

WELCOME TO THE WORLD OF 'SMILEYCAM' PHOTOGRAPHY.

Your 'SmileyCam' is ready to use and will give you 22 colour images (24 with a new film). The pinhole plate can then be removed, for use on another film and the exposed film sent off for processing.

The SmileyCam is made up of a 110 film with a handmade pinhole plate fixed onto the front ready for use. The precision hole is 0.18 (a sixth) of 1mm in diameter giving an effective aperture of f180

Qualities of the image.

It has unlimited depth of field - Everything is in focus, from the pinhole to infinity, giving a bug's eye view of the world.

The cameras are virtually indestructible - enabling the camera to go where none other has feared to tread!

It can: take time exposures and see beyond our vision.

Viewfinder-less photography enables you to just ponder on what something might look like and give it a bash! and most importantly, it can fit in ones mouth (for large mouths only!).

Subject matter.

Anything! but try to make use of the foreground close to the camera. Even an object a few mm from the pinhole will be in focus! Maybe start off with a self portrait, sweets, push it round in a supermarket trolley, throw it off the top of a favourite building, tape it onto a skate board, a windscreen wiper, feed it to the cat,,,,,,,,, possibilities limited only by your imagination.

Exposure.

You can use the SmileyCam indoors or out, or with electronic flash (see separate section).

Although different from normal cameras, once mastered, the joys of colour pinhole photography await! Exposure latitude (The amount one can over and under expose and still get a useable images) with colour negative films is very large. The below exposures are a guide:

Sunlight = 4 seconds (keep the sun behind you to avoid sunlight going straight into the pinhole).

Cloudy = 10 seconds (although the brighter the day the more contrast in the colours).

Indoors = 5 minutes to 5 hours (whether it be a brightly lit room or a dingy pub!).

For the photo heads among you, the effective aperture is f180 but in reality guessing usually works!

To take a photograph, peel off the insulation tape 'shutter' quickly replacing it with your finger to prevent any light entering the hole.

Place the camera down on a surface and let go of the camera, the exposure starts as you remove your finger.

To stop the exposure pick up the camera with your finger and thumb covering the pinhole, then carefully replace your thumb (which is over the pinhole) with the tape 'shutter'.

Using electronic flash.

This has the advantage of a very short exposure time, removing any camera shake and gives a good contrasty image. A handheld electronic flash (set on manual for full power) is ideal although a flashgun on a camera will still work.

The camera and flash need to be very close, around 5 cm from the subject (point the flash at the subject rather than at the pinhole).

Remove the tape 'shutter' and replace with your finger - remove finger - operate the flash -

replace finger, then carefully replace the tape 'shutter' making sure as little light gets in as possible.

Winding on.

Always remember to wind the film on after each exposure. The film needs to be wound into the chamber with the cog on, (shown with an arrow). **Don't wind the cog the opposite way or the film will unravel.**

Wind the film on, keeping an eye on the small window on the back of the camera. The cog may have to be wheeled along your finger to prevent it spinning back.



The backing paper of the film has arrows and numbers on the back. These are viewed through the small window at the rear of the SmileyCam. When the numbers begin, count to the second number in the sequence of four, and then stop winding. Make your exposure, then wind on to the next second number and carry on until you go past 24. So stop winding when you see the 2nd number 3, the 2nd number 4, right the way to the 2nd number 24 (As below).

>>>>>>>>> 1 1 1 1 >>>>>>>>> 2 2 2 2 >>>>>>>>> 3 3 3 3 >>>>>>>>> 4 4 4 4 >>>>> 5 5 5 5 >

Removing the Pinhole plate.

When you finish the film, take off the insulation tape and remove the metal pinhole before sending the film to a processing laboratory. Notice how the pinhole plate is held in place by the black insulation tape this will help in future SmileyCam assembly (See below).

Processing.

Most processing laboratories send 110 films off to be processed rather than developing them in an hour, (which, being honest adds to the excitement of getting your photos back!)

Putting the pinhole plate onto a new film.

Use BLACK insulation tape to fix the plate onto a new 110 film. This can be stretched to ensure it fits into the corners to prevent light entering. On a new 110 film, the 'wind on' cog on the cartridge needs to be made accessible by removing the flap of plastic covering the cog (using scissors or teeth!).



Flap - cog cover

Flap removed exposing cog for winding the film on



The film starts in the 'cog-less' chamber, Wind the film ONTO the spool with the cog. This can be tricky to start off with as the film spool can spring back. Wheel the cog along your finger to take up the slack until the film begins to move. It will then move freely for the rest of the film.

Taking two photographs.

Using the SmileyCam requires a different approach to a regular camera. Below is a step-by-step approach to taking two photographs. Following these instructions will give you the confidence to experiment with other subject matter as well as taking advantage of some of the unique qualities of pinhole photography.

Photo - 1, the car window squirter

This photograph makes use of an ultra close subject contrasting with the background maximising the effect of unlimited depth of field found in pinhole photography.

It also looks like an odd scary bug!



1 Find a car pointing away from the sun. (to prevent sunlight going directly into the pinhole).

2 Peel the shutter off the camera, and replace with your thumb. (See photo 1 below). I usually stick the shutter temporarily onto my watch.



1 - Holding the SmileyCam before exposure 2 - Releasing the SmileyCam for the exposure

3 Place the camera on the bonnet of the car about two centimetres from the squirter.

4 Let go of the camera and the exposure begins (See photo 2). Don't try to hold onto the camera as this can result in camera shake. Better to let gravity hold the camera steady. Give 3 seconds for sunlight, 7 seconds if cloudy.

5 After counting to the correct time, quickly pick the camera up between your thumb and forefinger. (Covering the pinhole with your thumb as you pick the camera up, stops the exposure. See photo 1 above).

6 In the shade or pointing the camera towards the ground, (to stop light from the sky entering the hole) quickly replace your thumb covering the hole with the tape shutter.

7 Wind on the film to the next frame.

Photo - 2, 30-minute night time cycle ride.

This combines a long time exposure with a flash from a flashgun to light the foreground. It also involves securing the camera onto a moving object, in this case the light bracket of a bicycle.

The photograph shows the brake block on the right with the rim of the wheel arching downward.

The lines are streetlights rushing past as I wobble my way through the streets of Bristol par nuit.

If you don't have a bicycle, get one! (Although it is just as easy to do this photo using a car - bus etc).



1 At night, tape the SmileyCam onto a moving object: i.e. a cycle, in front of a car squirter, next to a wing mirror of a car, a skateboard, your shoe, the cat etc using: gaffer tape, insulation tape, rubber bands string etc.

2 Find a camera with a flash, or ideally an electronic flash gun, set on manual for full power. (See flash use instruction sheet).

3 Peel off the sticker - shutter. Don't panic! Outside at night the exposure time will be in the region of 30 minutes to an hour so you have ample time to sort out your photo, even when the camera is exposing.

4 Flash the flashgun at the foreground in front of the camera, the area 5 -15 cm from the camera. This isn't essential but fills in the foreground with a bit of detail.

5 Pedal off, for 30 minutes or however long it takes you to get to the pub, then replace the shutter and detach the camera (or just wind on and do a second exposure for the return journey).

Film availability

110 film was designed in the 1960s and as such is getting tricky to find although it is still made in Italy. It is easy however to buy film stock on the Internet for bargain prices, even cheaper if it is out of date.

I find out of date film works fine, as long as it has been stored well, (i.e. not in an oven on top of an x ray machine!).

After several years (5 - 10) the colours stop being true and a base fogging occurs. Anything over ten years out of date should be tested before 'serious' use. I don't find any problem in getting it processed although it does take a week to get the results back (The waiting becomes all part of the fun!)

Underwater Pinhole photography.

I have spent many a soggy film trying to perfect this challenging, if fairly pointless 'world first'. The only success I have had is 'Duck and foot underwater' where I filled a different type of pinhole camera with water and held the camera underwater for the 15-minute exposure. Attempts with the SmileyCam have been as yet unsuccessful, however you could try a clear, waterproof container sealed with the camera inside, with the shutter removed. (This would need to be done in a darkened room). Then the camera and housing can be held underwater in a sink and an electronic flash can be used to produce the illumination for the exposure.

The SmileyCam and electronic flash.

Very few pinhole cameras can be used with electronic flash due to the relatively large pinhole to film distance. The SmileyCam has the pinhole very close to the film and so can be used of most flashguns, including 'on camera' flash.

An electronic flash gives a very intense and very short burst of light. (Around 1/5000th of a second), They are still produced but there are many inexpensive ones available in the second hand market

Type of flash.

The best type of flashgun to use is one you have lying around the place. If you can't find one, buy a second hand one with a manual setting. Small and powerful is the best but make sure you haggle as no one else buys these things any more! A flashgun is on full power when set to its manual setting. A flash on automatic setting at close distances will give an ultra short - and therefore less powerful flash. Most automated flashguns can be forced to work at full power by taping over the sensor. For us photo geeks a 24 or 32 guide number is a good strength.

Advantages of using flash.

- 1 Indoor pinhole photography. Although the SmileyCam is great for long exposures, a flash is the best way of opening up indoor photography, making full use of the 'bugs eye view' foreground image unique to pinhole photography. Any objects around the house, or contrived scenarios can be photographed this way.
- 2 Aiming the SmileyCam without camera shake. The short flash allows you to hold and aim at a particular angle, so removing the need to rest the camera down on a surface.
- 3 Increased contrast. The light given out by a flash increases the contrast, resulting in an apparent increase of sharpness in the final image.
- 4 Black background. As the flashlight loses its strength (at a distance of 10 cm+) the background becomes black, so isolating and enhancing the subject matter.
- 5 Capturing movement. As well as removing camera shake, other fast movement can be frozen such as water splashes, humming bird's wings, my wallet being closed etc.
- 6 Frozen action with movement. If the camera is held for a period of time after the flash exposure, the (blurred) background will begin to appear on the image (Similar to using a flash with a long exposure with normal lens based cameras). Can look fairly cool!

How to Use the SmileyCam with a flashgun.

The subject should be indoors and no more than 8cm from the pinhole. Using a flash with the SmileyCam involves photographing objects close up to the camera rather than the usual far away 'landscape' convention. Flash at this distance takes advantage of the unlimited depth of field available with pinhole photography and the intensity of light obtained when a flashgun is used close to the subject. (Inverse square law means that twice the closeness of the flash results in 4X the brightness)



Flash and camera position

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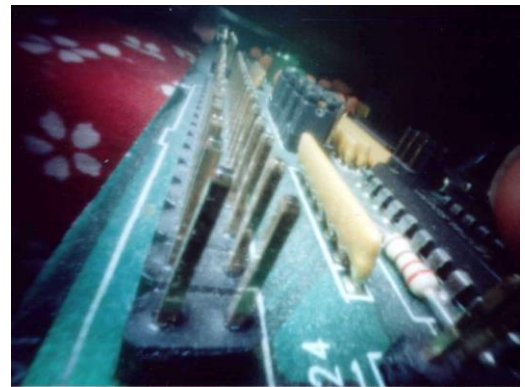


Mouth and allsort



Flash and camera position

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Circuit Board

Exposure.

Luckily colour film has huge exposure latitude so even the grossly over exposed image should work. Under exposed images will appear to have no solid black background. Often exposure judgements can be easier to judge from the negatives. Try to begin with the distances suggested above.

Angling the flash.

This is critical, as you need to illuminate the subject without pointing the flash into the pinhole. Hold the flashgun just above the SmileyCam, making sure the flash is pointing towards the subject. It is essential that the flashgun to subject distance and the Camera to subject distance is close. See photo.

Using two flashguns.

To increase the illumination another hand held flash with a slave unit (a gizmo that fires off a flash when it sees another flash go off) could be used. This spreads the illumination, allowing subjects further from the pinhole to be lit.

On camera flash.

These can be used but you end up with a lot of clutter in the way of your photograph. It can also be tricky to get the camera to set the flash off at its full power. If it's all you have, don't worry about this just go ahead and try it anyway!

Studio Flash.

These give more power and can be adjusted to give good controlled illumination. Ring flash

would give ideal illumination but they are relatively weak, Designed for macro work with normal lenses.

Mouth photography.

Several people want to give this a go, so as a special treat for SmileyCam owners, below are instructions for taking your very own mouth images! Only people with large mouths should attempt this and I cannot be responsible for dental bills resulting from attempts to do such an absurd thing.

- 1 Stick clear tape over the window at the back of the film to prevent saliva and general dribble getting into the film housing!
- 2 Practice holding the camera in the back of your mouth, biting on the film keeps it well clamped.
- 3 Get two flashguns charged up, one with a slave unit.
- 4 Find a gullible 'assistant' then leer menacingly around 20cm from their face.
- 5 Peel off the shutter. (If taken indoors the relative darkness will give you a while before the background light affects the image).
- 6 Aim the flashguns sideways on so they illuminate both the subject as well as the inside of your mouth.
- 7 Peel your lips back 'Mandrill style' enabling as much of the background to be framed by teeth as is possible.
- 8 Set off the flashguns and then quickly take the film out of your mouth using your finger to cover the pinhole.
- 9 Replace the 'shutter', wind on the film and try to find another friend.

Happy Pinholing!