Winlink
Packet Radio

* Send & Receive Messages without the Internet
* Provide Communication During Times of Emergency

HF Packet P2P
Can Have a Global Reach

Distant Stations can be accessed through
the Use of Digipeaters and Nodes.

winlink.org

Download

Winlink Express (current production version)

* Send & Receive Plain Text Messages, without the Internet

* Send & Receive Messages within Forms

* Provide Reliable, Accurate Communications During Times of Emergency

* Chat, Keyboard to Keyboard

* Post Ham Radio News Bulletins for All to View

* Use Repeaters & Nodes to Reach Out to More Distant Stations

* Provide Text Communications During Public Service Events

* Send Text Messages to the Phones of Non-Hams and Get a Reply

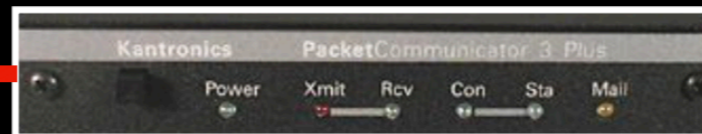* Attach Pictures to Forms and Send them along with your Text Message

Basic Packet Station Set-Up
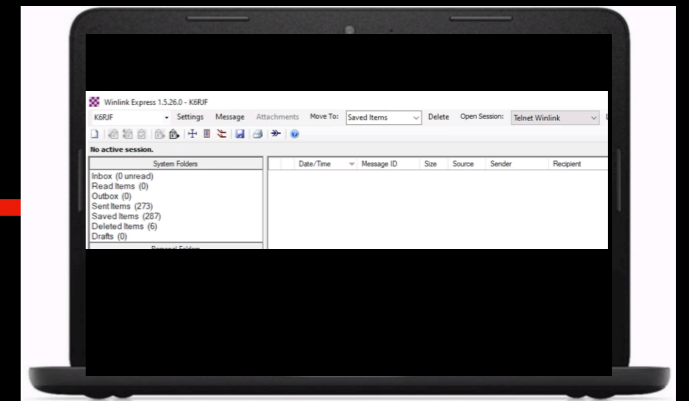

**Two Meter Radio
w/ Outdoor Vertical Antenna**

Computer Interface
Kantronics TNC KPC 3+

**Computer Running
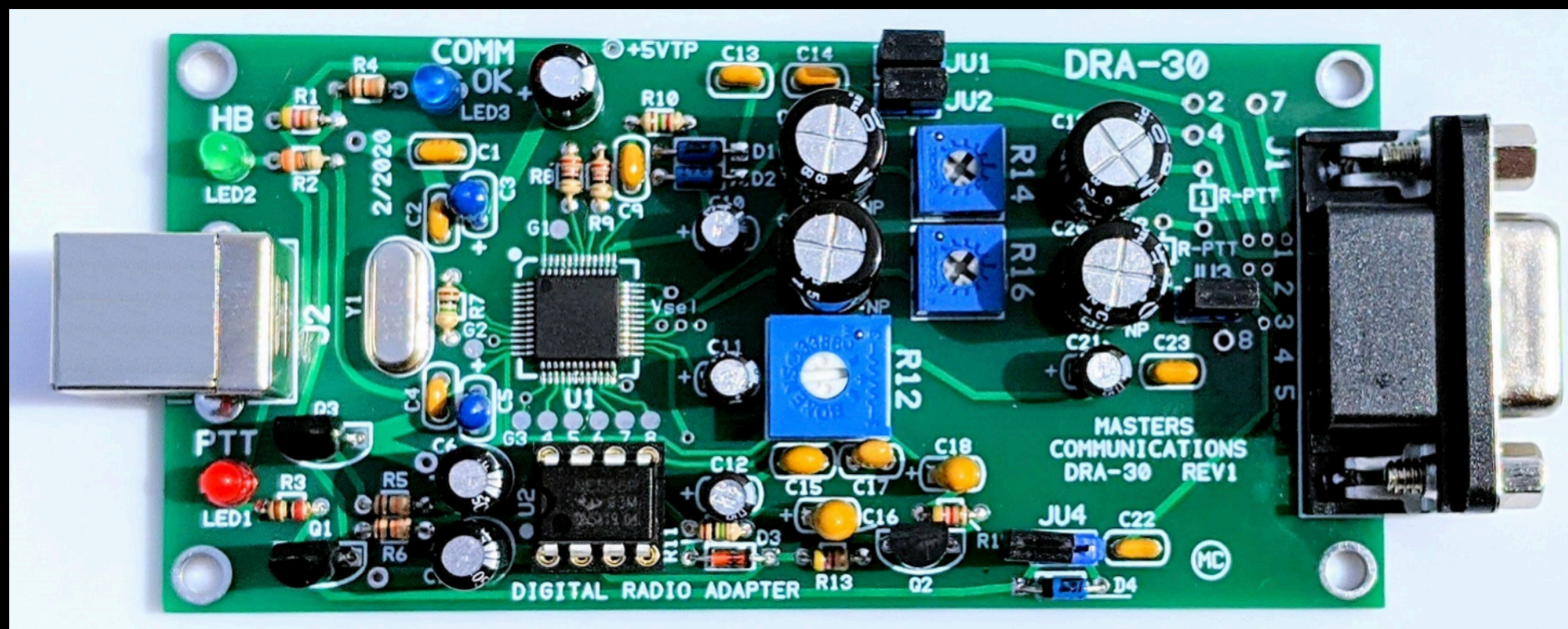Winlink Express**

Radio Specific Cable

*Standard
USB Cable*

*Contact Ed KC2LM, John KC5QOC or Jim KC5RUO
to help Set-Up your TNC Commands*

Master Communications DRA-30 Radio Adapter Interface

https://www.masterscommunications.com/products/radio-adapter/dra/dra30.html

Pricing:

- **Unassembled Kit - $35.00 each.**

- **Unassembled Kit with Case * - $50.00 each.**

- **Assembled and Tested - $65.00 each.**

- **Assembled and Tested with Case * - $80.00 each.**

Packet Set-Up with Baofeng HT

Internal Module SLMOD 6PM

SignaLink to Baofeng Cable: SLCABHTW

Standard USB Cable

145.01

SignaLink USB

PWR   TX   REC   DELAY

WINLINK EXPRESS

YouTube Video Detailing Set-Up https://www.youtube.com/watch?v=W5NeGF1klQY

Packet Set-Up *part 2*

Settings

Sound Card

Output device: Speakers (3- USB Audio CODEC)
Input device: Microphone (3- USB Audio CODEC)

- [ ] Dual channel   TX SampleRate: 11025
- [x] TX rotation   TX corr. PPM: 0
- [x] Single channel output   RX SampleRate: 11025
- [x] Color waterfall   RX corr. PPM: 0
- [x] Stop waterfall on minimize   Priority: Highest

Server setup

AGWPE Server Port: 8000   [x] Enabled
KISS Server Port: 8100   [x] Enabled

PTT Port

Select PTT port: NONE   [ ] Dual PTT
[ ] Swap COM pins for PTT

OK   Cancel

Modem settings

Modem filters ch: A

BPF Width	1400	Show
TXBPF Width	1600	Show
LPF Width	650	Show
BPF Taps	256	
LPF Taps	128	

- [x] Default settings
- PreEmphasis filter: None   [x] All
- [ ] KISS Optimization
- [x] non-AX25 filter

Modem filters ch: B

BPF Width	500	Show
TXBPF Width	500	Show
LPF Width	155	Show
BPF Taps	256	
LPF Taps	128	

- [x] Default settings
- PreEmphasis filter: None   [x] All
- [x] KISS Optimization
- [x] non-AX25 filter

Modem type ch: A

Mode: AFSK AX.25 1200bd
TXDelay: 400 msec
TXTail: 200 msec
Add. RX: 0 pairs
Add. RX shift: 30 Hz
Bits Recovery: NONE

Modem type ch: B

Mode: AFSK AX.25 300bd
TXDelay: 250 msec
TXTail: 50 msec
Add. RX: 0 pairs
Add. RX shift: 30 Hz
Bits Recovery: NONE

Ok   Cancel

Packet Winlink/P2P Setup

TNC Connection

Packet TNC Type: KISS
Packet TNC Model: ACKMODE   Serial Port: TCP
Autoconnect time: Disabled
TCP Host/Port: 127.0.0.1
Packet sound modem: (For KISS mode)
- [ ] Automatically launch packet sound modem

TNC Parameters

	(•) 1200 Baud	( ) 9600 Baud
TX Delay (Milliseconds):	500	300
Maximum Packet Length:	255	255
Maximum Frames:	2	7
Frack:	2	2
Persistance:	160	224
Slot time:	30	20
Maximum Retries:	5	5
Transmit Level:	100	100
Enable IPoll	[x]	[ ]

Update   Cancel

Using RMS *Radio Message Server*

1. Open *Packet Winlink*

2. Access BBS

KC5QOC-10
   Albuquerque **145.01**

NM5PB-10
   Albuquerque **145.01**

NM5RR-10
   Rio Rancho **145.01**

K5GEO-10
   Los Alamos **145.01**

BBS Commands

LB = List Bulletins

LM = List My Messages

SP KC5QOC = Send a Message to KC5QOC, only

SB ALL = Posts a Message for All

K = Kill a Message, K 432 Eliminates Message Number 432

B = Disconnects from the BBS

After Opening Winlink Packet, access the BBS, Click on "Open Session", and typing in "LM". Any message meant for you will be listed on the screen. Select R and Copy/Paste the Message's Number to view the message(s) received.

Send a *Plain Text* Message

Your Call

Select Winlink Message

Call Sign of the Recipient

Enter a new message

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

From: KC2LM   Send as: Winlink Message ▼   ☐ Request read receipt   Set Defaults

To:

Cc:

Subject:

Attach:

The Subject of the Message

The Message Text Goes Here

Finally, Post to Outbox

Jim Frazier BC EC: KC5RUO

BCARES EOC NM5BC

Ed Poccia: KC2LM

John Mocho: KC5QOC

NM5RR Sandoval County ARES

NM5RR

NM5RR V SCREST

The SCREST Digipeater allows us to reach out to more distant stations.

Sending A P2P Message

P2P Messages are Sent to a <u>Specific Station</u> that Is <u>On The Air</u> at the Time.

Select *Peer to Peer* from the Send as Pull Down Menu

Enter a new message

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

From: **KC2LM** ⌄   Send as: **Peer to Peer** ⌄   ☐ Request read receipt   Set Defaults

Winlink Message
Radio-Only Message
Peer-to-Peer Message

To: **KC5QOC**

Cc:

Subject:

Attach:

Call Sign of Recipient

The Text Message

Packet Winlink Session

Exit | Settings | Switch to Peer-to-Peer Session | Channel Selection | 1200 B | **START** | op

Connection type: Direct ⌄   **KC5QOC**   Via WX4MC-10

Connection script: ⌄   Edit script | Add script | Remove script

Time to next Autoconnect = Disabled

*** Starting WL2K packet session...
*** Initializing TNC-X; port COM4; 9600 baud
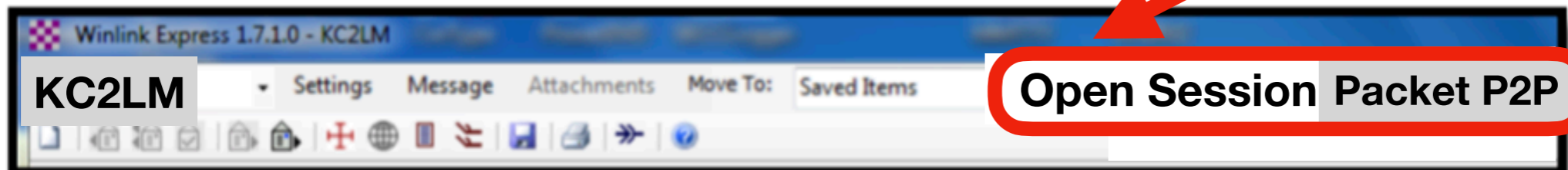   Initialization Complete
READY

After the READY text is spotted, select START.
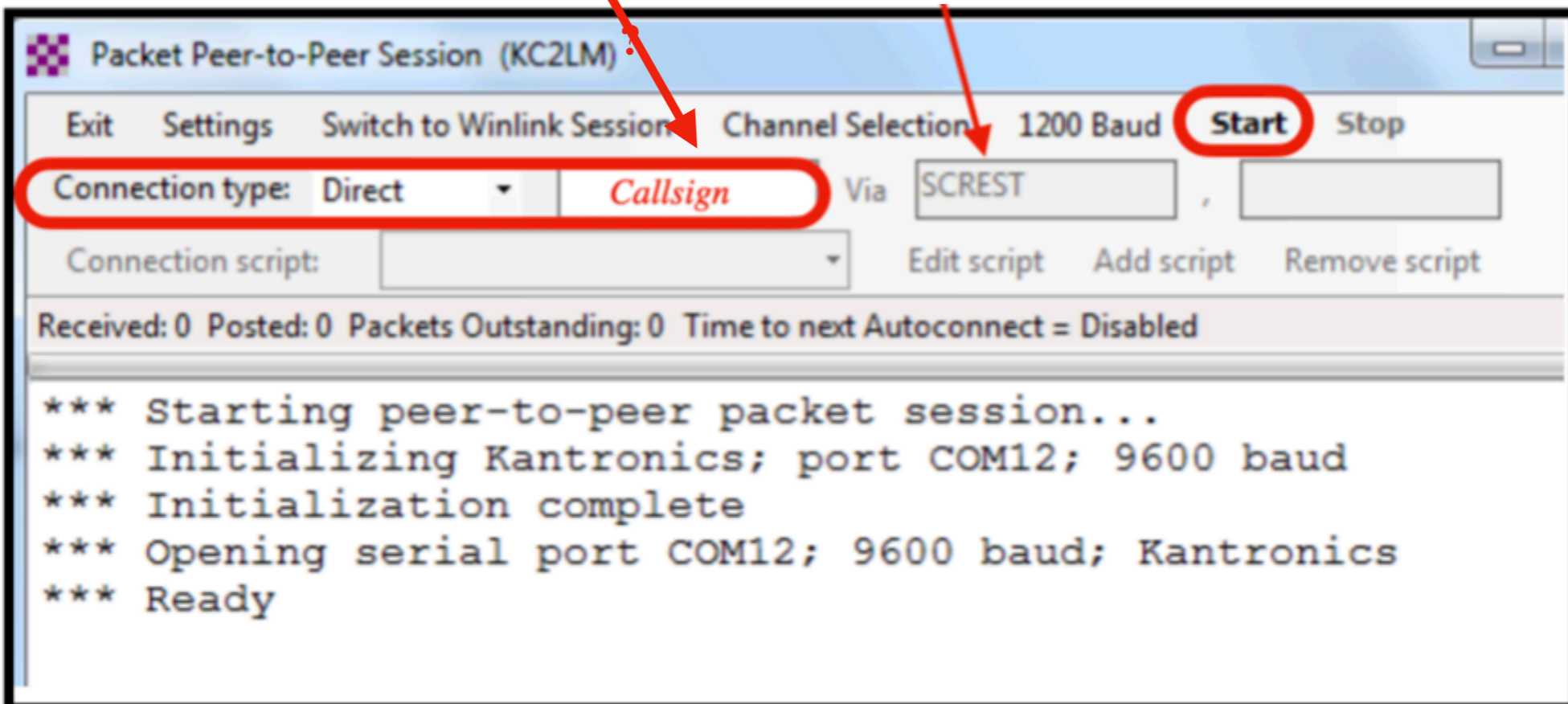
To Receive P2P Messages

Packet P2P - *The Preferred EmComm Mode*

In the **Open Session** Window Select *Packet P2P* , Then **Click** On "Open Session"

Winlink Express 1.7.1.0 - KC2LM

KC2LM ▾ Settings Message Attachments Move To: Saved Items

Open Session Packet P2P

IF you want a message from a specific station, place the Call Sign, Here.

Post the ID of the Needed Digipeater, Here

Packet Peer-to-Peer Session (KC2LM)

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

Connection type: Direct ▾   *Callsign*   Via SCREST   ,

Connection script: ▾   Edit script   Add script   Remove script

Received: 0 Posted: 0 Packets Outstanding: 0 Time to next Autoconnect = Disabled

```
*** Starting peer-to-peer packet session...
*** Initializing Kantronics; port COM12; 9600 baud
*** Initialization complete
*** Opening serial port COM12; 9600 baud; Kantronics
*** Ready
```

Use Digipeaters & Nodes

Digipeaters Function Like Voice Repeaters but for Digital Systems *(SCREST, RAVNRD...)*
Modes are a Home Packet Stations Set-Up to Function like a Digiepeater.
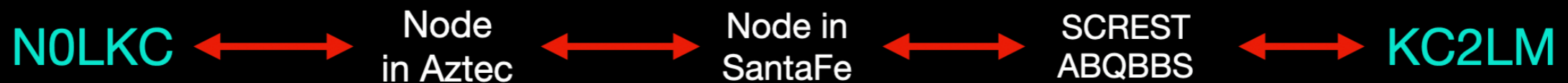
Hi Ed, KC2LM

Wanted to let you know I have submitted the packet exercise to K5WRT; hope it makes
it OK.   I posted the progress made here today, very cool to get into the CMS
gateways directly with packet. Definitely have never been able to do that before.

Sent one test exercise via HF winlink. Not being satisfied, I finally got packet to
work with a connection script, and so also sent it by VHF Winlink.

Hope it all starts to work OK, would be fun to be able to tie in with packet
activities across 4 corner states.

Thanks again for the packet participation prospects. Look forward to continung, 73
from Clifford N0LKC

Cliff's QTH
Montecello, Utah

N0LKC ⟷ Node in Aztec ⟷ Node in SantaFe ⟷ SCREST ABQBBS ⟷ KC2LM

(V = via)

N0LKC Typed:

KC2LM V AZTEC V SANTAFE V SCREST

Send a Text Message to a Cell Phone

This is an Excellent Activity to Demonstrate to non-Hams, Amateur Radios' Capability.

Send (S Cell Phone Number@provider's Code)
Example: S 5052697819@vtext.com

Cell Phone Provider's Texting Codes

ATT = cellnumber@text.att.net

Verizon = cellnumber@vtext.com

T-Mobile = cellnumber@tmomail.net

Sprint = cellnumber@messaging.sprintpcs.com

SMS Text Messages Using a Form

1. Open **Winlink Express**

2. New Messages / Select Template / Send SMS Text Message

Send SMS/Text message

Load SMS Data

Cell phone number: [ ]

Carrier [Select Carrier ▾]

Add #

Send to addresses:

[ ]

Clear addresses

Subject: [ ]

SMS/text Message (140 characters)

[ ]

Save SMS Form Data   Submit   Reset Form

Ver 1.2.1.1

3. Post Form to **Outbox** When Completed

4. CLICK on **START** to send text.

GENERAL MESSAGE (ICS 213)

1. Incident Name (Optional):

2. To (Name and Position):

3. From (Name and Position):

4. Subject: 5. Date: 6. Time

7. Message:

Emergency Service Agencies like to receive messages on a form with which they are familiar.

FIELD SITUATION REPORT

ETO Winlink Thursday

Setup   Click to add an agency or group name   Load Field Situation data   Form info

For Non-Express recipients, this form is sent as plain text in the message body.
Once this page is submitted No changes or editing of this message are allowed

PRECEDENCE: (R) - Routine ▾   DATE/TIME: 2022-04-01 01:13:02Z   TASK # WLT-001

FROM: KM6SO

TO: ETO-10

INFO (CC):   RTykulsker@gmail.com

Call signs or E-mails entered into

1. Is there is an EMERGENT/LIFE SAF
If your local situation is LIFE CRITICAL, repo
LIFE CRITICAL; the reporter should describe

2. City   Mercer Island

ACTIVITY LOG (ICS 214)

Incident Name:me:		2. Operational Period:	Date From: Date	
			Time From: HHMM	
3. Name:		4. ICS Position:		5. Home

6. Resources Assigned:

Name	ICS Position	He

7. Activity Log:

Date/Time	Notable Activities

Template Manager

Close   Add   Remove   Edit

Standard Templates (version 1.0.7.0)
⊞ AK_STATE_Forms
⊞ ABC_Forms
⊞ ARRL_Forms
⊞ CANADIAN_Forms
⊞ CA_STATE_Forms
⊞ FL_STATE_Forms
⊞ FMRE-SPANISH_Forms
⊞ GA_STATE_Forms
⊞ GENERAL_Forms
⊞ ICS_USA_Forms
⊞ IHS_Forms
⊞ INFO_Read
⊞ MARINE_Forms
⊞ MEDICAL_HICS_Forms
⊞ NY_STATE_Forms
⊞ OH_STATE_Forms
⊞ OR_STATE_Forms
⊞ SHARES_Forms
⊞ TX_STATE_Forms
⊞ WA_STATE_Forms
⊞ WEATHER_Forms
⊞ Global Templates
K0YDS Templates

Sending a Message Within a Form - *part 1*
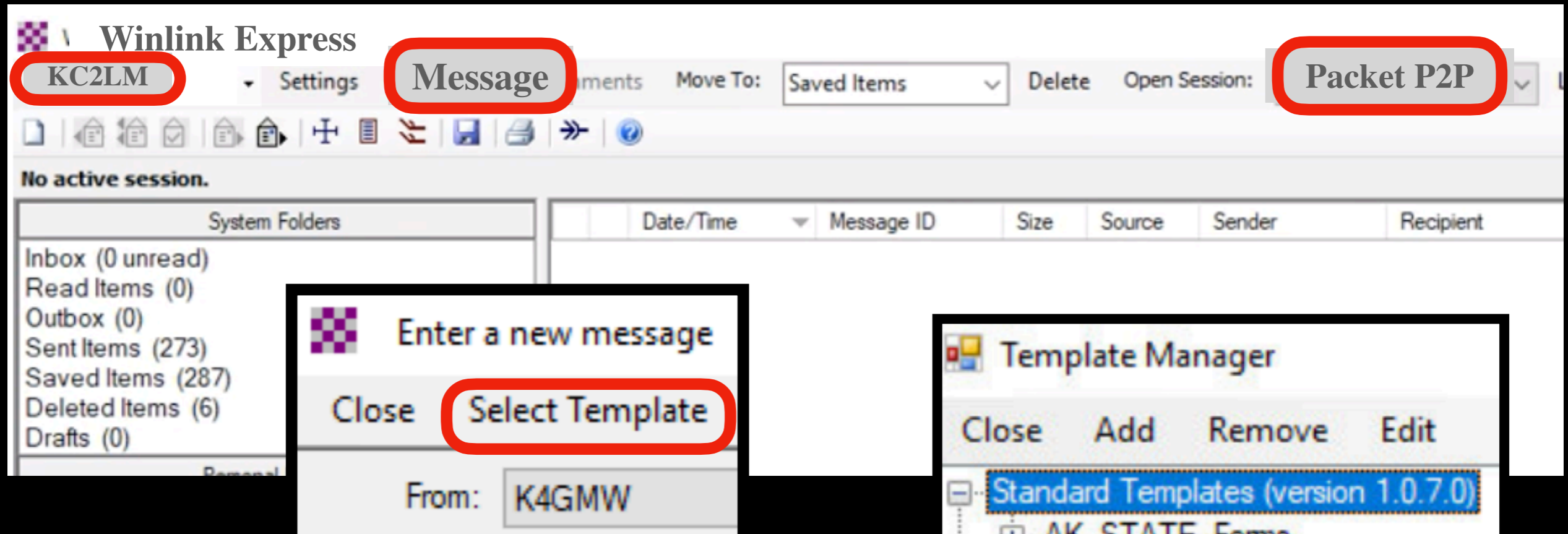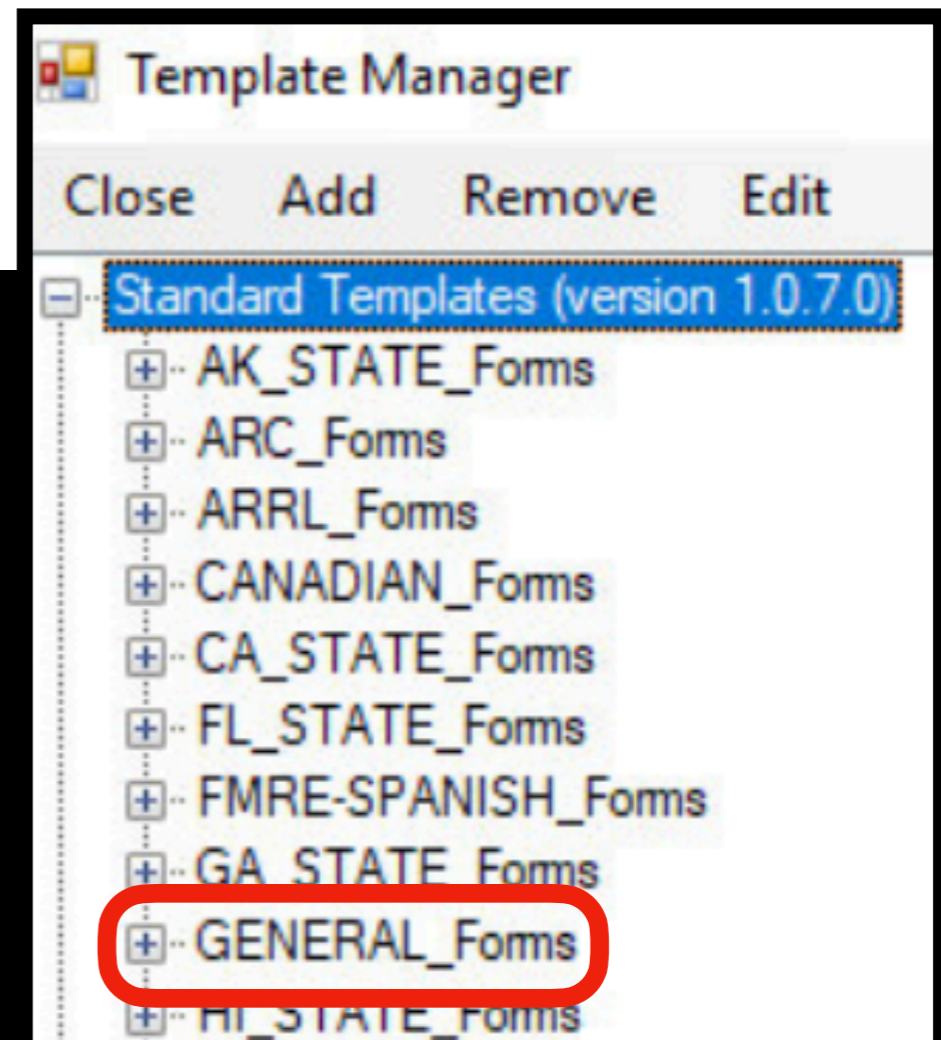

1. Select **New Message**

2. Click on **Select Template**

3. Select Appropriate Template

    ICS-213 is in the **GENERAL Forms** Folder

4. The Form, is already saved within your computer.

5. The Form will appear on your screen.

Sending a Message Within a Form - *part 2*

GENERAL MESSAGE (ICS 213)

1. **Incident Name** (Optional):		
2. **To** (Name and Position):		
3. **From** (Name and Position):		
4. **Subject:**	5. Date:	6. Time
7. **Message:**		

ICS 213, Packet P2P
The Preferred EmComm Message Method

6. Fill-In all appropriate information.

7. SAVE the completed form.

8. Click on SUBMIT & Post to Out Box.

9. The Message with the Form will be sent the next time you log on to a CMS.

Participate in Training Opportunities

Packet Gateways

KC5QOC-10 Albuquerque **145.01**

NM5RR-10 Rio Rancho   **145.01**

NM5PB-10 Albuquerque **145.01**

Packet Radio Digipeaters

Sanda Crest W5SCA-11   SCREST

Raven Road Manzanita Mtns.
   K5CQH-11.   RAVNRD

La Mosca Pk W5URD-11   LAMOSC

Grants   KE5FYL-11   OSO

North of Gallup KD5SAR-11   DEVA

Caballo W5DIG-9   CABALL

Packet Sponsors - *Sign-Up for Weekly Winlink Training Nets*

KB5HPT, El Paso Net kb5hpt@arrl.net

KF5VO N.TX kf5vo@arrl.net

KN4LQN, Virginia elkinsd@gmail.com

AF4Y, Kentucky, af4y@rebrown.org

KB4KY Amer. Leg. Post 42
   https://groups.io/g/AMLEGPost42WinlinkNet

ETO-06 EmComm-Training Organization
   https://emcomm-training.org

GCARES Greene County Ohio
   http://gcares.net/nets.htm

Questions? - Comments?