

THE ROLL OF AMATEUR RADIO TRAFFIC HANDLERS DURING AN EMERGENCY

If the worst possible event were to take place, i.e. a magnitude 8 or greater earthquake we would lose all of the following.

Hydro

Landlines

Cell phones

Internet

After we have taken care of immediate family safety we may be in a position to offer communication assistance .

The first question that needs to be addressed is :

Do we want to get involved in emergency traffic handling?

Assuming the answer to this question is yes we now have to decide on the best approach to establish the station.

There are three basic pieces of equipment necessary, they are:

Grab and Go Kit

Power supply

Antenna

What I have decide to put forward in the next few training sessions are some ideas and systems I have set up at my QTH all based on the KISS principle.

I hope these presentations will give rise to feedback of ideas and constructive comments.

We still have to remember Amateur Radio is a hobby and any participation is on a voluntary basis therefore we are not obliged to participate but I believe we have a moral obligation to help if required.

My email address for comments is ve7gn@shaw.ca

GRAB AND GO KIT

When setting up a basic station in a situation which is not normal we must keep all equipment to a minimum. Power requirements are going to determine just how long we can operate the station so keeping the power output of the transmitter as low as possible will conserve energy.

The grab and go kit should be as simple as possible, consisting of the rig with microphone, key and a manual antenna tuner even if the rig has a built-in tuner.

Manual antenna tuners do not require power and will tune the antenna more efficiently than the automatic variety. Also built in tuners can fail.

Antenna tuners required for HF only

My kit consists of a of a FT 857D and a home brew tuner. Both are mounted on a plywood base that has rubber feet underneath. It is not in a case but just tied down to the plywood base.

The 12 volt supply consists of 2metres of # 12 wire with automotive plug in fuses in each of the supply lines. Spare fuses are taped to the supply cable. The supply cable is connected to a terminal block with provision for extra supply cables should one have to add other pieces of equipment.

Test meter to keep a track of voltage supply and to test any cable problems.

By keeping everything as simple as possible the risk of component failure is reduced.

I had the FT 857 as a mobile rig which covered all HF bands as well as VHF and UHF. Any rig covering all bands will be the ideal choice for the grab and go kit .

Bear in mind that having a station ready for an emergency needs to have everything ready and tested before the event. The whole idea of the grab and go kit is one that can be set up and be operational anywhere at any time.

POWER SUPPLY

The method of supplying power to the rig is going to determine the length of time one can remain on the air.

Systems:-

Gas, diesel or propane generator requires fuel which limits its use.

Car 12 volts system also requires fuel.

Wind generator providing the wind is constant over a long period.

Solar power seems to be the most reliable method of keeping a battery charged.

Advantages :-

No fuel required

No maintenance

Will charge to some degree during all conditions of daylight hours.

Disadvantages :-

Output reduced during cloudy conditions

Useful operation during daylight hours which makes the system less useful during the winter.

Output current not as high as a generator.

My system consists of an 80 watt portable solar panel and two 12 volt 36Ah sealed batteries connected in parallel.

Keeping the transmitter power output as low as possible will prolong battery life.

H.F. WIRE ANTENNA

The antenna must be simple to erect, have the minimum of connectors and low cost.

The antenna I have experimented with is the 80/40m inverted “V”

It has a centre support of 30 feet with the sloping dipole ends terminated on an insulated post about 12-24” above the ground. The 40m dipole is set at right angles to the 80m dipole.

The co-ax feed is connected to a terminal block with stainless steel bolts and the dipoles also terminated to the same co-ax bolts.

The antenna system was tested with and without a balun, the SWR remained the same for both.

This KISS antenna did not have a balun thereby reducing the number of connections in the system. RF feed back was not experienced with the balun free set-up.

By keeping the antenna as simple as possible the likelihood of antenna problems is reduced.

VERTICAL ANTENNAS

The vertical antenna is not as efficient as the wire antenna for HF bands but has the advantage of requiring less space.

I have tried the vertical set up on a vehicle and on a tripod.

The advantage with the vehicle set up is the body of the vehicle acts as a ground whereas the tripod requires ground radials.

My main vertical antenna is the Bandspanner which tunes 80 to 10m by simply changing the length of the whip which is adjustable by a simple clamping screw at the top of the coil section.

I also have a set of vertical antennas for each HF band each with its own whip.

The antenna system will depend on the operators preference but should be tested well before an emergency.

Once again the KISS idea should be employed whenever possible.

FINAL COMMENTS

The last few training session comments have been based on the KISS system ideas that were tested at my location.

No computers or extra power system requirements only the rig and manual tuner in the G/G kit.

Antennas as simple as possible with the minimum number of connectors.

Power supply 12 volt battery with solar power charging.

Paper and pencil for messages and logging.

List of national and provincial emergency frequencies.

Everything ready packed up ready to go at a moments notice.

If interested all basic information including traffic handling, antenna construction and emergency frequencies can be found on my website which is www.ve7gn.ca.

VE7GN

Page 6 has suggested form to be used when a request is made to send a radiogram.

MESSAGE OUTGOING

DATE TIME OPERATOR CALL SIGN

ORIGINATOR INFORMATION

NAME
ADDRESS
EMAIL
PHONE NUMBER

RECIPIENT INFORMATION

NAME
ADDRESS
EMAIL
PHONE NUMBER

MESSAGE

.....
.....
.....
.....
.....

SIGNATURE RADIOGRAM #

MESSAGE INCOMING (FOR ORIGINATOR ABOVE)

RECIPIENT

MESSAGE

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.....
.....
.....

SIGNATURE

DATE AND TIME RECEIVED

OPERATOR CALL SIGN RADIOGRAM #