SK-220 v3.0 "SOFT KEY" INSTALLATION INSTRUCTIONS

PARTS SUPPLIED WITH THIS KIT:

(2) 0.1μF 50VDC Mono Capacitors (C1-C2)
(1) 1N60(A) Diode (D2)
(1) PN2222A Transistor (Q1)
(2) 100kΩ ½-Watt Resistors (R1-R2)
(1) SK-220 v3.0 Circuit Board
(1) #6-32x¼" Round Head Screw
(1) Nylon Threaded Spacer
(1) 1N4005 Diode (D1)
(1) 1N4148 Diode (D3)
(1) IRF610 MOSFET (Q2)
(1) 10kΩ ¼-Watt Resistor (R3)
(1) #20 4" Black Wire
(1) #22 5" Blue Wire
(1) #22 12" Red Wire

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-220 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.

( ) After assembly, the **RED**, **BLACK** and **DARK BLUE** connection wires can be soldered to the circuit board. Strip approximately ¼" of insulation from both ends of each wire and tin both ends. Solder one end of each wire to the SK-220 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 a book, front panel up, and remove the bottom screws holding the feet and case in place. Lift the case up and remove it from the amplifier. Place the amplifier on the bench with the front panel facing you. Remove the perforated top shield. Rotate the amplifier onto its side with the transformer down (it is more stable this way). You are now ready to proceed with the installation.

( ) From the bottom of the chassis, locate the #6-32 nut that is between the tube socket and the rear panel. It secures a screw that holds the RF shield (above the chassis) to the main chassis. Locate the screw in the tube compartment that is held in place by this nut (it is near the corner of this compartment at the rear). Loosen this screw and remove the nut and lock washer from the underside of the chassis.

( ) Screw the threaded nylon spacer from the SK-220 kit onto the screw (freed in the previous step) and tighten well without stripping the threads in the spacer.

( ) Mount the SK-220 circuit board onto the nylon spacer using the supplied #6-32x¼" screw. Position the board so that it is parallel with the fan cut out edge and the large transistor is away from the cut out edge.

( ) Unsolder (or cut very near the solder connection) the **BLUE** wire that goes to the center pin of the antenna relay jack on the back panel.

( ) Strip about ¼" of insulation from this wire. Pass the wire under the nearby wire harness, bringing it over near the SK-220 circuit board.

( ) Solder the **BLUE** wire to the wire pad labeled **RLY** on the circuit board.

( ) Pass the **BLACK** wire from the SK-220 circuit board under the wire harness and solder it to the ground lug on the ALC jack on the rear panel.

( ) Pass the **DARK BLUE** wire from the SK-220 circuit board under the wire harness and solder it to the center pin of the antenna relay jack on the rear panel.

( ) Pass the **RED** wire from the SK-220 circuit board under all of the wiring toward the front of the chassis to the terminal strip that holds the +110 VDC supply. Solder this **RED** wire to the terminal closest to the front panel. Also connected to this terminal are the "+" lead of a 20μF capacitor, a 22KΩ resistor, a diode lead and a red wire going to the antenna relay.

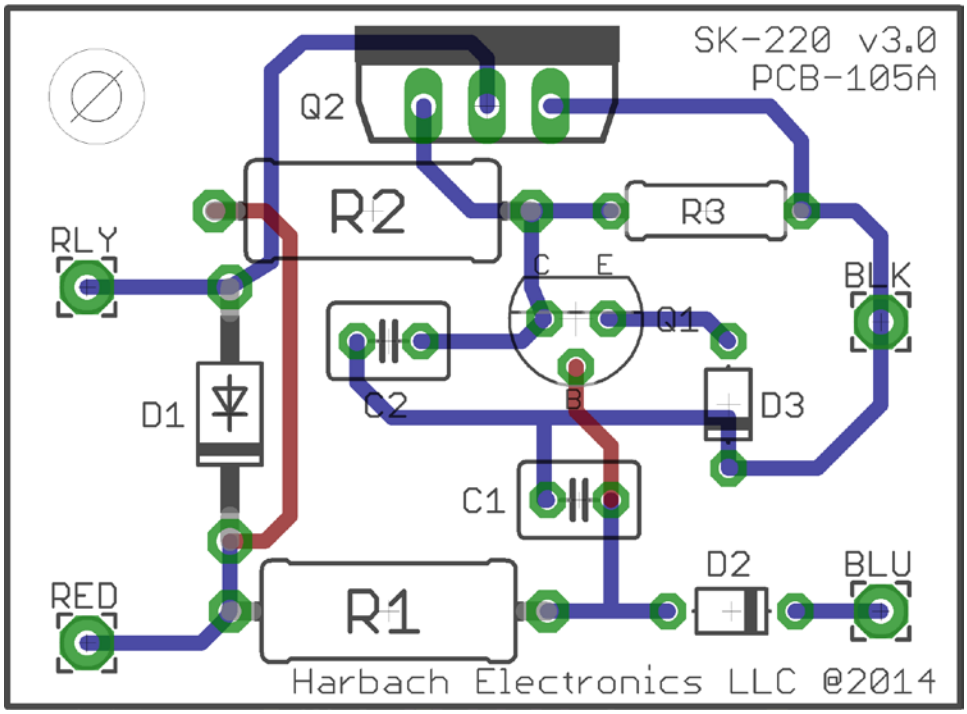
( ) Dress all wires close to the chassis.

( ) Replace the perforated cover and top rear plate cover. Reinstall the 15 sheet metal screws holding these pieces in place. **DO NOT** over tighten these screws, as it is fairly easy to strip the screw threads in the aluminum underneath.

( ) Use the book to hold the amplifier while you reinstall the case and feet.

This completes the installation of the SK-220 "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



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