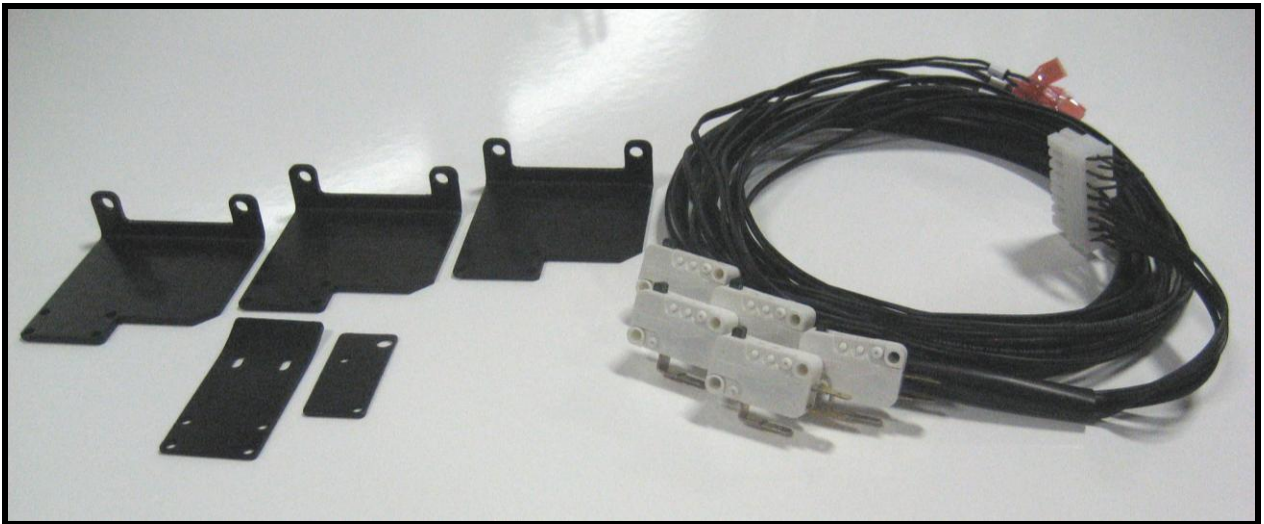


FLASHCUT CNC

Control Made Simple

Limit Switch Kit Installation Guide



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FLASHCUT LIMIT SWITCH KIT

Installation Guide

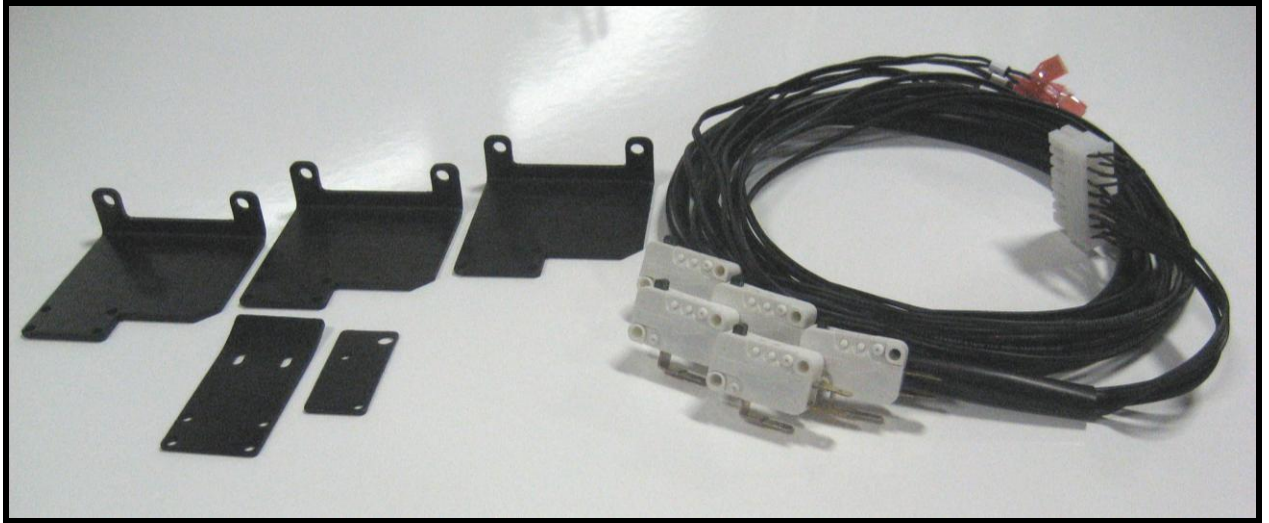


Figure 1. FlashCut CNC Limit Switch Kit for Sherline CNC Mills.



Figure 2. FlashCut CNC 2000 CNC mill with Limit Switch Kit installed.

This manual describes how to assemble and wire the limit/home switch kit, one axis at a time. The only tools you'll need are the 5/32" and 3/32" hex wrenches included with the Sherline mill, a 9/64 hex wrench and a pliers or adjustable wrench.

General Wiring

► **To install the limit switch cable:**

1. Plug each of the red connectors of the limit/home switch cable to the NC and COM leads of each limit switch for Normally Closed switch operation.
2. Plug the 16 pin connector of the limit/home switch cable into the “INPUT” connector on the Signal Generator box.

X Axis

► **To install the negative X axis limit switch, refer to the photos below and follow these steps:**

1. Mount Limit Switch #1 to the X- Switch Bracket using two 4-40 x 5/8 screws and two 4-40 Nuts, oriented as shown.
2. Mount the assembly to the bottom of the Table using one 10-32 x 1/2 screw oriented as shown. Note that this is the same screw and screw hole used as a stop for the X- travel of the Table.

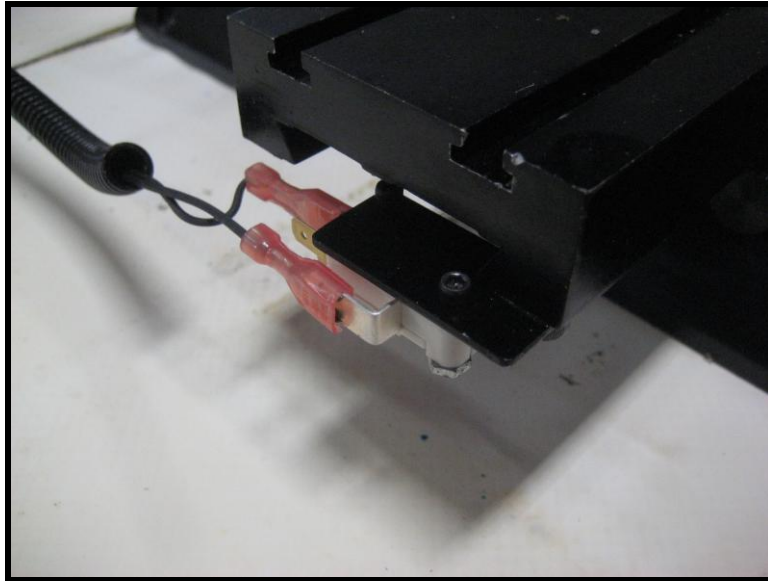


Figure 3. X- Limit Switch top view.

► **To install the positive X axis limit switch, refer to the photo below and do the following:**

1. Mount Limit Switch #2 to a Universal Switch Bracket using two 4-40 x 5/8 Screws and two 4-40 Nuts, oriented as shown.
2. Remove two 8-32 x 3/8 screws from X+ Motor.

3. Mount the Universal Switch Bracket to the Motor using two 8-32 x 1/2 screws.

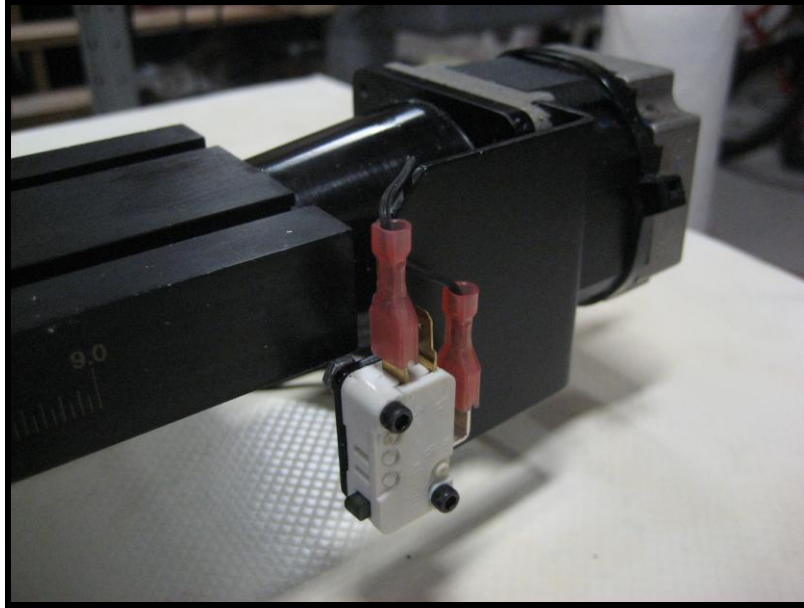


Figure 4. X+ Limit Switch.

Y Axis

- **To install the negative Y axis limit switch, refer to the photos below and do the following:**
1. If you have a 5400 Mill, mount Limit Switch #3 to the Column Base using the double stick adhesive oriented as shown. Note that the front edge of the limit switch should be flush with the front edge of the column base. If you use the Sherline Mill Tooling Plate, turn the switch over and mount it to the Column Base. Make sure the button of the switch is oriented so that it hits the Mill Tooling Plate. Note that you may need to bend the leads of the switch for a better fit. If you prefer to mount the switch using screws instead of adhesive you may tap four 4-40 holes according to the print included in this assembly guide.

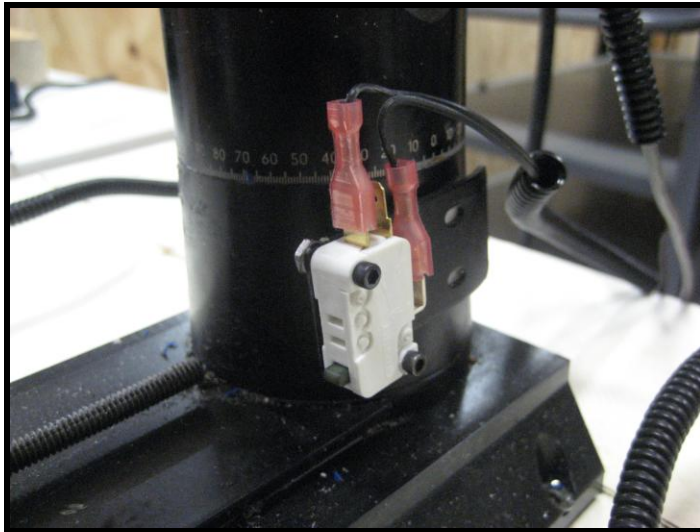


Figure 5. 2000 Y- Limit Switch.

2. If you have a 2000 Mill, mount Limit Switch #3 to the Y- Switch Mounting Plate (It has a slight curve to match the column) using two 4-40 x 5/8 Screws and two 4-40 Nuts oriented as shown. If you use the Sherline Mill Tooling Plate, turn the switch over and mount it to the other two holes on the Y- Switch Mounting Plate.

3. Mount the Y- Switch Mounting Plate to side of the conical column using the double sided adhesive. The holes on the plate should be lined up with the white score mark on the side of the column. Also the bottom edge of the plate should be about 0.710 ± 0.050 " from the bottom of the conical column. If you prefer to mount the plate using screws instead of adhesive you may tap four 4-40 holes using the holes on the plate as a template.

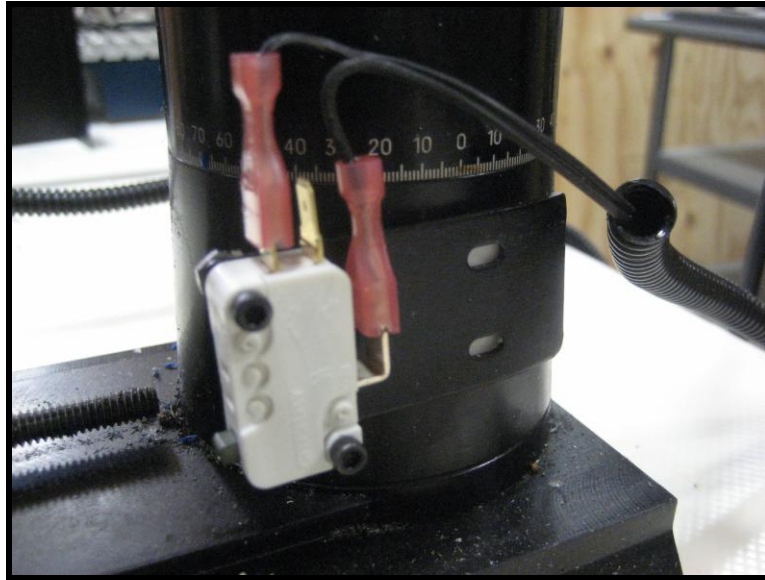


Figure 6. 2000 Y- Limit Switch outside view.

► **To install the positive Y axis limit switch, refer to the Y+ Photo and do the following:**

1. Mount Limit Switch #4 to a Universal Switch Bracket using two 4-40 x 5/8 Screws and two 4-40 Nuts, oriented as shown.
2. Remove two 8-32 x 3/8 screws from Y+ Motor.
3. Mount the Universal Switch Bracket to the Motor using two 8-32 x 1/2 screws.

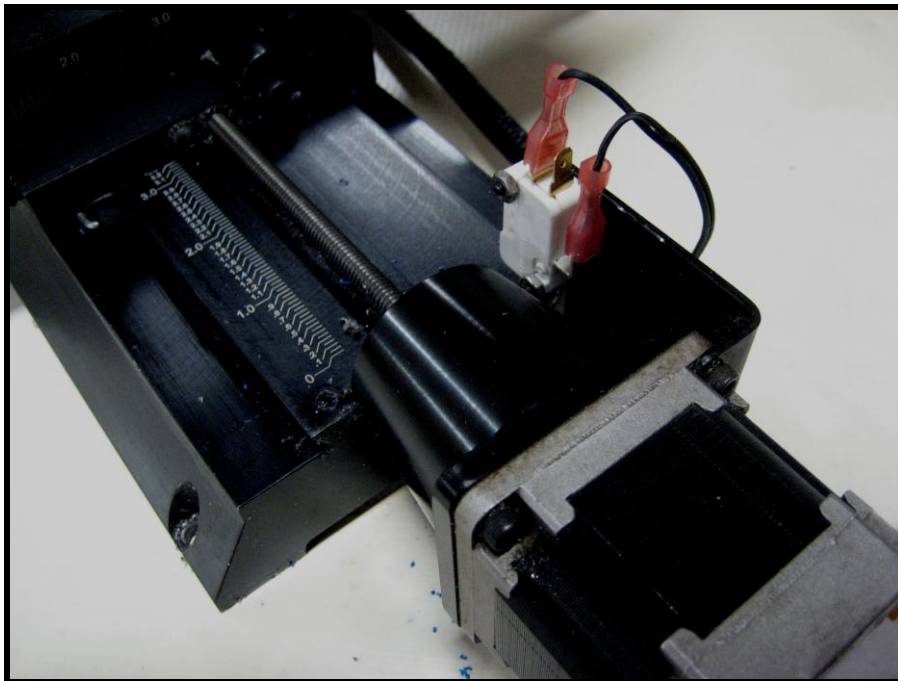


Figure 7. Y+ Limit Switch

Z Axis

- To install the Z axis limit switch, refer to the Z+ Photo and follow these steps:
1. Mount Limit Switch #5 to the Universal Switch Bracket using two 4-40 x 5/8 Screws and two 4-40 Nuts, oriented as shown.
 2. Remove two 8-32 x 3/8 screws from Z+ Motor.
 3. Mount the other side of the Motor using two 8-32 x 2 screws
 4. Mount the Universal Switch Bracket to the Motor using two 1.25 or (3/4 + 1/2) spacers, #8 washer and nut as shown.

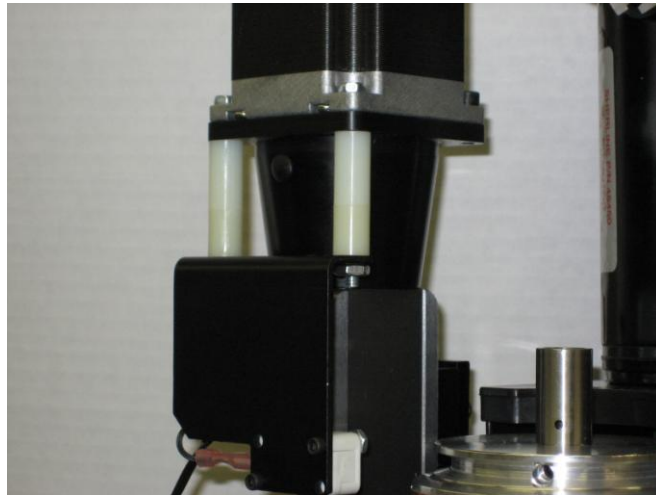


Figure 8. Z+ Limit Switch outside view.



Figure 9. Z+ Limit Switch inside view.

LIMIT SWITCH KIT

Parts list

Bag 1 – Large

- 3 Universal switch bracket
- 1 Small X bracket
- 1 2000 Z column bracket with pressure sensitive tape
- 1 6' Wiring Harness
- 1 Instruction Manual

Bag 2 – Small

- 5 Limit switches

Bag 3 – Small

- 2 8/32 x 2 SHC
- 2 #8 3/4 & 1/2 or 1.25 standoffs
- 2 #8 washers
- 2 8-32 nuts

Bag 4 – Small

- 12 4-40 x 5/8 SHC
- 10 4-40 nuts
- 2 4-40 x 3/8 SHC
- 6 8-32 x 1/2 SHC
- 1 10-32 x 3/8 SHC

