

EMERGENCY COMMUNICATION KISS MODE

Ham radio has traditionally always been ready to offer emergency communications when all else fails. I think some of us are ready to do just that but are now confronted with the so called emergency plans put out by many organizations ham and non ham that have such a set of complex instructions and procedures that problems are inevitable.

We need a group of hams that are willing to put their stations on the air without the constraints of "Official Organizations" telling us how to conduct ourselves as radio operators. When I see 18 pages of instructions for an upcoming exercise I wonder if the planners have any idea just how convoluted and confusing their instructions are. Have they not heard of the KISS principle?

Having got that off my chest I put the following thoughts together.

There are two major disasters that will have serious consequences, they are a major earthquake and a massive CME (Coronal Mass Ejection).

The earthquake with no warning will produce widespread damage limited to the proximity of the event and covering many square kilometers.

The CME with many hours warning may disrupt hydro and all forms of communication including earth satellites. If this event destroys the main intercity power line transformers it may be many months or years before power can be restored. The main power line transformers are custom made and no company keeps a supply on hand.

Therefore.....

We cannot rely on the repeater system to stay operational.

The EOC'S may not be manned or remain intact.

All other communication services if operational will be overloaded.

We may be on our own for some time.

Remember Amateur Radio is a hobby and there is no obligation to become involved in any way but the first line of this document states our long standing tradition and is one of the main reasons why many of us took up the hobby.

If we are to maintain this tradition I put forward the following as a suggestion.

Have a simple HF station ready to set up at any location.

HF rig with a built in antenna tuner if possible.

Microphone and key.

Wire antenna for 80, 40, and 20m

Power source.

The following pages contain suggested frequencies, plus a simple antenna construction.

EMERGENCY FREQUENCY OPERATION

Without any EOC stations it will be left to us to try and set up communications within the city and city to city.

The following frequencies are listed as the National emergency frequencies and others that are known to be used for traffic handling on a regular basis.

HF PHONE

3.675, 3.716 (BCYTN) Meets daily and would be a recommended frequency to monitor.

7.135

14.135

HF CW

3.535, 3.652 (BCEN) Meets daily and would be a recommended frequency to monitor.

7.035

14.035

HF DIGITAL AIRMAIL AND BPO32

3.596, 3615 (VE7PEP)

7.091, 7.096

14.096

VHF SIMPLEX

146.52

146.58

I'm not suggesting any formal format for communication between stations. The main objective is to contact stations in other areas and keep a list of stations heard. Any one station may take the initiative to take control and organize the relaying of messages.

This may seem contrary to all net organizations but what are you going to do when your carefully worked out plan fails because you don't have an EOC and the operators you so carefully selected in your plan are not available.

You will have to improvise and take on the responsibility to help your community. We need to plan for the worst case situation. We have helped in the past and we can do it again.

Remember in emergency situations keeping a written record of messages is mandatory

The RRI (Radio Relay International) system of traffic handling is recommended for this and is recognized in Canada.

If there is any interest, an informal get together on the air could be arranged.

I am on the BCYTN (3716) each evening at 0230 UTC.

SIMPLE HF ANTENNA

The Inverted V was chosen being simple and cheap to construct.

1. Secure a 20 to 30 foot pole. Anything will do providing it's strong enough to support light antenna wires.
2. Guy lines to support pole.
3. The 80m antenna needs 64 feet of wire either side of the feed point.
4. The 40m antenna needs 32 feet of wire either side of the feed point
5. The 20m antenna needs 17 feet of wire either side of the feed point
6. All antennas are terminated on a small plastic box with screw terminals in the top. A PL259 male connector at the base for co-ax.
7. The lower end of each antenna needs to be 2-3 feet above the ground .
8. I have a power point presentation of the antenna.

Analyzer Readings for the Inverted V

80m Antenna

Resonant frequency 3.69 SWR 1:1

At SWR 2:1 the frequency range is 3.58 to 3.84

40m Antenna

Resonant frequency 7.07 SWR 1:1

At SWR 2:1 the frequency range is 6.8 to 7.54

20m Antenna

Resonant frequency 14.07 SWR 1:1

At SWR 2:1 the frequency range is 13.7 to 14.56

With these SWR figures the rig will be happy as 2:1 seems to be the limit for automatic shutdown.

My emergency set up as follows:

I have a TS570 with automatic tuner in the Grab and Go kit and have included a SCS Pactor modem that scans three bands. The auto tuner memorizes the antenna settings for each band enabling the modem to scan without any risk to the rig.

The Grab and Go kit is powered with a Alinco switching power supply (if ac available) or with a sealed lead acid 12 volt battery. The latter kept charged with a 80 watt solar panel.

I have kept the equipment and antenna as simple as possible while being adequate for emergency communications

If anyone is interested in further discussion or comments feel free to contact me

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