

# Amateur Packet Radio Field Reference

For SCCo RACES responders

2018.04



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**How to use this handbook**

This document is a **Test Handbook** to determine the feasibility and effectiveness of providing a consolidated listing of critical information needed by Santa Clara County Packet Operators. This content includes information, references, and instructions relevant to support a Packet Field Deployment and is current as of 27-Sep-2017.

This document is not an official Santa Clara County RACES deliverable.

The user of this handbook is responsible for keeping current with environmental, procedural, and SCCo Packet System changes. This can be accomplished by periodically checking the [www.scc-ares-races.org](http://www.scc-ares-races.org) website and by joining and monitoring the [scc-packet@yahooogroups.com](mailto:scc-packet@yahooogroups.com).

Until the next release of this handbook, you should make updates to this handbook as soon as changes are communicated.

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**My Details**

**My City:** \_\_\_\_\_

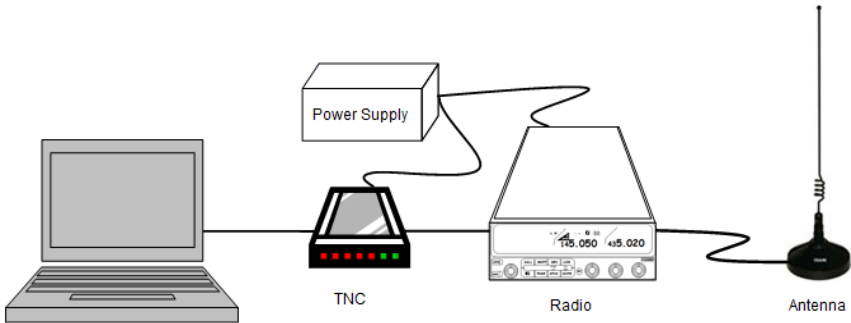
**Primary BBS:** \_\_\_\_\_ **Access Freq:** \_\_\_\_\_

**Secondary BBS:** \_\_\_\_\_ **Access Freq:** \_\_\_\_\_

# 1 Amateur Radio Packet Overview

## What is Ham Radio Packet?

- Amateur packet radio is one of many digital modes that hams can use.
- Packet Radio is used to transmit digital data by radio or other wireless communications links.
- Packet radio can send to or retrieve “mail” from a packet Bulletin Board System (BBS).



## Typical Packet System

Computer: Runs the packet software that communicates with the BBS.

TNC: Terminal Node Controller; the interface between your radio and your computer (similar to a telephone modem).

Radio: Set to the frequency of the BBS and other packet stations.

Antenna: Connected to the Radio.

Power Supply: Powers the Radio and TNC; could also be a battery.

## Why use Packet Radio?

1. BBSs allow messages to be stored, retrieved, or forwarded throughout the connected BBS network.
2. The recipient does not need to be on line to get the message, meaning that messages can be retrieved at the recipient's convenience.
3. Packet is ideal for passing lists of material, addresses, instructions, or complex words (e.g. pharmaceuticals or chemicals)
4. We would use packet radio for the same reasons we would use internet email: message accuracy, delivery, and the ability to handle message complexity.
5. The Santa Clara County Emergency Management Association (EMA) knows that our local communications infrastructure **WILL FAIL** during an earthquake and **expects** Ham Radio to enable the response and speed the recovery. Packet Radio is part of the response.

## 2 Packet Operator Checklist

This checklist is relevant for all packet field assignments. Follow the standard Resource Net procedures when traveling to your assignment.

**First Shift:** If you are establishing the first shift, do the following:

- \_\_\_\_\_ 1. Inform Resource Net Control that you have arrived. Check out of the Resource Net before you leave your car.
- \_\_\_\_\_ 2. Check into the assigned voice net before you leave your car. Start an ICS 309 Comm Log.
- \_\_\_\_\_ 3. Make an ICS 214 Unit log entry.
- \_\_\_\_\_ 4. Sign in on the site's ICS 211 Check-in sheet.
- \_\_\_\_\_ 5. Find the site Person in Charge and inform them of your arrival.
- \_\_\_\_\_ 6. Request a safety briefing; get details on any site- or event-specific conditions that exist.
- \_\_\_\_\_ 7. Find and establish the workspace to set up your equipment.

**Initial Setup, equipment check-out, check-in**

- \_\_\_\_\_ 8. Find, assess, and setup the packet radio equipment (see *Section 3, Packet Startup Procedure*).
- \_\_\_\_\_ 9. Confirm or set up your User Identification (FCC Call Sign) and **Tactical Call** for the Served Agency.
- \_\_\_\_\_ 10. Check Outpost settings before transmitting
  - Correct BBS
  - Correct Frequency
  - TNC settings
- \_\_\_\_\_ 11. Create a text check-in message to your served agency using your assigned Tactical or FCC call sign with the following information:
  - a. Name and Call of Packet Operator
  - b. Name and Tactical call of Packet Station, if used
  - c. Date and time the packet station was operational
- \_\_\_\_\_ 12. Begin Operations. Make ICS 214 Unit log entry.

**Packet Operations:** During the Operating period, do the following:

- \_\_\_\_\_ 13. Send, receive, log and process packet messages.
- \_\_\_\_\_ 14. Periodically check for new bulletins and follow any new instructions.
- \_\_\_\_\_ 15. Maintain voice radio contact on the designated voice net.
- \_\_\_\_\_ 16. Make appropriate ICS 214 Unit log entries.
- \_\_\_\_\_ 17. Initiate an Outpost Send/Receive at least every 30 minutes.
- \_\_\_\_\_ 18. Report any issues or problems to the site Person in Charge and on the voice net.

**Incoming Shift Change:** If you are relieving someone else, do the following:

- \_\_\_\_\_ 19. Inform Resource Net Control that you have arrived. Check out of the Resource Net before you leave your car.

- \_\_\_\_\_ 20. Sign in on the local ICS 211 form.
- \_\_\_\_\_ 21. Find the person you are relieving and receive a turn-over of information and status (see **Shift Change Information** below).
- \_\_\_\_\_ 22. Request a Safety Briefing of any site- or event-specific conditions that currently exist.
- \_\_\_\_\_ 23. Find the site Person in Charge and inform them of your arrival.
- \_\_\_\_\_ 24. Make packet system updates – Station ID, Tactical Call, etc.
- \_\_\_\_\_ 25. Make all relevant shift change entries in your ICS 214 Unit log.

**Outgoing Shift Change:** If you are being relieved, do the following:

- \_\_\_\_\_ 26. When contacted by your replacement, review all relevant information and status (see **Shift Change Information** below).
- \_\_\_\_\_ 27. Find the site Person in Charge and inform them of the shift change and your departure.
- \_\_\_\_\_ 28. Make the appropriate shift change entries in your ICS 214 Unit log.
- \_\_\_\_\_ 29. Turn over to your replacement all assigned equipment.
- \_\_\_\_\_ 30. Sign out on the site's ICS 211 Check-in sheet.
- \_\_\_\_\_ 31. Check into the Resource Net. Inform Net Control what you plan to do (go home, return to EOC, etc.).

**Securing Operations:** when directed to secure operations, do the following:

- \_\_\_\_\_ 32. Create a text check-out message to your served agency using your assigned Tactical or FCC call sign with the following information:
  - a. Name and Call of Packet Operator
  - b. Name and Tactical call of Packet Station, if used
  - c. Date and time the packet station is shutting down
- \_\_\_\_\_ 33. Find the site Person in Charge and inform them you are shutting down packet operations.
- \_\_\_\_\_ 34. Make the appropriate notation in the ICS 214 Unit log.
- \_\_\_\_\_ 35. Shut down and packet up all assigned equipment.
- \_\_\_\_\_ 36. Sign out on the local ICS 211 form.
- \_\_\_\_\_ 37. Check out of the assigned voice Net and check in with the Resource Net. Inform Net Control what you plan to do (go home, return to EOC, etc.).

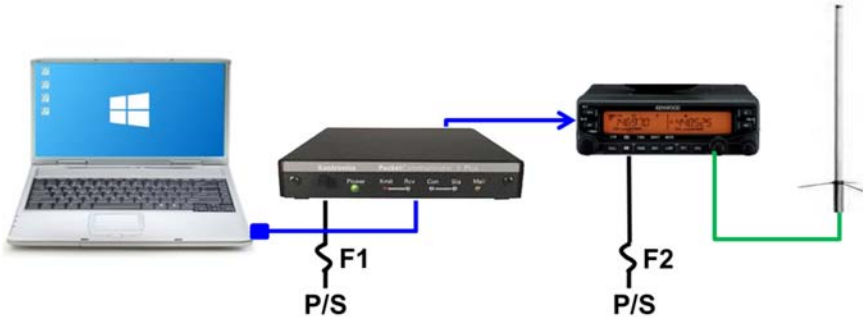
**Shift Change**

Before turning over or accepting a shift, both the in-coming and out-going operators should review as much information as possible, including:

- The purpose of this station.
- To whom you are reporting; how to find and recognize the person.
- The BBS and radio frequencies in use; radio, power, or antenna details.
- If a telephone is accessible, its location and phone number.
- What is going on in general? What changes are expected?
- Messages sent, replies you expect, and who should get them.
- The location of the toilet, food, water, etc.
- Location and timing for briefings that may occur during each shift change.

### 3 Packet Startup Procedure

This is a four-pass approach for confirming the operational state of a packet station.



**Connections:** Confirm that all packet components are correctly cabled.

- \_\_\_\_\_ 1. Laptop; Serial USB Adaptor available if no serial comm port exists.
- \_\_\_\_\_ 2. TNC
  - a. to PC: Serial modem cable to Serial USB Adaptor, or USB cable for newer KPC3+
  - b. to Radio: custom data cable; depends on the radio connection.
  - c. Power: fused, connected to battery or power supply
- \_\_\_\_\_ 3. Radio
  - a. To Antenna: coax connected to antenna
  - b. Power: fused, connected to battery or power supply

**Power Up:** Apply power. Verify all devices are correctly powered up.

- \_\_\_\_\_ 4. Laptop boots up, battery charged, or power adaptor plugged in
- \_\_\_\_\_ 5. TNC: Apply power, verify Power LED lights up; Verify the fuse LED is NOT lighted (indicates a blown fuse).
- \_\_\_\_\_ 6. Radio: Apply power, verify radio turns on

**Equipment Settings:** Confirm all equipment settings. This occurs prior to starting Outpost.

- \_\_\_\_\_ 7. Laptop Terminal Program: Set Comm Port Setting
- \_\_\_\_\_ 8. TNC Setting:
  - a. Comm Port Setting
  - b. Interface Terminal
  - c. CD Software

- \_\_\_\_\_ 9. Radio set to the frequency for the selected BBS
  - a. Tone set to none
  - b. Offset set to none
  - c. Squelch open
  - d. Radio set to high power
  - e. Correct side of the radio is selected for packet (radio dependent)

### **Outpost Application Settings**

- \_\_\_\_\_ 10. Laptop Application (see *Section 9, Client Software*)
  - a. Station ID is set to your FCC Call Sign
  - b. Tactical Call is set per your operational instructions
  - c. PC Time is checked to be the correct time
  - d. BBS is set to the required BBS
  - e. TNC is set to the TNC type you are using
  - f. Other Outpost configurations

## 4 Packet Network Frequencies

Last revised: 28-Jul-2017 at 22:12 by Michael Fox, N6MEF

**IMPORTANT:** Post a copy of this file in your radio room and retain a copy on your packet computer. The suggested location is the Outpost Archive folder.

### Notes:

- Users can connect using the access frequencies listed below
- The BBS-BBS forwarding frequency is not for primary user access. It may be used in emergency/backup situations and for occasional testing.
- See the SCCo\_Packet\_Tactical\_Calls bulletin to determine which BBS the users in each agency should use
- Agency EOCs and command posts are encouraged to use 220 since most individual users will be on 2m

### Frequencies are in MHz

Call Sign	AX.25 Connect	User Access	BBS-to-BBS Forwarding
W1XSC	W1XSC-1	145.750, 223.620	
W2XSC	W2XSC-1	145.730 223.560	
W3XSC	W3XSC-1	144.310, 223.540	
W4XSC	W4XSC-1	145.690, 223.600*	223.600

\*223.600 is primarily for BBS forwarding; O.K. for back-up user access, testing.

### BBS Locations

Call Sign	Location
W1XSC	San Jose
W2XSC	Crystal Peak (South County)
W3XSC	Palo Alto
W4XSC	Frazier Peak (East of Milpitas)



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## 5 Primary Tactical Calls and BBS's

Last revised: 06-Mar-2016 at 17:17 by Michael Fox, N6MEF

**IMPORTANT:** Post a copy of this file in your radio room and retain a copy on your packet computer. The suggested location is the Outpost Archive folder.

### BBS Naming/Addressing

Address Type	Format	Example
BBS Call Sign:	W#XSC (where is 1-6)	w1xsc, w2xsc, ...
AX.25 connect:	<BBScall>-1	connect w1xsc-1
AMPRnet/Internet:	<BBScall>.ampr.org	w2xsc.ampr.org
BBS Network:	<BBScall>.#nca.ca.usa.noam	w3xsc.#nca.ca.usa.noam

### Usage:

- All users: connect to the primary BBS for your city/agency. If the primary is down, connect to the secondary.
- Individuals: connect using your FCC call sign
- Cities/Agencies: connect using a tactical call assigned by your EC/CRO

Each line in the table below contains:

- 1) Primary tactical call sign for the agency (typically for the DOC/EOC)
- 2) Agency name
- 3) 3-letter tactical prefix assigned to agency
- 4) Primary BBS name (agency normally connects to and receives mail here)
- 5) Secondary BBS name (agency connects here if primary BBS is down)

Tactical	Agency Name	Prefix	Pri	Sec
ARCEOC	American Red Cross	ARC	W1XSC	W4XSC
SCUCIC	Cal-Fire VIPs Santa Clara Unit	SCU	W2XSC	W1XSC
CBLEOC	Campbell, City of	CBL	W1XSC	W4XSC
CUPEOC	Cupertino, City of	CUP	W1XSC	W4XSC
GILEOC	Gilroy, City of	GIL	W2XSC	W1XSC
HOSDOC	Hospitals, all SCCo	HOS	W2XSC	W1XSC
LMPEOC	Loma Prieta Region	LMP	W2XSC	W1XSC
LOSEOC	Los Altos, City of	LOS	W3XSC	W1XSC
LAHEOC	Los Altos Hills, Town of	LAH	W3XSC	W1XSC
LGTEOC	Los Gatos, Town of	LGT	W1XSC	W4XSC
MLPEOC	Milpitas, City of	MLP	W4XSC	W1XSC
MSOEOC	Monte Sereno, City of	MSO	W1XSC	W4XSC
MRGEOC	Morgan Hill, City of	MRG	W2XSC	W1XSC
MTVEOC	Mountain View, City of	MTV	W3XSC	W1XSC
NAMEOC	NASA - Ames	NAM	W3XSC	W1XSC
PAFEOC	Palo Alto, City of	PAF	W3XSC	W1XSC
SJCEOC	San Jose, City of	SJC	W1XSC	W2XSC
SJWEOC	San Jose Water Co	SJW	W1XSC	W2XSC
SNCEOC	Santa Clara, City of	SNC	W1XSC	W2XSC
XSCEOC	Santa Clara County	XSC	W1XSC	W4XSC
VWDEOC	SC Valley Water District	VWD	W1XSC	W2XSC
SAREOC	Saratoga, City of	SAR	W1XSC	W4XSC

<b>Tactical</b>	<b>Agency Name</b>	<b>Prefix</b>	<b>Pri</b>	<b>Sec</b>
STUEOC	Stanford University	STU	W4XSC	W1XSC
SNYEOC	Sunnyvale, City of	SNY	W1XSC	W3XSC

**NOTES:**

- Each of the above agencies also has ten (10) numbered tactical call signs which begin with their assigned prefix and end with the numbers 001 - 010.

*example:* City of Palo Alto also has tac calls PAF001, PAF002, ... PAF010

- Each of the above agencies may also have additional tactical call signs, defined by the EC/CRO, which begin with the agency's assigned prefix.

**Primary Tactical Calls for Other (non-SCCo) Agencies**

<b>Tactical</b>	<b>Agency Name</b>	<b>Prefix</b>	<b>Pri</b>	<b>Sec</b>
COSEOC	CalEMA - Coastal Region	COS	W1XSC	
XALEOC	Alameda County	XAL	W4XSC	
XCCEOC	Contra Costa County	XCC	W1XSC	
XMREOC	Marin County	XMR	W4XSC	
XMYEOC	Monterey County	XMY	W2XSC	
XBEEOC	San Benito County	XBE	W2XSC	
XSFEOC	San Francisco County	XSF	W4XSC	
XSMEOC	San Mateo County	XSM	W4XSC	
XCZEOC	Santa Cruz County	XCZ	W2XSC	

**Other Special Tactical Prefixes**

<b>Tactical</b>	<b>Function</b>	<b>Prefix</b>	<b>Pri</b>	<b>Sec</b>
PKTMON	SCCo Packet Net Check-ins	PKT	W2XSC	W4XSC
PKTTUE	SCCo Packet Net Check-ins	PKT	W2XSC	W4XSC

## 6 SCC ARES/RACES Data Network Tactical Call List

Updated/Revised: 01-Sep-2016 by Michael Fox, N6MEF

**IMPORTANT:** Post a copy of this file in your radio room and retain a copy on your packet computer. The suggested location is the Outpost Archive folder.

### Santa Clara County OES

XSCEOC	SCCO Emergency Operations Center	55 W Younger Ave, San Jose
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### Santa Clara County ARES/RACES/ACS

XSCRCT	SCCo RACES Communications Trailer	
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### Santa Clara County Communications

XSCCCC	SCCo Communications Center	2700 Carol Dr, San Jose
XSCCIT	SCCo Communications Interoperability Trailer	

### Santa Clara County Fire Department

XSCFHQ	Headquarters	14700 Winchester Blvd, Los Gatos
XSCF70	Station 70 (expansion)	
XSCF71	Station 71 (Cupertino)	20215 Stevens Creek Blvd, Cupertino
XSCF72	Station 72 (Seven Springs)	21000 Seven Springs Pkwy, Cupertino
XSCF73	Station 73 (Saratoga)	14380 Saratoga Ave, Saratoga
XSCF74	Station 74 (El Monte)	12355 El Monte Rd, Los Altos Hills
XSCF75	Station 75 (Los Altos)	10 Almond Ave, Los Altos
XSCF76	Station 76 (Loyola)	765 Fremont Ave, Los Altos
XSCF77	Station 77 (Monta Vista)	22620 Stevens Creek Blvd, Cupertino
XSCF78	Station 78 (Quito)	8870 Saratoga/Los Gatos Rd, Los Gatos
XSCF79	Station 79 (West Valley)	19800 Cox Ave, Saratoga
XSCF80	Station 80 (Sunnyoaks)	485 West Sunnyoaks Ave Campbell
XSCF81	Station 81 (Campbell)	123 Union Ave, Campbell
XSCF82	Station 82 (Shannon)	16565 Shannon Rd, Los Gatos
XSCF83	Station 83 (Los Gatos)	306 University Ave, Los Gatos
XSCF84	Station 84 (Redwood)	21452 Madrone Dr, Redwood Estates
XSCF85	Station 85 (Winchester)	14850 Winchester Blvd, Los Gatos

### Santa Clara County Airports

XSCARH	Reid-Hillview Airport - San Jose	2500 Cunningham Ave San Jose
XSCAPA	Palo Alto Airport - Palo Alto	1925 Embarcadero Rd Palo Alto
XSCASC	South County Airport - San Martin	13030 Murphy Ave San Martin

### Santa Clara County Libraries

XSCLCA	SCCo Library – Campbell	77 Harrison Ave, Campbell
XSCLCU	SCCo Library – Cupertino	10800 Torre Ave, Cupertino
XSCLGI	SCCo Library – Gilroy	350 W. Sixth Street, Gilroy
XSCLLA	SCCo Library - Los Altos	13 S. San Antonio Rd, Los Altos
XSCLMI	SCCo Library – Milpitas	160 North Main Street, Milpitas
XSCLMH	SCCo Library - Morgan Hill	660 West Main Ave, Morgan Hill
XSCLSA	SCCo Library – Saratoga	13650 Saratoga Ave, Saratoga
XSCLWL	SCCo Library – Woodland	1975 Grant Road, Los Altos

### Santa Clara County Parks

XSCPAQ	Almaden Quicksilver	21785 Alamden Rd, San Jose
XSCPAV	Alviso Marina	1195 Hope Street, San Jose
XSCPAL	Anderson Lake	19245 Malaguerra Ave, Morgan Hill
XSCPCL	SCCo Park – Calero	23205 McKean Rd, San Jose
XSCPCH	Chesbro Reservoir	17655 Oak Glen Ave, Morgan Hill
XSCPCA	Chitactac-Adams	10001 Watsonville Rd, Gilroy
XSCPCC	Coyote Creek Parkway	(See Hellyer or Anderson Lake)
XSCPCH	Coyote Lake- Harvey Bear Ranch	10840 Coyote Res. Rd, Gilroy
XSCPEL	Ed R. Levin	3100 Calaveras Rd, Milpitas
XSCPFS	Field Sports	9580 Malech Rd, San Jose
XSCPHL	SCCo Park – Hellyer	985 Hellyer Ave, San Jose
XSCPJG	Joseph D. Grant	18405 Mt Hamilton Rd, San Jose
XSCPJR	Lexington Reservoir	17770 Alma Bridge Rd, Los Gatos
XSCPJG	Los Gatos Creek	1250 Dell Ave, Campbell
XSCPMC	Martial Cottle	5283 Snell Ave, San Jose
XSCPMO	SCCo Park – Motorcycle	300 Metcalf Rd, San Jose
XSCPMM	Mount Madonna	7850 Pole Line Rd, Watsonville
XSCPCC	Penitencia Creek	Mabury & Jackson Ave, San Jose
XSCPMS	Rancho San Antonio	22500 Cristo Rey Dr, Cupertino
XSCPMS	SCCo Park – Sanborn	16055 Sanborn Rd, Saratoga
XSCPST	Santa Teresa	260 Bernal Rd, San Jose
XSCPSC	Stevens Creek	11401 Stevens Canyon Rd, Cupertino
XSCPSC	Sunnyvale Baylands	999 E Caribbean Dr, Sunnyvale
XSCPUS	Upper Stevens Creek	Skyline Blvd, Palo Alto
XSCPUC	Uvas Canyon	8515 Croy Rd, Morgan Hill
XSCPUR	Uvas Reservoir	14200 Uvas Rd, Morgan Hill
XSCPVA	SCCo Park – Vasona	333 Blossom Hill Rd, Los Gatos
XSCPVM	Villa Montalvo	15400 Montalvo Rd, Saratoga

### NOTES:

1. Plus 10 Tactical Calls for Ad Hoc Use: XSC001 - XSC010

## 7 Standard Subject Line Format

Last revised: 13-Jun-2017 at 06:04 by Michael Fox, N6MEF

**IMPORTANT:** Post a copy of this file in your radio room and retain a copy on your packet computer. The suggested location is the Outpost Archive folder.

Always use the following subject line format to allow the recipient to review and prioritize messages.

The standard subject line format is:

[SenderMsgNbr]\_[Severity]/[HandlingOrder]\_[Subject]

### Where:

[SenderMsgNbr]	Typically, a three-character Tactical ID consisting of letters and/or digits, followed by a hyphen ("-"), followed by three or more digits, followed by an optional letter suffix. <ul style="list-style-type: none"><li>▪ Tactical ID: Individuals should use their initials, call sign suffix or other identifier. Agency EOCs/DOCs should use their assigned three-letter Tactical ID. Others should use the three-character value assigned by their agency, typically the last three characters of the tactical call sign.</li><li>▪ Optional letter suffix: Used to make the number different from any that may already exist on pre-printed forms. Outpost uses the suffix "P" when it generates the message number. It is recommended to avoid using letters which could be mistaken for digits (I, O, Q, Z).</li></ul>
[Severity]	One letter: E = Emergency; U = Urgent; O = Other
[HandlingOrder]	One letter: I = Immediate; P = Priority; R = Routine
[Subject]	Short description of the contents of the message

### Example:

Subject Line: LOS-127P\_O/R\_Los Altos EOC check-in

### Meaning:

Sender Msg Nbr:	LOS-127P
Severity:	Other
Handling Order:	Routine
Subject:	Los Altos EOC check-in

### NOTES:

1. When sending PacFORMS messages, PacFORMS will automatically format the subject line and will include the type of form used as part of the subject.
2. Underscore characters "\_" are required as separators as shown above.

## 8 Weekly Packet Check-In Procedure

Last revised: 03-Jul-2017 at 10:32 by Michael Fox, N6MEF

Use the following instructions to check-in with packet on a weekly basis. You can send your check-in up to six days in advance. Check-ins close promptly at 20:00 on Mondays and Tuesdays.

### Weekly Rotating Simulated BBS Outage

Each week, we simulate that one of the BBSs is down. Avoid sending messages from or to the simulated down BBS.

Check-in Day	Simulated Outage
1st Monday or Tuesday of the month	W1XSC
2nd Monday or Tuesday of the month	W2XSC
3rd Monday or Tuesday of the month	W3XSC
4th Monday or Tuesday of the month	W4XSC
5th Monday or Tuesday of the month	none

### Monthly Rotating Message Format Schedule

Use the appropriate message format for the current month.

Month	Format
January, May, September	Plain Text
February, June, October	PacFORMS: XSC ICS-213 Message Form
March, July, November	PacFORMS: XSC EOC Resource Request Form
April, August, December	PacFORMS: XSC City Scan/Flash Report Form

### To Address

Use the appropriate To address depending on the check-in day.

Mondays:	PKTMON@bbSCALL.ampr.org (from SCCo net, AMPRnet or Internet) PKTMON@bbSCALL.#nca.ca.usa.noam (from BBS network)
Tuesdays:	PKTTUE@bbSCALL.ampr.org (from SCCo net, AMPRnet or Internet) PKTTUE@bbSCALL.#nca.ca.usa.noam (from BBS network)

where "bbSCALL" is the call sign of the BBS used for packet net check-ins.

Consult the "Primary Tactical Calls and BBSs" bulletin to determine which primary and secondary BBS is used by the SCCo Packet Net Check-ins function. Remember to send to the secondary BBS on the week that the primary BBS is (simulated) down.

### Subject Line

PacFORMS will automatically add the message number, severity, handling-order, and subject line to the outgoing message. If the form itself has a subject field, then the following format is suggested for the subject field in the form: Check-in <Date> - <CallSign> - <FirstName> - <City>

For plain text messages, you must construct the subject line manually. The following subject line format is suggested:

<MsgNbr>\_O/R\_Check-in <Date> - <CallSign> - <FirstName> - <City>

## 9 Client Software

### Application Startup

1. **Start Outpost.** Find the Outpost icon on the PC desktop, and double-click on it.
2. The **Station Identification Form** opens.



Outpost SCC

- a. Use the **User Call Sign** dropdown to select your call sign. If your FCC call sign is not listed, press **New** and fill in all fields. Verify the User Fields are filled in as follows:

User Call Sign:	< your call sign >
User Name:	< your name >
Message ID Prefix:	<Last 3 chars of call sign>

- b. Press **Apply** when Done.
- c. Use the **Tactical Call Sign** dropdown to select your tactical call. If your assigned Tactical call is not found, press **New** and fill in all fields. Verify the Tac Call Fields are filled in as follows:

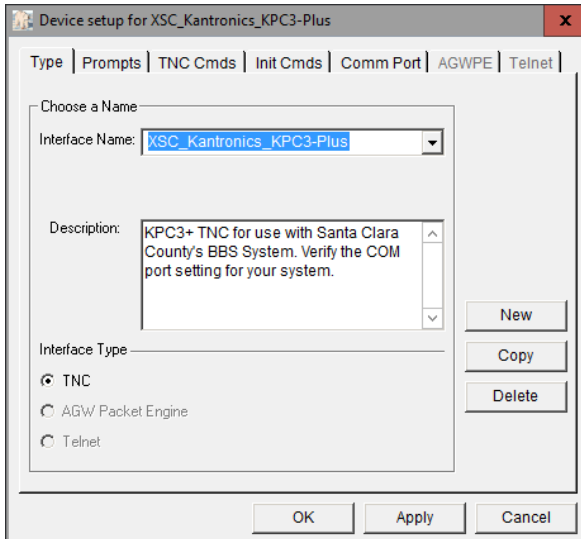
User Tactical Call:	<input checked="" type="checkbox"/> CHECKED.
Tactical Call Sign:	< per your assignment >, 6 characters
Additional ID Text:	Short description of the location
Message ID Prefix:	< Usually the first or last 3 characters of your tactical call >

- d. Press OK when done. The Outpost main form will open.

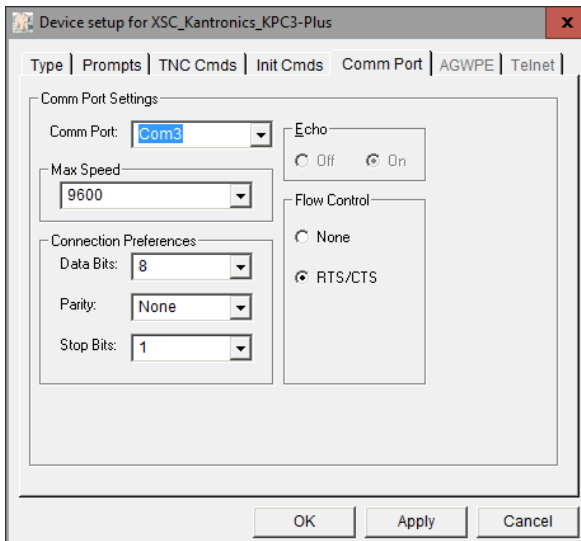


3. **Setting up the TNC.** From Outpost, select **Setup > TNC Settings.**

- a. On the *Type* tab, set the Device Name, such as **XSC\_Kantronics\_KPC3-Plus.**



- b. On the *Comm Port* tab, select the PC Comm Port to which the TNC is connected.



- c. Do not change any fields on any other tabs.  
d. Press **OK** to Save your settings.

4. **Setting up the BBS.** From Outpost, select Setups > BBS Settings.
  - a. On the Name tab, select the primary BBS Name for your city. If that BBS is not available, select your secondary BBS.

- b. Set **BBS Type** to “**Let Outpost determine...**”
  - c. Press **Set/Get TNC** to reopen the TNC Settings form, and press **OK** from that form. This links the TNC to this BBS.
  - d. Do not change any fields on any other tabs.
  - e. Press **OK** to Save your settings
5. **Confirm your settings.** Check the bottom of the Outpost main form and confirm you see your Station ID, Tactical Call, BBS, and TNC listed as you have just set up.

6. **Other SCC Outpost Settings (Installer v134).** There are several settings that can be made in Outpost. The following are the default settings for operating in the SCC County BBS system.

**Setup > Station ID**

Tab	Option	What to set
Signature	<input type="checkbox"/> Insert a signature for <call> in all messages [ _____ ]	Optional

**Setup > BBS**

Tab	Option	What to set
Retrieving	<input checked="" type="checkbox"/> Retrieve Private Messages	Checked
	<input type="checkbox"/> Retrieve NTS	Unchecked
	<input type="checkbox"/> Retrieve Bulletins	Unchecked
	<input checked="" type="checkbox"/> Retrieve Bulletins	Checked
	<input type="radio"/> All new Bulletins	A XSCPERM LA
	<input type="radio"/> Selected Retrieval	A XSCEVENT LA
	<input checked="" type="radio"/> Custom Retrieval	
	<input type="checkbox"/> Skip NTS Messages that I send	Unchecked
<input type="checkbox"/> Skip Bulletins that I send	Unchecked	
<input type="checkbox"/> Keep messages on BBS, do not delete after retrieving	Unchecked	

**Tools > Send/Receive Settings**

Tab	Option	What to set
Automation	<input checked="" type="radio"/> Manual – Initiate Send/Receive sessions manually.	Checked
	<input type="checkbox"/> Send a message immediately when it is complete	Unchecked
	Send/Receive Button Setup <input checked="" type="radio"/> Send/Receive	Checked
Receiving	<input type="checkbox"/> Play this sound on arrival:	Unchecked
Printing	<input type="checkbox"/> Print received, sent messages	No preference
	<input checked="" type="checkbox"/> Print with message headers	Checked
	<input type="checkbox"/> Print Delivery, Receive Receipts	Unchecked
Notifications	<input checked="" type="checkbox"/> N0 through N3	Check All
	<input checked="" type="checkbox"/> Play this sound on notification [sound136.wav]	Checked
Other	<input checked="" type="checkbox"/> Show the TNC session form during Send/Receive	Checked

- a. Press **OK** to Save your settings.

**Tools > Message Settings**

Tab	Option	What to set
New Messages	<input checked="" type="radio"/> Set default to Private	Checked
	<input type="checkbox"/> Create and send NTS messages as private	Unchecked
	<input type="checkbox"/> Default destination [ _____ ]	Unchecked

### Tools > Message Settings (continued)

Tab	Option	What to set
Message Numbering	<input checked="" type="checkbox"/> Add Message number to subject line ⊙ With hyphenation	Checked
	<input checked="" type="checkbox"/> Add Message Number Prefix	Checked
	<input type="checkbox"/> Add message number separator	Unchecked
	<input checked="" type="checkbox"/> Assign a local message number to inbound messages.	Checked
Replies / Forwards	⊙ Set default to private	Checked
	<input checked="" type="checkbox"/> Close original message on reply or forward	Checked
Receipts	<input type="checkbox"/> Always request a Delivery Receipt	Unchecked
	<input type="checkbox"/> Always request a Read receipt	Unchecked
	<input checked="" type="checkbox"/> Auto-Delivery Receipt	Checked
	<input type="checkbox"/> Auto-Read Receipt	Unchecked
Deleting	<input checked="" type="checkbox"/> Prompt before permanently deleting a message	Checked
Adv	<input checked="" type="checkbox"/> Automatically start Opdirect Message Capture System	Checked
	Opening a locally created PacFORM... ⊙ Never ⊙ Prompt ⊙ Always	Never
	If the msg was previously submitted ⊙ Never ⊙ Prompt ⊙ Always	Prompt
	Opening a received PacFORM... ⊙ Never ⊙ Prompt ⊙ Always	Always

- a. Press **OK** to Save your settings.
- b. Exit and restart Outpost to ensure the **Adv** Opdirect settings take effect.

### Tools > Report Settings

Tab	Option	What to set
Variables	Global Variables: Next Message Number [ ### ]	Next Msg Number
	Organization:	"RACES"
	County:	"Santa Clara County"
	All other fields at your discretion	Optional
ICS309	⊙ No Automation	Checked
	Task ID:	Activation No.
	Task Name:	Event Name
	Radio Operator Name:	See Station ID Form
	Station ID:	See Station ID Form

- a. Press **OK** to Save your settings.

### Tools > Log Settings

Tab	Option	What to set
	<input checked="" type="checkbox"/> L1: Send/Receive Session Window Logging	Checked
	<input type="checkbox"/> L2: Interface Data Logging	Unchecked
	<input type="checkbox"/> L3: Diagnostic Logging	Unchecked

- a. Press **OK** to Save your settings.

### Tools > General Settings

Tab	Option	What to set
	<input checked="" type="checkbox"/> Show Station Identification Form on Startup	Checked
	<input checked="" type="checkbox"/> PC Time Check, at startup...	Checked
	Custom Folder labels: Folder 1 [            ] Folder 2 [            ] Folder 3 [            ] Folder 4 [            ] Folder 5 [            ]	Optional
Addressing	<input type="checkbox"/> Use hierarchical address Continent parameter in validation.	Unchecked
Profiles	Save profile changes when switching profiles... <input type="radio"/> Always (original Outpost behavior) <input checked="" type="radio"/> Prompt (avoids unintentional changes) <input type="radio"/> Always (best for shared stations with presets)	Prompt
Miscellaneous	<input checked="" type="checkbox"/> Auto-Print with Message Header	Checked
	Recently used configuration list [   ]	8

- a. Press **OK** to Save your settings.

### Tools > Script Settings

Tab	Option	What to set
	<input type="checkbox"/> Run this script on startup [   ]	Unchecked
	<input type="checkbox"/> Run this script on exit [   ]	Unchecked
	<input checked="" type="radio"/> Send/Receive runs standard process	Checked

- a. Press **OK** to Save your settings.

7. **Connection Test.** Verify connectivity with the BBS. From the Outpost Main Menu tool bar, press **Send/Receive**. Verify that the Send/Receive Session Window opens. When done, verify that it closes without error.

# 10 Creating packet messages

## 10.1 Packet message addressing basics

Addressing a packet message requires 2 types of addresses:

1. What individual do you want to receive the message?
2. What packet station can deliver it to the individual?

We want to "embed" our message below into a packet message with additional addressing information

From: Ops, Xanadu Fire ICP  
To: Ops, Xanadu EOC  
Subj: ICP Staffing Summary

~~~~~  
~~~~~  
~~~~~

Signed,  
Dave Miller Ops Chief



BBS: W1XSC-1  
From: XNDFS1  
To: XNDEOC  
Subj: XND47823P: ICP Staffing Summary

From: Ops, Xanadu Fire ICP  
To: Ops, Xanadu EOC  
Subj: ICP Staffing Summary

~~~~~  
~~~~~  
~~~~~

Signed,  
Dave Miller Ops Chief



### 1. Packet Address Header

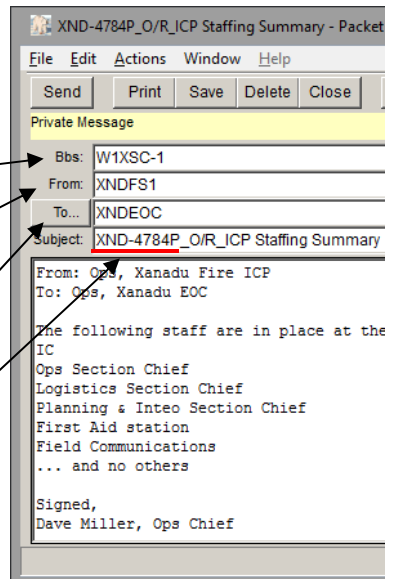
The packet address header gets the message to the correct packet station.

**BBS:** The "store and forward" mail drop where this message is sent. **Automatically filled in.**

**From:** Tactical call of your packet station. **Automatically filled in.**

**To:** Destination station

**Subject:** Outpost automatically sets the Message ID in the subject line. You need to fill in the rest of the subject text.



## 2. Recipient Address and Message

To ensure the message gets to the right person, fill in the rest of the message.

**Subject:** Fill in the rest of the subject line after the Message ID.

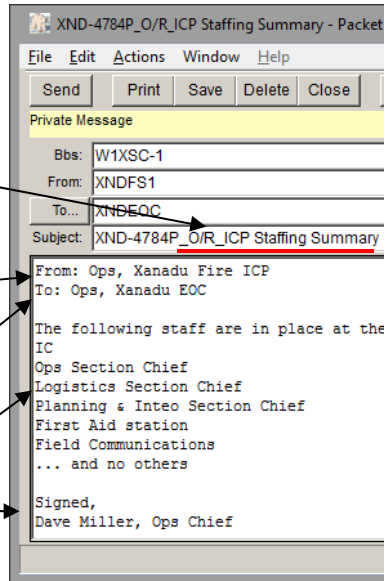
### Message Body

**From:** Who is the message from? Include the ICS position or function.

**To:** Who do you want to receive the message? Include ICS position or function.

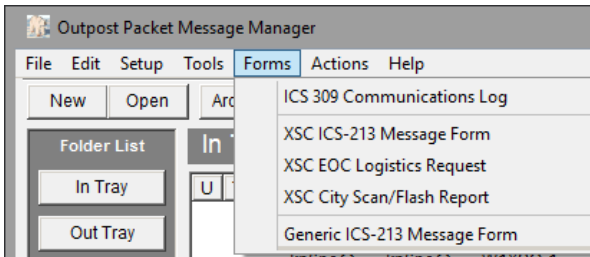
**Message** Fill in the message details.

**Signature:** Put whom the message is from.



## 10.2 Sending a PacFORM message

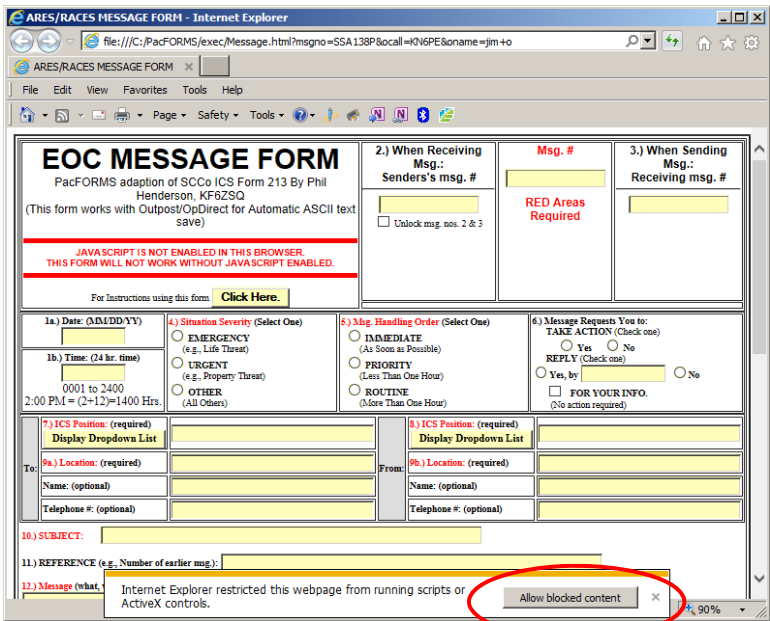
1. PacFORMS are browser-based fill-in-the-blank html message forms used within Santa Clara County.
  - a. To open the forms from Outpost, go to the Forms Menu, and choose the desired form.



Form name	Purpose
<b>Standard Santa Clara County PacFORMS</b>	
XSC ICS-213 Message Form	Used to send a message from the cities/agencies to Santa Clara County EOC, or other jurisdictions within the county.
XSC EOC-213RR Resource Request	PacFORMS version of the Santa Clara County Resource Request Form.
XSC City Scan/Flash Report	PacFORMS version of the "City-Scan" Flash Report.

<p><b>Other Forms</b></p> <p>ICS 309 Communications Log</p>	<p>Creates a standard ICS 309 Comm log report based on packet messages sent. Different report options let you customize the data and look and feel. Run this report at the end of your shift.</p>
<p>Generic ICS-213 Message Form</p>	<p>This form is a program that can run on a remote PC on the same subnet as Outpost. See the ICS-213mm Message Manager User Guide for details.</p>

2. For City-to-County packet messages, we will use either the 3 standard Santa Clara County PacFORMS listed above or free form messages.
3. Running the PacFORMS from Outpost is recommended since several fields are filled in for you.
4. After double-clicking on your PacFORM, you may get a message that says essentially that **Scripts** or **ActiveX controls** are restricted from running. You must enable them for the form to work correctly.
  - On Windows XP, click on the **yellow banner** at the top of the browser window. Select the option to “Allow Blocked Content”.
  - On Windows 7, 8, or 10, press “Allow Blocked Content” button at the bottom of the Browser window.



5. Once enabled, the default fields will be populated.



## Completing the PacFORM

6. Required fields are indicated with accompanying **RED** Text.

7. When done, scroll to the bottom of the PacFORM, and press

**SUBMIT Message Form to Outpost.**

8. The form data is extracted, formatted, and transferred to Outpost where it is loaded in a message form and opened.

**NOTE:** If you don't see the message form, then check behind the browser window.

9. Fill in any missing fields (To: field).

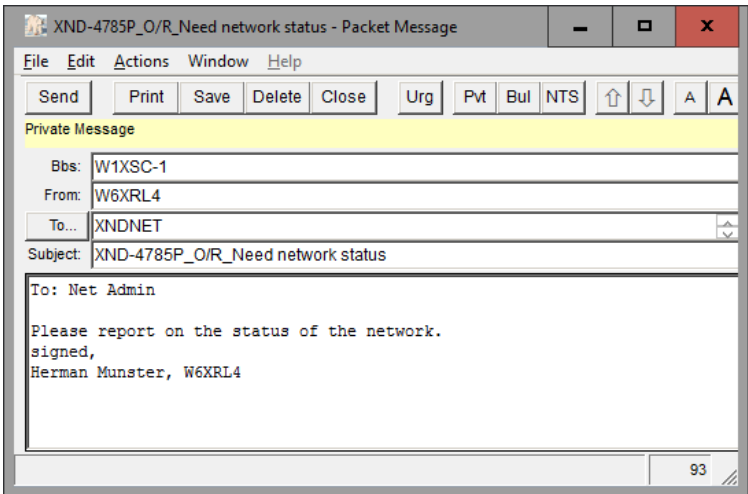
10. DO NOT change the subject line.

11. When done, press **Send**.

12. From Outpost, press **Send/Receive** to send the message.

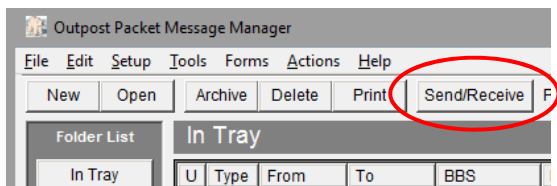
### 10.3 Free Form Message

1. From Outpost's main form, create a new message by pressing the **New** button. A Blank message form opens.
2. The **BBS:** and **From:** fields are filled in with the BBS and From Station call sign or tactical call that were previously defined.
3. Fill in the **To:** field with the call sign or tactical call of the station to receive this message.
4. Complete the **Subject:** text. Add a message description after the Message ID characters (**XND-4785P** in this example).



**NOTE!** Not adding any additional subject line detail (Severity, Handling Order, and message summary) will delay processing your message on the receiving end. See *Section 7, Standard Subject Line Format* for details.

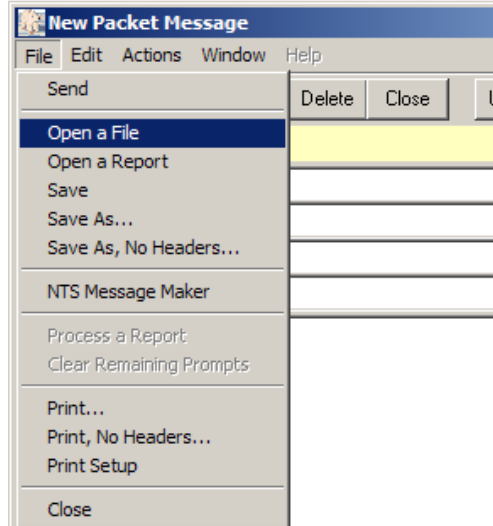
5. Enter the body of the message.
6. Press **Send** when done.
7. From Outpost, press **Send/Receive** to connect and deliver the message to the BBS.



## 10.4 Sending a text file

The text of the message can originate from a text file created elsewhere. To import a message from a text file, do the following:

1. From the Outpost main form, click on the **New** button.
2. Select **File > Open a File**. Navigate to the directory where the file resides and select the file. Press **OK**.
3. The text will be loaded into the Message area.
4. The message Subject is set to the text file name.
5. Press **Send** when done.
6. From Outpost, press **Send/Receive** to connect and deliver the message to the BBS.



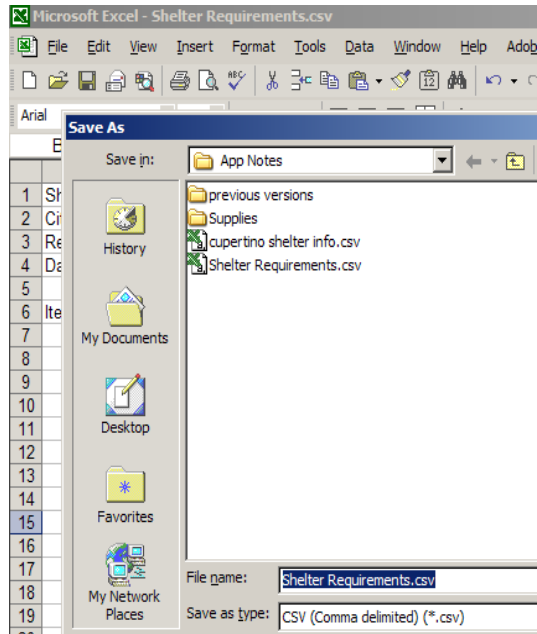
## 10.5 Sending a spreadsheet .csv file

Attempting to send a standard spreadsheet file will cause Outpost, the BBS, or both, to hang because of embedded binary content in the spreadsheet.

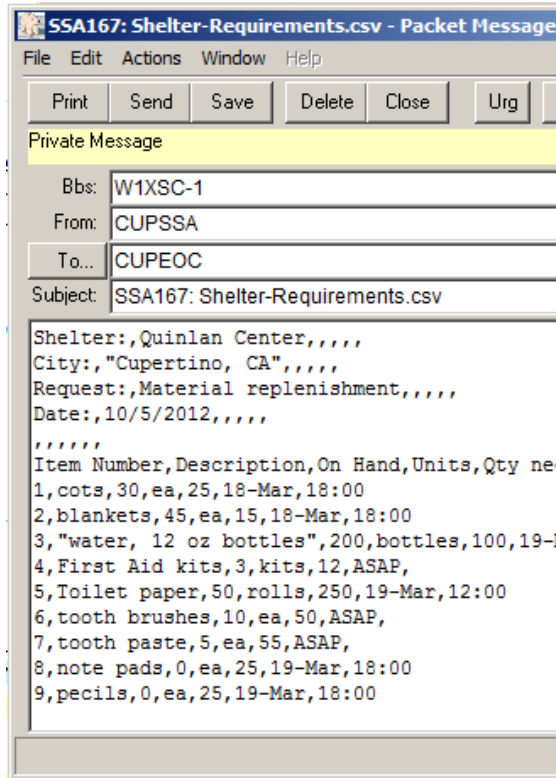
However, most spreadsheet applications support a way to export spreadsheet data into one or more ASCII formats that are compatible with Outpost.

This approach also works with other spreadsheet packages.

1. Once the spreadsheet is created, move a copy of it to the PC where Outpost resides.
2. At the Outpost PC, open the spreadsheet, press **File->Save As** from the spreadsheet menu.
3. Change the "Save as Type" to "Comma Delimited (\*.csv)". Press **Save**. A file with a \*.csv extension is created.



4. Go back to Outpost. Open an Outpost message form. Press **File->Open** from the Outpost message menu.
5. Change the "Files of Type" to "All files (\*.\*)"."
6. Change the directory to where the \*.csv file is located, select the file, and press **Open**. The \*.csv file is copied into the message form.
7. Take a look at this example to the right. Note that all fields are separated by commas, and fields with embedded commas are surrounded by quotes.
8. When done, press **Send** to move the message to the Out Tray.
9. From Outpost, press **Send/Receive** to connect and deliver the message to the BBS.



**NOTE:** The file name is also set as part of the Subject. This will come in handy at the receiving end.

## 10.6 Receiving a spreadsheet .csv file

Continuing with the above example, proceed to recover the file as follows:

1. Once the Outpost message arrives, open the message.
2. Press **File->Save As** from the Outpost message menu.
3. The file name will default to that of the message's subject with the correct \*.csv extension. Press **Save**. Close the message.
4. Open Excel.
5. Press **File->Open** from the Excel menu. Change the "Files of Type" to "Comma Delimited (\*.csv)." Locate the file saved by Outpost. Press **Open**.
6. The entire message is brought into the spreadsheet. Delete any header lines that may show up in the file.

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