

WINLINK 2000

Winlink 2000 is a hybrid system that enables amateur radio RF paths to bridge across a failed portion of the Internet. The current system provides capabilities of e-mail message delivery not easily done via RF-only amateur radio paths and is the most practical way to provide our served agencies with an easy to use interface for their staff to route traffic to distant points. All WL2K software is free for amateur use.

WL2K consists of “server” and “client” parts, most of which operate under the Microsoft Windows environment. The system can route e-mail messages via VHF/UHF packet radio, typically at 1200 or 9600 baud, or HF Pactor I, which are a little slower but still much faster and more accurate than voice. HF Pactor II and III are faster but more expensive to purchase.

Client Portion of the system:

Connections are made to the system with a supported digital mode. For typical VHF/UHF packet radio connections, either Paclink or Airmail programs would be used.

Paclink uses a standard e-mail program much like the Microsoft Outlook Express as the interface point, through an individual computer, or can act as a server for the served agency when connected to that agency’s Local Area Network. It then uses the AGW Packet Engine program to drive either a TNC operating in KISS mode, or a sound card.

Airmail is an alternative product that will also operate with older MS Windows 98 software and provides its own e-mail interface. It cannot connect to a LAN and is used in stand-alone computers. Airmail has two additional features, which allow it to act as a peer-to-peer hub between VHF/UHF stations.

Telpac (TELnet PACket bridge) is a simple interface between amateur radio RF data and the Internet and is the main bridge between the client side to the server side when using VHF/UHF.

Server Portion of the system:

The client software operating through an appropriate digital mode connects to a PMBO (Participating Mail Box Office). Once the data enters the PMBO, it is routed locally or to one of eight mirrored CMS’s (Central

Message Server's) that stores the necessary routing data and permits an address with a @winlink.org extension. This allows e-mail to be properly routed worldwide to any location that has an operating portion of the Internet.

Deployment:

There is a great deal of flexibility with the WL2K system and different parts of our Section will need to determine what is best for their location and their neighboring counties when setting up the system.

Most standalone digital stations might want to consider using Airmail due to the ability to use older versions of MS Windows, and the ability to connect with other VHF/UHF stations on an RF peer-to-peer basis if the internet connection should be lost.

When a served agency wants to have the ability to send e-mail when their Internet connection or e-mail server is inoperative, the use of Paclink will allow the sending of messages to a distant Telpac Node. If a Telpac Node's Internet connection fails, you can still keep the system operational by digipeating to another Telpac Node that does have Internet connectivity. It is strongly recommended that we have many Telpacs set up throughout the state.

When longer distances are needed, HF with Pactor I, II and III can be used to bridge the distance. Based on the ARRL proposed NTS/NTSD restructuring, WL2K will be a concurrent system that is an alternate path for almost all messaging between served agencies and amateur radio.