A Simplified Guide to Using the Maine Emcomm HF/Packet Network

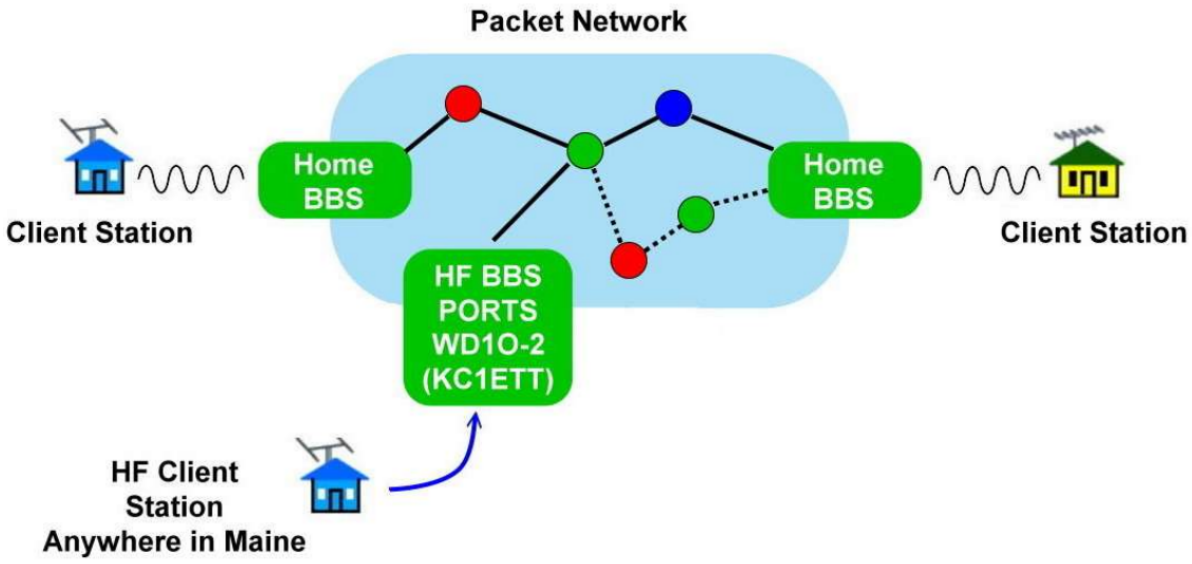
Introduction

This is an interim guide to using the Maine Emcomm HF/Packet Network. It will be followed by a more extensive guide. An overview presentation is available [1].

The network is based on a geographically dispersed set of VHF and/or UHF 1200 baud packet nodes, configured as a mesh for redundancy. Currently (late 2019), the nodes are located in the coastal counties from York to Waldo plus Androscoggin. Since a number of nodes are on hill tops, coverage is extended to neighboring counties and even to the Maritime provinces of Canada.

Message movement is store/forward and is primarily based on the BPQ BBS software developed by John Wiseman, G8BPQ. Clients access the system using the Winlink Express program or other suitable software [3]. Transfers use B2F open compression protocol and binary files are allowed. While some of the nodes also serve as Winlink gateways, the network is independent of the Winlink system and does not make use of the internet.

Range is augmented by the use of HF ports that are connectd to the network. Currently, WD1O supports Winmor and Pactor connects on 80, 40 and 20 meters.



General Guidelines

The system is designed to support emergency communications as efficiently as possible. The use of slow modes such as keyboard to keyboard is not encouraged.

To be recognized on the network, each user (call sign) must be registered. To register, submit your name, call sign and town to the coordinator WD1O via Winlink at wd1o@winlink.org. You will be assigned a home BBS and a hierarchical address (HA).

Sending a message from an unregistered station to a registered station is permitted, however a reply through the network will not be processed without an address on the network.

The preferred client is Winlink Express. However, other clients may be used. These include Pat (Linux) and Airmail. BPQ (Linux) or BPQ32 (Windows) may also be set up as a client. BPQTerm may be used for internet access to a node.

Even though the system will handle binary files, please be economical and use plain text. For example, do not send Excel (xls) files. Convert them to csv text format.

If sending multiple messages, do not send them one at a time. Batch them instead. This conserves the time spent handshaking.

Network Map

A map of the network is available at [3]. This is continuously updated as the network evolves.

Since VHF/UHF packet is essentially line of sight, you must have a node within simplex range. Once you reach a node, your message will be automatically relayed through the system to its destination.

You must have a home BBS. This will determine your full hierarchical address within the system. As an example:

1. N1XP in E. Waterboro has the packet address N1XP@W1YCA.ME.USA.NOAM where W1YCA is the call sign of his home BBS which is located at the York County EMA.
2. K1IRK in Rockport has the packet address K1IRK@KX1EMA.ME.USA.NOAM. His BBS is located at the Knox County EMA, KX1EMA.
3. Since the system has been programmed with the hierarchical addresses, the process of sending a message from N1XP to K1IRK simply involves addressing the message to the call sign.
4. If K1IRK could not use KX1EMA as his home BBS, he might select WD1O-2 in Tenants Harbor. Since WD1O-2 is not within simplex range, he would use a node such as WD1O-5 on Lenfest Mountain.

Important Note: We are in the process of standardizing on one HA addressing scheme across the network. To the registered user, this is transparent as all you need to know is the call sign of your addressee.

Setting Up a VHF/UHF Packet Session in Winlink Express

The Session screen controls the mode and path for your connection. As noted, for packet you have two choices: direct of via a node.

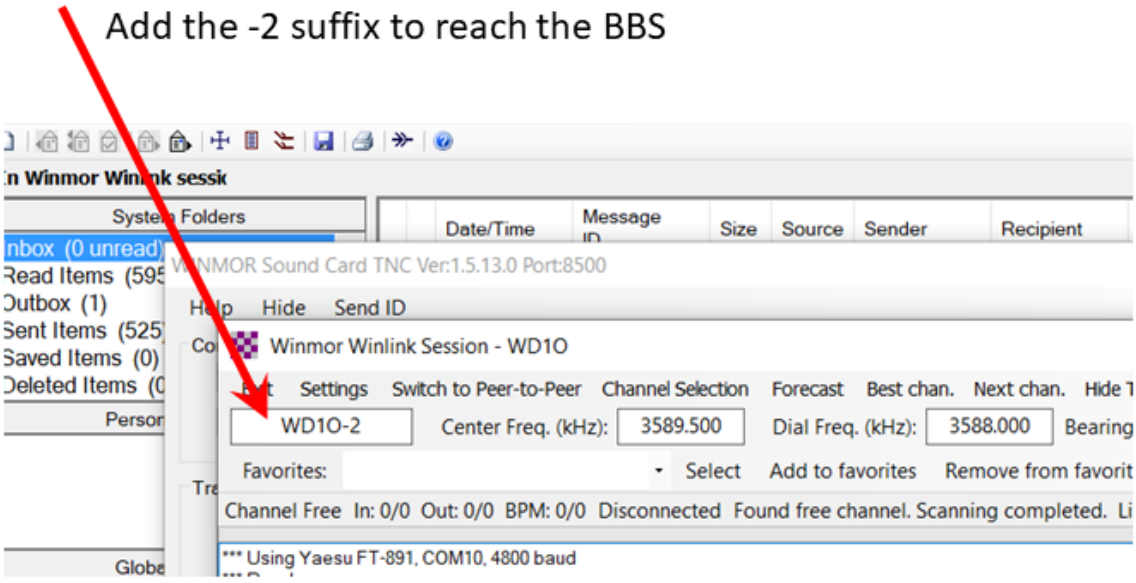
For a direct connection to the KX1EMA BBS using packet, you set up the session as follows:

If your connection has to go through a node/digipeater, then set it up like this example:

With packet, you need to manually set your radio's frequency to that of the station you are initially connecting to.

Setting Up a HF Session in Winlink Express

The HF session is configured just as you would for a HF Winlink session. If you don't know the HF frequency of the network HF port, open the Channel Selection screen and pick the most applicable frequency. For connects to WD1O-2, this will usually be the 80 meter frequency.



WD1O has the base call sign (WD1O) for Winlink connections. For the BBS, you must enter the base call with SSID i.e. WD1O-2.

Sending a Radiogram

KB1TCE is the Maine station in the Digital Traffic Network (formerly known as NTS-Digital). This station is intended for formal radiogram format traffic into and out of the state. Messages must be submitted in radiogram plain text format. For those who are not familiar with the details, Winlink Express has a built-in application for creating and sending radiograms. To use this feature, open a New Message screen and then click on Select Template - Standard Templates - Radiogram RRI Forms - Radiogram.txt. This will open a form in your browser that has lots of helps for proper formatting.

The normal way to submit a form is to send it by Winlink to a regional Winlink-RRI Liaison station that is near to the destination. Absent Winlink, you can send address the message to KB1TCE for injection into the network.

References

1. *A Resilient Amateur Radio Digital Emergency Communications Network for Maine*, presented at the Maine Partners in Emergency Preparedness Conference, April 2019: http://www.maine.gov/tools/whatsnew/attach.php?id=1269680&an=3
2. Comparison of client programs for Winlink: https://winlink.org/ClientSoftware
3. http://kx1ema.org/infrastructure.html

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The current version of this document can be found at http://kx1ema.org/infrastructure.html
Please address comments or inquiries to KB1TCE.