TET-EMTRON

TE-AEA

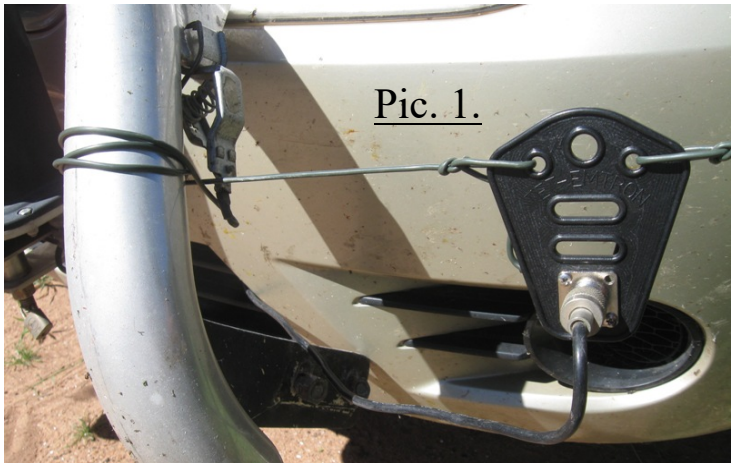
Amateur HF Emergency and Portable Antenna.

This portable emergency antenna is primarily designed to be used either when your mobile antenna has failed and you need an emergency back up, or if you just want some more portable fun with a more efficient antenna than your mobile antenna. It can be used in a variety of ways, and although it may not be a perfect resonance on every band, when used properly it will still be in the ballpark and allow your transmitter to work and get a signal out. In conjunction with a tuner it can be quite efficient. Without a tuner it is designed for the 80,40,30 and 20 metre bands.
To best use it, the ideal scenario would be to park about 22 metres from a branch that you know you could throw a stone or stick over. Or you might have another throwing device in mind.
In an emergency, if there are no trees around or your car is not mobile, the next best thing is to lay it over some bushes. As a last resort it can be laid on the ground, the drier and sandier (up over a sand hill) the better.

Instructions.

As an emergency antenna, for 80,40,30 and 20m.

1. Unclip the bulldog clip and unwind the 1 metre long earth wire up to the plastic joiner with the coaxial connector.
2. Disconnect the coaxial cable from your mobile antenna and screw it onto the emergency antenna.
3. Wrap the earth wire around some fitting (bullbar, ect a few times to take the strain of the antenna, as in Pic.1. Then clip the bulldog clip on to some earthing point i.e the bottom of your mobile antenna or its earth strap. **Do it in such a way as to not put pressure on your coaxial cable and fitting, as you risk separating the coax and the connector.**



Pic. 1.

4. Unwind the antenna from the winder in the direction you need to go to be able to throw it over a branch . You will notice that the antenna has small pieces of heat shrink with the bands on them at points along the antenna.
5. Roll it out until you get to the band you want to use and then hook it around the winder hook as in Pic.2. or Pic.3, depending on which end it is near. It will be close to the resonance that you want to use, but you can check and improve it with the use of an SWR meter. Anywhere around the frequency will be OK, but set it short rather than long, you do not need to duplicate the picture exactly.

Pic.3.

Pic.2.

6. Throw the rope up over the branch if you are using a tree. I use a rock or stick using the loop to make a hitch, as in the PIC.4 and 5. Use the rock like a sling, or a stick like a boomerang. **Don't use your best shifter. If it wraps around the branch you may never get it back. (Don't ask me how I know.)** You may already have some other throwing device.
7. Pull the antenna up off the ground and make the rope fast. Some times the weight of the rock or stick is enough to hold tension.

As a Portable Antenna.

Basically the instructions are the same as above, although for use with a tuner I found the following resonances are on the following bands. I have highlighted the usable ones.

	80m	40m	30m	20m	17m	15m	12m	10m
Full Out	1.0:1	>9:1	2.4.:1	>9:1	6.3:1	>9:1	6.3:1	>9:1
40m	X	1.1:1	>9:1	>9:1	>9:1	4.5:1	6.3:1	>9:1
30m	X	X	1.5:1	>9:1	>9:1	>9:1	8:01	7:01
20m	X	X	X	2:01	5.2:1	7.1:1	7.7:1	>9:1

This may not be the same for you if you don't have a Falcon Wagon parked in my yard with my gum tree. But they should not be far different. With a small tuner the non resonate should be efficient enough.
The reason I have not put any band markers higher than 20m is that with the lump of wound up wire on the winder, it changes the impedance at the end of the wire. This shortens the antenna (20m is already at 3.5m instead of 5). It does however broadband it, which is useful for the higher bands.
Hope you have a lot of fun with it.

Pic.4.

Pic.5.

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