

Using the
Kinor 16 CX-2M
16mm cine camera



Getting to know the Kinor 16 CX-2M:

Note: This user guide is available for download free from <https://www.mediafire.com/file/eugmxtqibcoowl0/Using+the+Kinor+16+CX-2M.pdf/file>

Note: The English translation of the original Kinor user guide is available for download from: https://www.mediafire.com/file/3sxe9trod2nrrm1/Kinor_16_CX-1M_and_2M_Manual_English_translation.pdf/file

Note: Olex Services, located in the Ukraine, is a huge source of information regarding Kinor 16 and other Russian cine cameras: <https://sites.google.com/site/olexserviceskinor/home>

The Kinor was manufactured by Moskinap and produced between 1975 and 1990. The camera is reflex, (view through the lens) and shoots 1R and 2R film. Frame size is standard 16mm. The camera was designed for news gathering and non-studio filming. It is moderately quiet, 42 decibels when well maintained. The camera has a 170-degree shutter angle. 25fps exposes at 1/53 of a second, and at 24fps exposes at 1/51 of a second

The camera requires a 12-volt power source. A motorcycle battery is a common and sufficient source. The Kinor can take a 30 meter/100ft or 120 meter/400ft magazine. The cameras can take four types of Kinor motors: The most commonly available one is the 29EPSS which runs at 25fps. See the **Motor section**, page 12, for more information

The Kinor 16 CX-2M is very similar to the Kinor 16 CX-1M camera. The 1M is a turret camera, in which three lenses can be attached and rotated on a turret, whereas the 2M has a single lens mount. Both Kinors can share lenses, motors, and magazines. Earlier motors attach to the camera body with a lever.

Note: it is recommended to check the compatibility of the magazine drive gear, that it matches the camera's drive gear. A mismatch will damage the gears.

Kinor 16 Lenses

Lens availability for the Kinor is limited to the lenses that were manufactured for its specific lens mount type, by Lomo and Krasnogorsk for example. Other manufacturers made lenses to suit the Kinor mount, possibly not offering as big a range as Lomo.



The above picture simply illustrates the design of the lens mount, and a basic measurement to assist when purchasing Kinor specific lenses online.

The most commonly available Lomo lenses for the Kinor 16mm camera.

<p>Prime Lenses:</p> <ul style="list-style-type: none">16 OKS 1-6-1 $f/1.8$ 6 mm16 OKS 3-10-1 $f/2.1$ 10 mm16 OKS 3-15-1 $f/2$ 15 mm16 OKS 2-20-1 $f/1.9$ 20 mm16 OKS 1-25-1 $f/2.5$ 25 mm16 OKS 8-35-1 $f/2$ 35 mm <p>Zoom Lenses:</p> <ul style="list-style-type: none">16 OPF 12-1 $f/2.5$ 10-100 mm16 OPF 1-2M-01 $f/2.4$ 12-120 mm	<ul style="list-style-type: none">16 OKS 1-50-6 $f/2$ 50 mm16 OKS 1-75-1 $f/2$ 75 mm16 OKS 1-100-1 $f/2$ 100 mm16 OKS 1-150-1 $f/2.8$ 150 mm16 OKS 7-200-1 $f/2.8$ 200 mm16 OKS 6-300-1 $f/3.5$ 300 mm
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A wide-angle adapter is available which when attached to both lenses adds:

7.5-75 mm range to the 16 OPF 12-1 and 9-90 mm range to the 16 OPF 1-2M-01.

For more information on Kinor specific lens and understanding Russian lens mount standards, see this [link](#).



Rear zoom lens colour correction filters and a "compensator" filter are an often overlooked accessory. According to a Kinor technician, the zoom lens cannot be used without the "compensator" rear filter, as per the above picture.

The colour correction filters can be listed as:

Filter 01 -colour correction 4500-3200K

Filter 02 -colour correction 6000-3200K

Filter 03 -colour correction 8000-3200K

Filter HC6 -neutral density 2.2x/+1 stop

Filter HC7 -neutral density 4.8x/+2 1/3 stop

Filter "compensator"

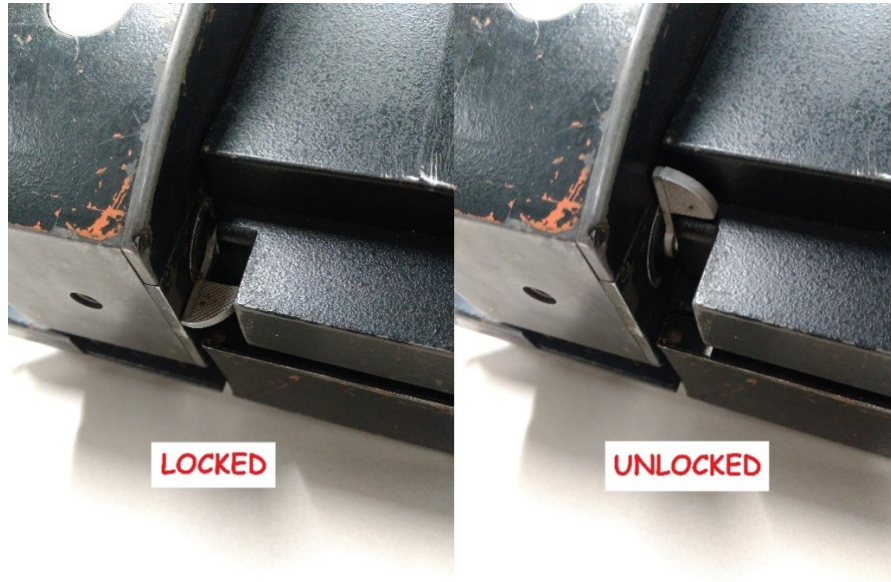
The above information was located:

<https://cinematography.com/index.php?/topic/27047-kinor-16cx-2m-3m-zoom-filters/>

The Kinor 16 CX-2M Magazine

Removing the magazine:

First unlock the magazine at the base and turn the securing lever upwards, to a horizontal position, as per the picture. The locked position is the lever being vertical.



Once unlocked, push the button on the side of the magazine, as per the picture, and slowly pull the magazine backwards, away from the camera body.



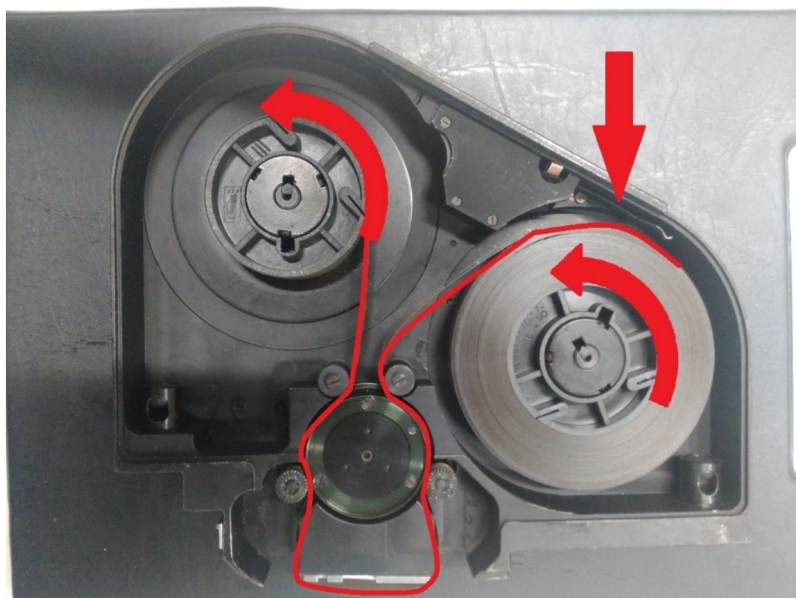
Opening the magazine:

With the magazine removed from the camera, open it by pushing both indicated buttons at the same time. Doing so will release the lid and it can be lifted off the magazine case.

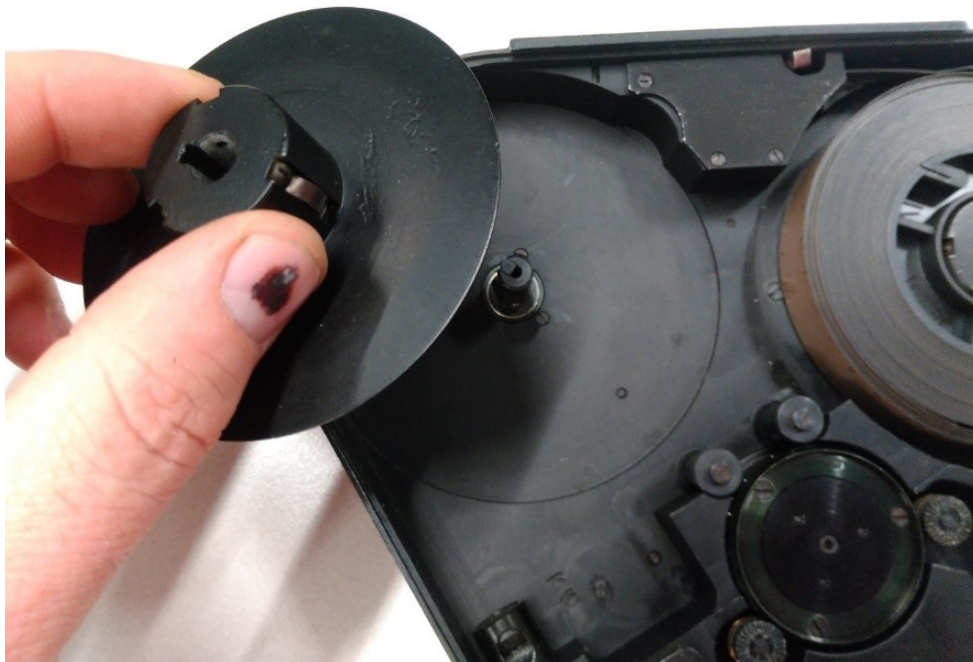


Loading the magazine:

When about to load film, be sure to push the thin metal "film remaining" indicator back into its base. A small barb of metal will hold the metal strip in place until the magazine lid is closed, at which point the metal strip will be released and rest against the film and accurately indicate, via the "film remaining" window on the side of the magazine, how much film remains.

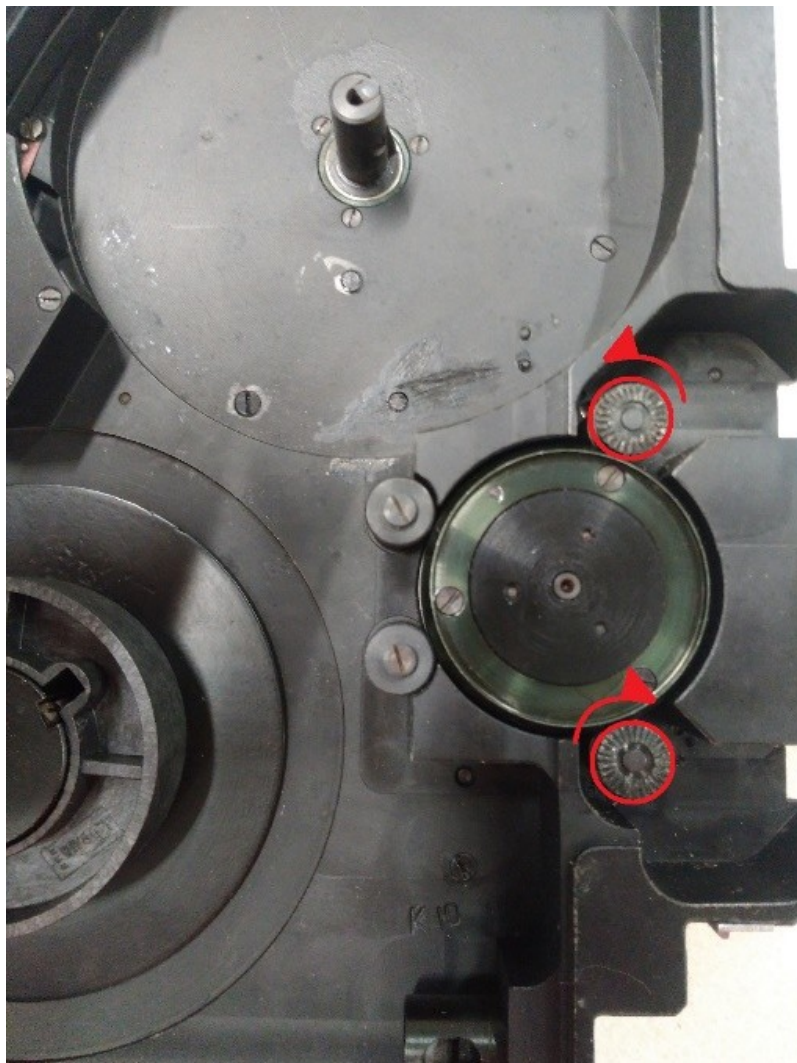


The magazine also comes standard with two removeable film core "adaptors" that sit on top of each film sprocket, both film feed and take-up. when lifted out of the magazine, the user can then load a 100-foot daylight spool stock. Leaving the removeable adaptors in the magazine suits core-loaded film stock. See below picture. Core loaded film stock is often preferred as many daylight spools are metal and occasionally rub against the inside of the magazine making sound recording difficult.



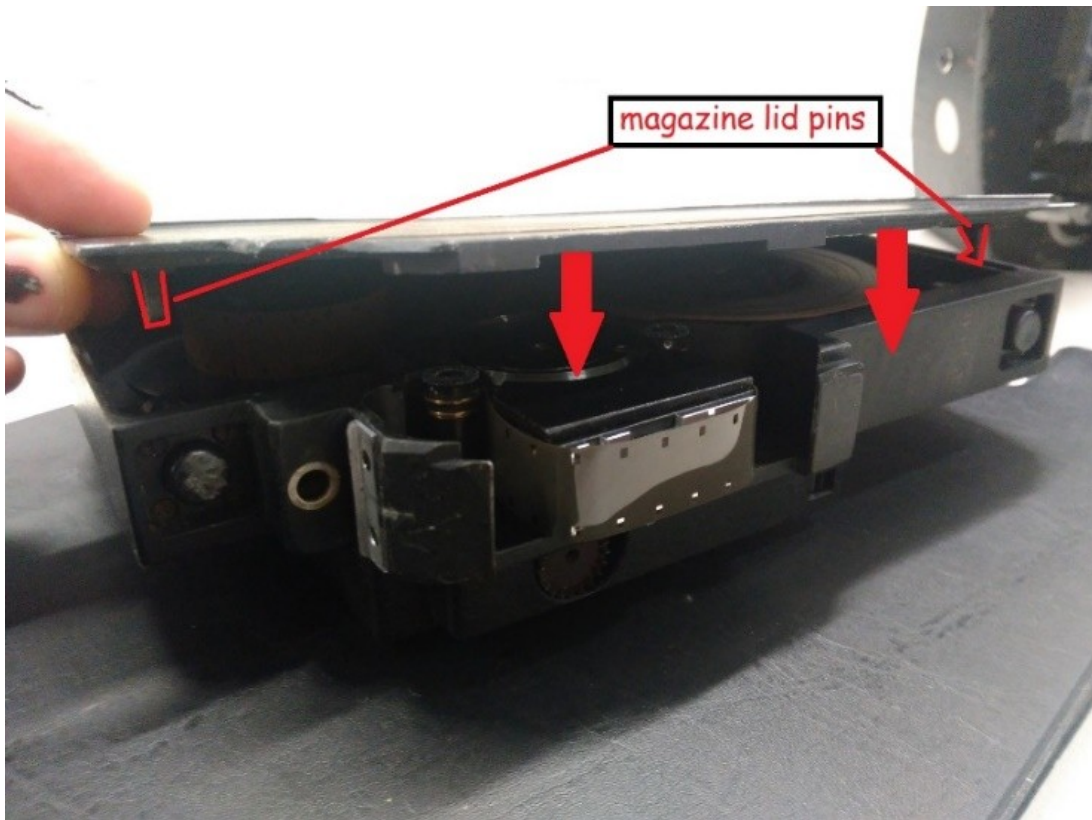
After placing fresh film onto the top spindle, be sure to load the film in a way that it follows the correct path through the magazine rollers.

Before feeding the film through the large sprocket, rotate the knurled or grooved rollers away from the central sprocket to better enable film to be feed through the rollers. As per the below picture. The top knurled roller rotates anti-clockwise, and the bottom knurled roller rotates clockwise. These knurled rollers hold the film firmly against the large roller. The knurled rollers must be rotated back to the clamp position against the main roller. If not, the magazine lid will not close properly.



Closing the magazine:

Once the film is loaded into the magazine, place the lid onto the magazine case. The lid should first wedge under the lip on the edge of the magazine, then slowly close it and the two lid pins, top and bottom, should audibly click into place. The lid should sit evenly onto the magazine case. Any gap indicates the lid is not sitting properly and light leaks will occur. A good indicator of a sealed magazine is both release buttons should be raised, not depressed.



Reverse/rewind knob:

On the side of the magazine is a round knob with directional arrows on it. As per the below picture. This reverses the direction of the film that has been feed through the magazine rollers. Essentially it rewinds the film back onto the feed spool. This is handy for several reasons, one of which is assisting the film perforations be located by the film advance claw when the magazine is loaded into the camera body.

Film remaining counter:

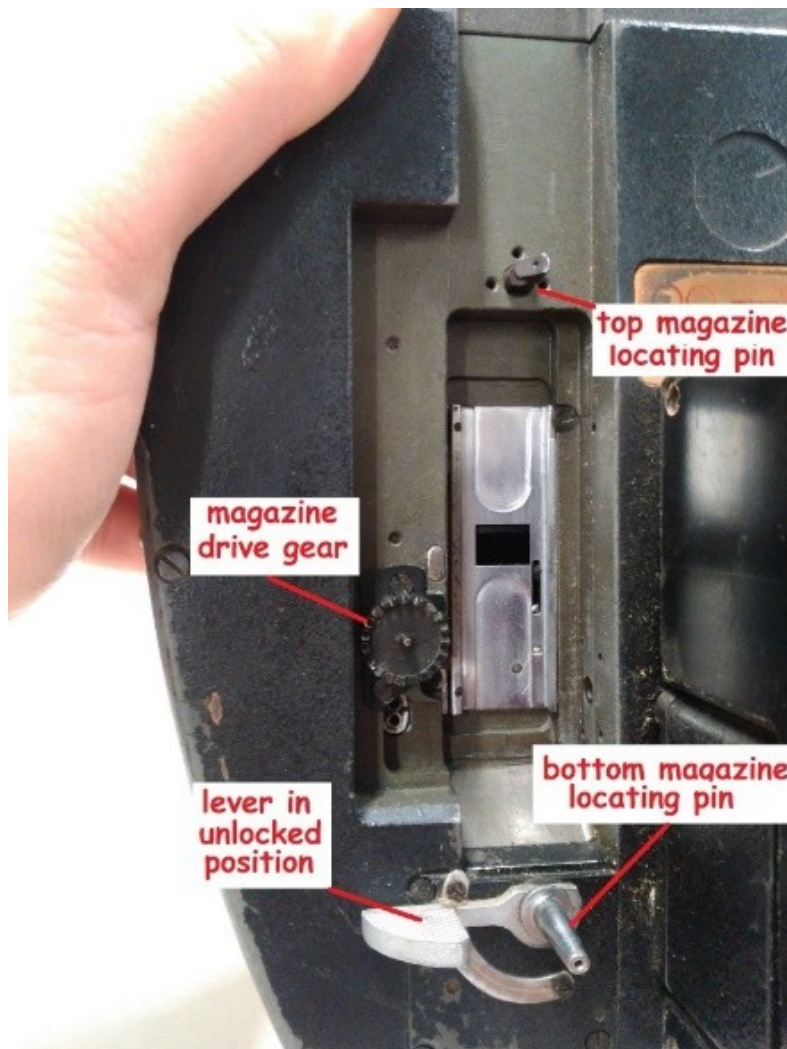
As per the below picture, the film counter has two lines of numbers. The line of numbers on the left are for when a 100ft **core** loaded film is loaded into the magazine. The line of numbers on the right are for when a 100ft **daylight spool** is loaded into the magazine. The different diameter of the respective core affects the film remaining counter.



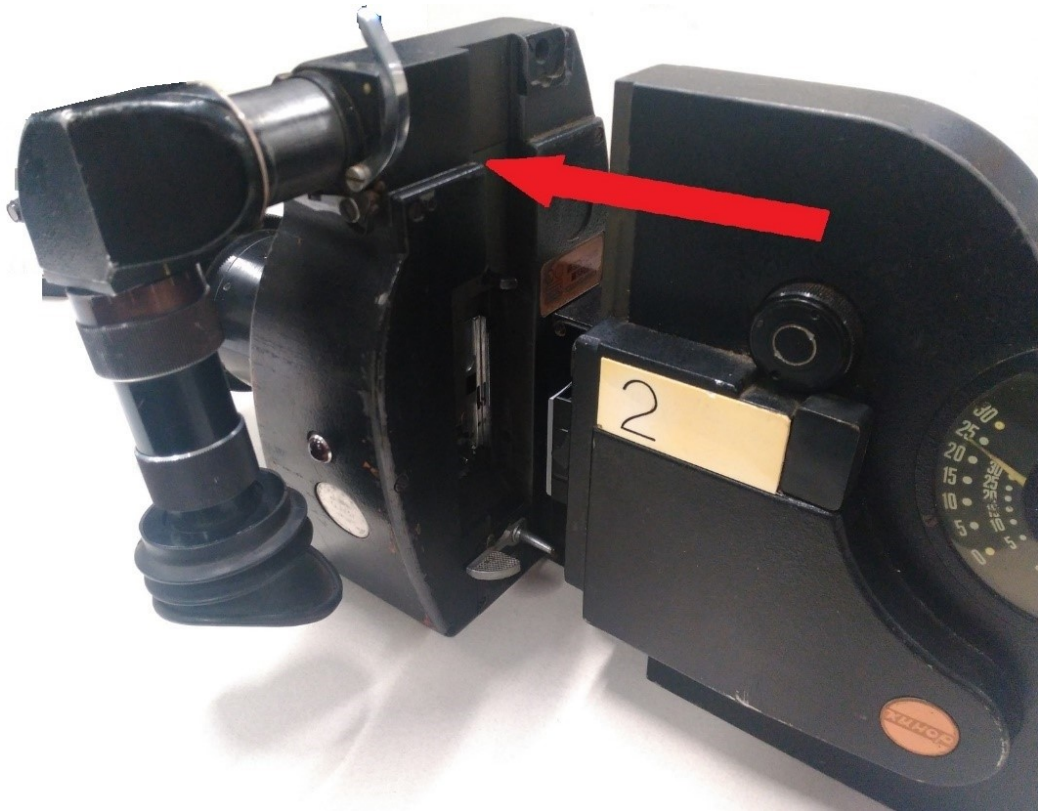
Inserting the magazine:

Before inserting the loaded film magazine back into the camera body, be sure to check the locking lever is on the horizontal (unlocked) position, as per the picture on page 3.

Note: it is recommended to check the compatibility of the magazine drive gear, that it matches the camera's drive gear. A mismatch will damage the gears.



As the magazine is pushed gently into the camera body, be sure to check the two locating pins on the camera body are lined up with the corresponding holes in the magazine, as per below picture.



When pushing the magazine into the magazine cavity, be sure not to force it. The magazine holes should line up with the earlier indicated locating pins, and one finger should be pushing the button on the side of the magazine in to assist the magazine "clicking" into place.

The Kinor 16 CX-2M Motor

There are Kinor motors designed initially to be used with the camera.

29EPSS is not crystal synched and runs at one speed, 25fps.

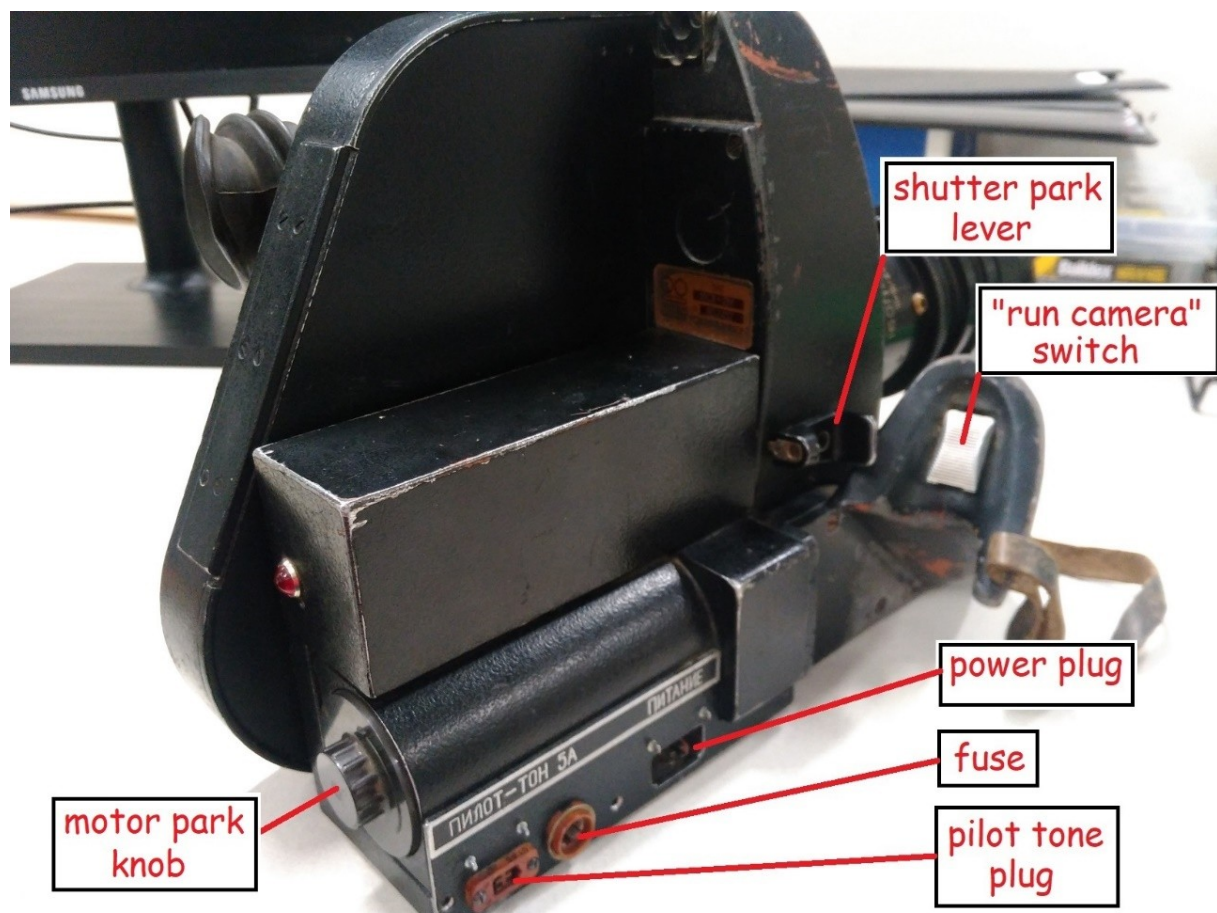
28EPSS is crystal synched and runs speeds 8,16,24,25,32,48, and 64fps

10EPS is a mains/AC powered motor and runs at one speed, 25fps

11EPS is a mains/AC powered motor and runs at one speed, 24fps

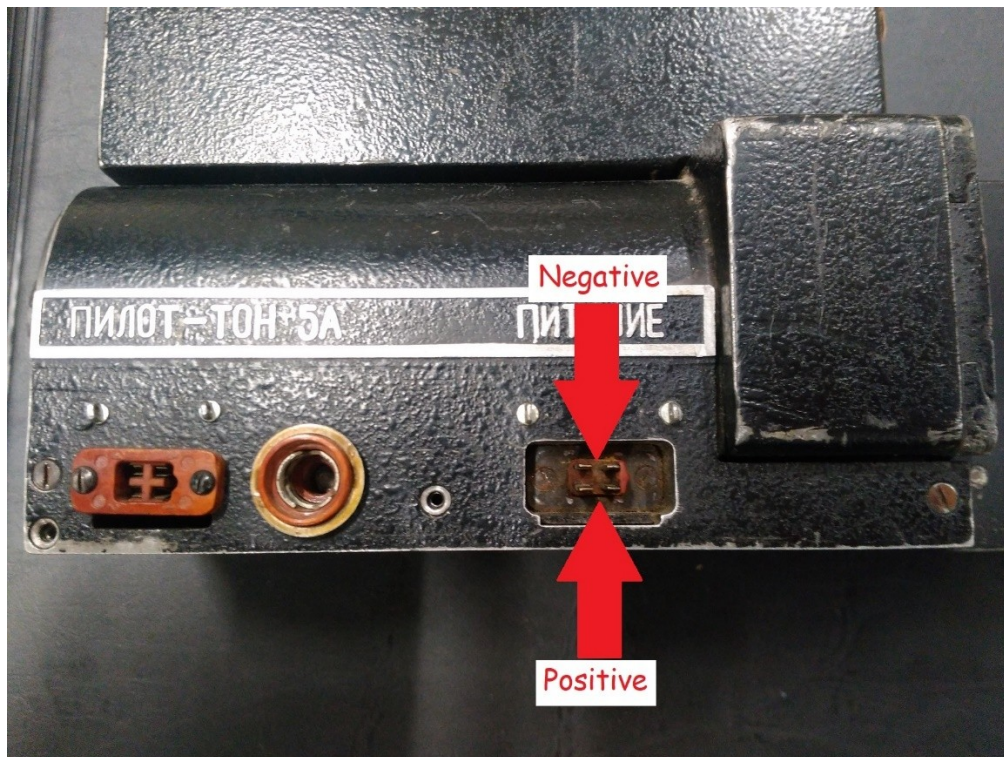
A later privately modified motor, the **29EP-1414**, is a multiple speed crystal synched motor to suit modern film making requirements. For a full listing of this motor's impressive specs, follow this [link](#).

The Kinor motor has a large plastic knob at the rear. This knob, when turned anti-clockwise, parks the motor in a position to match the shutter park position. To operate the motor, push the silver button. To keep the camera running for continuous filming, hold the button down and push towards the user.



The motor power connection:

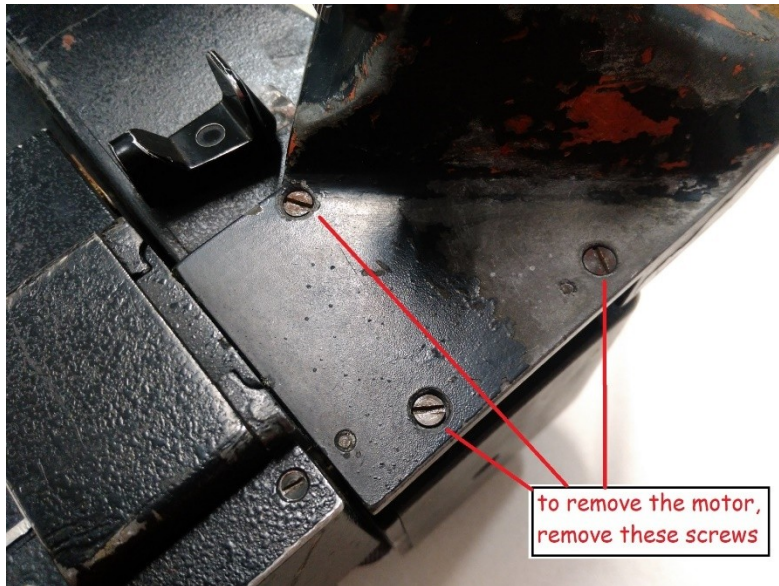
If powering up the camera with a cable, the below image indicates the correct wiring orientation. The power cable will only plug in "one way".



If a power cable is unobtainable, a replacement can be fashioned. By installing an appropriate power plug, for instance an XLR socket. For details on this procedure see: <http://canon-s8-repair.yolasite.com/kinor-16-cx2m.php>

Removing the motor:

Early versions of the Kinor motor have a lever release. Later versions are secured with three screws, as per picture, located under the camera "run" button, which once removed, release the motor.

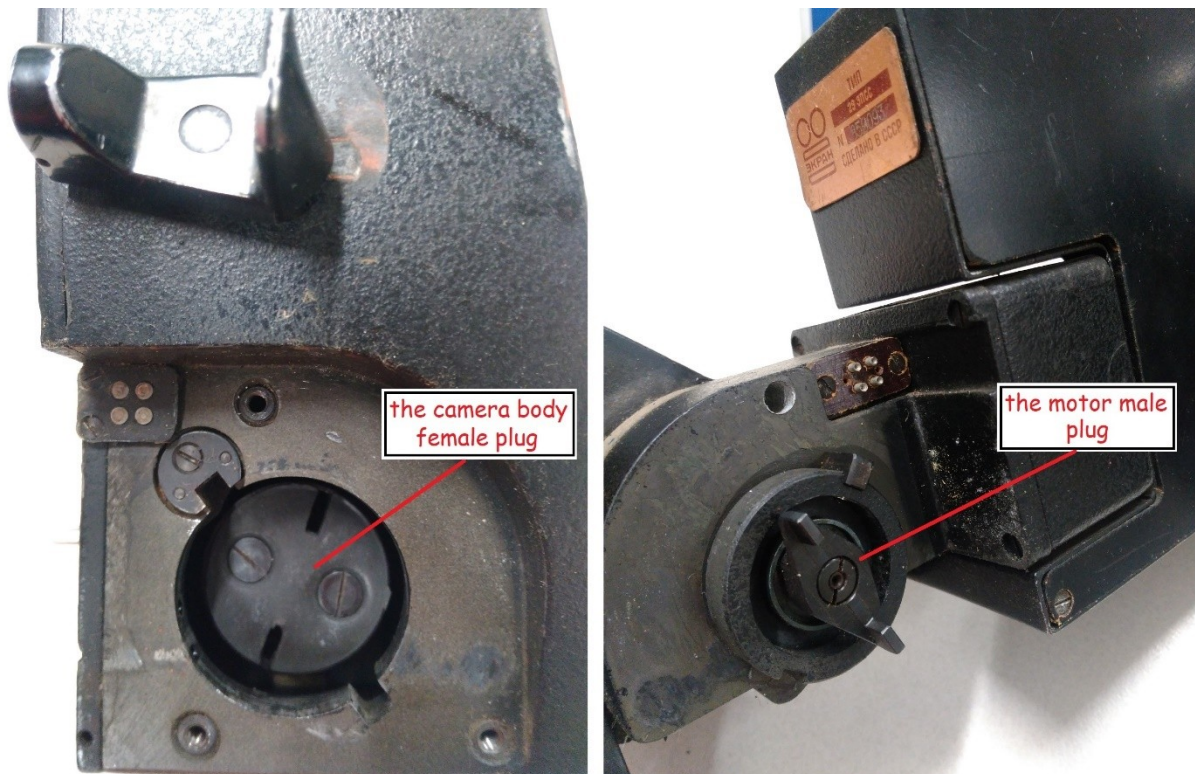


Pull the motor gently sideways of the camera body, as per the below picture.



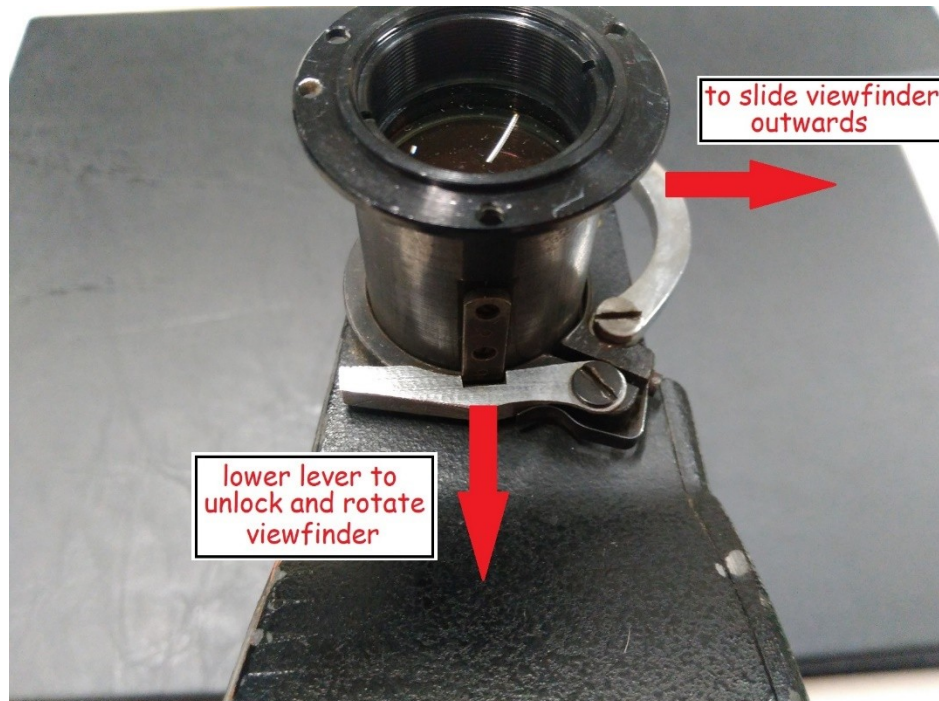
Attaching the motor:

Attaching the motor to the camera body is the opposite of removal. If there is difficulty lining up the motor connection plug, turning the plastic dial at the rear of the motor assists in lining up the motor's male plug connection to the camera body female plug connection. Insert and tighten the 3 screws to secure the motor to the camera body.



The Kinor 16 CX-2M Viewfinder

The Kinor viewfinder can be rotated upwards and downwards, and slid outwards from the camera body. The curved lever on the side of the viewfinder can be pulled outwards which loosens the viewfinder tube. The viewfinder can now be slid in and out of the camera body, as per picture.

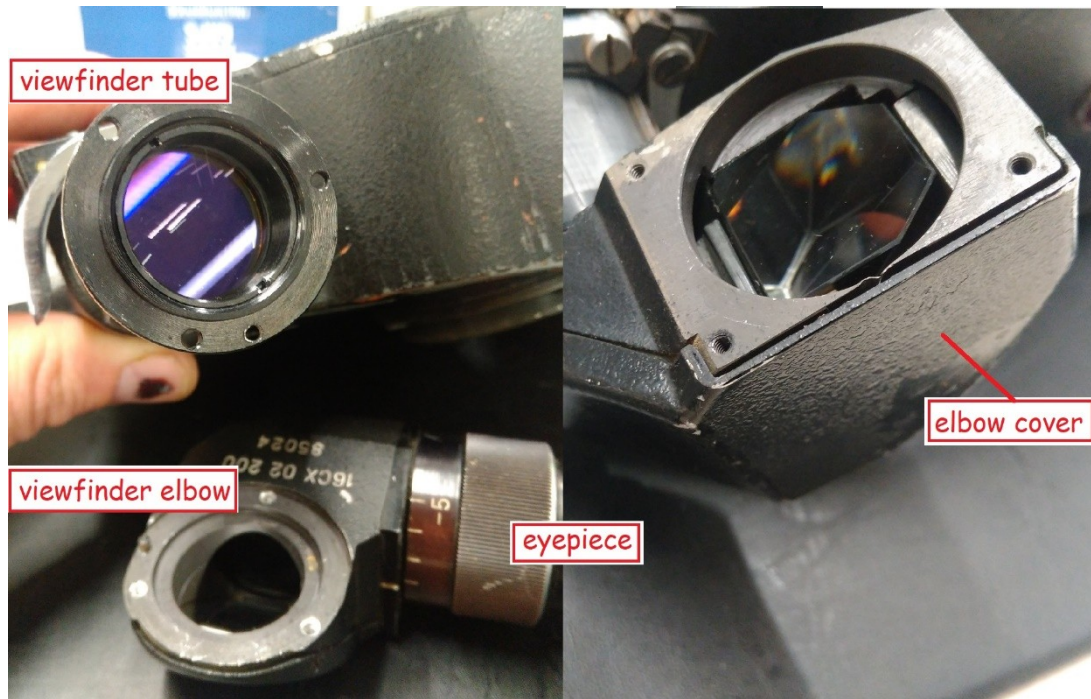


Rotating the viewfinder can be achieved by sliding it out of the camera body as far as it can go, then pushing the straight lever, located under the viewfinder tube, downwards, as per picture. The viewfinder eyepiece has been removed to better illustrate the above mechanism.

Note: When the viewfinder is rotated up and down, the image in the viewfinder will alter accordingly. There is no mechanism to keep the image from rotating with the viewfinder.

Maintenance on the viewfinder can be carried out quickly easily as the whole viewfinder assembly can be easily disassembled. The below picture indicates the components of the viewfinder assembly.

The eyepiece attaches to the elbow with three screws, the elbow attaches to the viewfinder tube with three screws, and the elbow cover can be removed to expose the glass components for cleaning.



Note: As with all camera equipment, take due care in learning how to use it, seek manuals or search for information before tackling any maintenance or repair, force nothing, use correct tools, and always remember, many parts are irreplaceable.

References:

https://www.wikiwand.com/ru/%D0%9A%D0%B8%D0%BD%D0%BE%D1%80_16%D0%A1%D0%A5-2%D0%9C

<https://cinematography.com/index.php?/topic/19841-kinor-and-k-3-massive-informations/>

<https://picclick.co.uk/16mm-Soviet-movie-camera-Kinor-16CX-M-Lens-322581396769.html>

<https://sites.google.com/site/olexserviceskinor/>

Most information in this user manual is original, however, information has also been gathered from a variety of websites.

The below link is an English translation of the original Kinor user manual:

https://www.mediafire.com/file/3sxe9trod2nrrm1/Kinor_16_CX-1M_and_2M_Manual_English_translation.pdf/file

The below link is to a website where a D.I.Y repair and service is conducted on the Kinor 16 CX-2M:

<http://canon-s8-repair.yolasite.com/kinor-16-cx2m.php>