KU3X’s QRP Portable Station

Icom IC 703 Plus with home brew vertical antenna.
The pictured home brew vertical can be used with almost any HF rig with 200 watts or less. I’ve used it with my Icom 703 and my FT 897D.

In the picture you will see a short white mast that goes from the tabletop mount to the bottom of the coil assembly. This is nothing more than a Hustler 22” short mast that can be purchased at any ham radio supply outlet.

The antenna will cover 6 meters up to 40 meters. To use this antenna on 6 through 15 meters you will have to collapse the telescopic whip about 2 feet of more.

The above B&W coil is 41 micro henries. The OD is 1-1/2”, length is 5-1/2” and is 12 turns per inch. I found this coil at a hamfest. I mounted the coil on some PVC with caps placed on both ends. (MFJ-404-0811 coil stock can also be used)

The above coil actually has more inductance than is needed to cover 40 to 6 meters. I left the total length on the coil form for test purposes. You actually need only half of the coil for a total of 21 micro henries.

On both ends of the coil form are 3/8” female fine thread adaptors. These fittings can be purchased from Sauder Electronics,

“http://www.sauderelectronics.com/Mounts_c5.htm”
The cost per fitting is only $1.00. You will have to drill a 3/8” in each PVC end cap. Put a short 3/8” bolt through each end cap to attach the couplers. Make sure you also use a locking washing washer next to the head of each of the bolts.
The telescopic whip I used is 9’5” long. The threaded end of the telescopic whip is 3/8” fine thread and will screw directly to the top of the coil form. The long telescopic whip can be purchased from the Buddipole manufacturing people.

“http://www.buddipole.com/lotewh.html

The tabletop mount is very easy to make. Cut a short length of aluminum about 8” long and 4” wide. Drill a ½” hole in one end to accept the 3/8” antenna mount which is also available from Sauder Electronics. I use a short length of RG 8X coax to connect the antenna system to the radio.

I also drilled two small holes and inserted two each 8-32 by ¾” stainless steel machine screws with nuts for attaching the numerous ground radials. I used two each 36’ long ground radials and two each 16’ ground radials. Put down as many ground radials as you can. The more you lay down the better the antenna will perform. I am comfortable with 4 ground radials.

I used a “C Clamp” to attach the base plate to almost any tabletop. Harbor Freight is a good place to purchase most any size clamp at a very reasonable price.
The battery pack is a 10.8 volt at 4200 mah package. This is a great little pack and adds portability to the rig. By running the rig at only 5 watts output power, this little battery pack will offer you an afternoon of portable fun. The fuse for the battery pack is tucked under the rig. Below is the web link for the battery pack.


The batteryspace people have numerous battery packs to choose from. The reason I chose this pack is size and cutoff voltage. They do make a 12 volt pack and it’s not too much bigger. I feel the 9 volt pack will not offer as much operating time.

I changed all of my rigs power cords to Anderson Power Plugs. It makes life so much easier.

Good luck with your project,
Barry G. Kery, KU3X

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