

# SK-922 “SOFT KEY” INSTALLATION INSTRUCTIONS

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## PARTS SUPPLIED WITH THIS KIT:

(2) 0.1 $\mu$ F 50VDC Mono Capacitors (C1-C2)	(1) 1N4005 Diode (D1)
(1) 1N60(A) Diode (D2)	(1) 1N4148 Diode (D3)
(1) PN2222A Transistor (Q1)	(1) IRF610 MOSFET (Q2)
(2) 100k $\Omega$ 1/2-Watt Resistors (R1-R2)	(1) 10k $\Omega$ 1/4-Watt Resistor (R3)
(1) SK-922 “Soft Key” Circuit Board	(1) #20 8" Black Wire
(2) #6-32x1/4" Round Head Screws	(1) #22 15" Blue Wire
(1) Nylon Threaded Spacer	(1) #22 24" Red Wire
(1) #6 Lock Washer	

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Read these instructions very carefully before any assembly or installation is performed! Be sure to inventory all of the parts in the kit!

- ( ) Assemble SK-922 unit according to the parts layout pictorial (top view of circuit board). There is no right or wrong assembly sequence, just be sure to observe correct polarity of diodes D1-D3 and the correct orientation of Q1-Q2. When installing Q1 (PN2222A), be sure to bend the base (center leg) up and route to the hole next to C1 on the silk-screened side of the PC board as shown in the parts layout diagram.
- ( ) After assembly, the connection wires can be soldered to the circuit board. Strip approximately 1/4" of insulation from both ends of each wire and tin both ends. Solder one end of each wire to the SK-922 as shown on the parts layout pictorial.

Now unplug the amplifier and remove any input, output and control cables that may be connected to the back of the amplifier. Place the amplifier on towel and remove the bottom screws holding the feet and bottom cover in place. Remove the feet and bottom cover from the amplifier. You are now ready to proceed with the installation.

The preferred mounting location is near the HV transformer in the corner near the side and rear panels. The unit may be mounted in any location using any available method. The easiest method is to mount the SK-922 to a piece of 1-1/2" x 3" fiberglass board or perfboard and then secure the sub-assembly to one of the HV transformer mounting screws.

- ( ) Prepare a 1-1/2" x 3" fiberglass board or perfboard. Drill the SK-922 mounting hole (5/16") and the sub-assembly mounting hole (1/4").
- ( ) Mount the SK-922 unit to the fiberglass board or perfboard using the nylon spacer, #6-32 x 1/4" screws and #6 lock washer.
- ( ) Mount the completed board/K-922 sub-assembly on to the HV transformer mounting bolt by removing the nut and using any available washers as spacers below the board and then replacing the transformer mounting nut. Note: You may use washers or any available spacers as long as the sub-assembly is above and isolated from the amplifier chassis.

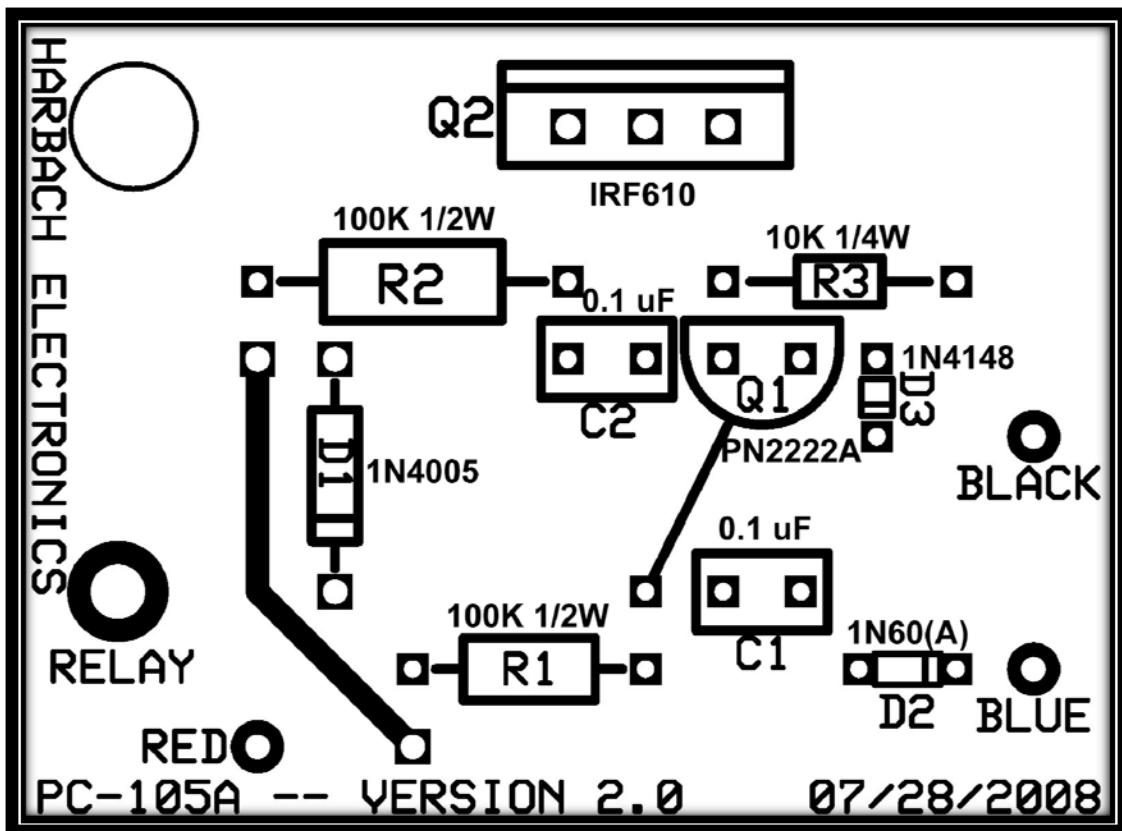
See fiberglass board, SK-922 and sub-assembly mounting details in the drawings included with these instructions.

- ( ) Unsolder (or cut very near the solder connection) the **BROWN or GRAY** wire that is connected to the center pin of the antenna relay jack on the back panel.
- ( ) Strip about 1/4" of insulation from this wire. Route the end of **BROWN or GRAY** wire that you just disconnected over to the SK-922 circuit board.

- ( ) Wrap and solder this **BROWN or GRAY** wire to the terminal post on the SK-922 circuit board.
- ( ) Pass the **BLACK** wire from the SK-922 circuit board to the nearest chassis ground connection and solder it to chassis ground.
- ( ) Route the **BLUE** wire from the SK-922 circuit board to the center pin of the antenna relay jack on the rear panel and solder.
- ( ) Route the **RED** wire from the SK-922 circuit board toward the front of the chassis to the 5-lug terminal strip that holds the +110 VDC supply. This terminal strip is located next to the filament transformer along the side panel. Solder this **RED** wire to the terminal where the “+” lead of C3 (33  $\mu$ F 160 VDC) and the cathode of D1 (V06E) are attached. See picture below.
- ( ) Replace the bottom cover and feet. Reinstall the screws holding these pieces in place.

This completes the installation of the SK-922 “Soft Key” module. You may not **SEE** any difference in the operation of your exciter or amplifier, but you will know that you have reduced the stress on the exciter’s keying relay by many orders of magnitude.

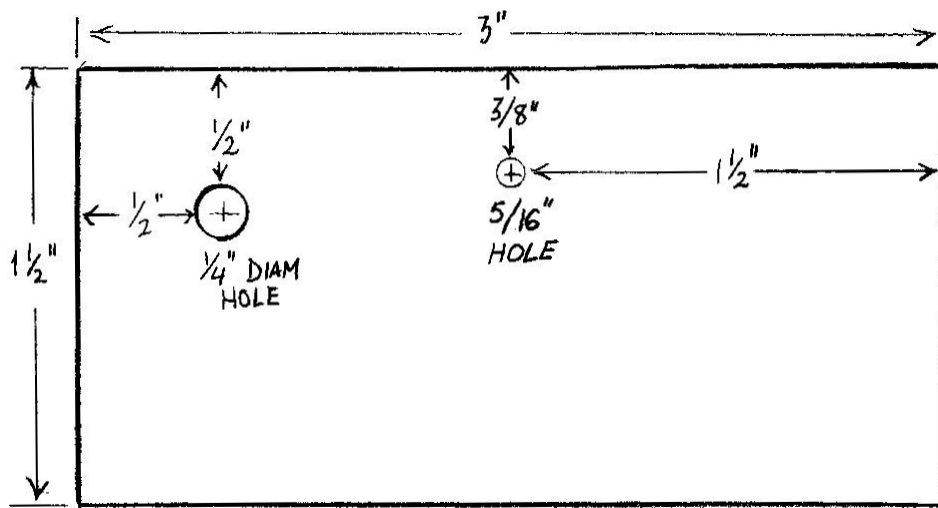
### PC BOARD PARTS LAYOUT PICTORIAL



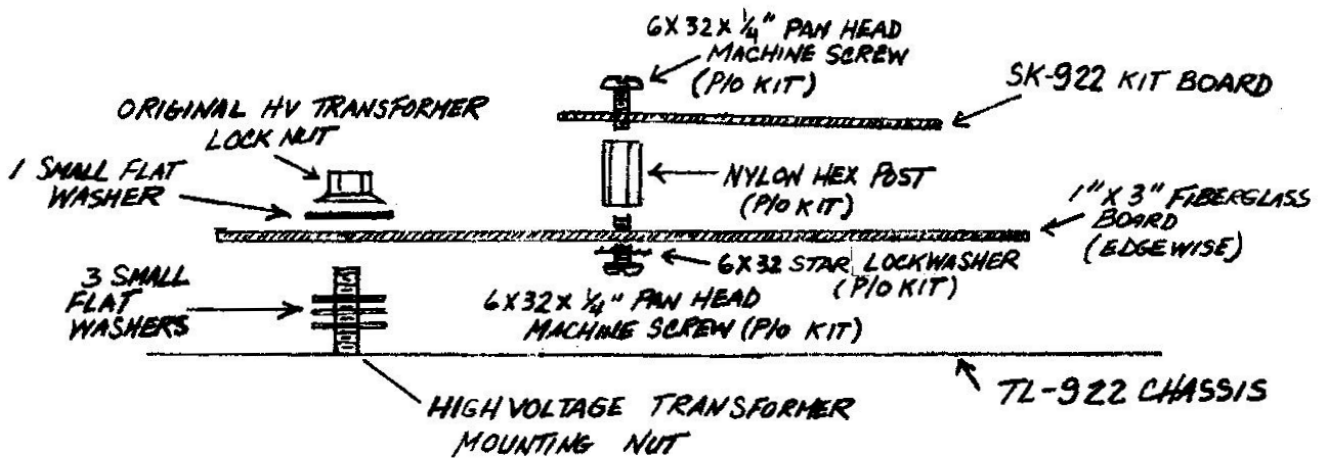
HARBACH ELECTRONICS, LLC  
 Jeff Weinberg – W8CQ  
 468 County Road 620  
 Polk, OH 44866-9711  
 (419) 945-2359

<http://www.harbachelectronics.com>  
[info@harbachelectronics.com](mailto:info@harbachelectronics.com)

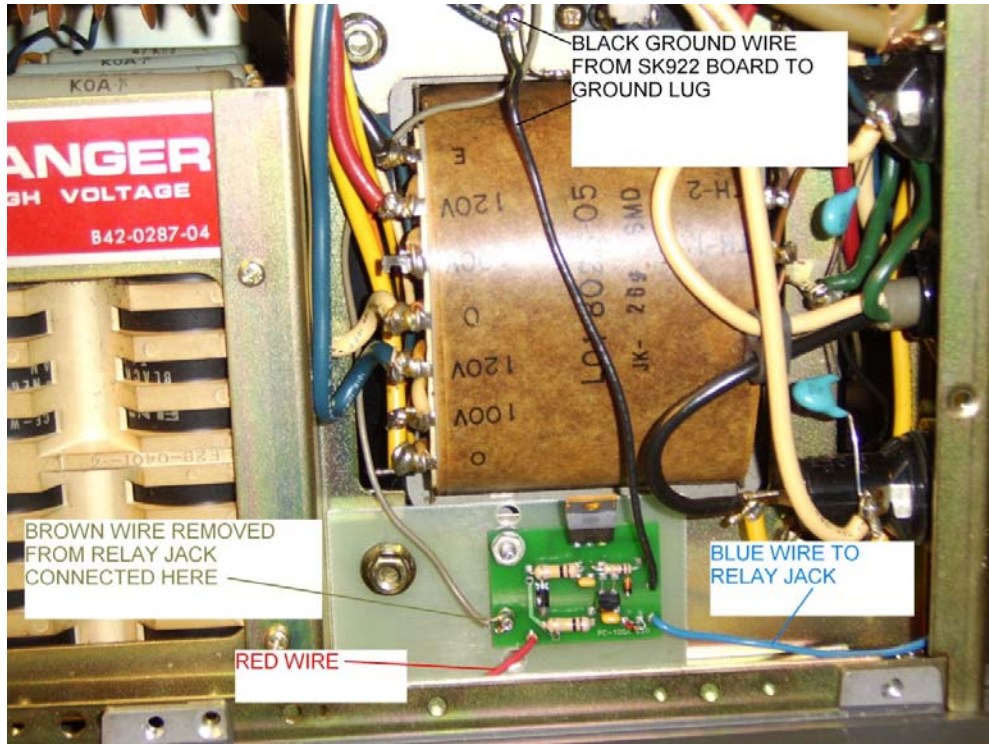
### SK-922 MOUNTING BOARD DETAIL



### SK-922 SUB-ASSEMBLY MOUNTING DETAIL



## SK-922 MOUNTING LOCATION



## SK-922 +110 VDC HOOKUP

