

## **Mecklenburg County ARES<sup>®</sup>**

### **RMS Express / Winlink 2000**

The RMS Express program allows users to interface with the Winlink 2000 Global Radio Email System. RMS Express can access the Winlink 2000 network by several different avenues which include the internet, HF radio and Packet radio. RMS Express is an integral part of many emergency communication operations. The use of the RMS Express program is very similar to many of the email programs that are popular today.

The RMS Express program can be downloaded at the Mecklenburg ARES website at <http://www.mecklenburgares.org> . Links to the RMS Express program are on the Links & Downloads page. There are two programs that must be downloaded and installed onto your computer, the RMS Express program and the Propagation program. RMS Express is the email interface and the propagation program is used by RMS Express to calculate propagation paths when using HF to access the Winlink 2000 network.

Winlink 2000 ([www.winlink.org](http://www.winlink.org)) is a worldwide network for passing email traffic over radio. It does not depend on the internet but has connectivity to internet based stations allowing you to send and receive to other winlink.org recipients AND to email accounts that are internet based. Winlink is used by mariners, RV enthusiasts, MARS, ARES, RACES and many other agencies who need to communicate when the internet is not available.

The Winlink system consists of a group of Common Message Servers (CMS) placed at various locations around the world. These connect via the internet to Radio Message Servers (RMS) in many geographic locations to form a communications network. Radio Message Servers are the VHF, UHF, or HF gateways into the Winlink system. The final component of this network is your station running the RMS Express software to send/receive messages via your radio or the internet.

Winlink messages, like regular email, are sent to specific addresses and may contain file attachments such as pictures, weather maps, spreadsheets, ICS forms, etc. Since Winlink is a store and forward system, stations do not have to make simultaneous connections. This removes time constraints on communications.

Winlink is heavily used by the US and other governments and Military Auxiliary Radio System and some of the Radio Message Servers are restricted to non-amateur operations since they operate on frequencies unavailable to amateur radio operators.

It is possible to make peer to peer connections between two client stations within propagation range of each other without going through a Radio Message Server. This might be useful in an emergency scenario where Winlink traffic is too heavy or where the RMS gateway is unreachable. Emails sent through the Winlink 2000 network via the ham bands must follow the usual rules for amateur radio communications and may not be used for commercial operations, or be encrypted.

During Emergency Drills in Mecklenburg County, RMS Express is used extensively. 79 pieces of traffic were sent or received via the Winlink 2000 network during the last drill. The network was accessed using packet radio, the 40 meter HF band and the internet. This flexibility allows ARES operators access to the network 24/7 and enhances our capacity to send large quantities of message traffic without overwhelming our local emergency voice nets.

In the Charlotte area we have several RMS Packet gateways so users can access the Winlink 2000 network through normal packet radio interfaces instead of using the RMS Express program. These gateways are listed on the W4BFB website <http://www.w4bfb.org>. On the W4BFB site pull down "MARS Info", select "Packet Radio" and click Packet Radio Info. This is an entire page about packet radio in our area and there is a map at the bottom of the page that is interactive and allows you to see which nodes have RMS gateways.

It is highly recommended that everyone in Mecklenburg ARES download and install the RMS Express program even if you do not plan on interfacing it to a radio. A link detailing how to configure the program is listed in the links section of the Mecklenburg Ares website, right under the links to the program. There is also a link to an RMS Express training document and a series of how to videos that reviews connecting RMS Express through various modems and a Signalink interface.

Those of you who already use HF digital modes will find that integrating the RMS Express program is a rather simple endeavor and it greatly increases your emergency communication capabilities. There are RMS servers that listen on many of the HF Ham bands including 20m, 30m 40m and 80m. At last count there were 60 Radio Message Server stations active on the bands.

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