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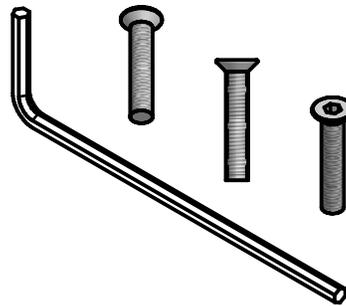
# Topcon TRC-JE and TRC-FE Retinal Camera Digital Upgrade

## Kit Contents



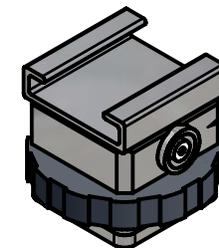
Custom retrofit adapter

This provides the bayonet fitting which mates to the digital camera. The EF-mount type for Canon EOS cameras is shown. Versions for other makes, such as Nikon, are available.



Replacement screws  
and hex key

These screws provide extra length and flush surface needed to attach the custom adapter to the Topcon instrument, compared to the original Topcon screws. Metric size M3x0.5-16 flat-head cap screw using 2mm hex key.



PC sync  
connector  
socket

Hot Shoe Adapter

This provides a "PC sync" connector for digital cameras which do not already have this connector for flash synchronization.

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# TOPCON TRC-JE and TRC-FE RETINAL CAMERA DIGITAL CAMERA UPGRADE KIT INSTALLATION INSTRUCTIONS

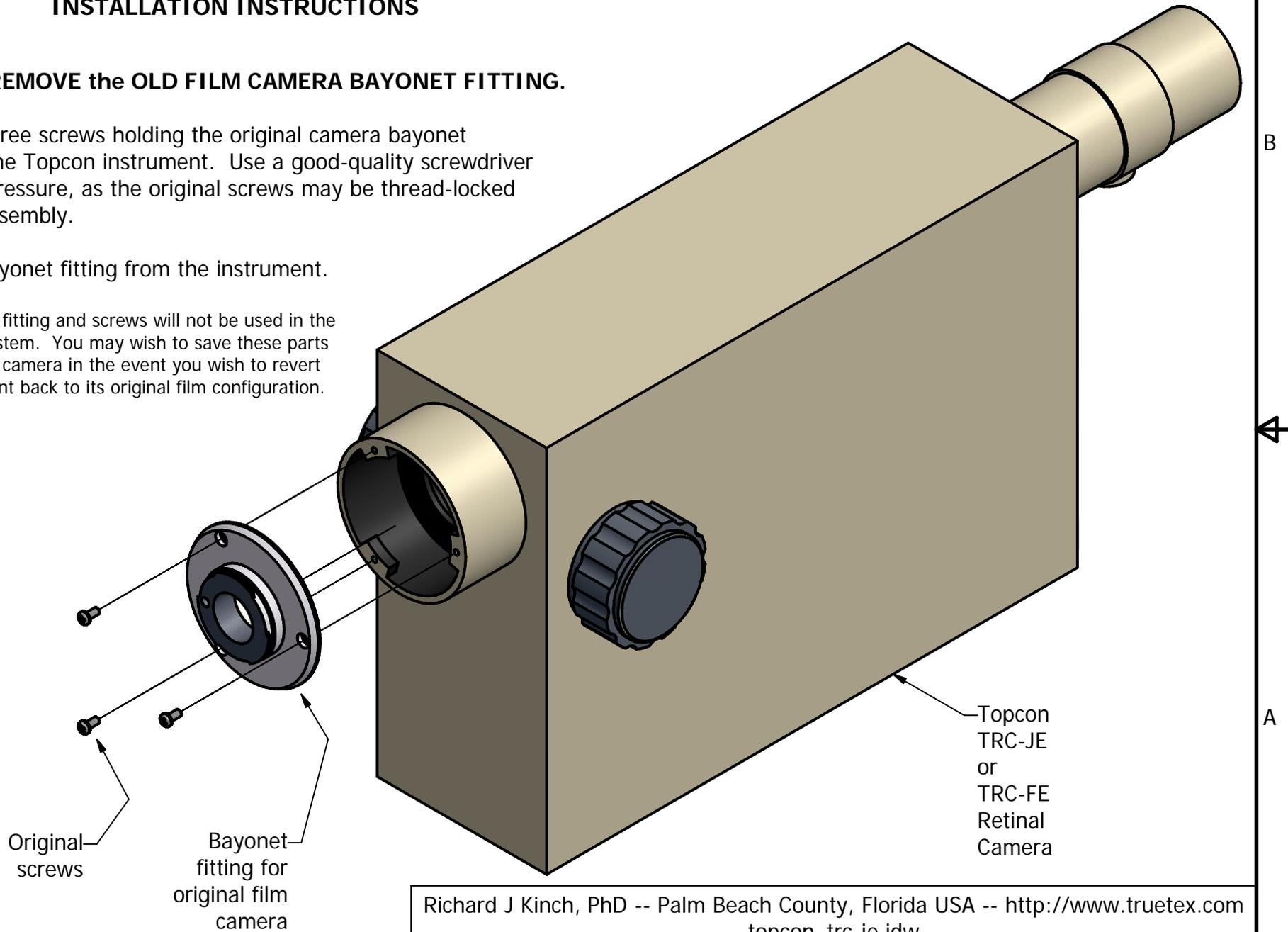
## STEP 1: REMOVE the OLD FILM CAMERA BAYONET FITTING.

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Remove three screws holding the original camera bayonet fitting to the Topcon instrument. Use a good-quality screwdriver and firm pressure, as the original screws may be thread-locked into the assembly.

Pull the bayonet fitting from the instrument.

The bayonet fitting and screws will not be used in the upgraded system. You may wish to save these parts with the film camera in the event you wish to revert the instrument back to its original film configuration.



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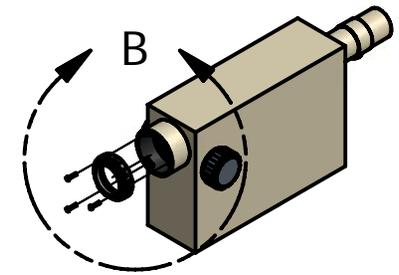
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### STEP 2: INSTALL the NEW DIGITAL CAMERA BAYONET FITTING

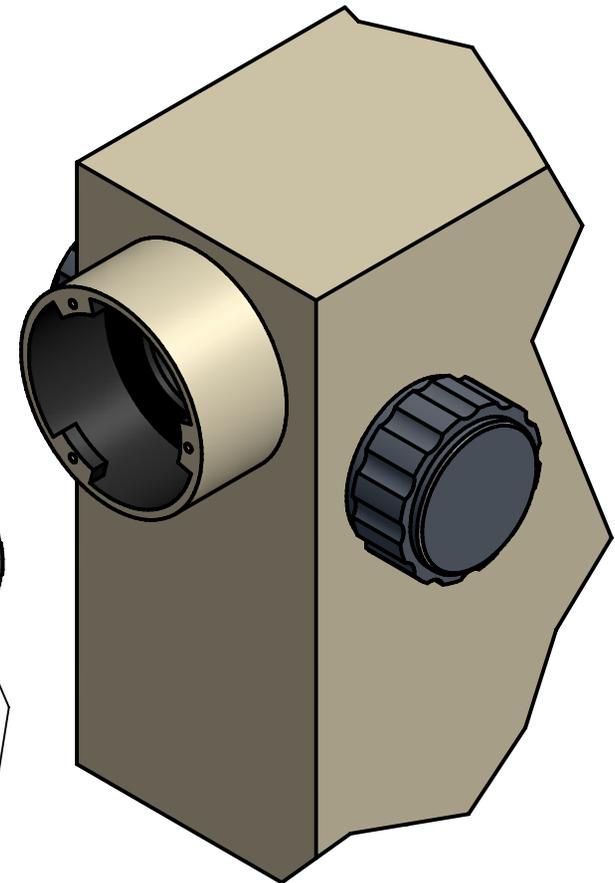
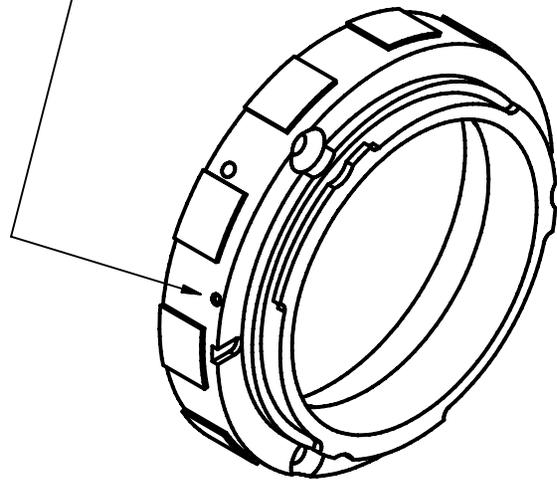
Align the new fitting to the same holes where you removed the old screws. In making this alignment, rotate the bayonet such that its RED DOT is at the 10 o'clock position.

Insert and lightly seat the new screws, then after all three screws are seated, tighten all three.

This completes the retrofit assembly. Proceed to attach and connect your digital camera as described in the next step.



RED DOT



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### STEP 3: ATTACH, CONNECT, and PHOTOGRAPH with the DIGITAL CAMERA

Remove any conventional lens from the digital camera body.

Connect the original Topcon coiled flash synchronization cable to your camera using the PC-sync connector socket on the camera. If your model camera does not provide a PC-sync socket, attach a hot-shoe adapter to your camera's flash bracket, and connect the Topcon cable to the PC-sync socket on the hot-shoe adapter.

Mount the digital camera (with lens removed) onto the instrument using the red dot as an alignment guide. Mounting starts with the top of the camera pointing at about a 10 o'clock angle, swinging to the 12 o'clock angle (upright) and locking.

To take photographs, turn on the Topcon instrument and the digital camera. Set the Topcon flash energy to the lowest setting. Set the digital camera to manual mode, ISO 64 or ISO 100 speed, and shutter speed of 1/20 second. Use the digital camera shutter button to trigger taking a photograph.

Collimate and focus on the subject retina in the usual way, using the digital camera viewfinder. Note that the image will be inverted, smaller, and less bright, compared to the original Topcon viewfinder, as a consequence of the smaller digital sensor format and viewfinder. We offer an optional viewfinder inverter-magnifier for Canon cameras to render the viewfinder image upright and larger.

Smaller-format digital SLR cameras (Canon models other than 5D) will furthermore impose an 0.6X crop factor on the full Topcon image, cropping out the top and bottom extremes of the full instrument image. The Canon 5D camera, which provides a full-frame digital sensor, does not have this limitation.

Transfer digital photos to a computer using a USB cable or by removing the memory card. While the camera will shut itself off if you leave the power on, you may wish to use an AC power adapter to avoid the need for charging the camera battery.

