RetroScan 816^{2K} Instructions
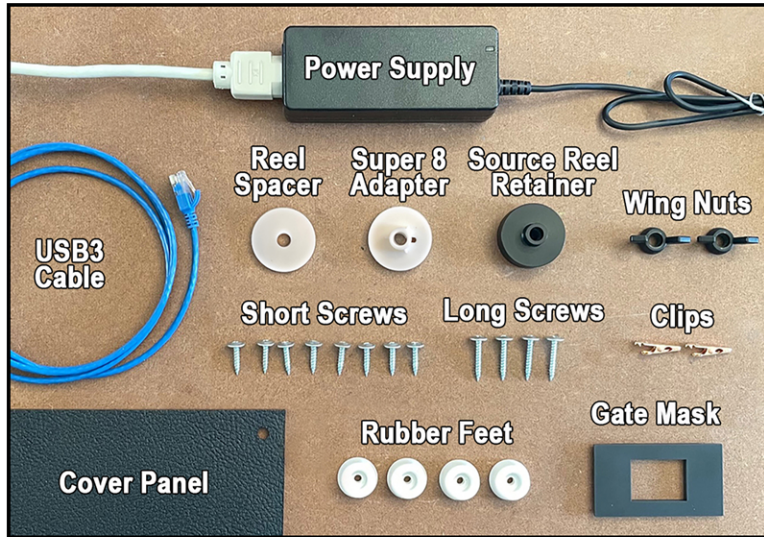
Table of Contents

RetroScan 816²ᴷ Instructions

copyright 2023, MovieStuff, LLC - All rights reserved

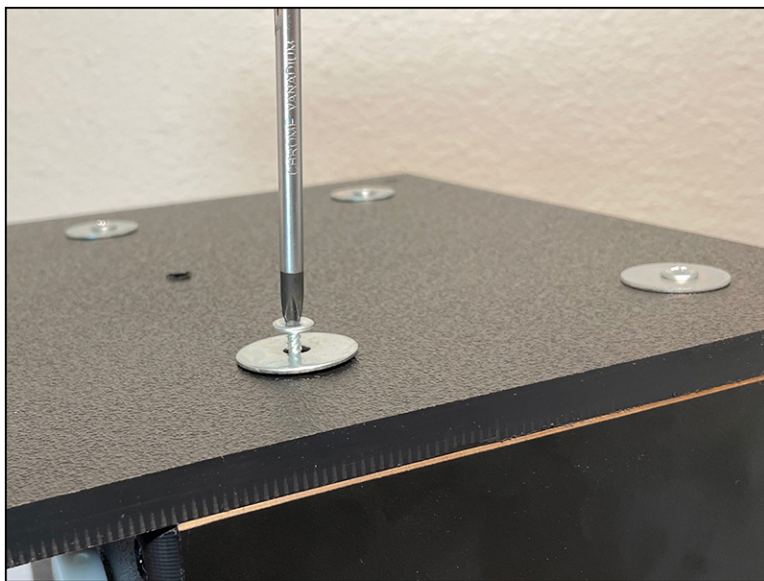Please locate and identify these accessories and items found in the box on top of the unit.

Using a medium Phillips screwdriver, remove all of the screws and washers from the top plate of the unit. These screws will not be used again so please set them aside and do not mix with the other items provided with the unit.
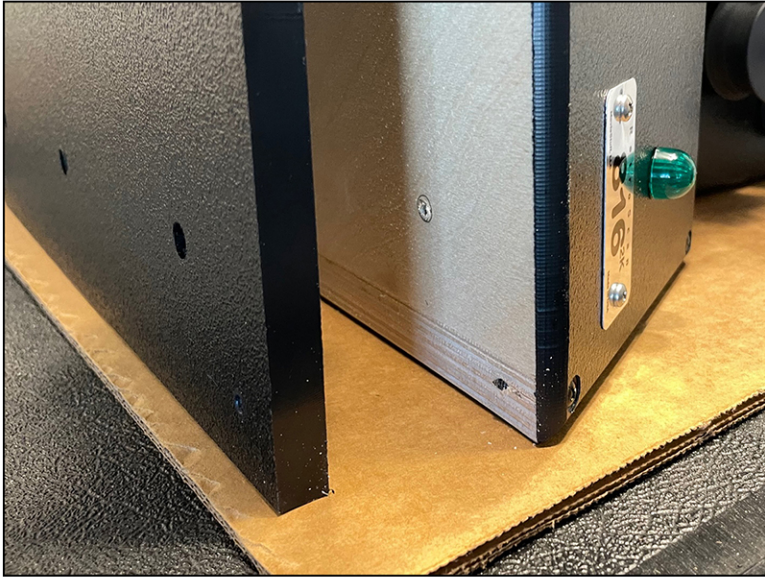

Remove the wooden shipping spacer from the plate. This wooden spacer and the screws will not be used again. However, it is advised to keep the wooden spacer, styrofoam corners, and the shipping boxes for future shipping, if necessary.

RetroScan 816²ᴷ Instructions

copyright 2023, MovieStuff, LLC - All rights reserved

Lay the unit on its side on a non-marring surface. Align the plate with the bottom of the unit. It does not matter which end of the plate faces front as the plate is symmetrical.
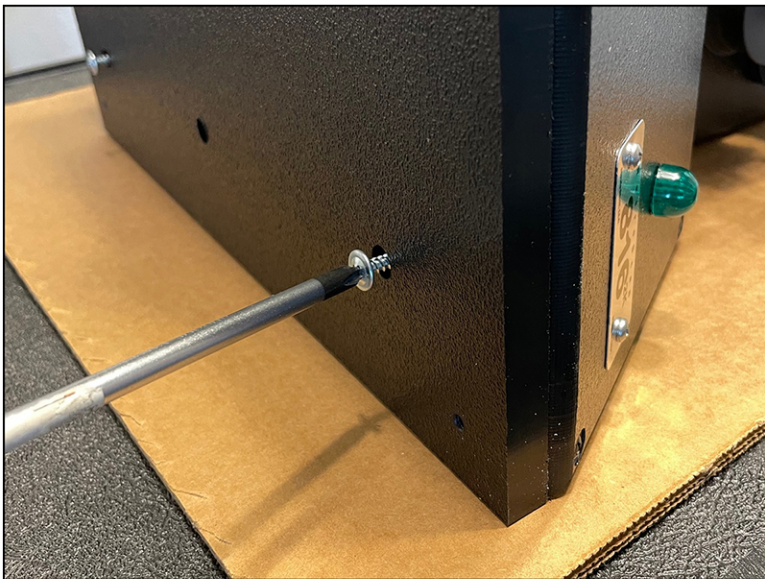
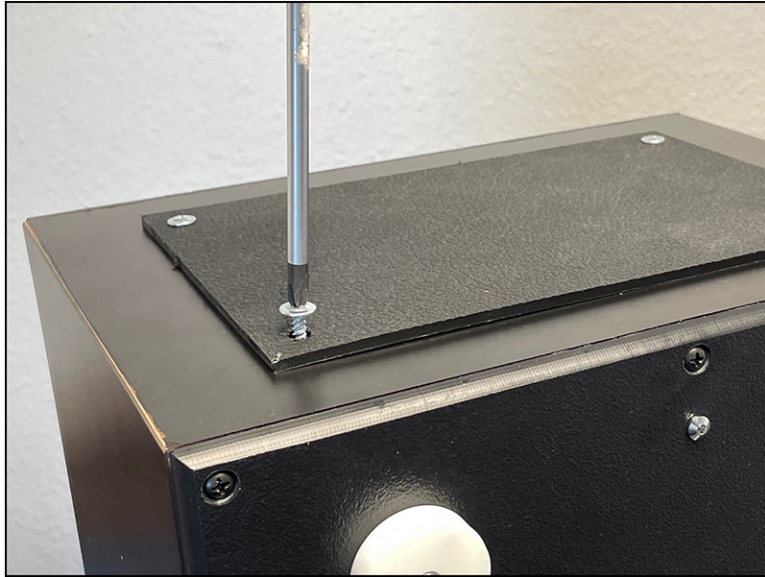Use the long screws from the accessory box to attach the plate to the bottom of the unit.

Attach the 4 rubber feet to the bottom of the unit using the short screws from the accessory box.

RetroScan 816^{2K} Instructions

Using 4 of the short scews, attach the thin cover to the top of the unit.
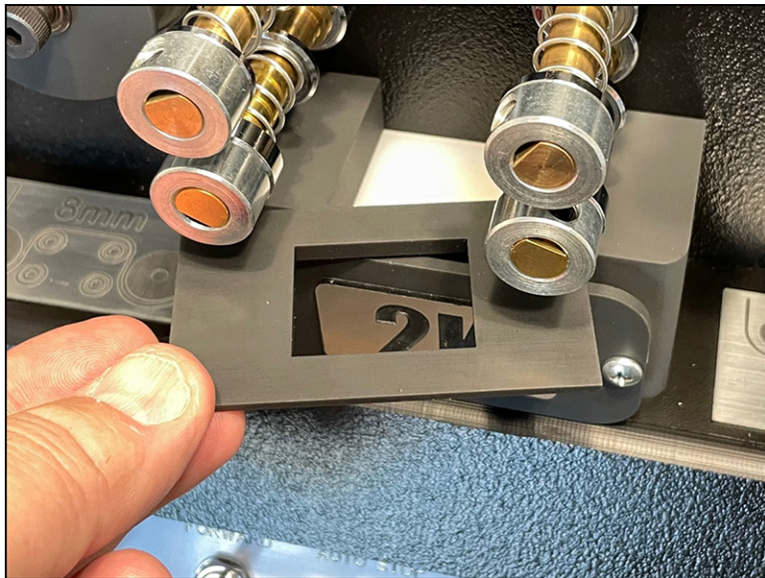
Insert the removable light mask into the gate area. This mask can be removed for easy cleaning of the light source below. Additional masks are available which can be used with tape to customize the area of the film that is illuminated to reduce flare.
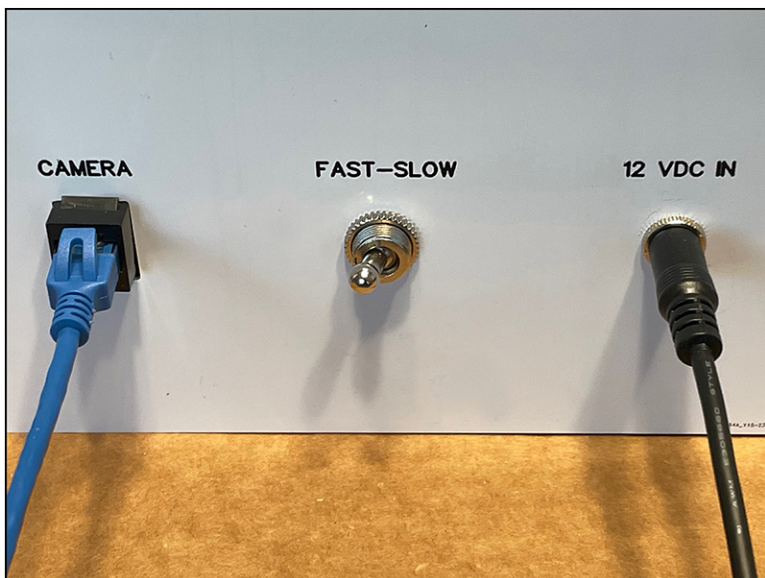
Insert the provided power supply and Ethernet cables as shown.

The fast-slow switch changes the speed of the scan from 15fps to 10fps. This is handy if your PC is running slow or your hard drive is full. Scanning at 10fps will not affect the playback rate of the file.

RetroScan 816^{2K} Instructions

The controls are pretty simple. The **Red Buttom** turns power on and off for the entire unit. **Foward** and **Reverse** has a center stop position. If activated, the **AutoStop** switch will stop the unit after 15 seconds if frames are no longer being captured due to misalignment of the LightPin sensor, end of reel, or if film breaks or jams. The **Exposure** knob is used during manual exposure and can help to find tune the software's auto exposure function.

As noted in the PC specs, the camera in this scanner uses an Ethernet connection and not a more typical USB. However, we have found through experience that most PCs will not function properly if connection from the scanner to the PC is limited to just the Ethernet port. Therefore, you will need to purchase the following two items. They are commonly available on Amazon.com:

TP-Link USB to Ethernet Adapter (UE300)   **TP-Link 802.3af Gigabit PiE Injector**

To your PC
USB3 port
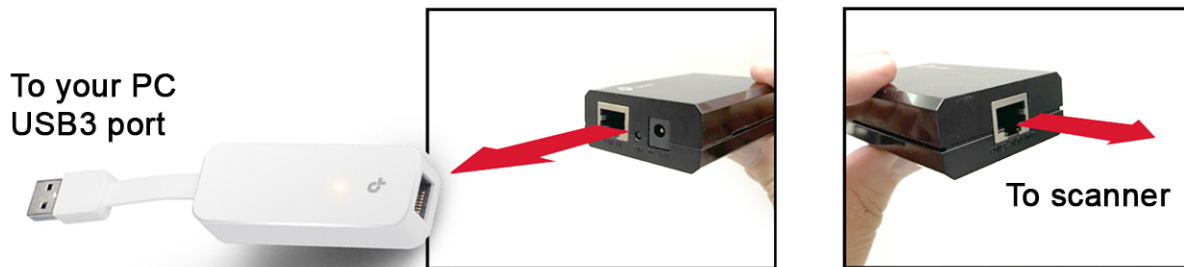
To scanner

The USB to Ethernet adapter plugs into an open USB3 port. (USB2 will not work) The USB to Ethernet adapter is connected to the PoE Injector via a short Ethernet cable. The other end of the PoE Injector is connected to the scannera via the 5 foot Ethernet cable provided with the scanner. Don't forget to check your network card settings on your PC and match them to the examples in the software instructions.

When the Ethernet cable is not plugged into the PC, this pilot light will be off.
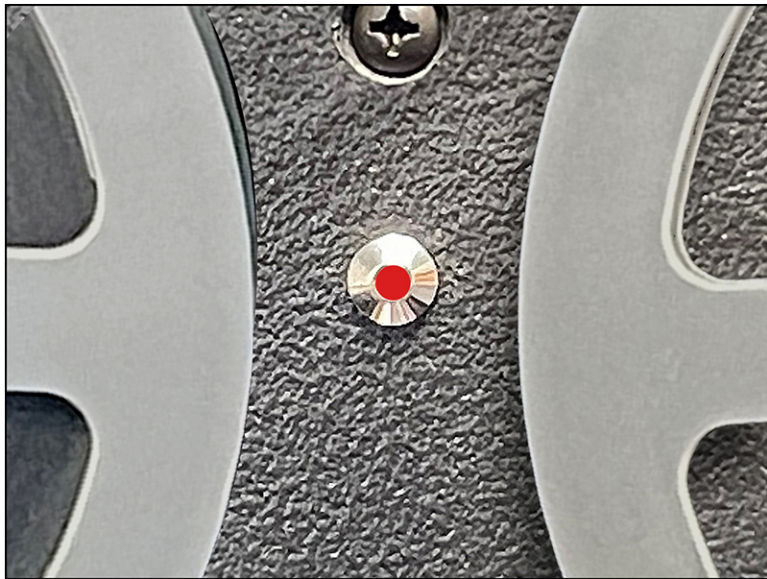
When the Ethernet cable is plugged into the scanner with the software active, this light will start to blink red.

After blinking red, the light will then blink green. When scanning, the light will be solid green and not blinking.

NOTE: The green may be dim, compared to the red. Also, because the internal camera gets its power from the Ethernet cable, it is advised to unplug the cable from the scanner when not in use. This will prevent additional wear on the camera inside the unit.

RetroScan 816²ᴷ Instructions
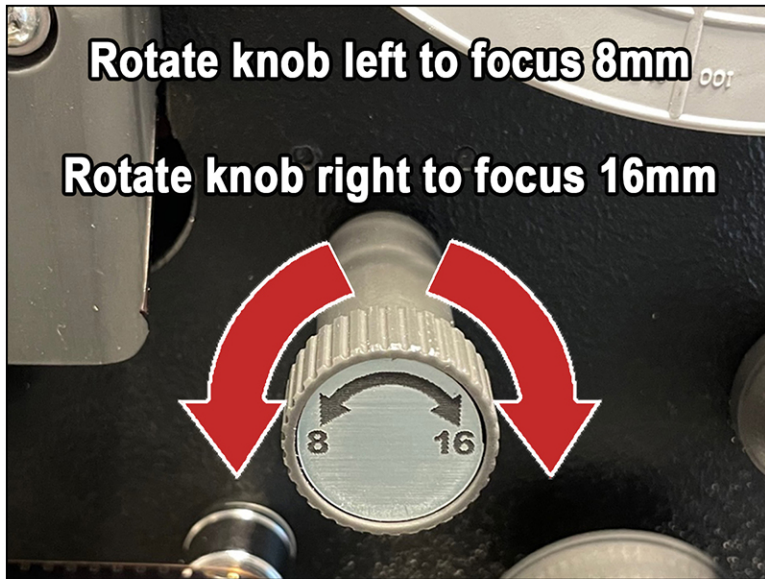
To focus the unit, simply turn the focus knob in the direction shown on the front of the knob. This should be done while the film is moving so that the film has proper tension on the film guides.
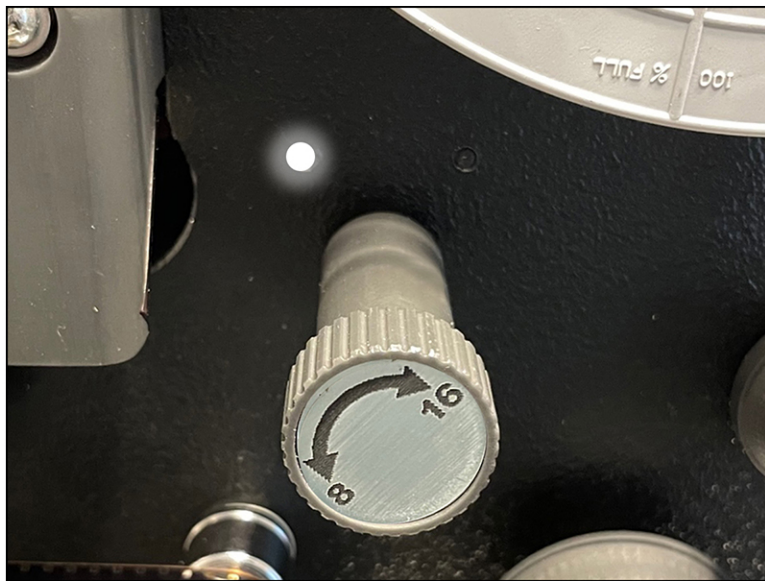
If you reach the limit of the internal focus mechanism while focusing 8mm/S8 film, this light will come on accompanied by a really annoying beep. This is to prevent damage to the focusing mechanics of the unit.

The same thing will happen if you reach the limit when focusing 16mm.

RetroScan 816²ᴷ Instructions
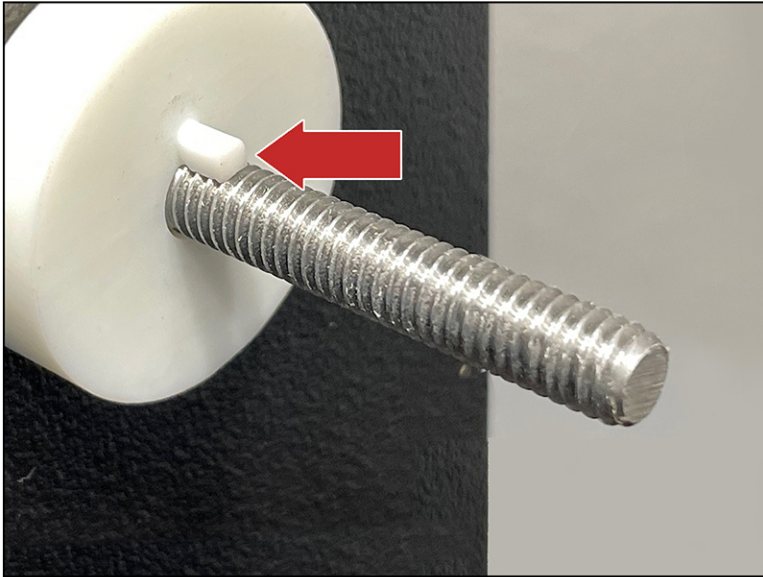
To mount a 16mm take up reel, note the small tab on the take up hub.
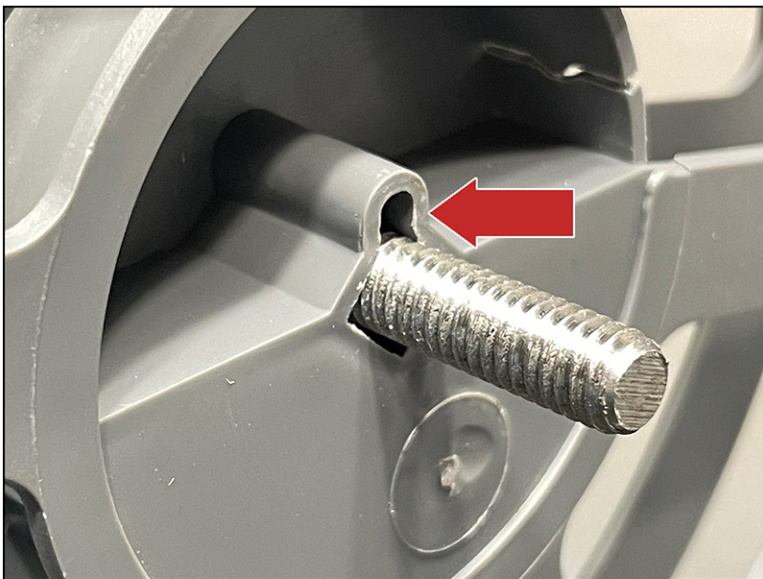
The reel must be aligned with the tab as shown.

Tighten

Loosen
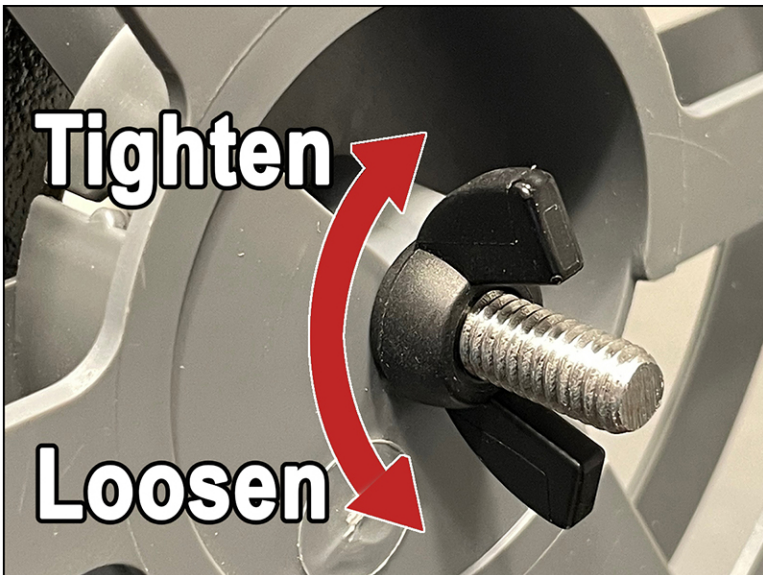
The take up reel is held in place with a simple wing nut. There is no need to over-tighten the wing nut as its job is merely to keep the reel in place.

RetroScan 816²ᴷ Instructions

Unlike the take up hub, the source hub on the left has no tab.
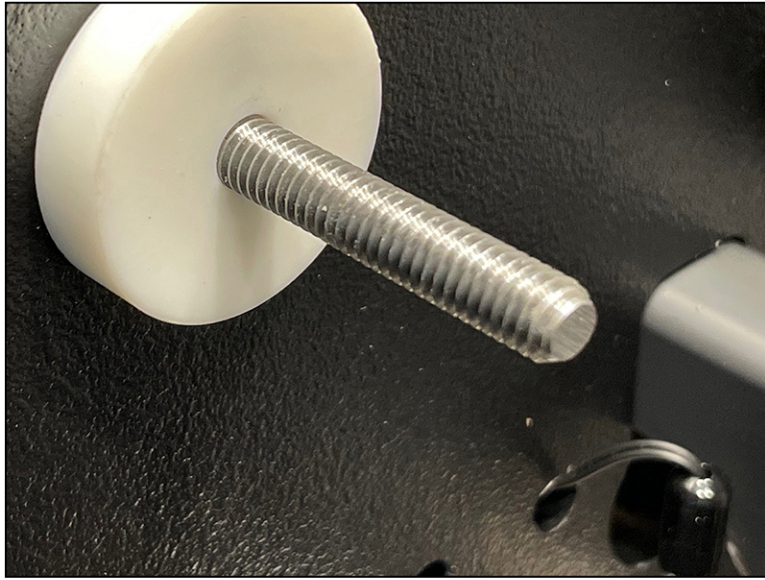

For 16mm reels of film, simply slide the reel onto the left source spindle as shown. Film should feed from the left side of the reel.
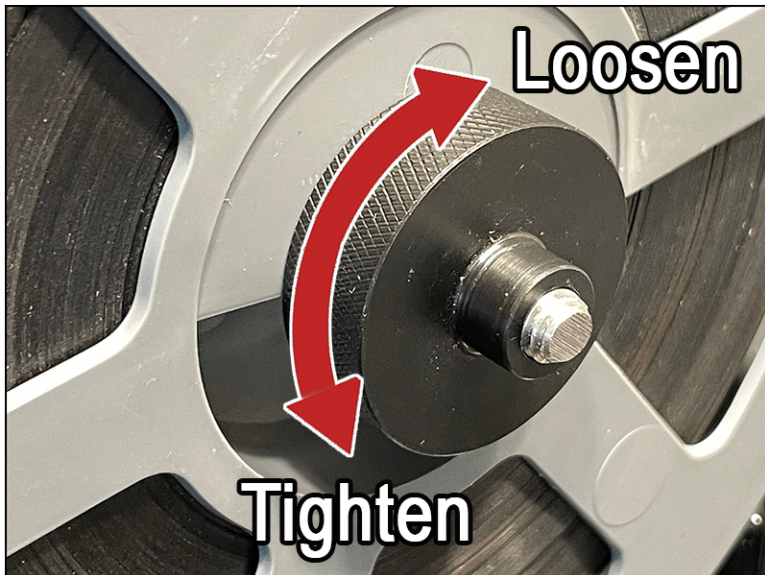
Unlike the wingnut used on the take up spindle, which has normal right handed threads, the reel retainer on the source spindle has left handed threads. This means that you will turn the reel retainer to the left to tighten and to the right to loosen. There is no need to over-tighten. Just enough to lock the reel to the source hub without slipping.

NOTE: The wing nut and the source reel retainer shown here are not interchangeable. You can not use the wing nut on the source spindle and you can not use the source reel retainer on the take up spindle. Attempts to do so will damage both.

Loosen

Tighten

RetroScan 816^{2K} Instructions
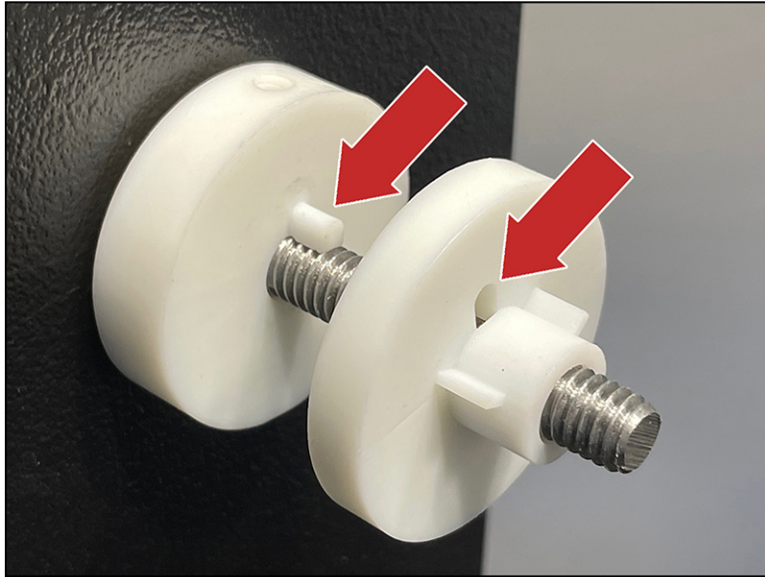
When scanning 8mm or Super 8 flm, a Super 8 take up reel should always be used. Note the alignment of the tab on the take up hub with the notch in the S8 reel adapter.

NOTE: Do not lose this adapter! Other brands of adapters will not work with this unit. Extra adapters are available for purchase, if needed.
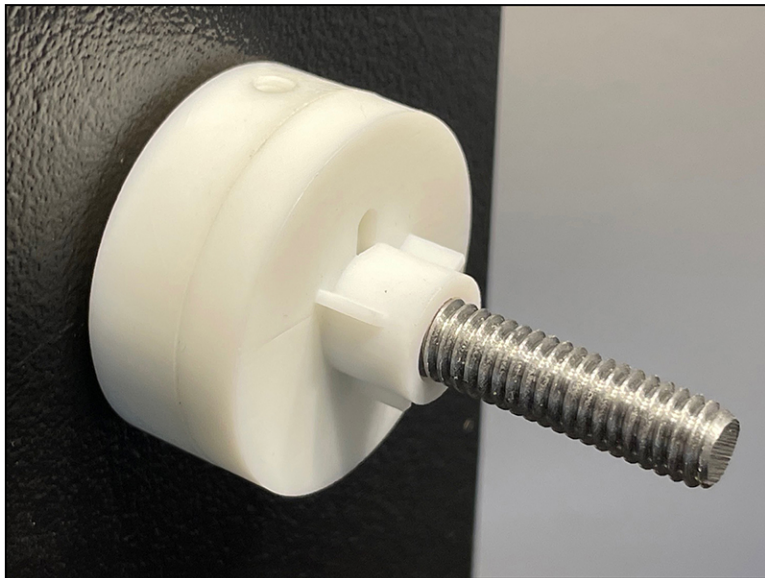
Slide the Super 8 reel adapter back as shown.

Secure the Super 8 take up reel with the provided wingnut.

RetroScan 816^{2K} Instructions

The source hub has no tab so, if scanning 8mm or Super 8 film, all you need is the spacer as shown.

The purpose of the spacer is to position the source reel so that the film does not rub against the reel as it is being scanned. This spacer will work for most all reels. If needed, washers from a hardware store can be used to suppliment or replace this spacer for better 8mm reel alignment.
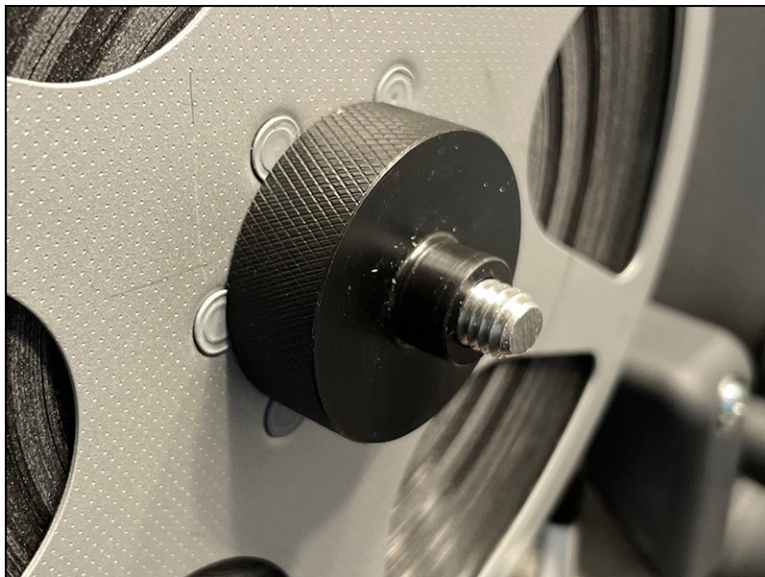
Like 16mm reeels, all Regular 8mm reels have a smaller opening in the center of the reel than Super 8 reels. When mounting a Regular 8mm reel, note the flange of the retainer faces away from the reel.

NOTE: Remember, the source retainer has left handed threads. You turn to the left to tighten and turn to the right to loosen.

RetroScan 816²K Instructions
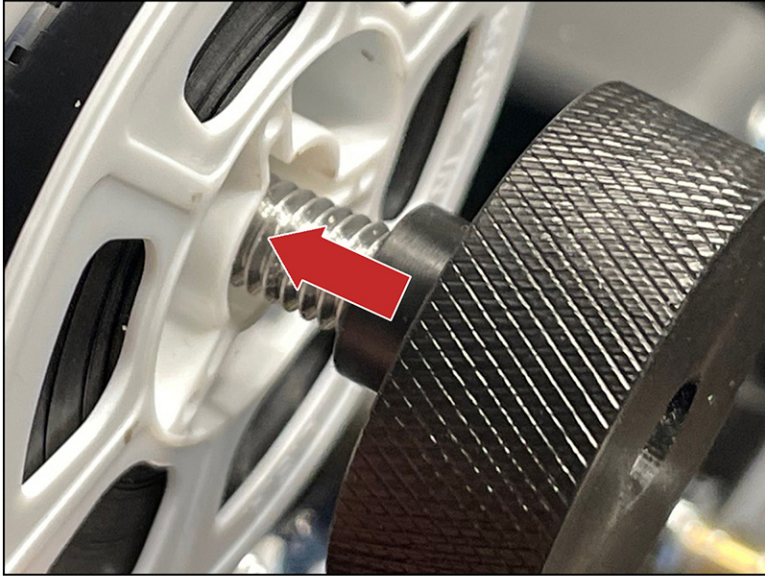
When mounting a Super 8 reel of film, the source reel retainer should be turned around so that the flange faces towards the Super 8 reel as shown.
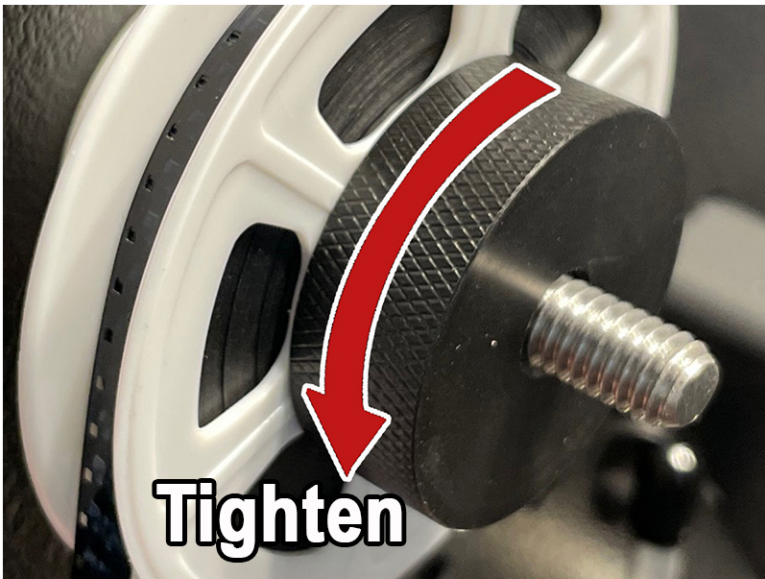
The flange should be aligned wit the opening of the Super 8 reel of film and then gently tightened.

Tighten

Loosen
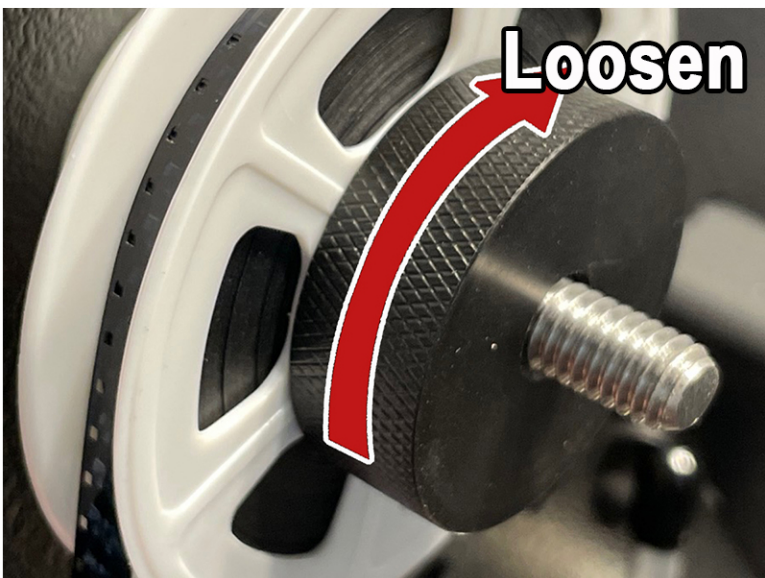
Again, remember, the source reel retainer has left handed threads!

RetroScan 816²ᴷ Instructions

There are two different threading paths for the scanner. All 8mm and super 8 film should be threaded as shown to ride over the top film guides. All 16mm film should be threaded as shown to ride under the bottom guides. Threading differently will cause unwanted alterations in image size and also may affect performance of the unit by altering the tension of the film passing by the LightPin sensor and camera.

The accessory kit includes two film clips that are a handy way to secure the end of the film to the reel as shown. Juste remember to remove the clips when you are finished scanning about about to rewind the roll.

The unit will allow you to rewind the film through the film guides for easy set up of each reel. However, it is advised to avoid rewinding the entire reel through the film guides to prevent potential wear on both the film guides as well as the film, itself.

To rewind the entire roll after scanning, thread the film as shown, which will bypass the film guides altogether.

12
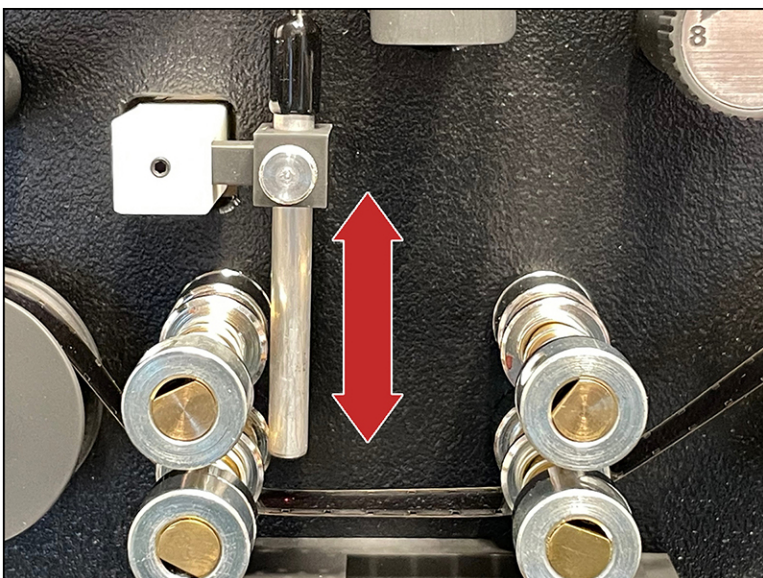
RetroScan 816²ᴷ Instructions

The scanner uses a unique LightPin Sensor to detect the sprocket holes in the film. The LightPin Sensor shines a small red beam of light onto the film, which is then reflected back into the sensor. As each hole passes, the beam is interrupted, which triggers the camera inside to capture a frame of film.

Turning the knob as shown will move the LightPin Sensor across the surface of the film. This makes for easy alignment with the sprocket holes.
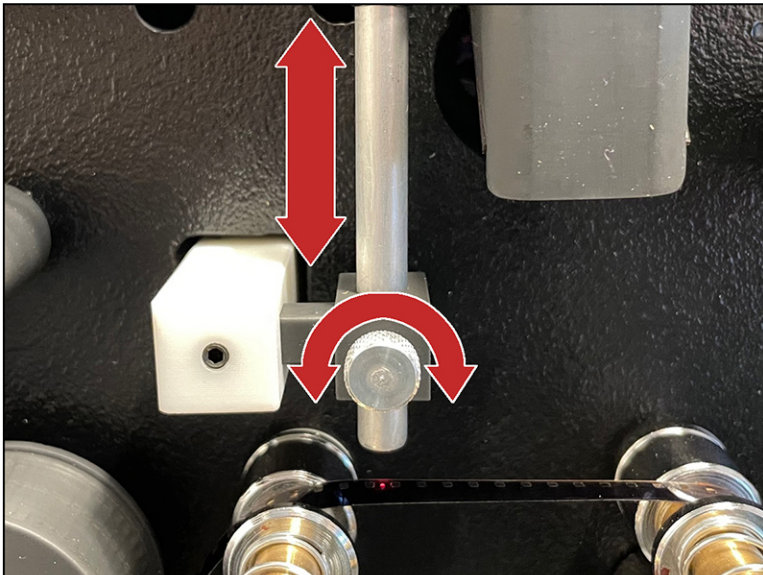
To focus the LIght Pin Sensor, loosen the small silver knob and, using your hand, slide the LightPin Sensor up and down to change the focus of the beam as shown. Once the focus is achieved, gently tighten the small silver screw.
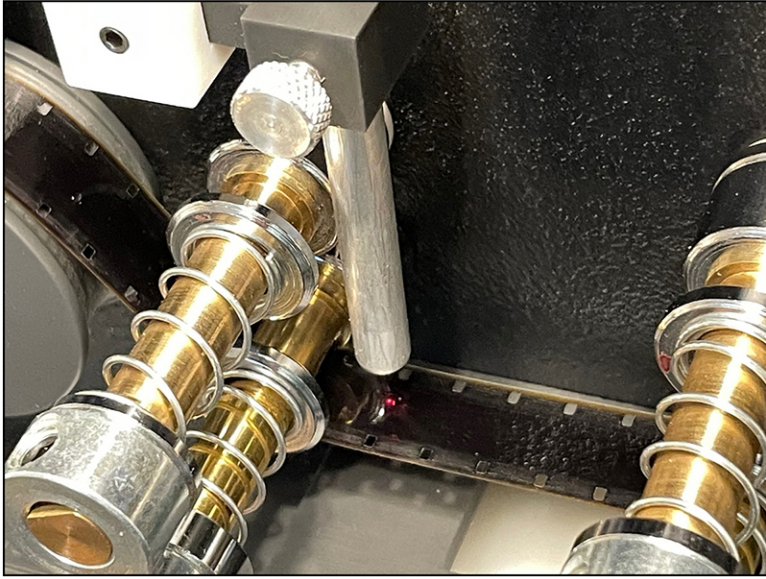
Focusing the LightPin Sensor on 16mm film is achieved the same way.
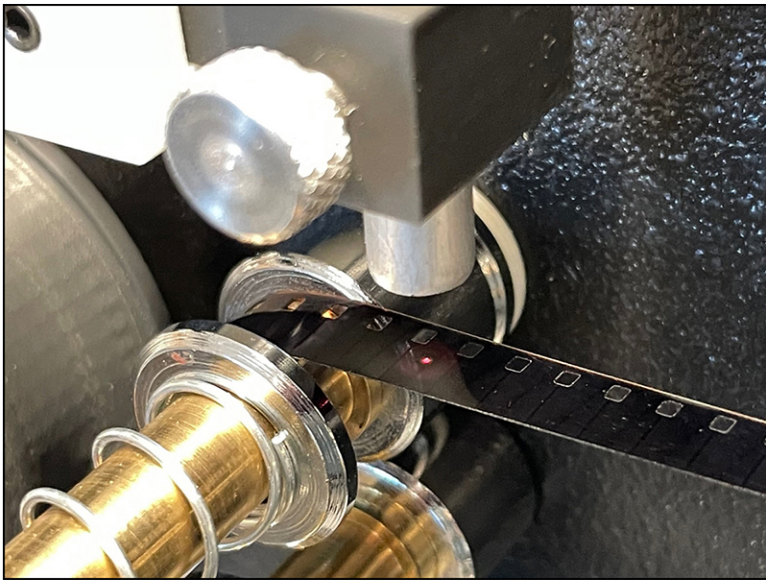
13

RetroScan 816^{2K} Instructions

Whether scanning 16mm or 8mm film, it is important to keep tension on the film when focusing the LightPin Sensor. This can be done by holding one reel and rotating the other by hand to tighten the film or the scanner can be running while the LIghtPin focus is set. Turning down the light will help see the red dot more easily.

Typically, it is easier to focus the LightPin Sensor by moving it to the center of the film. Moving the LightPin Sensor up and down will make the red dot smaller and larger. You want as fine a dot as you can achieve. When critical focus is attained, you will see the dot change color, which is an indication that the sensor is seeing a good return on the reflected red beam.

Once focus on the LightPin Sensor is achieved, move the red dot to the middle of the sprocket hole path.

Typically, you will not need to refocus the LghtPin when switching back and forth between S8 and R8 but you will need to reposition the LightPin Sensor between the holes since the center of S8 and R8 sprocket holes do not align with each other.

RetroScan 816^{2K} Instructions

copyright 2023, MovieStuff, LLC   -   All rights reserved

Once you have loaded film onto the scanner and focused the LIghtPin Sensor, flip the control to "Forward" and the first sound you will hear is the motor clutch engaging, after which the take up reel will begin to turn, pulling film through the unit.

As the film moves, you will see the green light above the name plate begin to blink. This blinking indicates that the LightPin Sensor is detecting the passing sprocket holes. If the unit is not running smoothly, or if the light is not blinking, make adjustments to the focus of the LIghtPin Sensor and/or the position of the sensor relative to the sprocket holes.

If you have any questions regarding operation of your unit, please contact us at 512-284-7197 or email moviestuff@swtexas.net