


Nikon Eclipse FN1 Installation Procedure

This is the manual for the new Flex coupler version of the Z drive. This version was introduced in December 2016. If your kit has the Flex Coupler. Then this is the correct manual. If not, then refer to the [old FN1 manual](#).



 Flex Coupler

The procedure below outlines the steps necessary to install the ASI Microscope Focus Controller Drive onto the Nikon Eclipse FN1 microscope.

To perform the following steps you will need the following tools:

- Medium flat blade screw driver
- 1.5mm, 2mm and 2.5mm Allen(hex) wrenches
- The Allen wrenches are provided by ASI.

The procedure has three parts:

1. Removing the Left fine focus knob
2. Installing the baseplate.
3. Installing and aligning the motor drive assembly.
4. Installing the motor drive cover plate & fine focus knob.

Part 1 - Removing the Right Fine Focus Knob



Figure 1: Pull off the Rubber Boot to expose the nut. Use screwdriver to remove the nut

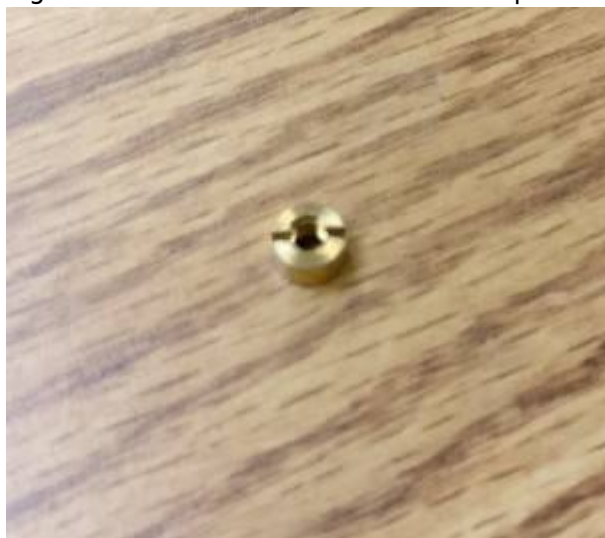


Figure 1b: Slotted Nut



Figure 2: Pull knob straight off to expose shaft

1. Pull off the black rubber boot covering the Left fine focus knob.
2. Remove the round slotted nut from the end of the knob using the medium slotted screwdriver.
3. Remove the fine focus knob by grasping it firmly and pulling it straight off. Do not turn the knob to work it off as this will damage the plastic alignment key molded into the knob.

Part 2 - Installing the Baseplate

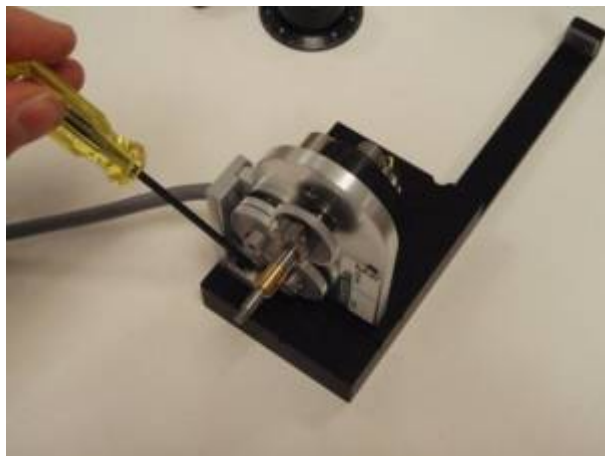


Figure 4a: Remove drive from base plate

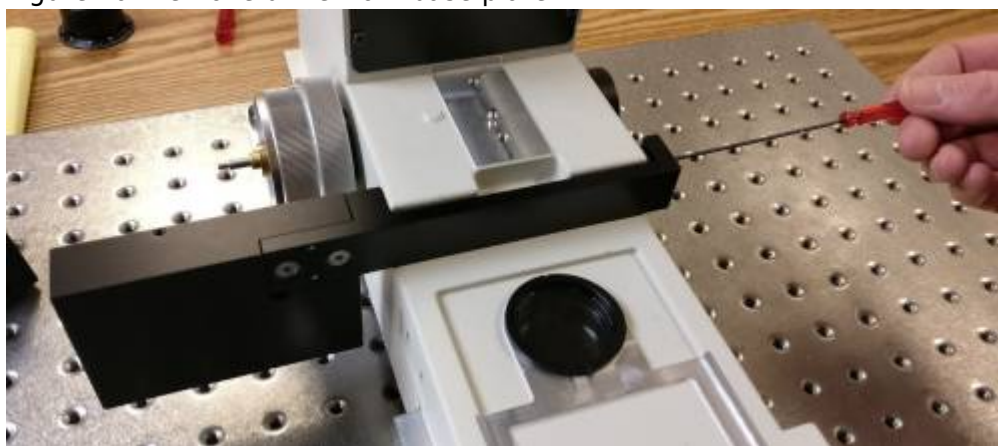


Figure 4b: Install baseplate

Locate the ASI drive and baseplate assembly. If the drive is attached to the base plate use the Allen wrench provided to remove the horizontal adjustment screw to remove the drive. Install the baseplate as outlined in figures 4a - 4b above. Align the drive and base plate as shown so that the baseplate is "about" perpendicular with the table. Use the 1.5mm Allen wrench to tighten the base plate clamp as shown.

Part-3 Installing & Aligning the Motor Drive



Figure 5a

Loosen the two horizontal adjustment screws on the top of the Z-drive.

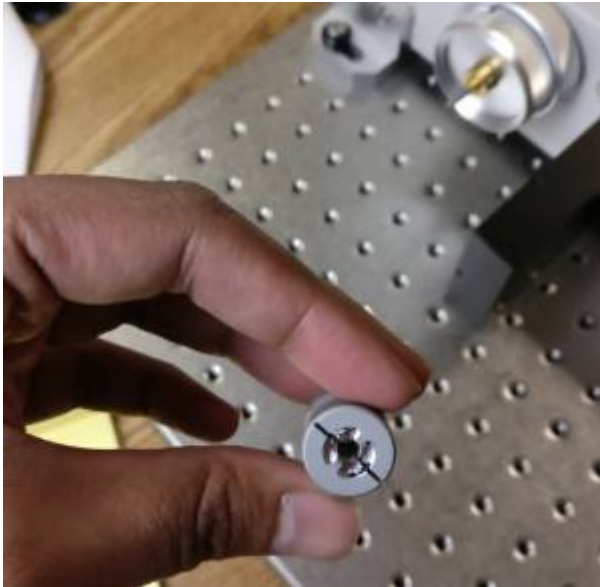


Figure 5b: Flex Coupler keyway

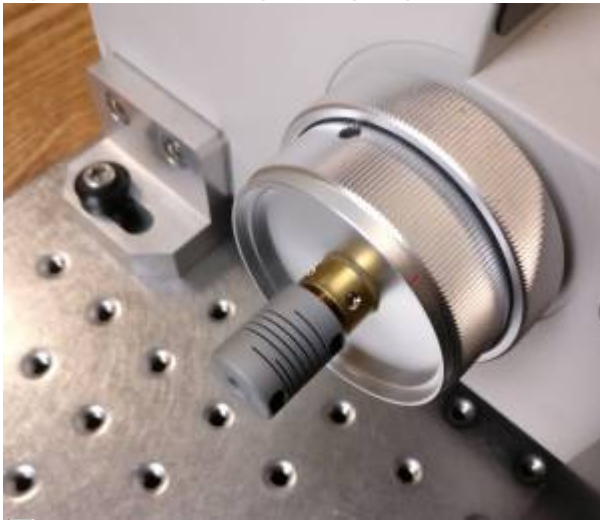


Figure 5c: Put the flex coupler on the Microscope shaft

Put the flex coupler on the Microscope shaft with the Keyway pointed at the scope as shown in figure 5b and 5c. Do not tighten the flex coupler screws yet.

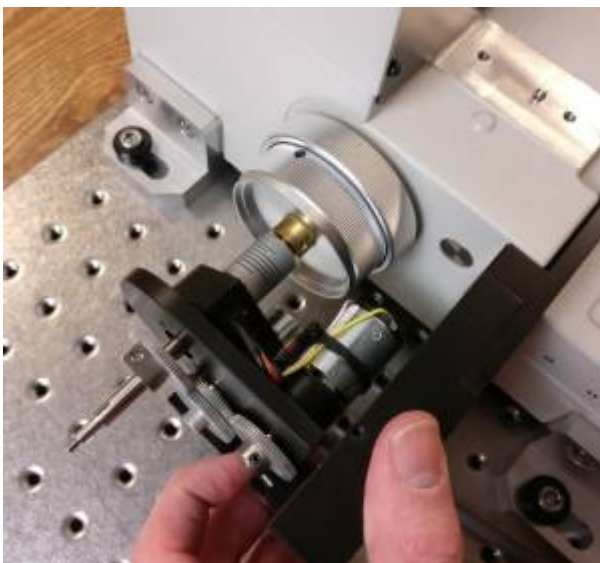


Figure 6a

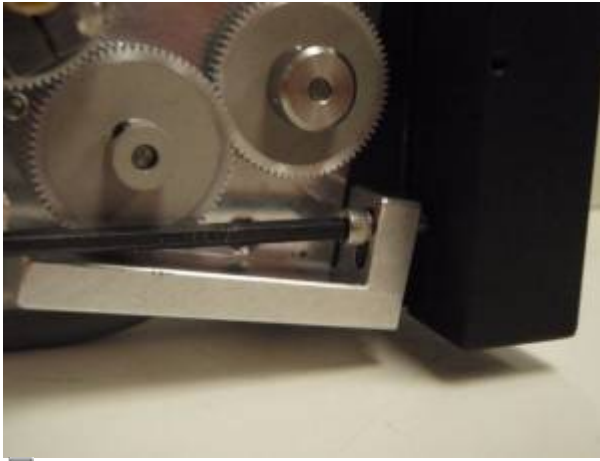


Figure 6b

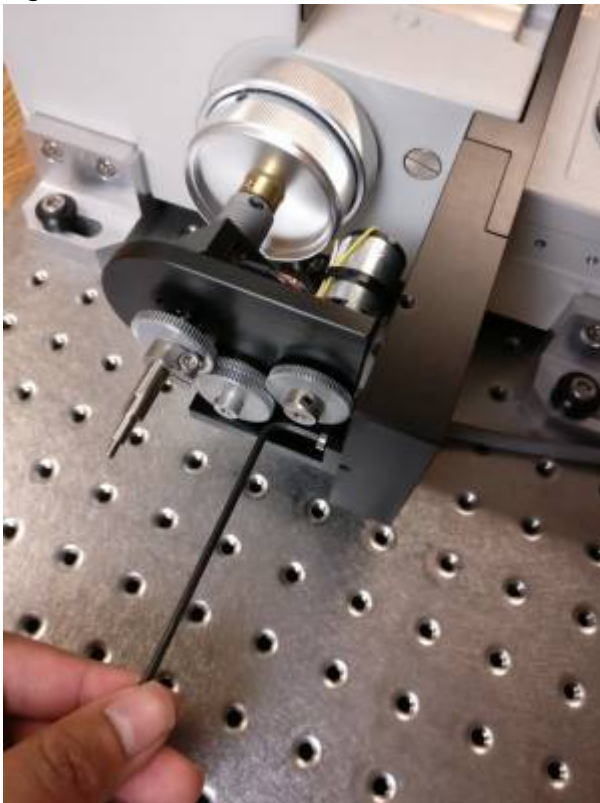


Figure 6c: Horizontal groove on baseplate

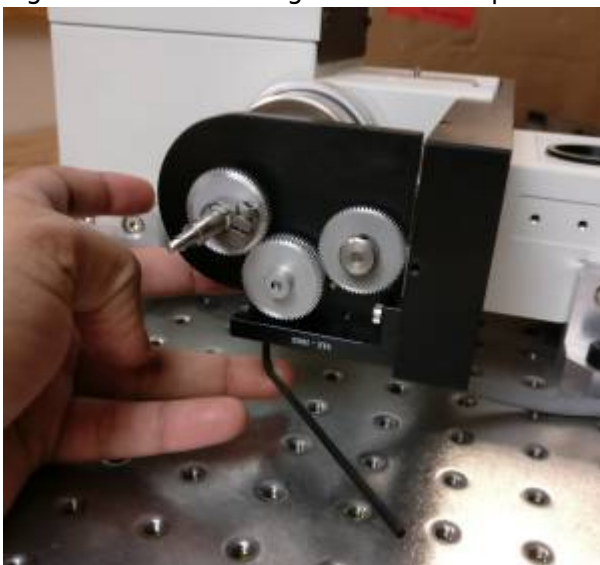


Figure 6d: Vertical Adjustment screws

Slide the drive onto the microscope as shown above; the drive shaft couples to the fine focus shaft of the microscope thru the flex coupler. The tab on adjustment bar slides into groove on baseplate. Use the 2.5mm Allen wrench to align and secure the drive assembly to the base plate and the vertical adjustment screws.

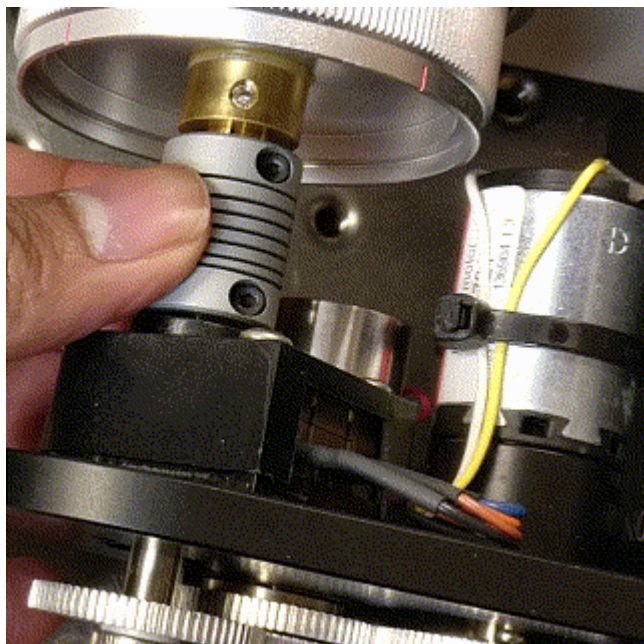


Figure 9a

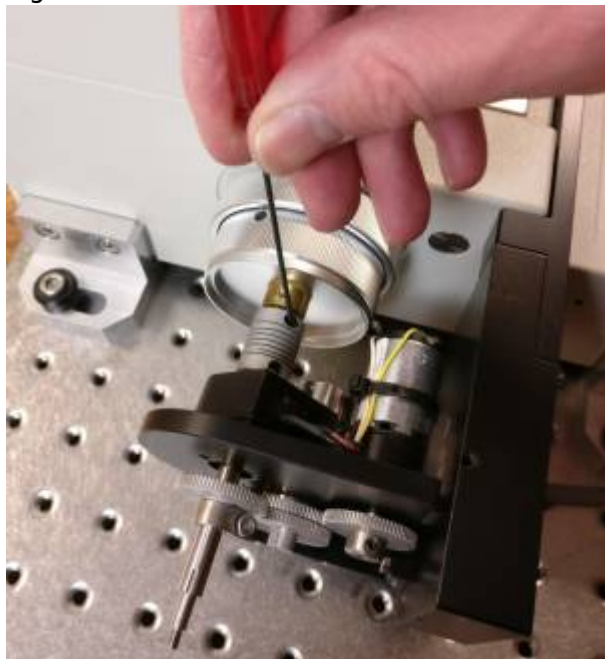


Figure 9b: Securely tighten the Flex coupler using 1.5mm Allen wrench

When Aligned the flex coupler can slide between the Microscope Shaft and Drive shaft easily, as shown in figure 9a. Securely tightened the Flex Coupler as shown in Figure 9b using 1.5mm Allen wrench.

After doing this rotate the left fine focus knob. No drag should be felt. If no drag is felt loosely tighten the Horizontal and Vertical adjustment screws as shown in figures 6c & 6d. Recheck the alignment by turning the left fine focus knob. No noticeable drag should be felt. If drag is felt at any one point with in a full rotation loosen the Horizontal and Vertical adjustment screws. Then slide the motor drive up and down, forward and backward slightly while turning the left fine focus knob until it is in the position where minimum drag is felt. It is ok if the drive wobbles a small amount; this will not affect the

accuracy of the unit.

Part 4-Installing the motor drive cover plate & fine focus knob.

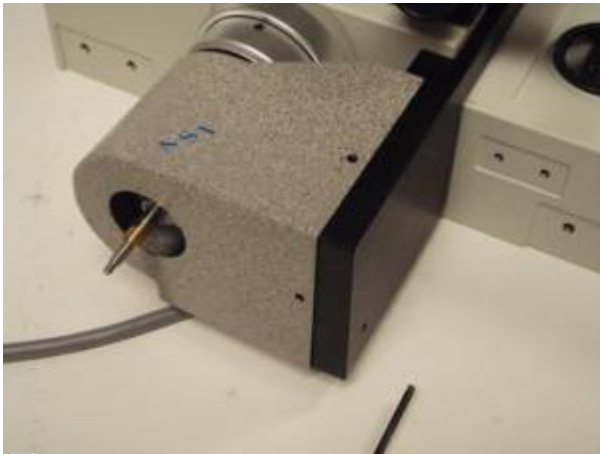


Figure 10a



Figure 10b: Secure using 2mm Allen wrench



Figure 10c: Secure using 2mm Allen wrench



Figure 10d

Locate the cover and install it on the drive as shown using the Allen wrench and the supplied screws that are in the drive plate. Before tightening the screws make sure the cover is positioned so that it does not rub against the outer clamp as shown. Once the cover has been installed the original knob can be installed onto the protruding shaft. Note that the slots on the shaft mate with the plastic tabs on the knob.

1. Locate the motor drive cover. Remove the M3 Round(button) head screws from the drive with the 2mm Allen wrench. Position the motor drive cover over the motor drive assembly and secure in place using the M3 Round(button) head screws.
2. Slide the microscope fine focus knob over the shaft extension and press it on all the way so that the plastic tabs on the knob mate with the slots on the ASI drive shaft. Install the small round nut in the end of the fine focus knob and tighten it with the medium slotted screwdriver. Slide the black rubber boot over the fine focus knob. Refer to figure 1 if necessary.

This completes the procedure for installing the ASI motor drive on to the Nikon FN 1 Microscope.

[nikon](#), [fn1](#), [zdrive](#)

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