

The Bolex!

Part I: Film and Functionality

16mm Film

- The bolex shoots regular 16mm film
- Aspect ratio is 4:3
- 30 frames per foot of film
- Can load up to 100' of film
- 100' roll = Approx 2 minutes



How to read a Kodak film can label

Film Speed

Film provided with KEYCODE Numbered edge print

Upper portion of label is peelable; it can be placed on film magazine as reminder of product being used

Tungsten rating with no filter will give indicated speed rating

Daylight rating with an 85 filter will give indicated speed rating

Length of roll in meters (feet)

Finished film specification

5219 = Film code
221 = Emulsion number
011 = Roll number
02 = Part number
03 = Strip number
11 = Unit number

UCC/EAN 128 Codes

Catalog Number

35 = Film width (35mm)
N = Perforation type (Negative)
4740 = Metric pitch measurement (4.740 mm)
(1866) = Imperial pitch measurement (0.1866 inch)
EI = Emulsion position and winding type (Emulsion In)

www.kodak.com/go/motion
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KPI27221A

Process ECN-2 5219 221 011.02 03.11

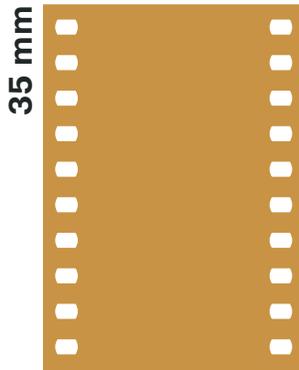
☉ 3200 K	EI 500/28°
☼ Filter No. 85	EI 320/26°

35 N4740(1866) EI
5219 221 011.02 03.11
122m (400ft)
Sp 718

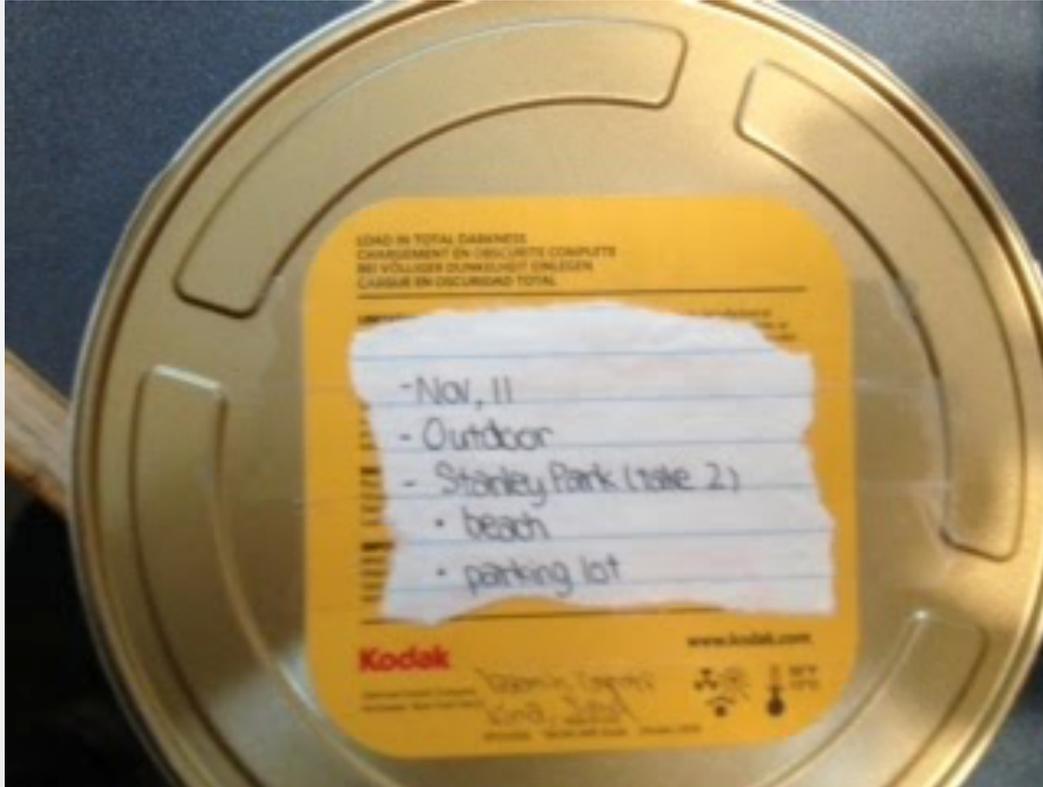
CAT 873 8304

(01)40041778738304(30)01
(3220)000400(10)5219221011020311

FILM SIZES



HOW NOT TO LABEL YOUR FILM:



That's better:

If you only use 300' of the roll, you can "short end" the last 100' in another can. Be sure to label the short end accordingly, with length, film type, and the date.



Type of film is important as it tells them which chemical process they need to use

Daylight spool:



The bolex accepts 100' loads of film which will be packaged on what's called a "daylight spool." It is called this because it is built in such a way that it blocks light from hitting the inner portion of the film.

This means you can load the bolex in low light conditions. You will lose the first 5 feet or so as they will become exposed in the loading process.

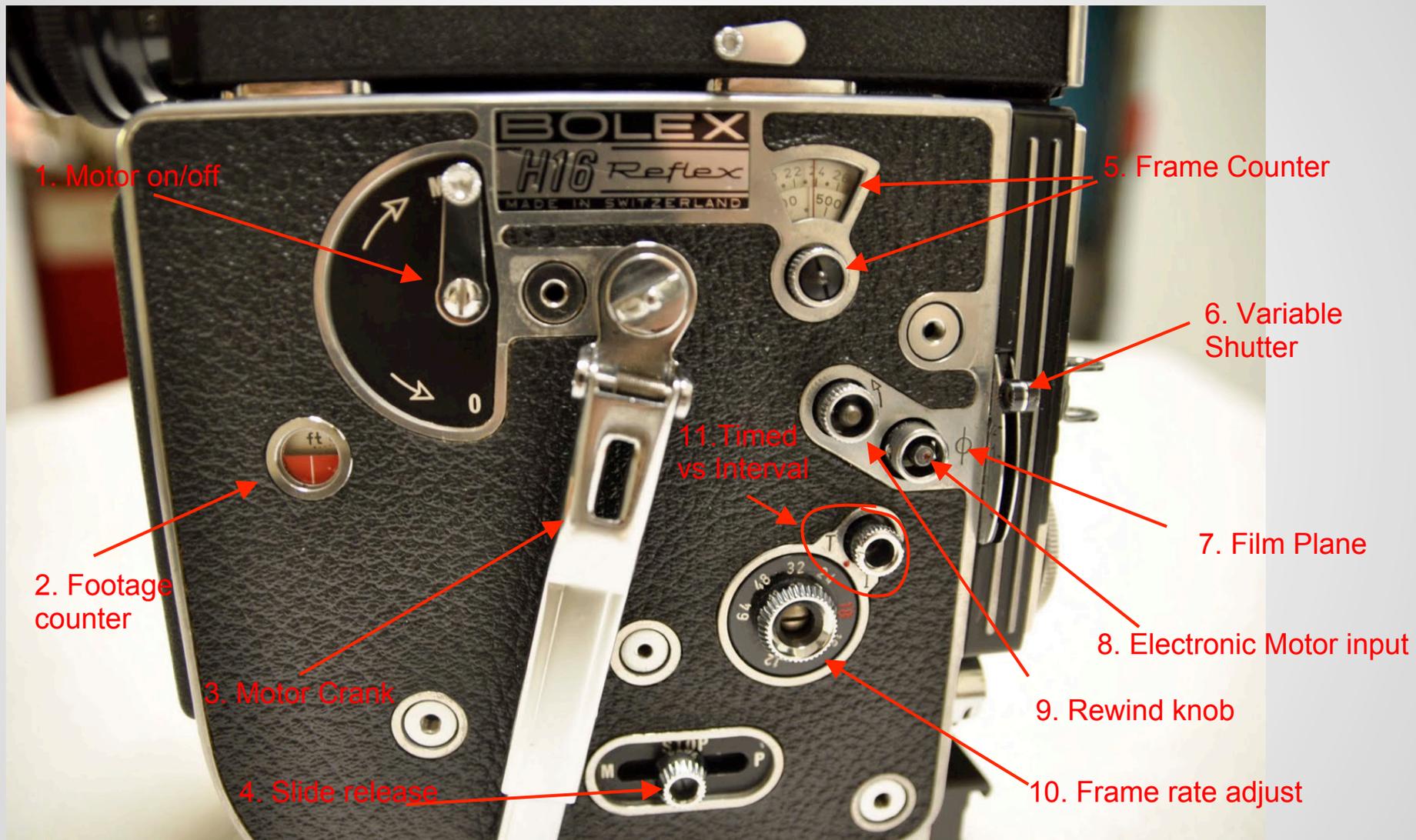
Bolex H16 Reflex:



Originally developed in 1935! The models we have at ECUAD are from the 1966-1970's.

Uses a spring wound system, so no batteries required. Full wind gives up to 30sec of action at 24fps.

We also have one electronic bolex that runs on battery.



1. Motor on/off

2. Footage counter

3. Motor Crank

4. Slide release

BOLEX
H16 Reflex
MADE IN SWITZERLAND

11. Timed vs Interval

5. Frame Counter

6. Variable Shutter

7. Film Plane

8. Electronic Motor input

9. Rewind knob

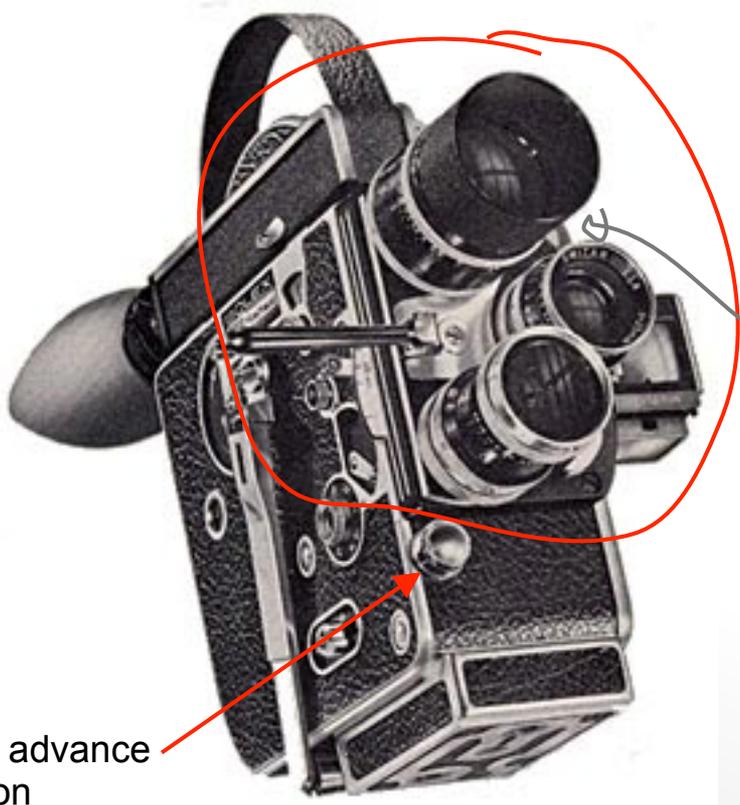
10. Frame rate adjust

Setting your diopter

The diopter is like the lens on a pair of glasses, it adjusts the viewfinder to your eye. If it is not set to your vision, all of your shots may end up out of focus. To set it:

- first remove the lens from your camera
- loosen the diopter ring by unscrewing the little locking knob
- look through the viewfinder and point the camera up at something bright
- adjust the diopter ring until you the grain on the viewfinder glass look sharp
- lock the diopter

The Lens Turret



Film advance
button

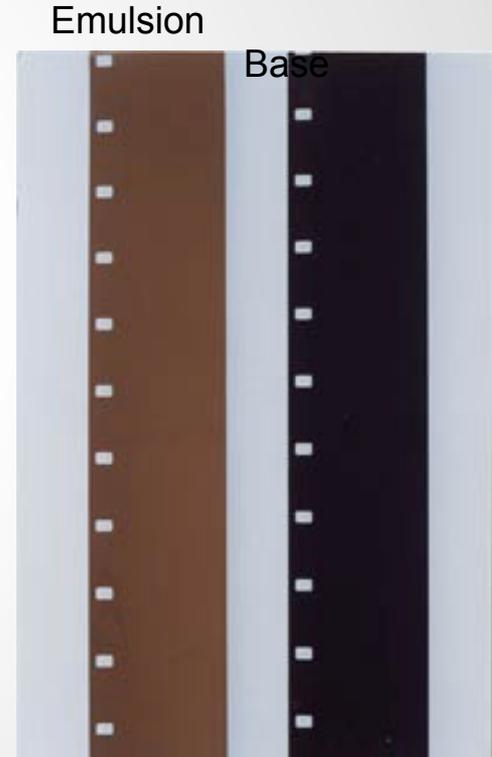
As you can see, these bolexes have a 3 lens turret which means you can have three lenses mounted at once. Only one of these lenses is in front of your film gate (the middle one), but you can turn the turret to switch lenses by unlocking it here:

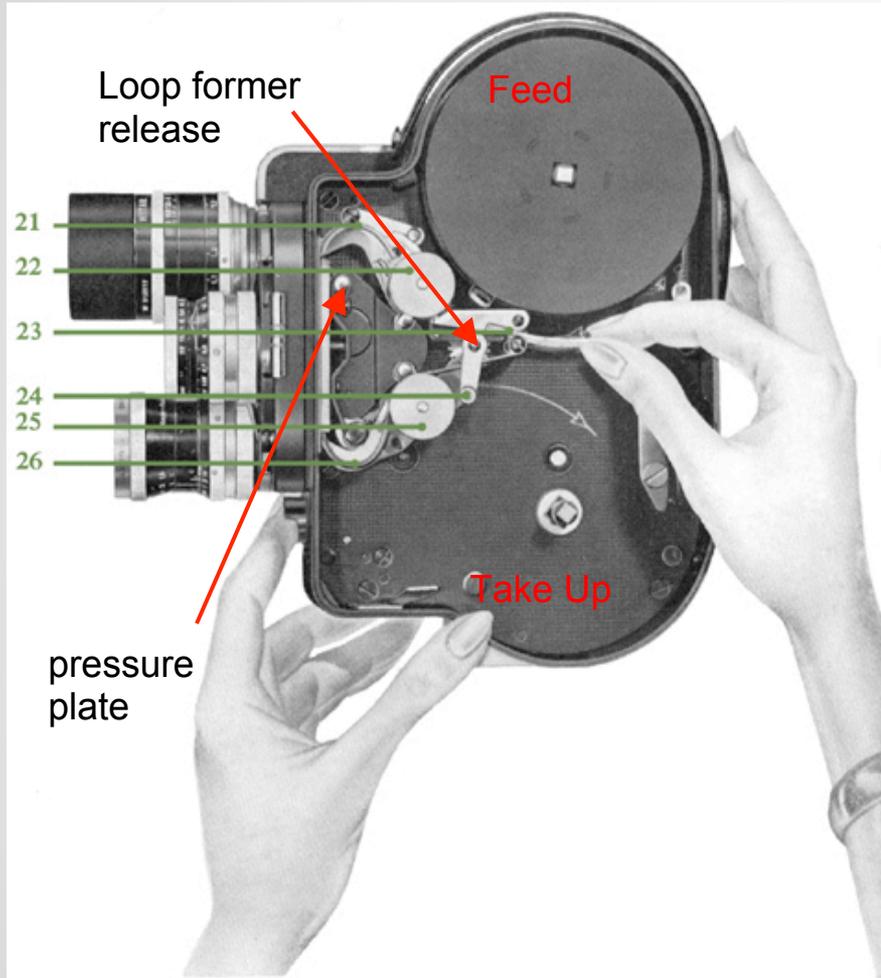
Just be aware that if you have a wide lens on, you have to be careful that your long lens isn't appearing in your shot.

These cameras use a "C" mount lens, which simply screws on and off.

The Bolex Part II: LOADING!

- As I said, loading can be done in dim lighting situations (ie. a shady area if outside, or a room with the lights off, or low wattage lights on if it's too dark to see)
- The film has two sides to it: The emulsion and the base
- The emulsion is the layer that reacts when in contact with light
- The base is the celluloid layer that acts basically as a canvas for the emulsion layer
- So, when loading the film, you want the emulsion side to be facing out towards the lens to be exposed when the gate opens





- All film cameras have either “displacement” or “coaxial” magazines (the mag is where you load your film)
- The bolex uses a displacement mag which means that both the feed and the take up spools are on the same side
- First, wind your camera to give it power
- Then load the film onto the feed side with the sprockets on the bottom
- Make sure your loop formers are closed (see 21 & 26) by turning lever 24 so it is perpendicular to the lens as shown
- Make sure your pressure plate is in place by pushing it towards the lens
- Feed the end of your film into the gears as shown, and advance the film with your other hand until the film catches
- It should advance smoothly out the other side in the direction of the arrow
- Feed the end into a second daylight spool and secure on the take up side
- Release the loop formers by pressing down on the release button
- Roll the camera to test!

Still confused?

Watch this video:

<https://www.youtube.com/watch?v=nsDDzwX8-IM>

Common mistakes:

- Pressure plate not in place, so film jams at gate when loading, or footage is out of focus
- Variable shutter left down when shooting
- Diopter not set (footage out of focus)
- Loop formers not shut when loading, film jams or breaks