



HINTS TO TONING

INTRODUCTION

Fotospeed toners have been specifically designed for the toning of black and white silver based emulsions. This applies to both film and paper. The toning process involves the conversion of the black silver within the print to another metallic compound. When correctly toned, the image will be chemically stable. Toners such as Selenium and Gold are ideal for archival permanence techniques.

Toning techniques are carried out after the print has been fully fixed and washed and are therefore performed under normal daylight conditions. If, as in the case of an old print, you have any doubts as to whether it has been fully fixed and fully washed, then refix and rewash before proceeding. Toning is very much in the creative domain of the user. When toning it is important to observe the shift of colour in the print. Times given in the instructions should therefore be used as a guide only.

Fotospeed toners are available as liquids and fall into two categories. Two bath working solutions i.e. ST20 Vario Sepia Toner, ST10 Non vario Sepia Toner and single working solution toners i.e. PALETTE Toner, 20 Blue Toner, RT20 Copper/Red Toner, SLT20 Selenium Toner and AU20 Gold Toner. In the case of the two bath toners the print is bleached first and after a short rinse, toned in the second bath. The print can be bleached for as little or as long as the user requires. Full bleaching of the print, i.e., when the whole image has virtually disappeared, will allow the pure colour of the toner to be reproduced in full. Partial bleaching of the print will leave black silver in the image and therefore give the final tone a darker colour due to the underlying silver still in the print. In the case of single working solution toners the bleaching and toning processes are simultaneous. To arrest the toning process the print is removed from the toner and washed. As with all these techniques it is the user's personal preference which is paramount. After any toning process only good washing is required, there is no requirement for fixation.

CHOICE OF PAPER

Fotospeed toners are suitable for all silver based emulsions. There are many types and makes of photographic paper available and all are suitable for toning provided there is silver in the print. (It should be noted that some Black and White Prints produced commercially in colour laboratories will have used a special B&W paper that goes through the RA4 colour process. These prints will be silverless after processing and therefore will not be able to be toned. Watch out!) Each paper will have its own inherent characteristics according to how they have been manufactured. As a result each paper will produce a slightly different shade, depth and quality of tone.

Resin coated variable contrast papers are the most popular and readily available. The plastic coating makes them easy to handle and they will require minimal (2 minutes) washing times. The lightweight emulsion coating and plastic coating means that they may require longer toning times and will produce less tonal vibrance than fibre based papers.

Fibre based papers absorb toners well and produce rich hues. They require less toning time but infinitely more washing and more careful handling than resin papers.

Graded papers will vary according to the grade. The higher the grade the stronger the tone.

Variable Contrast Papers have a complex structure of emulsions for the toner to penetrate and will require greater toning times.

The higher the silver content within the paper the better the quality of the toned image.

Which ever paper is used, it is important that all prints are well fixed and washed before toning. Handle prints carefully as any mark or blemish in the print will be exaggerated in the toning process. This is particularly important when using blue toner.

IMAGE DENSITY

Sepia Toner ST20 and ST10 Sepia Toner should return the image to the density of the original print. Therefore no additional print density is required. Where very fine detail in the highlights does not return it is most likely due to the solution being too cold.

• Blue Toner BT20, particularly when used to obtain a dark blue, can add density to the image. If a final toned image of "normal" density is required, the image of the original print for toning should be sufficiently lighter to compensate for the gain in density during the toning process.

• Conversely, the Copper/Red Toner RT20 has a reducing effect on the image density during toning. The image prior to toning should be sufficiently darker to compensate.

• Selenium Toner SLT20, being a true selenium toner, will add contrast to the image. The final effect will show a crisping of the black areas and an increase in contrast of approximately half a grade.

• Gold Toner AU20 should be treated as per Sepia Toner.

SPLIT TONING

Options for toning are not limited to just the use of one toner per print. Split toning is a technique whereby toners of different colours are used sequentially to allow more than one colour to react with the image and create a blend of colour. The technique requires the reduction of time in the first toner (in the case of sepia then a reduction of time in the bleach), leaving sufficient untoned silver for a reaction with the subsequent toner. Choose a subject with good tonal range. Split toning is not an exact science. Results can be a little unpredictable but as a general rule, the highlights will take the colour of the first toner, the shadows the colour of the last toner and the mid tones in the area of the "cross over" a mixture of each. Extending the time in the first toner will push the "cross over" further towards the shadows with more of the first tone appearing in the highlights and mid range and visa versa. Always wash the print well when transferring from one solution to the next.

SPLIT TONING SUGGESTIONS

Follow the instructions for using the toners but reduce the time in the first solutions to 25% of that required for a "normal" toned print. Wash the print well prior to immersing in the second toner. Leave in the second toner until the required effect is seen then remove and wash.

- Sepia then blue produces sepia highlights with blue shadows and green mid range.
- Copper then blue produces mauve, mauve blues and blues.
- Sepia then Selenium produces brown purples.
- Selenium then Gold produces purpley blue mid tones.
- Blue then Selenium produces blue shadows and buff highlights.



GENERAL HINTS

Make up sufficient solution to allow the print to be fully immersed in the toning solutions. If there is insufficient solution toning will be uneven. Continuous agitation will keep the solutions moving across the surface of the print and prevent localised exhaustion of the toner. Once toner concentrates have been mixed they will begin to oxidise in the open dish. The greater surface area exposed to the air the more rapid the oxidation will be. Concentrates will keep in tightly capped bottles so it is better to make up smaller quantities of working solutions as required.

Toning often produces a 'scum' on the surface of the print which is not noticed until the print has been dried. To ensure that scum does not appear on the dried print it is advisable to rub the surface of the print during the final wash with either wet cotton wool, kitchen towel or a J cloth making sure that the print is on a flat surface during rubbing. Return the print to the wash before drying.

Contamination of solutions can cause disappointing results. Always take meticulous care when toning and ensure that all equipment is clean before use. Chemical residues in dishes can contaminate solutions and produce inconsistent results. Rinse prints in a water bath when moving from one solution to the next unless otherwise stated as this will help to prevent cross contamination and improve the life of the toner. Follow the mixing instructions carefully.

Always follow the health and safety guide lines with each kit. Wear impervious gloves and/or use tongs when handling prints in the solutions. Work in a well ventilated room.

Fotospeed PALETTE TONER is a new multi toner kit with three colours - Yellow, Blue & Red enabling a range of colours and hues to be achieved through the split toning process. Each colour is a single solution with an activator liquid being added to the toner to start toning. Palette toner offers a huge range of colours that are totally different to the traditional toners shown here.

Fotospeed ST20 SEPIA TONER is an odourless variable toner that will produce a wide range of sepia tones. ST20 is a two bath sepia toner supplied as a three part

concentrate. Part 1 is the bleach which dilutes with water to form a working solution. Part 2 is the toner which dilutes with water to make the toner working solution. Part 3 is the additive which gives the toner solution the shade of sepia. This concentrate is added directly into the toner working solution. The quantity of part 3 added to the toner solution will vary the sepia colour from yellow sepia through to dark chocolate sepia. If too much part 3 is added to the part 2 working solution the sepia hue will be so dark brown that the print will have the appearance of a black and white print. For full information on this toner see the relevant section of this booklet.

BLEACHING

ST20 bleaching solution will slowly remove the image from the print. The solution will begin bleaching the highlight areas first and then move into the shadow areas until the image has been almost, though not completely removed. Where the image has been bleached the toner will redevelop the image in the chosen shade of sepia. Bleaching can be stopped at any time by removing the print and rinsing in water. The amount of bleaching the image receives will alter the final effect of the toned print. The more the image is bleached the purer the hue of sepia will be. The less time the print is bleached the more black silver will remain in the image and therefore the sepia will have a more black hue. Fotospeed bleaching solution has been designed to act slowly so that the bleaching times can be carefully controlled. If you require more rapid bleaching, add less water when diluting.

TONING

The part 2 toning solution once diluted to working strength will need to be activated by a small amount of the additive. To achieve a yellow sepia only small quantities of part 3 should be added. The more part 3 added the darker the sepia shade.

Fotospeed BT20 BLUE TONER is an odourless single bath toner which is supplied in three concentrates. These concentrates are mixed with water and then combined in the dish to make a single working solution. A variety of blue tones can be achieved by varying the suggested dilutions of the concentrate and by varying the length of time the print is left in the solution. Full toning will occur after about 10 minutes depending on the density of the print. Once full toning has taken place remove the print from the solution and rinse in water.

A blue toned print can be further enhanced by intensifying or reducing the blue tone using working solutions of Fotospeed PD5 Print Developer and Fotospeed FX20 Fixer. Instructions for these techniques are given in the relevant section.

Blue toned prints will have an overall yellow stain on removal from the toner which is particularly apparent in the white areas of the print. This stain will disappear with washing. Any stubborn stains related to blue toning that do not wash out in the running water can be removed by either passing the print quickly through a weak salt solution (approximately 1 tablespoon diluted in half a litre of water) or wiping a swab of cotton wool soaked in print developer across the effected areas. Always rinse the print thoroughly and allow to dry naturally.

If any residual scum remains on the print after washing, this can be removed by rubbing the print with a piece of cotton wool containing 80% solution of acetic acid. Give the print a quick rinse and allow to dry naturally. Good washing cannot be overstressed with blue toner. Ideally tone past the point you want to be and wash the print back. Prolonged washing will regenerate the blue tone to black and white which can be very effective for getting a really clean, crisp blue tone.

Fotospeed RT20 COPPER/RED TONER is an odourless single bath toner which is supplied in two concentrates. The concentrates are diluted with water and combined in the dish to make a single working solution. The shade and depth of copper/red tone can be varied by the altering the suggested dilutions of the concentrates and by the length of time the print is left in the working solution. Full toning will take approximately 10 minutes. Once toning has been completed the bleach elements in the solution will continue to attack the image but no further change of colour will take place and the image will gradually reduce in density.

The copper /red toned print can be further enhanced by intensifying or reducing the colour using working solutions of Fotospeed PD5 Print Developer and Fotospeed FX20 Fixer. If a copper/red toned print is placed after washing into sepia toner (no need to bleach first) a reddish sepia tone will result.

A Copper toned print once toned and washed can be placed in a working solution of Fotospeed PD5 Print Developer as redevelopment occurs remove the print and wash briefly then place into the copper toner solution. This procedure can be repeated several times. With each process the image will become more solarised and the original shadow areas will take on a metallic look.

Fotospeed ST20 SEPIA TONER BLEACH can also add a further dimension to a copper toned print. A copper toned print after being washed can be passed through ST20 sepia bleach for 30 seconds or so and then washed. This process will shift the copper red tone to a brighter red and generally brighten the print. It is important to realise that when copper toning, a deposit is left on the surface of the print and prints should be rubbed with a wad of cotton wool when they first go into the wash to remove this deposit.

Using the same method but instead of ST20 Sepia bleach a working solution of Fotospeed FX20 Fixer, will give the shadow areas a blue cast and move the copper tones to a pinky hue.

When manipulating an image with these solutions, always wash the print between each bath.

Copper Red toner will exhaust quickly, so it is advisable to make up small quantities of working solution and replace with freshly mixed concentrates as needed.

Fotospeed SLT20 SELENIUM TONER is a single concentrate diluted to make a single working solution. Selenium toner smells strongly of ammonia and should therefore be used in a very well ventilated area. Once the smell of ammonia can no longer be detected then the Selenium has become exhausted. The warm purple hue associated with selenium will depend on concentration and the type of paper being used. With some of the RCVC papers, the selenium effect can sometimes be so subtle that only when compared to the original print can a shift in colour be noticed, however the increased contrast and crisping of the black areas, and the archival permanence effect will take place.

The type and brand of paper used when producing selenium toned prints is more crucial than with any other toner. The depth of colour can be very slight in some cases. Resin papers are the most stubborn to react to selenium and will give the most subtle of changes.

Split toning techniques often use Selenium toner as the subtle tone mixes well with the stronger tones of Copper/Red, Blue and Sepia.

When used for archival permanence techniques Selenium toner should be diluted at 1+39 with water. The print should be left in the solution for approximately 10 minutes and there will be no appreciable shift in colour.

Fotospeed AU20 GOLD TONER is so called because of the presence of gold chloride in the solution. Gold toner will create peachy red tones on prints which have already been sepia toned, or steely blue shades on fibre prints that have not been toned. Gold toner will not produce gold coloured prints. To create the peach tones, sepia tone the print in the normal way, making sure fully wash the print at the end of the process. Then place into gold toner. Staring with the highlight areas the image will slowly turn a rich peachy red.

Untoned B&W fibre prints placed into the gold toner will take on a cold steely blue the black areas.

Gold toner also used for archival permanence techniques. It is supplied as a working solution. It should not be diluted. Gold toner should be rebottled and used again. It is most important that prints placed into Gold Toner have been very well washed prior to immersion since contamination will reduce its longevity.

Fotospeed AD10 ANTIQUE DYE is used after sepia toning to give prints that old fashioned nicotine stain in the borders. It can be diluted to alter the shade of yellow required. Once the print has been passed through the solution it should not be washed but wiped and allowed to dry.

MASKING AND TONING

Fotospeed MK50 FOTOMASK is a bright red liquid plastic which is used to protect the applied areas from subsequent dyeing, toning, beaching, etc. It has been designed specially for photographic emulsions and so will not leave any surface mark on the print. It is easy to use and once applied dries quickly to form an impervious seal. To remove Fotomask lift the edge with a piece of adhesive tape and it will peel away. Fotomask can be applied to areas of a print so that two or more toners can be used to give an image a duo tone effect.

Fotospeed DY15 FOTODYES

Hand tinting with fodydyes can add just a hint of colour to an image. Fotospeed fodydyes are supplied in a kit of 11 colours and one reducer. Also the dyes will not leave any surface mark on the print, even on glossy paper.

Palette toner is the exciting new toning kit from Fotospeed. Using traditional

INSTRUCTION SHEETS

PALETTE Multi Colour Toning Kit

toning techniques you can create a rainbow of colours and hues. Within the kit there are four toners - Vanadium Yellow, Titanium Yellow, Red and Blue. These toners will produce their own natural colour plus, by using split toning techniques the tones will combine to produce a vast range of hues. For example yellow and blue makes green. Yellow toning first then blue toning creates a yellow green tone. However Blue toning first then yellow toning will create a vibrant solid green. Toning times will vary the depth and strength of the colour and washing between each toning bath is important to extend the life of the toner and to prevent cross contamination.

THE KIT

In the kit are six bottles, Vanadium Yellow Toner, Titanium Yellow Toner, Red Toner, Blue Toner, Activator and Intensifier.

MIXING INSTRUCTIONS

Each of the four toners dilute 1+9 with water to make the required volume of working solution. Each of these toners are single solution toners where bleaching and toning occurs simultaneously. There is no need to bleach the print first. Activator needs to be added to the toner before it will work. The amount of Activator needed is one quarter of the volume of the toner concentrate used i.e. To make 1Ltr of toner working solution take 100mls of toner concentrate and mix with 900mls of water this makes a 1Ltr of working solution. Now add to the 1Ltr of working solution 25mls of undiluted Activator. The toner is now ready to use. To increase the intensity of the toner you can add Intensifier to the activated working solution at the same rate as the Activator. When making the working solution (1 Ltr) of blue toner add 25mls of intensifier to the solution. You do not have to add the Intensifier but it does produce the most wonderful blue. Once intensifier has been added it cannot be removed and the solution will be permanently intensified.

Intensifier is only used with the Blue and Red toners. The yellow toners cannot be intensified.

MIXING TABLE - For use with all four Toners: *Intensifier is optional and is only added to the Red and Blue toners.

With the Activator and Intensifier, you can round down the volumes i.e. 6.25ml make 6ml, 12.5ml make 12ml and 62.5ml make 60ml. This will not effect the performance of the toner.

Additional Requirements

MIXING TABLE	To Make:	250ml 0.25Ltr	500ml 0.5Ltr	1000ml 1Ltr	2000ml 2Ltr	2500ml 2.5Ltr
Water		225ml	450ml	900ml	1800ml	2250ml
Toner Concentrate		25ml	50ml	100ml	200ml	250ml
Activator		6.25ml	12.5ml	25ml	50ml	62.5ml
*Intensifier		6.25ml	12.5ml	25ml	50ml	62.5ml

You will also need a saline solution. This is easily made by adding one tablespoon of table salt to 500ml of water. Accuracy in this mixture is not essential however you will need to keep changing the saline solution to keep it fresh. It is also useful to have a solution of Hypo 20% for refixing. Hypo crystals (sodium Thiosulphate) are widely available and Fotospeed do supply many raw chemicals including Hypo. 500gms will make 2.5Ltrs of a 20% solution, and costs £5.00 incl VAT /postage and packing.

USAGE

Titanium Yellow:

Produces an orange/yellow tone which changes to a yellow/brown in the shadows. This toner also has a reducing effect on the print density (particularly noticeable in the highlights) and it is therefore advisable to over print by as much as a 1/2 stop for this toner. Place the print to be toned into the toner and agitate gently until the required effect is achieved. Rinse the print for 30secs and place it into a salt bath to help clear the highlights. Wash fully after the salt bath - 2 mins for RC; 10 mins for FB. Then dry the print.

Vanadium Yellow:

Produces a bright yellow tone which only becomes noticeable when the print has been in the wash for a minute. Place the print into the toner and agitate gently until the desired effect achieved. Rinse the print for 30secs and place it into a salt bath to help clear the highlights. Wash fully after the salt bath - 2 mins for RC; 10 mins for FB. Then dry the print.

Colour Solarisation can be produced with Vanadium Yellow Toner. Vanadium seals the gelatin surface. Therefore in the toned areas no dye can be absorbed. If a contrasting darker Fotodye is applied, only the highlights and white areas will take up the colour, the shadow areas will remain yellow a colour solarisation is achieved. To produce this effect immerse the toned print into a chosen dye bath, remove and allow to dry. After drying wipe the print (on both sides) with paper towel to remove any surface dye from the print. Always wear gloves when handling chemicals particularly when using dyes as they will stain. Try Fotospeed's new Finger Cotts (in effect finger condoms) which just cover the fingers - available in packs of 100 finger cotts for £5.95 incl VAT and p&ap.

Red:

This toner produces a cherry-red tone which penetrates deep into the shadow areas the longer you leave the print in the toner. Place the print into the toner and agitate gently until the desired effect is achieved. Rinse the print for 30 secs and then immerse the print into a 20% Hypo solution for 1min. to clear the highlights then fully wash the print - 2 mins for RC; 10 mins for FB. While the print is in the wash rub the surface of the print with wet paper towel or a "J" Cloth to remove any scum. then allow to complete washing. Dry the print.

You can use intensifier with this toner to boost the colour. It is not essential as the toner will produce a beautiful red tone without. The addition of intensifier will boost the colour by some 40% making it more vibrant.

Should you find crystals in the concentrate of the red toner do not worry. They have no adverse effect on performance. The crystals may be left in the solution or filtered, if desired and disposed to waste.

Blue:

This toner produces an iron blue tone. Immerse the print into the toner and agitate gently until the effect you want is achieved. Remove from the toner and rinse for 30secs before placing into a salt solution for 1 min to help clear the highlights. Return the print to the wash - 2 mins for RC and 10 mins for FB. The longer you wash a blue toned print the more of the blue will be regenerated back to B&W. It is therefore advisable to over-blue tone a print and then allow to wash back. When washing is complete allow the print to dry.

Intensifying a blue toned print will produce a superb blue tone and will add some 40% to the hue of the blue.

MIXING THE COLOURS - SPLIT TONING

Split toning with Palette opens whole new world to toning. It is impossible to write down all the options open to you - there are too many. So, if you are thinking what happens if.... the answer is try it. But remember the following important information: Always wash/rinse between stages. You can also use the Salt and Hypo to manipulate the image tone. No harm is done to try either but keep notes on what you do! Before you "get creative" here are a few suggestions.

Titanium Yellow and Blue: Greens

- First into the Yellow, wash and then into the Blue.
 - First into the Blue, wash and then into the Yellow
- Differing the times in each gives a different result. You have to try it to find out.

Red and Blue:

First into the Red, wash and then into the Blue gives red highlights and blue shadows.

Mixing Vanadium Yellow and Titanium Yellow working solutions:

Take 1 part of each of the yellow working solutions and mix together. This will give a bright sunshine yellow. Take 1 part of Vanadium and 2 parts of Titanium working solutions and mix together. This will give a bright slightly orange yellow.

NEVER MIX CONCENTRATES TOGETHER

KEEPING PROPERTIES

The concentrates will keep for months once opened. The working solutions keep as follows: Titanium Yellow & Vanadium Yellow - Can be rebottled and will keep for 3 to 4 weeks. Red - Can be rebottled and will keep for 2 to 3 weeks. A sediment will form. Ignore it or filter it. It will have no effect on the efficiency of the toner. Blue - Will not keep for further use. Therefore only make up the working solution required.

