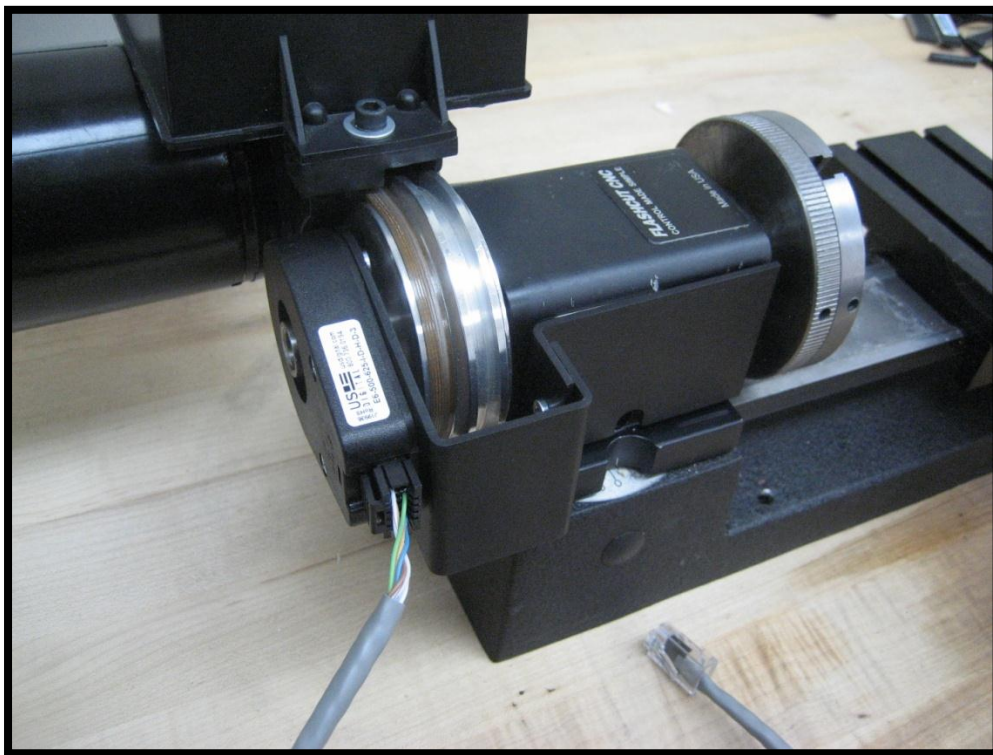


**FLASHCUT CNC**

CONTROL MADE SIMPLE

# Encoder Kit Installation Guide



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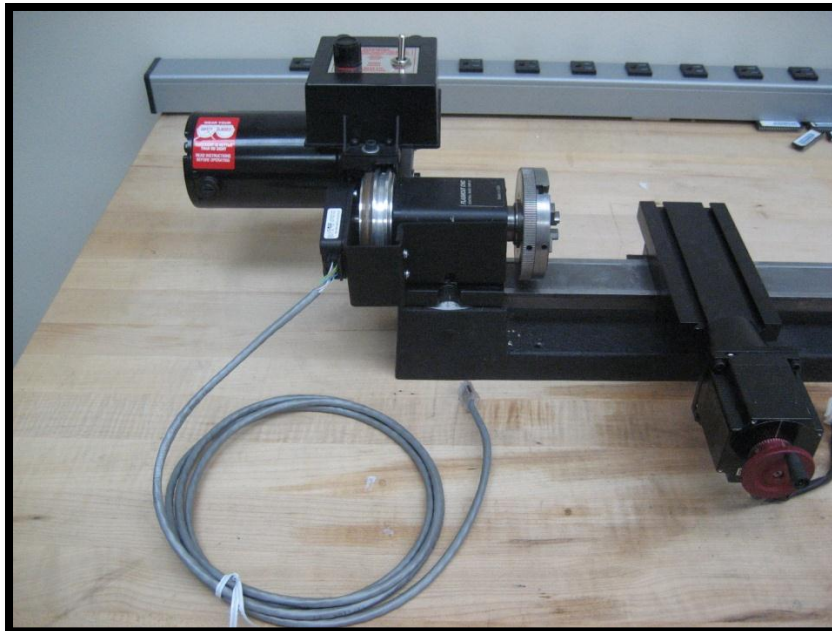
# FLASHCUT ENCODER KIT

## *Installation Guide*



*Figure 1. FlashCut CNC Encoder Kit for FlashCut CNC Tabletop Lathes and Mills.*

This manual describes how to assemble and wire the encoder kit for the Flashcut CNC Tabletop Lathes and Mills. The only tool needed to complete installation that is not included is a Philips No. 1 size screwdriver.



*Figure 2. FlashCut CNC 4400 Lathe with Encoder Kit installed.*

## ● INSTALLATION

- Before proceeding, check to make sure that you have all required materials to install the Encoder Kit. Included should be:

- One Large Encoder Bracket,



- One Small Encoder Bracket. On one side, double sided tape should be affixed as shown,



- One Encoder Parts Package,



- One Encoder Cable,



- Four 4-40 x 1/4" Pan Head Screws



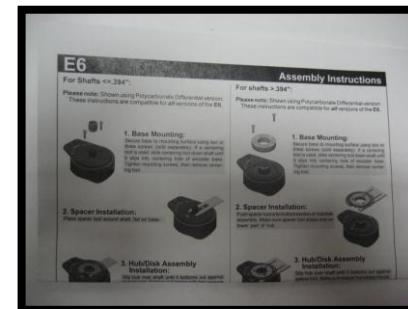
- Two #4 Washers



- One Brass Encoder Adapter Ring,



- And one Encoder Assembly Instructions Sheet



## • BRACKET ASSEMBLY

- o Attach the base of the encoder assembly to the Large Encoder Bracket using two 4-40 x 1/4" screws as shown.



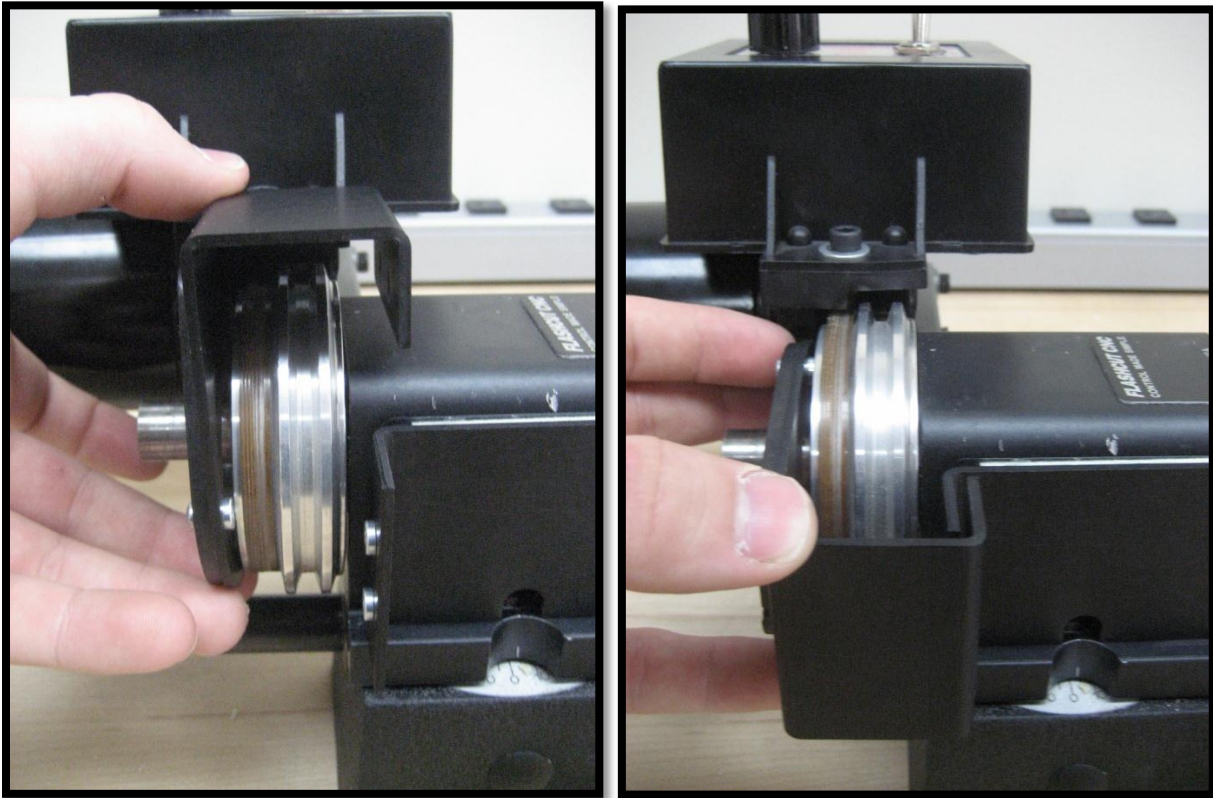
*Figure 3. Large Encoder Bracket with base of Encoder Assembly attached.*

- o Using the double sided tape attached to the Small Encoder Bracket, attach the Bracket to the lathe spindle assembly in the position shown below. The bottom edge should butt up against the spindle mount. Be sure that the notch in the bottom of the Bracket allows access to the set screw on the lathe.



*Figure 4. Small Encoder Bracket attached to spindle assembly with double sided tape.*

- o Position the Large Encoder Bracket around the output shaft of the spindle assembly as shown below, and then rotate the Bracket so that the screw holes of both the Large Encoder Bracket and the Small Encoder Bracket align.



*Figure 5. Positioning and rotating the Large Encoder Bracket to be in alignment with the Small Encoder Bracket.*

- o Using two 4-40 x 1/4" screws and two #4 washers, attach the Large Encoder Bracket to the Small Encoder Bracket. These screws may be loosened and repositioned later to adjust encoder alignment.



*Figure 6. Small Encoder Bracket attached to Large Encoder Bracket.*

## • ENCODER ASSEMBLY

- o To assemble the encoder, insert the Brass Encoder Adapter Ring into the aluminum hub as shown.



Figure 7. Brass ring seated into encoder hub.

- o From there, follow the assembly instruction sheet provided to complete assembly of encoder.

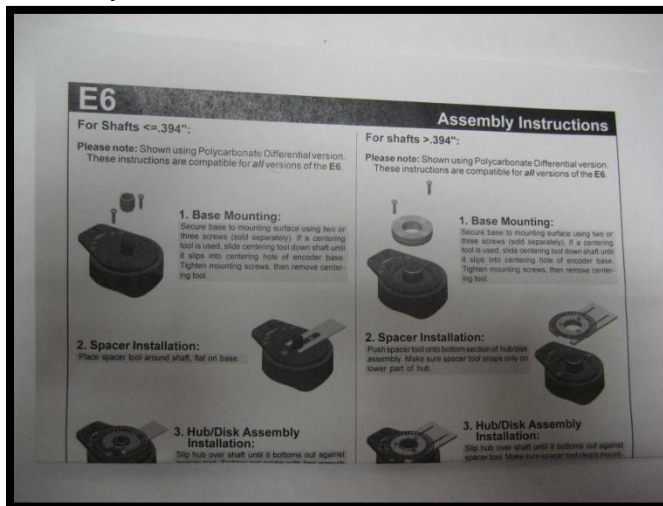


Figure 8. Encoder Assembly Instructions Sheet.

## • SOFTWARE CONFIGURATION

- o For the most accurate and up to date software configuration settings, consult the FlashCut CNC User's Manual included with FlashCut CNC software.

**E6****Assembly Instructions****For Shafts  $\leq .394$ "**

Please note: Shown using Polycarbonate Differential version.  
These instructions are compatible for *all* versions of the E6.

**1. Base Mounting:**

Secure base to mounting surface using two or three screws (sold separately). If a centering tool is used, slide centering tool down shaft until it slips into centering hole of encoder base. Tighten mounting screws, then remove centering tool.

**2. Spacer Installation:**

Place spacer tool around shaft, flat on base.

**3. Hub/Disk Assembly Installation:**

Slip hub over shaft until it bottoms out against spacer tool. Tighten set screw with hex wrench provided while pressing down on hub. Remove spacer tool.

**4. Encoder Module Installation:**

Orient module with thin part of module toward top. Slide module from front to back, being careful not to damage disk. Stop when two alignment pins on base fit into holes of module. Secure with two 4-40 1/2" pan head screws (supplied).

**5. Cover Installation:**

Place cover over assembly and secure with two 4-40 5/8" flat head screws (supplied).

**For shafts  $> .394$ "**

Please note: Shown using Polycarbonate Differential version.  
These instructions are compatible for *all* versions of the E6.

**1. Base Mounting:**

Secure base to mounting surface using two or three screws (sold separately). If a centering tool is used, slide centering tool down shaft until it slips into centering hole of encoder base. Tighten mounting screws, then remove centering tool.

**2. Spacer Installation:**

Push spacer tool onto bottom section of hub/disk assembly. Make sure spacer tool snaps only on lower part of hub.

**3. Hub/Disk Assembly Installation:**

Slip hub over shaft until it bottoms out against spacer tool. Make sure spacer tool clears mounting screws on base. Tighten both set screws with hex wrench provided while pressing down on hub. Remove spacer tool.

**4. Encoder Module Installation:**

Orient module with thin part of module toward the top. Slide module from front to back, being careful not to damage disk. Stop when two alignment pins on base fit into holes of module. Secure with two 4-40 1/2" pan head screws (supplied).

**5. Cover Installation:**

Place cover over assembly and secure with two 4-40 5/8" flat head screws (supplied).

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## **ENCODER KIT**

### **Parts list**

#### **Bag 1 – Large**

- 1 Encoder Cable**
- 1 Large Encoder Bracket**
- 1 Small Encoder Bracket with Double Sided Tape**
- 1 Encoder Parts Package**
- 1 Encoder Assembly Instructions Sheet**
- 1 Instruction Manual**

#### **Bag 2 – Small**

- 4 4-40 x 1/4” Pan Head Screws**
- 2 #4 Washers**
- 1 Brass Encoder Adapter Ring**



