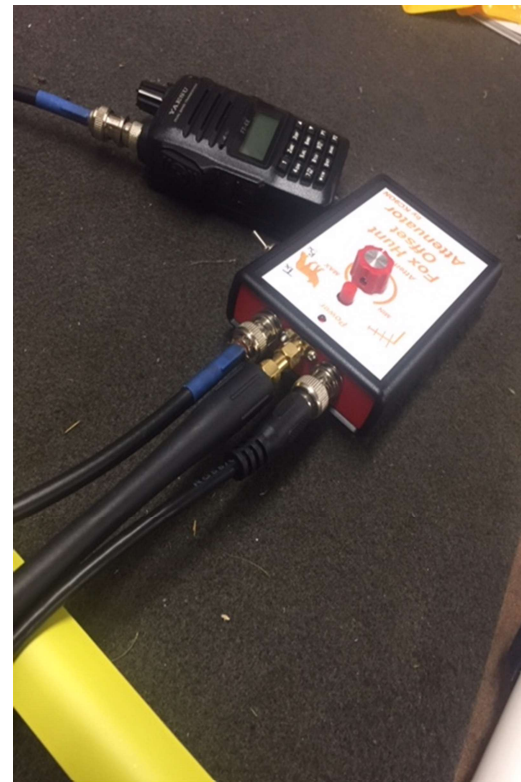


Fox Hunt Offset Attenuator TxRx Modification

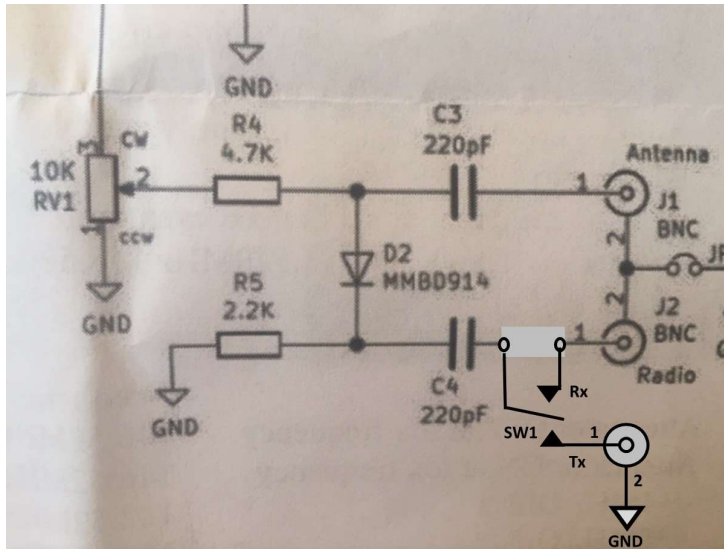
The purpose of this modification is to allow a single radio to be used efficiently to allow the offset attenuator to be switched from transmit to receive mode. A momentary SPDT toggle switch is employed to switch the radio to the duck antenna to key the Fox Box. It can then be instantaneously released to listen to the returning signal



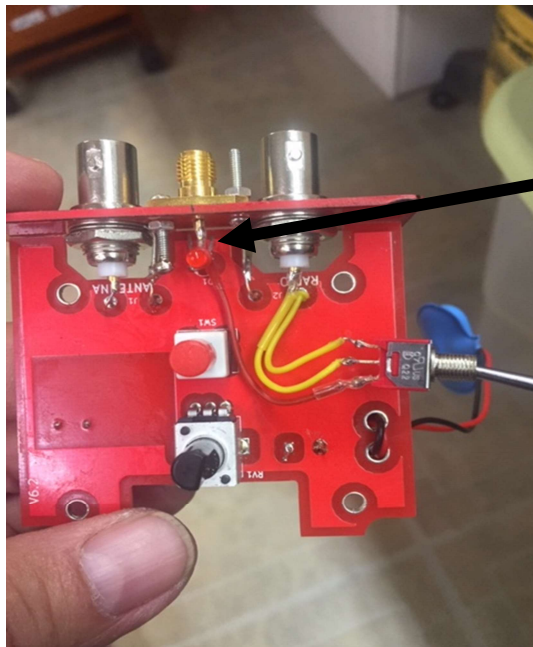
Here is the finished modification. Adapters were used to allow the BNC cable to attach to my Yaesu radio, and to mount its ducky antenna to the attenuator box.



Here is another view showing the SMA jack mounted between the attenuator BNC jacks.



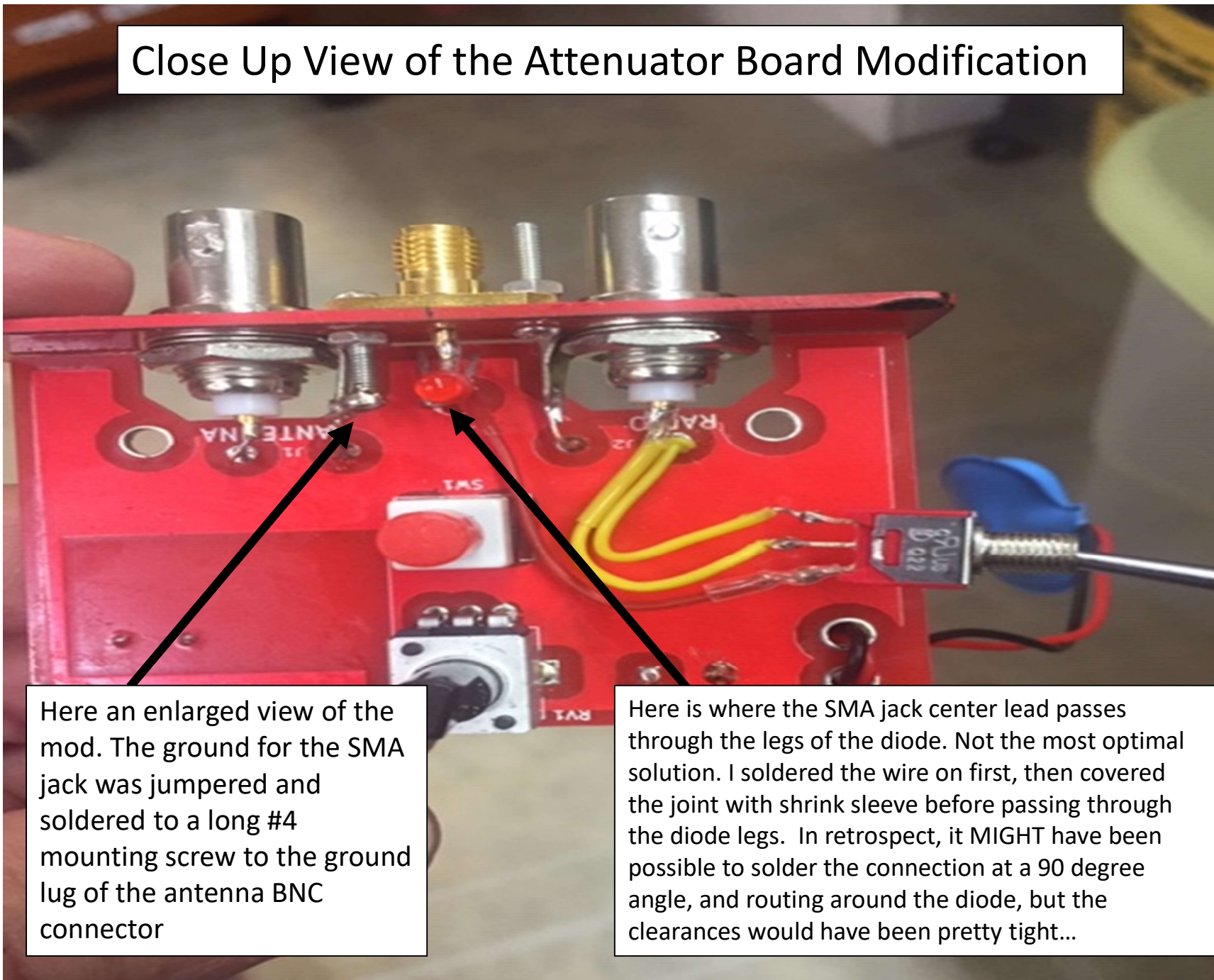
Here is the updated circuit showing the I/O section of the attenuator.



Here is the physical layout of the mod. It gets a little dicey because of the location I chose for the SMA jack. The center wire for the ducky jack had to pass through the two legs of the power indicator LED.

While this modification of the box is doable, it could be made more easily producible by interrupting the PWB run at the Radio connection and also by reconfiguring the region around the Power Indicator LED to accept the SMA connector connections. The SMA ground connection also needs work, but again, some modifications to the PWB would make for a cleaner connection method.

Close Up View of the Attenuator Board Modification



Here an enlarged view of the mod. The ground for the SMA jack was jumpered and soldered to a long #4 mounting screw to the ground lug of the antenna BNC connector

Here is where the SMA jack center lead passes through the legs of the diode. Not the most optimal solution. I soldered the wire on first, then covered the joint with shrink sleeve before passing through the diode legs. In retrospect, it MIGHT have been possible to solder the connection at a 90 degree angle, and routing around the diode, but the clearances would have been pretty tight...

Parts list:**Box Mod**

- SDPT switch \$3.39
- SMA Panel Mount Jack - \$7.99
- 24 ga telephone wire. Had it laying around.
- 2 ¾" #4 screws and nuts. I bought an assortment of small screws for \$4.79

Adapters for Yaesu HT(your radio may differ)

- BNC Female to SMA – \$6.99
- SMA male to SMA Male -\$6.99

Source – Cables and Connectors in Newington, CT

Final Thoughts

As implemented, this is a medium difficulty modification. You need to be able to work in small areas with small parts. I happen to be a model builder, so I am tooled for and accustomed to small work. Small pliers, cutters, tweezers, are necessary. A magnifying light can also be helpful, but is not necessary.

Another potential issue is that this modification is not fail safe. In other words, with the system connected and in use, it is possible to transmit into the tape measure antenna if you forget to key the TxRx selector switch. This could be precluded by reversing the connections of the switch to force default function through the ducky instead of the Yagi antenna.

Finally, I'd be happy to work with whoever is responsible for the board design to help develop a more producible solution. It might even be possible to develop a board with jumpering capability to allow the user to build this with or without the switching capability.

73!!

Bob

W1BOB