



Beginner's Classroom

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This column attempts to explain some aspect of our hobby each month. The subjects may be technical or they may concern such things as DX practices and traditions. Suggestions for topics are always welcome.

BEGINNER'S CLASSROOM FOR JULY 2009

Different Aspects of our Listening Hobby: Part 2

Last month we began a series of how radio communication is used in various types of work and recreation, with a look at marine and weather radio. In this column we'll continue in this vein with an overview of the 160-meter amateur band followed by an explanation of CANWARN, the severe weather tracking and early reporting system that is led by ham radio volunteers throughout North America.

Except for some very low experimental frequencies, the 160-meter ham band is the lowest band, situated just above the AM band from 1800 – 200 kHz. Because this is the lowest frequency amateur band (thus making it the highest wavelength band) as well as the only amateur band in the mediumwave spectrum, 160 meters is known as the "topband". Although daytime use gives a range of about 100 km or so for making contacts, nighttime propagation allows for DXing to be more prevalent, especially in the wintertime. This being said, much of what I've researched about the propagation of this band is scattered and somewhat contradictory – so, in essence, "the sky's the limit" for the topband.

Many of the users of 160 meters operate in AM, or Amplitude Modulation. There are also some who work in SSB mode (Single Sideband) and CW (continuous wave, using Morse Code). Here in the Toronto area I have heard hams having QSOs from Ontario, Quebec, and throughout the Northeast United States. There are amateurs from the US and Canada who have actually worked other countries on 160 meters, but I assume this is not the usual fare for the topband. I notice more activity on 160 meters during the Autumn and Winter than in the summer.

CQ Magazine has a contest devoted to 160 meters, aptly called the CQ WorldWide 160 Meter Contest. The contest is actually in two parts; the last full weekend in January for CW, then the last full weekend in February for SSB. The American Radio Relay League (ARRL) has its own 160-meter contest during the first weekend of December. There are also various ham nets that operate on the topband, including the 160 Meter Net in Illinois weekdays at 10:30 AM CDT (1530 UTC) on 1935 kHz. If you haven't listened to this interesting and somewhat unpredictable ham band, give it a try!

The CANWARN System consists of a group of volunteer amateur radio operators in various parts of Canada who report to Environment Canada

about severe weather conditions they observe from their locations. Severe weather in this case refers to violent thunderstorms, tornadoes, funnel clouds, and hailstorms occurring usually in the warmer months of the year. In the United States and Canada, the Amateur Radio Emergency Service (ARES, with which CANWARN is associated) consists of trained ham operators who assist in various types of emergency communication. ARES is sponsored by the ARRL and RAC, the Radio Amateurs of Canada.

Locally, VE3CTV is the Toronto Repeater frequency for CANWARN, located on 145.37 MHz (-103.5 Hz tone) in the 2-meter band. VE3ULR is the Toronto area hub repeater, located in Aurora on 442.025 MHz in the 70 cm band. If you would like more information on CANWARN and other emergency communications and procedures, go to the EMO website at <http://www.emergencyradio.ca/canwarn.shtml>. EMO stands for Emergency Management Ontario.

CANWARN nets operate under three states of alert. The first is *Condition Green*, when there is a severe thunderstorm watch in effect. The second is called *Condition Yellow*, when there is a severe thunderstorm warning or tornado watch in effect. The difference between a watch and a warning is that a watch means there is a possibility of severe weather in a certain area, and a warning refers to the probable eminent approach of this weather. The last state of alert is *Condition Red*: a tornado warning is in effect. This would include reports of large hail, damaging winds, funnel clouds or tornadoes in a given area.

If you have scanner capability, or have 2-meter and/or 70 cm transceivers or receivers, give a listen to various frequencies when you know of the

approach of severe weather. The CANWARN operators are highly trained and know their role as observers and reporters during these conditions. Don't forget to report to Dave Ross in the **QRZ?** Column anything you hear on the amateur bands!

Next month we'll have a look at more ways radio communication and reception is used for work and recreation. Until then,

73, keep smiling and keep listening,

J O E