



Using WinLink to send NTS Messages for FD 2020 Bob Lanahan

22 Jun 2020
Version #2



W6TRW Amateur Radio Club

Home of the W6TRW ARC in Redondo Beach California

Winlink Overview & Demo

Bob

W6TRW General Meeting
Tuesday, 9 July 2019 @ 5:30 pm
Roundtable Pizza,
4330 Redondo Bch Blvd, Torrance CA





Outline – Winlink NTS Messaging FD 2020

- Your Setup – Computer, Radio, Connector cables, Software
- How you create a message
- A few Examples – Telnet (internet)
- Sending a radio message – find a Remote Message Server (RMS)
- Example Field Day Messages



The A2 Shack Setup





Cables & Setup

- Ordered a RS-232 to Kenwood Comm cable \$50? – one week
- Ordered a USB to RS-232 cable \$20 – one week
- Plug the cable in to laptop, it will download drivers (be connected to the internet)
 - It will set up a Comm port (might need if for troubleshooting)
 - Find the comm port using the hardware detection – comm port 5
 - Think each usb port has it's own comm port

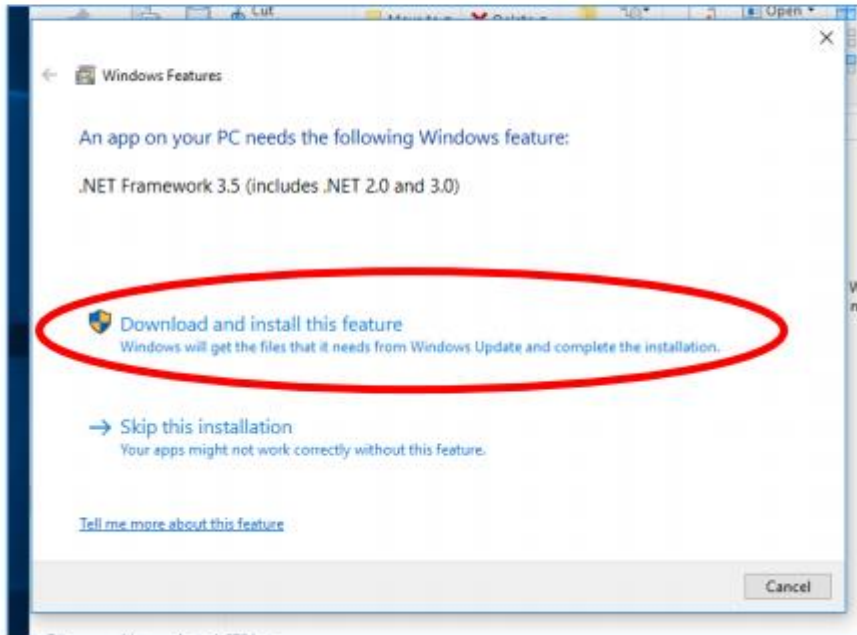


Installing Winlink

- Go to website – <https://www.winlink.org/>
- Download Winlink Express
- My big issue – it needs Microsoft .Net 3.5 framework to operate (this is the software that does the port mapping, USB, and data control)
 - Took about 30 – 45 mins to install



.Net and Devices





Install / Boot Up Winlink

Winlink Express Properties

Call Signs

Primary Callsign: Password:

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

Password recovery e-mail:

(Non-Winlink e-mail address which will be password e-mailed 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

- Install winlink
- Will take you right into Setup
- Create account and password
- call sign @ winlink.org
- Know your 6 letter Grid Square or know your Lat/ Long



Nag screen ...

You will get a nag screen when you open the application again. The Nag screen will make you wait a bit, before it lets you select “remind me later”, but you don’t have to buy the program or get a registration key.

Winlink Express Registration

Winlink Express is made possible through the Amateur Radio Safety Foundation Inc. Your registration of Winlink Express and support for the ARSF makes the Winlink system possible. Registering Winlink Express also registers your callsign to use the Winmor TNC.

Registration Site URL (click):
<http://www.arsfi.org/express.aspx>

Enter Registration Key

Call Sign: XYZ-123

Registration Key:



Create an Email

The screenshot displays the Winlink Express 1.5.18.0 interface. The 'Message' menu is open, with 'New Message...' selected and circled in red. The 'Enter a new message' dialog box is also open, showing the 'Send as:' dropdown menu set to 'Winlink Message', which is also circled in red. The 'To:' field contains 'l address@aol.com', the 'Subject:' field contains 'test', and the message body contains 'This is a test' and 'Bob'.



Post Message to Outbox

The screenshot displays the Winlink Express 1.5.18.0 interface. The main window shows a message composition screen with the following details:

- From:** KK ...
- Send as:** Winlink Message
- To:** email@email.com
- Subject:** test

The message body contains the text: "This is a test. Bob]"

A red circle highlights the "Post to Outbox" button in the top right corner of the message composition window. Other buttons visible include "Close", "Select Template", "Attachments", "Spell Check", and "Save in Drafts".

The left sidebar shows the folder structure:

- System Folders
 - Inbox (0 unread)
 - Read Items (0)
 - Outbox (0)
 - Sent Items (0)
 - Saved Items (0)
 - Deleted Items (0)
 - Drafts (0)
- Personal Folders
- Global Folders
- Contacts

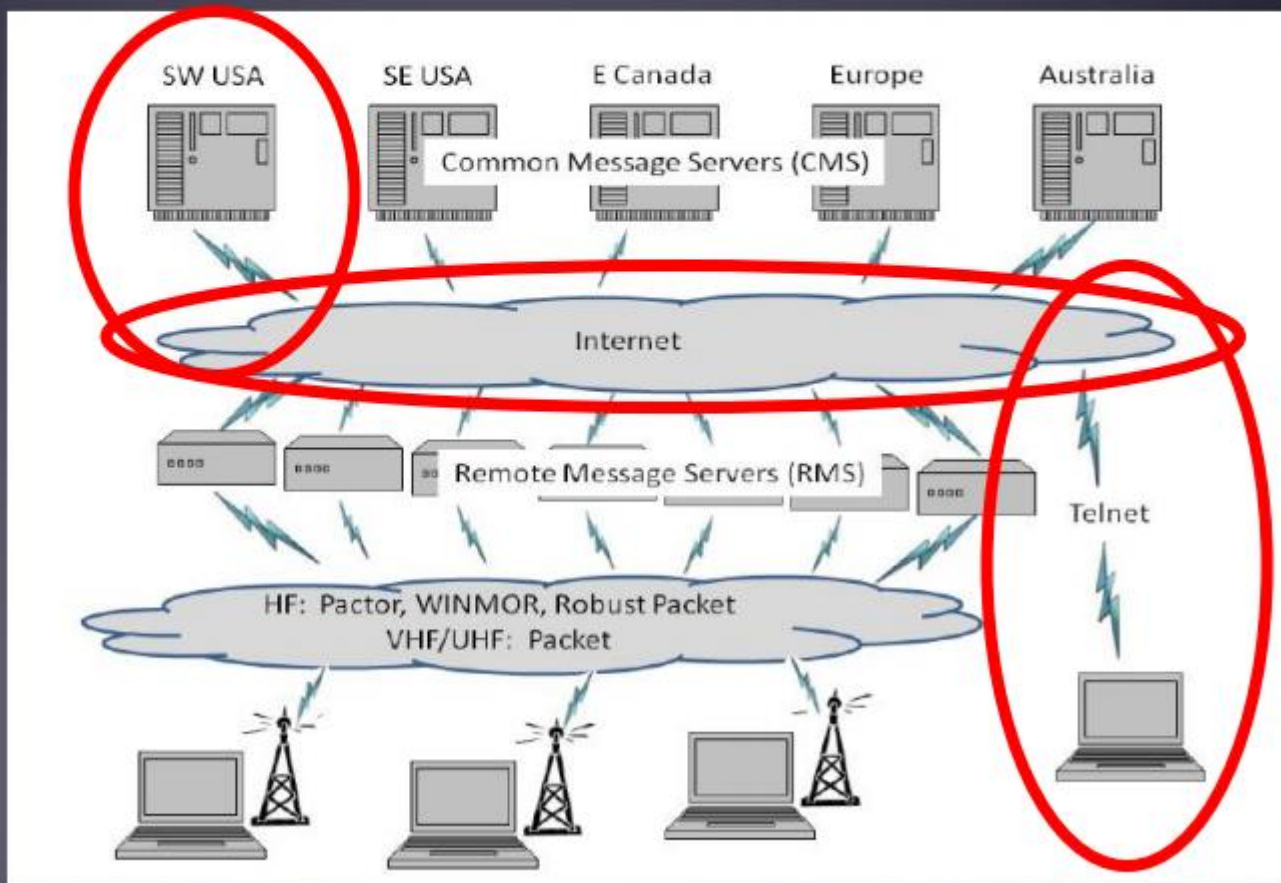


Now - Try a Telnet Email

Uses internet – No point on FD, needs to go RF !!

Winlink 2000 Architecture (Conventional Mode)

- CMS
- RMS (gateway)
- Client (you)





Open a Telnet session

Winlink Express 1.5.18.0 - KK....

File Home Share View

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

Help

No active session...

Open session

Date/Time	Size	Source	Sender	Recipient	Subject
System Folders					
Inbox (0 unread)					
Read Items (0)					
Outbox (1)					
Sent Items (0)					
Saved Items (0)					
Deleted Items (0)					
Drafts (0)					
Personal Folders					
Global Folders					
Contacts					

Make sure you have an internet connected. Test to see that your email works.



Telnet Session

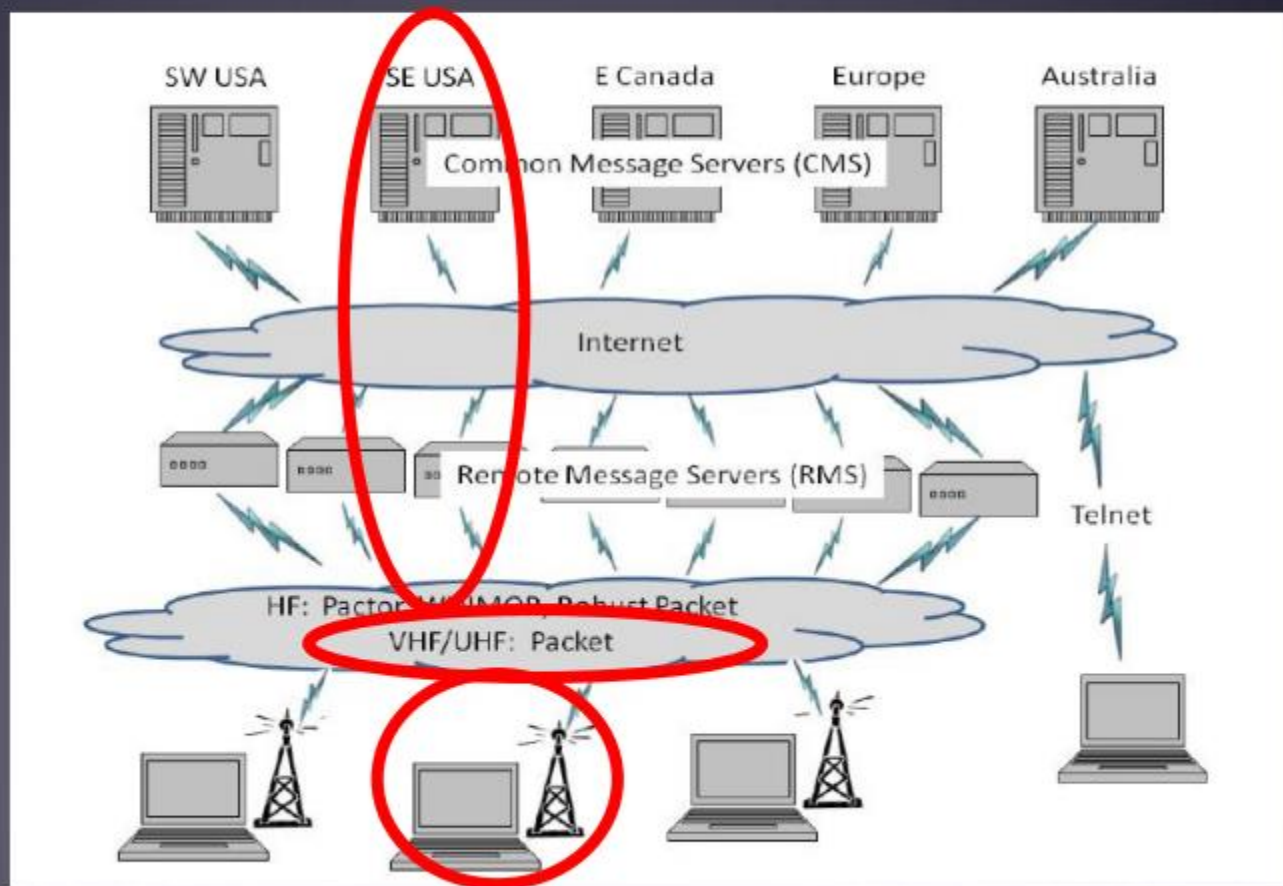
```
Telnet Winlink Session
Exit  Settings  Start  Stop  Time to next Autoconnect = Disabled
*** Connecting to a CMS...
*** Connected to AWS at 2018/10/05 18:51:10
[WL2K-5.0-B2FWIHJMS]
:PQ: 20902194
CMS>
:FW: KK6 ...
[RMS Express-1.5.12.0-B2FHMS]
:PR: 20456386
:WL2K DE KK--- (DM03TV)
FC EM 3V0D40HSADEC 192 173 0
F> C8
FS Y
*** Sending 3V0D40HSADEC.
FF
*** Completed send of message 3V0D40HSADEC
*** Sent 1 message. Bytes: 206, Time: 00:00, bytes/minute: 46532
FQ
```



Now - Try a Radio Email

Winlink 2000 Architecture (Conventional Mode)

- CMS
- RMS (gateway)
- Client (you)





Find a station

Packet Winlink Session

Exit Settings Switch to Peer-to-Peer Session Channel Selection Via Start Stop

Connection type: Direct K6CCR-10 Via

Connection script: Edit script Add script Remove script

Time to next Autoconnect = Disconnected

Packet Channel Selector

Exit Select Channel Update Table Via Internet Update Table Via Radio

Stations found within 160 kilometers of your grid square.

Call sign	Frequency (MHz)	Baud	Grid Square	Group	Distance (mi)	Bearing (Degrees)
K6CCR-10	145.050	1200	DM04TA	PUBLIC	006	000
K6CCR-10	145.050	1200	DM04TA	PUBLIC	006	000
AJ7C-10	431.125	9600	DM04TA	PUBLIC	006	000
W2NP-10	145.050	1200	DM04UC	PUBLIC	012	025
KE6WEZ-10	145.050	1200	DM04PG	PUBLIC	030	320
W6ACS-11	431.125	9600	DM13CW	PUBLIC	034	090
K6NBR-10	431.475	9600	DM13BO	PUBLIC	037	129
K6NBR-10	145.050	1200	DM13BO	PUBLIC	037	129
W6ACS-10	431.475	9600	DM13DS	PUBLIC	040	107
KK6MTQ-10	145.630	1200	DM04VM	PUBLIC	041	014
AG6MO-10	145.090	1200	DM14EC	PUBLIC	044	075
WB6TT-10	144.970	1200	DM13FU	PUBLIC	048	097
W6ACS-12	431.075	9600	DM13EK	PUBLIC	055	128
KE6NYT-10	145.050	1200	DM04LM	PUBLIC	055	317
WM6T-10	145.090	1200	DM14JG	PUBLIC	071	071
KG6HSQ-10	145.050	1200	DM13JJ	PUBLIC	077	119
KD6ILO-10	145.050	1200	DM13IF	PUBLIC	080	128
NH6SW-10	145.050	1200	DM13LM	PUBLIC	083	119

1. Need internet
2. Pick a station,
 - Close is good
 - Notice Data Rate -- 2 meter vs 70 cm

Need to find your station list before field day !!

Out in the field, you won't have internet!!



Find a Station

← → ↻ ⓘ Not secure | ccares.net/about/

Apps Google ms2labs torproject VirusTotal ms2labs-25 SB-WASP mt-up PublicVerse ccares

Amateur Radio Operator and will agree to support CCARES during disaster operations.

Frequencies

The K6CCR repeater is located near the Baldwin Hills Scenic Overlook and is on:

445.6 MHz, CTCSS code 131.8, standard offset of -5 MHz.

[CCARES Essential Channel List](#)

CCARES has a Winlink Packet Gateway Station, K6CCR-10, which operates 24/7 on **145.05 MHz/1200bps.**

Example of Connection to W6ACS-10, was my best option from Aerospace Bld

The screenshot shows the Packet Winlink Session interface. At the top, there are menu options: Exit, Settings, Switch to Peer-to-Peer Session, Channel Selection, 9600 Baud, Start, and Stop. The Connection type is set to Direct, and the channel is W6ACS-10. The connection script is empty, and there are buttons for Edit script, Add script, and Remove script. Below the interface, the received and sent data are shown as 120 and 121 respectively, and the time to next autoconnect is disabled. The log shows the following text:

```
*** Starting to call W6ACS-10
*** Opening serial port COM5; 9600 baud; Kenwood TM-D710 B-Band
*** Connecting to W6ACS-10
*** Connected to W6ACS-10 at 2019/01/24 02:33:12

WELCOME TO THE ORANGE COUNTY RACES LOMA RIDGE RMS SITE. 431.475 MHz
[WL2K-5.0-B2FWIHJMS]
:PQ: 28058089
CMS via W6ACS >
:FW:[KK]
[RMS Express-1.5.18.0-B2FHMS]
:PR: 31861625
: W6ACS-10 DE [KK] (DM03TW)
FC EM QFRN31N3DJH6 155 147 0
F> A9
*** Disconnected at 2019/01/24 02:34:26

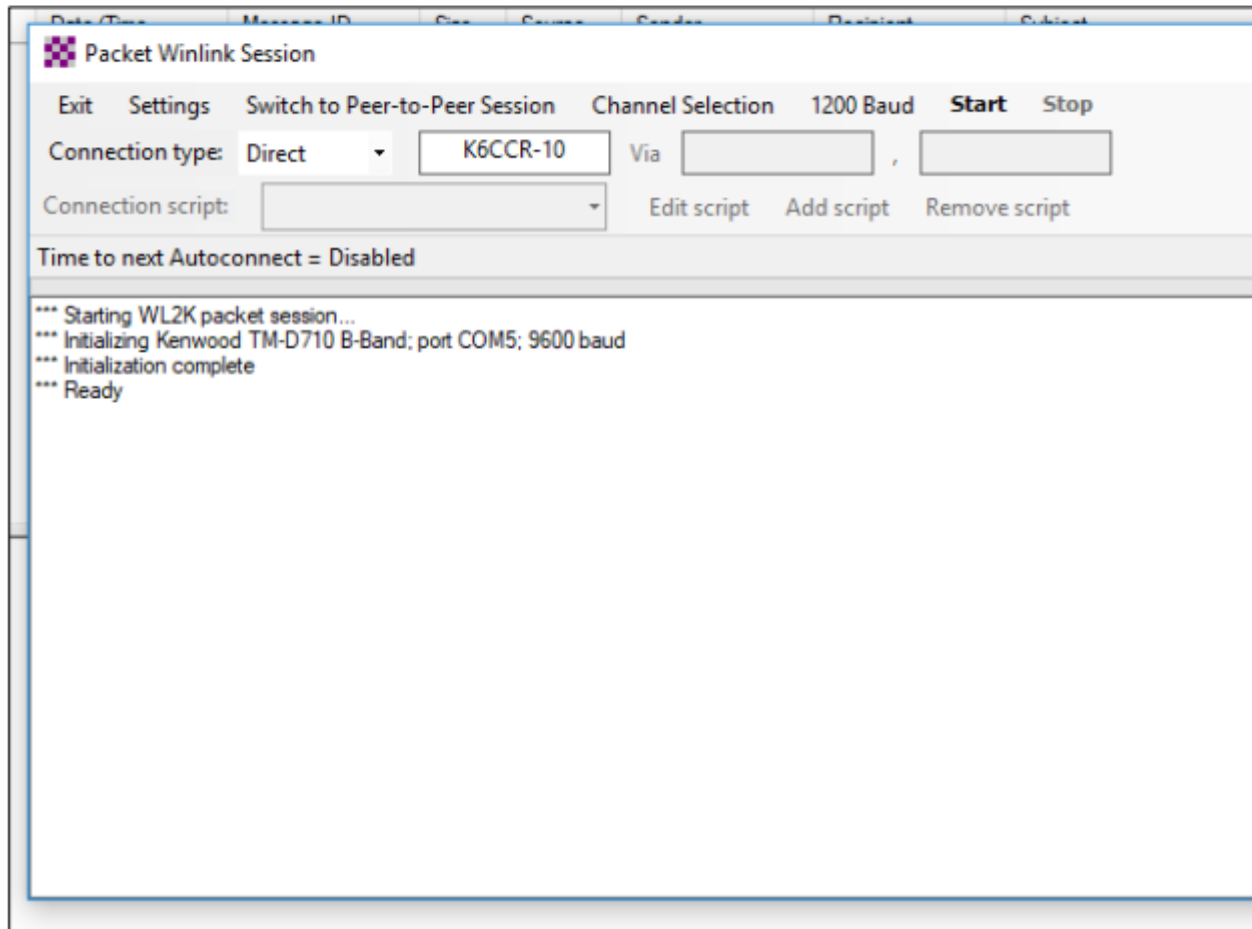
*** Disconnect reported.
```

This isn't a P2P Session, it's a 431 Mhz attempt to Orange County Races – with squelch set wrong

I don't think I have any screen prints of the P2P sessions (sigh)



Set up – Connect to the radio



- Radio and Band
- Port
- TNC parameters

- Important, listen to the channel, set your squelch properly.

- Your radio won't transmit if it hears a busy channel !!



Set up

Packet Winlink/P2P Setup

TNC Connection

Packet TNC Type: Kenwood TM-D710 B-Band

Packet TNC Model: [] AutoConnect Time

Serial Port: COM5

Serial Port Baud: 9600

If Auto Connect is enabled, open session when Winlink Express is started

TNC Parameters

1200 Baud 9600 Baud

TX Delay (Milliseconds):	400	300
Maximum Packet Length:	128	255
Maximum Frames:	2	7
Frack:	2	2
Persistence:	160	224
Slot time:	30	20
Maximum Retries:	5	5

Disable Xmt Level Adjust Transmit Level: 100 100

Update Cancel

- Radio and Band
- Port
- TNC parameters

- Important, listen to the channel, set your squelch properly.
- Your radio won't transmit if it hears a busy channel !!



Create an Email, Select Message Type and post to Outbox

The image illustrates the steps to create and post an email in Winlink Express 1.5.15.0:



- Step 1:** Open the 'Message' menu and select 'New Message...'.
- Step 2:** In the 'Enter a new message' dialog box, select 'Send as: Winlink Message'.
- Step 3:** In the 'Enter a new message' dialog box, select 'Post to Outbox' in the 'Attachments' section.

The email content shown in the screenshots is:

This is a test
Bob

A blank ARRL Radiogram Form

<http://www.arrl.org/files/file/Public%20Service/RADIOGRAM-2011.pdf>

 ARRL — the national association for Amateur Radio™ 									
NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE		
TO				THIS RADIO MESSAGE WAS RECEIVED AT					
				AMATEUR STATION _____		PHONE _____			
PHONE NUMBER				NAME _____		E-MAIL _____			
E-MAIL				STREET _____					
				CITY, STATE, ZIP _____					
_____				_____					
_____				_____					
_____				_____					
_____				_____					
_____				_____					
_____				_____					
FROM			DATE	TIME	TO			DATE	TIME
REC'D					SENT				
<small>This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio may be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org.</small>					<small>The ARRL is the national association for Amateur Radio and the publisher of <i>QST</i> magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.</small>				
					1320 2/11				



ARRL — the national association for Amateur Radio™



RADIOGRAM

NUMBER 1	PRECEDENCE R	HX	STATION OF ORIGIN W6HA	CHECK 15	PLACE OF ORIGIN REDDONDO BEACH CA	TIME FILED	DATE JUN 22
-------------	-----------------	----	---------------------------	-------------	--------------------------------------	------------	----------------

TO DIANA FEINBERG AI6DF LAX SM
PO BOX 4678
PALOS VERDES PENINSULA CA

THIS RADIO MESSAGE WAS RECEIVED AT

AMATEUR STATION _____ PHONE _____
 NAME _____ E-MAIL _____
 STREET _____
 CITY, STATE, ZIP _____

PHONE NUMBER

E-MAIL AI6DF AT SIGN ARRL DOT **NET**

W6HA	AT	HOPKINS	WILDERNESS	PARK
HAD	023	MEMBERS	AND	003
ARES	MEMBERS	ATTEND	X	73

FROM MIKE VAHEY N6MDV	DATE	TIME	TO SENTWINLINK K6CCR-10	DATE JUN 23	TIME 1556Z
--------------------------	------	------	----------------------------	----------------	---------------

REC'D
 This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio may be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org.

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1320 2/11

Is .Org in 2020

MSG 1, Text File:

ai6df@arrl.org

(for FD Jun 2020, her email address is .org, was .net in 2019)

FIELD DAY RADIOGRAM FROM HUGHES AMATEUR RADIO CLUB

1 R W6HA 15 REDONDO BEACH CA JUN 22

DIANA FEINBERG AI6DF LAX SM

PO BOX 4678

PALOS VERDES PENINSULA CA 90274

AI6DF ATSIGN ARRL DOT ORG

BT

W6HA AT HOPKINS WILDERNESS PARK

HAD 000 MEMBERS AND 000

ARES MEMBERS ATTEND X 73

BT

MIKE VAHEY N6MDV

HARC Field Day 2019

Msg #1

The screenshot shows the Winlink Express 1.5.21.0 interface. The top menu bar includes 'Winlink Express 1.5.21.0 - KK6WYW', 'Settings', 'Message', 'Attachments', 'Move To: Outbox', 'Delete', 'Open Session: Packet Winlink', 'Logs', and 'Help'. Below the menu is a toolbar with various icons. The main window is divided into three panes. The left pane shows a folder tree with 'System Folders' (Inbox, Read Items, Outbox, Sent Items, Saved Items, Deleted Items, Drafts) and 'Personal Folders'. The middle pane is a table of messages. The right pane shows the content of the selected message.

	Date/Time	Message ID	Size	Source	Sender	Recipient	Subject
[Icon]	2019/06/23 1...	Q1BR0RB3R...	429	KK6W...	W6HA	[Redacted]	//WL2K #6 RADIOGRAM SENT BY HAM RADIO ON FIELD DAY
[Icon]	2019/06/23 1...	BI89GTUF0GIZ	418	KK6W...	W6HA	[Redacted]	//WL2K #8 RADIOGRAM SENT BY HAM RADIO ON FIELD DAY
[Icon]	2019/06/23 1...	TU0M5TICJF06	422	KK6W...	W6HA	[Redacted]	//WL2K #9 RADIOGRAM SENT BY HAM RADIO ON FIELD DAY
[Icon]	2019/06/23 1...	9Q5IUAS8FN2G	424	KK6W...	W6HA	[Redacted]	//WL2K #7 RADIOGRAM SENT BY HAM RADIO ON FIELD DAY
[Icon]	2019/06/23 1...	P5ZNM9BS96...	426	KK6W...	W6HA	[Redacted]	//WL2K #10 RADIOGRAM SENT BY HAM RADIO ON FIELD DAY
[Icon]	2019/06/23 1...	9Y70N651DM...	429	KK6W...	W6HA	[Redacted]	//WL2K #11 RADIOGRAM SENT BY HAM RADIO ON FIELD DAY
[Icon]	2019/06/23 1...	GJD3YYJULX...	440	KK6W...	W6HA	[Redacted]	//WL2K FIELD DAY TEST MESSAGE #2 FROM BOB
[Icon]	2019/06/23 1...	FJ88ZNHJLU7B	441	KK6W...	W6HA	[Redacted]	//WL2K FIELD DAY TEST MESSAGE #3 FROM BOB
[Icon]	2019/06/23 15:56	S4QZJB1KT23S	428	KK6WYW	W6HA	[Redacted]	//WL2K FIELD DAY RADIOGRAM FROM HUGHES AMATEUR RADIO CLUB
[Icon]	2019/06/23 13:59	LTM9WV4JYYDS	483	KK6WYW	W6HA	[Redacted]	//WL2K #5 PREVIEW MESSAGE FROM BRIAN AFTER THE BIG ONE
[Icon]	2019/06/23 13:59	398BTT9P6571	469	KK6WYW	W6HA	[Redacted]	//WL2K #4 PREVIEW MESSAGE FROM PHIL AFTER THE BIG ONE
[Icon]	2019/06/23 13:47	JIA017X7TFTFX	287	KK6WYW	KK6WYW	[Redacted]	//WL2K test msg #2

Message ID: S4QZJB1KT23S
Date: 2019/06/23 15:56
From: W6HA
To: ai6df@arrl.net
Source: KK6WYW
Subject: //WL2K FIELD DAY RADIOGRAM FROM HUGHES AMATEUR RADIO CLUB

1 R W6HA 15 REDONDO BEACH CA 0900 PDT JUN 23
DIANA FEINBERG AI6DF LAX SM
PO BOX 4678
PALOS VERDES PENINSULA CA 90274
AI6DF ATSIGN ARRL DOT NET
BT
W6HA AT HOPKINS WILDERNESS PARK
HAD 023 MEMBERS AND 003
ARES MEMBERS ATTEND X 73
BT
MIKE VAHEY N6MDV



ARRL — the national association for Amateur Radio™



RADIOGRAM

NUMBER 2	PRECEDENCE R	HX	STATION OF ORIGIN W6HA	CHECK 24	PLACE OF ORIGIN REDONDO BEACH CA	TIME FILED	DATE JUN 22
TO MIKE 101 PR CARY			THIS RADIO MESSAGE WAS RECEIVED AT				
PHONE NUMBER			AMATEUR STATION _____ PHONE _____				
E-MAIL			NAME _____ E-MAIL _____				
			STREET _____				
			CITY, STATE, ZIP _____				
I		MIGHT		CONTACT		YOU	
HAM		RADIO		MESSAGE		AFTER	
BIG		ONE		IF		COMMERCIAL	
AND		CELLULAR		AND		EMAIL	
ARE		DAMAGED		OR		OVERWHELMED	
BOB LANAHAN		KK6WYW					
FROM	DATE	TIME	TO	DATE	TIME		
REC'D			SENT WINLINK K6CCR-10	JUN 23	1600Z		

This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio may be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org.

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MSG 2, Text File:

[REDACTED]@gmail.com

PREVIEW MESSAGE FROM BOB AFTER THE BIG ONE

2 R W6HA 24 REDONDO BEACH CA JUN 22

M [REDACTED]

10 [REDACTED] LANE

C [REDACTED] 13

9 [REDACTED] 2

[REDACTED] ATSIGN GMAIL DOT COM

BT

I MIGHT CONTACT YOU BY
HAM RADIO MESSAGE AFTER THE
BIG ONE IF COMMERCIAL LANDLINE
AND CELLULAR AND EMAIL INFRASTRUCTURE
ARE DAMAGED OR OVERWHELMED

BT

BOB [REDACTED] YW



A successful connection !!

Hit Start ...

```
Packet Winlink Session
Exit Settings Switch to Peer-to-Peer Session Channel Selection 1200 Baud Start Stop
Connection type: Direct K6CCR-10 Via
Connection script: Edit script Add script Remove script
Received: 468 Sent: 304 Time to next Autoconnect = Disabled

*** Starting to call K6CCR-10
*** Opening serial port COM5: 9600 baud; Kenwood TM-D710 B-Band
*** Connecting to K6CCR-10
*** Connected to K6CCR-10 at 2019/01/23 02:31:07

Culver City ARES RMS Packet Gateway 145.05 | DM04a
[WL2K-5.0-B2FWIHJM$]
:PQ: 31456252
CMS via K6CCR >
:FW| KK - cont Data in Boxes
[RMS Express-1.5.18.0-B2FHM$] removed
:PR: 35389784
: K6CCR-10 DE|KK... (DM03TW)
FC EM OQD2RXB3BFV7 168 155 0
F> B4
:PM| KK... BZ2U96B3YZ80 231 bob @ com Re: //WL2K test
FS Y
*** Sending OQD2RXB3BFV7.
FC EM BZ2U96B3YZ80 271 231 0
*** Completed send of message OQD2RXB3BFV7
*** Sent 1 message. Bytes: 175, Time: 00:06, bytes/minute: 1545
F> B6
FS Y
*** Receiving BZ2U96B3YZ80
*** BZ2U96B3YZ80 - 286/243 bytes received
*** Bytes: 255, Time: 00:01, bytes/minute: 14278
FF
FQ
*** -- End of session at 2019/01/23 02:31:55 --
*** Messages sent: 1. Total bytes sent: 175, Time: 00:47, bytes/minute: 220
*** Messages Received: 1. Total bytes received: 255, Total session time: 00:47, bytes/minute: 320
*** Disconnected at 2019/01/23 02:32:03

*** Disconnect reported.
```



Questions?

