

## Instructions for Tetra-Cam Solargraph Camera

The 'Tetra-Cam' solargraph pinhole camera can take a photograph of the sun travelling across the sky or rising or setting along the skyline.

The focal length can vary depending upon how 'high' the camera is trimmed. The greater the pinhole to photo paper distance, the more telephoto (and less the angle of view) the image.

Due to a pinhole cameras unlimited depth of field the image will remain in focus.

The camera is best used pointing towards sunrise, sunset or pointing straight upwards.

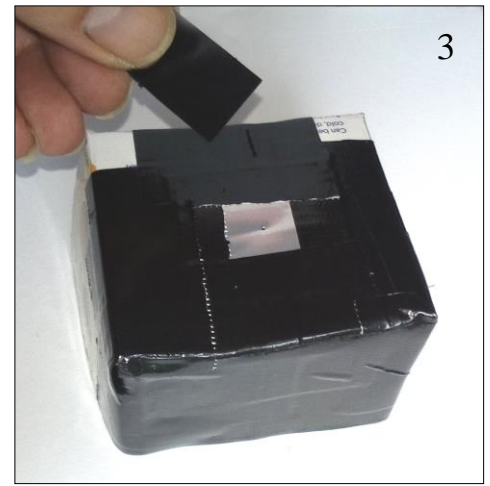
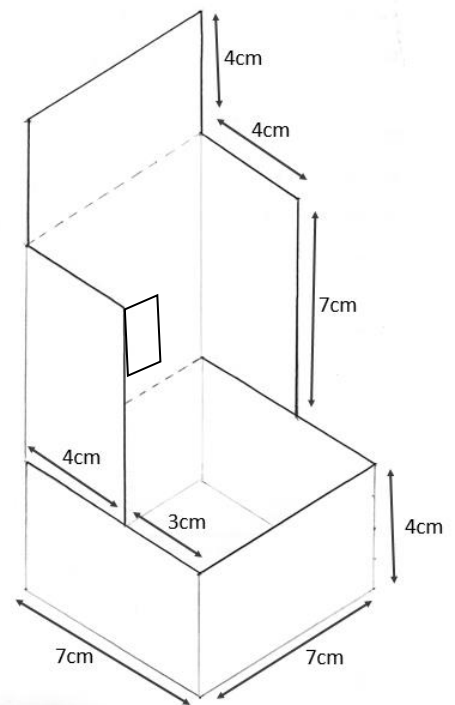
### Materials. You will need:

- An empty 1L washed out tetra brick carton.
- $\frac{1}{4}$  of a sheet of 5x7 inch light sensitive photographic paper ( $2\frac{1}{2} \times 3\frac{1}{2}$ ) (buy some [here](#))
- A pair of scissors
- A dressmaking pin.
- Black gaffer and insulation tape.
- A square of aluminium cut from a drink can
- Some thin black paper

To 'process' the final image you will need a flatbed scanner (found in some printers) or you can photograph your negative on a mobile phone or digital camera and invert the image using imaging software.

### Construction.

- Wash out your Tetra Brick container
- Measure and cut out the carton as shown. You could increase or decrease the measurement of 4cm to make a more or less telephoto image
- Cut a small 1cm aperture out of the centre of the 'lid' (1)
- Tape a small (2mm) size pinhole made in a piece of aluminium can over this hole. (2)
- Put a tape shutter over the pinhole (3)
- Stick some thin black paper on the inside of the camera to reduce internal reflections.



### **Loading the light sensitive photographic paper\*.**

In a curtained room or artificial light, take your photographic paper out of the packet As long as there is no sunlight you have a minute until the paper begins to fog. Divide into 4 pieces of 6.3 x 8.7 cm

- In subdued light tape the photographic paper into the bottom of the camera. It's fine if the paper curls a bit, the slightly shiny side is the emulsion side
- Close the box and add extra tape wherever light may get through.

### **Installing your camera.**

Find a position in your garden, window ledge etc. where the pinhole can point towards the sunrise, sunset or vertically upwards.

Tape the camera to a surface if windy.

To start the exposure peel the insulation tape off the pinhole and leave exposing towards the sun for a few hours before replacing the insulation tape shutter over the pinhole and take the camera in for 'processing'.

### **Recovering the image.**

You do not use any chemicals to recover the image. Over a period of time the image appears on the paper in a similar way to it getting a sun tan. The image that appears must then be scanned into a computer using a flatbed scanner or you can photograph your image on a mobile phone or camera. This negative image is then inverted into positive using digital imaging software. After which you can play with contrast – levels etc. Store your paper negative in a light tight box.

- Close the curtains in your computer room
- Set the scanner on a high resolution (500dpi is good) and set on 'colour' scan
- Take the photo paper out of Tetra-cam.
- Place it onto the scanner then press scan
- Save the negative image on your computer
- Open up Photoshop / photo manipulation software
- Image > Inverse > Flip horizontal and play around with: contrast, brightness and levels.
- File > save

For further information and video see: <https://www.realphotographycompany.co.uk/solargraphy>

\*Light sensitive photographic paper is not the photographic paper used in ink jet printers.

[realphotographycompany@gmail.com](mailto:realphotographycompany@gmail.com)  
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