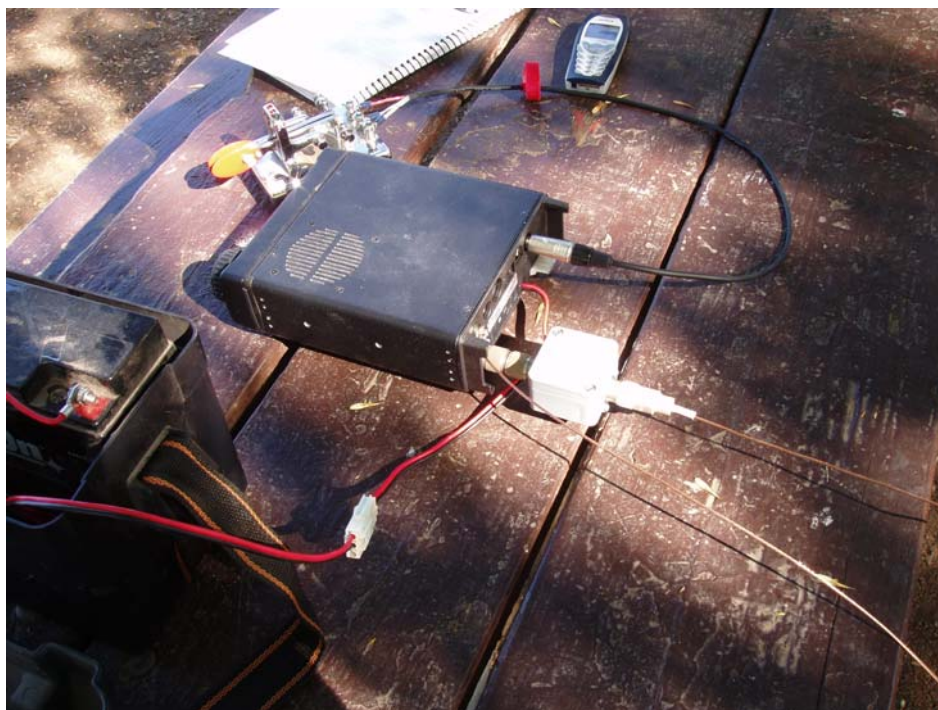


Field Testing the MatchBox

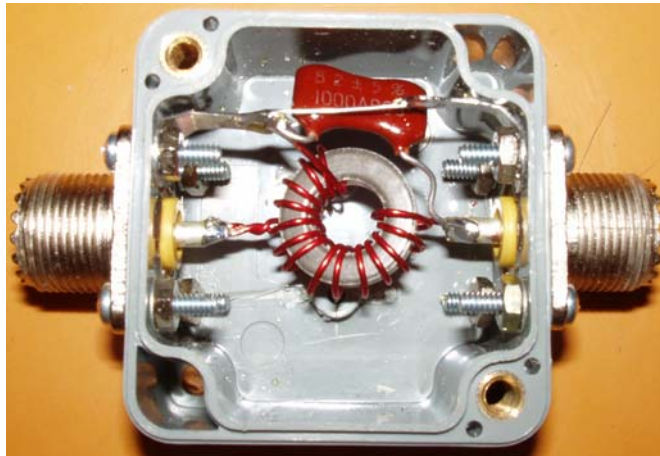
This photo shows the MatchBox connected directly to the output of the 703. You can also see the counterpoise radial connected to the ground-lug of the 703. The counterpoise wire is simply laying on the ground directly beneath the antenna wire. Both wires are 33' 5" in length. The antenna wire has a PL-259 connector soldered onto one end and a plastic insulator on the far end. The antenna wire was soldered to the center part of the PL-259 connector and then a short piece of plastic soda straw was slipped over the end of the far end of the wire and slid down the wire and inserted into the PL-259 connector. The shell of the connector was removed and a piece of electrical tape was cut approximately 1/4" wide and wrapped around the barrel part of the connector covering all the solder holes. Then I mixed up a good portion of 5-minute epoxy and poured it into the top of the PL-259 connector. The epoxy was allowed to set over night to cure. This provided a good center insulator support for the wire so that it will not short against the shell of the connector. The shell was then slid back into place and screwed onto the connector.



The battery is a 18 ampere/hour gel-cell and will power the IC-703 for several days of operation considering that I would operate in 3 to 4 hour intervals several times a day always at the 10 watt output level. My initial tests were performed on 20 meters, both with and without a ground radial. My first QSO was with W8NCK and WD8NM at 18:21 UTC, both in Ohio. I received a 599 report from both stations. The next QSO was with K6KSG at 18:54 UTC in California, also a 599 report. My last QSO was with KC0OFE at 19:32 UTC, he was in Colorado and also gave me a 599 report. At this point I concluded that the antenna was working fine as a 1/2 wave length End-Fed wire. I then removed the MatchBox and connected the antenna directly to the output of the 703 and QSY'd to 40 meters. There my first QSO was with a local station K8ORD/7 in Cavecreek, AZ at 20:12 UTC and of course a 599 report. My next QSO was with KF7S at 18:27 UTC in Salt Lake City, Utah. I also received a 599 report from Ken. This concluded my field tests of using the wire on both 40 and 20 meters. I was very pleased with the results.

MatchBox matches high impedance End-Fed 1/2 wave wire

A inside view of the MatchBox shows the T68-7 Toroid coil and 82 pF Silver Mica Capacitor. The cap is rated at 1KV. The input is tapped at six (6) turns from the ground end. The circuit is a simple parallel tuned tank circuit resonate at 14.1 MHz with a low-impedance input tap. It matches the high impedance of a end-fed 1/2 wave wire antenna on 20 meters and provides a good match to the IC-703 with the SWR indicator lighting only two bars, well less than 1.5:1 And of course on forty meters no matching is required since the antenna is a quarter wave length and presents a low impedance to the 703, easily handled by the internal antenna tuner.



Outside view of the MatchBox. You can use coax cable to connect the 703 to the matchbox or connector the matchbox directly to the output of the 703.

