



All About Winlink

Presented to Peoria Area Amateur Radio Club
02/21/2019

By Richard Holtman, KD9ANU
AEC, Peoria County ARES

email: KD9ANU@arrl.net
KD9ANU@winlink.org



Thank You

- Thanks to everyone who helped and provided encouragement
 - Fritz Bock, WD9FMB
 - Steve Frank, KB9SF
 - Steve Grob, KD9AER
 - Jim Hanley, KC9WRK
 - Gary Kantner, W9GMK
 - Justin Flick, KD9JFF
 - Jim Hudson, WB9QPM
 - Robert Littler, W9DSR
- Peoria County EMA for Winlink radio site and antenna
- Peoria Area Amateur Radio Club
- <https://wordart.com/create>



RTTY
Winlink
PSK31
DSTAR
C4FM
DMR
Fldigi
JT65
APRS
JT44
WSTJ-X
Fusion
Packet
FT-8
Modes
JS8CALL
WIRES-X

Digital



Scope of this Presentation

- What's In
 - Winlink for the typical ham radio operator
 - The basics to send and receive messages
- What's Out
 - Settings for particular radios and interfaces
 - Details regarding use of Digipeaters/Nodes
 - How operate an RMS Gateway

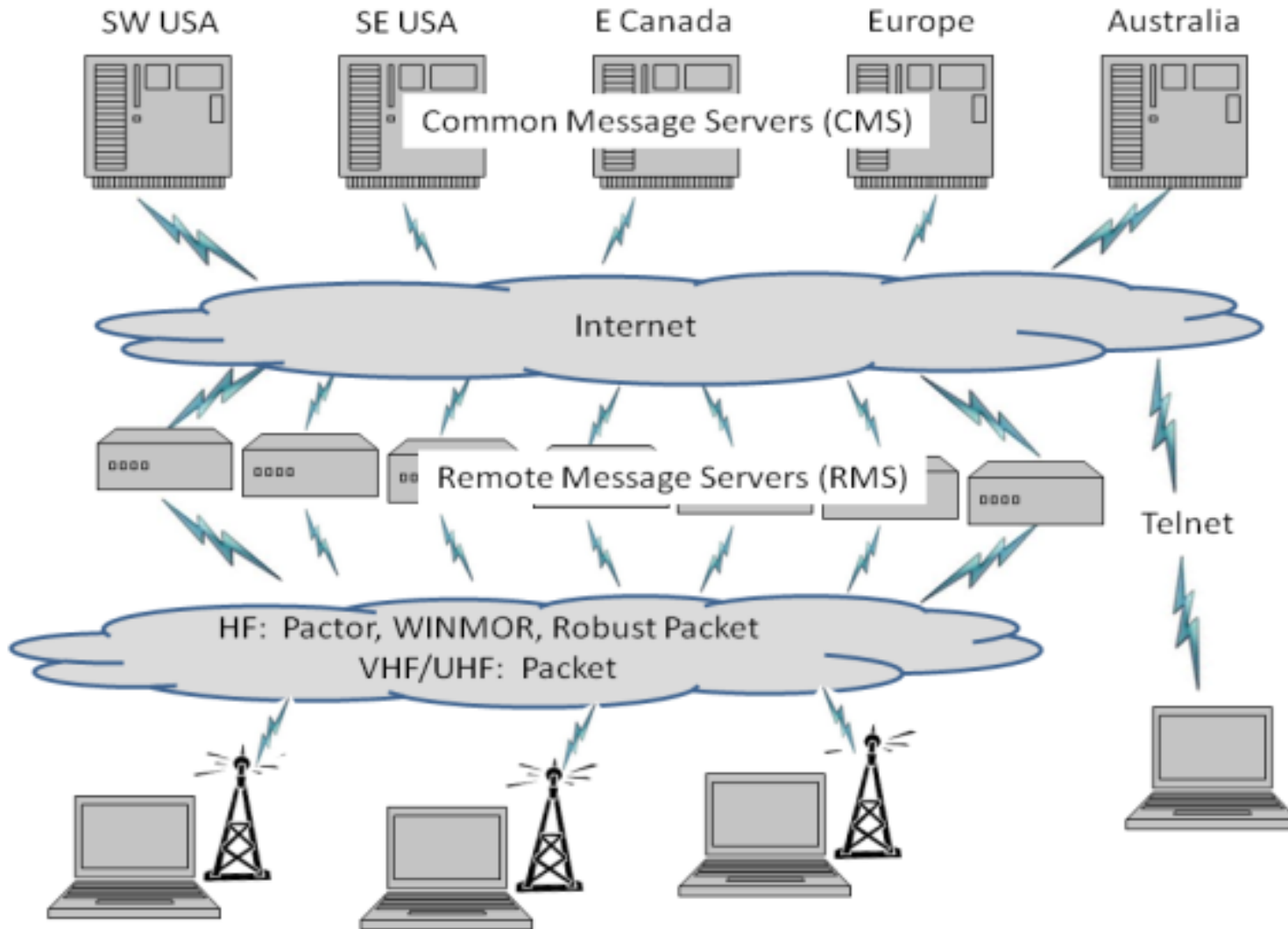


Winlink Global Radio Email®

- The Winlink system is a worldwide radio email service that uses radio pathways where the internet is not present, and is capable of operating completely without the internet--automatically--using smart-network radio relays.
- Winlink provides users email messaging with attachments, position reporting, weather and information bulletins, and is well-known for its role in emergency and disaster relief communications.
- The Winlink system uses the Internet (when available) to send messages between users. Five servers worldwide provide the backbone.
- Winlink can send messages to & from regular Internet Email Addresses.
- Winlink can also send messages direct between users (Peer-to-Peer).
- User software formerly called RMS Express, now Winlink Express.



WinLink Network





Winlink Limitations

- Backup messaging system
- Does not replace your normal email account
- Does not replace your internet service provider
- Does not provide any ability to surf the Internet
- Most messages sent via Radio transmit slower than most home internet or cell phone connections
- Max size of email and attachments=120,000 bytes
- Regulations prohibit commercial content over the air
- No built-in search function for messages
- No cloud database for messages – only stored on your PC



Origin of Winlink

- Winlink is an all-volunteer project of the Amateur Radio Safety Foundation, Inc. (ARSFI), a non-profit public benefit corporation.
- Built, maintained and supported entirely by volunteers of the Winlink Development Team.
- Winlink is happy to take donations for support.
- Winlink grew from Packet Radio. Packet has been around for many years.
- Earliest version was in use in 1990. Now full-featured software.
- Regular updates are made, including fixes and new features.
- Winlink messages are NOT encrypted, are NOT private, and can be read by at least the Gateway SYSOPS.



Why Winlink?

- Regional Internet outages can occur during natural disasters
- Detailed, accurate messages can be transmitted via ham radio using the Winlink System
- Send messages out of the effected region
 - Quickly alert family of your status
- Support emergency services within effected region
 - Served agencies are familiar with email messages



Multiple Modes in One Program

- Winlink includes multiple modes in one program - Packet, Pactor, Winmor, ARDOP, VARA, and direct between radios (Peer-to-Peer)
- VHF/UHF & HF & Telnet (Internet)
- Recommend Winlink Express – a full-featured email client, which is free. Donations accepted.
- More Mode info can be found at www.winlink.org or in the Winlink Express program.



Uses & Users

- Popular with ARES & EmComm folks
- Used during at least 14 recent hurricanes
- 2018 Western Wildfires
- 2017 Mexico City Earthquake
- Other high profile disasters
- Lives and property saved, damage mitigated
- Sailors stay connected at sea, over marine radio



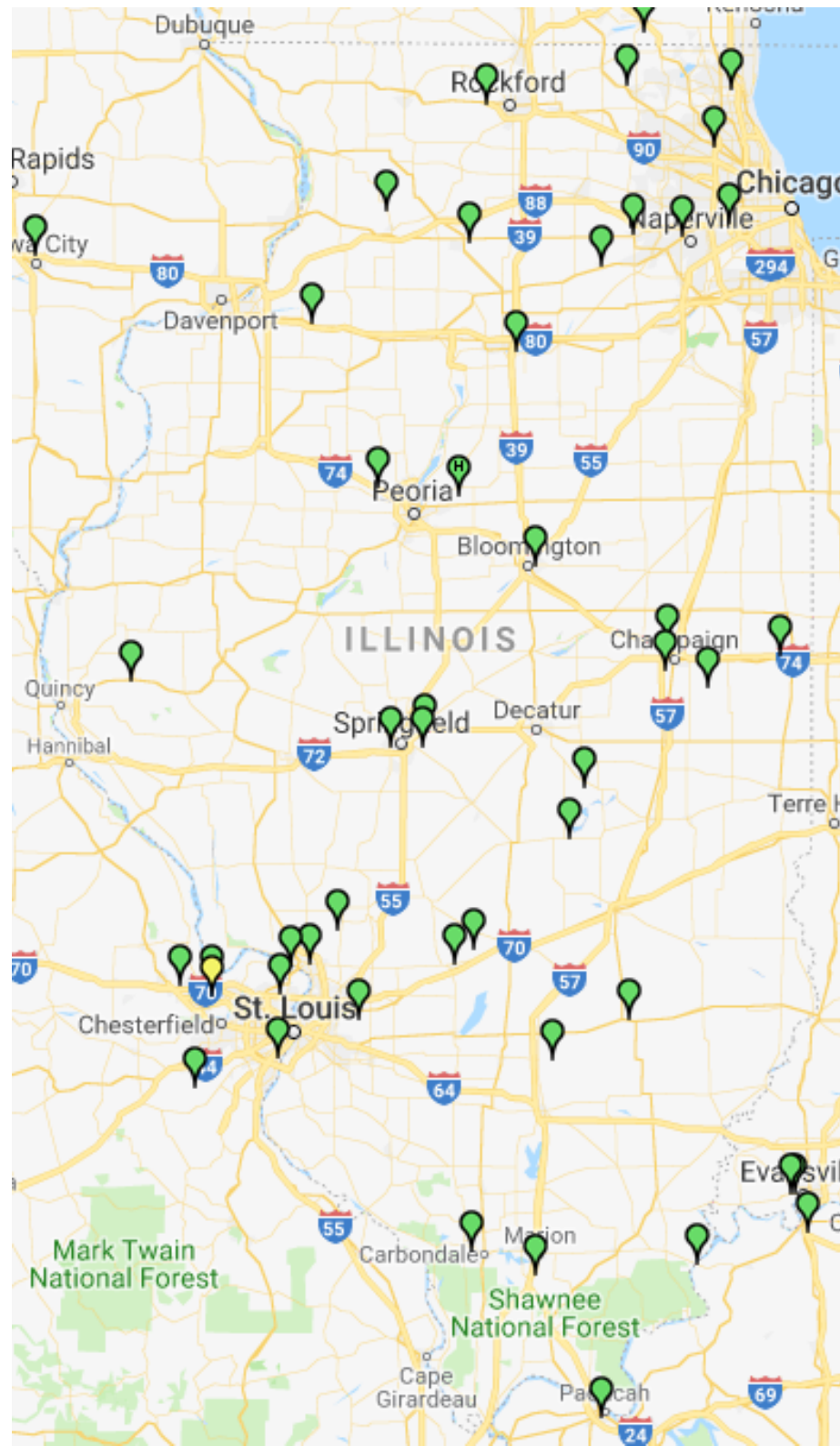
Statewide Growth

- Illinois experienced much growth in numbers of Winlink VHF Gateways and Digipeaters in 2018
- Approximately 40 VHF Gateways are online in Illinois, operating on VHF frequency 145.610 MHz
- Former IL State Police Radios have been repurposed for some of the new gateways
- We now have a local VHF Winlink Gateway located at Kickapoo. Also can digipeat signals for greater range. Gateway Name = KD9ANU-10, Digi Name = PEORIA
- Plus an in-range Digipeater is operating in Mason County. Digi Name = WD9FMB-1 or MASON



Illinois VHF Gateways

- Go to winlink.org
- Select >Tools
- On the RMS Map, choose the radio button "Packet"
- Zoom in to the region of interest





Live Stations – Winmor HF



- Go to winlink.org
- Select >Tools
- On the RMS Map, choose the radio button “Winmor”
- Zoom in to the region of interest

As of 02/03/2019 5:10 PM



Getting Ready with Winlink

- Practice using Winlink software without Radio
 - Uses only an Internet Connection (Telnet mode)
 - All the non-radio software features are available
- Start sending radio messages at later time



Software & Equipment Needs

- Winlink Express client software runs only on Windows (7, 8, or 10)
- Microsoft .NET Framework 3.5 must be enabled (it's typically loaded)
- Create your own Winlink account using Winlink Express software
- VHF radio for Packet/VARA
- HF radio for Pactor/Winmor/ARDOP/VARA
- Interface Box (TNC or external sound card) and Cable
- Some radios have built-in TNC (Kenwood D700 & D710)
- Some radios have built-in sound card (IC-7100, 7300, 7410, 7600, 9100)
- Radio 101 applies – higher Antenna, SWR, Propagation, Power Level
- RFI can cause issues – remote antenna mount, ferrites on cable ends
- Handi-Talkies with rubber duck antennas may disappoint users
- Some Yaesu radios that claim to include a TNC cannot do Winlink



Interface Box Examples

- If not built-in to your radio, there are many options
- TNC (Terminal Node Controller) [many models]
 - Kantronics KPC-3+ USB (\$199)
- Sound Cards (w/SoundModem or Direwolf - free software)
 - Signalink USB (\$115, cable adds \$22)
 - RigBlaster (\$70 to \$230)
 - More models
 - Unified Microsystems SCI-6 PC Sound Card Interface Kit (\$35 with DIY cables) (an isolation card, uses PC's soundcard)
- High End Modem for PACTOR I thru IV
 - Spezielle Communications Systeme GmbH & Co. KG
 - P4dragon DR-7400 (\$1500)



External Interface Options



Kantronics KPC-3 Plus TNC



Signalink USB Sound Card



SCI-6 PC Sound Card Interface Kit



P4dragon DR-7400 PACTOR Modem



Winlink Modes

- Internet Only
 - **Telnet** – Uses an Internet connection to the Winlink web servers.
- VHF/UHF Radio
 - **Packet** – (TNC or Sound Card) Uses the AX.25 (Amateur X.25) data link layer protocol, adapted for amateur radio use in the 1970's.
- HF Radio
 - **Winmor** (Sound Card) - Alternative to external Pactor hardware that works with a PC sound card to provide a virtual TNC enabling throughput performance approaching Pactor 2.
 - **FACTOR I-IV** (SCS Modem) - Utilizes a combination of simple FSK modulation, and the ARQ protocol for robust error detection and data throughput.
 - **ARDOP** – (Sound Card). HF software modem offering high-throughput and adaptive multi-bandwidth operation. Faster than Winmor in my experience.
 - **VARA** - (Sound Card) HF sound-card software modem offering high-throughput, fixed 2.5 KHz wide-bandwidth operation. (Free & paid versions)



Additional Software Features

- Winlink usually saves your selections without need to hit “Save”
- Forms/Templates – simplify information and the amount of data being sent, transmitted as text to all users without Winlink
- Store individual Contacts (Winlink Address Book)
- Create Group Contact Lists
- Use Personal Folders to store messages how you desire
- Store Signature text
- Has Built-in Spam filter using Whitelist
- Automatically check for new messages periodically (unattended)
- Forward received messages to Internet email account
- Preview messages before downloading



How to Install WinLink Express

- Visit the Winlink Download page to obtain Winlink Express software, at <https://downloads.winlink.org/>
- In the directory list, click on “User Programs”
- Click on “Winlink_Express_install_1-5-18_0.zip” to download
- Extract the files to another directory
- Double-click the file named “Winlink Express Install.msi”
- Select the Run button in the next window
- After the installation finishes, find and click on the “RMS Express” Program Icon. Might need to look in c:\RMS Express for RMS Express.exe.





Create a WinLink Account (1 of 2)

- Must have a valid Ham Radio License
- When run the first time, the program opens the “Properties Tab”
- Fill the blanks as much as you can
- Don’t change or delete any default values that may be provided
- Recommend to NOT include any Call sign suffix, which is optional and just complicates things down the road
- Be sure to include your email in the fields labeled Password recovery email and also Non-Winlink e-mail
- You DO NOT need a Winlink Express registration key, leave that blank
- When finished, click on the “Update” button



Create a WinLink Account (2 of 2)

- Connect with the WinLink system to create your account (use the Telnet mode Internet connection)
- Do not use a password on your first connection
- A message containing your password will be sent to your account. (Can change the password later.)
- Retrieve password with a second connection
- Enter password in “Settings”, “Winlink Express Setup”
- Your email address will be CALLSIGN@winlink.org



Winlink Express Setup

Winlink Express Properties

Call Signs

My Callsign: My Password:
(Case sensitive) Show password

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

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:

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



Connect to the System (1 of 3)

Winlink Express 1.5.10.0 - KD9ANU

KD9ANU Settings Message Attachments Move To: Saved Items Delete **Open Session: Telnet Winlink** Logs Help

No active session...

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

System Folders

- Inbox (0 unread)
- Read Items (10)
- Outbox (0)
- Sent Items (4)
- Saved Items (1)
- Deleted Items (3)
- Drafts (2)

Personal Folders

Global Folders

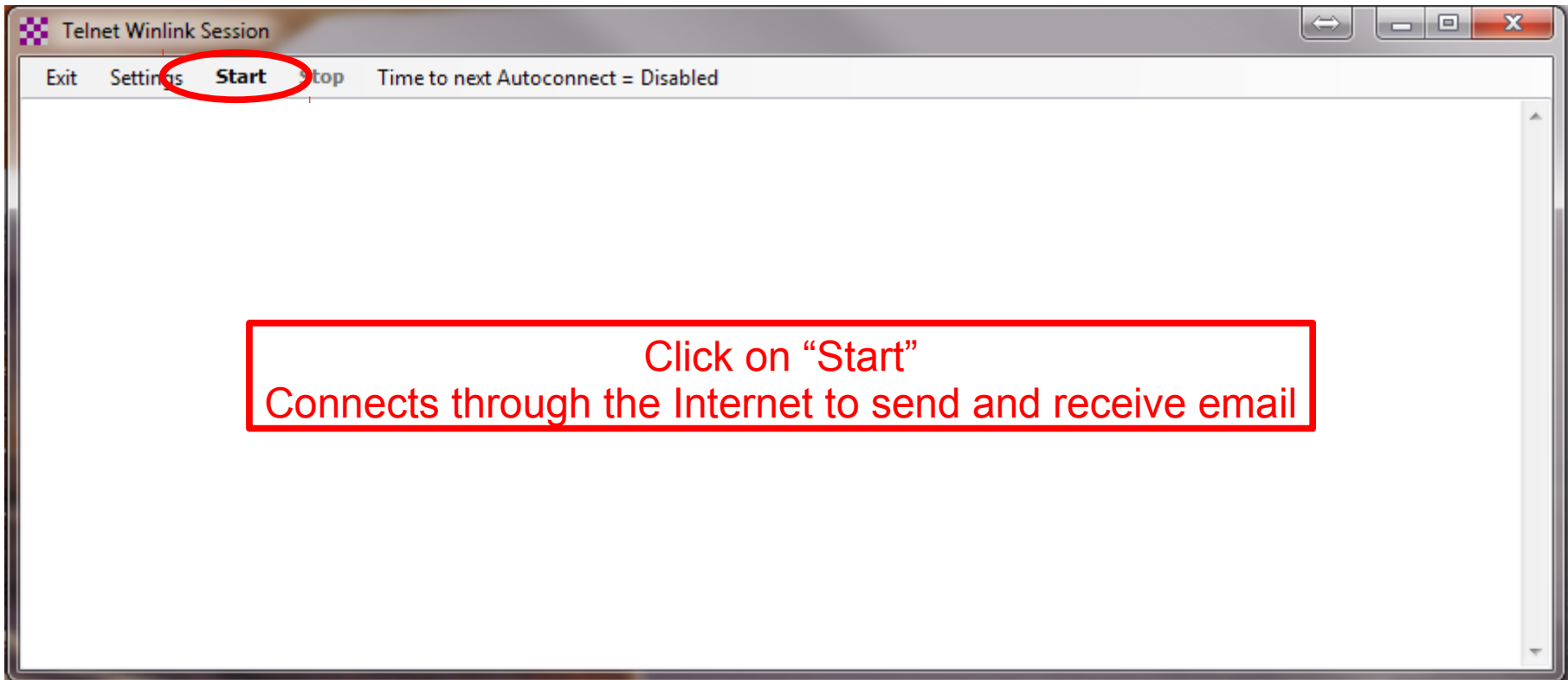
Contacts

- FRITZ_BOCK
- GARY_SHANKS
- JIM_HANLEY
- KD9ANU
- RICH.HOLTMAN@GMAIL.CC
- RON_MORGAN

With the mode Telnet Winlink showing,
Click on "Open Session"



Connect to the System (2 of 3)





Connect to the System (3 of 3)

The screenshot shows a window titled "Telnet Winlink Session" with a menu bar containing "Exit", "Settings", "Start", "Stop", and "Time to next Autoconnect = Disabled". The "Exit" menu item is circled in red. The main text area displays the following session log:

```
*** Connecting to a CMS...
*** Connected to AWS at 2017/12/05 22:45:09
[WL2K-4.0-B2FWIHJM$]
:PQ: 34327558
CMS>
:FW: KD9ANU
[RMS Express-1.5.10.0-B2FHM$]
:PR: 95475577
:WL2K DE KD9ANU (EN50EU)
FF
FQ
*** -- End of session at 2017/12/05 22:45:10 --
*** 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 2017/12/05 22:45:15
```

Click on "Exit" after Disconnected is displayed
This window will then close



Winlink Express Screen

Winlink Express 1.5.18.0 - KD9ANU

KD9ANU Settings Message Attachments Move To: Weekly Winlink Ex Delete Open Session: Packet Winlink Logs Help

In Packet Winlink session. *** Received and processed RMS VHF Channels update message ***

	Date/Time	Message ID	Size	Source	Sender	Recipient	Subject
	2019/01/23 20:41	125_W9KJ	283	W9KJ	W9KJ	KD9ANU	Weekly Winlink Exercise #4-2019
	2019/01/23 18:18	GD4FMCTZKKEP	1413	WD9FMB	WD9FMB	KD9ANU	//WL2K ICS214A-Weekly Winlink Exercis
	2019/01/23 17:53	A3P8LFM051XC	236	N9JWI	N9JWI	KD9ANU	//WL2K Weekly Winlink Exercise #4-201
	2019/01/22 02:55	6KHNFVIFV8D5	2334	KC9RAV	KC9RAV	KD9ANU	//WL2K Re: ICS 213: Weekly Winlink Ex
	2019/01/20 20:18	118_W9KJ	3630	W9KJ	W9KJ	KD9ANU	Re: ICS 213: Weekly Winlink Exercise #3
	2019/01/20 02:40	101_W9KJ	3282	W9KJ	W9KJ	KD9ANU	Re: ICS 213: Weekly Winlink Exercise #3

Message ID: A3P8LFM051XC
 Date: 2019/01/23 17:53
 From: N9JWI
 To: KD9ANU
 Source: N9JWI
 Downloaded-from: RMS:KD9ANU-10
 Subject: //WL2K Weekly Winlink Exercise #4-2019

N9JWI, Frank, Amboy, Packet, 145.610.N9JWI-10 gateway



Preferences

Settings,
Preferences...

A screenshot of the Winlink Preferences dialog box. The window title is 'Preferences' with a close button (X) in the top right corner. The dialog is organized into several sections:

- Message Reading Options:** Includes a text box for 'Viewing seconds before marking message read:' with the value '2', and a checkbox for 'Automatically move read items to Read Items folder' which is unchecked.
- Message review before downloading:** Includes a checked checkbox for 'Display list of pending incoming messages prior to download'.
- Message acknowledgement options:** Includes four unchecked checkboxes: 'Default to requesting message read acknowledgements', 'Automatically send message read acknowledgements when requested', 'Automatically send message read acknowledgements for all read messages', and 'Ignore read acknowledgement requests on incoming messages'.
- Message sending options:** Includes a checked checkbox for 'Automatically add contact entry for each destination address' and an unchecked checkbox for 'Add "//WL2K" to the subject of messages'.
- Line wrapping:** Includes a checked checkbox for 'Wrap print lines after this many characters:' with a text box containing the value '72'.
- Distance Units:** Includes two radio buttons: 'km' (unchecked) and 'Miles' (checked).

At the bottom of the dialog are two buttons: 'Update' and 'Cancel'.



Compose New Message

Enter a new message

Close Select Template ICS213 HW NORCAL Attachments **Post to Outbox** Spell Check Save in Drafts

From: KD9ANU Send as: Winlink Message Request read receipt Set Defaults

To:

Cc:

Subject:

Attach:

73|

Rich Holtman - KD9ANU
Assistant Emergency Coordinator
Peoria County ARES
Home QTH - Illinois - en50eu
cell 309-256-4272 - text me!
W9UVI - Peoria Area Amateur Radio Club (Illinois)



Telnet Session Screen - Internet

Telnet Winlink Session

Exit Settings **Start** Stop Time to next Autoconnect = 59:58

*** Connecting to a CMS...
*** Connected to AWS at 2019/01/30 00:40:15
[WL2K-5.0-B2FWIHJM\$]
:PQ: 16167235
CMS>
:FW: KD9ANU
[RMS Express-1.5.18.0-B2FHM\$]
:PR: 59685885
: WL2K DE KD9ANU (EN50EU)
FF
FQ
*** -- End of session at 2019/01/30 00:40:16 --
*** 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

1) Click on "Start" to begin sending and receiving messages

2) Click on "X" to close the window after the summary appears



Packet Session Screen - VHF

The screenshot shows the Packet Winlink Session window. The title bar reads "Packet Winlink Session". The menu bar includes "Exit", "Settings" (circled in red), "Switch to Peer-to-Peer Session", "Channel Selection", "1200 Baud", "Start", and "Stop". The "Connection type" is set to "Direct" and the call sign is "KD9ANU-10". The "Connection script" field is empty, with "Edit script", "Add script", and "Remove script" buttons. The status bar shows "Received: 125 Sent: 1537 Time to next Autoconnect = 24:46". The main text area displays session logs, including a message sent to 477DG5SBRN9V and session statistics. A red callout box with the text "Settings need to be adjusted for your radio & interface" is overlaid on the session log.

Packet Winlink Session

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

Connection type: Direct KD9ANU-10 Via ,

Connection script: Edit script Add script Remove script

Received: 125 Sent: 1537 Time to next Autoconnect = 24:46

:PQ: 97249711
CMS via KD9ANU >
:FW: KD9ANU
[RMS Express-1.5.18.0-B2FHMS]
:PR: 55107271
: KD9ANU-10 DE KD9ANU (EN50EU)
FC EM 477DG5SBRN9V 3787 1348 0
F> 39
FS Y
*** Sending 477DG5SBRN9V.
FF
*** Completed send of message 477DG5SBRN9V
*** Sent 1 message. Bytes: 1410, Time: 00:24, bytes/minute: 3490
FQ
*** --- End of session at 2019/01/30 00:33:30 ---
*** Messages sent: 1. Total bytes sent: 1410, Time: 00:47, bytes/minute: 1770
*** Messages Received: 0. Total bytes received: 0, Total session time: 00:47, bytes/minute: 0
*** Disconnecting
*** Disconnected at 2019/01/30 00:33:39
*** Disconnect reported.

Settings need to be adjusted for your radio & interface



Packet Channel Selection

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 (mi)	Bearing (Degrees)
KD9ANU-10	145.610	1200	EN50CS	PUBLIC	010	237
WD9FMB-10	145.610	1200	EN50EQ	PUBLIC	011	180
K9WRA-10	145.610	1200	EN50HS	PUBLIC	014	113
KD9JFF-10	145.610	1200	EN50ML	PUBLIC	043	126
KB9YFW-10	145.610	1200	EN51LH	PUBLIC	044	044
NS0A-10	145.610	1200	EN41WK	PUBLIC	048	328
N9JWI-10	145.610	1200	EN51IR	PUBLIC	063	016
KB9APW-10	145.610	1200	EN51DU	PUBLIC	069	357
KD9FSG-10	145.610	1200	EN51JU	PUBLIC	072	017
N9PUZ-10	145.610	1200	EM59FT	PUBLIC	072	176
KD9BNQ-10	145.610	1200	EM59FS	PUBLIC	075	176
W9DUA-10	145.610	1200	EM59DS	PUBLIC	075	183
N9EF-10	145.610	1200	EN51QP	PUBLIC	076	043
KD9KDQ-10	145.610	1200	EN50UE	PUBLIC	084	123
K9KRO-10	145.610	1200	EN51SS	PUBLIC	088	043
K9MLT-10	145.610	1200	EN50UB	PUBLIC	089	127
NG9R-10	145.610	1200	EN40LA	PUBLIC	094	233



SoundModem (Sound Card)

Settings View Clear monitor Calibration Rotate

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

1:Fm KD9ANU To KD9ANU-10 <UA R F> [06:51:57T]
1:Fm ON To ID <UI R Pid=F0 Len=21> [06:52:44R] [+++]
Network Node (WOOD2)
1:Fm K9WRA-10 To BEACON <UI R Pid=F0 Len=31> [06:54:56R] [+++]
Winlink 2000 RMS Packet Server
1:Fm KD9ANU To KD9ANU-10 <SABM C P> [06:56:49T]
1:Fm KD9ANU-10 To KD9ANU <UA R F> [06:56:50R] [+++]
1:Fm KD9ANU-10 To KD9ANU <I C R0 S0 Pid=F0 Len=65> [06:56:52R] [+++]
Welcome to KD9ANU-10, serving Peoria County and Central Illinois
1:Fm KD9ANU To KD9ANU-10 <RR R R1> [06:56:53T]

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

Settings need to be adjusted for your radio & interface

Soundmodem can be downloaded at: <http://uz7.ho.ua/packetradio.htm>

Start SoundModem before Winlink Express If using a sound card interface



Winmor Session Screen - HF

Winmor Winlink Session - KD9ANU

Exit **Settings** Switch to Peer-to-Peer Channel Selection Forecast Best chan. Next chan. Hide TNC **Start**

NOLCR-1 Center Freq. (kHz): 7103.500 Dial Freq. (kHz): 7102.000 Bearing: 347 Quality:

Favorites: Select Add to favorites Remove from favorites

Channel Free In: 0/0 Out: 0/0 BPM: 470/315 Disconnected

```
*** Connected to Winlink RMS: NOLCR-1 @ 2019/02/03 16:23:05 USB Dial: 7102.000 at 2019/02/03 16:23:05
*** Station Bearing: 347, Range: 438 miles
RMS Trimode 1.3.22.0 Node in Knife River MN EN46cx
KD9ANU has 236 minutes remaining with NOLCR-1
[WL2K-5.0-B2FWIHJM$]
:PQ: 58381301
CMS via NOLCR-1 >
:FW: KD9ANU
[RMS Express-1.5.18.0-B2FHM$]
:PR: 11779300
; NOLCR-1 DE KD9ANU (EN50EU)
FC EM 9GOVJPX5MOF4 316 269 0
F> 6B
FS Y
*** Sending 9GOVJPX5MOF4.
FF
*** Completed send of message 9GOVJPX5MOF4
*** Sent 1 message. Bytes: 301, Time: 01:06, bytes/minute: 271
FQ
*** -- End of session at 2019/02/03 16:26:29 --
*** Messages sent: 1. Total bytes sent: 301, Time: 03:23, bytes/minute: 89
*** Messages Received: 0. Total bytes received: 0, Total session time: 03:23, bytes/minute: 0
*** Disconnecting
*** Disconnected from Winlink RMS: NOLCR-1 @ 2019/02/03 16:26:51
*** Session: 3.6 min; Avg Thruput: 0 Bytes/min; 1 Min Peak Thruput: 470 Bytes/min
```

Settings need to be adjusted
for your radio & interface



HF Channel Selection Tool

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 (mi)	Bearing (Degrees)	Path Reliability Estimate	Path Quality Estimate
KG5KS-10	7101.500	1600	EM45JP	00-23	PUBLIC	369	194	91	55
N0LCR-1	7113.500	500	EN47DA	00-23	PUBLIC	438	347	89	56
N0LCR-1	7103.500	1600	EN47DA	00-23	PUBLIC	438	347	89	56
K0SI	3586.500	1600	EM39UA	00-23	PUBLIC	189	229	86	53
KD7UHR	3588.500	1600	EM58BQ	00-23	PUBLIC	150	185	86	54
W9FE	3597.000	1600	EM59AA	00-23	PUBLIC	127	188	84	53
W9JUN-10	7102.500	1600	EM78GU	00-23	PUBLIC	260	121	84	57
W6IDS	7084.500	500	EM79NV	12-23	PUBLIC	258	103	83	57
NF9D	3595.000	1600	EN51TW	00-23	PUBLIC	99	040	83	53
NS0A	3510.000	500	EN41WK	00-23	PUBLIC	48	328	83	53
W6IDS	7102.500	500	EM79NV	12-23	PUBLIC	258	103	82	56
KC8YJJ	7102.500	1600	EN90PL	00-23	PUBLIC	467	090	75	48
AJ4FW	10146.000	1600	FM07BC	00-23	PUBLIC	583	113	74	46
K9BBS-10	7102.500	1600	EM68SR	00-23	PUBLIC	223	130	74	53
KB5LZK	7101.200	1600	EM34UT	00-23	PUBLIC	441	200	73	46
AD5EO	7103.000	1600	EM34QN	00-23	PUBLIC	464	202	71	45
K0SI	7103.500	1600	EM39UA	00-23	PUBLIC	189	229	69	50



Winmor Virtual TNC - HF

WINMOR Sound Card TNC Ver:1.5.13.0 Port:8500

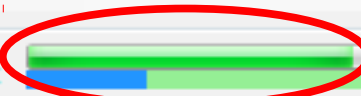
Help Hide Send ID

Connection State
DISCONNECTED

TCP Capture OK

Transmit
0 Avg ACK Percentage 100

Xmt Frame:

Receive
Rcv Level:  Busy Detector
Channel Clear

Remote Station Offset: -19.9 Hz

Squelch: 5

Rcv Frame:

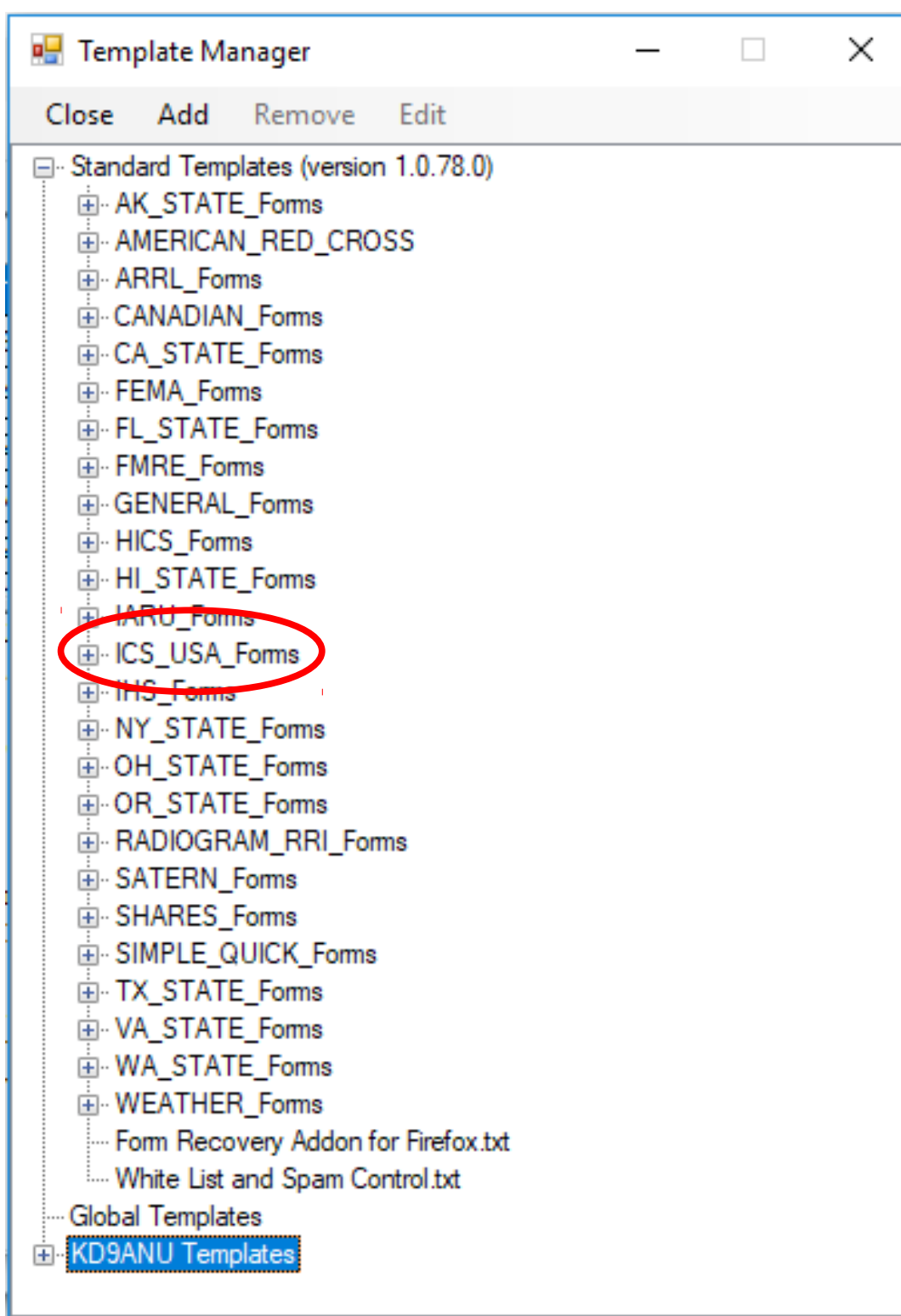
Waterfall
 Spectrum
 Disable

500 Waterfall 2KHz 2500 4FSK / 31

Look for "Channel Clear" in the Busy Detector or low signal



Forms or Templates





ICS213 Template (in Browser)

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](#)

Senders Base Call:

Ver 36.2



Whitelist – SPAM Control

- Over 90% of in-bound messages are SPAM
- Cannot turn off this feature
- Auto records Internet addresses you have used
- Stay in Whitelist for 400 days after last sent to
- Alternately the sender places //W2LK in subject
- Manually add email addresses to your Whitelist or Blacklist – see the Winlink FAQ file for how



Peer-to-Peer

- Send a message direct between two radios
- Packet, Winmor, Pactor are common modes
- Select desired mode in Open Session dropdown
- New Message - Send as Peer-to-Peer Message
- Coordinate P2P session via radio using voice
- Receiving station waits until sender transmits



Weekly Winlink Exercise

- Promotes regular practice with Winlink, educates regarding the features of Winlink software, and improves our capabilities with Winlink
- Similar to PAARC's Sunday Night Net, but no set time – you can respond when your schedule permits
- Participants respond to a Winlink message that I send (usually sent on Tuesday)
- Other similar Winlink Nets exist across the country
- Also suggest practicing peer-to-peer sessions



Winlink Support

- Good indexed Help within the Winlink Express program.
- Winlink Book of Knowledge (download latest pdf file)
https://winlink.org/content/winlink_faq_feb_14_2019_revised_frequently_asked_questions_answers
- Winlink Forums (text-searchable)
 - Program Group
 - EmComm Group
- I'm not a fan of Winlink's online support philosophy and video-based materials provided. But such may work for you.
- Can also be hard to find up-to-date detailed help using general Internet searches. Yet this may be a good way to find help for specific radio and interface, if you include enough specifics in the search lingo.



Reminders

- Log in regularly – after 400 inactive days your account is turned off – Contact Admin to fix
- Winlink Express software updates automatically while open or when opened, also auto updates the Templates/Forms
- If out-of-date too much, full reinstall necessary
- You cannot send a Winlink message to your Winlink address – rejected as a duplicate



Terminology

- RMS – Radio Message Server
- RMS Gateway – A station that connects Winlink users to the Winlink servers on the Internet
- Winlink Express – Name of full-featured user software
- Digipeater or Digi – A station that receives and then immediately re-transmits digital signals (digital repeater)
- Node – A station that acts as at least both an RMS Gateway and as a Digipeater
- Virtual TNC – TNC functions provided via PC software
- Forms or Templates – structure desired data to be sent in a formatted way, yet minimize the information transmitted.



Winlink Express Alternatives

- Winlink without Winlink Express (~80% share)
 - Airmail – Windows
 - BPQ – Linux, Raspberry Pi
 - PacLink – Windows Vista and up
 - PacLink UNIX – Linux, Raspberry Pi
 - Pat – Mac, Linux
- May not have all features of Winlink Express
- Probably not supported as well as Winlink Express
- Expect Challenges & Difficulties
- I have no useful experience with any of these



Take Aways

- Choose Winlink Express Software
- Create your Account
- Practice using Telnet (radio later)
- Consider “Weekly Winlink Exercise”
- Ask if you need help



Live Demonstration

- Create a message and post to Outbox
- Send message via VHF to nearby RMS Gateway
- Gateway will forward message to the Internet
- Who has a SmartPhone to receive a message?



73
until another time