

Mobile HF Dream – (On a Harley Davidson Sportser No Less – Ed.)
Eric - KE7ORH (12/12/21)

Just a few pics on my continuing mobile HF rig dream. Getting into the hard wiring. Lots of misc cables going here there and everywhere. I got to tell you, I was looking pretty hard at the VR7500 and thinking of scrapping the whole HF idea. But I still have to give the HF radio a try. Even if the Sportser vibration eventually eats it. It has been a long-time dream. I remember humping a manpack in the Army wishing for a dirt bike... heck even a mini-bike LOL. Marching just seemed so inefficient LOL.



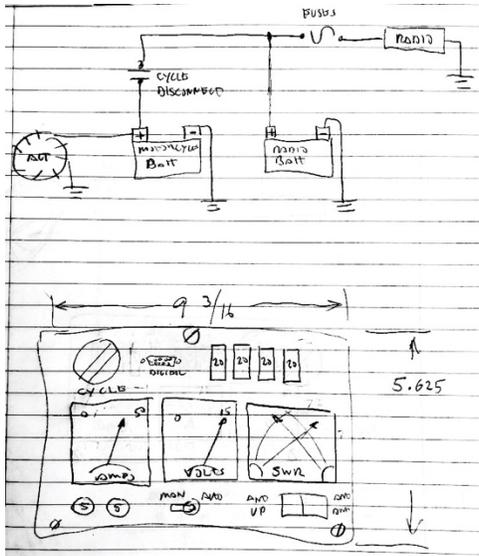
Anyway, I was a bit optimistic about the TS-480 fitting inside of an ammo can easily. I had to get a RS232 adapter for the tuner data cable that would turn 90 degrees to get it all to fit. Still pretty tight. I'm going with an auxiliary battery in the other ammo can. There is about 20 to 30 minutes of grey line propagation around sunrise and sunset, which is generally when the HF nets take place. That auxiliary battery can run the rig that long with some digital traffic mixed in. I wanted to avoid

using the motorcycle battery because at full squirt the TS480 pulls 40 amps. Key the mic and the engine dies LOL (that might be an exaggeration).



I'm thinking of putting a power panel in the back can on top of the tuner with a few meters, volts, amps & SWR for a manual field antenna tuning option, the fuses, and a main disconnect that I can close to charge the aux battery when the bike is running. The Sporty charge system is crudely rectified 18-20 amps, fine for charging but not so





good for the radio circuitry. One of the pics shows a sketch of the panel. Yes, I am hacking this together as I go... but half the fun for me in this hobby is the tinkering. We'll see how it turns out.

It's a race with the weather. I'm not in a huge rush, but my garage is not heated and once it gets chilly my mad scientist projects typically sit until spring.

Once I had the radio head, antenna, etc mounted, I wired everything up just using jumpers to see how the rig would perform. It actually worked much better than I had imagined. I could pick up lots of CW stations on 7mhz, and the MARS nets on 5mhz. With a small antenna I could hear lots of stations, but only a few could hear me. Kind of what I expected.

When I turned the power up to 100 watts I experienced a lot of common mode current all over the rig. Just touching the knobs on the antenna tuner during transmit would give me a nice bite. So I need to put some chokes on the antenna coax and the screwdriver motor wires.

I also tried several sizes of batteries to see how many beans I could get with the lightest battery. The Kenwood radio is an amperage hog. Even turned down to 10 watts it sucks the little batteries right down. I ended up using the U1 lawn & garden battery. It's about the biggest I can fit in the ammo can unless I go with a lithium battery \$\$\$\$. The U1 can transmit at full 200 watts for about 20 minutes, which is fine for what I generally do with the MARS folks.



Some day if I have some extra cash laying around, I would love to try the lithium. The lead acid drops to 9-10 volts at full power. Thankfully the Kenwood can run down low, but the fans come on at that point, and then you are done.

The sporty does have a kick start, and a points & condenser ignition. So, I could tap the motorcycle battery too, but for now I'm keeping the two separate. It just feels like hooking the two together is asking for trouble.

So, now I am drilling holes in the ammo cans to install liquid tight conduit to join the cans electrically and permanently run the wires. I'm not a super experienced electrician, so it's kind of sloppy... but functional. I ordered the ferrite for the chokes.





Those are fun to make. They need to be outside the ammo cans, so I plan to tuck them underneath the back can near the base of the antenna.

But right now, my biggest challenge is that one of the springs on my garage door snapped. It makes opening the door kind of tricky. Finding a new garage door spring is impossible right now. Lowes, Home Depot, nobody has them in stock. They are sitting in a container on a ship waiting to get unloaded LOL. I have a set on order... just waiting for them to show up LOL. But Winter is here too so that is also a limit on riding.

That's it for now.

Thanks,

Eric
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