

IRIS PINHOLE CINEMA NOTES!

Here are a few notes we have culled while researching our pinhole motion picture projects. Some apply to stills of course, but the ideas can always be modified, you just need to figure a way to photograph stills consecutively.

Check them out, get inspired, and go out and make a pinhole film!

To begin: the simplest approach - a pie plate cut out to fit on a Bolex, poked with a pin:

Pinhole Movie from Seattle Workshop with Thomas Comerford



FACT: The distance between the pinhole and the film plane is very simply, the "focal length" of the pinhole. The ratio of that distance and the diameter of the hole is the f-stop. There's no such thing as "depth of field" (it's **virtually infinite**), but the diameter of the pinhole is, in effect, the circle of confusion.

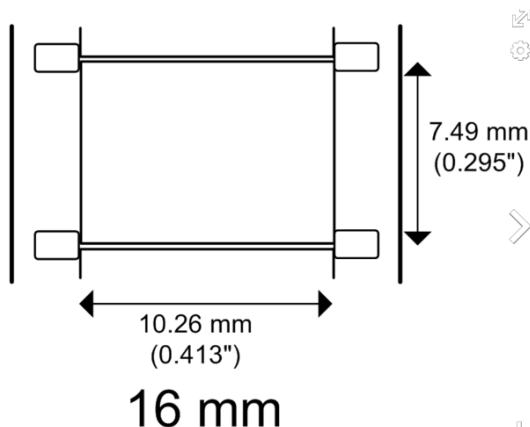
A dead-centre pinhole is best and will give the same coverage over the frame as an equivalent focal length lens. An off-centre pinhole will give an offset image. If the pinhole is close to the film (wide-angle), you may start to see fish-eye distortion at one edge of the image.

Here is an online Pinhole calculator:

<http://www.mrpinhole.com/wiz.php>

Select one of the following as a starting point

- ☐ Focal Length
- ☐ Pinhole Diameter
- ☐ Film Dimensions
- ☐ Angle Of View



Remember that your film width will not be 16mm, but rather the width (and height) of *the actual film frame*, not the entire film strip. That works out to **10.26mm W x 7.49mm H** for 16mm film.

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Matchbox Pinhole Camera Movie

Very cool example. This is using 35mm film, each shot is about 70 frames long, each exposure is between half and one second long. Some frames give a good indication of the nice blurring effect you can get with long exposures. The same can be done with 16mm, something like what Robert Schaller proposes with his filmbox camera, but with a more accurate frame and real registration. **Projector parts? Old camera parts?**



More instructions and examples of shooting a pinhole movie with a matchbox camera from Lena Källberg>

This example tends to be stills dissolved together, but there are a few active shots that are looped. She also offers a template for building the camera here.



Here is a hacked/modified handcranked 16mm camera that is quite antique-y/elegant, and is 'half' of a **1940 Kodak Model M** operating at 16 frames per second. This hack also nicely explains the calculations required.

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SUBMINIATURE, or “Spy” cameras are a very cool thing!

They also take 16mm film. So a possible contender for creating a film essentially taking “stills” with a modified pinhole lens (some even function with such a lens). These can also be modified/rigged to hold more film so you can actually get a decent amount of footage in one take. Be careful though, as the crank can only take so much tension and take up will likely need to be manual or rigged with a soft external spring/tensioner. **Remember to take the pictures with the camera on its side and the right side up to get movie-style images.** eBay has a million of them.



Japanese Subminiature "Spy" Cam...
flickr.com



16mm subminiature ca...
photo.net



1955 STEKY Model IIIb...
catawiki.com



16mm subminiature ca...
photo.net



Mamiya Super 16 16mm Submini...
worthpoint.com



File:Vintage Mamiya 16 Autom...
commons.wikimedia.org



16mm Subminiature Camera by Wilc...
flickr.com



Scat 16mm Subminiature Spy Camera ...
flickr.com



Kunik-Walter:Petie-Vanity-(leather ...
pinterest.com



Rollei 16 16mm Subminiature Film ...
worthpoint.com



Subminiature photo
en.wikipedia.org



THIS is a great guide:

<https://www.diyphotography.net/the-comprehensive-tech-guide-to-pinhole-photography/>

IRIS PINHOLE CINEMA NOTES!

Here is a guy who built **pinhole cameras out of the landscape** material he was photographing.

He doesn't even make the pinhole, but finds objects that already have holes in them:

Site-Specific Pinhole Cameras Constructed From Nature Capture the Pacific Northwest



Multiple pinholes are great, some truly beautiful abstractions:

Adventures with multi-pinhole cameras - AlternativePhotography.com



And then there is the potential for **stereo images** as well...

Project 4: Stereo Pinhole Camera Pinhole 5x7 (Stereo)



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LIVE PINHOLE CINEMA ON YOUR HEAD

Some of you may have seen this before, but it's worth another look, especially once they let you see the inside of the device. Simple workshop, great inspiration!



We at IRIS are thinking of building one out of a more resilient material and hanging it at the Fieldhouse but maybe after Covid times, too germey right now... :(

<https://vimeo.com/111914423>



Enjoy yourselves – all you gotta do is type “pinhole camera” into your search engine and away you go...

- Pinhole Love from your friends at [The Iris Film Collective](#)