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# 2024 Year End Summary, Update, Preview



Santa Clara County ARES®/RACES

Revised: 11-Dec-2024

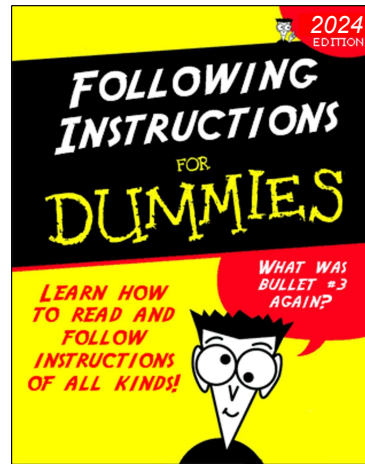
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## Housekeeping

- Introductions
- Pen/pencil, paper
- Cell phones
- Side conversations
- Questions
- Breaks
- Restrooms
- Do not park in side parking lot
- Do not wander around the building
- In case of emergency



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## Agenda

- Message Passing Skills
- Training
- ICS Forms
- Credential Updates
- Packet Network Update
- Monthly Packet Message Passing
- P1 and HF Credentials & SHARES
- Weekly Packet Practice
- Safety Issue Observed: no fuses in power cables
- Working with a Served Agency
- W2XSC BBS Failure



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# Message Passing Skills

## Can you send what the served agency needs?

Tim Howard, KE6TIM

Revised 10-Dec-2024

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## Why is Message Passing Important

- Trained Amateur Radio Operators
  - Do more than push a PTT button.
  - Know how to get agency specific messages from Point A to Point B accurately and efficiently, even when other systems are failing.
- No matter how much experience you have, your skills become stale without practice.
- We encourage everyone to attend the training classes every few years.
- We all think we are good enough, but how good is good enough?
- Let's try some examples.
- No judgement, just some fun to see what we can do.

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# Some Examples

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## Message Handling Procedures

Revised: 28-June-2024

<https://www.scc-ares-races.org/operations.shtml#MHP>

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## Message Passing Skills

- We schedule two Message Passing Classes each year.
  - January 27<sup>th</sup>
  - July 19<sup>th</sup>
- Quarterly Training Nets on the 3<sup>rd</sup> Tuesday of the 1<sup>st</sup> Month in each Quarter at 7pm on the Resource Net Repeaters is another opportunity to learn and practice.
  - January 21<sup>st</sup> - details on web site--sign up.

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## Training

Judy Halchin, KK6EWQ  
Revised 22-Nov-2024

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## Classes

- 24 training classes in 2024
- 16 unique classes
- 40 people in Introduction to Emergency Communications classes (not counting instructors and staff)
- 2025 schedule is very similar to this year's

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## Practices

- Monthly packet practice
- Pop-up packet drill
- Quarterly message passing practice
- Quarterly drills at County EOC radio room
- Annual exercise in September

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## Hospital Training

- Hospital employees got ham radio licenses (or already had them)
- ICS-214 and ICS-309 training videos
- Basic voice and packet training for hospital employees

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## 2025

2025 Santa Clara County ARES/RACES/ACS -- Training/Activity Calendar												
TRAINING	January	February	March	April	May	June	July	August	September	October	November	December
WK1	Field Ops Type 3A Date: Sat 1/4 Instr: Howard Loc: SO auditorium	Field Ops Type 3B/2 Date: Sat 1/17 Instr: Howard Loc: SO auditorium	Net Control Type 3A Date: Sat 2/12 Instr: Howard Loc: Sunnyvale DPS	Net Control Type 3B Date: Sat 2/19 Instr: Howard Loc: Sunnyvale DPS		Event Planning Date: Sat 6/7 Instr: Howard Loc: Sunnyvale DPS		Packet Type 3A Date: Sat 8/2 Instr: Ruth Loc: Sunnyvale DPS	Cross-Band Repeat Antenna Fund. Date: Sat 9/5 Instr: Ott Loc: Sunnyvale DPS	Packet Type 3B Date: Sat 10/4 Instr: Ruth Loc: Sunnyvale DPS		
WK2		Intro to Em Coms Date: Sat 2/8 Instr: TBO Loc: Sunnyvale DPS			Net Control Type 2 Date: Sat 5/20 Instr: Howard Loc: Sunnyvale DPS	RDF Search & Locate Date: Sat 6/14 IC: TBO Loc: TBO					Packet Type 2 Date: Sat 11/8 Instr: Oberholzer Loc: Sunnyvale DPS	End of Year Summary Date: Sat 12/13 Instr: SCC Staff Loc: Sheriff Aul.
WK3	Cross-Band Repeat Antenna Fund. Date: Sat 1/18 Instr: Ott Loc: Sunnyvale DPS		Fundamentals of Em Coms Date: Sat 3/15 Instr: TBO Loc: Sunnyvale DPS		Quarterly Drill Date: Sat 5/27 10am - 12 noon	Shadowing Date: Sat 6/21 Instr: Halchen Loc: Sunnyvale DPS	Message Passing Date: Sat 7/19 Instr: Howard Loc: Sunnyvale DPS	Field Ops Type 3B/2 Date: Sat 8/16 Instr: Howard Loc: SO auditorium	County Wide Exercise Date: Sat 9/20 Loc: TBO		*Photo/Video County EOC Radio Room Orientation	
WK4	Message Passing Date: Sat 1/25 Instr: Howard Loc: Sunnyvale DPS	Quarterly Drill Date: Sat 2/22 10am - 12 noon	RACES Unit Lead Date: Sat 3/22 Instr: Howard Loc: SCCA EOC				Field Ops Type 3A Date: Sat 26 Instr: Howard Loc: SO auditorium					
WKS								Quarterly Drill Date: Sat 8/23 10am - 12 noon				EC Council Meeting Date: Sat 8/23 7pm Loc: SCCA EOC
EVENING		EC Council Meeting Date: Thu 2/13 7pm Loc: SCCA EOC			EC Council Meeting Date: Thu 5/8 7pm Loc: SCCA EOC	Intro to EmComs NIGHT CLASS Date: Wed 6/11 Instr: TBO Loc: Sunnyvale DPS	Fundamentals of EmComs NIGHT CLASS Date: Wed 7/9 Instr: TBO Loc: Sunnyvale DPS	EC Council Meeting Date: Thu 8/14 7pm Loc: SCCA EOC		Intro to EmComs NIGHT CLASS Date: Wed 10/23 Instr: TBO Loc: Sunnyvale DPS	Fundamentals of EmComs NIGHT CLASS Date: Wed 11/27 Instr: TBO Loc: Sunnyvale DPS	

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# ICS Forms

Tim Howard, KE6TIM  
Revised 10-Nov-2024

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## Forms Updated in 2024

- In 2023 the Public Health Department relocated their operations center and renamed it:
  - Was: Medical Health Joint Operations Center - MHJOC
  - Is: Public Health Department Operations Center - PHDOC
- This resulted in updates to Hospital Forms and the Recommended Form Routing Sheet.
- We are still seeing numerous cases of MHJOC still being used instead of PHDOC.
- The ***Recommended Form Routing Sheet*** is your friend.

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## Forms Updated in 2024 (Cont.)

- The RACES Mutual Aid Request Form was updated.
- The primary changes were on page two used at the County EOC to assist with resource assignment and tracking.
- Some changes on the front for cities.
- Those are used by city ECs/AECs and the changes were shared with city RACES leaders at a quarterly EC Council Meeting.

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## Errors in Form Completion

- We continue to see errors in form completion.
- Primarily 214 Activity Log and 309 Communications Log.
- Judging from the call signs, it is mostly newer operators; but, some experienced operators also make errors.
- So new or experienced, we all can do better.
- These forms are legal documents and need to be accurate.
- Let's review some of the more common errors to help us all learn. Names have been redacted to protect the innocent.

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## What is missing or could be improved

<b>COMM Log</b> ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number <i>SCCo Annual Drill</i> <i>XSC-24-07T</i>	2. Operational Period (Date/Time) 9/28/24 9/28/2024 From: 1200 To: 1400			
3. Radio Net Name (for NCOs) or Position/Tactical Call		4. Radio Operator (Name, Call Sign)			
5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1328	S-3	SMTB-008		XND-115	213: need trained volunteers radio ops for next shift should ask for instructions to break room on arrival.
1331	S-2				
↓					
1336		VND-116	All stations ss:		213: High winds ↓
↓			S-2	S-2-605	
↓			S-3	SMTB-009	
6. Prepared By (Name, Call Sign)		6A. Signature		7. Date & Time Prepared	8. Page <u>2</u> of <u>2</u>
				9/28/24 1405	

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## What is missing or could be improved

<b>COMM Log</b> ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number <i>County-Wide Communications</i> <i>Exercise XSC-24-07T</i>	2. Operational Period (Date/Time) 9/28/24 9/28/24 From: 0900 To: 1100			
3. Radio Net Name (for NCOs) or Position/Tactical Call <i>NCO</i>		4. Radio Operator (Name, Call Sign) <b>Same</b>			
5. COMMUNICATIONS LOG					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
0752	<b>Same</b>		NCO		Depart for Park 080921 Arrived checked out of resource checked in to Staging 147.85 NCO for Mag Net Closed net
0806					
0807					
0808					
1100					
1100					
6. Prepared By (Name, Call Sign) <b>Same</b>		6A. Signature		7. Date & Time Prepared	8. Page <u>1</u> of <u>   </u>
				9/28/24	

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## What is missing or could be improved

<b>UNIT LOG</b> ICS 214-SCCo ARES/RACES	1. Incident Name and Activation Number COUNTRY WIDE COMMUNICATIONS EXERCISE - RAYNOR PARK XSC-24-07T		2. Operational Period (Date/Time) 09-28-24 From: 0830 To: 15:00																																									
	3. Unit Name / Tactical Call / Designators		4. Unit Leader (Name, Call Sign, ICS Position)																																									
<b>5. Personnel Roster Assigned</b>																																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Name</th> <th style="width: 20%;">Call Sign</th> <th style="width: 20%;">ICS Position</th> <th style="width: 20%;">Home Base/City</th> <th style="width: 20%;"></th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>					Name	Call Sign	ICS Position	Home Base/City																																				
Name	Call Sign	ICS Position	Home Base/City																																									
<b>6. ACTIVITY LOG</b>																																												
Time (24:00)	Major Activities & Events / Occasional Messages (Indicate From / To / Msg# / Msg Text)																																											
0853	Leave home ODO 602																																											
0856	Arrive Raynor Park ODO [REDACTED]																																											
0650	Check into staging																																											

## What is missing or could be improved

<b>COMM Log</b> ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number XSC-24-07T		2. Operational Period (Date/Time) From: To:		
	3. Radio Net Name (for NCOs) or Position/Tactical Call Shelter 2		4. Radio Operator (Name, Call Sign) [REDACTED]		
<b>5. COMMUNICATIONS LOG</b>					
Time (24:00)	FROM		TO		Message
	Call Sign/ID	Msg #	Call Sign/ID	Msg #	
1203	[REDACTED]		NC		Check in to net
1204	NC	XND-101	[REDACTED]	502-601	Shelter status -213
1214	[REDACTED]	502-001	[REDACTED]	XND-102	Shelter status
1222	[REDACTED]		NC		We only have 2meter voice at this time
<del>1232</del>	[REDACTED]	<del>XND-104</del>	[REDACTED]	<del> </del>	<del> </del>
1232	NC	XNP-104	[REDACTED]	502-602	Supplies you requested -213
1240	[REDACTED]	502-002	NC	XND-105	Grape Avenue blocked -213
1257	NC	XND-108	[REDACTED]	502-603	
1259	[REDACTED]		NC		we will need to have before sundown
<del>1309</del>	[REDACTED]		[REDACTED]	<del>603</del>	<del> </del>
1309	[REDACTED]	502-003	NC	XND-110	Shelter status
1218	NC	XND-112	NA60	502-604	213 - cots - urgent

## What is missing or could be improved

Continuation of the same form

1337		NC			Radio operators should ask for directions to [redacted] county
1343	NC XND-116		S02-605	213	High winds alert
1352	NC XND-117		S02-606	213	Requisitions
1403	NC XND-118		S02-607	213	Supplies will arrive soon
No check-out of net or release from assignment					
6. Prepared By (Name, Call Sign)		6A. Signature		7. Date & Time Prepared	
[redacted]		[redacted]		9/25/24 1405	
				8. Page 1 of 1	

## What is missing or could be improved

<b>COMM Log</b> ICS 309-SCCo ARES/RACES	1. Incident Name and Activation Number XSC-24-OTT	2. Operational Period (Date/Time) 9/24/2024 From: 0900 To: 1200	
3. Radio Net Name (for NCOs) or Position/Tactical Call [redacted]		4. Radio Operator (Name, Call Sign) [redacted]	
5. COMMUNICATIONS LOG			
Time (24:00)	FROM Call Sign/ID    Msg #	TO Call Sign/ID    Msg #	Message
0753	—	RESOURCE NET	LEAVE HOME 000 356
0804	—	RESOURCE NET	ARRIVE PARK FOR PARK 361
0830	—	STAGING NET	CHECK INTO STAGING
0840	—	STAGING NET	CHECK OUT STAGING
0845	—	—	CHECK INTO MESSAGE NET
0901	—	MESSAGE NET	FIELD OPS (SLEEPING)
0902	XSC 101	XSC-101	CHECK INTO MESSAGE NET
0902	XSC-101	XSC-101	ICS 213
0902	XSC-101	XSC-101	SHOWER STANDBY
0930	XSC-101	XSC-101	ICS 213
0940	XSC-101	XSC-101	INFORMAL OP/OP MESSAGE
10:26	SØ 103	XND-119	ICS 213
10:43	SØ 104	XND-121	INFORMAL MESSAGE
10:59	[redacted]	[redacted]	[redacted]
10:53	XSC-123	XSC-104	ICS 213
11:00	[redacted]	NET Control	MESSAGE NET CLOSES

# Credential Updates

Tim Howard, KE6TIM  
Revised 11-Dec-2024

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## Earned Credentials/Endorsements 2024

Credential	Field Operator	Net Control	Packet Operator	Shadow
Type I	0	1	3	0
Type II	1	1	0	0
Type III	2	2	2	2
Type IV	2			

Endorsement	Earned
Mutual Aid Communicator (MAC)	5
County EOC Radio Operator (ERO)	5
County EOC RACES Unit Leader (RUL)	5

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## Total Credentials and Endorsements

### Number of Credentials Earned by Type

Credential	Field Operator	Net Control	Packet Operator	Shadow
Type I	5	7	3	5
Type II	17	13	13	9
Type III	42	30	33	20
Type IV	54			

### Number of Endorsements Earned

Endorsement	Earned
Mutual Aid Communicator (MAC)	43
County Fire Station Radio Operator (FRO) (Pending)	0
County EOC Radio Operator (ERO)	17
County EOC RACES Unit Leader (RUL)	5

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## Credentialing

- Credentialing in technical fields (usually called certification) has been used for 25+ years to verify an individual’s ability.
- Credentialing is becoming more prevalent in Emergency Management, especially where mutual aid may be utilized.
- The State of California has a credentialing program for EOC positions and many cities are having their staff earn credentials.
- Served agencies are increasingly aware of credentialing and are expecting team members to be credentialed.

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## Credentialing

- **Credibility:** Credentials demonstrate your training, knowledge, skills, and experience; and enhances your credibility with peers and served agency personnel.
- **Commitment:** Earning credentials demonstrates your commitment to the EmComm role, validates your acquired skills as a volunteer, and can open doors to leadership and training roles within the organization.
- **Assignments:** Credentials can assure those that assign you to a task know that you are capable of handling whatever challenges the assignment presents.

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## Credentialing Program Handbook



Santa Clara County ARES®/RACES/ACS

**Amateur Radio Operator  
Credentialing  
Program Handbook**

Version 3.1.3

Revised: 26-Mar-2024

<https://www.scc-ares-races.org/credentials/index.shtml#overview>

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## Database Update

If you have a County DSW, the sticker on your DSW Card Expires at the end of December.



New stickers will be provided to your EC for distribution if you have updated your database contact information by December 31<sup>st</sup>.

## Update/Verify Contact Info

- My Profile**
- [My Contact Info](#)
- [My Equipment](#)
- [My Activity Record](#)
- [My Completion Certificates](#)
- [My Credentials](#)
- [My MAC-Qualifying Events](#)
- [Cities/Agencies I Support](#)
- [Change My Call Sign](#)
- [Change My Password](#)

**My Contact Information**

<p><b>Personal Information</b></p> <p>Call Sign* <input type="text" value="W6XRL4"/></p> <p>First Name* <input type="text" value="Herman"/></p> <p>Last Name* <input type="text" value="Munster"/></p> <p>Address 1* <input type="text" value="1313 Mockingbird Ln"/></p> <p>Address 2 <input type="text"/></p> <p>City* <input type="text" value="Mockingbird Heights"/></p> <p>State* <input type="text" value="TZ"/></p> <p>Zip* <input type="text" value="00000"/></p> <p><b>Emergency Contact Information</b></p> <p>Emergency contact* <input type="text" value="Lily"/></p> <p>Contact number* <input type="text" value="408-555-1212"/></p> <p><b>Supported Agencies</b></p> <p>You are on the rosters of these agencies:                  County of Santa Clara  <b>My Primary Agency</b>                  County of Santa Clara</p> <p><small>If you are on multiple rosters, "Primary Agency" is the agency that you will most likely respond to first in case of a wide-spread incident.                  * denotes required field</small></p>	<p><b>Contact Information</b></p> <p>Home Phone# <input type="text" value="408-555-1212"/></p> <p>Work Phone# <input type="text"/></p> <p>Cell Phone# <input type="text"/></p> <p>Pager <input type="text"/></p> <p>e-mail #1 * <input type="text" value="none1@noone.com"/></p> <p>e-mail #2 <input type="text" value="none2@noone.com"/></p> <p><small>* denotes required field                  # at least one number is required</small></p> <p><b>AlertSCC Information</b></p> <p><small>(format for phone &amp; SMS numbers:                  999-999-9999)</small></p> <p>Phone #1 : <input type="text" value="408-555-0001"/></p> <p>Phone #2 : <input type="text" value="408-555-0002"/></p> <p>Phone #3 : <input type="text" value="408-555-0003"/></p> <p>e-mail #1 : <input type="text" value="email1@gmail.com"/></p> <p>e-mail #2 : <input type="text" value="email2@gmail.com"/></p> <p>e-mail #3 : <input type="text" value="email3@gmail.com"/></p> <p>SMS #1** : <input type="text" value="408-555-1000"/></p> <p>SMS #2** : <input type="text" value="408-555-2000"/></p> <p><small>** SMS stands for Short Messaging Service which is synonymous with text messaging.</small></p> <p><b>Note:</b> These entries are prioritized. Put your primary information as #1, your second as #2, etc.</p>
--	--

You last reviewed this information on: 04/20/2024  
 I have reviewed the information on this page



# Packet Network Update

## 2024 Year End Review

Jim Oberhofer, KN6PE  
Revised 30 November 2024

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## Highlights -- Outpost and PackItForms

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## What's in the box?



- **SCCo Integrated Packet Installer 163C**  
\*\*\* PRERELEASE \*\*\*
  - **Outpost Packet Message Manager**
    - GUI-based interface for managing packet communications
    - Makes using packet as simple as using e-mail
  - **PackItForms**
    - Next generation HTML-based forms for use with Outpost
    - Manual operation without Outpost

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## SCCo Installer v163C September 2024



### **PackItForm 3.16\***

- Various forms and .pdf updates
- Even better manual operation support
  - Auto-logging of sent and received messages
  - Updated ICS-309 log maintenance
  - Enhancements and bug fixes from user feedback

### **Outpost v3.8.6\***

- Resolves 3 reported defects; adds 6 requested changes, including...
  - Signature update on the ICS-309 comm log
  - Address book address expansion with sent messages

\*See the release notes for details

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## What's new

(or 6 things to make your packet life easier)

1. Setting up Message ID prefix for Tac Calls
2. Packet Forms and Manual Packet
3. Message search
4. Monitor RF Packet Traffic
5. Fixing JNOS extra line feeds
6. Packet Field References

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## 1. Setting up Message ID prefix for Tac Calls

**Situation:** You are deployed with a tactical call. You get a call from the EOC that the tac call message ID is not set up correctly.

**Problem:** Message IDs are both unique and help reference the sending station.

**Solution:** **With Outpost**

1. Select **Settings > Station ID...**
2. When you fill in your FCC Call sign, Outpost picks up the last 3 characters of your call as the Message ID Prefix.
3. When setting up the Tactical Call, you need to fill it in yourself.
4. Ask your shift supervisor or exercise coordinator for what this field value should be.

**Examples:** Monthly Exercise: **Tac Call=XND056** **Msg ID Prefix = X56**  
 City Deployment: **Tac Call=CUPDZA** **Msg ID Prefix = DZA**

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## 1. Setting up Message ID prefix for Tac Calls

**Situation:** You are deployed with a tactical call. You get a call from the EOC that the tac call message ID is not set up correctly.

**Problem:** Message IDs are both unique and help reference the sending station.

**Solution:** **Manual Operations**

1. Find and click on manual.cmd
2. PackItForms picks up the last 3 characters of your FCC call as the Msg ID Prefix.
3. The Tactical Call Msg ID Prefix does the same, but may not be correct.
4. Ask your shift supervisor or exercise coordinator for what this field value should be AND change this field if necessary.

**Examples:** Monthly Exercise: **Tac Call=XND056** **Msg ID Prefix = X56**  
 City Deployment: **Tac Call=CUPDZA** **Msg ID Prefix = DZA**

## 2. PackItForms

## County Use of PackItForms

- Santa Clara County PackItForms contains these **public** forms
  1. *XSC Check-In/Out Message* Form
  2. *XSC ICS-213 Message* Form adapted for Santa Clara County to transmit messages.
  3. *XSC EOC-213RR Resource Request* Form – Requests specific resources needed to support an emergency.
  4. *XSC OA Jurisdiction Status* Form – Reports jurisdiction emergency situation status to county OEM.
  5. *XSC OA Shelter Status* Form – Reports information and status on shelters opened in the cities to county OEM.
  6. *XSC Allied Health Facility Status* – Reports information & status of private Skilled Nursing facilities to SCC Public Health Department.
  7. *XSC RACES Mutual Aid Request* Form – Used by a jurisdiction to request a RACES Mutual Aid.
- The SCC Installer program automatically installs these packet forms along with Outpost.
  - Additional forms may be provided by your EC

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## Updated PackItForm Defaults

PackItForms	Handling Order	TO ICS Position	To Location
ICS 213 Message Form	--	--	--
EOC Resource Request 213RR	--	Planning Section	County EOC
OA Jurisdiction Status	Immediate	Situation analysis Unit	County EOC
OA Shelter Status	Priority	Mass Care and Shelter Unit	--
Allied Health Status	Routine	EMS Unit	<b>PHDOC</b>
RACES Mutual Aid Request	Routine	RACES Chief Radio Officer	County EOC
HAvBed Report	Immediate	EMS Unit	<b>PHDOC</b>
Medical Facility Status	Immediate	EMS Unit	<b>PHDOC</b>
Resource Request Form #9A	<b>Obsolete -- Replaced by EOC Resource Request 213RR</b>		

- Aligns with the *RACES Recommended Form Routing Cheat Sheet; updated March 2024*
- Updates are in **BOLD** text
- Fields can be changed at message create time
- Always double-check the *RACES Recommended Form Routing Cheat Sheet* for your specific situation

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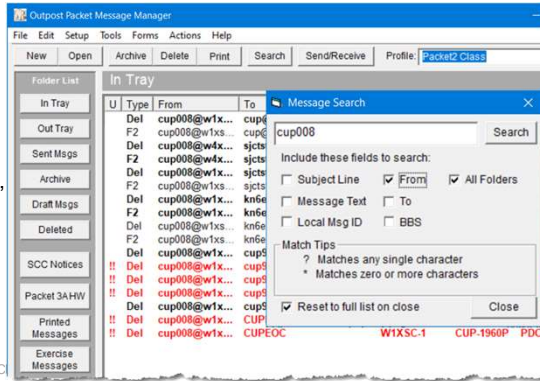
42

### 3. Message Search

**Situation:** This assignment has been in place for several shifts with plenty of packet message traffic already passed.

**Problem:** Now, someone asks for a copy of a message you received. Where is it?

- Solution:**
1. On Outpost, click on the **Search** menu.
  2. Enter some text that you know is likely part of the message, which fields it is in (or check all fields), and whether you want to check this or all folders.
  3. Press **Search**
  4. For  **All Folders**, **Type** field shows the message location.

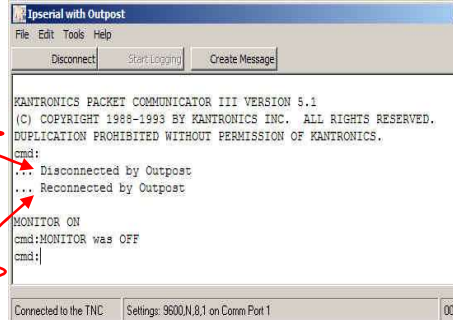


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### 4. Monitoring Packet traffic

**Situation:** Some users like to watch what is going on with on a frequency in between Send/Receive Sessions to see if the frequency is clear.

- Solution:**
1. From Outpost, **Tools > Interactive Packet > Serial / Com Port**.
  2. From Ipserial, Tools > Options. Check  **"Turn on Packet Monitoring (MON ON)..."**. Press **OK**.
  3. When you press **Connect**, Ipserial.exe sends the MON ON command to the TNC to start monitoring.
  4. When Outpost starts a Send/Receive session, it requires the serial port.
    - it tells Ipserial.exe to disconnect.
    - It opens the com port and sends the necessary TNC & BBS commands.
    - When done, it tells Ipserial to reconnect to the Com Port.



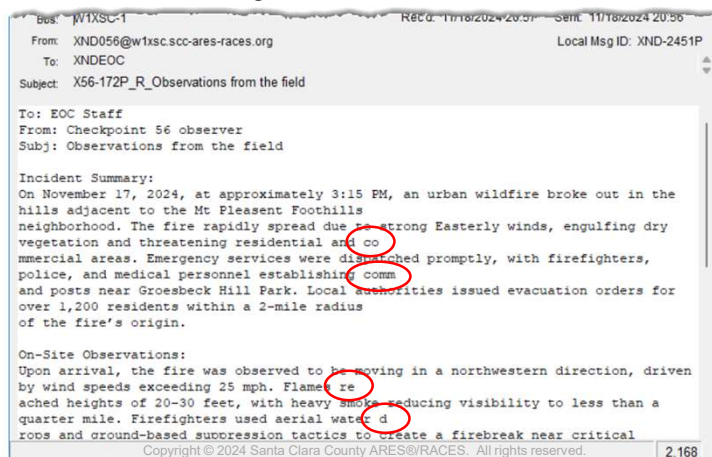
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### 5. Fixing JNOS Extra Line Feeds

\*\*\* DRILL TRAFFIC \*\*\*

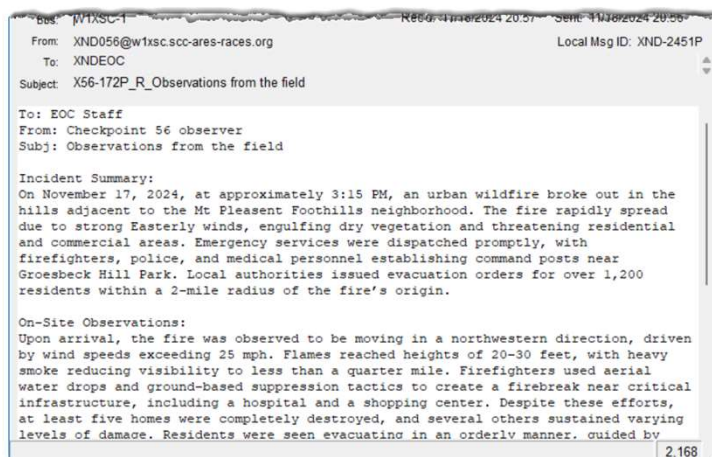
**Situation:** JNOS causes message text lines greater than 127 characters to have a CR/LF inserted regardless of where it is in a sentence or word. PackItForms handles this situation nicely. But what happens if an **Informal Message** is sent? This is what it could look like...



### 5. Fixing JNOS Extra Line Feeds

\*\*\* DRILL TRAFFIC \*\*\*

**Solution:** If you come across this situation, try this:  
 1. In the message form, press **View > JNOS Line Fix (BETA)**  
 2. This change is not permanent and cannot be saved.  
 3. Pressing the forms' **Print** button will print the original message.





## 5. Fixing JNOS Extra Line Feeds

\*\*\* DRILL TRAFFIC \*\*\*

**Solution:** 4. But, pressing **File > Print** will print the corrected version.

W6XRL4 as XND056

---

From: XND056@w1xsc.scc-ares-races.org  
 To: XNDEOC  
 Sent: 11/18/2024 20:56  
 Received: 11/18/2024 20:57  
 Subject: X56-172P\_R\_Observations from the field  
 Local Msg ID: XND-2451P

To: EOC Staff  
 From: Checkpoint 56 observer  
 Subj: Observations from the field

Incident Summary:  
 On November 17, 2024, at approximately 3:15 PM, an urban wildfire broke out in the hills adjacent to the Mt Pleasant Foothills neighborhood. The fire rapidly spread due to strong Easterly winds, engulfing dry vegetation and threatening residential and commercial areas. Emergency services were dispatched promptly, with firefighters, police, and medical personnel establishing command posts near Groesbeck Hill Park. Local authorities issued evacuation orders for over 1,200 residents within a 2-mile radius of the fire's origin.

On-Site Observations:  
 Upon arrival, the fire was observed to be moving in a northwestern direction, driven by wind speeds exceeding 25 mph. Flames reached heights of 20-30 feet, with heavy smoke reducing visibility to less than a quarter mile. Firefighters used aerial water drops and ground-based suppression tactics to create a firebreak near critical infrastructure, including a hospital and a shopping center. Despite these efforts, at least five homes were completely destroyed, and several others sustained varying levels of damage. Residents were seen evacuating in an orderly manner, guided by local law enforcement, though some individuals struggled to leave due to traffic congestion and poor air quality.

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## 6. Amateur Packet Radio Field Reference, Type III

### What is it

- an Unofficial SCCo RACES reference.
- Provides a reminder (job aid) for how to perform tasks that need to occur during a packet field deployment.
- Helps ensure task consistency, completeness, and operational alignment with SCCo RACES policies and procedures.

### What it is not

- the only source of information on which you should rely.
- an official SCCo RACES deliverable.

### Amateur Packet Radio Field Reference, Type III

For SCCo RACES Responders

October 2024



1/20

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## 6. Amateur Packet Radio Field Reference, Type III

### Table of Contents

- 1 QUICK REFERENCE.....
- 2 INTRODUCTION.....
  - 2.1 PURPOSE.....
  - 2.2 HOW TO USE THIS HANDBOOK.....
- 3 PACKET OPERATOR CHECKLIST.....
- 4 PACKET STARTUP PROCEDURE.....
- 5 CLIENT SOFTWARE.....
- 6 PACKET MESSAGING.....
  - 6.1 PACKET MESSAGING BASICS.....
  - 6.2 FREE FORM (PLAIN TEXT) MESSAGE.....
  - 6.3 SENDING A SPREADSHEET .CSV FILE – ONE APPROACH.....
- 7 MESSAGE ADDRESSING.....
- 8 STANDARD SUBJECT LINE FORMAT.....
- 9 CHECK-IN, CHECK-OUT MESSAGE.....
- 10 RECOMMENDED FORM ROUTING CHEAT SHEET.....
- 11 ARCHIVING EVENT DOCUMENTATION.....
  - 11.1 CREATE THE ICS 309 COMMUNICATION LOG.....
  - 11.2 CREATE A PRINTABLE LIST OF YOUR MESSAGES.....
  - 11.3 CREATE AN ARCHIVE OF YOUR MESSAGES.....
  - 11.4 RESET (CLEANUP) OUTPOST FOR THE NEXT EVENT.....

<https://bit.ly/PacketT3>

## Amateur Packet Radio Field Reference, Type III

For SCCo RACES Responders

October 2024



1/20

## 6. Amateur Packet Radio Field Reference, Type II

### Table of Contents

- 1 QUICK REFERENCE.....
- 2 INTRODUCTION.....
  - 2.1 PURPOSE.....
  - 2.2 HOW TO USE THIS HANDBOOK.....
  - 2.3 OTHER REFERENCES.....
- 3 MANUAL PACKET OPERATIONS.....
  - 3.1 TNC COMMANDS.....
  - 3.2 BBS COMMANDS.....
  - 3.3 CONNECTING TO THE TNC WITH PUTTY.....
  - 3.4 START OF SHIFT: CONFIGURE TNC SETTINGS.....
  - 3.5 END OF SHIFT: RESTORE TNC SETTINGS.....
  - 3.6 GETTING READY FOR MANUAL MESSAGING.....
  - 3.7 MANUAL MESSAGE BASICS.....
  - 3.8 SENDING A MANUAL PACKETFORM MESSAGE.....
  - 3.9 RECEIVING A PACKETFORM MESSAGE MANUALLY.....
  - 3.10 NOTES ON OUTPOST TAGS.....
  - 3.11 VIEWING SAVED MESSAGES.....
  - 3.12 NOTES ON MANUAL ICS 309 COMM LOG.....

<https://bit.ly/PacketT2>

## Amateur Packet Radio Field Reference, Type II

For SCCo RACES Responders

October 2024



# mpmp, P1 and HF Credentials & SHARES

Mark Laubach, K6FJC  
14-Dec-2024

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## Monthly Packet Messaging Passing Practice January to November stats

	Not Held			Not Held								
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Totals
<b>Participants</b>	24	21		19	20	16	11		16	27	15	<b>169</b>
<b>Messages by participant by Type</b>												
ICS213	29	29		57	40	28	33		39	40	42	337
EOC213RR				20		14	11		19	27	21	112
Shelter Status					20		11			28		59
Allied Health Status		22										22
RACES Mutual Aid	26						11					37
CSV	26					14						40
Op-to-Op & Other		281		249	205	?	38		216	311	208	1508
<b>Total Messages</b>	816	768		674	577	387	330		617	913	602	<b>5684</b>

**You can review all past practices on the MPMP Training Page:**  
[https://www.scc-ares-races.org/training/practice/monthly-packet-message-practice/monthly\\_packet-message-practice.html](https://www.scc-ares-races.org/training/practice/monthly-packet-message-practice/monthly_packet-message-practice.html)

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## Packet Credential Changes

- Packet Operator Type I (P1)
  - Removing: *out of county assignments*
  - Moving out of P1 to a new area of focus:
    - *Set up, manage, and troubleshoot a JNOS-based packet BBS system, running on Ubuntu, etc.*
  - Changing focus to W5XSC BBS to set up and operate for a training or exercise event, with instructions from net team
  - Refining knowledge items, digipeaters and nodes, and other problems
  - Etc.
- Motivations
  - P1 should be on parallel with other Type 1 credentials, e.g., specialist and plan, design, deploy, train, ...
  - It's a lot of work to complete existing requirements
  - P1 credential != county BBS sysop
    - Doesn't need to incorporate SCCo BBS sysop/network
- **When: next Credential Program Handbook update**

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## Member of County Networking Staff

- The network team is looking for a few “good people”
  - In discussion likely in the form of a member of network staff position posting (likely)
  - Discussed new endorsement not the way to go
- Recommendation from CRO and Pkt Manager
- Prerequisites: P2+, demonstrated team player
- Not for everyone, interview will be required with credential evaluator and network team member – think of a position posting
- Successful interview,, candidate will be assigned mentor
- County BBS knowledge and demonstration (for all candidates)
  - Building Ubuntu-based JNOS system to county configuration
  - BBS JNOS sysop privileges demonstration, message and notice management, log maintenance, Ubuntu tcp/ip networking, etc.
  - Knowing what and what not to touch
- Additional skillsets desired among one or more of the following
  - Network management, Network security, firewalls, monitoring, Network routing, email (configuration, spam), devops, analysis, logging, maintenance and upgrades, SCCo BBS operational knowledge, etc.



**This is all under consideration and development**

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## Changes in County EOC Radio Room

### HF Radio Remove / New State-funded HF Technology

- New radio technology has reduced the need for HF radio users to deal with the complexities of HF propagation (solar conditions, time of day, antenna orientation, etc.)
  - State has called this SHARES for SHARed RESsources
  - SCCo OEM has two rigs: EOC radio room fixed and mobile unit
- The use of new technologies all but eliminates the need to be concerned about HF propagation for state-wide EmComm purposes.
- The need for a three level HF Credential is being removed from the Credentialing Program and a “SHARES Radio Operator Endorsement” is being added to the next version of the Credentialing Program Handbook.

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## Changes in County EOC Radio Room

### HF Radio Remove / New State-funded HF Technology

- The “SHARES Radio Operator Endorsement” will be available to anyone holding the EOC Radio Operator Endorsement.
- Early next year we will offer a SHARES HF Radio Orientation class for those interested.

#### Quick Overview

- Based on Codan Communications equipment (Australia)
- Limited to state civil defense and emergency management agencies and some select agencies within the state of California.
- Shared channels in the 2 to 8 MHz range. Access to 10 channels providing point-to-point emergency radio coverage across the state. 24x7 Link Quality Analysis and Automatic Link Establishment to eliminate ToD propagation concerns
- Operates in accordance with FCC Rules Part 90 – Private Land Mobile Radio Services (primary) and Part 97 Amateur
- All “push button”

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### SHARES Base Station HF Equipment



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### SEMS - Reminder Standardized Emergency Management System



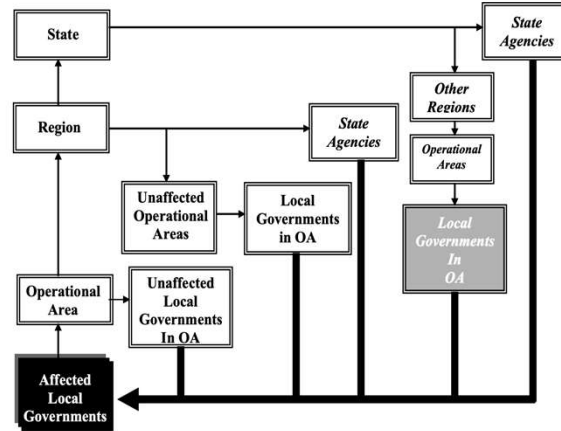
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## SEMS General Flow of Requests and Resources

- OA encompasses a county
  - 58 counties
- Six mutual aid regions

**NOTES**

- Local governments may request mutual aid directly from other local governments where local agreements exist.
- Discipline-specific mutual aid systems may have procedures that provide additional methods of obtaining state resources.
- Volunteer and private agencies may be involved at each level.



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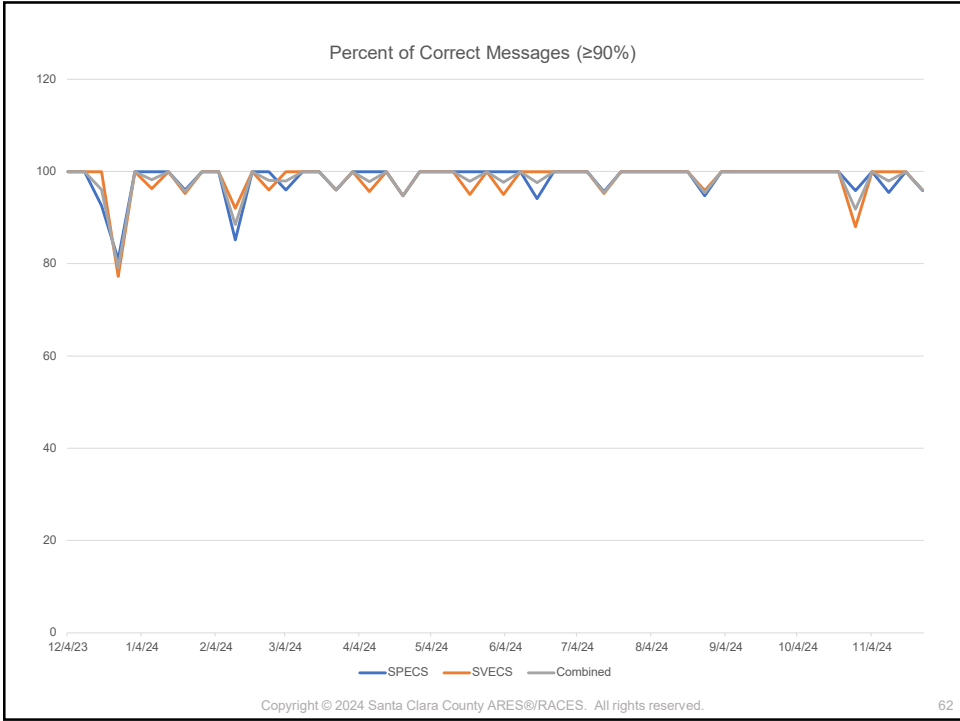
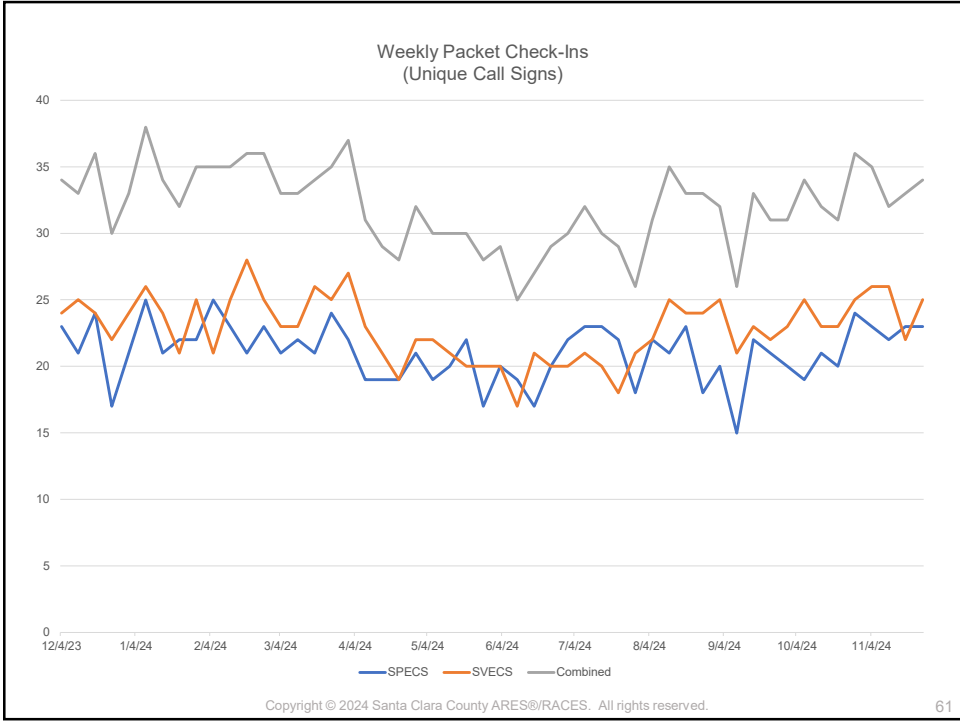
## Weekly Packet Practice

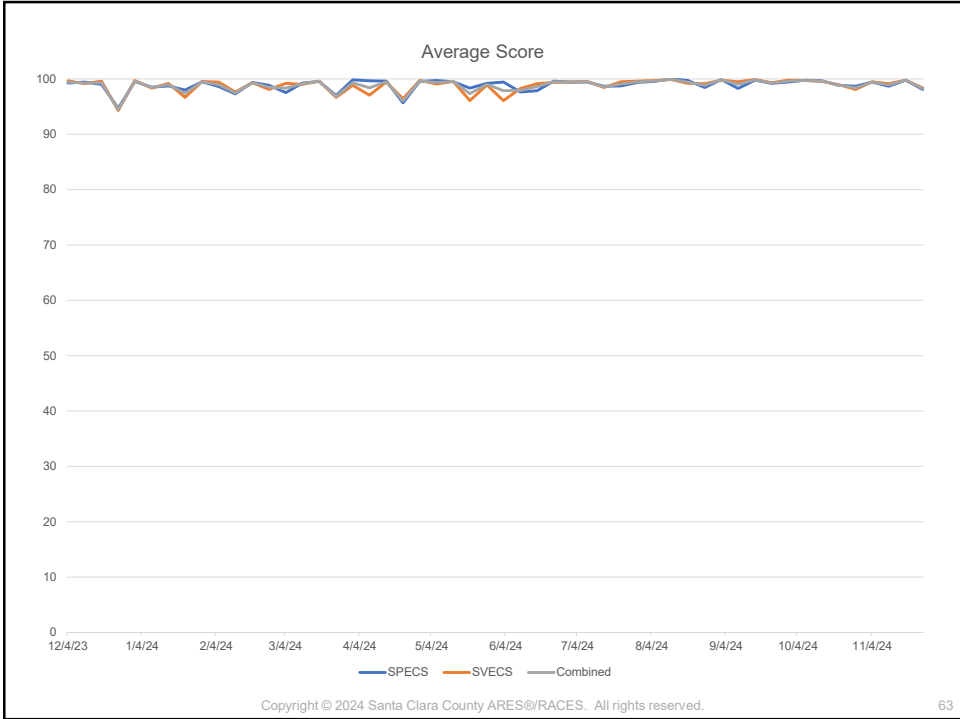
Steve Roth, KC6RSC

Revised 11-Dec-2024

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### Multi-Year Comparison

	2018	2019	2020	2021	2022	2023	2024
Total Messages	2116	2844	3138	3226	3200	2932	2408
% Correct	93.2%	93.7%	95.5%	96.6%	88.4%	83.1%	98.3%
Unique Calls	25.5	29	31	30	27.4	34.3	32.0

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## Mailbox Full — Now What?

You are assigned to a rarely used station. You connect to the BBS, and it has 142 messages waiting. That will take forever!

1. Abort the connection
2. Switch to alternate BBS
3. Connect manually, list with LL. If the backed-up messages are obsolete or unimportant, kill them with K.

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## Can't Wait for Bulletins to Download?

You're waiting for a critical message but Outpost wants to download the XSCPERM bulletins. That will take too long!

1. Abort the connection
2. Outpost: Setup → BBS → Receiving
3. Turn off "Retrieve Bulletins" checkbox. (Don't forget to turn it back on later!)

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# Switching between RF and TCP/IP network access in Outpost

Using Profiles extensively

Andreas Ott, K6OTT

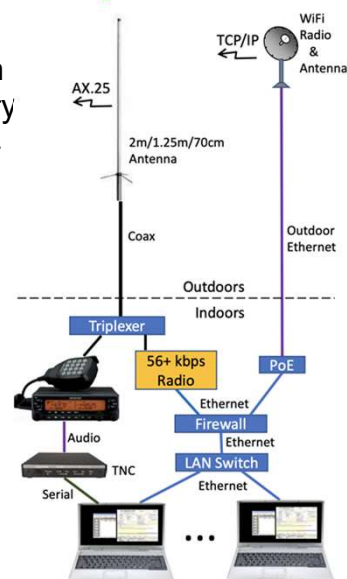
Revised 11-Dec-2024

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## BBS settings and access paths

- you are in an EOC or tactical location
- you know your primary and secondary BBS, your tactical call, your FCC call – and know how to configure all this in Outpost
- your main access to the BBSen has been over RF
- you recently got connected to the SCCo Systems TCP/IP Subscriber Network (or your EOC location has a wired Ethernet connection to our network)



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## Workflows on RF

- No Issues: you are using your primary BBS over RF
- primary BBS “unreachable”: you manually switch to the secondary BBS, and announce this fact on a net to the County EOC (and other stations) so that they can adjust sending you messages to your secondary BBS address
- primary BBS “reachable”: you have the choice of continuing on the secondary BBS or switching back to the primary BBS (same..., announce it, so others know where to find you)

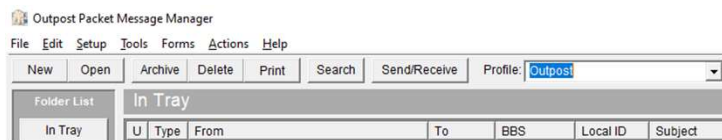
→ your easiest way of “switching around” is by using Outpost Profiles

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## Create RF Profiles

- the default Outpost profile after new install is “Outpost”



- create new profile (naming convention below)
- for your primary BBS, device and StationID
- test it!
- repeat for your secondary BBS, then test some more!
- practice switching between profiles, do not forget to “switch” and verify the radio frequency at the same time
- switching between RF bands on the same BBS without changing the profile

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## Profile Parameters

- BBS name
- device/connection
- Interface name
- StationID  
(your callsign, tactical or FCC)
  
- Create, save as (use ~ in profile name as separator)

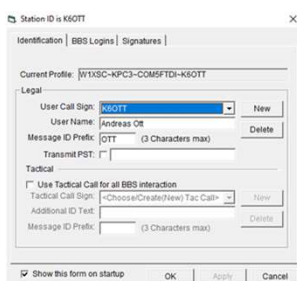
Examples:

- W1XSC~KPC3~COM5FTDI~K6OTT
- W1XSC~TELNET-W1XSC~K6OTT

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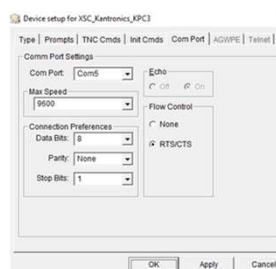
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## Parameter details

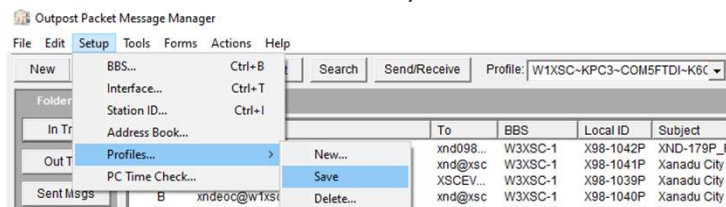


< Station ID

TNC/ComPort >



finally: Save it



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## Create Telnet Profile

- for your primary BBS, telnet connection and StationID
- add username and password, remove colon ":" from password prompt field
- test it!
- repeat for your secondary BBS
- test some more!
  
- when switching back to any RF profile, do not forget to "switch" and verify the radio frequency to match the BBS frequency on that band at the same time

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## Telnet details

IP, port >

prompt >

BBS username and password >

Remove ':'!

Log on as	BBS Friendly Name
XK0TT	XSC_W1XSC-1
K80TT	XSC_W2XSC-1
K80TT	XSC_W3XSC-1
K80TT	XSC_W4XSC-1

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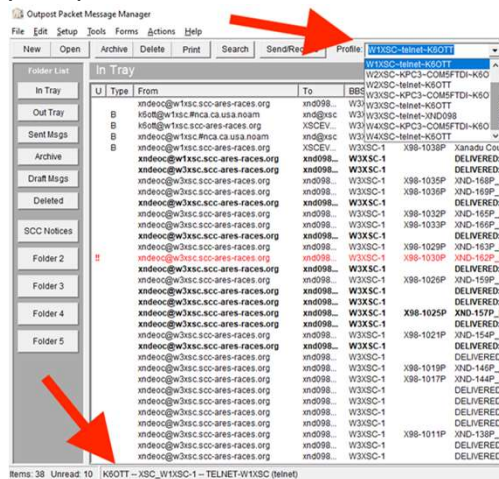
## Workflows on Telnet

- No Issues: you are using your primary BBS over telnet
- primary BBS “unreachable”: you manually switch to the secondary BBS, and announce this fact on a net to the County EOC (and other stations) so that they can adjust sending you messages to your secondary BBS address
- primary BBS “reachable”: you have the choice of continuing on the secondary BBS or switching back to the primary BBS (same..., announce it, so others know where to find you)

→ your easiest way of “switching around” is by using Outpost Profiles

## Switching around

Always verify Outpost status bar on the bottom



## References

For Outpost, see training slide decks from SCCo  
ARES/RACES Packet Operations classes

[Packet Operations - Type III, Part A](#)

[Packet Operations - Type III, Part B](#)

[Packet Operations - Type II](#)

and of course the [Outpost Documentation](#)

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**Safety issue observed:  
no fuses in power cables  
Batteries are no fun**

Andreas Ott, K6OTT

Revised 11-Dec-2024

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## Energy content in a battery

- Energy content in a (SLA) battery:  
 $3.6 * \text{voltage} * \text{mAh} = \text{Energy [Joule]}$   
Example: SLA 12V@18Ah  
 $3.6 * 12 * 18,000 \approx 777 \text{ kJ}$   
(approximate energy needed to boil 1/2 gal of water from room temp)
- Energy density in LiFePO4 battery:  
> 3x of SLA battery by weight, also higher load current possible

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## The Big Short

Now picture this: if your battery shorts out, you will set free most of the energy in a fraction of one second (aka. boil the water in < 1 second). Until something fails, such as the wire melting, or the battery liquids heat past their boiling point, with “steam” quickly escaping.

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## Rapid Unscheduled Disassembly

Escaping electrolyte steam usually leads to the entire battery exploding. [\*]  
 Good engineering practice is to insert something into the circuit that will fail before it turns into an incident, preferably a protective device such as a fuse. “All circuits shall have fuses”.

\* “Don’t try this at home - go to a friend’s house.”

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## Fuses to the rescue

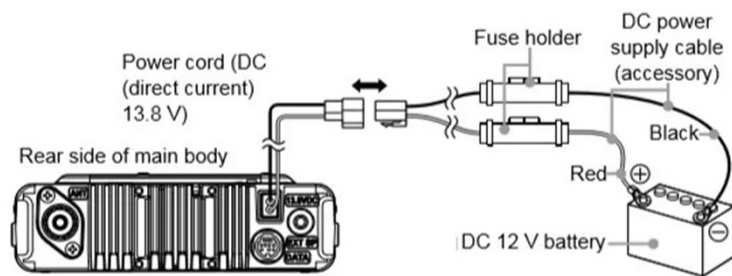


image credit: KOBG/Yaesu

Protecting battery and load (equipment)

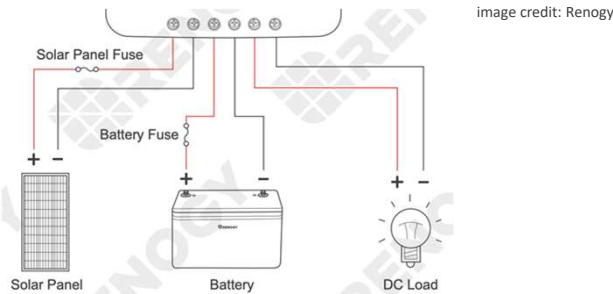
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## Charge controllers with electronic load limiters

Check the manual: They will recommend minimum wire sizes *and* fuses, at least at the battery and the power source!

DC Load:  
20 amps  
cutoff



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## Working with a Served Agency Golden Eagle 2024

Jeff Grafton, AJ6XZ  
Revised 10-Dec-2024

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## Golden Eagle 2024: Hellyer Park C-POD

- Simulated M7.5 earthquake
- County OEM established Type III C-POD in Hellyer Park
  - Simulated cell phone outage at site
- RACES mobilized to provide comms between C-POD site and EOC

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## Golden Eagle 2024: Hellyer Park C-POD

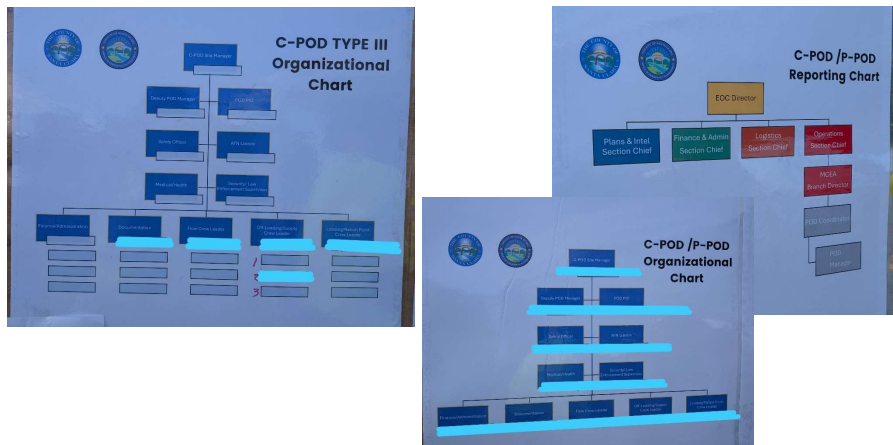


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### Golden Eagle 2024: A few surprises

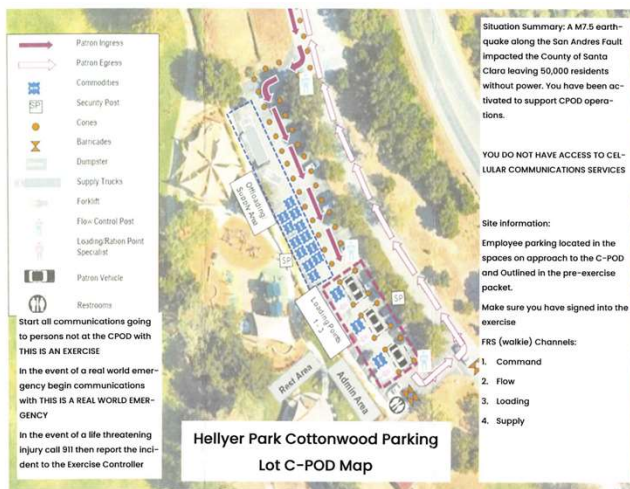
- RACES wasn't in the org chart...



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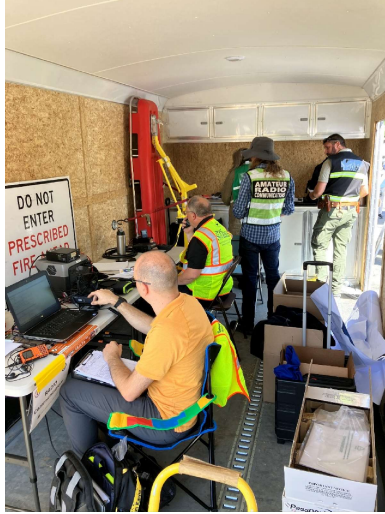
### Golden Eagle 2024: A few surprises

... or the site map



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## Golden Eagle 2024: Field Setup



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## Golden Eagle 2024: More surprises

- FRS radios were used for on-site comms
- The IC expected RACES would handle all comms, including FRS
- RACES staff had not been briefed on use of FRS

**Motorola CLS 1410 Radio**

**Radio Etiquette:**

1. Start by announcing the position you want to speak to (i.e. Flow Crew Lead)
2. Tell them who is calling (i.e. Loading Point Lead)
3. Be specific in your message, speak clearly, and without long pauses
4. Don't interrupt! You cannot talk and listen at the same time

Start all communications going to persons not at the CPD with THIS IS AN EXERCISE

In the event of a real world emergency begin communications with THIS IS A REAL WORLD EMERGENCY

In the event of a life threatening injury call 911 then report the incident to the Exercise Controller

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## Golden Eagle 2024: Message flow

- Many incident staff (including IC) were unfamiliar with forms and message flow to EOC

- RACES provided blank forms and coaching
- Handing off the *Recommended Form Routing* Cheat Sheet worked wonders

**SCCo ARES/RACES Recommended Form Routing**

**Usage:**

- This cheat sheet summarizes the recommended Handling, To Location, and To ICS Position when sending official forms via amateur radio.
- The message author can select whatever Handling Order, To Location and ICS Position (the chosen for each message).
- **Routing:** As a general rule, address a message to the most specific ICS position that is staffed at the destination location. If the specified unit is not staffed, send it to the branch, if the branch is not staffed, send it to the section.
- **Defaulting:** As a general rule, deliver the message to the leader of the "To ICS Position" identified in the message: Unit Leader, Branch Director, Section Chief, or their Deputy. If that position is not staffed or available, deliver to the next higher position in the ICS hierarchy shown below.

Form Type	Handling	To Location **	To ICS Position **
<b>General EOC:</b>			
ICS-213 Message Form	Author defined	Author defined	Author defined
EOC-213RR Resource Request	if "Priority" (Field 11) is:	Then "Handling" is:	
	None	Immediate (ASAP)	
	High (0-4 hrs)	Immediate (ASAP)	County EOC
	Medium (5-12 hrs)	Priority (4 hrs)	Planning Section
	Low (13+ hrs)	Resolute (2 hrs)	
OA Jurisdiction Status	Immediate (ASAP)	County EOC	Situation Analysis Unit Elal: Planning Section
OA Shelter Status	Priority (4 hrs)	For city managed: City EOC For county managed: County EOC	Mass Care and Shelter Unit Elal: Care and Shelter Branch Elal: Operations Section

\*\* For actual EOC activations, use the default To Location and To ICS Position(s) as indicated, unless told otherwise by the message originator. For an ARES/RACES exercise or training event, use the information given for that event, e.g. "Tanabe EOC" may be specified instead of "County EOC", etc.

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## Golden Eagle 2024: Operations

- RACES sent and received multiple 3<sup>rd</sup>-party messages over packet and voice
  - ICS-213
  - 213RR with routing slip
  - Informal
- Cross-trained operators
  - Able to fill in while others were coaching incident staff or taking breaks

## Golden Eagle 2024: Takeaways

- Exercising with served agencies is invaluable
- Keep current on training and practice so you know how message flow works
- *Semper Gumby!*



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## W2XSC BBS Failure June 8<sup>th</sup> – 16<sup>th</sup>

Tim Howard, KE6TIM  
Revised 16-Nov-2024

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## Initial Evaluation

- Problems with W2XSC were reported
- A number of remote troubleshooting steps were taken.
  - The network connection between the BBS PC and the other network infrastructure at the site had failed.
  - The JNOS BBS, the TNCs, and the Radios were fully functional.
  - The BBS was usable as a standalone BBS without external connectivity to the rest of the network.
- It was determined that a spare computer, data switch, and data cable should be taken to the site.
- Because of the remote location of the site, other parts, tools, and equipment were collected for the trip.

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## Plan for Trip to Site

- Over a one hour drive one-way
- Take anything you might need. Spare parts for repair and also backup monitor, keyboard, mouse, tools, etc.
- Need a high clearance vehicle in good weather, 4WD at other times.
- Because of the remote location we want to send at least two people.
- It took a couple of days to get the material together.
- The keys to access the site were not readily available.
- Once on site, it was quickly determined there was a cable issue.

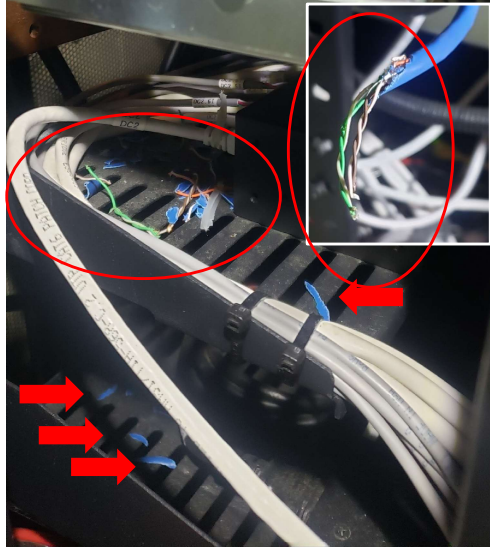
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## Initial Visit

- Cable was replaced
- TNC Firmware updated
- General cleaning and inspection of cabinet
- Remote testers checked all radio, BBS, and email connections to the site
- The site was up and back to normal operation

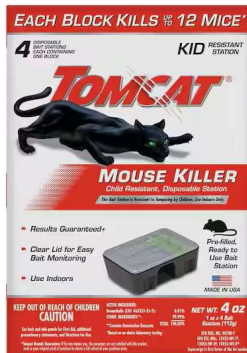


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## Less than 16 hours later

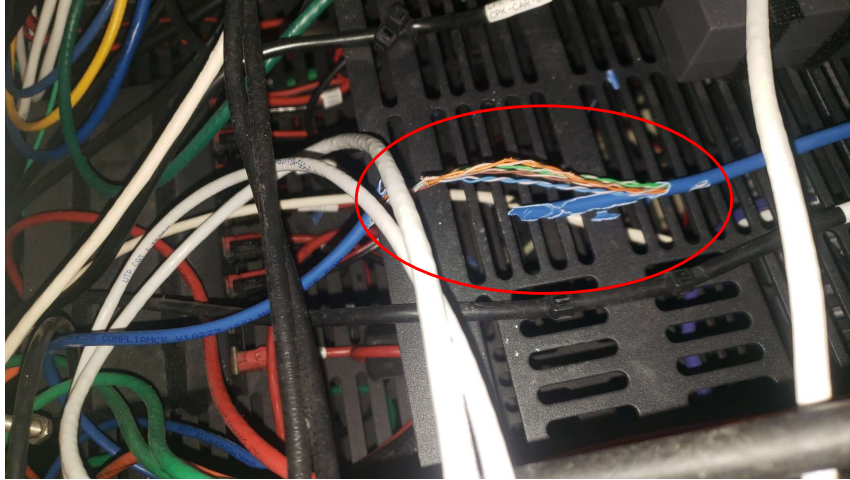
- The BBS failed with the exact same symptoms. Remote diagnostics indicated a similar failure.
- A second visit the next day was scheduled with spare parts, a hardened data cable, and mouse deterrent.



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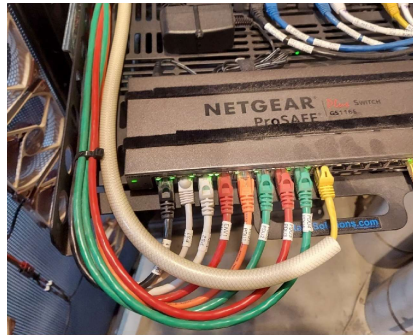
## Second Visit



- The same data cable was chewed breaking wires

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- The data cable was replaced with the shielded cable.
- No additional problems with mice eating cables
- Site owner has placed more traps and sealed any openings found. Reminded tenants to keep door closed.
- Thanks to:
  - Thomas Leibold – spare parts and technical expertise
  - Bertrand Achard – extra tools and computer monitor
  - Tim Howard – driver and support

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## Additional W2XSC Issues

- PG&E PSPS power shutdown
  - Generator started but shutdown failed due to overheating
  - Fan Blades were broken providing no cooling air
  - Mice or larger rodents had got inside the fan shroud and when engine started the fan blades broke off.
  - Our batteries did not work due to several years of use with numerous PG&E and generator issues
- Site owner has enclosed all openings to the generator with wire mesh to allow air flow but block mice and other rodents from access
- New batteries are on order and when they arrive a site visit will be scheduled

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## Q&A

All Training Staff

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# Thank You!

Please check your email and follow the instructions to complete and return the Course Evaluation.

To get course credit the Course Evaluation is due by next Saturday.

If you have questions or feedback about this or other training activities, you can join our Training discussion group.

<https://scc-ares-races.groups.io/g/training>

This is a moderated group.

**See you at a training class or exercise next year!**