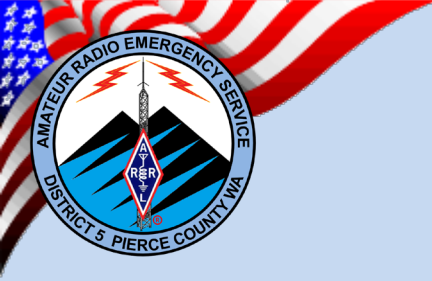




Pierce County WA, District 5, ARES
Introduction to WINLINK
WINLINK Network, ARDOP, VARA, and RMS Express

(as of 18 February 2021)

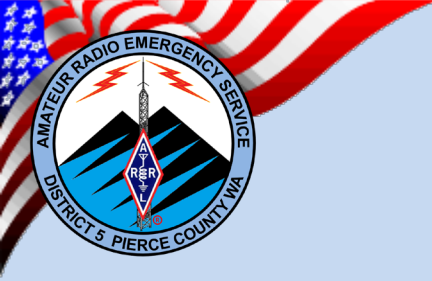


PURPOSE

To provide the ARES Radio Operator with an introduction to the WINLINK system. Familiarize Radio Operators with the WINLINK Modes, Paths, Equipment requirements, and the RMS Express Interface in order to operate WINLINK/WINMOR.

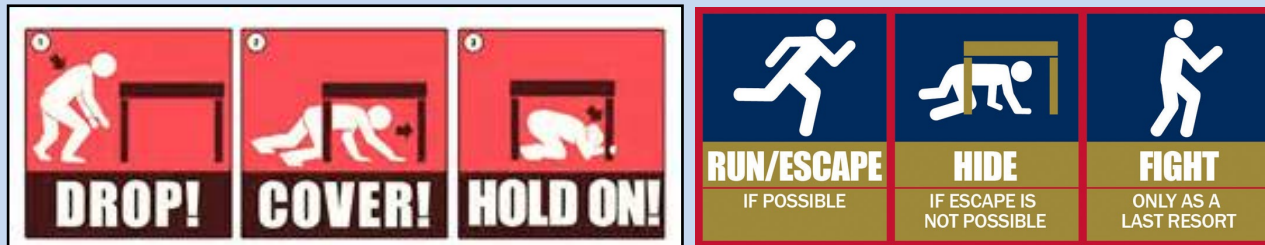
RULES

- Maximum participation
- Silence Cell Phones please
- Ask questions as they arise
- Comments and experiences are welcome / for group discussion not side bar
- Breaks approximately every hour (+/-)



ADMINISTRATION

- Restrooms
- First Aid, Stop the Bleed, and AED kits
- Earthquake (Drop, Cover, Hold)
- Active Shooter (Run, Hide, Fight)
- Evacuation (routes, rally point, accountability)
- Additional duties (sign in roster, escorts)





AGENDA



- **Objective**
- **Abbreviations**
- **BLUF: Bottom Line Up Front**
- **WINLINK Background**
- **What is WINLINK**
- **WINLINK and ARES**
- **ICS/NIMS support**
- **WINLINK Modes**
- **WINLINK Paths**
- **Equipment requirements**
- **Digital Interfaces**
- **RMS Express Interface**
- **RMS Express Advanced**
- **Conclusion**
- **Questions**



OBJECTIVE

Mission:

As ARES Radio Operators one of our primary means of establishing effective communications is by re-establishing e-mail communications. **E-mail communications have become essential to managing large scale responses to incidents.** One of the major capabilities that we offer to our served agencies is the ability to send and receive **e-mail traffic both within an effected area and outside of the effected area.** ARES Radio Operators must be capable of providing effective communications to our Served Agencies.

Objectives:

- Familiarize Radio Operators with the capabilities of the WINLINK system.
- Familiarize Radio Operators with the Modes and Paths used by WINLINK.
- Familiarize Radio Operators with the equipment requirements to operate WINLINK.
- Familiarize Radio Operators with the RMS Express Interface.
- Provide step by step instructions on advanced RMS Express Interface options.



Abbreviations and Definitions



- **ARES** Amateur Radio Emergency Service
- **ARQ** Automatic Repeat Request
- **AUXCOMM** Auxiliary Communications
- **AX.25** Amateur X.25 is a data link layer protocol derived from the X.25 protocol suite
- **Baud** A common measure of the speed of communication over a data channel
- **BBS** Bulletin Board System
- **BLUF** Bottom Line Up Front
- **BPS** Bits Per Second (Symbol Rate)
- **CMS** Common Message Server
- **CSV** Comma Separated Values
- **E-mail** Electronic Mail
- **EMCOMM** Emergency Communications
- **FEC** Forward Error Correction
- **HF** High Frequency
- **ICS** Incident Command System
- **NIMS** National Incident Management System
- **LAN** Local Area Network
- **MPS** Message Pickup Station
- **P2P** Peer to Peer
- **RACES** Radio Amateur Civil Emergency Service
- **RMS** Radio Message Server
- **TNC** Terminal Node Controller (also used to describe Digital mode encoders – ARDOP/VARA)
- **UHF** Ultra High Frequency
- **VHF** Very High Frequency



Abbreviations and Definitions



WINLINK:

WINLINK, also known as the WINLINK 2000 Network, is a worldwide radio messaging system that uses amateur-band radio frequencies to provide radio interconnection services that include email with attachments, position reporting, weather bulletins, emergency relief communications, and message relay. The system is built and administered by volunteers and administered by the Amateur Radio Safety Foundation Inc., an American charitable entity and 501c(3)non-profit organization.

ARDOP:

ARDOP is a medium-performance protocol for HF transport of messages in the WINLINK system. Its chief attraction is low-cost implementations using common computer sound cards or low-cost radio-to-soundcard interface products.

UZ7HO:

The UZ7HO Soundmodem software TNC is a software dual-port Packet Radio TNC that uses a sound card as a modem and supports the AX.25 protocol. The UZ7HO Soundmodem has two TCP/IP interfaces to link with client applications.

VARA / VARA FM:

VARA and VARA FM are digital modes that are audio-signal-based (as opposed to packet), and rely on multi-carrier Orthogonal Frequency-Division Multiplexing (OFDM). VARA / VARA FM decompose the transmission into multiple sub-carriers, allowing multiple simultaneous low-symbol-rate transmissions on multiple sub-carriers to achieve high-speed data transfer across similar spectrum usage. The use of subcarriers allows numerous signals to be transmitted concurrently – **vastly improving on packet speeds**. However, **VARA FM is not compatible with packet; they are separate systems**.



Bottom Line Up Front (BLUF)



BLUF:

Since the advent of electronic-mail (e-mail) people and organizations have become increasingly reliant on the simplicity and effectiveness of e-mail communications. **E-mail affords the organization an avenue for delivering written messages, lists, graphics, and pre-defined formatted documents to multiple recipients in near real time.** In today's modern work space, hand written message forms are seldom used and are not transparent to normal operations.

The WINLINK network provides the Radio Operator with a non-internet dependent, radio based last mile avenue to restore effective communications into and out of the effected area.

ARES Radio Operators must be capable of providing effective communications to our Served Agencies, and the WINLINK network is a critical tool to provide effective digital communications.



WINLINK Background



WINLINK development history:

- Initiated in the early 1980's, known as APLINK (Amator-Packet Link).
- Gained notoriety during the 1990 Gulf War resulting in a CBS documentary.
- With the mainstream introduction of the internet, work progressed and resulted in WINLINK Classic and NETLINK.
- Development in the late 1990's resulted in the WINLINK 2000 Network.
- An all volunteer project of the Amateur Radio Safety Foundation a 501.C(3) non profit.
- Donations are highly encouraged by purchasing a license. Funds are used to maintain the system and provide for further development.



What is WINLINK?

What is WINLINK?

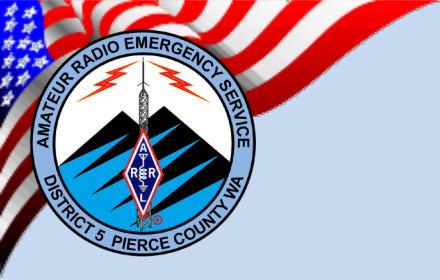
“A Worldwide system for sending e-mail via radio.”

Provides e-mail from almost anywhere in the world.

Entirely supported and operated by amateur radio volunteers (Amateur Radio Safety Foundation, Inc.).

Adopted for contingency communication by many Governmental and Non-Governmental agencies/organizations:

- Federal Emergency Management Agency
- Department of Homeland Security
- Emergency Management at all levels
- ARES, RACES, and EMCOMM/AUXCOMM teams
- International and American Red cross and the Salvation Army
- Maritime and Search and Rescue



What will the WINLINK system do for ARES?



Flexibility:

- Internet-only (Telnet) direct connections to Winlink.
- Radio link bridge to Internet e-mail.
- Radio-only store and forward messaging.
- Peer-to-peer connections between radio end-users.
- Familiar and simple e-mail client interface.

Interoperability:

- Bridge different radio capabilities (VHF/UHF/HF).
- Seamless integration with Internet e-mail.

Geographical dispersion and redundancy for reliability

- Formerly a system of servers located around the world (5)
- Now a Cloud based system



What will the WINLINK system do for ARES?



Continued:

- Standard e-mail format with many features.
 - **Binary file attachments** (pictures, pdf, spreadsheets).
 - Automatic message compression/decompression.
 - **White listing** used to prevent spam.
- **Time independence.**
- Ability to collect messages while unattended.
- Good operation at most power levels.
- Not limited by station-to-station propagation.
- Message logging, and ICS report generation.
- Forms and template support.
- Wide adoption by EMCOMM related agencies.
- Automatic Repeat Request (ARQ) protocols built in.



ICS support in WINLINK

(Forms, Formats/Templates, Logs, and Files)



The RMS Express software suite has built in support for the ICS/NIMS framework and is responsive to ARES, AUXCOMM, EMCOMM requests for content.

ICS forms are built in:

ICS forms are built as message templates and can be sent without sending the form template (Lines, etc.) instead limiting the message to pure text. By having shared forms resident within the software, transmissions times can be kept to a minimum. ICS-309 Logs can be generated and sent as a template by the RMS software.

Agency Specific forms, formats, and templates:

A repository of User Specific forms, formats, and templates are also included and updated regularly within the RMS express suite.

Files and Attachments:

Files and attachments may be sent using the RMS Express software. However any file/attachment must be vetted before being sent. Transmission times for files/attachments can be extensive and alternatives should be used if possible.

If a file/attachment must be sent, TELNET is the preferred mode.



Types of WINLINK

WINLINK is software and system based using the RMS Express Software Suite. Other software may be used but RMS Express is the most recommended and maintained.

Main WINLINK mode types:

Telnet:

- Internet based email system similar to traditional email providers.

Packet:

- VHF or UHF (**AX.25 Packet**) based message sent to a radio gateway (RMS) and relayed to the internet cloud based server system (CMS).
- 1200 bps or 9600 bps.

VARA FM:

- Purchased software as the TNC (\leq **25,210** bps across 116 sub-carriers).
- Faster transmission rate, but software costs \approx \$69.
- Lower investment cost \leq \$200 total.



Types of WINLINK

Main WINLINK mode types Cont.:

ARDOP:

- HF based messaging using the RMS software as the TNC (≤ 4000 bps).
- Slower transmission rate, but free software based.
- Lower investment cost \approx \$125.

VARA (HF):

- HF based messaging using purchased software as the TNC ($\leq 7,000$ bps).
- Higher baud rate for shorter transmission times when compared to ARDOP.
- Same investment cost as ARDOP (\leq \$200).
- *Capable of exceeding PACTOR data rates in ideal conditions.*

PACTOR:

- HF based message using specialized PACTOR equipment. Higher baud rate for shorter transmission times.
- *Most reliable HF mode in austere conditions.*
- Capable of using the SHARES network (PACTOR IV).
- Widely used by governmental organizations.
- *Sizeable investment \$1000 to \$1900.*



Types of WINLINK

Main WINLINK path types:

WINLINK:

- Traffic is passed through the traditional WINLINK system.

Peer to Peer (P2P):

- WINLINK (HF, VHF, UHF) message sent directly to the intended recipient via direct radio contact.

Radio Only:

- WINLINK messages sent to intended recipient via a radio relay (MPS). This path does not rely on the internet to pass traffic. Must be configured in the Hybrid Network Parameters (Settings).

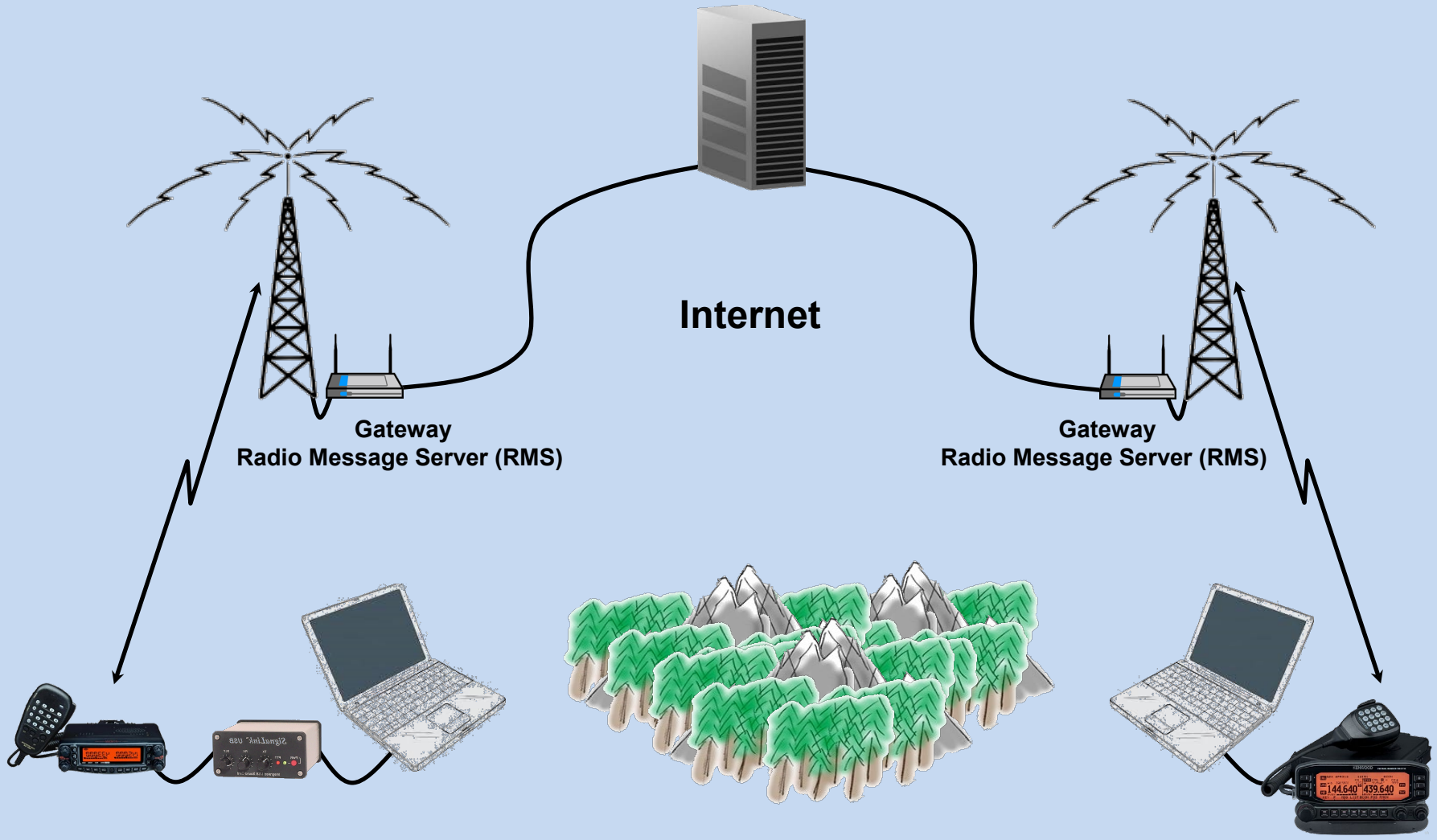
Telnet post office:

- This path uses a local area network (LAN) or a mesh network to pass traffic directly to a post office identified by callsign and IP address. Messages are held in the post office until the intended recipient checks into the post office.



WINLINK Packet Path

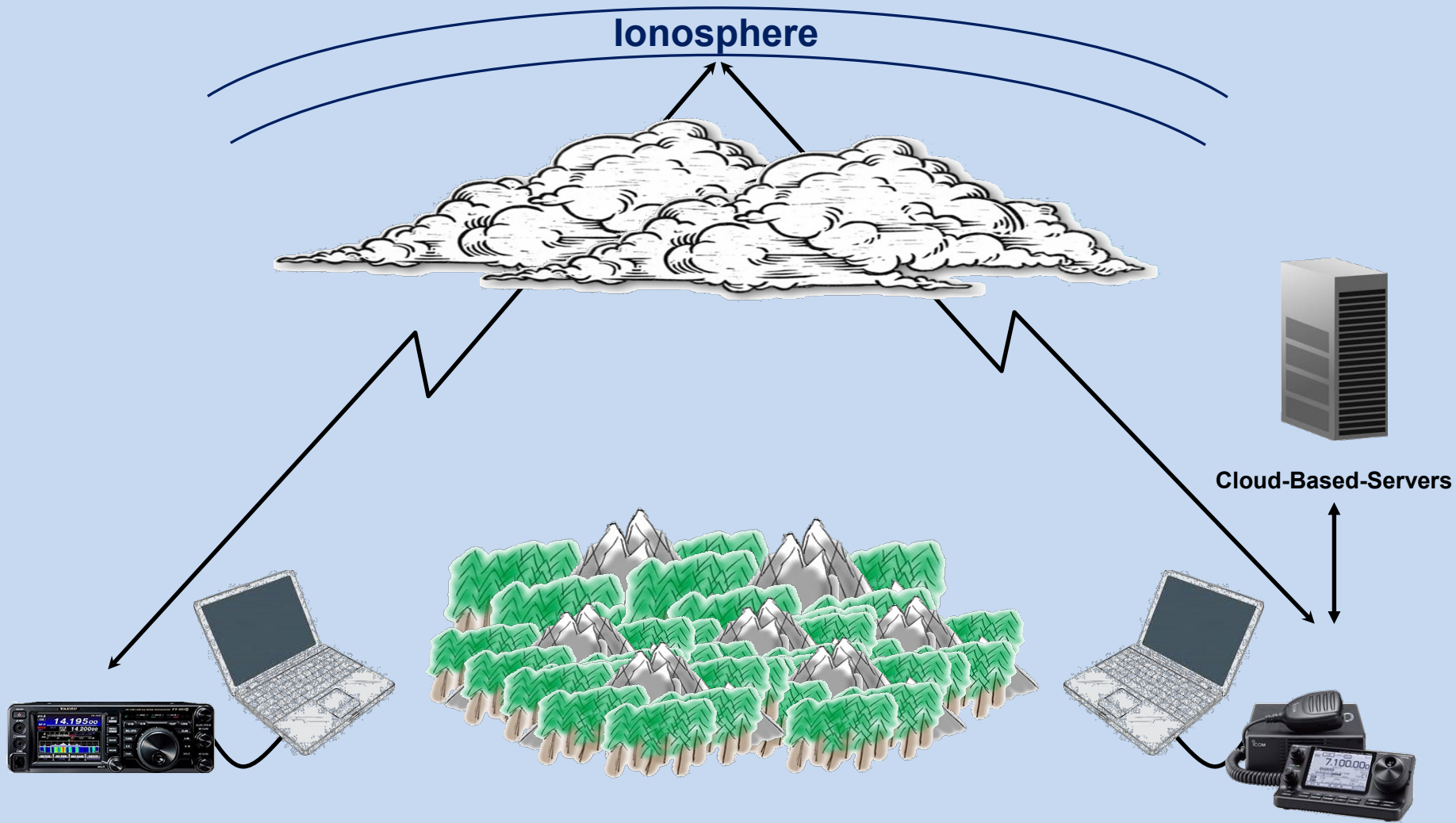
Cloud Based Common Message Server (CMS)





WINLINK Distant Gateway Path

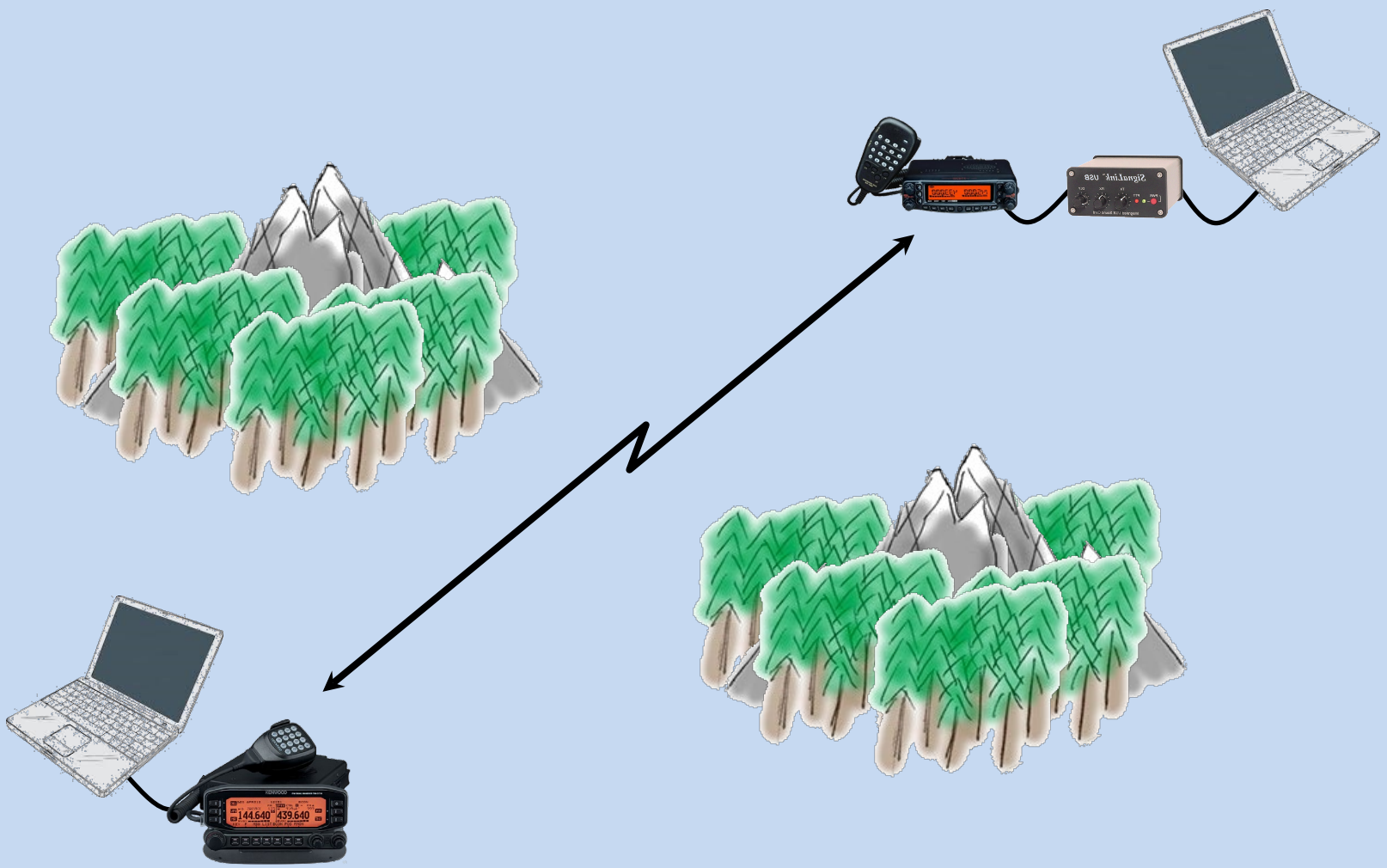
Cloud Based Common Message Server (CMS)





WINLINK P2P Packet Path

Direct

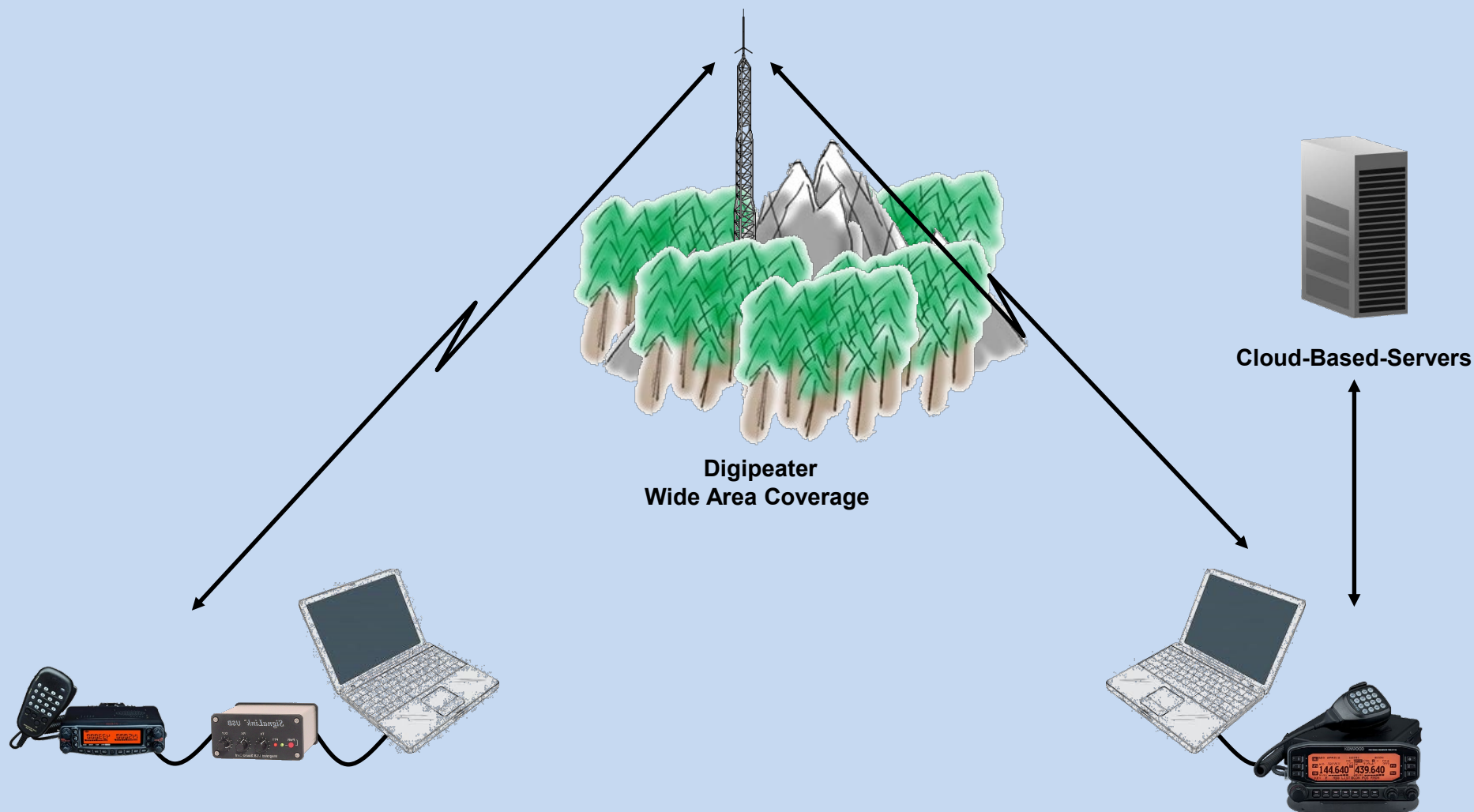




WINLINK Packet Path

Digipeater

Access to distant Gateway

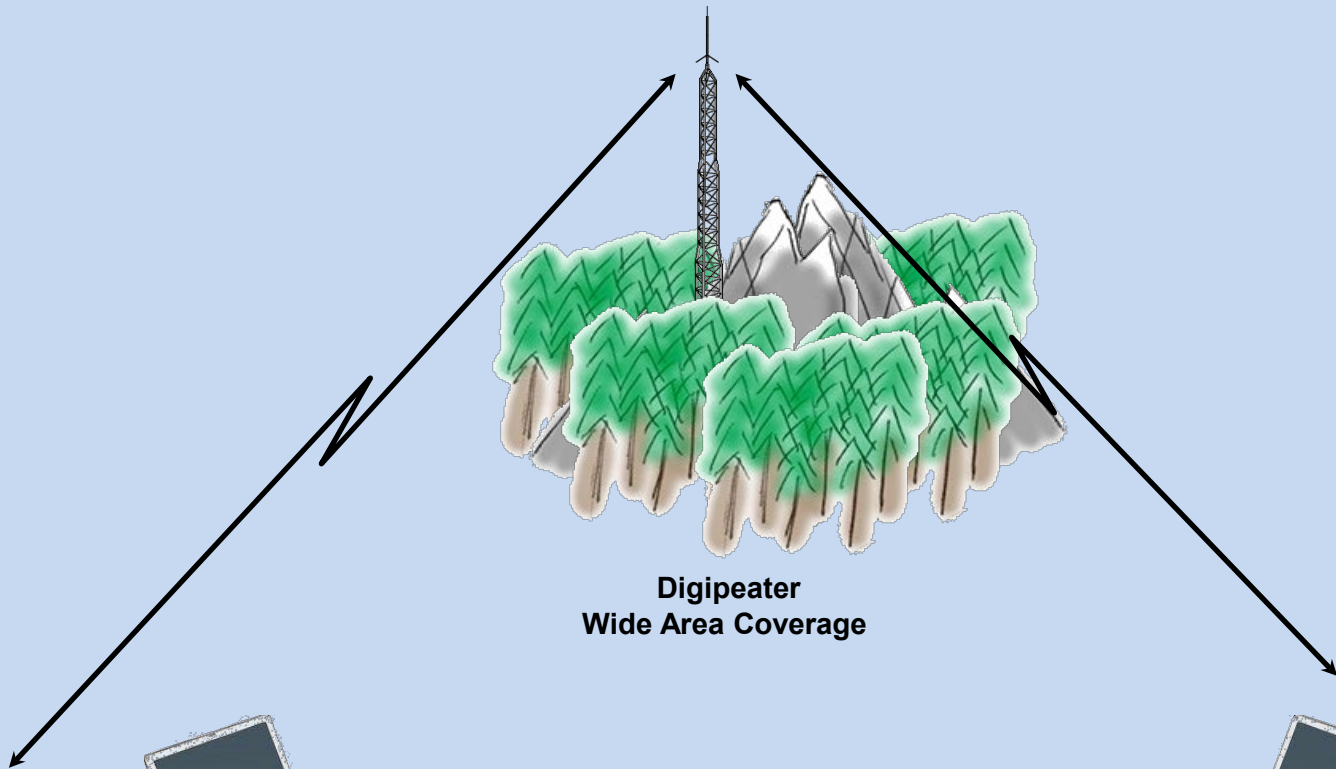




WINLINK P2P Packet Path

Digipeater

Access to distant Station



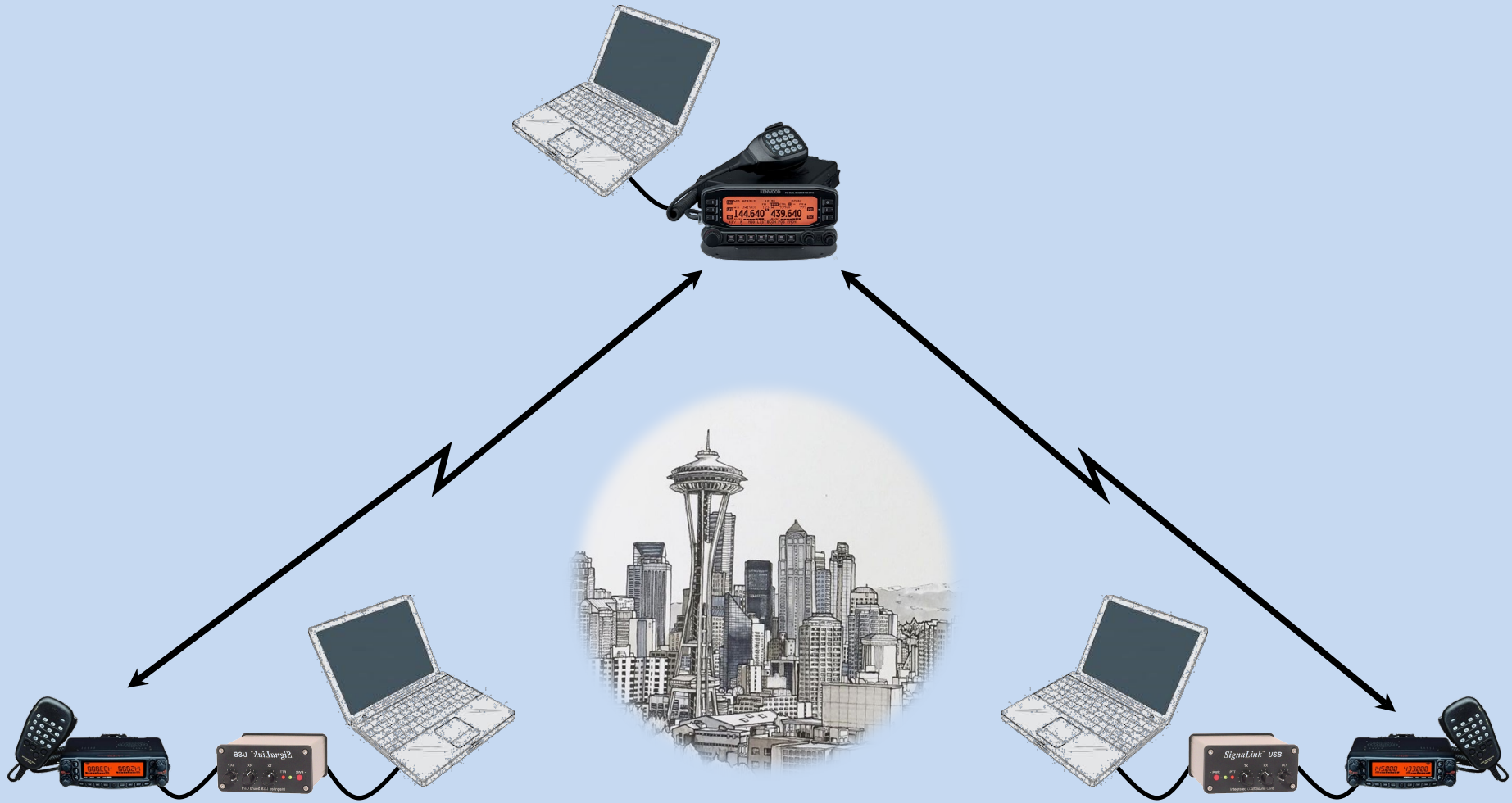
Digipeater
Wide Area Coverage





Radio Only Packet Path

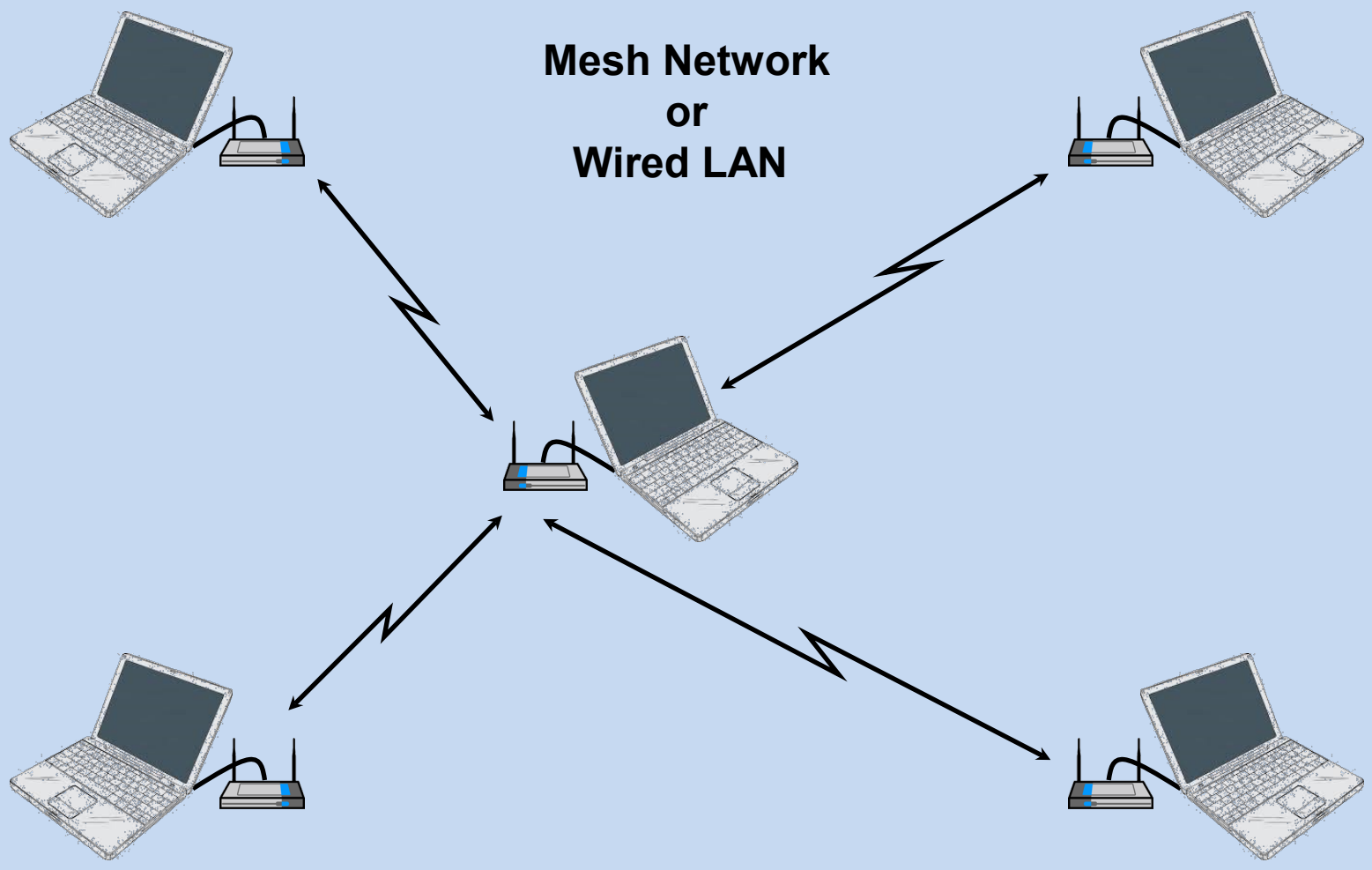
Message Pickup Station (MPS)





TELNET Post Office

Mesh Network
or
Wired LAN





Why P2P – Why not Gateways?

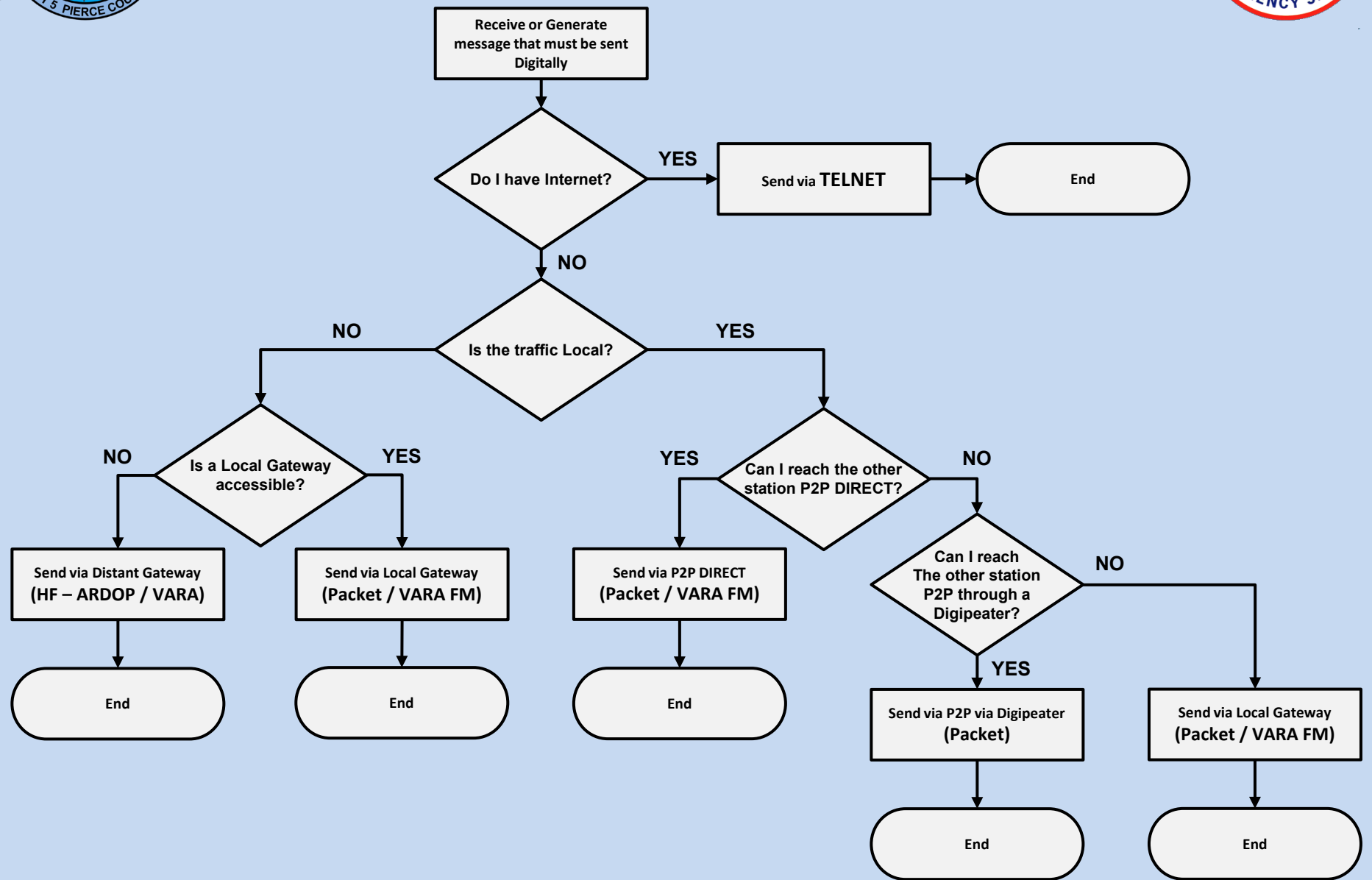


District 5 ARES is prioritizing P2P & Digipeaters – WHY?

- Decrease load on Gateways – Collisions & Inefficiency
- **Gateways are Internet dependent** – P2P and Digipeaters are not
- Digipeaters are dumb devices which are simpler to field at remote locations where internet may not be available
- Digipeaters are more resilient than gateways (no computer)
- P2P and Digipeaters are not reliant on updates, internet, or routine administrator action



Winlink Decision Tree





What Equipment do I need to operate WINLINK?



VHF/UHF Packet:

- Computer running Windows (XP – 10)
- RMS Express software suite

Option 1:

- VHF/UHF radio with a data port (1200/9600 Baud) or a speaker/mic interface cable (1200 Baud only).
- Terminal Node Controller (Hardware or Software (UZ7HO)).
- Soundcard Interface (non hardware TNC).
 - Signalink (1200 bps Packet / Narrow Band VARA FM (≤ 9600 bps))
 - DRA-50 (full speed utilization)
 - Rim Lite (full speed utilization)

Option 2:

- Radio with a built in AX.25 TNC capable of two way communication (Kenwood TM-D700/710).

Note:

Not all APRS (AX.25 protocol) radios are capable of two way TNC communication (Yaesu).



What Equipment do I need to operate WINLINK?



HF ARDOP / VARA:

- Computer running Windows (XP – 10)
- RMS Express software suite

Option 1:

- HF radio with a data port.
- Soundcard Interface
 - Signalink
 - DRA-50
 - Rim Lite

Option 2:

- Radio with a built in Soundcard Interface (IC-7100/7200/7300, FT-891/991, etc.)

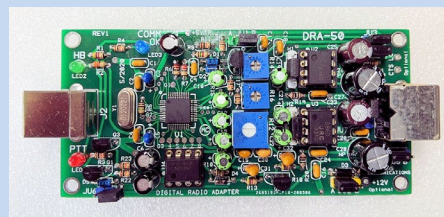


Packet Interfaces



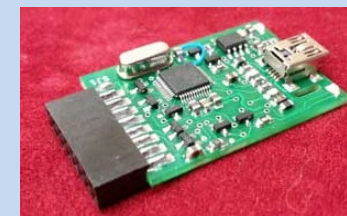
Signalink:

- Cost effective (\approx \$125)
- Simple to setup and operate
- Multi mode
- Requires a software TNC (UZ7HO, Direwolf)
- Pre-made interface cables
- Limited to 1200 Baud



DRA-50:

- Cost effective (\approx \$50 +)
- Simple to setup and operate
- Multi mode
- Requires a software TNC (UZ7HO, Direwolf)
- Pre-made interface cables
- High-Speed Capable

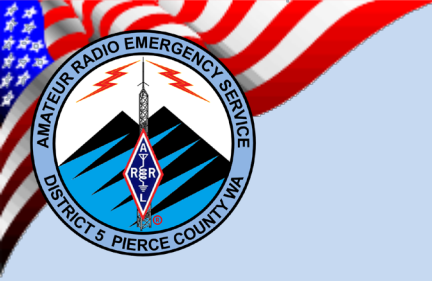


Rim Lite:

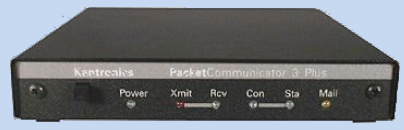
- Cost effective (\approx \$50 +)
- Simple to setup and operate
- Multi mode
- Requires a software TNC (UZ7HO, Direwolf)
- Specialized or DB-9 connector
- Homebrew cables necessary in most circumstances
- High-Speed Capable

Other Sound Card based Interfaces:

- MFJ (\approx \$100)
- RigExpert (\approx \$200 - \$500)
- RIGblaster (\approx \$120 - \$300)
- Homebrew



Packet Interfaces



Hardware TNC:

- Cost \$100 to \$1900
- Can be more complex to setup
- May or may not be Multi-mode
- May be used for other AX.25 based projects (Weather Station, BBS, etc.)
- May be capable of a higher baud rate (9600)
- No additional software required
- Less likely to cause software instability



What software do I need?

What Software do I need to run WINLINK?

The software requirements may be somewhat different depending on the individual user and station. Will you be using a Software or Hardware TNC?

Main software programs you may need:

RMS Express:

Main WINLINK software suite

RMS Log (Optional):

RMS Log is a standalone software to aid in producing ICS-309 logs directly from your RMS sent/received folders. This software has been replaced and imbedded within RMS Express, but will be available on the District 5 web site.

The reason it is still in use, is that the current version within RMS Express does not support producing the data in anything other than PDF form. RMS Log will produce a CSV file that may be transmitted over the air.

UZ7HO Sound modem (Optional):

UZ7HO Soundmodem software TNC is a software dual-port Packet Radio TNC that uses a sound card as a modem and supports the AX.25 protocol. The UZ7HO Soundmodem has two TCP/IP interfaces to link with client applications.



Where do I get the Software?

Where do I get the Software?

RMS Express:

Google “RMS Express”, it will result in the following web address:

<https://winlink.org/WinlinkExpress>

Look for the Download link near the bottom of the page.

ITSHF propagation prediction program:

You will be prompted to download the program the first time you use ARDOP, a link will be provided by RMS Express.

RMS Log (Optional):

Legacy copies of the software will be available from the District 5 web site or other ARES members on request.

UZ7HO (Optional):

Google “UZ7HO”, it will result in the following web address:

<http://uz7.ho.ua/packetradio.htm>

Download the soundmodem113.zip file.



Installing RMS Express

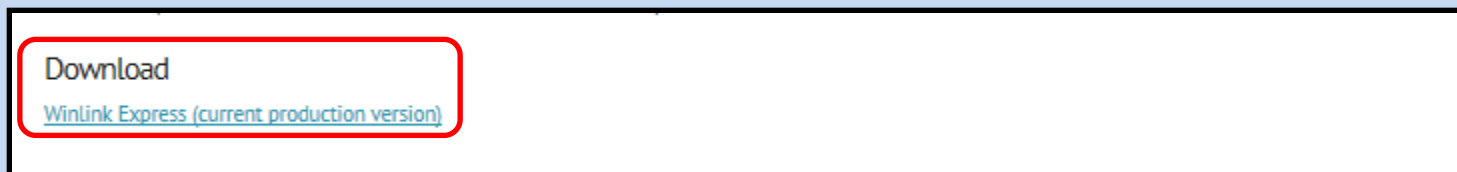
(RMS Express Web Site)

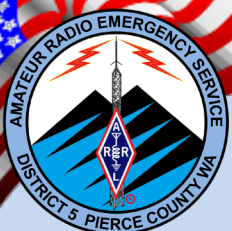
1) Download and save the zip file from the web site:

<https://winlink.org/WinlinkExpress>



Scroll to the bottom





Initial setup of RMS Express

(Initial Setup)

- 1) Double Click on the RMS Express Icon.
- 2) The Winlink Express Properties, initial setup screen will pop-up.
- 3) Fill in the required information.

Winlink Express Properties

Call Signs

My Callsign: My Password:
(Case sensitive)

Callsign suffix (optional): (Used for country code) Show password

Password recovery e-mail:
(Non-Winlink e-mail address where lost password will be sent when requested)

Auxiliary Callsigns and Tactical Addresses

My Grid Square:

Winlink Express registration key:

Path to propagation forecast program:

Service Codes

(Use PUBLIC for ham call signs. Separate multiple service codes by spaces.)
If you change service codes, you must update the list of channels.

Contact Information (Optional)

Name:

Street address 1:

Street address 2:

City:

State/Province:

Country:

Postal code:

Web Site URL (optional):

Phone number:

Non-Winlink e-mail:

Additional information (optional):

Recalculate HF path quality if SFI changes more than:

Keep logs for weeks. Keep deleted messages for days.

Display list of pending incoming messages prior to download

Warn about connections to stations holding messages

Allow diagnostic information to be sent to the Winlink Development Team

Automatically install field-test (beta) versions of Winlink Express



RMS Express Interface

Winlink Express 1.5.11.0 - N7SOI

N7SOI Settings Message Attachments Move To: Saved Items Delete Open Session: Telnet Winlink Logs

Help

No active session.

System Folders	Date/Time	Message ID	Size	Source	Sender	Recipient	Subject
Inbox (0 unread)	2017/11/28 16:45	31ID4SPHFIML	492	K7DKK	K7DKK	N7SOI	Re: //WL2K Testing new signalink
Read Items (0)	2017/11/10 20:00	0439HQLYQ40A	364	SMTP	SMTP.kd6oat@g...	N7SOI	//WL2K R/ WELCOME
Outbox (0)	2017/11/09 14:47	M00V1Y12SGJK	570	W7EAT	W7EAT	N7SOI	Re: //WL2K Testing new signalink
Sent Items (5)	2017/10/05 16:00	SFWOCR7QYGTF	1972	SYSTEM	SERVICE	N7PEG...	//WL2K User Notice
Saved Items (0)							
Deleted Items (0)							
Drafts (0)							
Personal Folders							
Global Folders							
Contacts							

Message ID: SFWOCR7QYGTF
 Date: 2017/10/05 16:00
 From: SERVICE
 To: N7PEG; N7PUN; N7PTM; N7PWC; N7QAX; N7QDZ; N7RAD; N7RBP; N7RCF; N7RDE; N7RHH; N7RHW; N7RKS; N7RU; N7RXE; N7SMI; N7SOI; N7TES; N7TNG; N7TNX
 Source: SYSTEM
 Downloaded-from: RMS:KF7RSF
 Subject: //WL2K User Notice

New CMS Cluster Goes Live October 31

The Winlink Development Team has scheduled the switch between the current production CMS cluster (Wien, Perth, Halifax, San Diego) to the new 'cloud' CMS cluster hosted by Amazon Web Services (AWS). The change will take place on October 31, 2017 at 1600 UT.



RMS Express Interface

(Start a new Message)

Winlink Express 1.5.11.0 - N7SOI

N7SOI Settings **Message** Attachments Move To: Saved Items Delete Open Session: Telnet Winlink Logs

Help

No active session.

System Folders	Date/Time	Message ID	Size	Source	Sender	Recipient	Subject
Inbox (0 unread)	2017/11/28 16:45	31ID4SPHFIML	492	K7DKK	K7DKK	N7SOI	Re: //WL2K Testing new signalink
Read Items (0)	2017/11/10 20:00	0439HQLYQ40A	36				
Outbox (0)	2017/11/09 14:47	M00V1Y12SGJK	57				
Sent Items (5)	2017/10/05 16:00	SFWOCR7QYGTF	19				
Saved Items (0)							
Deleted Items (0)							
Drafts (0)							

Personal Folders

Global Folders

Contacts

Enter a new message

Close Select Template Attachments Post to Outbox Spell Check Save in Drafts

From: N7SOI Send as: Winlink Message Request read receipt

To: _____

Cc: _____

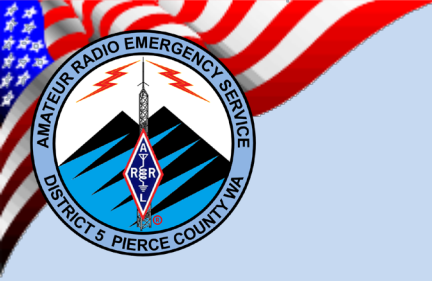
Subject: _____

Attach: _____

Message ID: SFWOCR7QYGTF
Date: 2017/10/05 16:00
From: SERVICE
To: N7PEG; N7PUN; N7PTM; N7PWC;
N7RKS; N7RU; N7RXE; N7SMI; N7SOI
Source: SYSTEM
Downloaded-from: RMS:KF7RSF
Subject: //WL2K User Notice

New CMS Cluster Goes Live Octobe

The Winlink Development Team has
cluster (Wien, Perth, Halifax, S
Amazon Web Services (AWS). The c



RMS Express Interface

(Start a new Message using a Template)

Enter a new message

Close **Select Template** Attachments Post to Outbox Spell Check Save in Drafts

From: N7SOI Send as: Winlink Message Request read receipt Set

To:

Cc:

Subject:

Attach:

- Template Manager
- Select Close Add **Remove** Edit
- Standard Templates (version 1.0.45.0)
 - AK_STATE_Forms
 - ARC_NATIONAL_Mass_Care_Forms
 - ARRL_Forms
 - A_INFO_READ
 - CANADIAN_Forms
 - CA_STATE_Forms
 - FL_STATE_Forms
 - FMRE_SPANISH_Forms
 - GA_STATE_Forms
 - GENERAL_Forms
 - HI_STATE_Forms
 - ICS_USA_Forms
 - Information
 - ICS205A_Initial.txt
 - ICS205_Initial.txt
 - ICS206_Initial.txt
 - ICS210_Initial.txt
 - ICS213RR_Initial.txt
 - ICS213_Initial.txt**
 - ICS213_SendReply.txt
 - ICS214A_Initial.txt
 - ICS214_Initial.txt
 - ICS217A_Initial.txt
 - ICS309_Initial.txt
 - IHS_Forms
 - IL_STATE_FORMS
 - MEDICAL_HICS_Forms



RMS Express Interface

(ICS-213 Message Template)



General Message (ICS 213)

[Load ICS213 INITIAL Data](#)

[Form Instructions](#)

1. Incident Name:

2. To (Name/Position):

3. From (Name/Position):

4. Subject:

5. Date:

6. Time:

7. Message:

Be Brief and Concise

8. Approved by:

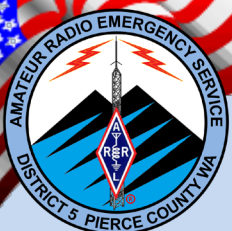
Position / Title:

[Save ICS213 INITIAL Data](#)

[Submit](#)

[Reset Form](#)

Ver 41.8



RMS Express Interface

(Sending a Message)

Enter a new message

Close Select Template ICS-213 ICS-213RR ICS-205 Check-in Attachments Post to Outbox Spell Check Save in Drafts

From: N7SOI Send as: Winlink Message Request message receipt Set Defaults

To: W7EAT|

Cc:

Subject: 213-ESSO Refinery Spill-N7SOI-T-001 [R] Activation Report - Home-Based - 2021-02-18 12:30

Attach: RMS_Express_Form_ICS213_Initial_Viewer.xml; **Must be corrected before Posting: will cause ICS-309 errors**

Winlink = Gateway / Peer-to-Peer = P2P

Must be corrected before Posting: will cause ICS-309 errors

Enter a new message

Close Select Template ICS-213 ICS-213RR ICS-205 Check-in Attachments Post to Outbox Spell Check Save in Drafts

From: N7SOI Send as: Winlink Message Request message receipt Set Defaults

To: W7EAT;

Cc:

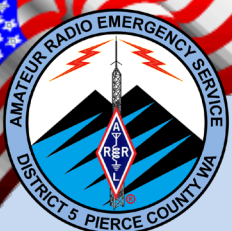
Subject: N7SOI-T-001 [R] Activation Report - Home-Based **Corrected**

Attach: RMS_Express_Form_ICS213_Initial_Viewer.xml;

Corrected

GENERAL MESSAGE (ICS 213)

1. Incident Name: ESSO Refinery Spill
2. To (Name and Position): South Pierce ECC / South Pierce ARES Team EC
3. From (Name and Position): Patrick Niles, N7SOI, RADO
4. Subject N7SOI-T-001 [R] Activation Report - Home-Based
5. Date: 2021-02-18
6. Time: 12:30
7. Message:



RMS Express Interface

(Telnet Session)

Winlink Express 1.5.11.0 - N7SOI

N7SOI Settings Message Attachments Move To: Deleted Items Delete **1** Open Session: Telnet Winlink Logs

Help

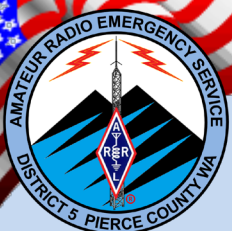
No active session.

System Folders	Date/Time	Message ID	Size	Source	Sender	Recipient	Subject
Inbox (0 unread)							
Read Items (0)							
Outbox (1)							
Sent Items (5)							
Saved Items (0)							
Deleted Items (4)							
Drafts (0)							

Telnet Winlink Session **2**

Exit Settings **Start** Stop Time to next Autoconnect = Disabled

```
*** Connecting to a CMS...
*** Connected to AWS at 2018/02/14 21:55:14
[WL2K-5.0-B2FWIHJMS]
:PQ: 64451461
CMS>
:FW: N7SOI
[RMS Express-1.5.11.0-B2FHMS]
:PR: 15090438
-WL2K DE N7SOI (CN87UB)
FF
FQ
End of session at 2018/02/14 21:55:16
*** Messages sent: 0. Total bytes sent: 0. Time: 00:00. bytes/minute: 0
*** Messages Received: 0. Total bytes received: 0. Total session time: 00:00. bytes/minute: 0
*** Disconnected at 2018/02/14 21:55:21
```



RMS Express Interface

(Packet Session)

Winlink Express 1.5.11.0 - N7SOI

N7SOI Settings Message Attachments Move To: Deleted Items Delete **1** Open Session: Packet Winlink Logs

Packet Winlink Session

2 Channel Selection 1200 Baud **4** Start Stop

Connection type: Direct W7EAT-10 Via

Outbox (1)

Time to next Autoconnect = Disabled

*** Starting WL2K packet session...
*** Initializing KISS over TCP Host 127.0.0.1 Port 8100
*** Initialization complete
*** Ready

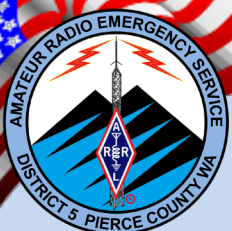
3

Packet Channel Selector

Exit Select Channel Update Table Via Internet Update Table Via Radio

Stations found within 160 kilometers of your grid square.

Callsign	Frequency (MHz)	Baud	Grid Square	Group	Distance (km)	Bearing (Degrees)
W7EAT-10	145.050	1200	CN87UA	PUBLIC	004	180
K7IF-10	145.630	1200	CN87OA	PUBLIC	038	263
K7RFH-10	145.630	1200	CN87VJ	PUBLIC	038	009
K7RFH-12	223.460	1200	CN87VJ	PUBLIC	038	009
W7VMI-10	145.070	1200	CN87SK	PUBLIC	044	343
K7NHV-10	144.350	1200	CN87SK	PUBLIC	044	343
NK7N-10	145.010	1200	CN87XL	PUBLIC	050	022
W7MIR-10	145.030	1200	CN87VN	PUBLIC	056	006
W7MIR-11	430.825	1200	CN87VN	PUBLIC	056	006
W7EFR-10	144.950	1200	CN87XN	PUBLIC	059	019
WA6PXX-10	440.825	1200	CN87VO	PUBLIC	060	006
KE7ARH-10	145.950	1200	CN87VO	PUBLIC	060	006
WA6PXX-10	145.790	1200	CN87VO	PUBLIC	060	006
N7CFO-11	223.480	1200	CN87WO	PUBLIC	061	011
W7EFR-12	145.630	1200	CN87XO	PUBLIC	063	017
W5KAV-10	145.050	1200	CN86KT	PUBLIC	070	247
W5KAV-10	145.630	1200	CN86KT	PUBLIC	070	247



RMS Express Interface (Packet Session)



Packet Winlink Session

Exit Settings Switch to Peer-to-Peer Session Channel Selection 1200 Baud Start S

Connection type: Direct W7EAT-10 Via [] []

Connection script: [] Edit script Add script Remove script

Received: 141 Sent: 284 Time to next Autoconnect = Disabled

```

*** Starting to call W7EAT-10
*** Opening KISS over TCP Host 127.0.0.1 Port 8100
*** Connecting to W7EAT-10
*** Connected to W7EAT-10 at 2018/02/15 00:00:58

Welcome to the Eatonville Amateur Radio Team Winlink RMS Gateway on Graham Hill.
[WL2K-5.0-B2FWIHJM$]
:PQ: 47996401
CMS via W7EAT >
:FW: N7SOI
[RMS Express-1.5.11.0-B2FHMS]
:PR: 27639989
: W7EAT-10 DE N7SOI (CN87UB)
FC EM UE1QB1KQGNB7 147 142 0
F> 9C
FS Y
*** Sending UE1QB1KQGNB7.
FF
*** Completed send of message UE1QB1KQGNB7
*** Sent 1 message. Bytes: 162, Time: 00:03, bytes/minute: 3021
FQ
*** -- End of session at 2018/02/15 00:01:16 --
*** Messages sent: 1. Total bytes sent: 162, Time: 00:18, bytes/minute: 535
*** Messages Received: 0. Total bytes received: 0, Total session time: 00:18, bytes/minute: 0
*** Disconnecting
*** Disconnecting due to timeout
*** Disconnected at 2018/02/15 00:01:29

*** Disconnect reported.

```

SoundModem by UZ7HO - Ver 0.97b - [AFSK AX.25 1200bd]

Settings View Clear monitor Calibration About

A: [AFSK AX.25 1200bd] 1700 DCD threshold [] [] Hold pointers []

```

1:Fm N7SOI To W7EAT-10 <SABM C P> [16:00:56T]
1:Fm W7EAT-10 To N7SOI <UA R F> [16:00:57R] [+++]
1:Fm W7EAT-10 To N7SOI <I C R0 S0 Pid=F0 Len=82> [16:00:58R] [+++]
Welcome to the Eatonville Amateur Radio Team Winlink RMS Gateway on Graham Hill.

1:Fm N7SOI To W7EAT-10 <RR R R1> [16:00:59T]
1:Fm W7EAT-10 To N7SOI <I C R0 S1 Pid=F0 Len=21> [16:01:00R] [+++]
[WL2K-5.0-B2FWIHJM$]

1:Fm W7EAT-10 To N7SOI <I C R0 S2 Pid=F0 Len=14> [16:01:01R] [+++]
:PQ: 47996401

1:Fm N7SOI To W7EAT-10 <RR R R3> [16:01:01T]
1:Fm W7EAT-10 To N7SOI <I C R0 S3 Pid=F0 Len=16> [16:01:03R] [+++]
CMS via W7EAT >

1:Fm N7SOI To W7EAT-10 <I C R4 S0 Pid=F0 Len=11> [16:01:03T]
:FW: N7SOI

1:Fm N7SOI To W7EAT-10 <I C R4 S1 Pid=F0 Len=30> [16:01:03T]
[RMS Express-1.5.11.0-B2FHMS]

1:Fm N7SOI To W7EAT-10 <I C R4 S2 Pid=F0 Len=14> [16:01:04T]
:PR: 27639989

1:Fm N7SOI To W7EAT-10 <I C R4 S3 Pid=F0 Len=29> [16:01:04T]
: W7EAT-10 DE N7SOI (CN87UB)

1:Fm W7EAT-10 To N7SOI <RR R R2> [16:01:06R] [+++]
1:Fm W7EAT-10 To N7SOI <RR R R4> [16:01:06R] [+++]
1:Fm N7SOI To W7EAT-10 <I C R4 S4 Pid=F0 Len=29> [16:01:06T]
FC EM UE1QB1KQGNB7 147 142 0

1:Fm N7SOI To W7EAT-10 <I C R4 S5 Pid=F0 Len=6> [16:01:06T]
F> 9C

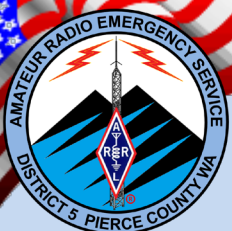
1:Fm W7EAT-10 To N7SOI <I C R6 S4 Pid=F0 Len=5> [16:01:08R] [+++]
FS Y

```

MyCall	DestCall	Status	Sent pkts	Sent bytes	Rcvd pkts	Rcvd bytes	Rcvd FC	CPS TX	CPS RX

UZ7HO Sound Modem Window

1000 2000 3000



RMS Express Interface

(ARDOP Session)

Ardop Winlink Session - N7SOI

Exit Settings Switch to Peer-to-Peer **1** Channel Selection Map Forecast Best chan. Next chan. Start Stop Abort

K7HTZ Center Freq. (kHz): **3589.000** Dial Freq. (kHz): 3587.500 Bearing: 285 Quality: 99

Favorites: Select Add to favorites Remove from favorites

Channel Free In: 0/0 Out: 0/0 BPM: 0/0 Disc

*** Using Icom 7300, COM4, 19200 baud
 *** Waiting for TNC to initialize...
 *** Ready to start calling.

2

HF Channel Selector

Exit Select **Update Table Via Internet** Update Table Via Radio Forecast SFI All RMS

Callsign	Frequency (kHz)	Mode	Grid Square	Hours	Group	Distance (km)	Bearing (Degrees)	Path Reliability Estimate	Path Quality Estimate
KF7RSF	3585.500	1600	CN73TD	00-23	PUBLIC	464	201	89	53
N0LCR-1	3586.500	1600	EN47DA	00-23	PUBLIC	2300	079	0	5
KE7XO	3587.000	1600	DM26JG	00-23	PUBLIC	1334	151	0	11
WD4SEN	3587.500	1600	EM90CC	00-23	PUBLIC	3931	104	0	0
KK5QT	3587.500	500	EL19AN	00-23	PUBLIC	2855	124	0	0
NH6NN	3587.500	1600	BL11CK	00-23	PUBLIC	4265	241	0	0
AD50-10	3587.500	1600	EM52AF	00-23	PUBLIC	3185	109	0	0
K6SDR	3589.000	1600	CM87RX	00-23	PUBLIC	1009	181	0	20
KQ4ET	3589.000	1600	FM16XU	00-23	PUBLIC	3923	090	0	0
KJ6IX	3589.500	1600	DM08DV	00-23	PUBLIC	930	166	1	25
KC8YJJ	3589.500	1600	EN90PL	00-23	PUBLIC	3373	087	0	0
WD1O	3589.500	1600	FN53IX	00-23	PUBLIC	4060	075	0	0
WX4PCA-10	3591.000	1600	EM73NU	00-23	PUBLIC	3444	102	0	0
N2LEE	3591.000	1600	FM18HX	00-23	PUBLIC	3702	087	0	0
XE2BNC	3591.700	1600	DM12MM	00-23	PUBLIC	1677	162	0	0
W0MAC	3592.000	1600	EM20GA	00-23	PUBLIC	2977	120	0	0
WA7ODN	3592.000	1600	CN82LN	00-23	PUBLIC	503	187	87	52



RMS Express Interface

(ARDOP Session)



Winlink Express 1.5.35.0 - N7SOI

N7SOI Settings Message Attachments Move To: Saved Items Delete Open Session: **Ardop Winlink** Logs Help

In Ardop Winlink session.

System Folder	Date/Time	Message ID	Size	Source	Sender	Recipient	Subject
---------------	-----------	------------	------	--------	--------	-----------	---------

Ardop Winlink Session - N7SOI

Exit Settings Switch to Peer-to-Peer Channel Selection Map Forecast Best chan. Next chan. **Start** Stop Abort

K7HTZ Center Freq. (kHz): 3589.000 Dial Freq. (kHz): 3587.500 Bearing: 285 Quality: 99

Favorites: Select Add to favorites Remove from favorites

Channel Free In: 0/0 Out: 0/0 BPM: 0/0 Disconnected

*** Using Icom 7300, COM4, 19200 baud
*** Waiting for TNC to initialize...
*** Ready to start calling.

- Inbox (5 unread)
- Read Items (0)
- Outbox (0)
- Sent Items (34)
- Saved Items (0)
- Deleted Items (39)
- Drafts (0)
- Current (25)
- Exercise (75)
- Research (17)
- Training NET (80)
- Waiting (0)
- 01) WINLINK-NET
- 02) CAMP_MURRAY
- 03) CAMP_MURRAY

ARDOP_Win Virtual TNC Ver: 1.0.2.5

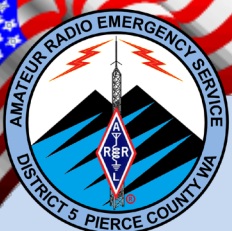
File Graphics Send Abort Logs Help

Rcv Level: Offset: -31.6 Hz @ -14dB State: **DISC**

Rcv Frame:

Xmt Frame:

Quality: -1200 **CF: 1.5 KHz** +1200 Host: **TCPIP on port 8200,8201**



RMS Express Advanced

(ICS-309)



Winlink Express 1.5.11.0 - N7SOI

N7SOI Settings Message Attachments Move To: Saved Items Delete Open Session: Telnet Winlink Logs

Help

No active session.

System Folders

- Inbox (0 unread)
- Read Items (0)
- Outbox (0)
- Sent Items (5)
- Saved Items (0)
- Deleted Items (0)
- Drafts (0)

Personal Folders

Global Folders

Contacts

Message

Date: [redacted]

From: [redacted]

To: [redacted]

Source: [redacted]

Downloaded: [redacted]

Subject: //WL2K User Notice

New CMS Cluster Goes Live October 31

The Winlink Development Team has scheduled the swi cluster (Wien, Perth, Halifax, San Diego) to the r Amazon Web Services (AWS). The change will take pl

Sender: K7DKK
Recipient: N7SOI
Subject: Re: //WL2K Testing new signalink

SMTP:kd6
W7EAT
EM SERVICE

N7QDZ; N7RA
N7RKS; N7ING; N7

- New Message...
- Reply...
- Reply to All...
- Forward...
- Forward without change...
- Acknowledge receipt...
- Save message as...
- Edit...
- Templates...
- Template settings...
- Set favorite templates...
- HTML Forms
- Generate ICS-309 Communication Log**
- Export messages
- Import messages
- Archive messages

Generate ICS-309 Communication Log

Generate an ICS-309 Communication Log as a pdf File

Select Message Mailboxes

- Inbox
- Outbox
- Drafts
- Personal 1: [dropdown]
- Read
- Sent
- Deleted
- Personal 2: [dropdown]
- Saved
- Global: [dropdown]

Message Date Range

- Limit start date/time: 2021-02-01 08:30 (Local time)
- Limit end date/time: 2021-02-01 14:30 (Local time)

Page Layout Options

- Separate entry for each recipient
- Combine recipients into a single entry

Format of Dates on Report

- mm/dd/yyyy
- UTC time

Task ID: [text box]

Task Name: Activation Report Drill

Operational period: 2/1/2021 0830 - 2/1/2021 1430

Operator name: Patrick Niles

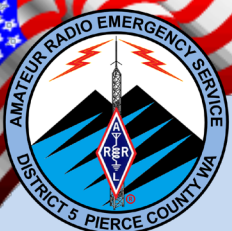
Station ID: N7SOI

Output pdf file: C:\Users\hopli\Desktop\Activation Report Drill ICS [Browse]

Generate ICS-309 PDF

Generate CSV File

Exit



RMS Express Advanced

(Address Book Contacts)



Winlink Express 1.5.11.0 - N7SOI

N7SOI Settings Message Attachments Move To: Saved Items Delete Open Session: Packet Winlink Logs

Help Winlink Express Setup... Review message list before downloading GPS / Position Reports... Winlink Catalog Requests... GRIB file request... Preferences... Update User Options... Message Notification and Forwarding Form settings... **Contacts...** Group Addresses... Add Personal Folder... Add Global Folder... Hybrid Network Parameters View Usage Statistics View background tasks... Backup and restore databases... Exit

No active session...

System Folders

Inbox (0 unread)
Read Items (0)
Outbox (0)
Sent Items (6)
Saved Items (0)
Deleted Items (0)
Drafts (0)

Personal Folders

Global Folders

Contacts

ACTIVATION
CAMPMURRAY
EAST_THURSTON
PCEOC
PENINSULA
PLU
PUYEOC
ROYNET
SITREP
SOUTH
STAN_NELSON

Source	Sender	Recipient	Subject
--------	--------	-----------	---------

Contacts Editor

Close Add Remove Edit Import/Export

Name	E-mail	Notes	Server
01)_WINLINK-NET	winlink@piercecountyares.net	Weekly Check-in NET	
02)_CAMP_MURRAY_(WINLINK)	W7EMD	WA. State EOC	
03)_CAMP_MURRAY_(SHARES)	NNA0WA	WA. State EOC	
04)_PCEOC_(PRIMARY)	W7AAO	Pierce County EOC (Primary)	
05)_PCEOC_(ALTERNATE)	W7AAO-13	Pierce County EOC (Alternate)	
06)_PCEOC_(CONTINGENCY)	W7AAO-14	Pierce County EOC (Contingency)	
07)_PENINSULA_MACC	KA7EOC	Peninsula MACC	
08)_SOUTH_PIERCE_ECC	W7EAT	South Pierce Team ECC	
09)_ROY_AREA_COMM_NETWORK	WA7ROY	RACN Winlink station	
10)_LAKEWOOD_EOC	KB7IOG		
11)_ORTING	KC7AF		
12)_PACIFIC_LUTHERAN_UNIV_EOC	W7PLU		
13)_PUYALLUP_EOC	WA7PUY		
14)_RUSTON_SENIOR_CENTER	KG7ONL		
15)_SUMNER_EOC	WA7SRT		
16)_RAINIER_EOC	RAINIER-EOC	East Thurston (Primary)	
17)_EAST_THURSTON_ALTERNATE	EASTTHURSTON		



RMS Express Advanced

(Group Address Contacts)



Winlink Express 1.5.11.0 - N7SOI

N7SOI Settings Message Attachments Move To: Saved Items Delete Open Session: Packet Winlink Logs

Help Winlink Express Setup... Review message list before downloading GPS / Position Reports... Winlink Catalog Requests... GRIB file request... Preferences... Update User Options... Message Notification and Forwarding Form settings... Contacts... Group Addresses... Add Personal Folder... Add Global Folder... Hybrid Network Parameters View Usage Statistics View background tasks... Backup and restore databases... Exit

No active session... System Folders: Inbox (0 unread), Read Items (0), Outbox (0), Sent Items (6), Saved Items (0), Deleted Items (0), Drafts (0). Personal Folders: (empty). Global Folders: (empty). Contacts: ACTIVATION, CAMPMURRAY, EAST_THURSTON, PCEOC, PENINSULA, PLU, PUYEOC, ROYNET, SITREP, SOUTH, STAN_NELSON.

Group Addresses

ACTIVATION = ROYNET SOUTH
SITREP = PCEOC ROYNET SOUTH

Add Group Edit Group Delete Gr

Add Group Address

Name of group:

Addresses in Group (Separate entries with space or ':')

Select From Contacts

Save Cancel



RMS Express Advanced

(Tactical Addresses)



Winlink Express Properties

Call Signs

My Callsign: My Password:
(Case sensitive)

Callsign suffix (optional): (Used for country code) Show password

Password recovery e-mail:
(Non-Winlink e-mail address where lost password will be sent when requested)

Auxiliary Callsigns and Tactical Addresses 1

FRONTIERPARK

My Grid Square:

Winlink Express registration key:

Path to propagation forecast program:

Service Codes

(Use PUBLIC for ham call signs. Separate multiple service codes by spaces.)
If you change service codes, you must update the list of channels.

4

Contact Information (Optional)

Name:

Auxiliary Callsign 2

Callsign/Tactical Address:

Password: Show password

Enabled:
(Enabled entries download incoming messages)

3

Additional information (optional):

Recalculate HF path quality if SFI changes more than:

Keep logs for weeks. Keep deleted messages for days.

- Display list of pending incoming messages prior to download
- Warn about connections to stations holding messages
- Allow diagnostic information to be sent to the Winlink Development Team
- Automatically install field-test (beta) versions of Winlink Express



RMS Express Advanced

(Tactical Addresses)



Enter a new message

Close Select Template Attachments Post to Outbox Spell Check Save in Drafts

From: N7SOI Send as: Winlink Message Request read receipt Set Defaults

To: N7SOI
FRONTIERPARK

Cc:

Subject:

Attach:

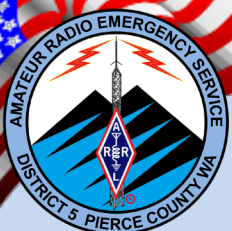
Winlink Express 1.5.11.0 - N7SOI

N7SOI Settings Message Attachments Move To: Saved Items Delete Open Session: Packet Winlink Logs

Help

No active session...

System Folders	Date/Time	Message ID	Size	Source	Sender	Recipient	Subject
Inbox (0 unread)	2018/02/15 02:48	H9YYM7N6ITY2	173	N7SOI	FRONTIERPARK	sp_ares.pio@gma...	//WL2K Test
Read Items (0)							
Outbox (1)							
Sent Items (6)							
Saved Items (0)							
Deleted Items (0)							
Drafts (0)							
Personal Folders							



RMS Express Advanced

(Favorite Templates)

Winlink Express 1.5.11.0 - N7SOI

1 Message

2 Set favorite templates...

3

4 Save

Set Favorite Templates

Up to four favorite templates can be specified. These templates will be shown on the message composition menu bar.

Favorite Template 1

Display name: Activation

File name: C:\RMS Express\N7SOI\Templates\Activation Report.txt

Favorite Template 2

Display name: SITREP

File name: C:\RMS Express\N7SOI\Templates\SITREP.txt

Favorite Template 3

Display name: DEMOB

File name: C:\RMS Express\N7SOI\Templates\Demobilization report.txt

Favorite Template 4

Display name: ICS-213

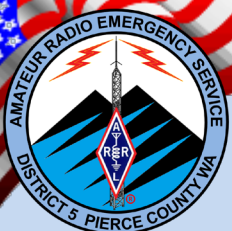
File name: C:\RMS Express\Standard Templates\ICS_USA_Forms\ICS213_initial.txt

Enter a new message

Select Template: Activation SITREP DEMOB ICS-213

From: N7SOI Send as: Winlink Message

To: Cc: Subject: Attach:



RMS Express Advanced

(Attachments to Messages)



Winlink Express 1.5.11.0 - N7SOI

N7SOI Settings Message Attachments Move To: Saved Items Delete Open Session: Packet Winlink Logs

Help

No active session...

System Folders

- Inbox (0 unread)
- Read Items (0)
- Outbox (0)
- Sent Items (1)
- Saved Items (0)
- Deleted Items (3)
- Drafts (0)

Personal Folders

Global Folders

Contacts

- ACTIVATION
- CAMPMURRAY
- EAST_THURSTON
- PCEOC
- PENINSULA
- PLU
- PUYEOC
- ROYNET
- SITREP
- SOUTH
- STAN_NELSON

Message menu options:

- New Message...
- Reply...
- Reply to All...
- Forward...
- Forward without change...
- Acknowledge receipt...
- Save message as...
- Edit...
- Templates...
- Template settings...
- Set favorite templates...
- HTML Forms
- Generate ICS-309 Communication Log
- Export messages
- Import messages
- Archive messages

Enter a new message

Close Select Template Attachments Post to Outbox Spell Check Save in Drafts

From: N7SOI Send as: Winlink Message Request read receipt Set

To:

Cc:

Subject:

Attach:



RMS Express Advanced

(Attachments to Messages)



Enter a new message

Close Select Template Attachments Post to Outbox Spell Check Save in Drafts

From: N7SOI Send as: Winlink Message Request read receipt Set

To:

Cc:

Subject:

Attach:

Attachments

Close Add Edit/Resize-Image Open/View Delete Save-To

File Name	Size (kb)

Attachments

Close Add Edit/Resize-Image Open/View Delete Save-To

File Name	Size (kb)
Add Group.png	35.4

Good Attachment

Attachments

Close Add Edit/Resize-Image Open/View Delete Save-To

File Name	Size (kb)
Packet slide 1.png	631.1

**Bad Attachment
too large of a file**



RMS Express Advanced

(Attachments to Messages)

Attachments

Close Add **Edit/Resize-Image** Open/View Delete Save-To

File Name	Size (kb)
Packet slide 1.png	631.1

Attachments

Close Add Edit/Resize-Image Open/View Delete Save-To

File Name	Size (kb)
a5aa1b0a-81c1-11e6-b53e-703472722b17-1200x630.jpg	100.0

Edit a5aa1b0a-81c1-11e6-b53e-703472722b17-1200x630.jpg

Save Cancel Crop **Resize** Rotate left Rotate right Restore original

Position: (14,217)

Resize Image

Resize file

Change File Size

Current file size (kb): 583.1

Desired size (kb):

Change Size

Note: The total size of Winlink messages -- including all file attachments -- may not exceed 120 kb.

Save Cancel

Resize Image

Change File Size

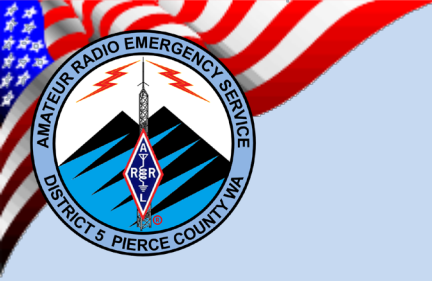
Current file size (kb): 119.7

Desired size (kb): 100

Change Size

Note: The total size of Winlink messages -- including all file attachments -- may not exceed 120 kb.

Save Cancel



RMS Express Advanced

(Attachments to Messages)



Enter a new message

Close Select Template Activation SITREP DEMOB ICS-213 Attachments Post to Outbox

From: N7SOI Send as: Winlink Message Request read receipt Set Defaults

To:

Cc:

Subject:

Attach: a5aa1b0a-81c1-11e6-b53e-703472722b17-1200x630.jpg

Successful Attachment

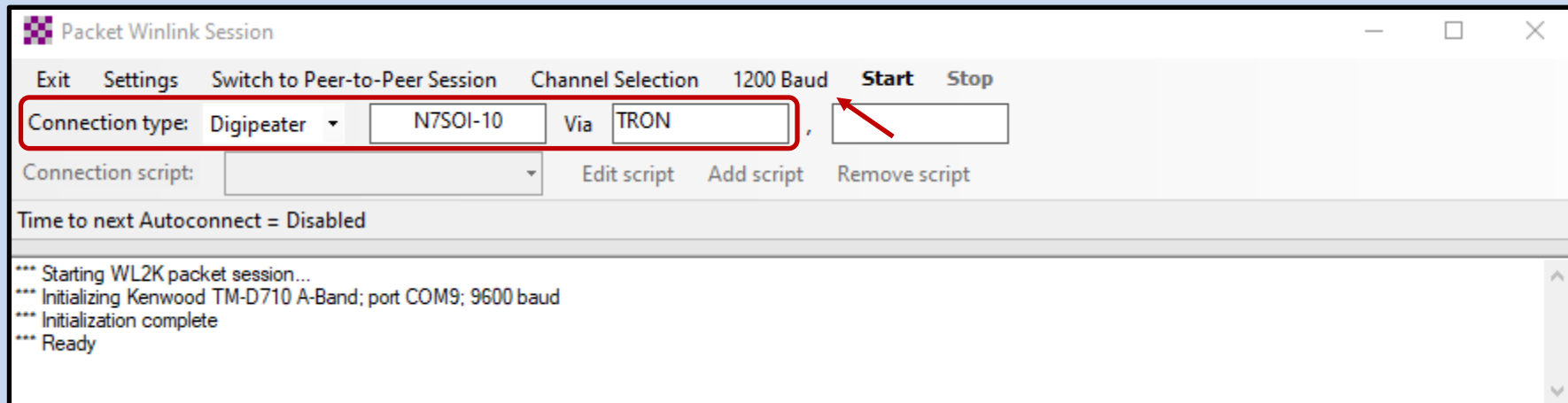


RMS Express Advanced

(Relay through a Digipeater)



Digipeater Path



Notes:

- When using a digipeater, all stations (originator, digipeater, receiver/gateway) must be on the same frequency and baud rate.
- Digipeaters give stations wide area coverage allowing them to conduct P2P sessions or connect to a distant gateway.
- Digipeaters double spectrum usage – connection times.



RMS Express Advanced

(Sending yourself a message?)



Test Message Options

Enter a new message

Close Select Template ICS-213 ICS-213RR ICS-205 Check-in Attachments Post to Outbox Spell Check Save in Drafts

From: N7SOI Send as: Winlink Message Request message receipt Set Defaults

To: TEST; ← **TEST@winlink.org**

Cc: SP.ARES.PIO@GMAIL.COM; ← **Your-email@???.com**

Subject: N7SOI-001 [R] Test message

Attach:

This is the only ways you can send a message to yourself in Winlink!

Notes:

- WINLINK will not allow you to address a message to yourself – it will not be returned
- You must either use TEST@winlink.org or use your non-WINLINK email address



RMS Express Advanced

(Out-of-area contacts – maintaining your White List)

Send an iterative email to your out-of-area emergency contacts

Enter a new message

Close Select Template ICS-213 ICS-213RR ICS-205 Check-in Attachments Post to Outbox Spell Check Save in Drafts

From: N7SOI Send as: Winlink Message Request message receipt Set Defaults

To: **← Insert all of your out-of-area contacts emails**

Cc:

Subject: From **[INSERT YOUR NAME HERE]**, this is not spam - please read

Attach:

All,
 If you are receiving this email, you will be on the list of email address' that can send me an email via the WinLink system in the case of an emergency. The WinLink system is an email delivery system that incorporates FM and HF radio to send and receive email via amateur radio frequencies. This is an emergency communications tool to be used in the event that the internet is down in our area or I am in an area that has no internet connectivity.

The WinLink system will work with your standard email; you do not need a WinLink account. Only licensed amateur radio operators may use the system to send and receive via radio. This is an emergency communications tool and not for regular email usage. Please use my standard email address for normal traffic.

I will send this message at periodic intervals. Only email address' that receive this email will be able to send messages to me. The reason for this is to limit traffic to legitimate usage.

You may send a reply (encouraged for testing purposes) but it is not necessary. Please add this email to my contact information as an emergency contact address.

Thank you.

Note: Any email address (non-WINLINK) that you have not sent an email to will be rejected by the system!



Conclusion

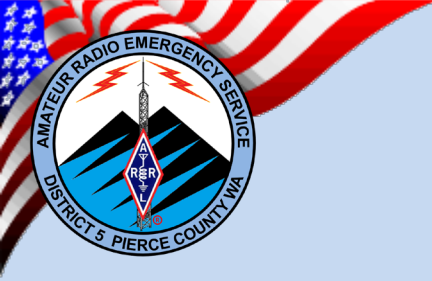
The use of WINLINK in the ARES, AUXCOMM, EMCOMM environment continues to grow and is quickly becoming a standard across many Served Agencies. Many **Served Agencies prefer the use of WINLINK due to its FEC/ARQ protocols, its addressability (specific recipient(s)), and its internet link.**

While ARES focuses on the Radio link, Served Agencies may have access to Satellite based internet feeds and rely on TELNET for most of their WINLINK access.

Bandwidth usage and duration of transmission times are of great importance to the ARES Radio Operator and any WINLINK message should be vetted prior to transmission. **If at all possible transmission of files should be limited and the use of Comma Separated Values (CSV) files to minimize file sizes and transmission times.**

Each additional message addressee adds to the cumulative spectrum usage as each addressee must download the message and confirm receipt if requested.

The WINLINK system is continually improved; please support the development of WINLINK by purchasing the subscription.



QUESTIONS