

## Installing Micro Switches on a Patch Panel

The micro switch is an optional addition to the basic patch panel. A patch panel contains one switch mounting position for each possible U-link position, and the customer may order the panel with switches, add them later, or get along without them.

The micro switch is an interlock, used as a safety feature to prevent transmitter power from being turned on unless the U-links are positioned correctly. The switch itself is a "dry" component which merely makes or breaks a circuit; power must be provided.

### If purchased with the patch panel:

- a. Select the locations where you want to locate the micro switches. These will be locations where you need to be very sure a U-link is in place before the transmitter is started up.
- b. Each switch mounting location has three holes (see figure 1). Install the switch on the reverse side of the panel, with the switch plunger directly under the large hole. Mount the switch bracket to the panel using the bolts and nuts through the two smaller holes. Tighten the nuts and bolts securing the switch to its mounting bracket.
- c. Place the appropriate U-link in its sleeves and secure it, using hose clamps.
- d. Each U-link designed for use with micro switches includes an actuator rod, secured to the U-link with two hose clamps. The actuator rod is shipped in a retracted position to prevent inadvertent damage to the switch during installation. After the switch and the U-link are secured in position, loosen the jam nut and unscrew the actuator rod to extend it through the hole in the patch panel, until it actuates the switch. Secure it with the jam nut.
- e. Run electrical leads from the micro switch to the terminal board mounted on the patch panel. A qualified electrician should determine the appropriate circuit logic; use the normally open side of the switch if possible, since this is a more fail-safe arrangement.
- f. Run the leads to the transmitter circuit in such a way that if the micro switch is not actuated, the transmitter cannot be started.

### If added later:

- a. Select the locations where you want to locate the micro switches. These will be locations where you need to be very sure a U-link is in place before the transmitter is started up.
- b. Loosen the hose clamps and remove the U-link to which you want to install the micro switch. Install the actuator rod on the U-link, using two hose clamps provided with the switch and actuator rod. Do not tighten these clamps completely yet.
- c. Each switch mounting location has three holes (see figure 1). Reinstall the U-link so that the actuator rod extends into or directly over the large hole in the panel. Tighten the hose clamps securing the U-link to the patch panel.
- d. Install the switch on the reverse side of the patch panel, with the switch plunger directly under the large hole. Mount the switch to the panel using bolts and nuts through the two small holes.
- e. Loosen the jam nut and unscrew the actuator rod to extend it through the hole in the patch panel, until it actuates the switch. Secure it with the jam nut.

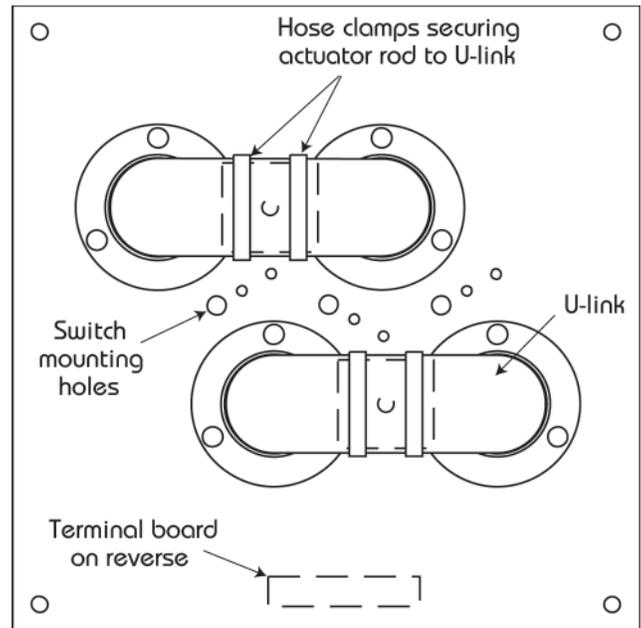


Figure 1. Patch Panel, "top" view

### Document No. ts-patch\_panel\_micro\_switch (150320)

A Division of Howell Laboratories, Inc., P. O. Box 389, Bridgton, Maine 04009 USA

(207) 647-3327

1-888-SHIVELY

Fax: (207)647-8273

An Employee-Owned Company

www.shively.com

sales@shively.com

Certified to ISO-9001

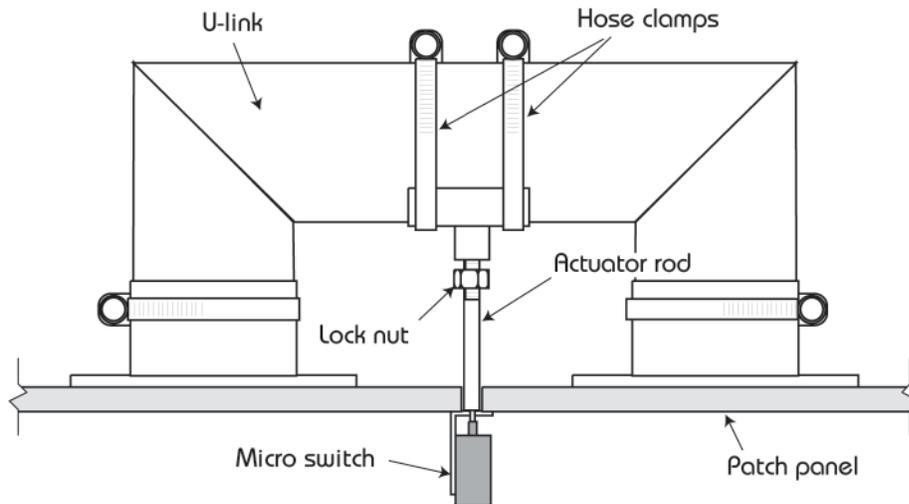


Figure 2. Patch Panel, "side" view

- e. Tighten the hose clamps securing the actuator rod to the U-link.
- f. Run electrical leads from the micro switch to the terminal board mounted on the patch panel. A qualified electrician should determine the appropriate circuit logic; use the normally open side of the switch if possible, since this is a more fail-safe arrangement.
- g. Run the leads to the transmitter circuit in such a way that if the micro switch is not actuated, the transmitter cannot

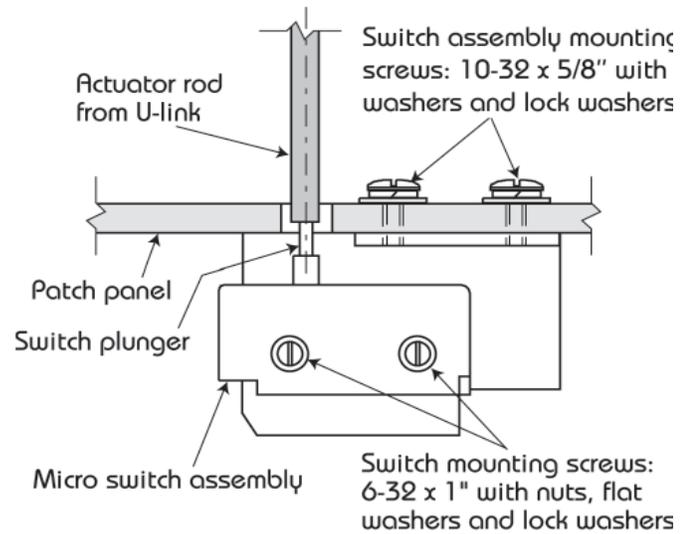


Figure 3. Micro Switch Mounting Detail