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## Packet Type II



Santa Clara County ARES®/RACES/ACS

Last Updated: 9 October 2023

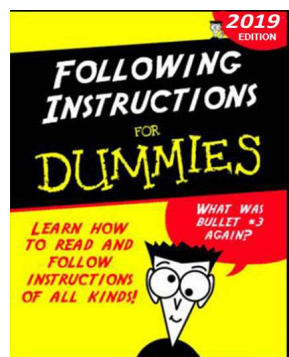
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## HOUSEKEEPING

- Introductions
- Pen/pencil & paper
- Cell phones
- Side conversations
- Questions
- Corrected Handouts
- Breaks
- Restrooms (code: 9033)
- In case of emergency
- No wandering or exploring other areas of the building.



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## Overview: Packet Classes

### Packet Type III, Part A

- Role of the Packet Operator
- Packet Network Overview
- Packet Network Components
- Packet Station HW & SW
- Accessing the Network
- Standard Workflow

### Packet Type III, Part B

- Packet Operations
- Diagnosing Setup Problems
- Selecting a BBS
- Creating Messages
- Event Documentation
- Productivity Hints
- Exercises

### Packet Type III, Part A+

- Packet Operations Self-Paced Exercise workbook

**Packet Type II:** Advanced Techniques, such as County EOC Packet Station Setup & Operations, Operating without Outpost.

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## Learning Objectives

At the end of this class, you should be able to:

- Understand the setup and operation of the county EOC radio room packet station
- Set up and use a terminal program to access a BBS
- Without Outpost...
  - Connect to a JNOS BBS
  - Send and receive plain text messages with BBS commands
  - Send and receive PackItForms with BBS commands

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## A Note on receiving Class Credit

To get credit for this class, there are 3 things that you need to do:

1. Attend the classroom session.
2. Complete the evaluation by the Saturday, one week after the class. See the instructions at the end of this material.
3. Complete the exercise by the Saturday, one week after the class.

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## Fictitious Examples

- We use fictitious call signs in this presentation to avoid SPAM

- W6XRL4: Herman Munster



- XNDEOC: City of Xanadu Emergency Operations Center



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## What about Xanadu?



- Xanadu received lasting fame in the western world thanks to the Venetian explorer Marco Polo's description of it in his celebrated book *Travels* (c. 1298).
- Distant and mysteriously lost Xanadu, thus, came to represent a place of mystery, splendid luxury and easy living.
- Fortunately, you get to visit Xanadu only during Packet classes and Packet exercises.
- Only use an XNDxxx tactical call that has been specifically assigned to you for an exercise or training event and then only for the duration of that event, including any homework follow-up.
- **PLEASE NEVER USE** XNDxxx tactical calls during any other time. Instead, use one of your City's extra tactical calls for practice (with your EC's permission, of course).

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How to process high volume traffic efficiently

## COUNTY EOC PACKET STATION SETUP & OPERATIONS

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## Packet Net Operations at County EOC

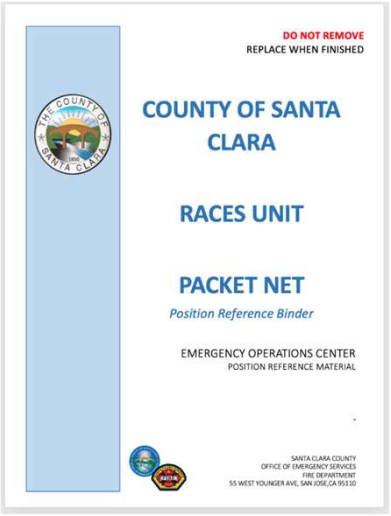
- County message handling can be non-stop action
- Have separate send & receive stations
- Learn to use the automation
  - Automated polling every 5 minutes by Telnet
  - Automated ICS 309 Logging
- Watch message handling order
- Move the messages to the Traffic Manager as quickly as possible
- Balance outgoing and incoming traffic
- Follow the *SCCo Radio Room packet procedures*

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## SCCo Packet Net Reference Binder

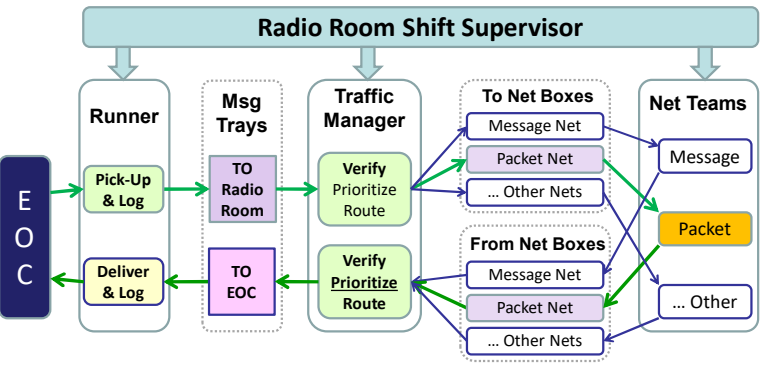
**What's inside**

- There is a "standardized" binder for every position in the SCC EOC, including *each position in the RACES radio room.*
- The **Packet Net** binder contains the material from the previous binder, with updates in progress.
- General content includes:
  - activation and operation
  - end-of-shift and demobilization
  - Packet-specific activities



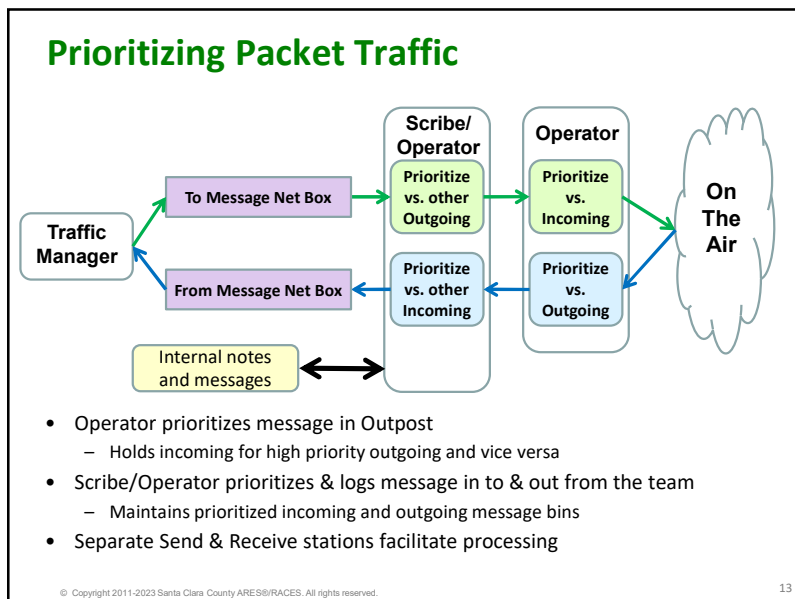
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## County Radio Room Traffic Routing

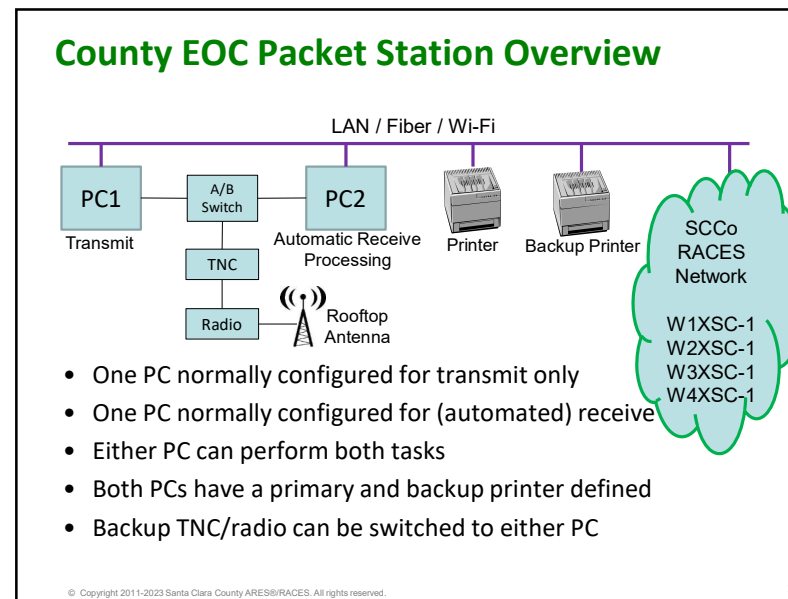


- For small, low traffic events, radio room supervisor may also perform the traffic manager role

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- ### Its all about control with Text Commands
- Simple text commands control the **TNC**
    - MYCALL** *callsign* = set the TNC's Mycall command to your *callsign*
    - CD** *software* = set Carrier Detect mode to software
    - C** *callsign* = Connect to station *callsign* (ax.25 address)
  - Simple text commands control the **BBS** mailbox
    - SP** *address* = Send a Private message to an *address*
    - LA** = List All messages in this area (mailbox)
    - R** *n* = Read message number *n*
  - Outpost simply automates the process of typing the commands to the TNC (to connect) and then to the BBS (to send/receive messages)
    - Watch the Outpost session window to see what it's doing
    - View the Outpost transaction log later to see what it did
      - Actions > View Outpost Data Directories > logs > transactionYYMMDD.log
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## Sidebar: Outpost Logs

From Outpost: *Actions > View Outpost data directory > logs*

session211015.log - Notepad

```

15-Oct 09:34:40: Outpost/opsessn v3.5.0 c0: TNC Session # 3019
-----
15-Oct 09:34:40: Using Call Sign KN6PE
15-Oct 09:34:40: Using TNC setup XSC_Kantronics_KPC3-Plus
15-Oct 09:34:40: Using BBS setup XSC_MIXSC-1
15-Oct 09:34:40: TncCheck: TNC is ok
15-Oct 09:34:47: TncInit: Complete as KN6PE
15-Oct 09:34:50: BbsConnect: connected to MIXSC-1 as user KN6PE
15-Oct 09:34:50: BbsConnect: BBS is JNOS
15-Oct 09:34:50: BbsDeleteMsgs: Done
15-Oct 09:34:50: BbsSendMsgs: Done
15-Oct 09:34:50: BbsSendMsgs: Done
15-Oct 09:35:03: BbsGetMsgs: Done
15-Oct 09:35:17: BbsGetMsgs: Done
15-Oct 09:35:17: BbsSendMsgs: Done
15-Oct 09:35:19: BbsDisconnect: BBS Session closed
    
```

transaction211015.log - Notepad

```

cmd:D
Can't DISCONNECT, A Link state is: DISCONNECTED
cmd:b
BEACON EVERY 0 (disabled)
cmd:Echo on
ECHO was ON
cmd:my KN6PE
cmd:non off
STREAMEV was OFF
STREAMSW $00
STREAMSW was $7C ([])
cmd:connect MIXSC-1
cmd:*** CONNECTED to MIXSC-1
[JNOS-2.0k:2.xsc:4-B1FH1MS]
You have 0 messages.
(#0) >
A XSCPERM
xscperm: 6 messages - 6 new.
(#1) >
    
```

Log Settings

Options

- L1: Send/Receive Session window logging
- L2: Send/Receive Interface data trace
- L3: Send/Receive diagnostic trace
- L4: Main program diagnostics trace (restart Outpost to apply)

FYI...Log Settings has L1 selected by default  
Optional: select L2 for additional info

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## Everything Can Be Done Manually

- Why would I want to/need to?
  - Outpost is not installed or installed incorrectly; no administrative access to PC
  - Browse the BBS to read bulletins
  - Gain deeper understanding of how packet radio works
  - Perform clean up or diagnostic activities on your setup or to maintain the BBS
- All you need is a terminal emulator program
  - Suggested: PuTTY (free download) <https://www.putty.org/>  
... or just do an Internet search for "PuTTY"
  - But any terminal emulator will do ...
- The following examples will use PuTTY
  - Select and copy: highlight/select (not <ctrl>C)
  - Paste: Right-click (not <ctrl>V)

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## Summary of Steps to be Discussed

- What you need to know to operate without Outpost
- Setting up PuTTY for BBS access (serial)
- The connection basics
  - Start of shift: Configure optimized TNC settings
  - Per session: Using you FCC call sign, -OR-
  - Per session: Using a tactical call sign (plus your FCC call sign)
  - End of shift: Restore default TNC settings
- Managing Messages on JNOS
  - Access user and bulletin areas (mailboxes)
  - Read a message
  - Send a message
- Reading notices and bulletins on JNOS
- Working with PackItForms

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## What you need to know

### Operations without Outpost

1. Connect Parameters
2. TNC Standard Settings and Manual Workflow
3. TNC User Commands
4. TNC Init Settings
5. BBS User Commands
6. BBS Init Settings

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### 1. Three Connect Parameters

Operations without Outpost... need to know

- **Call Sign or Tactical Call of the user**  
example : W6XRL4  
XNDEOC
- **TNC Comm Port Settings**  
example : COM3,9600,8,N,1  
COM5,9600,7,E,1
- **BBS Connect Name**  
example : W1XSC-1  
W3XSC-1

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### 2. TNC Standard Settings

Operations without Outpost ... need to know

- SCCo RACES determined the optimum TNC parameters for our BBS system that significantly improves message traffic throughput.
- Document contains parameters for both **Outpost** and **Manual** sessions. Details of each parameter are explained.
- See: <https://www.scc-ares-races.org/data/packet/index.html> → Application Notes → Standard TNC Parameter Settings  
  
... and specifically the section titled: *Standard TNC Settings for Manual BBS Sessions*

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### 2. TNC Standard Settings

Operations without Outpost ... need to know

The screenshot shows the 'Packet BBS Service' website. At the top, there is a navigation menu with links for Home, Services, Operations, Data, Training & Events, References, and About. Below this is a 'Packet BBS Service Notices' box with a pink background, listing updates from 2019 and 2020. The 'Overview' section describes the service as a standard amateur radio packet BBS. The 'Service and Network Info' section includes a description of the service. The 'Application Notes' section lists various configuration and set-up instructions with links to PDF files.

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### 2. Manual Operations

Operations without Outpost ... need to know

- Complete manual ops info
- Workflow
  - Start of Shift
  - Each message
  - End of Shift
- TNC-specific Commands

The screenshot shows a document titled 'Standard TNC Parameter Settings for Santa Clara County Packet Network'. It includes a 'Table of Contents' with page numbers for sections like Introduction, Fictitious Call Signs, and Manual Operations Workflow. Below the table of contents, there is a list of settings for 'Standard TNC Settings for Manual BBS Sessions', including Manual Operations Workflow, TNC Commands for Manual Operations, and Explanation of TNC Parameters.

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### 3. Eight TNC user commands

Operations without Outpost (Kantronics KPC-3+)

- HELP** [command]  
When entered alone, lists all available commands. With a command, provides details on that specific command.
- MYCALL** xxxxxx  
Tells the TNC what its' call sign is.
- CONNECT** call1 [ via call2, call3, ... ]  
Call1 = Call sign of the station to be connected to. Adding "via call2..." connects to the BBS by digipeaters.
- CONVERS**  
Puts the TNC into Conversational mode. Then, whatever you type is immediately transmitted.
- <ctrl> c**  
Puts the TNC into Command Mode. Then, enter TNC commands at the prompt.
- RESTORE DEFAULT**  
Resets the TNC to the factory default settings; performs the AUTOBAUD routine. Defaults INTface to NEWUSER. Hard reset can be triggered by temporarily removing the battery.
- INTFACE** [ TERM | ... ]  
When set to TERMinal, the full command set of the TNC is available.
- XMITLVL** [value]  
Displays or sets the TNC's transmit drive level

### 4. TNC Init Settings

Operations without Outpost ... need to know

- Go to the "Standard TNC Settings for Manual BBS Sessions"
- Follow instructions in "Manual Operations Workflow"
- Use the "TNC Commands for Manual Operations" appropriate for your particular TNC

TNC Type	Manual Ops: Start of Shift	Manual Ops: End of Shift
Kantronics KPC-3+	INTERFACE TERMINAL MONITOR OFF CD SOFTWARE NEWMODE ON SBITCONV ON BEACON EVERY 0 SLOTTIME 10 PERSIST 63 PACLEN 128 MAXFRAME 2 FRACK 6 RETRY 8 CHECK 30 TXDELAY 40 XFLOW OFF STREAMSW OFF STREAMSW \$00	STREAMSW \$7C

### 5. Eight BBS user commands

https://scc-ares-races.org > Data Networking > Packet BBS > Reference > JNOS BBS Information

The screenshot shows a web page with a navigation menu at the top: Home, Operations, Data > Packet, Training and Events, Reference, FAQ, October 20, 2018. The main heading is "JNOS Packet BBS Information". Below it is an "Overview" section and a "JNOS User Information" section with a link to "Mailbox User Commands [from Appendix A of the JNOS Commands Manual] (PDF - 61 KB)". A green arrow points from this link to a second screenshot of "JNOS User Manual - Appendix A".

The second screenshot shows "APPENDIX A" with the following text:
   
JNOS MAILBOX USER COMMANDS
   
The following commands are available to the users connected to the mailbox. This file is available separately as whosmbox.txt.
   
AREA
   
The Area command lists the mail areas that contain messages you may read.
   
A gives a short listing, whereas
   
AF gives a full listing with descriptions (if available)
   
AM shows areas that have new mail since you last zapped off.
   
To read messages in one of the areas, type 'A *areaname*'. You will then be told how many new, not previously listed messages there are in this area. You can send mail to any of the listed areas as '\*A *areaname*'.
   
BYE
   
The Bye command is used to exit from the JNOS MBX. This will close your mailbox file and remove any messages that you have deleted with the R[emove] command.
   
CONNECT
   
The Connect command has the following modes :
   
[connect] [port] [callsign] [digipeater] - - -
   
connects to station *callsign* on interface *port*, possibly via digipeaters *'digipeater...'* (note the use of *'via'* is optional)
   
[connect] [node]
   
connects over netrom to a remote node with *'node'* as either node-call or node-alias
   
COPY {*channel*}
   
This (if available) puts you in converse mode. This is a readable discussion feature. The *'channel'* allows specifying the conference channel you wish to join. Channel default 0.
   
DOWNLOAD
   
[download] [/i:ipath\_name/]filename
   
Sends a plain ASCII text file.
   
EM
   
Download the mod (message of the day) which is otherwise unavailable once you get into the mod.
   
Page 1/111

### 5. Eight BBS user commands

Operations without Outpost ... need to know

- HELP** [ command ] or ?  
When entered alone, generates a summary of available commands. With a command as a parameter, provides details on that command.  
**H List** = shows all the List command options and what they do
- LIST**  
**L** = by itself will display the headers for all **unread** messages, if any.  
**LA** = List ALL messages, both **read** and **unread**  
**LM** = Lists MY messages addressed to me  
**L> addr** = Lists all messages that have "addr" in the **To:** field of the message
- READ #**  
**#** = The message number to be displayed.
- KILL #**  
**#** = The message number to be deleted.
- AREA** [ Area\_name ]  
**A** = Lists all available bulletin areas.  
**AF** = Gives a full listing with descriptions of areas.  
**A area\_name** = moves you to that area. Then use the List and Read commands to view messages.

## 5. Eight BBS user commands

*Operations without Outpost ... need to know*

6. **SEND** [ option ] <dest\_address>  
**S[P]** = Send Private;    example: SP w6xrl4@w5xsc.ampr.org  
**SB** = Send Bulletin;    example: SB xsctest  
**SC** = Send Copy; to multiple destination addresses  
                           example: SC w6xrl4@w5xsc.ampr.org  
                           (BBS then prompts with Cc: for all other addresses)
7. **BYE**  
 Disconnects from the BBS
8. **XM #**  
 displays or sets the page length for viewing messages

## 6. BBS Init Settings; Page Length

*Operations without Outpost ... need to know*

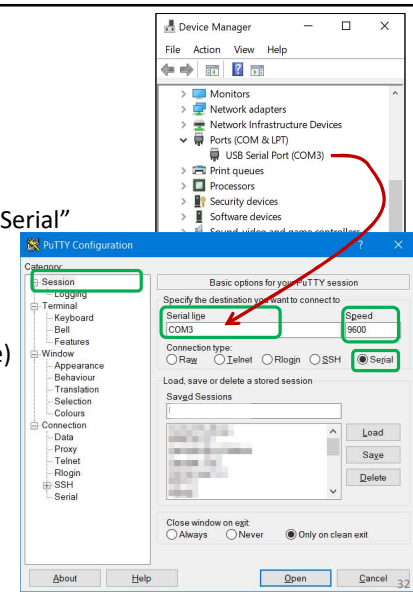
- The BBS “XM” command displays or sets the page length
  - **XM** = displays the current page length setting
  - **XM 24** = sets the page length to 24 lines
  - **XM 0** = turns off pagination (required when using Outpost)
- If a page length is set, message listings, messages and other content longer than the page length are paused and a “More (N=no)?” prompt is shown.
  - Press <ENTER> to see the next page; ‘n’ to stop
  - Good for reading content on the screen
  - Will cause Outpost to hang if not set back to XM 0
- Note: The SCCo Packet Installer includes **XM 0** in the BBS Init Commands for all SCCo BBSs. Outpost will send **XM 0** as soon as it connects to the BBS so message output is never paused.

## SETTING UP PUTTY FOR BBS ACCESS

## Serial Access Setting up PuTTY

1. Select the **Session** tab
2. Select Connection Type = “Serial”
3. Enter the Com Port
  - Verify with Windows Device Manager
4. Enter the Speed (baud rate)

**NOTE:** Not all TNCs use 9600,8,N,1 as the configuration. All fields must match what you actually have set in your TNC.

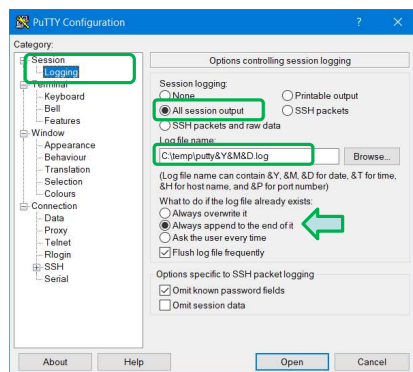




## Set up Session Logging

### Setting up PuTTY

5. Next, click on the **Session > Logging** tab
6. Set Session Logging to
  - All session output
  - All session output
7. Set up a **log file name**  
**NOTE:** &H does not work on Windows
8. ... if the file exists:
  - Always append to the end
  - Always append to the end



#### Why do logging at all?

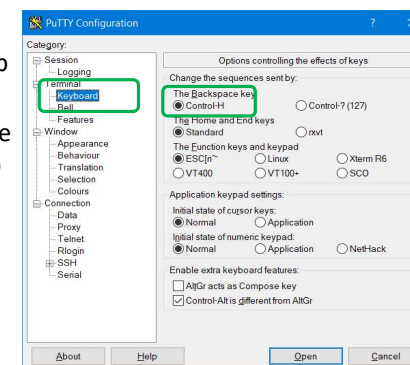
- During manual operations, it is easy to loose track of what is going on.
- Logging creates a history of your manual interactions and a reference if you ever need to go back and check if you got it all right.

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## Change PuTTY's Backspace Key

### Setting up PuTTY

9. Next, click on the **Terminal > Keyboard** tab
- The PuTTY default does not send the backspace key code that the KPC-3+ expects. To correct this:
10. Set the Backspace key option to **Control-H**

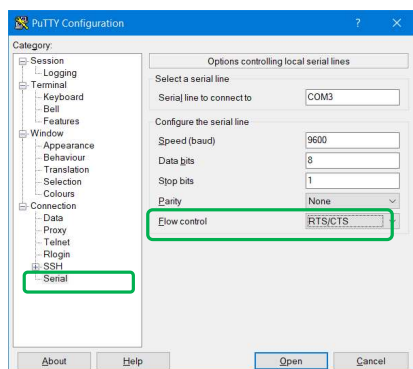


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## Serial Access

### Setting up PuTTY

11. Next, click on the... **Connection > Serial** tab
12. Set Flow control to **RTS/CTS**



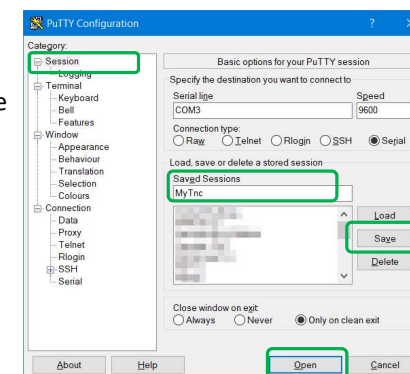
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## Name it, Save it, and Open it

### Setting up PuTTY

13. Finally, click on the... **Session** tab
14. Give this session a name
15. Press **Save**
16. Press **Open** to open the connection

**NOTE:** If you ever change any setting, remember to press **Save!**



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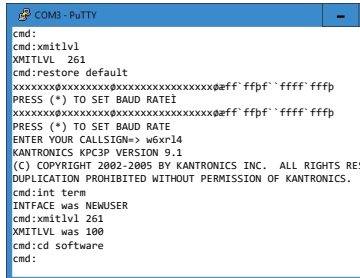
# THE CONNECTION BASICS

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## Start of Shift: Configure TNC settings

### The connection basics

- TNC settings affect overall performance
  - Start with the factory defaults
  - Make other settings for efficient use of the BBS
- To be **absolutely positively certain** that **all** TNC settings are at the **current** SCCo standard values, at the TNC prompt, perform the following:
  - cmd: **XMITLVL** (for KPC-3+) to display the existing transmit level <value>
  - cmd: **INT Term** (just in case)
  - cmd: **restore default**
  - PRESS (\*) TO SET BAUD RATE**
  - Enter your call sign
  - cmd: **INT Term**
  - cmd: **XMITLVL <value>**
  - cmd: **cd software**
  - Apply SCCo standard TNC settings for **manual** operations



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## Start of Shift: Configure TNC settings

### The connection basics

- Outpost configures the TNC at the start of each Send/Receive session
- For manual operation, you only need to send these commands once, at the start of your shift

**NOTE:** Manual Ops commands are slightly different from the Outpost list of commands.

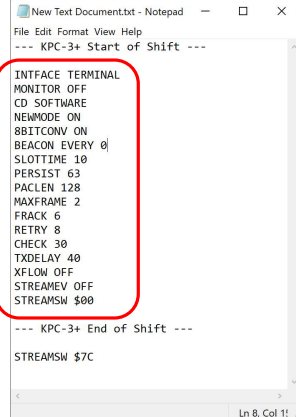
TNC Type	Manual Ops: Start of Shift	Manual Ops: End of Shift
Kantronics KPC-3+	<pre> INTERFACE TERMINAL MONITOR OFF CD SOFTWARE NEWMODE ON 8BITCONV ON BEACON EVERY 0 SLOTTIME 10 PERSIST 63 PACLEN 128 MAXFRAME 2 FRACK 6 RETRY 8 CHECK 30 TXDELAY 40 XFLOW OFF STREAMEV OFF STREAMSW \$00           </pre>	<pre> STREAMSW \$7C           </pre>

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## Start of Shift: Configure TNC settings

### The connection basics

- Create and save a text file with the “Start of Shift” and “End of Shift” TNC commands.
  - CAUTION:** Do NOT cut-and-paste directly from the PDF into your terminal emulator; *it doesn't always work.*
  - \*\*Best practice:** copy the commands first into a text editor (Notepad), save it, and then copy-and-paste from there into your terminal program.
- To send the “Start of Shift” TNC commands,
  - Connect to the TNC with PuTTY
  - Select and copy the entire “Start of Shift” command list from the text file
  - Paste it into Putty (right-click) at the TNC cmd: prompt.



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## During the Shift: FCC Call Sign Session

### The connection basics

```

1 cmd:mycall w6xrl4
2 cmd:c w5xsc-1
3 cmd:*** CONNECTED TO W5XSC-1
4 [JNOS-2.0k.1.xsc.2-B1FHIM$]
5 You have 0 messages.
6 (#0) >
7 b
8 *** DISCONNECTED
9 cmd:
    
```

**Note: All SCCo BBSs have a 2 minute Inactivity Timer!**

- On the TNC:
  - Set **MYCALL** to your FCC call sign
  - CONNECT** to the BBS / mailbox service (SSID=1) on W5XSC
  - Connected message from TNC
- On the BBS:
  - BBS says it is a JNOS BBS, version is 2.0k.1.xsc.2, with options
  - You have no messages
  - BBS Prompt: You are on message #0
  - You type "**B**" (bye) to terminate the BBS session  
The BBS drops the connection
- On the TNC:
  - Disconnected message from the TNC
  - TNC is ready for the next command

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## FCC Call Sign Session – On the Air

### The connection basics



```

AX25: W6XRL4->W5XSC-1 CONNECT

AX25: W5XSC-1->W6XRL4
DATA: [JNOS-2.0k.1.xsc.2-B1FHIM$] .You have 0 messages..(#0) >.

AX25: W6XRL4->W5XSC-1
DATA: b.

AX25: W5XSC-1->W6XRL4 DISCONNECT
    
```

*Note: Protocol codes have been removed*

- FROM and TO addresses of all packets contain legal call signs
- Both stations are meeting the FCC identification requirements with every packet (more than required)

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## During the Shift: Tactical Call Sign Session

### The connection basics

```

1 cmd:mycall xndeoc
2 cmd:c w5xsc-1
3 cmd:*** CONNECTED TO W5XSC-1
4 [JNOS-2.0k.1.xsc.2-B1FHIM$]
5 You have 0 messages.
6 (#0) >
7 b
8 *** DISCONNECTED
9 cmd:conv
  This is w6xrl4
10 cmd:
    
```

**Note: All SCCo BBSs have a 2 minute Inactivity Timer!**

- On the TNC:
  - Set **MYCALL** to your **tactical** call sign
  - CONNECT** to the mailbox service (SSID=1) on W5XSC
  - Connected message from TNC
- On the BBS:
  - BBS says it is a JNOS BBS, version 2.0k.1.xsc.2, with IHM\$ options
  - You have no messages
  - BBS Prompt: You are on message #0
  - You type "**B**" (bye) to terminate the BBS session  
The BBS drops the connection
- On the TNC:
  - Disconnected message from the TNC
  - Enter **CONVerse** mode, and then type in at least your FCC call sign, press enter to transmit
  - Enter **Cntl-C** to return to Command Mode.  
TNC is ready for the next command

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## Tactical Call Sign Session – On the Air

### The connection basics



```

AX25: XNDEOC->W5XSC-1 CONNECT

AX25: W5XSC-1->XNDEOC CONNECT
DATA: [JNOS-2.0k.1.xsc.2-B1FHIM$] .You have 0 messages..(#0) >.

AX25: XNDEOC->W5XSC-1
DATA: B.

AX25: W5XSC-1->XNDEOC DISCONNECT

AX25: XNDEOC->CQ
DATA: This is w6xrl4.
    
```

*Note: Protocol codes have been removed*

The extra converse mode packet lets you identify your station XNDEOC as FCC call sign W6XRL4

- XNDEOC is not a legal call sign
- Keep session under 10 minutes and use ID process at the end of session to satisfy the FCC requirements.

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## End of Shift: Restore TNC settings

### The connection basics

- After the BBS session has disconnected, you should be back to the TNC command prompt, usually: cmd:
- When your shift is finished and before you pack up the gear or turn it over to someone else, return the TNC to “normal” settings
- Cut-and-paste the “End of Shift” Send/Receive settings into PuTTY at the TNC command prompt

## MANAGING MESSAGES WITH JNOS COMMANDS

## BBS Connect & Login

- Ready to connect to BBS
- Set your call (FCC or tactical) in the TNC for login

cmd: MYCALL W6XRL4 or cmd: MYCALL XNDEOC

- Connect

cmd: C W5XSC-1

- JNOS gets login info from MYCALL
- No login prompt needed

## HELP

### JNOS Commands

- Basic commands can be seen with HELP command

### HELP <command>

#### JNOS Commands

- Help with the command will give a detailed explanation

```

COM3 - PuTTY
Area: w6xr14 (#1) >
help area
The Area command will list the mail areas that contain messages
you may read. It also moves you to those areas. You must be in
an area before you can read messages in that area.

A will give a short listing, whereas
AF will give a full listing with descriptions (if available).
A <areaname> moves you to that area.
AF <areaname> will give more info about just that area (if available).
AN will show areas that have new mail since you last logged off.

To read messages in one of the areas, type 'A <areaname>'
You will then be told how many new, not previously listed messages
there are in this area.
You can send mail to any of the listed areas as 'S areaname'
Area: w6xr14 (#1) >
  
```

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### AREA

#### JNOS Commands

- Messages are organized in **AREAs**
  - Your mailbox is an area
  - Bulletins: xsccperm, xsccvent, xsctest are each their own AREA

**A[rea]** gives a short listing, whereas ...

```

COM3 - PuTTY
Area: w6xr14 (#1) >
area
Current message area is: w6xr14

Available areas are:

w6xr14
        xsccperm  xsccvent  xsctest      alllocal
allxsc  allbay    allnca    allca      allwusa  allusa
allnoam alllw

Type AF to get description of areas.
AF <name> tells more about that area.

Area: w6xr14 (#1) >
  
```

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### AREA

#### JNOS Commands

**AF** gives a full listing with descriptions (if available)

```

COM3 - PuTTY
Area: w6xr14 (#1) >
af
Current message area is: w6xr14

Available areas are:

w6xr14    Your private mail area

# Santa Clara County Op Area Shared Mailboxes
xsccperm  Operation, Configuration and other Permanent Info (To: xsccperm)
xsccvent  Emergency Incident and Public Service Event Info (To: xsccvent)
xsctest   Test and Training (To: xsctest)

# General Bulletin Areas by Distribution
alllocal  All categories, this BBS only (no distribution) (To: <cat>@local)
allxsc    All categories, Santa Clara Co distribution (To: <cat>@xsc)
allbay    All categories, SF & Monterey Bay distribution (To: <cat>@bay)
allnca    All categories, Northern California distribution (To: <cat>@nca)
allca     All categories, California distribution (To: <cat>@ca)
allwusa   All categories, Western USA distribution (To: <cat>@wusa)
allusa    All categories, USA distribution (To: <cat>@usa)
allnoam   All categories, North America distribution (To: <cat>@noam)
allw      All categories, Worldwide distribution (To: <cat>@w)

# <cat> A short (max 6 char) category like "quake", "flood", "wx", ...
Area: w6xr14 (#1) >
  
```

How to address an SCCo Notice

How to address a generic bulletin. Note the different format

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### AREA Example

#### JNOS Commands

- Change areas to read SCCo bulletins
  - "area xsctest" - changes to the "xsctest" area
  - "L" or "LA" - lists or lists all bulletins in that area
  - "area <callsign>" - returns you to your own area

```

COM3 - PuTTY
cmd:c w5xsc-1
cmd:*** CONNECTED TO WIXSC-1
[JNOS-2.0k.1.xsc.2-B1FHIM$]
You have 2 messages - 2 new.
Area: w6xr14 (#1) >
a area xsctest
You have 1 message - 1 new.
Area: xsctest (#1) >
l
Mail area: xsctest
1 message - 1 new

St. # TO FROM DATE SIZE SUBJECT
> N 1 xsctest xndec Nov 3 2627 Bulletin for Packet Type II Classro
Area: xsctest (#1) >
a w6xr14
Area: w6xr14 (#1) >
You have 2 messages - 2 new.
Area: w6xr14 (#1) >
  
```

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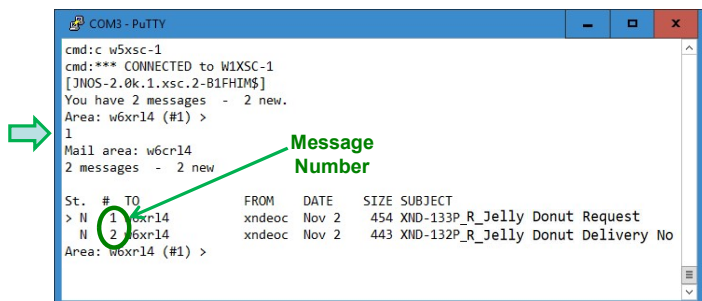
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## LIST

### JNOS Commands

- Displays a list of the messages from the current mailbox (or "area")
  - L** - by itself will display the headers for all unread messages, if any.
  - LA** - list all messages, read or unread



```

COM3 - PuTTY
cmd:c w5xsc-1
cmd:*** CONNECTED to W1XSC-1
[JNOS-2.0k.1.xsc.2-B1FHIMS]
You have 2 messages - 2 new.
Area: w6xr14 (#1) >
1
Mail area: w6cr14
2 messages - 2 new

St. # TO FROM DATE SIZE SUBJECT
> N 1 w6xr14 xndeoc Nov 2 454 XND-133P_R_Jelly Donut Request
N 2 w6xr14 xndeoc Nov 2 443 XND-132P_R_Jelly Donut Delivery No
Area: w6xr14 (#1) >
    
```

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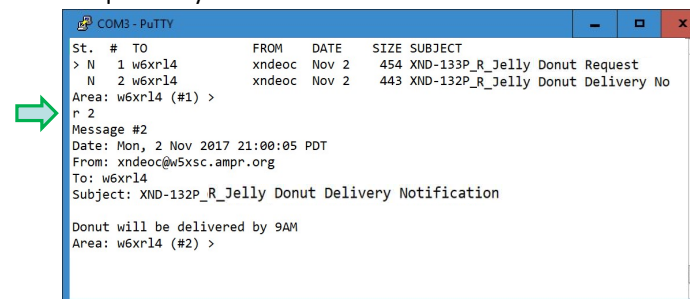
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## READ

### JNOS Commands

- R[ead] #**
- R[ead] <msg\_number\_or\_range>**
- To read a specific message, you may either type "R #" or just the number by itself. RM will display all unread messages, sequentially.



```

COM3 - PuTTY
St. # TO FROM DATE SIZE SUBJECT
> N 1 w6xr14 xndeoc Nov 2 454 XND-133P_R_Jelly Donut Request
N 2 w6xr14 xndeoc Nov 2 443 XND-132P_R_Jelly Donut Delivery No
Area: w6xr14 (#1) >
r 2
Message #2
Date: Mon, 2 Nov 2017 21:00:05 PDT
From: xndeoc@w5xsc.ampr.org
To: w6xr14
Subject: XND-132P_R_Jelly Donut Delivery Notification

Donut will be delivered by 9AM
Area: w6xr14 (#2) >
    
```

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## KILL

### JNOS Commands

- The **KILL** command allows you to delete messages from your mailbox
  - K[ill] <message\_number>**
- At least one message number must be supplied. The message numbers you can select from can be displayed with the "**L[ist]**" command.
- Messages will not disappear until you disconnect and connect again

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## SEND

### JNOS Commands

- The send (S) or send private (SP) command allows you to enter a message and send it to a user
  - S[P] <user>@<domain>** where
    - <user> = recipient's name
    - <domain> = <bbscall>
    - <bbscall>.ampr.org
    - internet domain
- Send an SCCo specific Notice
  - SB < NoticeArea | <category>@<distribution> >**
    - SCCo Notices: SB < NoticeArea >
    - General purpose bulletins: SB <category>@<distribution>
  - As above, but ANY <user> may read the message from the mailbox. The < NoticeArea > may be...
    - xscperm
    - xscevent
    - xsctest

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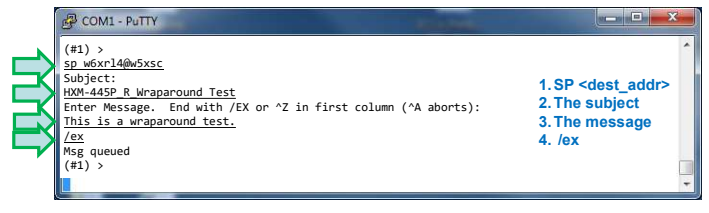
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### Send a Message from the Keyboard

#### JNOS Commands

- Connect to the BBS using a terminal program
- Use these BBS commands
  - **SP <user>@<domain>** – Send a message to a user at a specific domain.
    - When prompted, enter an SCCo standard subject
    - When prompted, type the body of message
    - When done, on the next line, add **"/EX"** and press **[Enter]**



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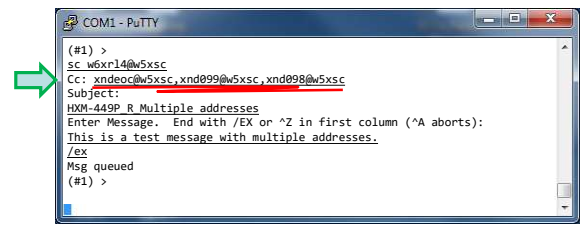
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### Send Copy

#### JNOS Commands

- The send copy command allows you to enter a message and send it to multiple users
  - SC <user>@<domain>**
- Enter the send copy command with one address
- JNOS responds with **"Cc:"**
  - Enter other addresses to receive a copy, separated with commas



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### BYE

#### JNOS Commands

- When you are all done with the BBS, disconnect from the BBS
  - B[ye]**
- On disconnecting
  - Outgoing messages will be processed
  - Deleted (killed) messages will be removed

**Don't Forget!!!**  
**All SCCo BBSs have a**  
**2 minute inactivity timer!**

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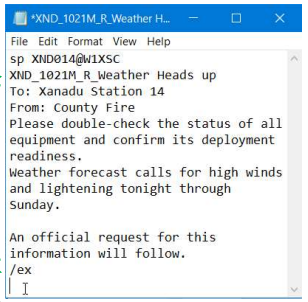
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### FYI... Manual message basics

#### Troubleshooting Hint

- Knowing how manual packet works will help you **troubleshoot problems.**
- Sending to one destination address:

- ① sp <dest\_address>
- ② <subject line>
- ③ <message line 1>  
<message line 2>  
:  
<message line n>
- ④ /ex



- After the SP command, the BBS prompts for the subject, then the message.
- Once the **\*ENTIRE\*** message sequence is created, highlight and copy all of it and then paste it into PuTTY at the BBS Prompt.

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## FYI... Manual message basics

### Troubleshooting Hint

- Knowing how manual packet works will help you **troubleshoot problems**.
- Sending to multiple addresses:

```

1 sc <dest_address>
1A <other_addresses>
2 <subject line>
3 <message line 1>
  <message line 2>
  :
  <message line n>
4 /ex
    
```

- After the **SC** command (Send Copy), the BBS prompts with a **CC:** for additional destination addresses.
- Once the **\*ENTIRE\*** message sequence is created, highlight and copy all of it and then paste it into PuTTY at the BBS Prompt.

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## FYI... Manual message basics

### Saving the message

- There are reasons to save the message before sending it
  - You have copy for your records.
  - You can save all your messages before sending them.
  - Avoids having to re-enter the message if something goes wrong.
- Where you save the message is up to you. But:
  - If this is your PC, then save them anywhere where you can find them.
  - If this is a shared PC, then create a directory on the C: Drive.
- For instance: your directory structure could look like this:
  - C:\MyMessages
  - C:\MyMessages\XND-23-1009T (activation number)
- Use the message subject as the name of the file.

**BUT... Manual PacketForms will do a lot of this for you!**

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## READING BULLETINS ON JNOS

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## Bulletin Review

### Bulletins



- Bulletins are messages intended for a broad audience
- The SCCo BBSs support two types of bulletins:
  - Notices** are a special type of bulletin specific to Santa Clara County
    - Only distributed to SCCo BBSs (W\*XSC)
    - SCCo uses 3 special categories for specific content
  - General **Bulletins** are globally compatible, used for everything else
    - User-defined *category* (e.g.: "equake", "ARES") identifies content
    - User-defined *distribution* controls how widely it is distributed (e.g.: "XSC", "BAY", "NCA", etc.).
- Regardless of the bulletin type, when configured in Outpost, Outpost will automatically download them

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## SCCo Notice Areas

### NOTICE

#### Bulletins

- SCCo ARES/RACES has three special **notice** categories:
  - **xscperm**
    - Used for notices that do not expire
    - examples: standard county procedures
  - **xscevent**
    - Notices posted here automatically expire after 8 days
    - examples: Drills, public service events, incidents, other activations
  - **xsctest**
    - Good for user testing; automatically expires after 1 day
  - **allxsc**
    - Where you can write city and jurisdiction notes
    - Notices posted here automatically expire after 8 days

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## General Bulletins Overview

#### Bulletins

- Bulletins are messages that are intended for broad readership
- Bulletins content varies from amber alerts and earthquake reports to jokes and recipes
- Bulletin sender controls how widely the bulletin is distributed
  - Can be as narrow as “local” (this BBS only)
  - Can be as wide as “ww” (worldwide)!
- In JNOS, bulletins are sorted into shared areas (mailboxes) for easier reading

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## General Bulletins – Why Do They Matter?

#### Bulletins

- Standard way to distribute information between BBSs of all types throughout the world
- Use them for fun or for emergency communications
- Use them for distributing information to broader areas:
  - Santa Clara County
  - San Francisco Bay area
  - Northern California
  - All California
  - And wider ...
- Example:
  - During the 2009 cable cut, information about anticipated service restoration times were distributed via bulletins by a ham who had information from the telecom carrier

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## General Bulletin Addresses

#### Bulletins

- Address format: `category@distribution`
- **Distribution**
  - A six-character or shorter keyword which defines how widely the bulletin will be distributed
  - Sender picks from a pre-defined list
  - Acceptable distributions:
    - **local** Local BBS only
    - **xsc** XSC Operational Area (Santa Clara County)
    - **bay** San Francisco and Monterey Bay area
    - **nca** No. California (generally north of the Tahachapi Mountains)
    - **ca** California
    - **wusa** Western USA (generally, West of the Mississippi River)
    - **usa** United States of America
    - **noam** North America (Canada, USA, Mexico, ...)
    - **ww** worldwide

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### General Bulletin Addresses (continued)

#### Bulletins

- Address format: **category@distribution**
- **Category:**
  - A six-character or shorter description of the main topic of the bulletin.
  - Sender picks the category based on the contents of the bulletin
  - Example categories:
    - amber – Amber alerts
    - earthquake – Earthquake reports
    - flood – Flood reports
    - swpc – Space Weather Prediction Center
    - mtv, cup, sjc, etc. – City bulletins
    - humor or humour – Jokes, stories, etc.
  - Any category works on our SCCo BBSs because we sort bulletins by distribution, not category
  - Uncommon/unusual categories may be held on other BBSs until the sysop decides where it should go

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### General Bulletin Addresses (continued)

#### Bulletins

- Example bulletin addresses:
  - mtv@xsc
    - City of Mountain View information for distribution to all BBSs in Santa Clara County
  - flood@bay
    - Information about flooding for distribution to all BBSs in the San Francisco and Monterey Bay areas
  - earthquake@nca
    - Information about an earthquake for distribution to all BBSs in Northern California
  - swpc@ww
    - Space Weather Prediction Center reports for distribution to all BBSs worldwide
  - humour@ww
    - Variety of jokes and funny stories

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### Reading General Bulletins

#### Bulletins

- Use a terminal program like PuTTY
  - Read only the bulletins of interest
  - Be selective when listing and reading
- Read bulletins just like mail
  - Find out what areas are available
    - AREA
  - Select a bulletin area
    - AREA <area\_name>
  - List bulletins
    - LA (list all)
    - L> <category\_name> (where category\_name matches the messages' To: field, ex: **quake@ww**)
  - Read a bulletin
    - R #

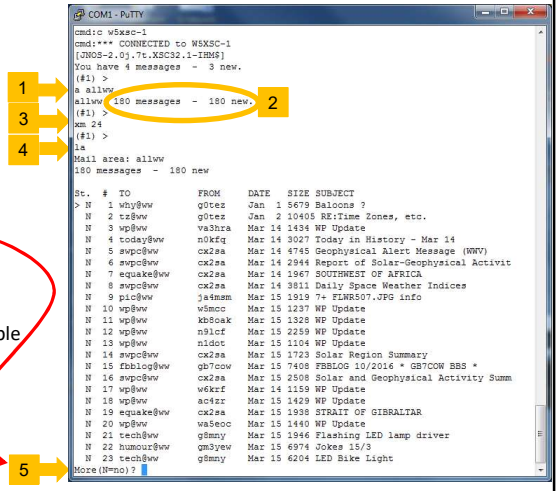
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### General Bulletin Example

#### Bulletins

1. Use "A" to change area to "allww"
  2. Wow, that's a lot!
  3. Set page length XM 24
  4. List All
  5. JNOS pauses
    - <Enter> to continue
    - <N> to stop
- Note, there are multiple categories in the list
    - wp
    - tech
    - swpc
    - quake
    - ...



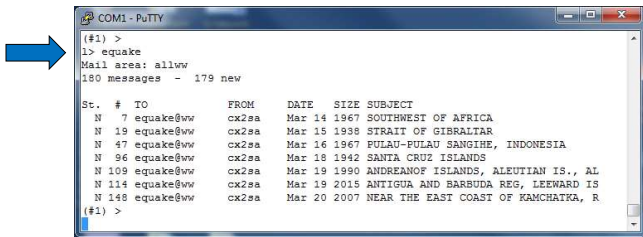
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## Filter the General Bulletins

### Bulletins

- JNOS command L> will filter the list by To: address
  - Example: L> category
  - ... will list only bulletins where the To: address contains category
- Example: list all earthquake bulletins



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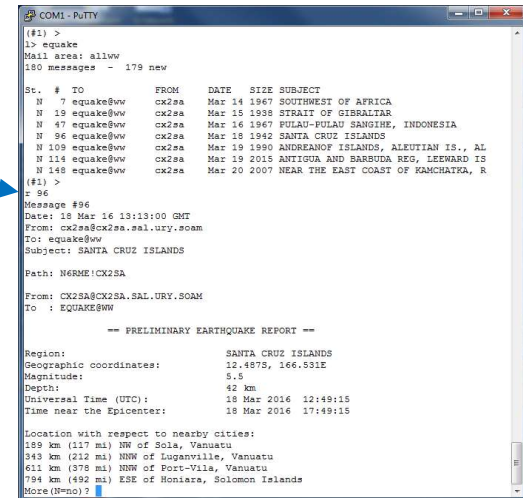
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## Read General Bulletins Like Messages

### Bulletins

- Read using the R # command



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## But, what about PackItForms?



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## Submitted for your approval...

**THE PACKET ZONE**

- You just arrived at **XND Fire Station 14** to take over as Packet Operator. This is great... Your first MAC assignment!
- As you enter, the last shift Packet Op rushes past you saying... *"there's a couple of ICS 213's on the desk to be sent!"*
- At least you won't be bored.
- Over your shoulder, you hear him yell back... *"Oh yeah, I could never get Outpost to work after IT updated the Windows O/S... and they just left."*
- The PC is running; you click the Outpost icon... Error; and you have never seen this error before ☹️
- OK, deep breaths. You know what to do, right?

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## Manual PackItForms

Fortunately, PackItForms is a message creation system designed to work with both Outpost or as a standalone solution for forms-based messages.

- **What's new with the PackItForms 3.10**
  - Enhanced standalone message management, including:
    - Manages setting up and using user and tactical IDs
    - Takes care of message numbering
    - Includes a Plain Text message form
    - Creates a standalone ICS-309 log
    - Creates copy-ready text (all BBS commands) to paste into PuTTY
    - Easy message saving
- **What's the same**
  - Tight integration with Outpost
  - Supports all PackItForms
  - Formats a standard packet form for sending
  - Processes a received packet form

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## Get ready for Manual PackItForms

### Things to do before you get started:

1. Create a directory where you will save your messages.
2. Consider a naming convention that is relevant for your assignment, examples:
  - C:\MyMessages\X14-23-1009T (by Activation Number)
  - C:\PacketMessages\2023-10-09 (by date)
  - C:\Xanadu\_Station\_14 (by assignment)
3. Identify a starting message number
  - Can be any number; PackItForm will append a **M** for **Manual** to make it unique.



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## Manual PackItForm messages

### Manually create a PackItForm message

1. Run PackItForms with the *manual.cmd*
2. Set up your user ID, tactical ID, and Next message number
3. Pick and fill in a PackItForm
4. Create the packet message
5. Send the message with PuTTY
6. Save a copy of the message

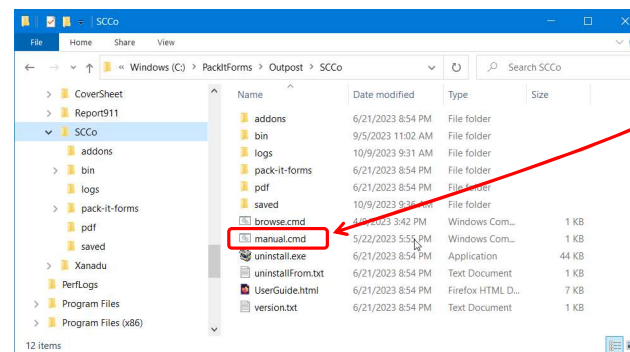
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## 1. Running manual PackItForms

1. Open your File Explorer and navigate to C:\PackItForms\Outpost\SCCo
2. Find the file *manual.cmd*, and run it (double-click on it)



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## 2. Set up manual PackItForm

### Setup Page

The setup page loads when you first start.

3. Fill in or update all fields:

- Your user information
- Tactical Call information
- Next Message Number

**FYI...** User and Tactical Call information will persist from run to run.

**FYI...** The Next Message Number will increment automatically.

4. Press **OK** when done

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## 3. Pick and fill in a form

### Home Page

Consists of 2 sections and a series of controls:

- **Setup button:** Opens the Setup page.
- **Edit ICS-309 Log:** lets you make updates to the manual ICS-309 Log.
- **Create a message to send:** Choose a PackItForm message, then press **Create Message**
- **View a received message:** Paste in a received message, then press **Log and View**

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## 3. Pick and fill in a form

### Home Page

5. From the dropdown menu, select a PackItForm,

- plain text
- XSC Check-In/Out Message
- XSC ICS-213 Message
- XSC EOC-213RR Resource Request
- XSC OA Jurisdiction Status
- XSC OA Shelter Status
- XSC Allied Health Facility Status
- XSC RACES Mutual Aid Request

then:

6. Press **Create Message**  
The PackItForm opens with the usual fields filled in.

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## 3. Pick and fill in a form

### Creating a message

On the selected PackItForm,  
7. Fill in the form as usual.

NOTE: The Message ID is set with the M suffix;

Origin Msg #: 2  
X14-312M

PackItForms takes care of this for you.

8. When done, press **Create Message**

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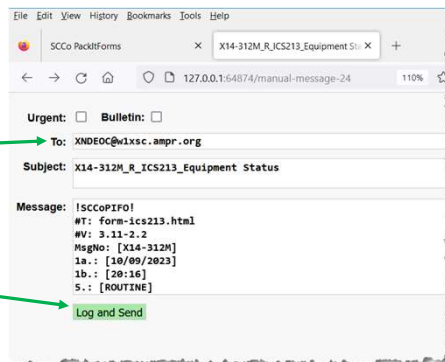
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## 4. Create the packet message

### Message Page

On the Message Page,

9. If needed, check the box if this message is **Urgent**  or a **Bulletin** .
10. In the **To:** field,
  - enter the Destination address
  - multiple addresses, separate with commas.
11. When done, press **Log and Send**



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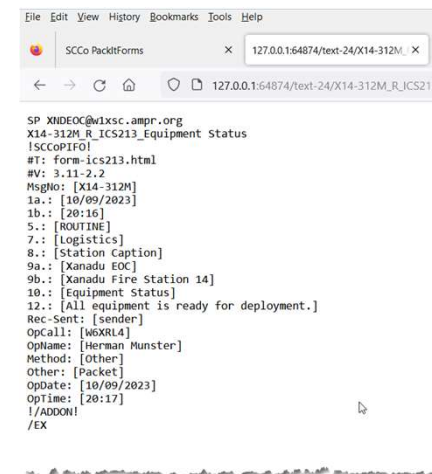
## 4. Create the packet message

### BBS Command Page

The complete packet-ready text is ready for sending.

12. Copy the text. Put your mouse cursor in the text area, and then either:
  - From the browser menu, **Edit > Select All**
  - **Edit > Copy**
  - or enter --
  - **<ctrl>-a <ctrl>-c** (same as the menus)

**Reminder:** PacketForm creates a properly formatted Subject line... do not change this!



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## 5. Send the message

### What are the Steps?

13. Make sure you previously copied the packet message from the **BBS Command Page** (previous page)
14. Start PuTTY
15. Connect to the BBS
16. Once at the BBS prompt:
  - Put the cursor in the PuTTY text area after the BBS prompt, and then
  - **Mouse right-click** to paste in the message.

The complete packet-ready text is pasted into PuTTY and will start being transmitted to the BBS.

### Reminder:

All SCCo BBSs have a 2-minute inactivity timer!

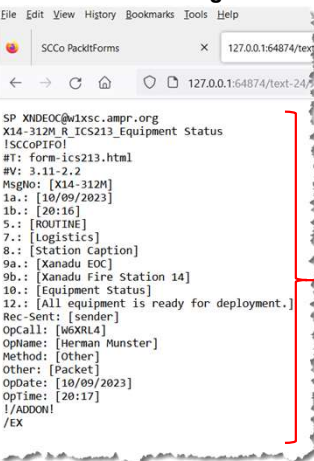
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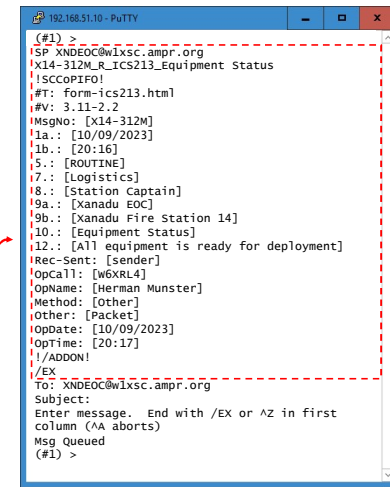
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## 5. Send the message

### BBS Command Page



### PuTTY Screen



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## 6. Save the message

### BBS Command Page

Back at this page,

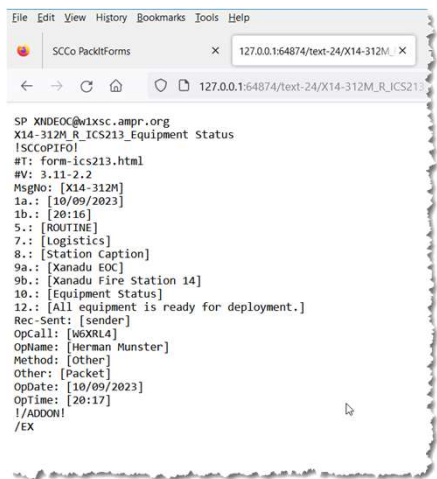
17. Put your mouse cursor in the text area, and then:

- From the browser menu, **File > Save As**
- OR --
- **<ctrl>-s** (same as menu)

18. If not shown, navigate to the PackItForm save directory previously created.

PackItForm sets the file name to the listed subject.

19. Press **Save**.



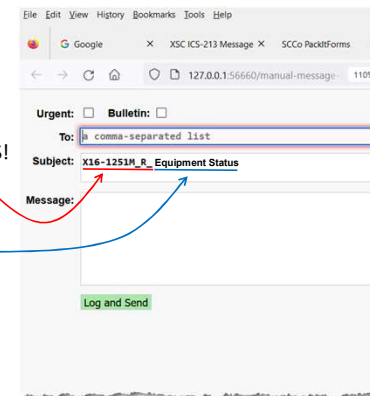
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## A note on manual plain text messages

- Yes, PackItForms does support manual Plain Text message sending and receiving.
- After picking plain text message from the **Home Page**, the **Message Page** opens up.
- Message ID and Handling order are filled in, **DO NOT REPLACE THIS!**
- Fill in...
  - To: destination packet address
  - the rest of the Subject text
  - Your plain text message
- Finally, press **Log and Send**
- The rest of the send process is the same.



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## Manual PackItForm messages

### Receiving messages

1. Read messages from the BBS using PuTTY
2. Save the message
3. Once you have the message saved, delete the message off of the BBS (use the **Kill #** command)

**Note: All SCCo BBSs have a 2-minute inactivity timer!**

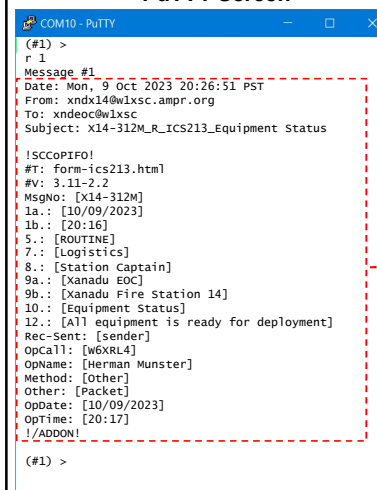
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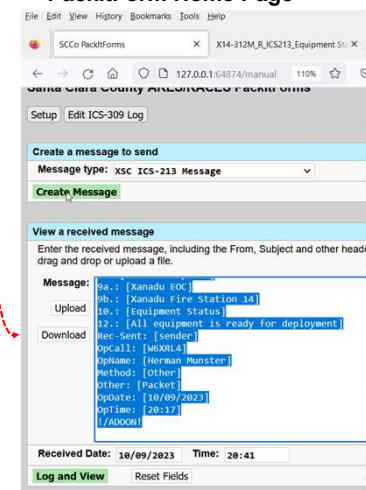
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## Receive manual messages

### PuTTY Screen



### PackItForm Home Page



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### 1. Receive a packet message

Suppose at XNDEOC... Outpost shows the same error.

1. Connect to the BBS with PuTTY and retrieve a message
2. List the messages with LM
3. Read the message with R # (message number)

You recognize Message #1 is a PackItForm message

4. Highlight all text from Date: to !/ADDON! (inclusive)
  - In PuTTY, selecting text copies it to the clipboard

**NOTE:** This manual process handles both PackItForms and plain text messages. Both can be processed by pasting them into the Home Page.

```
COM10 - PuTTY
(#1) >
r 1
Message #1
Date: Mon, 9 Oct 2023 20:26:51 PST
From: xndx14@w1xsc.ampr.org
To: xndec@w1xsc
Subject: X14-312M_R_IC5213_Equipment Status

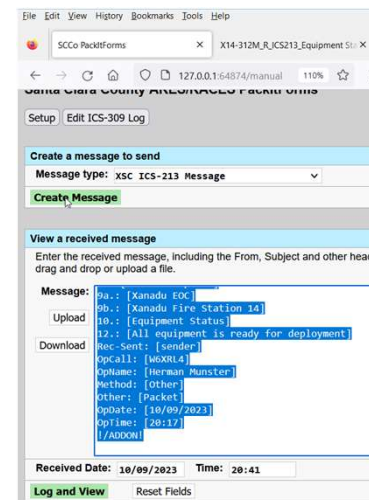
!SCCoPIFO!
#T: Form-ics213.htm
#V: 3.11-2.2
MsgNo: [X14-312M]
1a.: [10/09/2023]
1b.: [20:16]
5.: [ROUTINE]
7.: [Logistics]
8.: [Station Captain]
9a.: [Xanadu EOC]
9b.: [Xanadu Fire Station 14]
10.: [Equipment Status]
12.: [All equipment is ready for deployment]
Rec-Sent: [sender]
OpCall: [W0XRL4]
OpName: [Herman Munster]
Method: [Other]
Other: [Packet]
Opdate: [10/09/2023]
OpTime: [20:17]
!/ADDON!
(#1) >
```

### 2. Recover the PackItForm message

#### Home Page

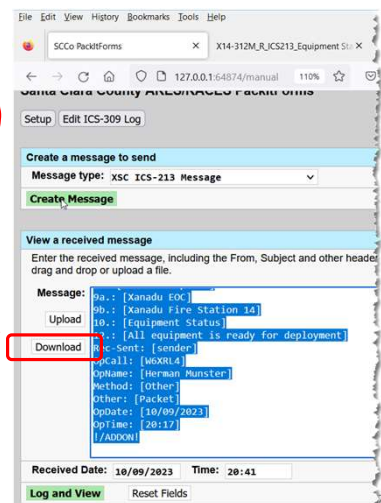
Back at the Browser, get back to the SCo PackItForms tab

5. Put your cursor in the "View a received message" section, and enter <ctrl>V or Edit > Paste to paste in the received message.
6. Press **Log and View**.
  - This entry is logged to the ICS 309
  - The received PackItForm is opened in its PackItForm.
7. Once the PackItForm is opened, print and hand it off for delivery.



### 3. Save this PackItForm message

8. Back at the Home Page, Press the **Download** button. The Message Page opens and shows the message text.
9. Put your mouse cursor in the text area, and then:
  - From the browser menu, **File > Save As**
  - or --
  - <ctrl>-s (same as menu)
10. Navigate to the PackItForm save directory previously created. The file name is set to the Subject.
11. Press **Save**.



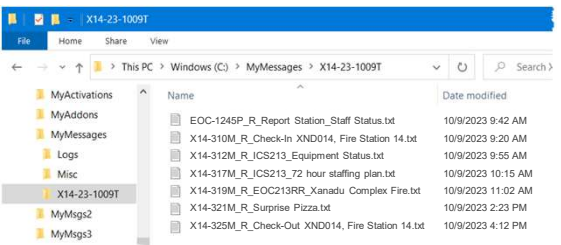
### Sidebar: A Note on Outpost tags

- Messages sent from Outpost occasionally have "tags" inserted in messages that you might see.
- Some of the more common tags are:
  - IRRR! Request Read Receipt
  - IRDR! Request Delivery Receipt
  - ISCCoPIFO! This is a PackItForm message
  - !/ADDON! The end of a PackItForm or other Addon message
  - !UG! Mark message as urgent (lists as RED in the Outpost listing)
- PackItForms will ignore many Outpost tags that it sees and they will not show up in the message.



### What about the saved messages?

- Take a look at your C:\MyMessage\X14-23-1009T\ manual message directory (or whatever you named it).
- The message’s Subject field is used for the file name.
- Clicking on the “Name” column header sorts messages by file name.
- Clicking on the “Date Modified” column header sorts by file timestamp.
- These views can help with managing your messages.
- Submit this directory with your paperwork when done.



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### What about the ICS 309?

- Manual PackItForms comes with its own ICS 309 Log, similar to what Postup does.
- From the PackItForm **Home Page**, when you click on **Log and View**, you write a new ICS 309 Log entry for this message.
- From the PackItForm **Home Page**, when you click on **Edit ICS-309 Log**, you open the ICS 309 form for editing and printing.

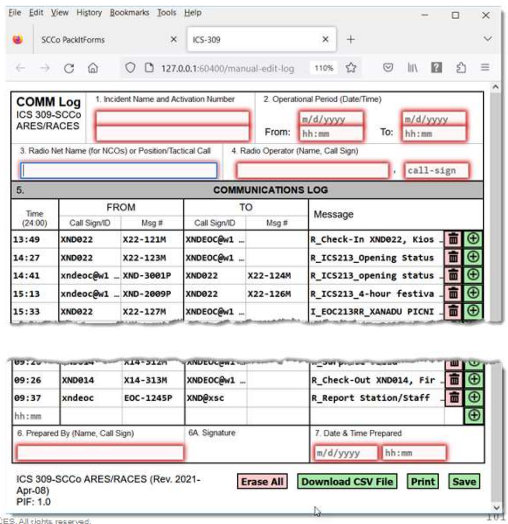
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### What about the ICS 309?

- All fields are editable.
- Required fields are highlighted in RED.
- Trash Can symbol deletes the entry.
- Plus symbol adds another line for a manual entry.
- **Erase All** – clears the form, does not require a **Save** to commit the changes.
- **Download...** – creates a .csv file of the Comm Log.
- **Print** – prints the Comm Log to the selected printer.
- **Save** – Saves any changes you made.



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### Manual packet operations; not many changes

This is a tool change, not a process change

- 1. First Shift...**
  - a. Show up, request a safety and assignment briefing
  - b. Find a workspace for your packet operations
- 2. Initial station setup...**
  - a. Find, assess, and set up the packet station
  - b. equipment check-out
- 3. Packet Operations...**
  - a. Download notices, send yourself a test message
  - b. Send the formatted check-in message with your Tac Call
  - c. Manage the message flow
- 4. Incoming Shift Change...**
  - a. Request a safety and assignment briefing
- 5. Outgoing Shift Change...**
  - a. Archive the event documentation
- 6. Securing Operations...**
  - a. Send the formatted check-out message with your Tac Call
  - b. Archive the event documentation
  - c. Shutdown

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## Amateur Packet Radio Field Reference, Type II

- Taking a quick look inside

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3.3 CONNECTING TO THE TNC WITH PUTTY .....

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3.7 MANUAL MESSAGE BASICS .....


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3.9 RECEIVING A PACKETFORM MESSAGE MANUALLY .....

3.10 VIEWING SAVED MESSAGES .....

3.11 NOTES ON MANUAL ICS 309 COMM LOG .....

*(the unofficial)*  
**Amateur Packet Radio  
 Field Reference, Type II**  
 For SCCo RACES Responders  
 November 2023




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## Could manual packet ops really happen to me?

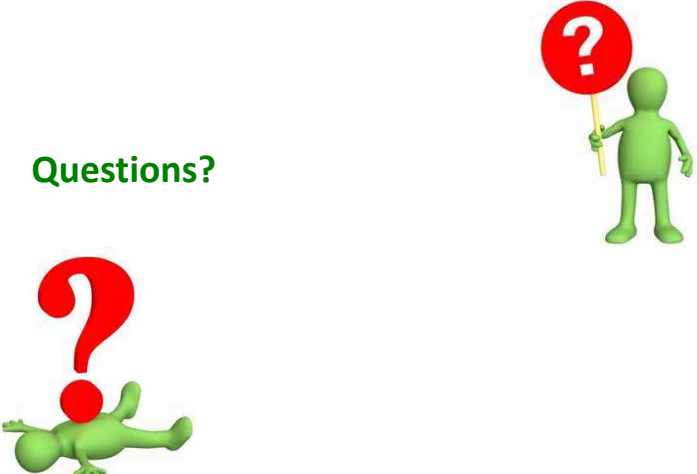
- Better to be safe than sorry... Build your USB packet thumb-drive now!
- Directories (suggested)
  - x:\Programs
    - Putty installer (<https://www.putty.org/>)
    - Putty standalone executables (<https://www.putty.org/> > Alternative binary files)
    - SCCo PacketForm Directory (C:\PacketForms\Outpost\SCCo)
    - SCCo Packet Installer - <https://www.scc-ares-races.org/data/packet/client-software.html>
    - SCCo PIFO only Installer (<download\_dir>\sccsetup162Mpub\_includes\SccoPIFOsetup3.13pub.exe)
    - Office Libre Portable version (<https://www.libreoffice.org/download/portable-versions/> )
  - x:\SCC Notices
    - downloaded text version
    - Archive of the Outpost SCC Notices directory to reload if necessary
  - x:\TNC Init files
    - text version, seven total
  - x:\Docs
    - Too many to list here... (<https://www.scc-ares-races.org/data/packet/index.html>)
    - Unofficial Amateur Packet Radio Field References, Type III, Type II, e-book edition
  - x:\Miscellaneous
    - Pre-defined messages to be edited prior to sending
  - x:\MyMessages\<event>
    - Or whatever directory name you choose.



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## Questions?



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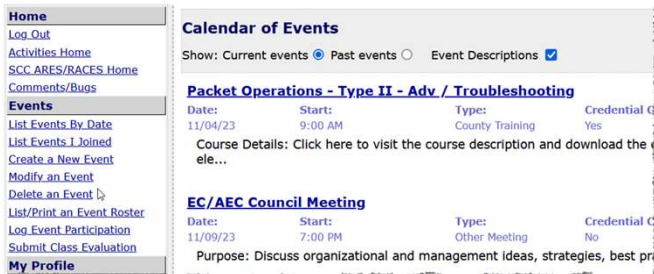
## WRAP UP

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## First things first

- Online Class Evaluation
  - Log into <https://www.scc-ares-races.org/activities/events.php>
  - Click “Submit Class Evaluation” in Events



- Submit your evaluation as soon as possible... after 1 week, the form will no longer be available for this class!

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## Exercise Scenario

- You’ve been dispatched by the *Xanadu EOC* to provide communications for a field location.
  - The EOC’s tactical call is XNDEOC on W1XSC.
  - Your tactical call is: XND### (Assigned by your instructor)
  - Your Message Prefix: X##
  - Your assignment Name: Xanadu Post ##
  - Operate using your home city’s primary or secondary BBS.
- You arrive at your assignment and set up the station, but discover that Outpost on the packet PC does not work! Looks like you need to do all packet operations manually.
- Your assignment will be mailed to you ahead of time.

Where “##” are the last two digits of your tactical call

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## Thank You!

Please complete the Course Evaluation **on or before** next Saturday 11-November!

Please complete the Assignment **on or before** next Saturday 11-November!

### Office Hours:

Sunday, 5 November, 3:00p to 5:00p (zoom)  
 Wednesday, 8-November, 7:30p to 9:00p (zoom)

If you have questions or feedback about this or other training activities, you can join our packet discussion group.  
<https://scc-ares-races.groups.io/g/packet>

Questions, comments, suggestions?  
 kn6pe@arrl.net

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