# HCW Panpin BN

**110 degree curved  film plane  panoramic pinhole camera**

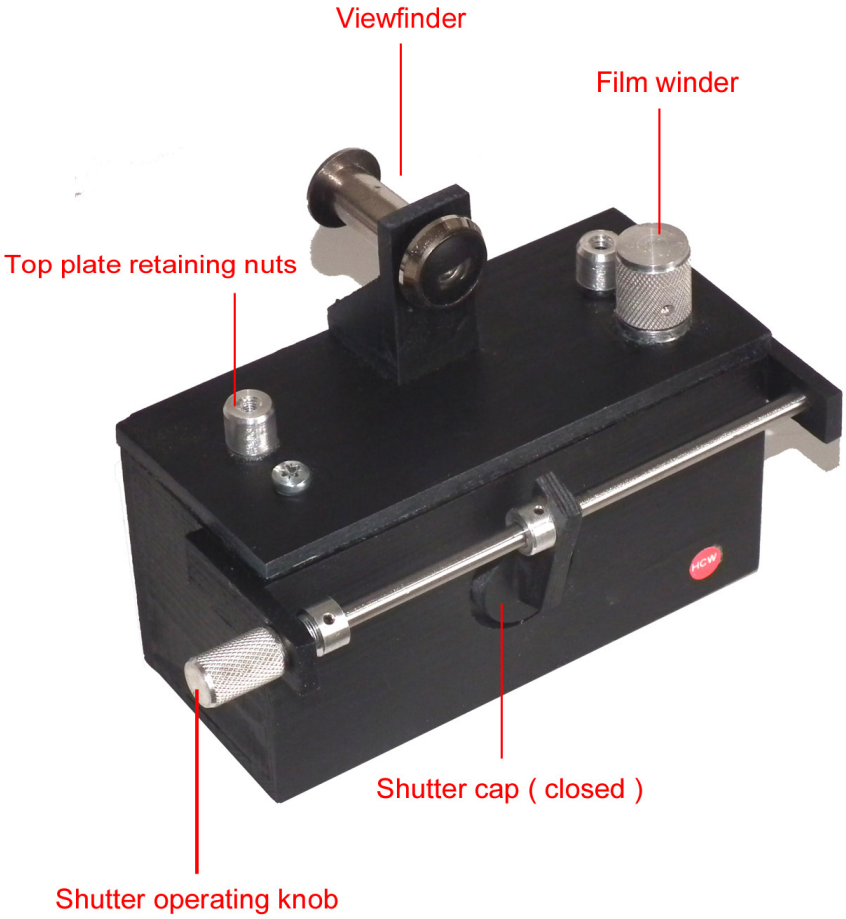
# Specification

| | |
|---|---|
| Pinhole effective "focal length" | 53 mm |
| Pinhole aperture | f 180 |
| Film type | 120 roll film |
| Negative size | 43 mm x 110 mm |
| View angle | approx. 110 degrees |
| Frames per film | 6 |
| Shutter | Manual |
| Viewfinder | WA reverse telescopic |
| Double exposure facility | Yes |
| Double exposure interlock | No |

| | | |
|---|---|---|
| Body dimensions * | H | 80 mm |
| | W | 68 mm |
| | L | 150 mm |

* (Excludes knobs, viewfinder etc.)

## Camera description




The HCW Panpin is designed to take 6 panoramic shots on a roll of standard 120 film. The film plane is circular, this providing even illumination over the entire field and thus avoids the light fall off associated with some flat plane pinhole designs.

A tripod bush is located on the bottom of the camera , since exposure times with any pinhole design are usually of the order of seconds. The shutter is manually operated by the Shutter operating knob

To facilitate loading the film around the curved plane, the loading is performed via the top which is removable by releasing the Top plate retaining nuts

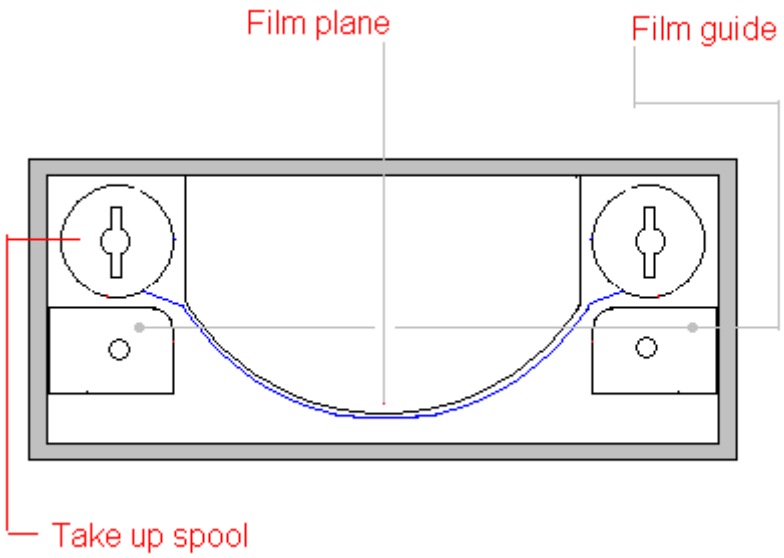
## Film loading

The film is loaded by releasing the retaining wing nuts, this giving access to the inner body.

The following diagram shows the threading path of the film, the spools being located at the bottom by two pins projecting from the base.

Care must be taken to make certain that the film is correctly seated on the bottom film runner otherwise the film may slip into the semicircular cavity and become wedged, resulting in the film becoming torn.

The film may be easily located by sliding the loading spatula, which is supplied with the camera  The spatula is also  used to manoeuvre the top surface of the film spools to line up with the locating spigot and the film wind knob. This is performed with the camera top plate nearly closed.




The top plate is then lowered onto the camera noting to turn the film winder to engage with the slot in the take up spool. A viewing window is located on the back of the camera to note the film position. This is normally covered by the  viewing window cover plate. The film should now be wound on until exposure number 2 is reached, this being the correct starting point for the first exposure.  Due to the length of the negative, each frame takes two normal 12  on 120 frames  and so the following sequence will be used.

### Frames  2, 4, 6, 8, 10 and 12

When the film has been wound on, the viewing window cover should be swung back over the film counter viewing window. A reminder of the frames to use is located adjacent to the viewing window.

## Picture taking

With a working aperture of f 180 virtually all exposures will be of the order of seconds and it is assumed that all shots will be taken with the camera firmly mounted on a tripod. Typical exposure times for 100 ASA film are shown on the following pages and it should be noted that whilst a faster film may be employed, in the case of very brightly illuminated scenes, such as beach and mountain views, the resultant exposure time may fall below 1 second which is difficult to achieve manually, although modern C41 emulsions would doubtless accommodate the over-exposure.

## Exposure times

All exposure times are of the order of seconds or tens of seconds, hence the use of a simple manual shutter capping system. The aperture of f180 would normally provide a long exposure time, but due to the effects of reciprocity failure, the times required in very dull conditions are further extended. The table below shows the calculated exposures derived from normal usage for 100ASA film, whilst the adjacent column shows the increased times required to combat the reciprocity failure effect.

In very dull conditions it is always wise to overexpose and some workers have used exposure times of hours with interesting results, since due to the very small aperture the film does not tend to become completely blacked out.

Typical exposures for most types of lighting conditions are shown in the following table

**Exposure times for 100 ASA film at f 180**

| Conditions | Norm exposure (sec) | Pinhole exposure (sec)* |
|---|---|---|
| Beach and mountain scenes | 0.5 | 0.5 |
| Normal sunny conditions | 1 | 1 |
| Sun and cloud | 2 | 2 |
| cloudy | 4 | 4 |
| Dull | 8 | 8 |
| Very dull | 16 | 30 |

* Allowance for the effects of reciprocity failure