

Adding an externally-accessible RESET SWITCH to the Idiom Press LogiKit CMOS-4 Keyer

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The Idiom Press CMOS-xxx series of electronic keyers are just about the best thing that has happened to Amateur Radio CW enthusiasts in quite a while. They're both easy to build and easy to use.

However, if you're an active CW operator, chances are that you've (at least once) had an incident where the CMOS-xxx keyer seemed to go brain-dead, either locking up during sending, or voluntarily going into a continuous DIT (or DAH) mode, until you finally gave up, found that the manual multi-button reset function did not function under these circumstances, opened the case, and temporarily removed power from the circuit. Returning power to the circuit allowed continued proper operation.

In the CMOS II and CMOS III versions of these keyers, I install an in-line normally-closed push-button switch to allow me to momentarily disrupt power to the keyer for the specific purpose of resetting the circuitry. However, in the LogiKit CMOS 4 version of the kit, there's little room available on the rear panel for adding such a switch. Furthermore, I've found that grounding pin 1 of the CPU forces a 'hard' reset which is more effective than merely removing the power.

There is, however available space on the **BOTTOM** of the case, just in front of the speaker, to install a small (Microswitch®-type) snap-action switch with it's push-button facing down through a small access hole.

At the right, you will see the bottom of my LogiKit CMOS 4 keyer with the reset switch installed and the red button accessible from the bottom of the case. Note that the button does not protrude past the bottom of the keyer case, so it's almost impossible to accidentally press it. The hole just to the left of the new reset switch is the access hole for the speaker volume control.

The snap-action switch (Microswitch 11SM1, or Mouser Mountain Switch series SNS61) should work nicely, as long as it includes a set of normally-OPEN contacts. As illustrated below, a short piece of ½" aluminum L-angle stock is used to mount the switch to the bottom of the case. Mount the switch onto the L-bracket such that the top (push-button side) of the switch will mount flush with the bottom of the case when the L-bracket is installed. This will ensure that the push-button extends at far as possible into the access hole.



Once the switch has been mounted onto the L-Bracket, and a hole has been drilled into the foot of the L-bracket to mount it to the case, the PC board is liberated from the two screws holding it in place, and set off to the side of the assembly. It will be reinstalled later on, and raised above the reset switch to allow the switch to easily clear the bottom of the PC board. Be sure to **SAVE** the two 4-40 nuts and two compression washers which were originally used to secure the PC board. The access hole location is determined and marked, then drilled large enough to adequately pass the actuating button of the switch. If the hole is made large enough, the pad of the finger can be pressed into the hole and will cause the button to actuate without having to make the button extend down past the bottom of the case.

Once the access hole has been drilled to the appropriate diameter, mount the switch assembly to the bottom of the keyer case.

Cut two small gauge (#24-#22) stranded (insulated) wires to a length of 3½". Strip 1/8" of insulation from the ends of each wire, twist and tin the exposed wires. Carefully solder the end of one wire to the **COM**mon terminal on the switch. And then solder one end of the other wire to the **NO** (normally-open) terminal on the switch.

Trim the length of tinned wire on the two unconnected ends of the wires to 1/16".

Refer to the illustration of the PC board layout on the following page for the next two steps.

Tack-solder the end of one of the wires to pin 1 of U1 (U1-1), shown at right.

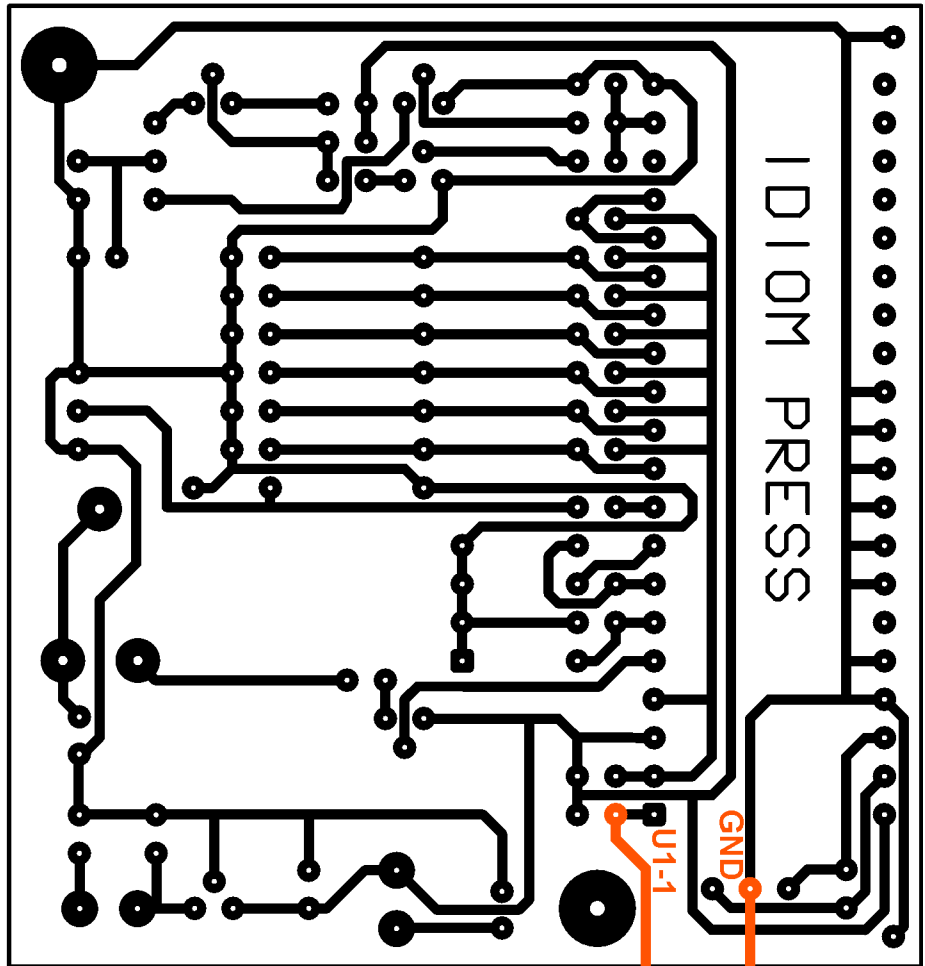
Tack-solder the end of the remaining wire to the GND point shown in the PC board illustration shown at right.

Re-assembly

In order to reassemble the keyer, you must raise the PC board so it sits above the new reset switch. The easiest way to accomplish this is to obtain two 1-1/2" long 4-40 screws, and four (4) additional 4-40 nuts. You can also use #4 insulated spacers long enough to raise the PC board above the switch. Regardless, you will have to obtain two long(er) 4-40 screws.

In the illustrations below, I used long insulated spacers, however using just the long screws and extra nuts works just as well... possibly better. Insert the long screw through the case and secure each with a single 4-40 nut. Then thread a second 4-40 nut onto each of the screws and run it down onto the screw about 3/8". Then install the PC board over the screws and secure it with a compression washer and a third 4-40 nut on the screw. You may now adjust the height of the PC board above the reset switch by varying the height of the nuts securing the PC board to the two mounting screws.

NOTE: When reassembling the keyer, ensure that no wires are caught between the PC board and its mounting hardware, and that none of the wires are allowed to interfere with access to the spkr. volume control pot mounted on the PC board.



HARD
RESET

The speaker volume control will still be accessible, but you will have to 'reach' a bit deeper into the case in order to get to it.

YOU ARE DONE!

