 After the stop bath, shake off any drops of solution and feed the leading edge of the paper into the fixer trough. Roll and re-roll the paper for the fixing time. Take as much care over the fixing step as over the development.
- 6 After the fixer bath, shake off any drops of solution and wash the paper in running water (in a trough you should roll and re-roll the paper for the washing time, completely replacing the water once every minute).
- 7 After washing, shake off any drops of water and hang the print up to dry.

RETOUCHING AND MOUNTING

To display your poster print at its best, you might like to retouch any blemishes and mount it. More information about retouching/mounting and displaying prints can be found in the fact sheets 'Processing B&W resin coated papers' and 'Processing B&W fibre based papers'.

TWO BATH FIXING

If space is available for a fourth processing trough two bath fixing is recommended particularly if FB paper is being processed.

Two-bath fixing at 18-24°C/64-75°F

ILFORD RAPID FIXER 1+4	Dilution	Fixing time (min)	
		Bath 1	Bath 2
RC Paper	1 ¹ / ₂	1 ¹ / ₂	
FB Paper	2	2	

More information about two bath fixing can be found in the fact sheets 'Processing B&W resin coated papers' and 'Processing B&W fibre based papers'.

A wide range of fact sheets is available which describe and give guidance on using ILFORD products. Some products in this fact sheet might not be available in your country.