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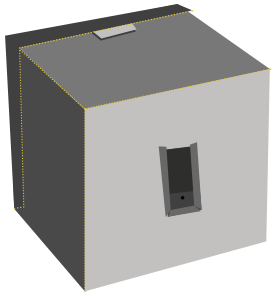

LYSC Retro Technologies Workshop:

Building and using the pinhole camera

This sheet accompanies the short film (link) which illustrates the construction of one type of pinhole camera however you may well want to experiment with other designs once you have got started.

Essentially a pinhole camera consists of the following features:

- A light tight box with a black, non reflective interior
- A pinhole at the front of the camera, this is best made in thin metal sheet
- A shutter so that the pinhole can be uncovered for a set amount of time
- A simple way of introducing a sheet of photographic paper into the camera (this needs to be done in darkness so should not be too fiddly)

We have provided template sheets for you to stick to stiff black card (or card painted black on the inside of the camera) before cutting out and scoring lines to make the folding easier.

The three parts you need to cut and construct from card are:

- The camera body with a small hole at the front to accommodate the pinhole sheet
- The camera back which can be opened to get the paper film in and out
- The shutter mechanism so that you can cover and uncover the pinhole

Each piece needs to be cut out carefully with folds and tabs being scored. Use a good quality glue for paper and card and if you need to tape over the joins with black tape.

Now make the pinhole:

Carefully cut a 3 or 4cm square from the side of an aluminium can taking care with sharp edges which can be smoothed with emery paper.

Now rub down both sides of the square to get rid of any paint or coatings and get a nice thin section of aluminium in the centre where the pinhole will be made.

You can use a larger dressmakers pin to make a hole around 1mm but we prefer a smaller hole made with a number 10 to number 16 beading needle that has been stuck into a cork. Basically the pros and cons are as follows:

Large pinhole: shorter exposure times, less sharp image
Smaller pinhole: longer exposure times, sharper image

Either way you want a smooth, circular hole; to achieve this do not make the full diameter hole in one go rather make a small hole, rub down both sides then repeat to gradually increase the size to full diameter.

Assembling the camera:

The pinhole sheet needs to be stuck on the inside of the front of the camera so that the pinhole corresponds with the middle of the cardboard hole. Use both a ring of glue, being careful not to get any on the pinhole, and black tape.

The camera back needs to be hinged on one edge and have a Velcro 'latch' on the opposite edge so that it can be opened and securely closed to get paper in and out. Remember this will need to be done in the dark so do not make it too fiddly.

As an option a strip of velvet can be fitted to the back rim of the camera body to make sure it is light tight when shut.

Lastly the shutter mechanism needs to be stuck to the front of the camera so that the pinhole can be covered and uncovered.