Building the QLF...A QRP Foot Switch

The Breadboard Radio "QLF" is a simple to build and operate foot switch for semi QSK operation with a QRP transmitter and separate receiver. The "QLF" was designed to work with our TimbeR QRP relay operated Transmit / Receive switching device.



First, use the photo below to identify all of the included parts to build the QLF:



You will need to supply your own Gell Type Super Glue (any brand will work). Follow precautions on label when using.

Locate the 2 inch diameter wooden piece and using a 1/4 inch Phillips screwdriver, ream out a countersink for the head of a #6-32 x 1/2 inch flat head machine screw as shown in photos:



Likewise, ream out a countersink in the rectangular wooden base as shown:





Screw a machine screw into the round piece of wood (if the head is not flush, remove the screw and ream out a larger countersink and replace the screw).





Likewise, screw in a machine screw into the rectangular base:





The long end of the clothespin has a hole predrilled through both sides. Place the clothespin on the board with the screw through one side (you may need to withdraw the screw first and then screw it through one side of the clothespin). Do not tighten, but bring the surface of the clothespin flat against the board. Center the other end of the clothespin as shown:



Using a pen or pencil, mark along the edges of the clothespin on the board. Then remove the clothespin from the board revealing the alignment lines for gluing the clothespin to the board.



Use gel type Super Glue as shown, on one side of the clothespin (a little glue goes a long way) Then place the glue side of the clothespin down on the board using the guidelines you drew and the machine screw goes through the clothespin.







Hold down the clothespin for 2-3 minutes for the glue to set and leave it alone for 10 minutes before continuing the assembly steps.



After letting the glue set for 10 minutes, place the round wooden piece with the machine screw on the clothespin with the screw partly in the hole on the clothespin. Using a pin or pencil, mark the clothespin at the edge of the round piece. This will show where to stop the glue in the next step.



Remove the round wooden piece of wood from the clothes pin. Apply gel superglue to the clothespin from the tip to the mark you made, but do not apply glue where the screw hole is on the clothespin. Screw the round piece to the clothespin with the machine screw and then hold pressure on the round piece and clothespin for two minutes to set the glue. Then leave alone for ten minutes for additional setting.



Next you will place two 3/4 inch blocks on the sides of the clothespin. These blocks keep the clothespin stable from side to side when in use.



In this step make sure that one of the blocks is mounted with the drilled hole going from front to back!

Place a large pool of gel super glue on one side of the cube and mount it glue side down and touching, but not so tight as to restrict movement of the clothespin. Repeat on the other side. Allow glue to set before continuing.



Crimp and solder the two ring terminals to one end of the supplied twin lead wire as shown.





You must now place the ring terminals over the machine screws and hold in place with # 6 machine nuts. The wires must exit on the side with the 3/4 inch block with drilled hole. If you have difficulty, you can remove the top side of the clothespin by carefully slipping if off the spring and replacing it once the ring terminals are in place and tightened. NOTE: the nuts will not be completely on the screw shaft even though they are tight.



Once the wires are attached, resemble the clothespin and run the other end of the wire through the hole in the 3/4 inch block. The wire may be dressed to connect to your Timber T/R switch or other device. You may paint the foot switch if you like or leave it natural.



TO USE: Apply just enough foot pressure to close the contacts. Do not step on the switch. You will learn that the foot switch is a very effect tool for semi QSK operation.