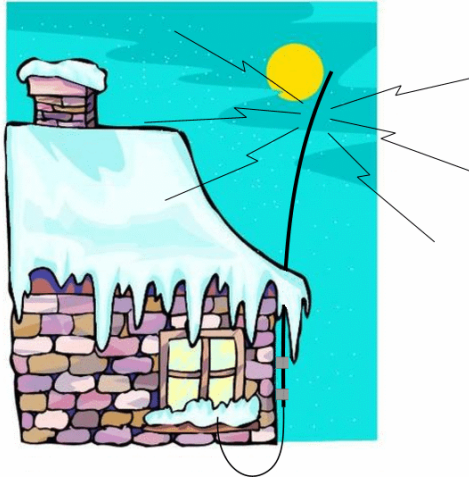


MERCURY AMATEUR RADIO ASSOCIATION

MARA - NORTH AMERICA - NORTH EAST



JANUARY 2008 NEWSLETTER

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TECH STUFF

ONE MAN'S MOBILE INSTALLATION - STAN STATEN, N3HS

I had sent Dave some pictures of my antennas on my van and he asked for more info on the installation. Here are a bunch of pictures with some descriptive material on the mobile installation of an FT-857D.

The first thing to consider is getting power for the radio. It is important to do this right as you can literally burn up the car if done wrong. The power is brought in through the firewall from the battery via a fuse and a ferrite choke (from RF Connections) to help with RF noise getting into the radio and the car's electronics. [For safety reasons it's a

good idea to fuse both positive and negative leads as close to the battery terminals as possible. If the vehicle's cable from the negative battery terminal comes loose at either the battery or the vehicle frame ends then starter and vehicle current will flow instead through the radio ground lead, the radio, and the coax shield to ground – Ed.]



Figure 1 – Power leads connected to the battery. The positive (red) lead is wound with a couple of turns through a ferrite choke before fastening to the battery terminal.

Robust black and red power wire is used to route the power to a terminal strip under the front seat. On other cars I have mounted the terminal strip on the upper part of the passenger side kick panel. Sure makes



Figure 2 – Power connections under the front seat.

hooking up the power cord that comes with the radio easier as they usually have a fuse at the opposite end from the rig connector and neither is easy to get through the fire wall. On my previous car I put a second power strip in the trunk when I mounted a radio there.



Figure 3 – Radio mounted in the box between the seats

The radio is located in a wood box between the seats along with an LDG AT-100 Pro automatic antenna tuner. A piece of filter media is used to keep the radio's fan from sucking too much junk into the radio. You can just see the white filter in this picture (Fig. 3).

The control head is located on the dash in a convenient-to-reach location just above the broadcast radio using a standard mount.



Figure 4 – Mounting position of the control head on the dash.



Figure 5 – Side view of the control head mounting arrangement looking toward the steering wheel.

I have not completed the installation as I plan to hide all the excess wire behind the driver's right side kick panel that is part of the console. The antenna wires go under the driver's seat and under the kick plate on the sliding door and emerge in the back of the van.



Figure 6 – Routing of the coaxial cable under the driver's side sliding door floor panel.

The VHF/UHF antenna is a dual band antenna that is short enough to allow me into the garage without excessive interference and is mounted on the top of the hatch. The following pictures show the wire routing as well as the grounding straps for the rear hatch. The coax is routed through a flexible stick-on "conduit" available at Home Depot to keep it in place so it will not get damaged.



Figure 7 – Stick-on clamp for coax



Figure 8 – View of grounding strap on the rear hatch hinge and the coax to the VHF/UHF antenna.



Figure 9 – Mounting of the VHF/UHF antenna on the rear hatch.

The HF coax comes out at the end of the floor kick panel at the right side/bottom of the hatch. The lump in the heat shrink tubing is another ferrite. There is a grounding strap between the mounting bracket and the body. I used it because I wasn't sure the aluminum home made mount was/would stay grounded.



Figure 10 – View showing the coax for the HF antenna exiting the rear hatch. The grounding strap connects to the mounting bracket under the black bolt located above the rear hatch rubber shock absorber and to the left of the top of the spring.

Finally here is a picture from the rear (Fig. 11). I have used various antennas with this configuration as well as other cars and I much prefer it to antennas such as the screwdriver. I have one mast, as you see, with Hustler 10, 15, 20 and 40M resonators that worked well in the past. With the low of the sunspot cycle being upon us, I have used the 20 M resonator you see in the picture as well as 40 and 80 meter ham sticks. The auto tuner allows much more flexibility in tuning round the band than a single 80 M antenna otherwise provides. The tuner also allows me to tune the 20M antenna high up so it will fit in the garage and still work on all of 20 M.



Figure 11 – Rear view of the van showing the Hustler HF antenna.

I have had enough LDG tuners that I have lost count. I remember their initial article in QST (1996 I think) and built their first kit. I have been very happy with all that I have had and also use an AT-897 in the house.

Text and photos by Stan N3HS

--- MARA NE ---

SWAP SHOP BUY – SELL – TRADE - GIVE AWAY

If you have anything ham-related that you would like to buy, sell, trade or give away, list it here. There is no charge for listing things and no limit to the number of items.

If you are selling, provide a description and a picture (optional) for the item or items, and the price you want. Also indicate whether or not shipping is included or extra, of it the item must be picked up.

If you want to locate an item, provide as much information as you can.

If you are giving something away then the same things as above apply.

To list, contact me at ve1vq@eastlink.ca

DI-DAH-DI-DAH-DIT

I've always wanted an HF mobile installation, and I guess I'm a little bit envious of those who do.

Oh, I've had VHF rigs in many vehicles over the years from trunk mount 2-meter tube models (converted from the 150-174 MHz commercial band) that took up the whole floor space on the passenger side (I was single then!) down to handhelds tucked away in the center console shelf with a mag mount on the roof. But those never satisfied my secret desire for a "Big Rig".

A good friend of mine, Prim McKay (VE1LN), now a silent key, used to tell about running high power AM (tube) mobile on 75 meters, and how he would park on the tracks at a railroad crossing for the increase in signal the effective ground provided.

I remember the year we had the annual meeting at Jeff's (KD1WZ) area in

Connecticut, and how Chic (WA2USI – also a silent key) arrived in a little station wagon or hatchback (that detail escapes me!) with a mobile antenna that seemed larger than the vehicle.

Since seeing Stan's article on his mobile installation my interest has once again revived and I've been looking at mobile antenna models and prices.

Maybe it will always be one of those things I have on my "life list" like climbing Mt. Everest or canoeing down the Amazon that will never ever happen. But I can always dream – can't I?

Until next month,
VE1VQ

IN THE FEBRUARY ISSUE...

**N3IA's visit to the LDS Salt Lake City
Communications Center**