Argyrotype with **Fotospeed**

Instructions

What exactly is Argyrotype?

Using sunlight (or an alternative UV light source), Argyrotype produces an image made up primarily of brown tones. A number of colour casts, however, can be produced using the Argyrotype technique.

An Argyrotype print is created by coating a sheet of Acid Free Art Paper with the sensitiser, then exposing the sheet to sunlight/UV. Finally, the image is "developed" in running water until the unexposed sensitiser stops washing off (5 mins), and then fixed in a hypo (sodium thiosulphate) solution for 3 minutes, and finally washed in running water for 20 minutes then dried.

Additional Items needed:

- *Coating tool* – This is an instrument used to apply the sensitizer to your paper. Almost anything may be used, and following are a few practical suggestions: glass coating rods (included), a paintbrush, a rubber roller, a *clean* jay cloth, or *synthetic* cotton wool (this falls apart less easily than its natural version).
- *A glass covered printing out frame*, ***or*** a board plus a *clean* sheet of glass, either of which should be larger than your intended image.
- *An oversized negative* – being a contact printing process, the argyrotype requires negatives of precisely the same size as the intended final image, so before beginning the process it is necessary that a large negative be created. Methods of producing large negatives are described below.

Before you begin:

Choosing Your Paper

The paper used in this kit is Fabriano 5, however there are many other suitable papers available. When choosing a paper ensure that it is **acid free** and of sufficient weight to allow it to retain it's shape during the processing cycle.You should select a paper of a weight between 120 and 300gsm. Light papers clear and wash rapidly, but may be fragile when handled wet; heavy papers are stronger but slower to wash. If you wish to use a smooth surfaced paper, choose hot pressed (HP); if you prefer textured paper, remember that rough surfaces can result in reduced definition.

Choosing your Negative

The negative should supply a good tonal range and adequate contrast. If you intend to produce a full tonal range in your print, ensure that the chosen negative contains rich detail as well as a very long density range. The contrast level produced by the argyrotype process is similar to that achieved when using a Grade 0 paper.
Your negative image must be the full size of your intended Argyrotype print, and oversized negatives are commonly produced in one of two ways:

The Digital Way

i) Scan your chosen negative into a computer using a negative scanner. Enlarge the negative image, then print this at the desired size onto Permajet OHP film. If a positive image has been scanned, this must be changed into the negative form prior to printing. This computer aided method is the quickest and simplest way of producing an oversized contact negative.

The Darkroom Way

ii) Using an enlarger, expose your 35mm negative onto **lith film** at the desired size, then develop the film using *normal print developer* for 1 min. Fix and wash in the normal manner. You now have a lith positive

iii) Contact print this lith image onto another sheet of lith film, to produce its *negative form*, and develop this sheet, again using *normal paper developer.*

iv) You can use a colour slide for the exposure which will give you a negative lith contact sheet thus cutting out the need to make another contact!

Choosing your coating method

Traditionally, glass rods are used to coat Argyrotype solution onto paper. Coating by the rod method will require approximately 1.75cc of sensitizer per 8x10 image. Use the syringe provided draw a line of sensitizer along the centre of the paper. Next, holding the glass rod by each end, spread the solution across the page by gently wiping the long base of the rod across the sheet.

Alternatively, the sensitizer can be brushed onto paper. This gives an artistic edge to the image but will consume more sensitizer. Cotton wool, a cloth, or a rubber roller will also give different coating surfaces.

Producing an Argyrotype Print:

Under tungsten lighting:

1) Apply sensitiser to your sheet of paper, using your preferred method. Ensure that the paper is coated evenly as uneven surface treatment will be evident in the dried print.
2) Leave the sensitizer to completely dry onto the sheet. If desire (and after drying) a second coating of sensitizer may be applied to the paper. Ideally, expose within the hour, although coated, unexposed paper will remain effective for about one week.
3) Photogenic drawings or Images from negatives may be produced.

A photogenic drawing does not require the use of a camera or negative. It is the image created by an object placed directly onto photosensitive paper, then exposed to a light source. Flowers, for example, may be printed in this way. A photogenic drawing of a flower will capture the delicacy and slight transparency of its petals as well as recording its thicker, more opaque leaf forms.

Cyanotype images produced from negatives require the negative to be the exact size of the intended final image. The transformation of 35mm negatives into this larger format is detailed above.

   a) To create a photogenic drawing of an object such as a leaf or blossom, place the object in contact with the sensitized side of the paper in either a printing frame or beneath a sheet of glass, then expose the paper to the sun or a UV light.
   b) To produce an image using an oversized negative, place your paper sensitised-side up, and lay your negative on top of this, emulsion side facing *up*. Lay a sheet of glass on top of the two to flatten the object against the paper, and expose.

4) Exposure time varies, but about 9min under normal sunlight conditions is usually adequate. When the paper has been sufficiently exposed the highlights should appear white and the shadow tones will be brown. The shadow tones will darken during the development period. When you feel that the image has been adequately exposed, remove it from the light source.

The following three steps are necessary for the processing of the print. It should be noted, however, that prolonging any of these actions will, in effect, begin to 'wash out' the image.

5) Place the exposed paper into a running water bath for 5 min. This removes any sensitiser solution that has not become hardened during exposure, and brings out the midtones of the image
6) Dissolve 70gm of Hypo Fixing crystals into 1Ltr of water. Remove your print from the wash and soak it in the Hypo fixing solution for 3min, *agitating constantly*. Typically, 1ltr of Hypo solution will fix ten 8x10"prints.
7) Wash the print in running water for 20min to remove all traces of Hypo. Do not make any assessment until the image is dry. Being a silver based sensitiser, should the image be too dark, you can use a very dilute sepia bleach to pull the density back.
8) Allow print to dry

You have now produced an authentic Argyrotype print!

Problems and Solutions:

Problem	Solution
Print looks uneven – 'darkest' shadows are lighter in some areas than in others	• Coat your paper methodically and *evenly* with the sensitiser. We have found that the most even coating is achieved by double coating using a flattened out jay cloth covered with the solution, drying the sheet between the two layers. • Ensure that the solution is completely dry prior to exposure. Humidified paper will produce a darker image.
Image is too mid brown and you would prefer darker brown tones	• This is a normal effect of the argyrotype process. To darken tones, humidify the paper just prior to exposure, and / or heat dry the finished image.
Print appears dirty and stained	• Ensure adequate rinsing after exposure (5min) as well as after soaking in the fixing bath (post rinse: 30min).
Areas of the image are very dark in colour	• The paper was most likely humid during exposure. This effect can be deliberately produced by humidifying the sheet prior to exposure, and if it is unwanted the paper must be completely dry during the exposure period.
Dark, muddy flecks on final print	• Hypo or water has been touched onto the print just prior to exposure.

Argyrotype: *in Brief*

It is important that you read all enclosed instructions carefully during your first few attempts at creating a Argyrotype image. However, those who have developed an understanding of the cyanotype process and prefer to refer to a concise, reduced set of instructions, the list below may be helpful.

1. **Coat paper** with sensitizer
2. **Expose**
3. **Wash** – 5min (in running water)
4. **Bathe print in Hypo solution**, agitating constantly – 3min
5. **Wash** – 30min (in running water)
6. Leave print to **dry**

Argyrotype: *Tips*

- To Control the Colour:
  a) *Heat dry the image* – Argyrotype images 'dry down' by about one zone. Heat drying by ironing or using an air heater to change the colour to a neutral blackish-brown, darkening the print
  b) *Humidify the paper* – to obtain a purplish-grey colour, leave the paper above water in a closed container for about 30min just prior to exposure. When exposing humidified paper place a protective film of thin polyester between the negative and the humidified sheet.
  c) *Tone the finished image* – tone as usual with sepia, blue, or copper/red toner.
- To improve the permanence of your image, tone with selenium toner.

FOTOSPEED: Jay House Ltd, Unit 6b, Park Lane Industrial Estate, Corsham, WILTS SN13 9LG, UK
Tel: +44 (0)1249 714555 Fax: +44 (0)1249 714999
E-mail: sales@fotospeed.com Web Site: www.fotospeed.com