

# Nikon Eclipse FN1 Installation Procedure[Obsolete]

This is the manual for the Non-Flex coupler version of the Z drive. This version was discontinued in Nov 2016. If your kit has the Flex Coupler. Then refer to the new [FN1 Zdrive 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 3mm, 5/64 and 7/64 inch hex wrenches The hex wrenches are provided by ASI.

**The procedure has three parts:**

1. Removing the right 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

Remove the right fine focus knob from the microscope as follows:



Figure 1: Use screwdriver to remove nut



Figure 2: Pull knob straight off to expose shaft

1. Pull off the black rubber boot covering the 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

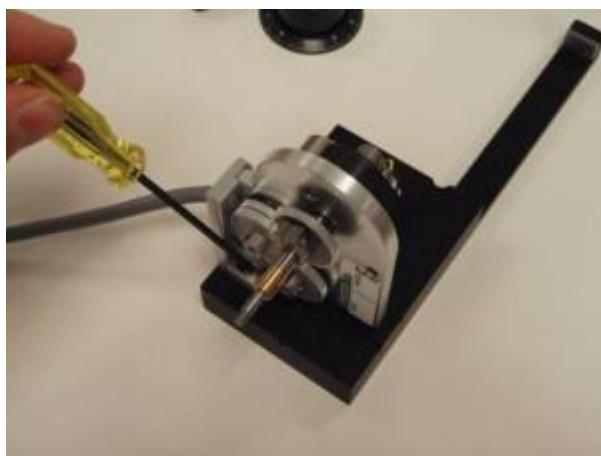


Figure 4a: Remove drive from base plate



Figure 4b Install baseplate , but leave the base plate clamp loose at this time

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. Use the screws and Allen wrench provided to install the baseplate as outlined in figures 4a - 4b above.

### Part-3 Installing & Aligning the Motor Drive



Figure 5a

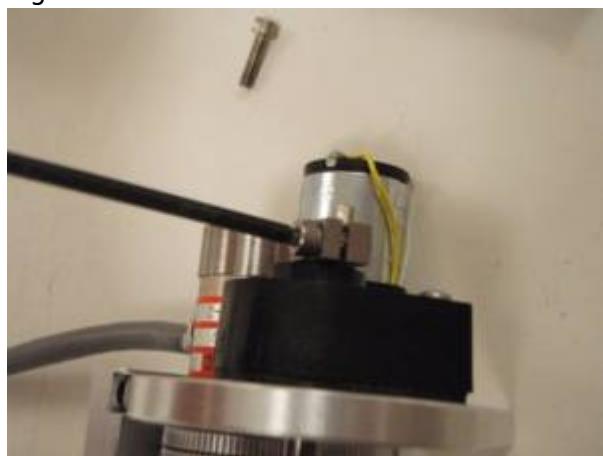


Figure 5b

Loosen the two horizontal adjustment screws on the top of the Z-drive. Also loosen the drive shaft clamp as shown above.

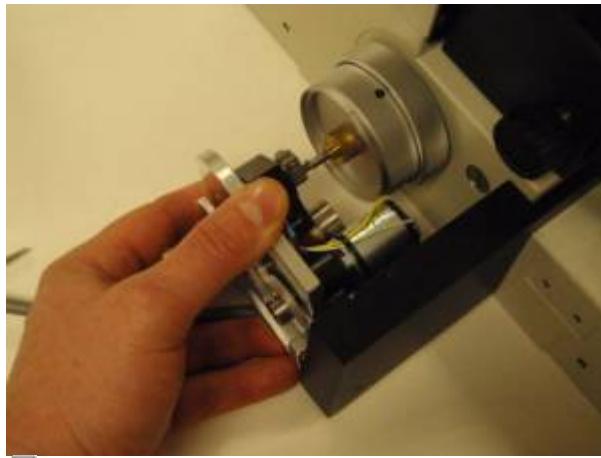


Figure 6a

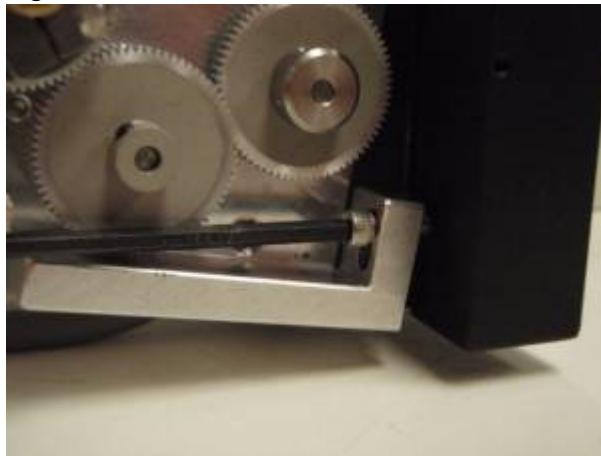


Figure 6b

Slide the drive onto the microscope as shown; the drive shaft on the drive slides over the fine focus shaft of the microscope. The tab on adjustment bar slides into groove on baseplate. Use the 7/64 " Allen wrench to secure the drive assembly to the base plate, but leave this screw loose for now.

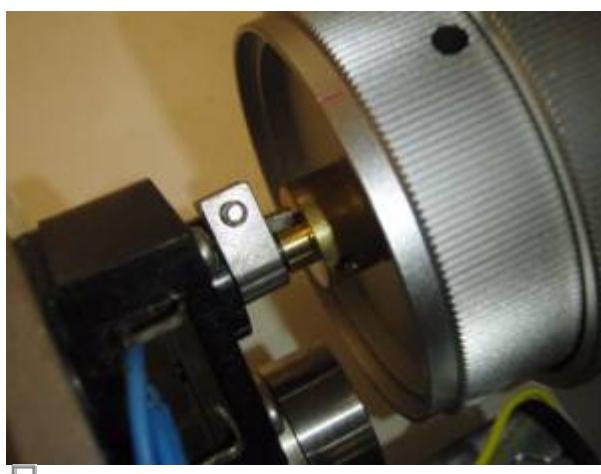


Figure 7

Metal tab on drive shaft clamp slides into slot on plastic gear. While holding drive shaft clamp in place use the 7/64" Allen wrench to securely tighten the drive shaft clamp that was loosened in Figure # 5. This clamp must be securely tightened or slippage may occur.



Figure 8a

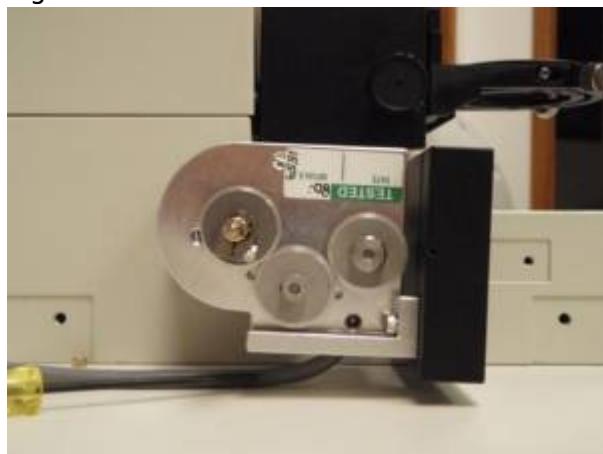


Figure 8b



Figure 8c

Align the drive and base plate as shown so that the baseplate is flush with the microscope body, and the drive is “about” parallel with the table. Use the 5/64” Allen wrench to tighten the base plate clamp as shown.

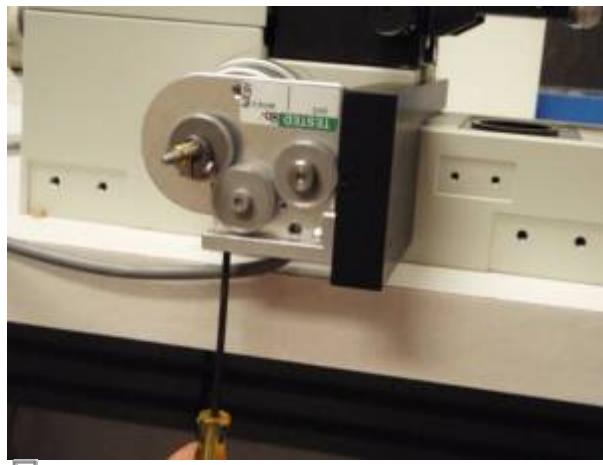


Figure 9

Slide the scope to the side of the table & loosely tighten the horizontal adjustment screws as shown. If the microscope its attached to an air table, this step may be skipped.

As shown in figures 5-9 above, install the ASI z-axis drive onto the microscope's fine focus shaft. Once you have securely tightened the drive shaft clamp as discussed figure #7 align the drive and base plate as reviewed in figure # 8. 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 6 & 9. 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.

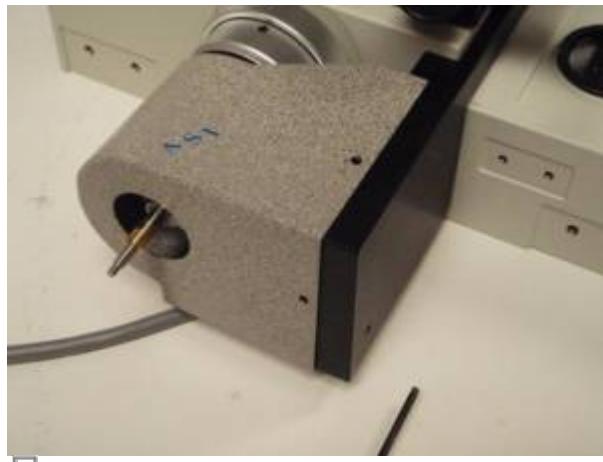


Figure 10a



Figure 10b



Figure 10c



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 4/40 button head screws from the drive with the 1/16 " Allen wrench. Position the motor drive cover over the motor drive assembly and secure in place using the 4/40 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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