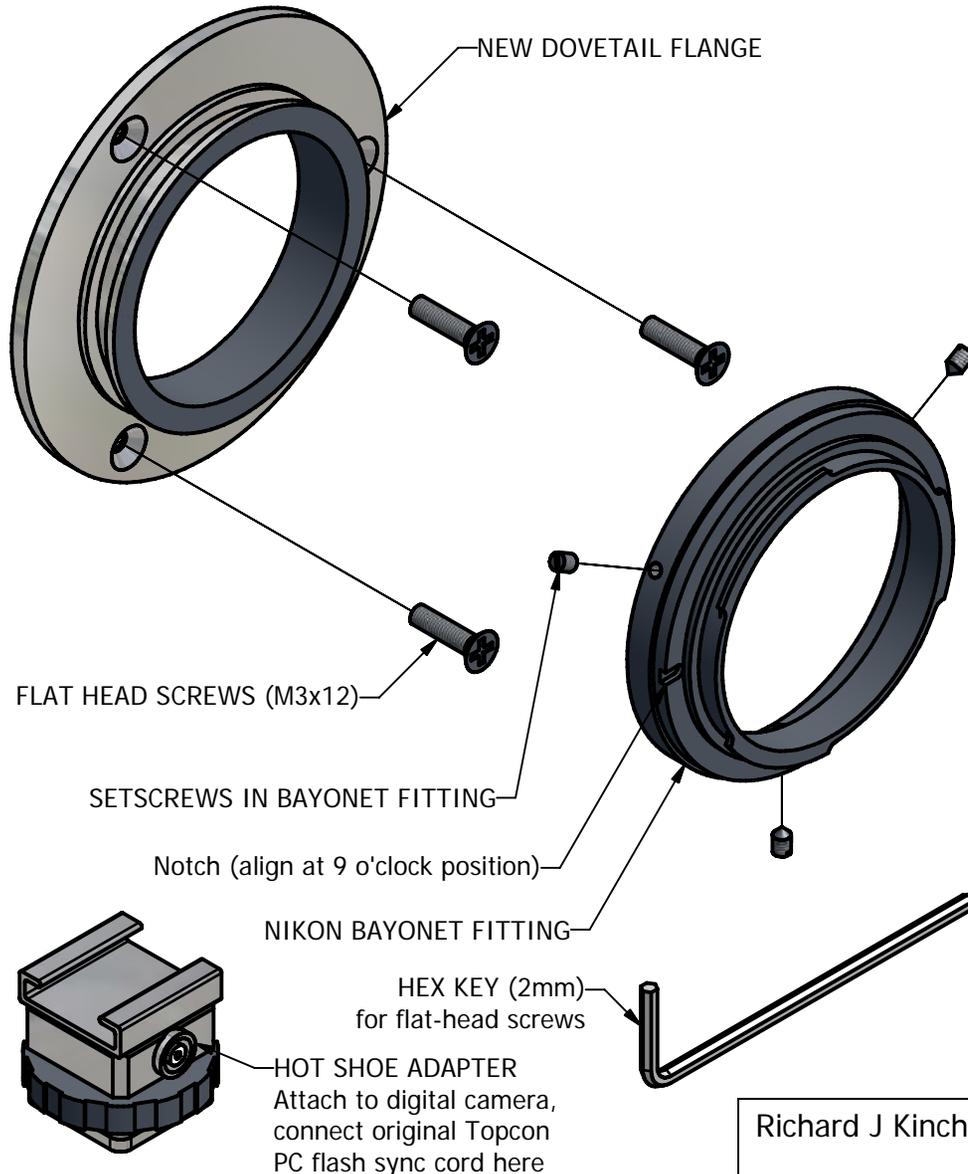


Installation Instructions

Upgrade kit for Nikon digital cameras for
Topcon TRC-JE, TRC-FE, and similar retinal cameras



STEP 1: Remove the old Topcon bayonet fitting from the Topcon instrument by removing three screws. This old fitting and the screws will not be used in the upgraded instrument, but you may wish to set them aside should you ever want to revert the instrument to film operation.

STEP 2: Attach the NEW DOVETAIL FLANGE to the instrument using the three FLAT HEAD SCREWS and HEX KEY supplied.

STEP 3: Fit the NIKON BAYONET FITTING over the dovetail projection on the NEW DOVETAIL FLANGE. Rotate the NIKON BAYONET FITTING so that the notch is at the 9 o'clock position, and tighten the SETSCREWS IN BAYONET FITTING using a small jeweler's screwdriver.

STEP 4: Attach your Nikon digital SLR camera to the NIKON BAYONET FITTING in the usual way. The Topcon instrument effectively becomes a manual lens for the Nikon camera.

STEP 5: Connect the Topcon PC flash sync connector to your Nikon camera flash sync terminal. If your Nikon camera does not provide this terminal, attach the HOT SHOE ADAPTER to the Nikon camera flash hot shoe receptacle, and connect the Topcon PC sync connector to the HOT SHOE ADAPTER.

STEP 6: Set the Nikon camera to its manual mode ("M" setting on the mode dial) and select a manual exposure of 1/20 second and ISO 100 speed. Use the Nikon viewfinder to align and focus the instrument to the patient eye, and the Nikon shutter button to take photographs with a synchronized flash.

NOTE 1: Full-frame Nikon SLR models (Nikon D3, D3X, D700) provide the same field of view as the original Topcon viewfinder, although inverted.

NOTE 2: Other Nikon SLR models, that are not full-frame size, provide a smaller sensor area than 35mm film, so the field of view of the camera is cropped by a factor of 0.6X versus the original Topcon film camera. This cropping will omit only the very top and bottom areas of the original field of view, while adequately covering the left and right sides. Cropped viewfinding is more difficult because the edges of the field are where the flares appear from slight misalignment to the patient pupil.

NOTE 3: Viewfinding in the digital cameras is dimmer and smaller than the original film cameras because the original viewfinder was a clear eyepiece, while the digital cameras use a focusing screen with beamsplitter for autofocus and exposure metering. The examiner must compensate by boosting the examination lamp brightness.