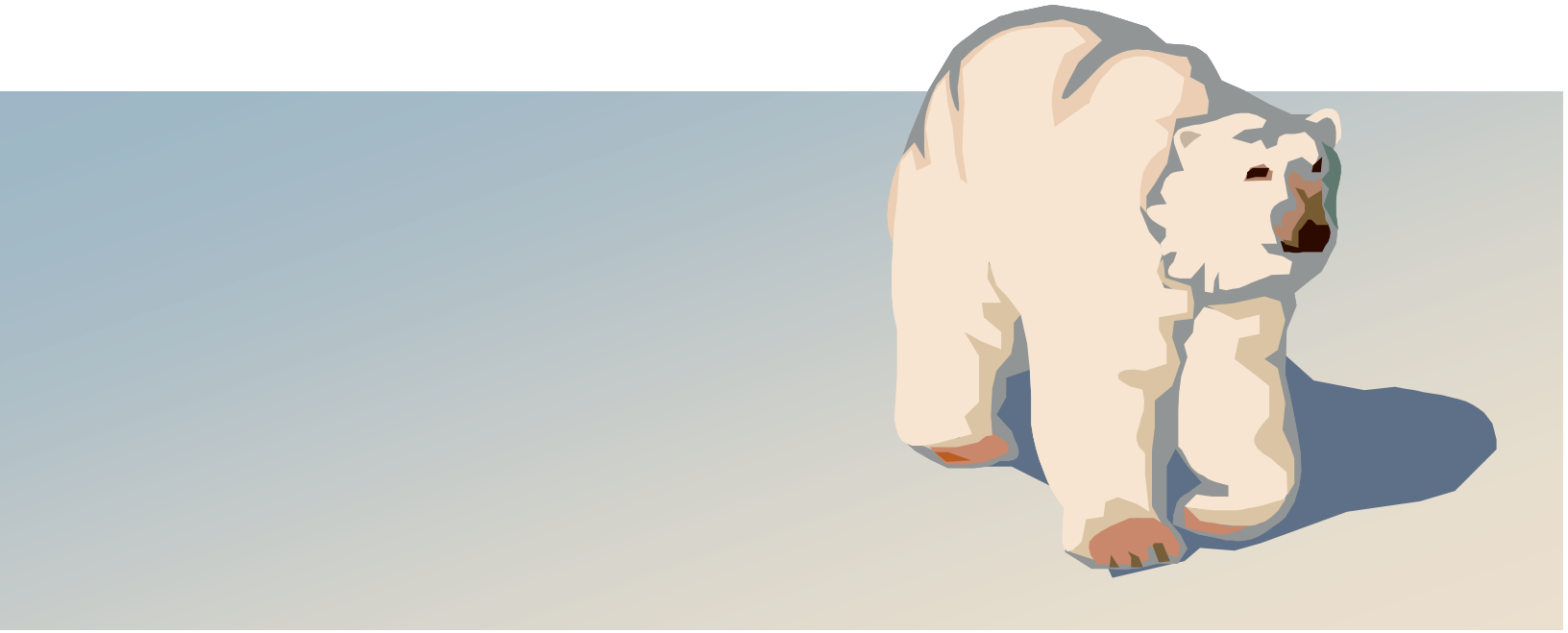
Outpost

Packet Message Manager v2.5

Users Guide

May 2011

Version: v2.5 c033



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Revision History

Date	Revision	Release	Notes
26-Dec-2010	Original	v2.5c014	Original
1 May 2011		V2.5c030	Update to reflect recent changes
9 Aug 2011		V2.5c033	Update to reflect recent changes

1 About Outpost

1.1 What is Outpost?

Outpost is a PC-based messaging client that lets you to exchange your packet messages with almost any Amateur Radio Bulletin Board System (BBS).

Using your existing Terminal Node Controller (TNC) or AGWPE-enabled sound-card, radio, and a Windows-based PC, all you need to know is your call sign, information about your TNC, and information about the BBS. Once the program is configured, Outpost then manages all message-handling between your PC and the BBS. Outpost also lets you send, receive, read, delete, create, reply to, or forward messages back to the BBS.

Unlike commercial mail systems, BBS-based mail is transmitted unencrypted over the amateur radio bands. There is nothing private about it.

1.2 Why Outpost?

Outpost was created to support the packet communication needs of an ARES, RACES, or other emergency communications response team during a disaster or other activation where Amateur Radio is deployed.

During an emergency, you may be required to pass lists of information or detailed instructions within an Operational Area to support Logistics, Operations, or Planning/Intel activities as required by a municipality's Emergency Operations Center (EOC). Packet is ideal for this task. Outpost makes the job even easier by automating the manual interaction between you and the BBS.

Because Outpost leverages the existing packet infrastructure, it can be deployed relatively easily and quickly. Outpost can either operate as a single stand-alone messaging client, or collaboratively with other Outpost stations using built-in features that enhance overall message handling effectiveness.

If Outpost had a tag line, it would be: "***Focus on the message, not the medium.***" An emergency activation is not the time to think about packet training. By using an application with a look and feel similar to contemporary email clients, Outpost helps emergency communicators get a packet message written and transmitted quickly without all operators needing to be packet experts.

A successful Outpost deployment does require a few things:

- At least one individual who has a fundamental understanding of packet, and can configure and verify that Outpost is operational prior to a response.
- A definition of your emergency response team's operating policies for packet messaging. Operating policies are the guidelines that would be observed during an activation.

  Examples of a policy would be things like (i) no keyboard-to-keyboard communications will be used, (ii) polling the Operational BBS will occur no more frequently than every 15 minutes, (iii) tactical call signs will be used, etc. Most packet messaging policies can be implemented through Outpost.

1.3 A typical TNC Session today

Before Outpost, if you wanted to send and receive a packet message, you needed a terminal emulator program and be familiar with commands for controlling your TNC and a remote BBS. For instance, you probably did something like this:

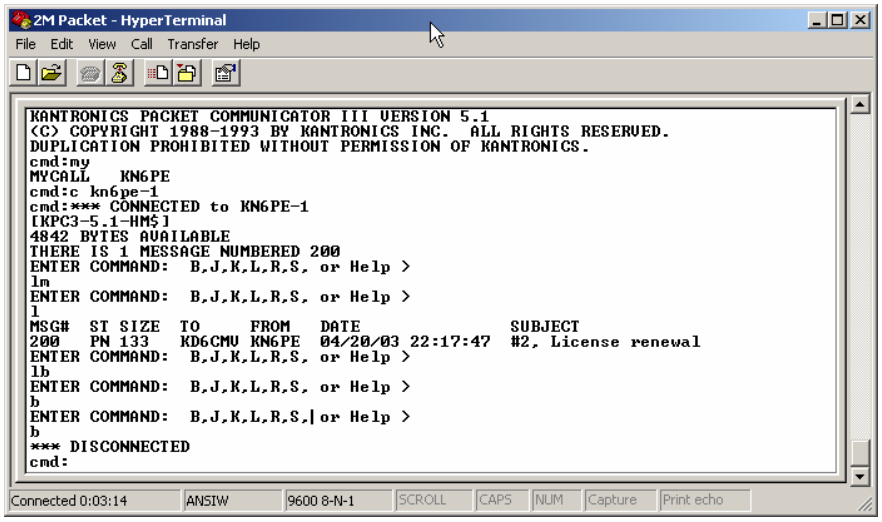


Figure 1: Sample TNC session using Hyperterm

1. Turn on your Computer and run your terminal emulator. You may be using PACTERM or some other TNC program. I've used the general-purpose MS-Windows HYPERTERM program because of its ability to cut-and-paste text to and from it.
2. Turn on your TNC. Verify you see the TNC welcome message.
3. Turn on your radio and select the frequency on which the BBS operates.
4. Check the configuration of the TNC. This could include sending the **MY** command to review or change the TNC's call sign, setting the date and time, or changing any display settings with the **ECHO** or **AUTOLF** commands.
5. Connect to the BBS. After issuing the **Connect <call sign>** command, you verify the BBS responds with its welcome message.
6. Once connected, you check for messages addressed to you with the **LM** (list mine) command. If you operate NTS packet, you may check for any NTS messages with the **LT** (list traffic) command. Then, you may read them with the **Read <####>** command (where #### is the message number) and delete them off the BBS with the **Kill <####>** command.
7. You may also check out current bulletins with the **LB** (list bulletins) command, and then read them one by one.
8. If you wanted to send a private message to a friend, you would enter the **SP <call sign>** command (send private). When prompted, you enter the subject, and then the message.

NOTE: As a reminder, every time you press **Enter** on your keyboard, the line of text you just typed is sent to the TNC and transmitted to the BBS. The only way to correct an error in your message is to finish your message, delete it from the BBS, and start over.

9. When done, you exit the BBS with the **B** or **Bye** command.
10. Because you don't know when your friend would get the message, you would repeat steps #5, #6, and #9 to see if you have a reply.

During normal operation, the above steps can get tedious, in particular if you are expecting a reply.

During an emergency, you may have an established routine to do something similar, with more purpose and intent to the steps outlined above.

1.4 A Typical Outpost Session

Outpost takes care of a lot of the above steps. Once configured, Outpost takes on the job of sending and processing all TNC and BBS commands during a "Packet Send/Receive Session." Because you have previously told Outpost what the TNC and BBS prompts and commands are, Outpost automatically sends, waits, receives, and processes all exchanges with the BBS.

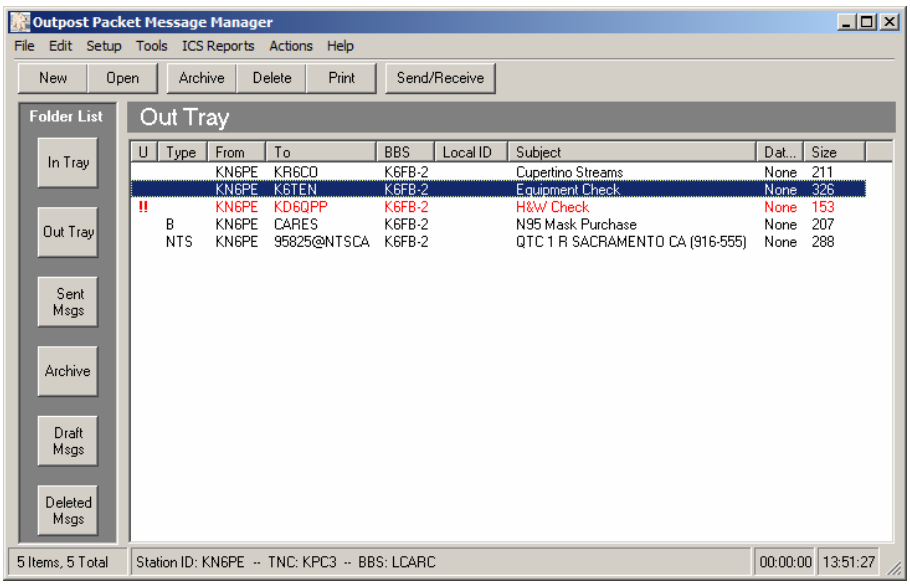


Figure 2: Outpost's Main window

Here is what you would do with Outpost:

1. Turn on your Computer and run Outpost.
2. Turn on your TNC.
3. Turn on your radio and select the frequency.
4. Confirm that Outpost has the correct TNC and BBS selected.
5. From Outpost, press the **Send/Receive** button.
6. Outpost will automatically:
   - Send the appropriate TNC commands to get it ready for a Send/Receive Session.
   - Connect to the BBS by sending the **Connect <bbs>** command.
   - Check to see if you have any private messages in the Outpost Out Tray to be sent to this BBS. If so, it will send them with the **SP** Command. It then does the same for any NTS or Bulletins you may want to send.

- Check for messages addressed to you with the **LM** command. Outpost will read these messages with the **R <####>** command, then delete them off the BBS with the **K <####>** command. Outpost will also check for and retrieve NTS and bulletins if selected.
- Finally log off the BBS with the **Bye** command.
- If configured, Outpost will repeat this cycle on a regular interval as defined by you.

In short, Outpost automates the Packet Session by sending TNC and BBS commands, looking for prompts, and responding with the next appropriate command.

Whatever you manually type at the keyboard into your terminal emulator program, Outpost does this for you automatically.

1.5 Outpost Features

Message Management

1. Multiple mail folders. Outpost lets the user manage messages in a series of folders, including an In Tray, Out Tray, Sent Folder, Draft, Archive, and Deleted Items Folders. These folders are permanently defined.
2. Message Types. Outpost supports three primary message types: Private, NTS, and Bulletins. Sent and received messages are displayed with their appropriate types indicated.
3. Address book. The user can create entries for a single user or for a distribution list.
4. Message Creation. Outpost allows messages to be created from scratch, importing text from an ASCII file, cut and pasted in from other applications, or by Replying to or Forwarding a previously received message.
5. Text Message Formatting. Messages can be entered in a free-form text area. Simple formatting can be performed, errors corrected, and text can be added and deleted prior to sending the message.
6. NTS Message Maker. Outpost also helps format NTS messages. The NTS Message Maker is a fill-in-the-blanks form that prompts for all required fields needed to create a correctly formatted NTS packet message. ARL Messages can also be added and automatically formatted.
7. Report Interpreter. Outpost supports an online report interpreter that helps get a pre-defined report filled in and formatted quickly.
8. Message archiving. After an emergency, the entire message database can be archived to either an Outpost-readable format for importing later on, or a user-readable format.

Packet Session Management

9. Serial Comm Port Management. Outpost supports direct serial communications with a TNC by setting up the serial port and handling any contention for the port that may exist.
10. AGWPE Support. Outpost supports the AGWPE application located either locally on the same PC as Outpost, or somewhere else on the network.
11. Telnet Support. Outpost supports Telnet access to a network-accessible BBS.

12. Interface Management. Outpost sends all initialization commands to the TNC, AGWPE, and Telnet interface to prepare it for a Packet Session.

13. BBS Management. Outpost sends the right BBS commands at the right time.

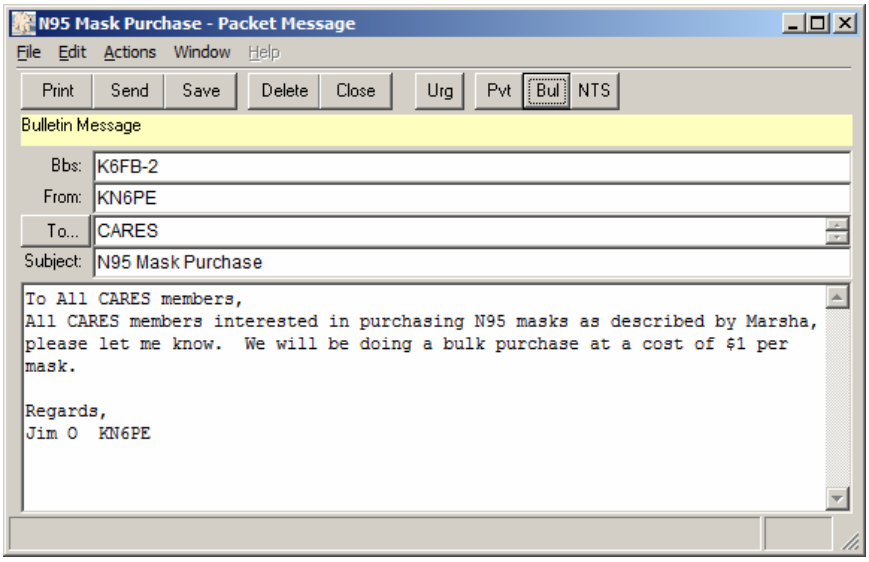


Figure 3: Outpost's New Message window

14. Support for several popular BBSs and PBBSs, including:
    - KPC2, KPC2400, KPC3+, KC9612, KAM (all models), Data Engine
    - PK-88, PK-96, PK-232, DSP-232
    - MFJ-1270x, MFJ-1278
    - AA4RE (standard and with the Tactical Call Customization)
    - BPQMailChat
    - DXNET
    - F6FBB
    - HAMSERV
    - JNOS, SNOS, TNOS
    - MSYS
    - OpenBCM
    - N0ARY
    - Winlink's RMS and CMS
    - W0RLI

Configurations and Setups

15. Interface configuration setup

16. TNC configuration setup. Outpost manages a list of Interfaces, TNCs and their commands. TNCs can be added or deleted.

17. BBS configuration setup. Outpost will manage a list of BBS's and their commands. BBSs can be added or deleted. TNCs can be linked to a BBS entry for quick BBS selection.

18. Message retrieval. Outpost allows the user to choose which types of messages will be checked for and retrieved from the BBS. The three message types are: Private, NTS, and Bulletin.

19. Retrieval Automation. You can configure Outpost to run a Send/Receive Session automatically at a specific time interval set (in minutes).

20. Station Identification. The Station ID (Call Sign) can be changed.

1.6 The Outpost operating environment

Outpost can operate in a number of packet environments where one or more BBSs are used as message drops (Star network). For instance, it may be operating in a network along with other Outpost users or other terminal emulator program users with a system running BBS software. In Santa Clara County, W6XSC-1 is the county's packet BBS system serving several San Francisco South Bay Area city EOCs.

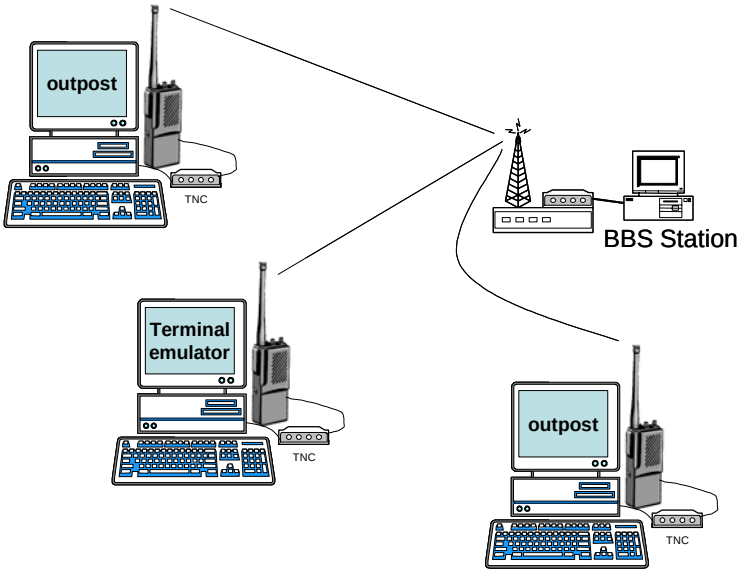


Figure 4: Central BBS Station serving many Packet users

Outpost could also be operating in a smaller closed packet network where one user has enabled a TNC's Personal BBS (PBBS) feature thereby providing a low cost central message drop for several stations.

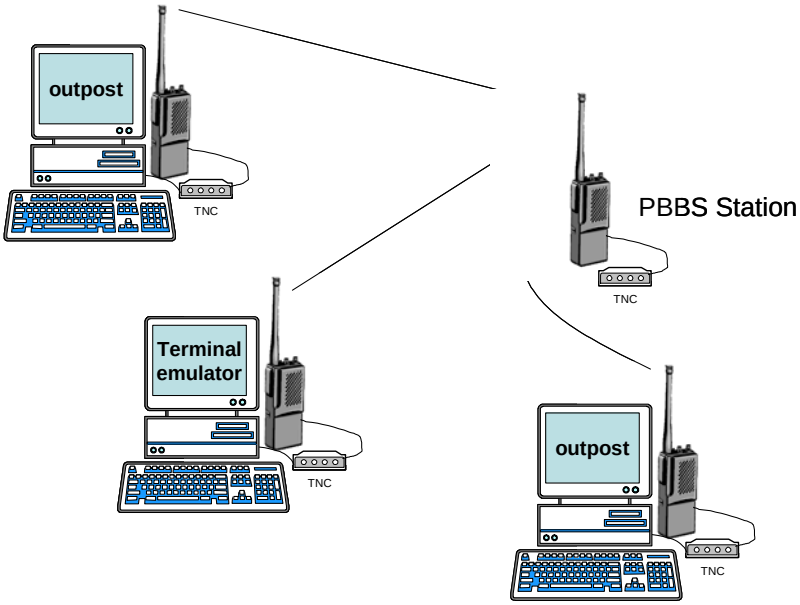


Figure 5: A PBBS Station as a central mail drop

1.7 What Outpost does not do

- Outpost does not support any of the bulletin board forwarding protocols. Instead, it automates sending commands and interprets the returning prompts of both the TNC and the BBS to manage message handling.
- Outpost does not support any of common email protocols such as POP3 or SMTP. However, internet mail is available indirectly through Winlink's RMS and CMS nodes.

2 Installation

2.1 System requirements

Outpost has been verified to run under the following operating system environments:

- Microsoft Windows 98, NT, 2000, ME, XP, Vista, and Windows 7

2.2 Hardware requirements

MS-Windows requires the following hardware:

- Intel-based PC required to support any of the above MS Window Operating Systems
- Open Serial Port for Serial or AGWPE interfacing, or
- USB port with a serial adaptor to connect to the TNC
- Network interface for remote AGWPE or Telnet interfacing

2.3 Upgrading from Outpost 1.3 or earlier

If you have Outpost 1.3 or earlier, you must **UNINSTALL** any of these versions before installing version 2.5.

If you DO NOT WANT to save the messages that you currently have, skip to Section 2.5 below. Otherwise, proceed as follows.

1. From v1.3.x Outpost, press **File > Export**
2. Choose either **All Folders…** or the **This folder…** to export.
3. Enter a file name, press **OK**

The messages are now stored in an export file.

2.4 Updating from Outpost 2.2 or greater

Outpost 2.4 data files are different from those used in previous releases. As part of the installation process, you need to run an update program delivered with the Outpost v2.5 release, otherwise, Outpost will complain. See *Section 2.6 Outpost v2.5 installation* for details.

2.5 Installation from an Internet Download

Installing the software off the Web begins by downloading the Outpost Install Program to your PC.

1. Create a Temp directory on your PC such as *optemp* (or any other existing temp directory will work fine).
2. Go to the website (www.outpostpm.org), navigate to the **Downloads** section, and look for **Outpost v2.5 Installation**.
3. Double-click on the link to run the program off of the web site, or,
4. Right click on the link, and select "Save Target As". Enter a directory to save the installation program to your temp directory. The install program is named *opsetup250ixx.exe*, where "*xx*" is the current installation version.

2.6 Outpost v2.5 installation

The Outpost 2.5 installation program comes with all files needed to install Outpost on your PC. After downloading the install program from the Outpost website, run the program. Here are the install steps that are presented.

1. Click on the *opsetup250ixx.exe* program (where *xx* is the latest release).
2. Information. This is general information that you should check out depending on the type if install you want to perform. When done, press **Next >.**
3. Select Destination Location. The usual and default location is provided. Unless you really want to install Outpost somewhere else, just press **Next >** to proceed.
4. Select components. Outpost can install program components in the following configurations:
   a. **Update for Existing users:** This installs all **Program Files** only. This is ideal since it updates only the components that changed since the last release. While this is primarily the Program Files, you may want to check the **User Documents** component as well to get the latest user guides for this release.

      NOTE: Do not check "Sample TNC and BBS configuration files"… this will overwrite whatever config files you currently have.

   b. **First time installation for new users:** This option installs all components; programs, documentation, sample files, etc. You can uncheck specific components as necessary.

   c. **Custom Installation:** This option lets you pick whatever components you want to install.

   Choose which ever installation option is right for you, then press **Next >.**
5. Select Start Menu Folder: The location where the install program will place the program short-cuts. Take the default location offered unless you want to pick someplace else.
6. Select Additional Tasks: The only task available is creating icons on the desk top. This is purely your option, but most people select it anyway.
7. Ready To Install: all choices are made, and this is a summary of the options you selected. Press **Install** to continue with the install process.
8. Data Update. The install program will automatically run *opupdate25.exe* to update the following data files:
   a. Message database – Outpost.odb
   b. TNC data file – TncInfo.dat
   c. BBS data file – BbsInfo.dat
   d. BBS path files – *bbs_name*.pth
   e. Message.log – logging used to support Ics309 Comm Log Builder
9. Information: This is yet another info window that describes some of the new features with v2.5.
10. Finally… you can view the README.TXT file or run Outpost directly.
11. When done, run Outpost as usual.

2.7 Installation from CD-ROM or USB Flash Memory

You can create an install CD-ROM or Flash Memory by copying the installation file to this device. See your specific system instructions for creating a CD-ROM. Once the CD is created:

1. Insert the Outpost CD-ROM or Flash Memory into the computer.
2. On the Task Bar, select START, select RUN. Enter the command *D:\opsetup250ixx.exe*, where "D" is the CD-ROM or Flash Memory Drive (use the appropriate letter if your system's device is different).
3. Follow the procedure from *Section 2.6 Outpost v2.5 installation* above.

All system software is now loaded and the system is ready for use. Refer to the other sections in this manual for information on configuring and controlling the Outpost application.

2.8 Installation from Floppy Discs

You can also create a set of install floppies for Outpost v2.5 as well; 5 floppies are required. To use an installation floppy disk set, proceed as follows:

1. Go to the website (www.outpostpm.org), navigate to the **Downloads** section, and then select **Outpost v2.5 for Floppy Install**.
2. Right click on the link, and select "Save Target As". Enter a directory to save the zip file to your temp directory. The install program is named *opfloppy250ixx.zip*, where "*xx*" is the current installation version.
3. Unzip this file.
4. Label the floppies as op250disc1, op250disc2, op250disc3, op250disc4, and op250disc5, or by some other name.
5. Copy the following files as follows:
   - op250disc1 opsetup250i*xx*.exe & opsetup250i*xx*-1.bin
   - op250disc2 opsetup250i*xx*-2.bin
   - op250disc3 opsetup250i*xx*-3.bin
   - op250disc4 opsetup250i*xx*-4.bin
   - op250disc5 opsetup250i*xx*-5.bin
6. Insert Disc 1 in the target machine and run a:\opsetup250i*xx*.exe.
7. The installation program will prompt for the other disks when needed.
8. Follow the procedure from *Section 2.6 Outpost v2.5 installation* above.

All system software is now loaded and the system is ready for use. Refer to the other sections in this manual for information on configuring and controlling the Outpost application.

2.9 Operating System Considerations

Outpost has the capability of independent operation where it will periodically poll the BBS for any new incoming message traffic. Because of this feature, the PC can run unattended.

However, this absence of any user interaction may cause the PC to think that it is idle and invoke any enabled power management features such as "Turn off Hard Disks," "System Standby," etc.

If you intend to run Outpost unattended, set these features to NEVER or OFF. These properties should be accessible from the Control Panel.

Additionally, depending on your hardware, specific BIOS setting changes may also have to be made.

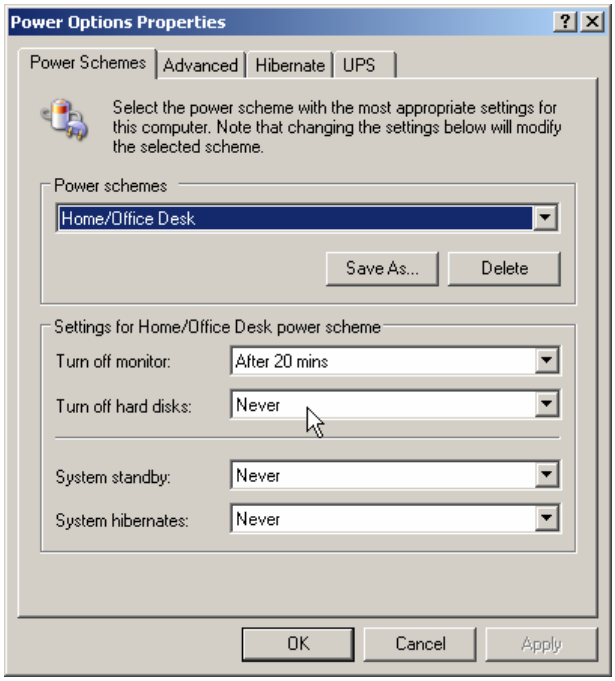


Figure 6: Sample Power Option Setup Menu on a Windows XP System

3 Getting started

Outpost manages and controls all aspects of the message "send and receive" process. This section describes how to use Outpost.

3.1 Station Logon Window

When you start Outpost, you are presented with the Station Identification window that displays the Legal Station Call Sign and name of the Call Sign owner that was entered the last time Outpost was run.

If this information is still correct, then press **OK** to continue. If your legal call sign and name are different from what is listed, then enter your call sign and name in the fields. Press **OK** when done.

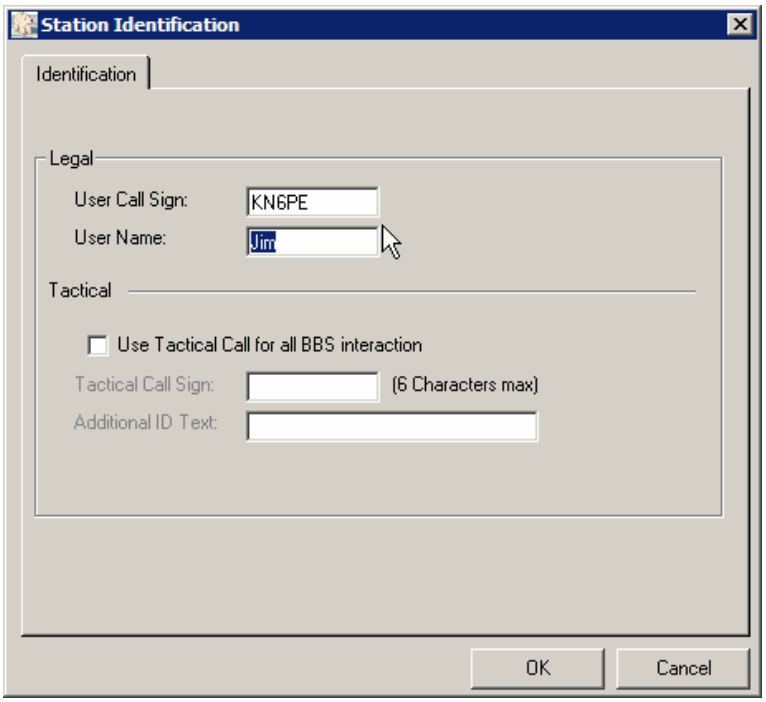


Figure 7: Station Identifier Window

The field below the User Name is the Tactical Call field. See *Section 11 Using Tactical Calls* for details on how to set up Tactical Calls.

3.2 The Main Outpost Form

From the main Outpost form, you can manage your messages, perform application setups, and control your Send/Receive Sessions.

This form has one view that allows the user to review messages stored in several different folders. The form is divided into four primary areas:

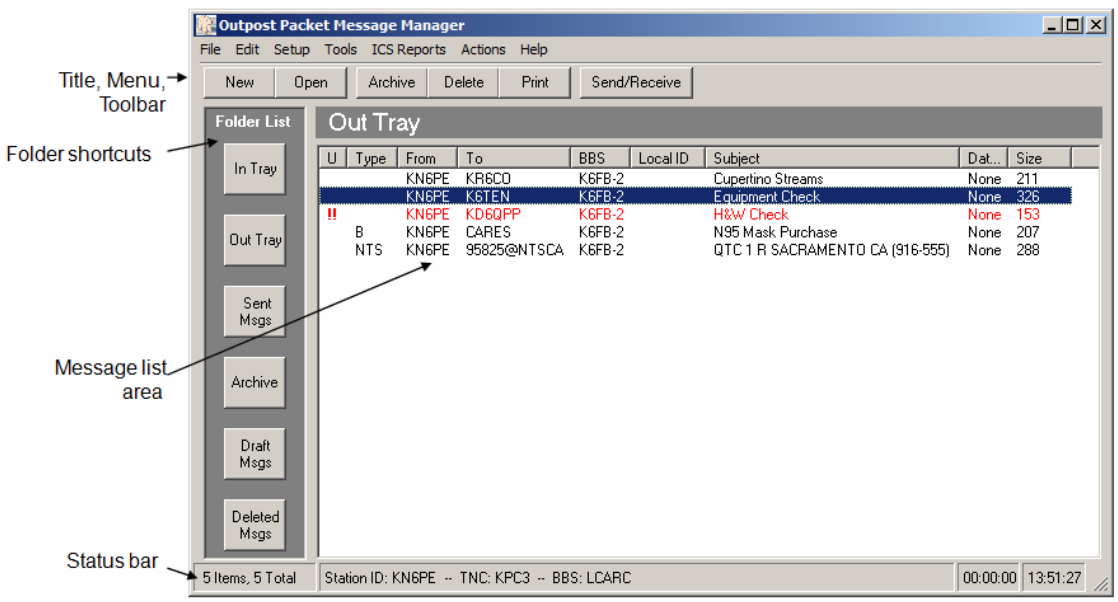


Figure 8: Main Outpost Window

3.3 Menus and Toolbars

The *Program Controls* portion of the main Outpost form controls the operation and execution of all program tasks.

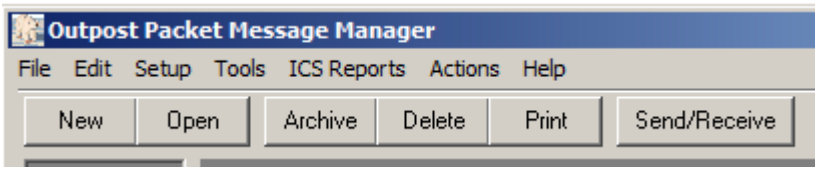


Figure 9: Main Screen Menu and Tool Bar

The Outpost menus provide different options for setting up and controlling the application.

NOTE: Some of the more common menu items are also implemented as Tool Bar buttons. See the associated menu item below for the description.

Menus	Description
File	**New Message**: Opens a new message window for creating a message. **Save As**: Saves the highlighted message to an ASCII text file. **Save As, No Headers**: Saves the body of the highlighted message to an ASCII text file without the message headers (From, To, Date, Subject).

Menus	Description
	Save All: Saves all the messages in the current folder to a single ASCII text file. Messages are separated by a header line and a Form Feed character, thereby allowing this file to be sent directly to a printer for bulk printing.
	Export: Writes the message database to a "*.oaf" (Outpost Archive) file. This file can be later used for importing messages back into Outpost. A submenu lets the user to select messages from either **All Folders**, export all folders. **This Folder**, export the currently selected folder. **Import**: Reads the file created by the **Export** function. Messages are loaded back in the same folder from which they originated. **Delete all Messages**: Deletes all messages in all folders. This function can be performed any time, but probably after performing a full or partial export of messages to an archive file. When selected, the user will be prompted whether they want to continue. This feature actually does the following: 1. Outpost renames the current Outpost.odb file to Op*yymmddhhmmss*.odb 2. Creates a new (and empty) *Outpost.odb* file. ***NOTE:*** If the user really did not want to delete all messages, he/she can: 1. Exit Outpost 2. rename *Outpost.odb* to something else 3. rename Op*yymmddhhmmss*.odb to *Outpost.odb* 4. Run Outpost. All messages will be present.
	Change Folder: displays a sub-menu of all the available folders. Clicking on a folder name will display messages stored in that folder. These folders are: • In Tray • Out Tray • Sent Msgs • Archive • Draft Msgs • Deleted Msgs
	Print. Allows the user to select a printer, then print the currently highlighted message to the printer. **Print, No Headers**. Same as Print above, but no message header (BBS, From, To, Subject, Date) is printed. **Print Setup**. Allows the user to select a default printer for Outpost.

Menus	Description
	***Most Recently Used* List**. As BBS/TNCs combinations are executed, a **BBS | TNC** entry is displayed here. When double-clicking on an entry, the BBS and TNC entry are loaded together. The default number of entries displayed is 4. To change this setting, see the **Tools > General Setting** menu. _____ **Exit**: Causes the program to exit.
Edit	**Delete**. Deletes the highlighted message from the current folder. If the selected folder is the "Deleted Msgs" folder, then the user is prompted to confirm the delete request, and then the message is permanently deleted. **Move to Folder.** Moves the highlighted message to other folder specified by the sub-menu choice. **Copy to Folder.** Makes a copy of the highlighted message to other folder specified by the sub-menu choice.
Setup	**TNC.** Manages the different interface methods – TNCs, AGWPE, and Telnet. Users can select or update an existing interface and its associated parameters, or create a new interface by entering the TNC prompts and commands. See *Section 4 Setting up Interfaces* for more information. **BBS.** Manages the list of available BBSs. Users can select or update an existing BBS, or create a new BBS entry by entering a BBS friendly name, connect name, prompts and commands. See *Section 5 Setting up a* BBS for more information. **Identification.** Allows the user to change the legal call sign that Outpost uses, the user name, and to optionally select a Tactical Call to be used for logging on to the BBS. See *Section 12 Using Tactical Calls* for more information. **Address Book.** Manages a list of user defined address entries. Addresses can either be a single address for a user name (i.e.: Name is *JIMOB*, address is *KN6PE*), or a list of addresses as a Distribution List. See *Section 9 Using the Address Book* for more information.
Tools	**Send/Receive Settings**. Sets various parameters to control each Send/Receive Session, including: • Automation. Selects one of the 4 methods for scheduling Packet Sessions. • Retrieving. Selects the messages to be retrieved from the BBS. • Receiving. Selects what Outpost will do after a message is received. • Other controls that control printing and Alerts.

Menus	Description
	See *Section 10 Customizing the Send/Receive Session* for more information. **Message Settings.** Sets various conditions to control how messages are handled, including: • Settings for New Messages, Default Destinations, auto-message numbering, and signatures. • Replies and Forwards. • Requesting Delivery or Read Receipts. • Message deletes and external program message handling (such as PacFORMS, ICS213) See *Section 8, Customizing Message Settings* for a full description. **Report Settings**. Allows the user to set up report values by Online Reports and NTS message creation, as well as configure specific on-line reports to be loaded with a single F-key stroke. See *Section 14, Online Reports* for a full description. **Log Settings**. Sets up different log options used for debugging TNC or BBS problems when they occur. **General Settings**. Minor options for program control. **Script Settings**. Defines the names of the scripts to be run at the start of an Outpost Session or on Outpost exit. **Scripts**. Presents 2 submenus that allow you to run the scripting tool or pick and run a predefined script. See the *Outpost Scripting Users Guide* for details. **Packet Session Counter Reset**. The session counter is displayed in the Packet Session Log. This command resets the counter back to zero. **Empty "Deleted Items" Folder**. Deletes all messages in the "Deleted Items" Folder. Once deleted from here, they're gone for good. **Reset Column Widths**. Restores the Message List Display columns to a default size. This option is great for redisplaying previously hidden (or lost) columns. **Pack Column Widths**. Forces the Message List Display column widths to align to the max size of the column content. **Reset form to normal**: Occasionally, the form gets stuck in either a minimized state or a maximized state, and cannot be restored to a movable window. This button resets the form to the default setting.

Menus	Description
	Interactive Packet. Brings up a terminal emulator that gives you interactive packet access to your TNC or BBS (outside of a Packet Session) by either a Serial Port device (TNC), AGWPE, or Telnet.
ICS Reports	**ICS 309 Communications Log**. Runs the ICS 309 report builder. The Ics309clb.exe program reads the message transaction history from Outpost and presents a series of reporting options for the user to create an ICS 309 Communications Log for packet messaging. See the *ICS 309 Communications Log Builder Users Guide* for details. **ICS 213 Message Form**. Runs the ICS 213 Message Maker. The Ics213mm.exe program presents a standard ICS 213 message form. See the *ICS 213 Message Maker Users Guide* for details. **PacFORMS**. If PacForms are installed, Outpost will read the Launch.ini file out of the data directory and load the available PacForms names for scheduling from Outpost. Outpost will check if the PacForms file exists, and if it cannot find it, the entry will be loaded, but disabled (grayed out).
Actions	**Send/Receive**. Initiates a Packet Session with the selected BBS. **New Mail Message.** Opens a new message window for creating a message. **Open a Message.** Opens the currently highlighted message in the message list. **Force Bulletin Retrieval, one time.** When checking this option, if Retrieve Bulletins is checked, Outpost will retrieve all bulletins selected for retrieval regardless of whether they were previously retrieved. **View Outpost Data Directories.** Opens Windows Explorer to the location where Outpost data files and data file subdirectories are located. **On-line Report Definition #[1-4].** The name of a predefined report that was set up in **Tools > Report Settings** menu. Pressing the associated F-Key loads the report into a message form.
Help	**About Outpost**. Description of this program; includes the License and Terms of Use.

3.4 Folders and Shortcuts

Outpost keeps messages in 1 of 6 different folders. Once a folder is selected, the contents of that folder are displayed and the selected folder name is shown above the message list area.

Folders	Description
In Tray	Messages retrieved by Outpost from the BBS are placed in the **In Tray**. The Date/Time field is set to the time that the message originally was posted to the BBS.
Out Tray	On creating a message and pressing Send on the message form, the message is saved in the **Out Tray**. The Date/time is set to "none." Messages in this folder can be opened, viewed, edited, and saved back to this location. Only valid messages can be sent. A valid message includes a message with all fields filled in and the **Send** button was pressed. Outpost checks this folder for messages addressed to the currently selected BBS and sends these messages regardless of type (Private, Bulletin, and NTS).
Sent Msgs	Once a message is sent to the BBS, Outpost moves the message to the **Sent Msgs Folder** with the date and time set to the time it was sent. This time may be different from the time assigned by the BBS. Messages in this folder can be opened, viewed, printed, or forwarded to another BBS user.
Archive	This folder is an ad hoc message folder.
Draft Msgs	This folder contains messages that were not completed. Only a Subject is required to **Save** a message to this Folder.
Deleted Msgs	This folder contains all messages previously deleted from all other folders. Messages in this folder can be opened, viewed, forwarded, replied to, or moved or copied to any other Folder. Deleting a message from this folder permanently deletes it from Outpost.

3.5 Message List Area

The message list area is where messages residing in the selected folder can be selected. Unread messages in the In Tray will be displayed in **BOLD** text. Once a message is read, it will be displayed in regular (unbolded) text.

Messages created in Outpost that where **Saved** will be listed in **BLUE** text. Once they are opened and the **Send** button is pressed, it changes to BLACK text.

Only messages stored in the selected folder are displayed. The message list area displays the following fields:

Field	Description
U	Urgent Flag. Messages sent to this station from another Outpost client can be sent as URGENT. When these messages are received, they are indicated by two RED "**!!**" in the "U" column and the message list displayed in RED. See the Message Form for the control to set a message as URGENT.
Type	Indicates the message's type and can contain one of the following 3 types: (blank) Private Message B Bulletin NTS National Traffic System Message For received messages, the Message Type is set by the sender. For locally created messages, it is set based on the option chosen at the time the message was created.
From	The originator of this message. This field contains either an FCC Call Sign (current station ID) or Tactical Call as assigned by the local emergency organization.
To	The destination addressee of this message. This field contains one ore more of the following types of addresses structures: • Legal user call sign • Hierarchical packet address • Tactical Call Sign • NTS address • SMTP email address (xNOS BBS systems) • SMTP:name@domain for Winlink RMS/CMS access • +ADDRESS_BOOK entry See *Section 7 Working with Messages* for details
BBS	The currently selected BBS. For messages created in Outpost, this field contains the name of the BBS that was set when the message was created, and where this message will be sent. This allows messages to be created for users on different BBSs, and not sent until the BBS is selected using the **Setup > BBS** menu. For messages received from the BBS, this field lists the BBS from where the message originated.
Local ID	Local Message ID. Shows the Local Message ID (LMI) assigned to incoming messages. Some jurisdictions require identifying all

Field	Description
	messages – both outgoing and incoming – with their own Message ID. When this option is turned on, the LMI will be displayed here. This option is controlled from the Tools > Message Settings, Msg Numbering tab.
Subject	The subject of the message. On opening the message, the entire 128-character subject line is displayed. **NOTE**: most BBS's have subject lengths that are a lot shorter than this. It is recommended to keep your subject lines brief so they inadvertently do not get truncated in a manner that you did not anticipate.
Date / Time	The message Date and Time. For messages created and saved in Outpost (stored in the **Draft Folder**) or Sent (stored in the **Out Tray**), this field will be set to **None**. After a message is sent to the BBS, it is moved to the **Sent Folder** and the date/time is set to the time the message was sent to the BBS. For message received from the BBS and stored in the **In Tray**, this field is set to the date/time that the message was posted on the BBS. For messages received from BBSs that maintain their time in GMT/UTC, Outpost converts the time to Local Time based on the Time Zone set up on your PC. The format of this field is dependent on your PC's **Regional and Language Option** settings.
Size	Size of the message in Bytes as stored in Outpost. Outpost has a hard limit of 10,000 characters per message. All originated and received messages will be limited to this size.

3.6 Status Bar

The status bar is displayed at the bottom of the Outpost Form and displays the following information.

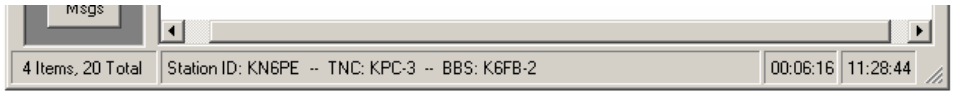


Figure 10: Typical Status Bar

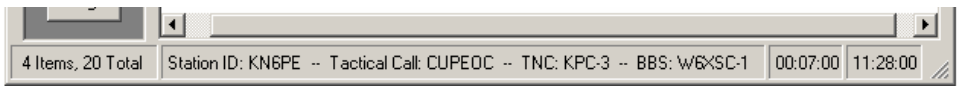


Figure 11: Status Bar when Tactical Call is enabled

Item	Description
Message Count	Displays the number of messages (items) in the currently displayed folder and the total number of messages in all folders (includes messages in the **Deleted Msgs** folder).
Current Setup	Displays the currently selected settings: station call sign, the currently selected TNC, and the currently selected BBS. Selected Tactical Call will also be displayed if selected. See the 2nd example above.
Time until next Packet Session	When Send/Receive automation is selected, this 1st timer shows the number of hours, minutes, and seconds left until the next Send/Receive Session is initiated. If the timer shows **00:00:00**, then no automation is selected.
Current Time	The current system time in 24-hour format.

3.7 Customizing the Display

Outpost lets you to change the widths of the columns, or hide a column if it is not needed for viewing.

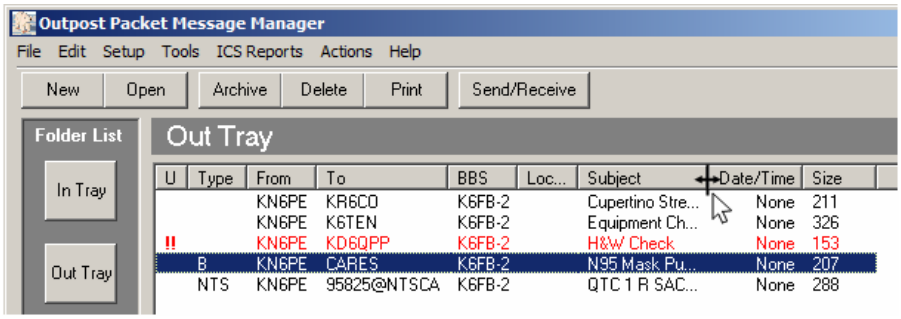


Figure 12: Resizing a column

To change a column width:

1. Put the mouse cursor on the right side of a column header's dividing line for the column you want to change size.
2. Left Click, hold the mouse button down, and move the mouse left to reduce the column size or right to increase the column size.
3. To hide a column, move the mouse all the way to the left until the field is hidden.
4. Double-click on the dividing line will automatically resize the column to the widest text in the column.

There are also two column re-sizing features and one form reset control on the **Tools** menu:

- **Reset column widths**: Resizes the columns to a default size.
- **Pack column widths**: Resizes the width of all columns to a width of the widest text in each column for the current display.
- **Reset form to normal**: Restores the form to the default position on your display.

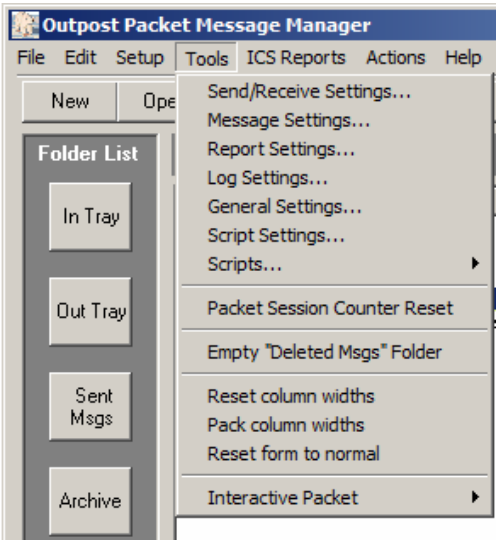


Figure 13: Resetting column widths

3.8 Getting ready to set up Outpost

In most cases, the steps involved with setting up Outpost need only to be performed once. All setup options are stored in initialization or data files. There are 4 things that must be set up prior to running your first Packet Session. These are:

- Select an interface and define the device
- Configure the BBS
- Register your call sign with the BBS (BBS-dependent)
- Confirm your user settings on the BBS

In preparation for defining these configurations, it is helpful to have any hardware and BBS documentation that may be available. If none can be found, manually interacting with the TNC and the BBS is the next best way to confirm you have entered these configurations correctly.

In most cases, the default Outpost settings can be used when defining a TNC or BBS. However, there is some information that is TNC and BBS specific that must be understood in order to complete the setup step.

These items are covered over the next 2 sections in this guide.

4 Setting up Interfaces

Outpost can communicate with a BBS by one of three methods: direct serial port with a TNC, an AGWPE-controlled TNC or other device, or by a telnet connection. Setting up your interface is the first step that you must do.

4.1 Defining the Interface Type

Depending on the type of interface that you select, the corresponding tabs will be enabled. In the example below, the Device Type is a TNC that is connected to one of the PCs Serial Ports. Note that the AGWPE and Telnet tabs are disabled.

Outpost comes with examples of different interfaces already set up. Please use these as examples when picking and defining a new interface.

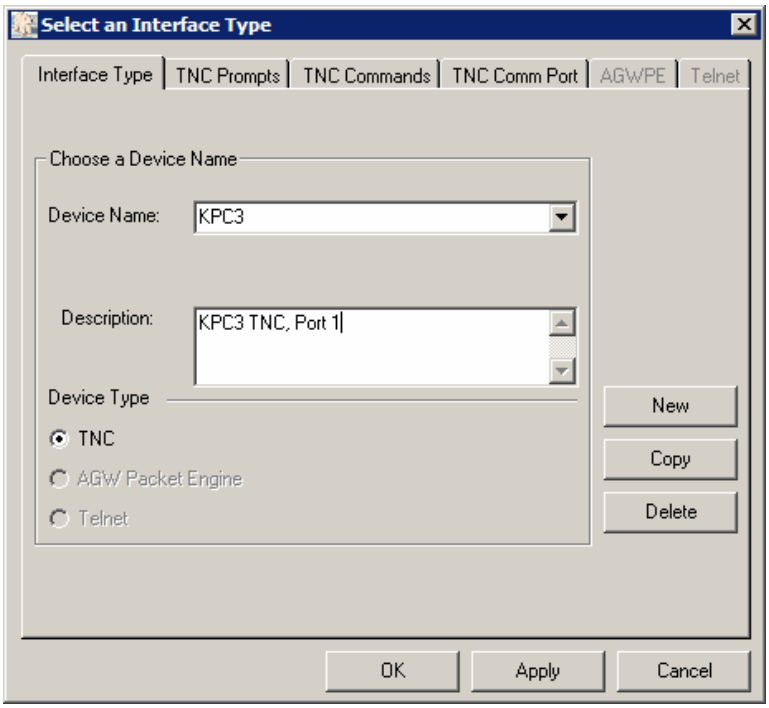


Figure 14: Interface Type Setup

Device settings are managed from the 6 tabs across the top of the Interface menu. These tabs are:

Tabs	Description
Interface Type	Allows the user to define a new interface or select a previously configured interface.
TNC Prompts	Enabled for a TNC connected to a Serial Port. This tab holds the definitions of what the TNC prompts look like. Defaults are specific for the KPC3 TNC, and generally work for all others.

Tabs	Description
TNC Commands	Enabled for a TNC connected to a Serial Port. This tab holds the definitions of the different commands Outpost uses to talk to the TNC. This tab also contains the controls for managing a TNC Initialization file that you may define for this device. This is covered later in this section.
TNC Comm Port	Enabled for a TNC connected to a Serial Port. This tab contains the serial port configurations for this TNC.
AGWPE	Enabled for an AGWPE interface. This tab contains the parameters needed for Outpost to talk to the AGWPE monitor program.
Telnet	Enabled for a Telnet interface. This tab contains the parameters needed for Outpost to talk to the BBS that is Telnet-accessible.

On the **Interface Type** Tab, the following fields are available:

Fields	Description
Device Name	A Pull-down menu of the interfaces previously set up in Outpost. **Default**: Last interface type selected.
Device Name	When creating a new interface entry, the Pull-down tab is hidden and a fill-in-the-blank Device Name field is enabled so you can enter the name of a new TNC or interface. While this is usually the TNC Model Number (i.e.: KPC-3), it can be some other friendly description such as KPC3-P0 (port 0), JIMS-KPC3+, etc. The name can be up to 64 characters long.
Description	This is an optional free-form text field for entering any information about this TNC or interface. This is a 256 character field.
Device Type	Selects or displays the device type for the interface. When creating a new entry, the user picks the interface type they want to set up. **Default**: TNC

The following menu controls are available:

Controls	Description
New	Lets the user set up a new interface type. All fields throughout the menu are either cleared or set to their default settings.

Controls	Description
Copy	Allows the user to copy or *Clone* the currently displayed interface. When pressed, the name of the current device is used along with the words "COPY OF" appended to it to ensure it is a unique name and the form is put into the New TNC mode for editing and updating. This name can then be changed, along with the other fields for this device.
Delete	Lets the user delete the currently displayed TNC or interface. The user will prompted whether they really want to delete the interface.
OK	Same as Apply, but closes the menu on completion if the validation is successful.
Apply	Causes all required fields to be validated as being filled in. On completion, the menu remains open. The Apply button becomes enabled as soon as any field is changed by an update to an existing configuration or by defining a new interface.
Cancel	Cancels any changes that may have been made to the form, and the form is closed.

4.2 Serial Port TNC Setup

A "Terminal Node Controller" (TNC) connects your computer to your radio, similar to how a dial-up modem connects your computer to the Internet by telephone. Most TNCs implement some or all of the command-set defined by TAPR (Tucson Amateur Packet Radio Club). Outpost uses these commands as the default commands when setting up your TNC. If your TNC's command-set is different, you can change them when you define a new or update an existing TNC.

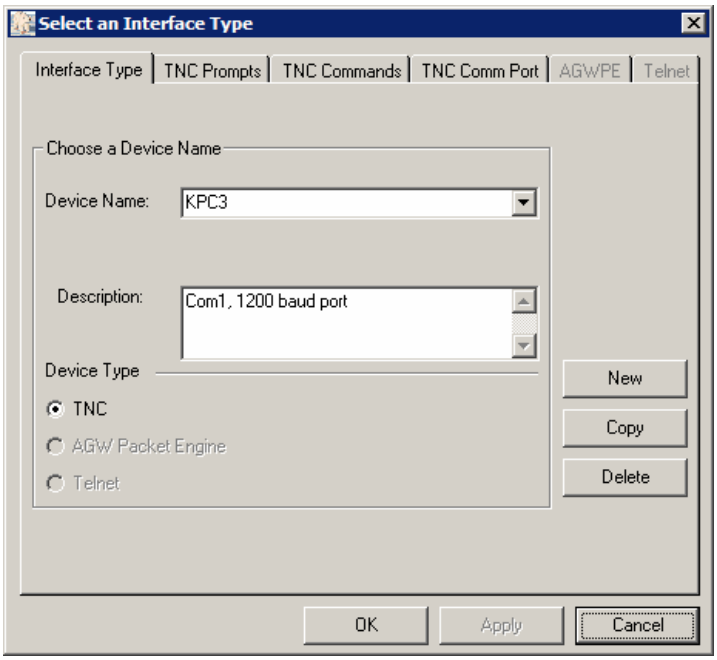


Figure 15: TNC Setup Menu

There are 3 tabs that are enabled to define the Serial Port TNC.

The **TNC Prompts** menu contains information on the prompts that the TNC will send back to Outpost so Outpost knows what kind of response it got from the TNC.

On creating a new TNC, the default prompts are loaded as shown below, and should work fine for all TNCs. Check your TNC manual if a system hang occurs.

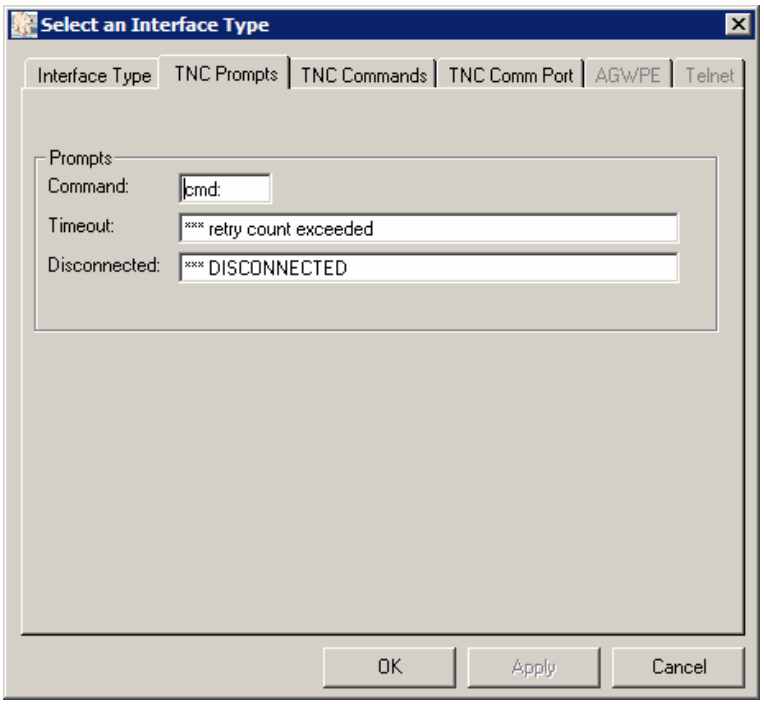


Figure 16: TNC Prompts Setup Menu

The fields on this form are:

Fields	Description
Command	The prompt that the TNC displays to prompt for the next TNC command. **Default**: `cmd:` (TAPR standard prompt)
Timeout	The string that is displayed by the TNC when the number of configured retries is exceeded. Outpost uses this message to detect a timeout and cancel the session. **Default**: `*** retry count exceeded`
Disconnected	The string that is displayed by the TNC whenever the TNC unexpectedly disconnects from the BBS. This is usually caused if the BBS terminates the connection, or the user forces a disconnect. Outpost uses this message to detect this condition and attempts to cleanly exit the session. **Default**: `*** DISCONNECTED`

The **TNC Commands** menu contains the different commands that Outpost uses to talk to the TNC to prepare for and connect to the BBS. On creating a new TNC, the default commands are loaded, and should work FINE for MOST TNCs. Check your TNC manual if a system hang occurs.

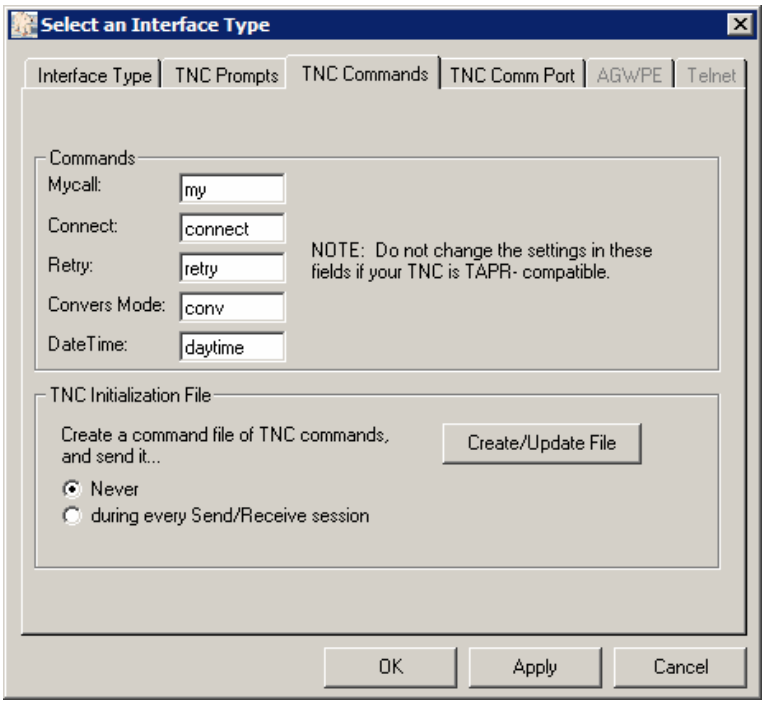


Figure 17: TNC Commands Setup Menu

The fields on this form are:

Fields	Description
Mycall	The TNC command that is used to set the station ID. When entering this command, only enter the TNC portion of the command. Do not include your call sign. **Default**: `my` (short for `MYCALL`)
Connect	The TNC command that initiates a connection with a BBS. When entering this command, only enter the TNC portion of the command. Do not enter the BBS callsign. **Default**: `connect`.
Retry	The TNC command that sets the number of attempts the TNC will transmit a packet to the BBS before giving up. **Default**: `retry`
Converse Mode	The TNC command that puts the TNC into a converse mode. This is used when Tactical Calls are used. **Default**: `reset`

Fields	Description
DateTime	The TNC command that is used to set the TNC's date and time. This command is transmitted each time a Packet Session is initiated. **Default**: `daytime`

A **TNC Initialization File** can be defined that contains other TNC Commands that Outpost usually does not send.

In reality, you would want to set up some TNC commands if you also use other packet programs that do not always "clean up" after themselves in terms of resetting the TNC to a known state.

The controls on this form are:

Controls	Description
Send TNC command File…	**Option: File not Defined** If this label (**File not Defined**) is presented as an option, then an Initialization Command File is not defined for this TNC. This label will change depending on whether a TNC Initialization Command File exists or not. **Option: Never** If this label (**Never**) is presented as an option, then an Initialization Command File is defined for this TNC. Check this option if you do not want to send this file to the TNC. **Option: During every Send/Receive Session** If this option is enabled (not grayed out), then an Initialization Command File is defined for this TNC. Check this option if you want to send this file to the TNC every time you connect to the TNC.
Create / Update File	This control opens the form where the user can enter additional TNC initialization commands.

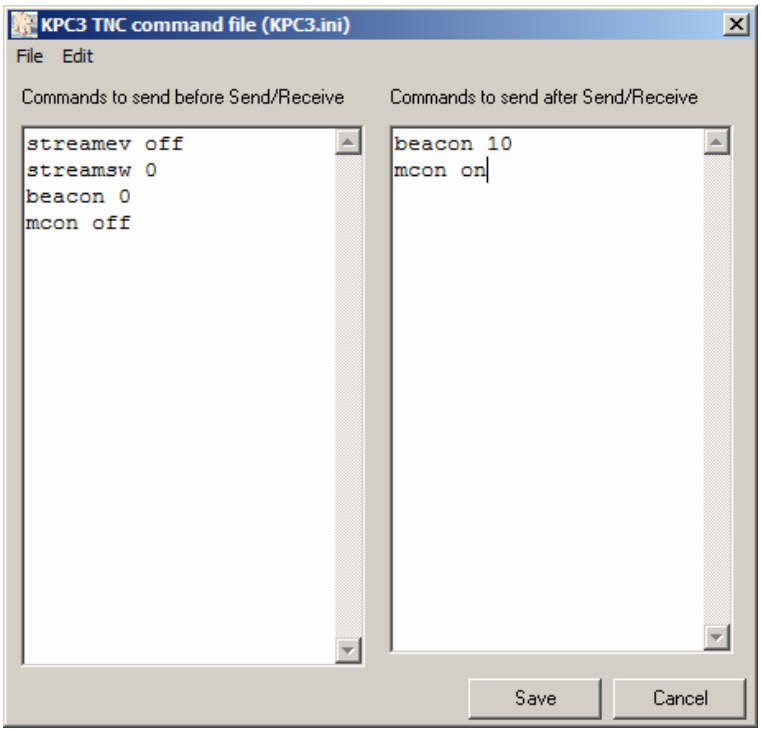


Figure 18: TNC Initialization Commands File Form

Once the Create/Update file is opened, you can enter TNC commands to be executed at either the beginning or the end of a Send/Receive Session.

The fields on this form are:

Fields	Description
Commands to send before…	Commands entered in this section will be sent after Outpost sends it standard set of commands and before connecting to the BBS. Enter a single command on each line.
Commands to send after…	Commands entered in this section will be sent after Outpost disconnects from the BBS and before disconnecting from the Comm Port. Enter a single command on each line.

There are 2 controls for this form.

Controls	Description
Save	Saves the Command set to the file named: **<tnc_name>.ini**, where **tnc_name** is the name of the TNC associated with this setup.
Cancel	Closes the form without saving any entries.

The **TNC Comm Port** menu defines the serial port settings for the TNC. On creating a new TNC, an initial configuration is loaded, but should be carefully checked against the serial port configuration for the TNC you are using.

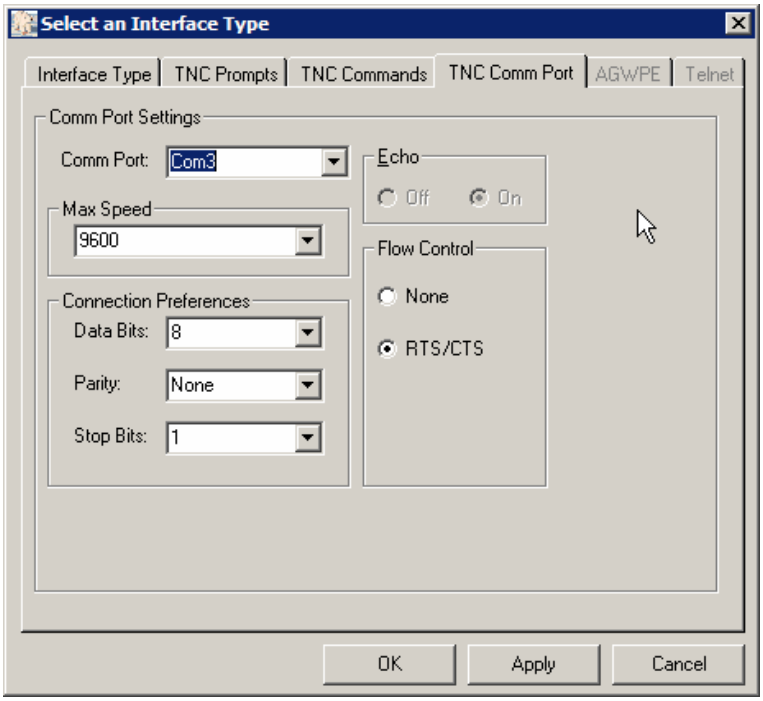


Figure 19: TNC Comm Port Setup Menu

Comm Port settings are standard serial port settings typically used by other terminal emulator programs. These settings define:

Fields	Description
Port	Identifies the Serial Port to which the TNC is connected. Outpost will detect the list of available ports on your PC, whether true Serial Comm port or a USB-to-Serial Port. **Default**: first Comm Port found if creating a new entry, or the Comm Port entered when set up.
Max Speed	This is the baud rate between the computer and the TNC. This is different from the speed that the TNC transmits data to the BBS. Outpost Baud Rate settings include: 110 19200 300 28800 600 38400 1200 56000 2400 57600 4800 115200 9600 128000 14400 256000 **Default**: 9600

Fields	Description
Data Bits	The number of data bits to be sent. **Default**: 8
Parity	Defines how parity will be handled **Default**: None
Stop Bits	**Default**: 1
Echo	This setting is disabled and cannot be changed. **Default**: On
Flow Control	Determines how the program will manage the data flow between the Computer and the TNC. The following options are available: None: no flow Control is used RTS/CTS: Hardware flow control **Default**: RTS/CTS

Comments on Flow Control

Flow Control (also known as Handshaking) is a way for data communication equipment to control the flow of data between connected equipment, particularly when one part of the system is slower than the other. This is the case with the TNC and BBS. While the PC running Outpost can connect and transfer data to the TNC at a high data rate (such as 9600 baud in the example above), the TNC is limited to transmitting at 1200 baud (or 9600 baud if your radio and BBS supports it) with the BBS.

Because Outpost generates all the commands that you would typically enter, it communicates with the TNC at a significantly faster rate than what you could manually type. Therefore, there is the risk that Outpost will overflow the TNC's internal transmit data buffer. When this happens, the TNC and the Packet Session Manager will hang.

The default setting is **RTS/CTS** (Hardware Flow Control). For this option to work, you must have a serial cable between the TNC and Computer with at least the additional CTS pin connected. To make it easy, I recommend using a full 9 pin cable. If you have only a Pin 2 and 3 cable, leaving this setting as is will not have any adverse affect. However, no flow control will occur and you should keep your messages as short as possible to avoid overflowing the TNC's transmit data buffer.

WARNING! Unshielded home-made cables are a known source of problems that can cause system and PC hangs. Most commercial cables are shielded. If you decide to make your own, ensure the cable is shielded, or else RF will get into your computer.

4.3 AGWPE Setup

Per Ralph Milnes KC2RLM, "AGWPE is a multi-TNC management utility written by George SV2AGW. Before AGWPE, a packet device such as a TNC or other radio modem could only be used by one program at a time. Likewise, a packet program could only use one packet device at a time. AGWPE changed all that. It lets a program access multiple packet devices at one time, and lets a packet device be shared by multiple programs at one time.

"AGWPE performs this magic by placing the TNC in KISS mode and assuming responsibility for handling most of the logic functions built into the TNC. The TNC is left to handle just tone modulation/demodulation, or modem functions. AGWPE also works with radio modems, such as the YAM and Baycom that already lack logic functions and must rely on the logic functions of a control program such as AGWPE."

NOTE: For users wishing to use AGWPE, I **strongly recommend** that you thoroughly understand how AGWPE works, how it is set up, and how it is confirmed operational before deploying it with Outpost. AGWPE support is a field of study unto itself and therefore, is out of scope for Outpost support. However, there is plenty of help available from users on the Internet.

Outpost implements the required protocol to talk to AGWPE and its associated TNC device located either on the same PC where Outpost is running or on a remote PC somewhere else on the network.

The AGWPE setup form is enabled once AGWPE is selected as the device type.

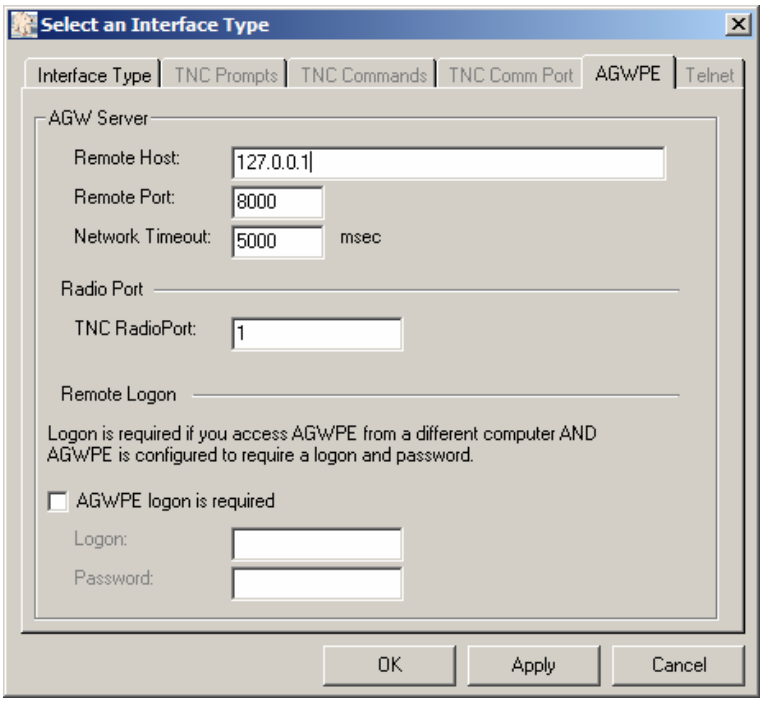


Figure 20: AGWPE Setup Menu

The **AGWPE** menu manages information specific for accessing the AGWPE program. On defining a new AGWPE Interface, the default values shown above are loaded, and should work for a locally configured (same PC) AGWPE installation. The fields on this form are:

Fields	Description
Remote Host	The IP Address or host name of the PC where AGWPE is running. The default setting tells Outpost to look for the AGWPE on the local machine where Outpost is running. **Default**: 127.0.0.1
Remote Port	Ports are used with TCP to name the logical connection on a specific network node. This setting must match what is set up in the AGWPE Winsock Interface form. **Default**: 8000 (matches AGWPE's default port number)
Network Timeout	The network timeout tells Outpost how long to wait for a network interaction with AGWPE before giving up and reporting an error. A setting of 5000 milliseconds (5 seconds) is plenty, particularly if AGWPE is operating on the same PC as Outpost. For remote instances of AGWPE, the timeout may need to be longer depending on the network traffic. **Default**: 5000
TNC RadioPort	Corresponds to the TNC Radio Port setting defined on the AGWPE Radio Port TNC Setup **Default**: 1
AGWPE Logon Required	This and the next 2 fields depend on whether a logon requirement was defined at the AGWPE program. For AGWPE operating on the same PC as Outpost, no Logon is required. Logon is optional for cases where AGWPE is located somewhere else on the same LAN, or elsewhere on the internet. Check this box is a Logon is required. **Default**: unchecked (not required)
Logon	If the AGWPE Logon box is checked, this field is enabled. The logon name entered here must match the name set up in AGWPE. Check the AGWPE configuration for a Logon/password requirement (AGWPE's Winsock Interface Security tab). **Default**: no entry
Password	If the AGWPE Logon box is checked, this field is enabled. The password entered here must match the name set up in AGWPE. Check the AGWPE configuration for a Logon/password requirement (AGWPE's Winsock Interface Security tab). **Default**: no entry

4.4 Telnet Setup

There are some BBSs that can be accessed by Telnet.

Similar to the AGWPE, setting up telnet requires an understanding of the network settings that need to be defined. Unlike AGWPE, Telnet access to a BBS is usually more tightly controlled resulting in the need to work with the BBS Sysop to establish a telnet logon and password. This ensures non-Hams cannot initiate traffic on the Amateur Radio bands.

The Telnet setup form is enabled once Telnet is selected as the device type.

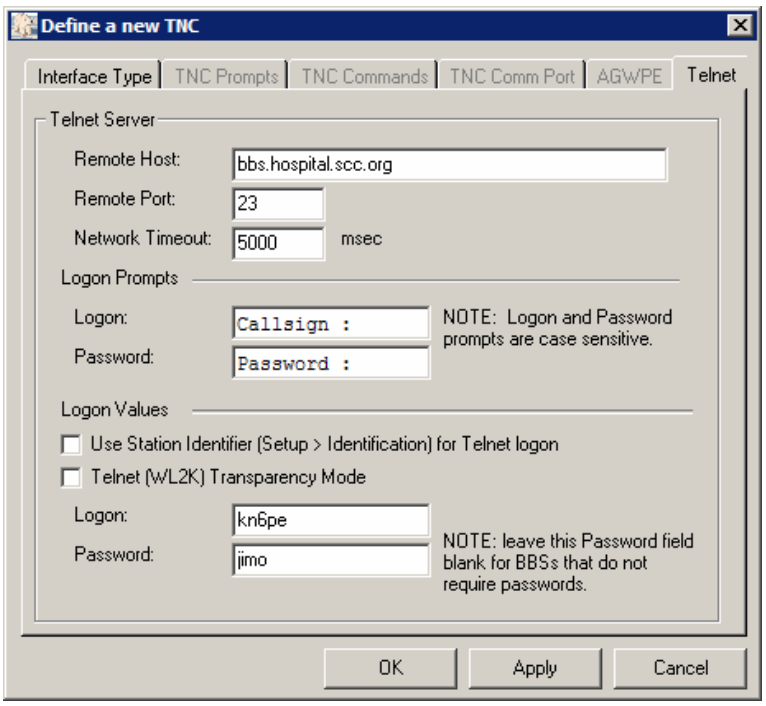


Figure 21: Telnet Setup Menu

The **Telnet** menu contains information specific to accessing the remote BBS over a LAN or WAN. On defining a new Telnet Interface, some default values are loaded, but will be insufficient to operate without additional information.

The fields on the form are:

Fields	Description
Remote Host	The IP Address or host name of the server where the BBS is running. The default setting tells Outpost to look for the BBS on the machine where Outpost is running. Contact the BBS Sysop for the IP Address or host name. **Default**: 127.0.0.1
Remote Port	Ports are used with TCP to name the logical connection on a specific network node. Contact the BBS Sysop for the Port number. **Default**: 23
Network Timeout	The network timeout tells Outpost how long to wait for a network interaction with the BBS server before it gives up

Fields	Description
	and reports an error. A setting of 5000 milliseconds (5 seconds) is plenty, particularly if the server is operating on the same LAN as Outpost. For remote instances of the server, the timeout may need to be longer depending on the network traffic. **Default**: 5000
Logon Prompt	This is the string presented by the BBS that prompts for the Logon Name. This entry must match exactly what the BBS sends as a logon prompt. Watch the spaces and capitalization. **Default**: `Callsign :`
Password Prompt	This is the string presented by the BBS that prompts for the password This entry must match exactly what the BBS sends as a password prompt. Watch the spaces and capitalization. **Default**: `Password :`
Logon	This will be your answer to the Logon Prompt that will be sent. Contact your BBS Sysop for the logon information. Usually, this will be your call sign. **Default**: no entry
Password	This will be your answer to the Password Prompt that will be sent. Contact your BBS Sysop for the logon information. This will be set up by the Sysop. Leave this field BLANK if there is no password assigned to access the BBS by Telnet (not recommended). **Default**: no entry

The controls on the form are:

Controls	Description
Use Station Identifier…	Use Station Identifier for Telnet Logon. When checked, the Logon Name that is passed to the BBS will come from the Station Identification Form instead of this form (Logon Name field). This simplifies changing users without needing to change the Telnet interface as well. **Default**: unchecked
Telnet Transparency Mode	Telnet (WL2K) Transparency Mode. There are some BBSs – Winlink CMS in particular – that requires a connection in Telnet Transparency Mode. If you are connecting to a Winlink CMS node by Telnet, check this box. Otherwise, telnet will not work. **Default**: unchecked

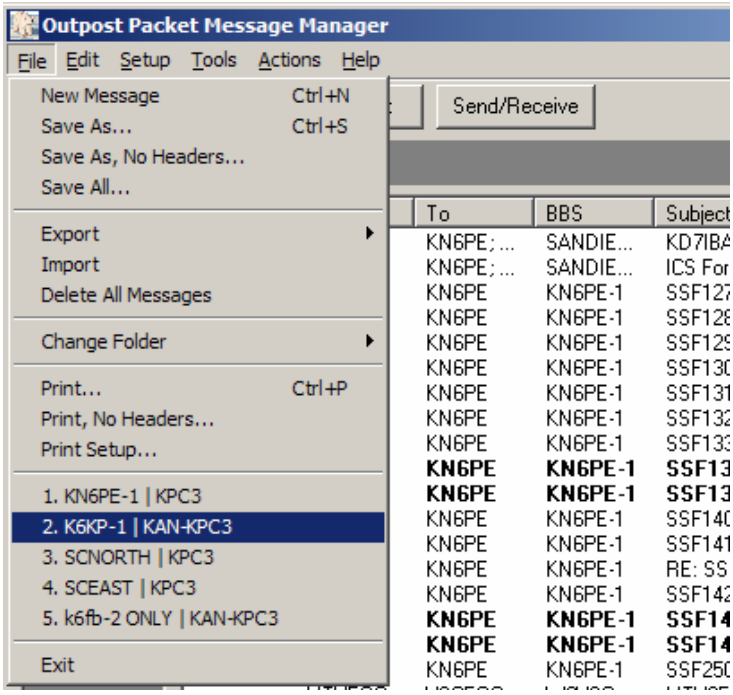
4.5 Selecting a previously configured interface

If you decide to install the sample Outpost configurations, you can see some commonly available TNCs, and sample AGWPE and Telnet interfaces already configured. To select one of these configured TNCs, perform the following:

1. From Outpost's main form, select the **Setup > TNC…** If a TNC was previously defined, it will be displayed.
2. At the **TNC Name:** field, use the pull-down menu to view the previously configured TNCs.
3. Select the TNC you want to use.
4. Press **OK** when done. This TNC is now selected as the default TNC.

When done, Outpost will display the selected TNC on the Status Bar on the bottom of the Main Form.

Additionally, a previously used BBS-and-Interface pair can be selected from the **File** Menu's most recently used list. This lists all the combinations that were previously selected in order when they were used, most recent on top.



4.6 Updating a previously configured Device

Most TNC settings can be changed. To change a TNC setting, do the following:

1. From Outpost's main form, select the **Setup > TNC…** If a TNC was previously defined and selected, it will be displayed and loaded.
2. All fields (other than the TNC name) can be changed. When done, press **Apply** or **OK**.

4.7 Defining a new interface

Setting up a new Interface uses the menus described above. Depending on the interface selected will determine which tabs on the menu will be enabled.

Set up a new TNC as follows:

1. From Outpost's main form, select the **Setup > TNC…**
2. Press the **New** button.
3. Enter the **Device Name**. A good rule of thumb is to enter the product or model number for a TNC (such as KPC-3, KAM, DSP232, etc.), or some descriptive text for AGWPE or Telnet (such as AGWPE-LOCAL, TELNET-TO-CRAIG). Device names can be up to 64 characters long.
4. Enter any additional text in the description field you want about the TNC (i.e.: location, etc).
5. For Serial Port TNC setups, the TNC commands are generally the same from one TNC manufacturer to another.

   Having said that, undoubtedly there is one or more TNCs on the market that have a different command and/or prompt set. Because Outpost issues TNC commands on behalf of the user, and looks for the TNC prompts coming back, it is important that the specific TNC commands and prompts required by Outpost are defined. If your TNC has a different command-set or prompt-set from what is initially loaded, then you will have to change the default settings.
6. For Serial Port TNC setups, using the TNC's reference manual, verify the default TNC <u>prompts</u> are correct, or change them as necessary.
7. Verify the default TNC <u>commands</u> are correct, or change them as necessary.
8. Verify the Comm Port settings are correct, or press the Comm Port button to change them as necessary (see below for the Comm Port menu).
9. Press **OK** when done. This new TNC entry and Comm Port settings are saved and set as the current TNC.

5 Setting up a BBS

The next step with setting up Outpost is to identify the Bulletin Board System (BBS) you want to access.

5.1 History

Wikipedia defines it the best: "A Bulletin Board System, or BBS, is a computer system running software that allows users to connect and log in to the system using a terminal program. Once logged in, a user can perform functions such as uploading and downloading software and data, reading news and bulletins, and exchanging messages with other users, either through electronic mail or in public message boards.

"Originally BBSes were accessed only over a phone line using a modem, but by the early 1990s some BBSes allowed access via a Telnet, packet switched network, or packet radio connection.

"The term "Bulletin Board System" itself is a reference to the traditional cork-and-pin bulletin board often found in entrances of supermarkets, schools, libraries or other public areas where people can post messages, advertisements, or community news."

It is the "exchange of messages with other users" feature on which Outpost relies. For our purposes, a BBS is simply a mail drop for packet messages. Packet BBSs come in all different types and sizes with implementations in both hardware (Personal BBSs as implemented in a TNC) and software, operating as either stand-alone or networked with packet messages shared across BBSs.

Because not all BBSes operate the same way, Outpost explicitly needs to know how the BBS works to correctly access it. Today, Outpost supports the following BBS and PBBS systems:

Firmware-based PBBSs	KPC2, KPC2400, KPC3, KPC3+, KPC9612 KAM, KAM-XL, KAM-98 KAM Plus, KAM-4 Kantronics' Data Engine PK-88, PK-96, PK-232, DSP-232 MFJ-1270x, MFJ-1274, MFJ-1278
Software-based BBSs	AA4RE standard release AA4RE with Tactical Call Customization BPQMailChat DXNET F6FBB HAMSERV JNOS, SNOS, TNOS MSYS N0ARY OpenBCM Winlink RMS, CMS W0RLI

"Support" means that Outpost knows how to identify the BBS using its *System Identifier*, determine the BBS prompt, and how to interpret the Message Listing

resulting from a LM, LB, or LT. For BBSs not listed here, see the BBS portion of the Outpost website for instructions and criteria on getting your BBS supported.

5.2 BBS Setup Menus

Outpost comes with some examples of different BBSs already set up. Please use these as references when setting up a new BBS.

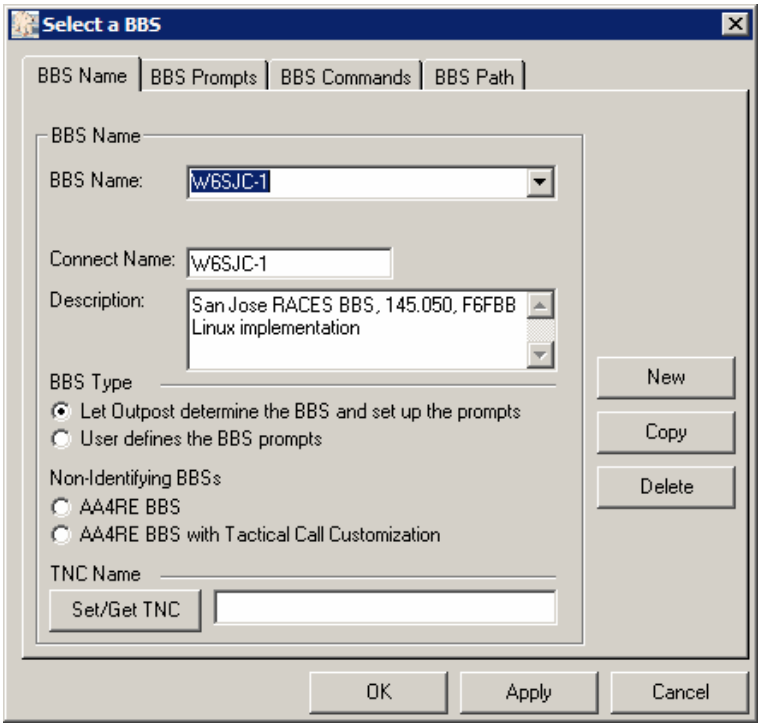


Figure 22: BBS Setup Menu

BBS settings are managed from a series of tabs across the top of the above menu. These tabs are:

Tabs	Description
BBS Name	Allows the user to select a previously defined BBS, or define a new one.
BBS Prompts	Lets the user to enter the BBS prompts instead of letting Outpost figure them out.
BBS Commands	Contains the entries for the different commands that Outpost uses to talk to the BBS.
BBS Path	Contains the options for selecting the method of connecting to the BBS: direct, digipeating, or by KA or Netrom Nodes.

On the **BBS Name** Tab, the following fields and controls are available:

Fields	Description
BBS Name	A pull-down menu containing the list of friendly names that identify the BBSs currently set up in Outpost. Friendly names allow different configurations to be entered for the same BBS. **Default**: Last BBS selected
Connect Name	The exact name of the BBS to which you want to connect. This is NOT a friendly name (Bob's BBS) but the call sign and SSID (if used) of the BBS, such as K6FB-2 or an alias (SEABBS). This is the string that will be added to the TNC "connect" command. **Default**: blank **Character Size**: 10
Description	This is an optional free-form text field for entering any information about this BBS. **Default**: blank **Character Size**: 256
BBS Type	Outpost supports 4 options on how to configure the BBS. **1. Let Outpost determine the BBS and set up the prompts** Outpost will identify the BBS based on the BBS's System Identifier (SID) or other unique sign-on introduction. It will then determine the BBS prompt by looking for the first occurrence of the ">" character, and then look back at the preceding line of text to determine the BBS command prompt. When this option is selected, the 2nd tab (**BBS Prompts**) is disabled. **2. User defines the BBS prompts** The user has the option of setting up the prompts directly. This implies a more detailed working knowledge of how the BBS works. This option would be chosen because of some mitigating situation where Outpost could not determine the BBS prompt correctly. In general, do not check this option. **3. AA4RE BBS** This BBS is a non-identifying BBS, meaning, it does not identify with an SID. Checking this box ensures Outpost knows this BBS is an AA4RE. However, the user needs to know this. See the list of supported BBSs on the Outpost website to compare the BBS message listing to confirm what you have is really an AA4RE BBS. **4. AA4RE BBS with Tactical Call Customization** This is a modified version of the AA4RE BBS that prompts for a tactical call. The only known instance was with Santa Clara County RACES (subsequently decommissioned). In general, do not check this option. **Default**: `Let Outpost determine the BBS…`

The following menu controls are available:

Controls	Description
New	Lets the user set up a new BBS. All fields are set to their default settings.
Copy	Lets the user copy or *Clone* the currently displayed BBS. When pressed, a copy of the currently displayed BBS is made, the Friendly Name is the current BBS with the words "COPY OF" appended to it, and the form is put in New BBS mode for updating and editing. This name can then be changed, along with the other fields for this device.
Delete	Lets the user delete the currently displayed BBS. The user will be prompted whether they really want to delete the BBS.
OK	Same as Apply, but closes the form on completion if the validation is successful.
Apply	Causes all required fields to be validated as being filled in. On completion, the menu remains open. The Apply control becomes enabled as soon as any field is changed as caused by an update to an existing configuration or by creating a new BBS.
Cancel	Cancels any changes that may have been made to the form.

The **BBS Prompts** tab is disabled for all BBS type selections except for the 2nd choice: **User defines the BBS prompts**. This form normally will be blank and disabled (labels and data fields) for all other BBS Type options.

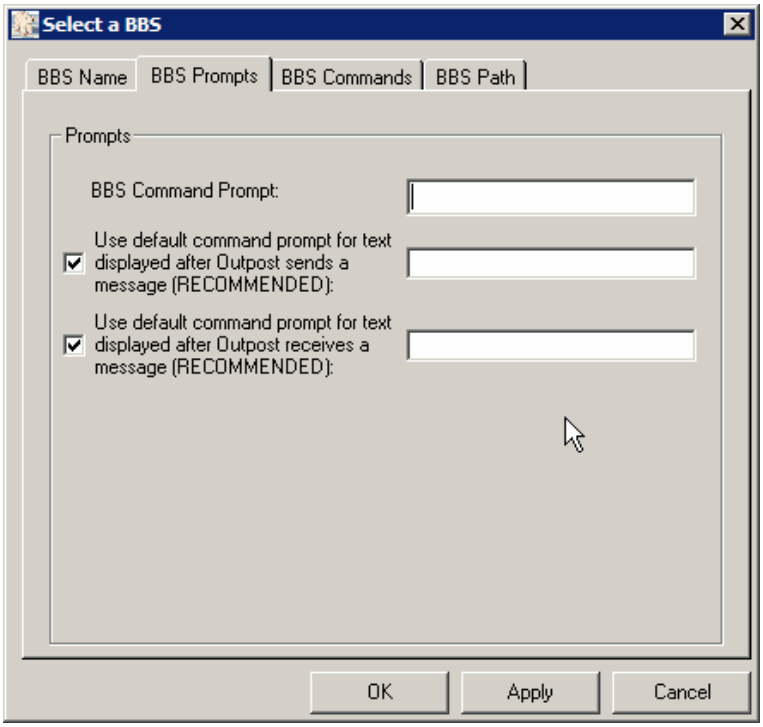


Figure 23: BBS Prompts Menu

The fields on the form are as follows:

Fields	Description
BBS Command Prompt	The prompt that the BBS displays to prompt for the next BBS command. There is no standard BBS prompt. It you elect to custom define the BBS prompts, it is recommended that you copy the BBS prompt exactly so there is no mistake in its setup. **Default**: none
Use default… after Outpost sends a message	After Outpost sends a message to the BBS, Outpost will looks for the string identified here and sent from the BBS to know that the message was sent. **NOTE:** Do not override this unless you are very sure of what the BBS sends back under this condition. **Default**: CHECKED, value defaults to the command prompt if one entered in the BBS Command Prompt field.
Use default… after Outpost receives a message	After Outpost receives a message from the BBS, Outpost will looks for the string identified here and sent from the BBS to know that the BBS is finished sending. **NOTE:** Do not override this unless you are very sure of what the BBS sends back under this condition. **Default**: CHECKED, value defaults to the command prompt if one is entered in the Command Field.

WARNING! Changing the last 2 fields may result in unexpected results. Be very careful if you decide to change these values.

The **BBS Commands** tab contains the commands that Outpost issues to the BBS to send, list, receive, and delete messages on the BBS. On creating a new BBS, the default prompts are loaded, and should work fine for most BBSs.

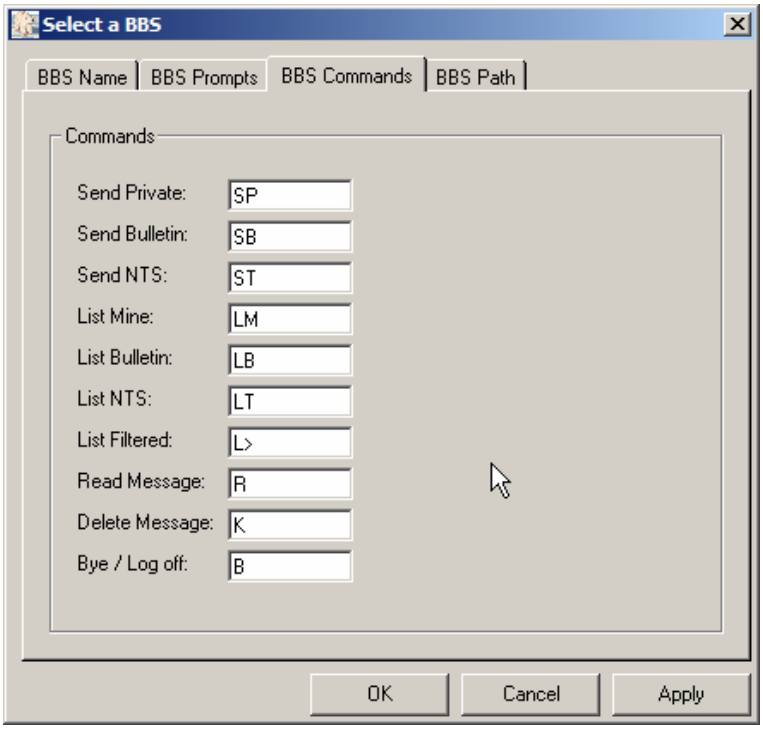


Figure 24: BBS Commands Menu

The fields on the form are as follows:

Fields	Description
Send Private	The BBS command that is used to send a Private Message. Only the station to which this message is addressed can read it. **Default**: SP **NOTES for JNOS Users**: If the message is created with multiple addresses in the TO: field, then the message is sent with the "SC" command (send with copies). This lets only one message to be transmitted to all addressees.
Send Bulletin	The BBS command that is used to send a Bulletin Message. Bulletins are usually addressed to a group of stations. All stations can read bulletins. **Default**: SB
Send NTS	The BBS command that is used to send an NTS Message. NTS messages can be read by anyone who is willing to service the NTS message. **Default**: ST

Fields	Description
List Mine	The BBS command that that produces the list of messages addressed to you (your call sign or tactical call sign). **Default**: LM
List Bulletin	The BBS command that produces the list of bulletins present on the BBS. **Default**: LB
List NTS	The BBS command that that produces the list of NTS messages present on the BBS. **Default**: LT
List Filtered	The BBS command that will produce the list of messages that match the Filter Masks defined on the **Send/Receive Settings** menu. **Default**: L> **NOTES for JNOS**: For JNOS users, if this field is set to "L" only, then only new messages to be listed.
Read Message	The BBS command that retrieves and displays a specific message on the BBS. **NOTE:** Do not replace this with the **RM** (Read Mine) command. Outpost uses the **R ###** command to explicitly read and handle one message at a time. **Default**: R
Delete Message	The BBS command that deletes a message on the BBS. **Default**: K
Bye/Log off	The BBS command that logs you off of the BBS. **Default**: B

The **BBS Path** tab is used to define how Outpost will reach the BBS.

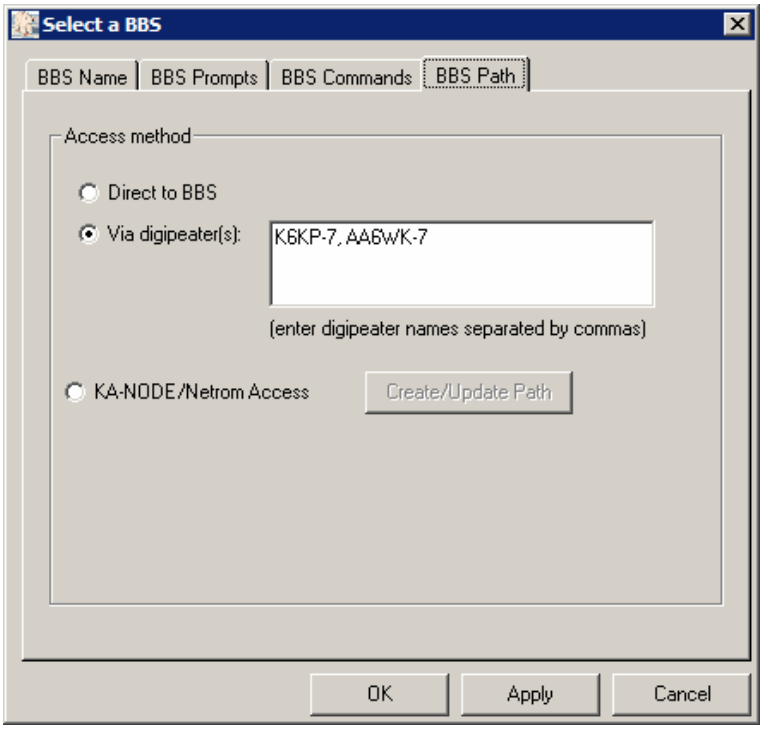


Figure 25: BBS Path Menu

The following menu controls are available:

Controls	Description
Access Method	One of three methods can be selected for accessing the BBS over an RF path: 1. **Direct to BBS**. This option means that Outpost will connect directly to the BBS without any intermediate nodes or stations in the signal path. 2. **Via Digipeater(s)**. The user cannot reach the BBS directly and needs to use one or more digipeat stations that may exist between the user and the BBS. When selecting this option, the corresponding field is enabled for input. Multiple Digipeat stations can be entered and separated by commas. 3. **KA-NODE/Netrom Access**. Similar to the Digipeat option, the user chooses to use KA- or Netrom nodes to reach the BBS. When this option is selected, the "Create/Update Path" button is enabled and allows the user to enter the information for each node in the path.

5.3 Configuring for KA-Node/Netrom access

Configuring for KA-Node/Netrom access is not difficult, but does require an attention to detail to get the settings right. Once you select this access method, the **Create/Update Path** button is enabled and a configuration must be created before this BBS configuration can be saved. Once this button is pressed, the Node Path Setup form is displayed.

NOTE: See the Application Note titled "*Setting up KA-Node/Netrom Network Access*" on the Outpost website for a more detailed walk-through of this topic.

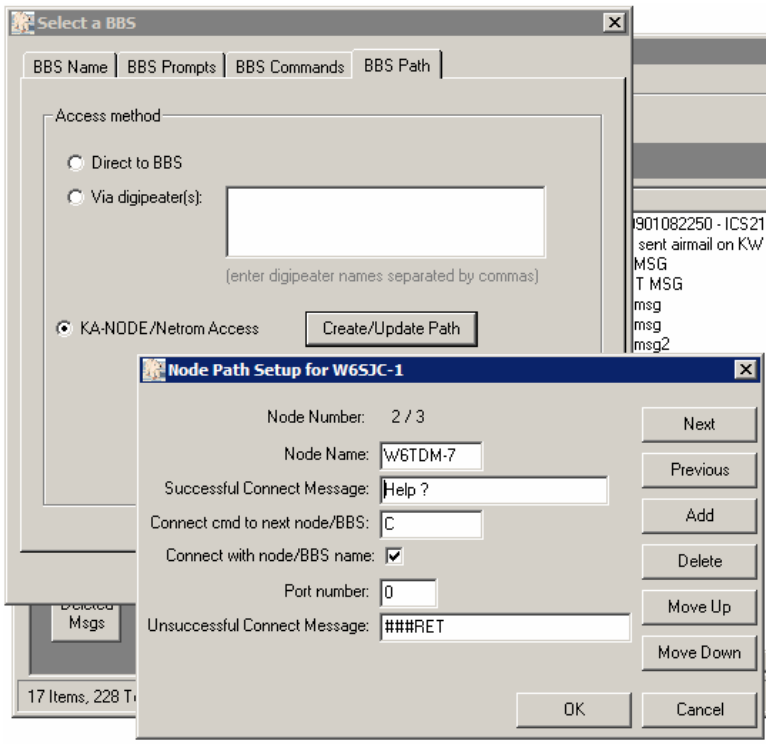


Figure 26: Node Path Setup

The fields on the form are as follows:

Fields	Description
Node Name	The actual connect name of a node in the node path, such as K6FB-7 or W6TDM-7. **Default:** blank
Successful Connect Message	The string that is returned by the node indicating that you are connected. Outpost uses this string to confirm that the connection was successful, and is ready to either connect to the next node in the sequence or connect to the BBS. **Default:** blank
Connect cmd to the next node/BBS	Some nodes support multiple channels that allow you to connect to a different channel. While the "**C**" connect command is typical, other commands could be used, such as "**X**" for Xconnect (cross-connect), or "**BBS**". **Default:** C

Fields	Description
Connect with node/BBS name	Some nodes are actually the host access point to a local BBS and does not require a full "**c bbs_name**" as the final command. Instead, by setting up the previous field as "**BBS**" connects the user directly to the BBS. **NOTE:** This is network- and BBS-dependent. **Default:** CHECKED
Port Number	The port number to be taken from the current node to the next node. Some nodes have multiple radio ports typically set up on different bands. For single channel ports, leave this value as 0. **Default:** 0
Unsuccessful Connect Message	In the event the connect request to the next node was unsuccessful, this string is returned by the current node to tell Outpost that the next connect was not successful. **Default:** blank

The following menu controls are available on this form:

Controls	Description
Next	Retrieves the next previously configured node in the sequence when there are more than one nodes in the node list.
Previous	Retrieves the previous node in the sequence when there are more than one nodes in the node list.
Add	Clears the form and prepares to receive information about a new node. All new nodes are added to the end of the node list.
Delete	Deletes the displayed node from the node list.
Move Up	Moves the displayed node up earlier (sooner) in the sequence. This is typically used when an intermediate node is added. All new nodes are added to the end of the list and may need to be positioned sooner in the list.
Move Down	Moves the displayed node further back (later) in the sequence.

Configuring a Node Path

To configure any node path, I recommend the following steps:

1. Collect information about the path to the BBS
2. Perform the connection manually before starting any Outpost setup
3. Record the relevant information for each node that you will need for the Outpost setup
4. Configure Outpost (and your BBS) for Node access
5. Test the configuration

Considerations about using Node Path

- Your understanding of the node path to get to the BBS is critical. I recommend developing a worksheet that includes the following:

Node #	Node Name	Successful Msg	Connect command	Connect with name	Port	Unsuccessful Msg
1	K6KP-7	Help ?	C	checked	0	###RETRIED
2	W6TDM-3	###LINK MADE	C	checked	0	3} Failure with
3						

- To develop the **Successful Connect Messages**, manually run through the sequence and record what each node returns. Usually, only the last couple of characters in the string are required. For instance, for Node 1 above, the entire returned string was: "ENTER COMMAND: B,C,J,N, or Help ?". However, only the "Help ?" is all that is needed. As usual, watch the spaces and capitalization.

  Most Netrom nodes do not return anything after a successful connect. However the calling station does report that the link was made (Node 1 was a KPC3 KA-Node and returned the string: ###LINK MADE). This string is a suitable proxy for the Netrom connect string. See Node #2 above.

- To develop the **Unsuccessful Connect Messages**, you will have to manually force the error by entering a non-existent node and recording what is returned.

  When picking the error string, DO NOT pick any portion that includes a call sign since this may change at runtime. For Node #2 above, the first portion of the error message was picked up and was deemed to be unique regardless of the next station to which it tried to connect.

NOTE: See the Application Note titled "*Setting up KA-Node/Netrom Network Access*" on the Outpost website for a more detailed walk-through of this topic.

5.4 Selecting a configured BBS

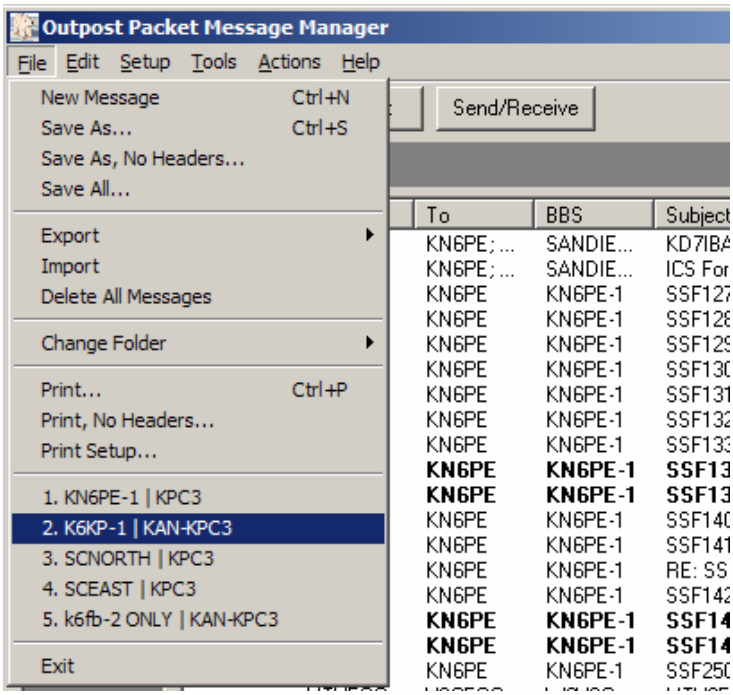
If you decide to install the sample Outpost configurations, you can see some BBSs already configured that are mostly found in San Francisco's South Bay Area. For those Outpost users outside the Bay Area, please use these as examples on how a completed BBS setup should look. If desired, these BBS entries can be deleted from the list.

To select a previously configured BBS, perform the following:

1. Select Outpost's **Setup > BBS…**
2. At the **BBS Name** field, use the pull-down menu to view the previously configured BBSs. If a BBS was previously defined, it will be displayed.
3. Select the BBS you want to use.
4. Press **OK** when done.

Outpost will display the selected BBS on the Status Bar on the bottom of the Main Form.

Additionally, a previously used BBS-and-Interface pair can be selected from the **File** Menu's most recently used list. This lists all the combinations that were previously selected in order when they were used, most recent on top.



5.5 Setting up a new BBS

Before beginning, you are strongly encouraged to ensure you can access the BBS from either the Outpost's Interactive Packet Program or some other TNC program to verify the path and confirm it works before trying it with Outpost.

Set up a new BBS as follows:

1. Select Outpost's **Setup > BBS…,** then press the **New** button.
2. Enter a Friendly Name. This is the name that you can use to identify the BBS. It can be the BBS call sign (K6FB-2), personal reference (Bobs JNOS), or other description that you wish to use.
3. Enter the Connect Name. This is the exact name of the BBS as you would type it to initiate a connection (such as: K6FB-2, W6XSC-1, etc.).
4. Select the BBS Type. The recommended option is the default option: "**Let Outpost determine the BBS…**"
5. If you cannot reach the BBS from your station, on Tab 4 "BBS Path", choose the path option based on the types of stations between you and the BBS.
   - For Digipeater access, check this box and enter one or more digipeater stations (limit is 128 characters / about 9 digi-stations… worst case).
   - For KA-, Netrom Node access, see the Application Note titled "*Setting up KA-Node Network Access*" on the Outpost website for setup details.
6. Verify the default BBS commands listed; change them as necessary.
7. Press **OK**. This new BBS entry is saved and set as the current BBS.

5.6 BBS Registration

The typical Outpost Packet Session assumes there are no superfluous prompts such as prompting for the user's name, zip code, city, etc. However, some BBSs require this as part of the *registration process* the first time you log on.

- If you intend to access a BBS that requires registration, you must log on manually and register prior to running Outpost.
- If you run Outpost and the program hangs because of registration prompts, Press the **Abort Session** button, wait for Outpost to end and close the Packet Session Manager window, then manually connect to and register with the BBS using either Outpost's Interactive Packet Program (under the **Tools > Interactive Packet** menu) or some other terminal emulator program.
- Log on manually to confirm the registration was successful.

5.7 BBS Expert User Mode

Several BBSs provide different levels of prompts.

- The NEWUSER mode presents different prompts that guide the new user through the use of the BBS.
- The EXPERT mode assumes the user is familiar with the BBS and its commands, and presents only the BBS Command prompt.

Outpost only works in **EXPERT** Mode and does not expect to see any other prompt other than the BBS command prompt. If your BBS supports it, before beginning an Outpost Packet Session, verify your logon is set for EXPERT.

See the Outpost Website for specific commands that will help put you in Expert Mode and turn off Paging.

6 Other First-Time Setups

There are 2 other areas that are worth setting up prior to beginning with Outpost.

6.1 Report Settings

There are a series of settings that help manage Outpost's report and message identification features. This form is accessible from **Tools > Report Settings…**

The **Variables** tab holds values that are used during the message creation process.

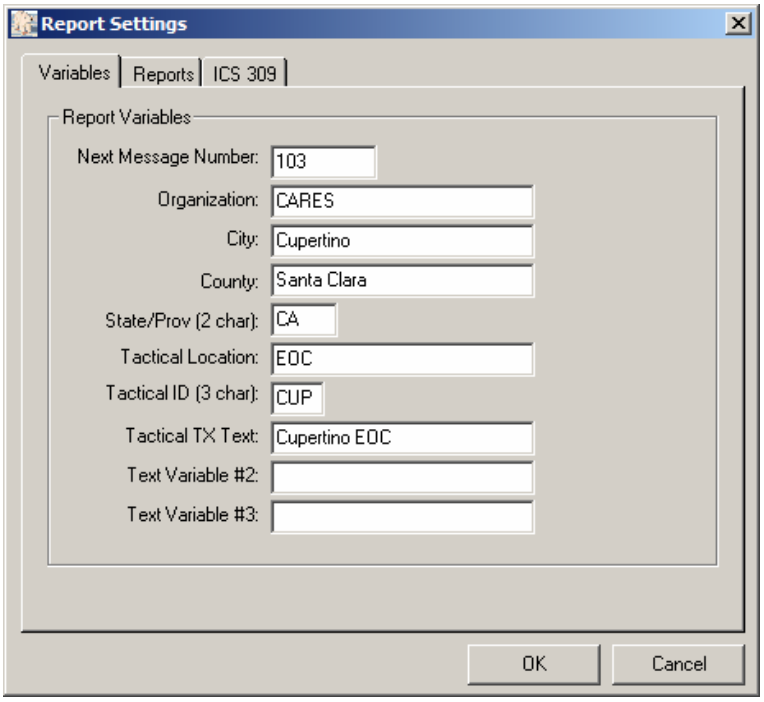


Figure 27: Report Settings Menu

The fields in this form are defined as follows:

Fields	Description
Next Message Number	This is a sequential message number that can be added to a Message's subject line, incorporated into an NTS message, or accessed by an On-line report. Each time it is accessed, it is incremented to the next number. **NOTE:** If Next Message Number is set to zero ("0"), it is not incremented to the next number when accessed. **Default**: 100
Organization	A free-form text field that can contain the name of the organization that you may be supporting or to which you belong. Sample organization names are: Cupertino ARES/RACES Department of Health Services

Fields	Description
City	A free-form text field that contains the name of a City. Typically, this is the City name from which you are operating.
County	A free-form text field that contains the name of the County or district. Typically, this is the County name from which you are operating.
State/Prov	A 2 character text field that contains the name of the State or Province. Typically, this is the State or Province name from which you are operating.
Tactical Location	A free-form text field that contains the name of the Tactical Location. Sample tactical location names are: Seven Springs Fire Station Santa Clara Valley Medical Center
Tactical ID	A 3 character text field that is usually an abbreviation of the tactical location. Sample tactical IDs (and what they could refer to) are: SSF (Seven Springs Fire Station) VMC (Santa Clara Valley Medical Center) Tactical IDs are used in On-line reports and with the Automatic Message Identifiers option. When turned on, the Automatic Message Identifiers feature creates a concatenated field of the "Tactical ID" and the "Next Message Number" that is inserted on a message's Subject Line. For instance, if the next message number is 247 and the Tactical ID is "VMC", the string "**VMC247:** " would be inserted on the subject line.
Tactical TX Text	This is the string that is used with the Tactical Call feature. It is appended to the Legal Identifier that is sent at the end of any Outpost session whenever Tactical Calls are used.
Text Variable #2, #3	Two free-form text fields that can contain any string. These are primarily used with On-Line reports.

Report variables are accessed by various Outpost features. Note that all settings can be used with On-Line Reports.

Field	On-Line Reports	NTS Message Maker	Message Subject Line	Tactical Calls
Next Message Number	✓	✓	✓	
Organization	✓			
City	✓	✓		
County	✓			
State/Prov	✓	✓		
Tactical Location	✓			
Tactical ID	✓		✓	
Tactical TX Text	✓			✓
Text Variable #2, #3	✓			

To fill in the report variables, do the following:

1. From the Outpost main menu, select **Tools > Report Settings**.
2. Fill in the fields. When done, press **OK**.

Typically, defining report values only has to be done once for all reports. Once these fields are filled in, the report values will be referenced by any of the above-mentioned functions during run-time.

See *Section 14 Online Reports*, for information on how references to these values can be embedded into your custom reports.

Second Tab: The **Reports** tab sets up for one-touch (Hot Key) loading of On-Line Report Templates.

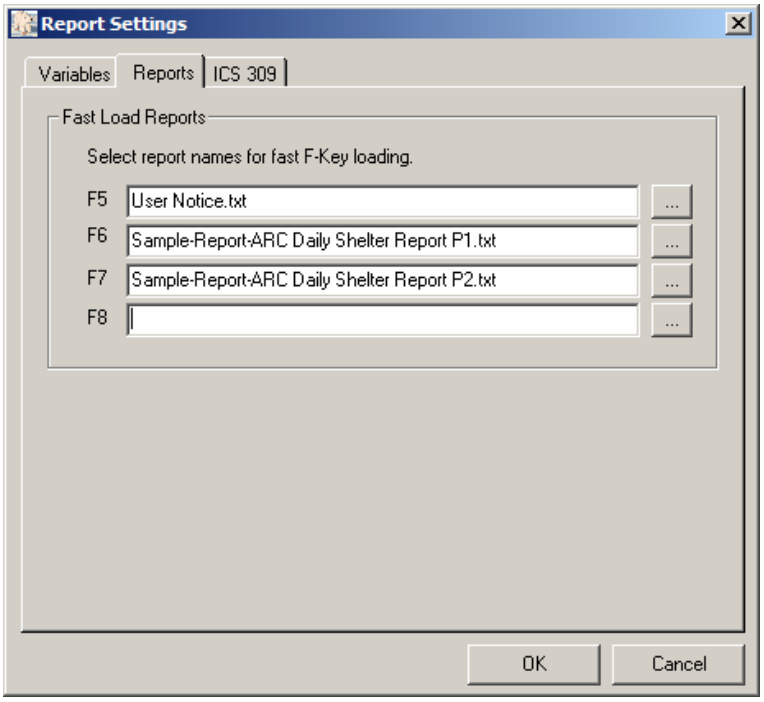
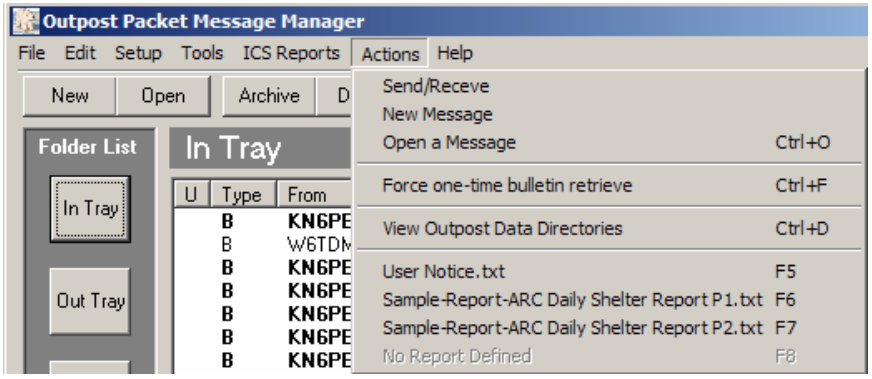


Figure 28: Report Hot-Key Menu

On-line report names can be entered in one of two ways:

1. **Direct Entry**. You can type in the report name and path into each field. When you press **OK**, a check is made to verify that the file exists.
2. **File Selection**. To find and select a file, click on the **[...]** button at the end of the entry field. A form pops up that allows you to browse and select a file name out of the `\reports` directory. Press **OK** to load the File Location Menu, then **OK** when done.

After these on-line reports are defined and set up, they show up on the Outpost main form under the **Actions** menu as follows:



Third Tab: The **ICS 309** tab sets up automation for running the ICS 309 Communications Log program.

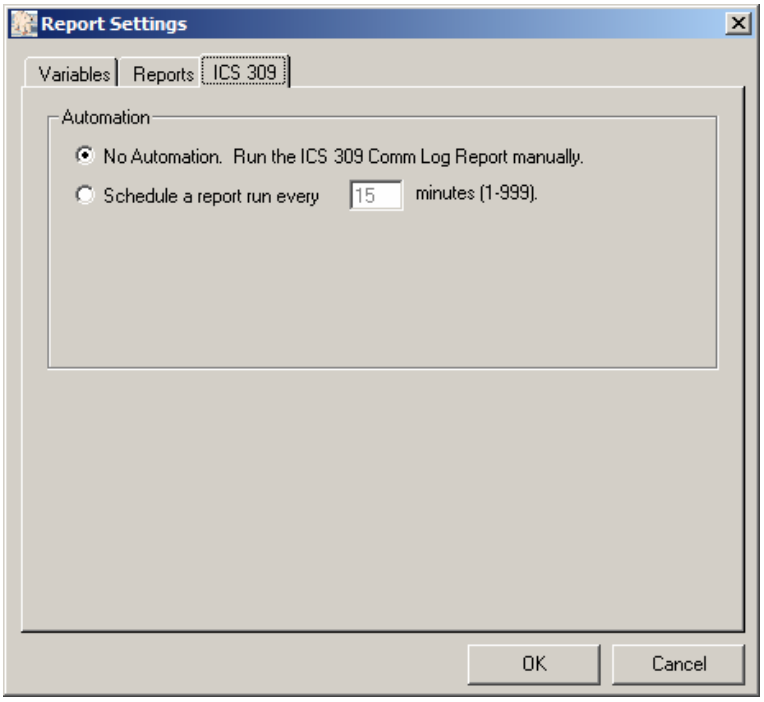


Figure 29: ICS 309 Communications Log run menu

On-line report names can be entered in one of two ways:

1. **No Automation**. When this option is checked, no automatic running of the report occurs.
2. **Schedule Every…**. Interval Scheduling: when this option is checked, Outpost will automatically run the report every "X" number of minutes in full automated mode with the previously setup. The timing for this is determined by the operator, with valid settings ranging from 1 to 999 minutes (about 16 hours and 40 minutes).

6.2 Script Settings

You can define Outpost Scripts to run as part of the Outpost process. This form is accessible from **Tools > Script Settings…** There is only one form for these settings:

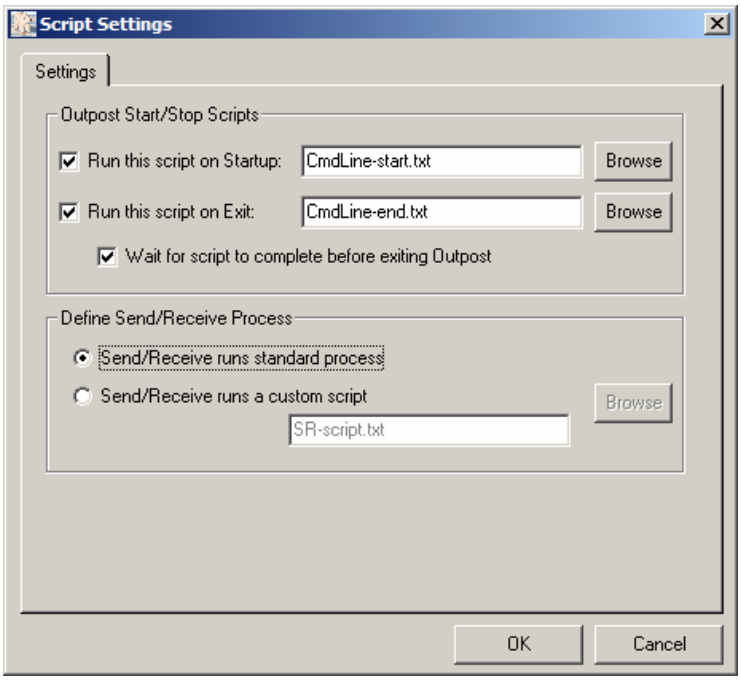


Figure 30: Script Setting Menu

The options on this form are defined as follows:

Operation	Description
Start/Stop Scripts	**Run this script on Startup.** When checked, Outpost will run the named script immediately after starting up. **Run this script on Exit.** When checked, Outpost will run the named script as one of the last steps in shutting down. In both cases, the Browse Button ensures you can find and declare the exact name of the script. **Wait for script to complete before exiting Outpost.** If "**Run this script on Exit**" is checked, then this option is enabled. If UNCHECKED, Outpost will start the script and immediately exit. If CHECKED, Outpost will wait for the script to exit before exiting. This is useful if your exit script needs to run a final Send/Receive Session.
Define Send/Receive Process	This option lets you decide how the Send/Receive process will run. **Send/Receive runs standard process.** When checked, this option runs the standard Send/Receive process exactly as it is defined within the application. **Send/Receive runs a custom script.** When checked,

Operation	Description
	this option runs a user-defined script that controls the Send/Receive process. This applies to both manual and automatic Send/Receive initiation.
OK	For any option where a script is defined, Outpost will validate that the script actually exists before closing the form.

Considerations when running Scripts from Outpost

The above options begin to give the user a lot more control over how Outpost runs. With this control is the risk for unanticipated problems, and requires the user to consider the following:

1. Scripts that are developed to be run from Outpost should END and EXIT when done. The Opscripts EXIT command will cause Opscripts to terminate once the script completes. This is important to avoid having multiple instances of the Opscripts running at the same time, thereby avoiding a house-keeping issue.
2. Unless you really want this to happen, these scripts should not be set up to loop unless it is your intent to manually terminate them when they are no longer needed. This is fine for semi-automatic operations where you are watching what happens, but should be avoided if you intend to run totally automatically.
3. When automatically scheduling a script as part of the send/receive process, make sure the Send/Receive automation time interval is sufficient to ensure you do not try to kick off another script before the last run complete. This will result in contention of the main Packet Session Manager and cause all kinds of problems.

7 Working with Messages

7.1 Introduction

Sooner or later, you will want to create and send a message. This is where Outpost's Message forms come in. There are two ways to get to these forms:

1. From Outpost's Main window, you can create a new message by either pressing the **New** button, or the **Actions > New Message** menu. Or,

2. You can view an existing message by highlighting the message with the mouse, then either press the **Open** button, select the **Actions > Open a Message** menu, double-click on the message, or by highlighting a message and pressing the "`Enter`" key.

NOTE: With the **In Tray** selected, new unread messages are listed in **BOLD**. Urgent Messages are listed in **RED!!**

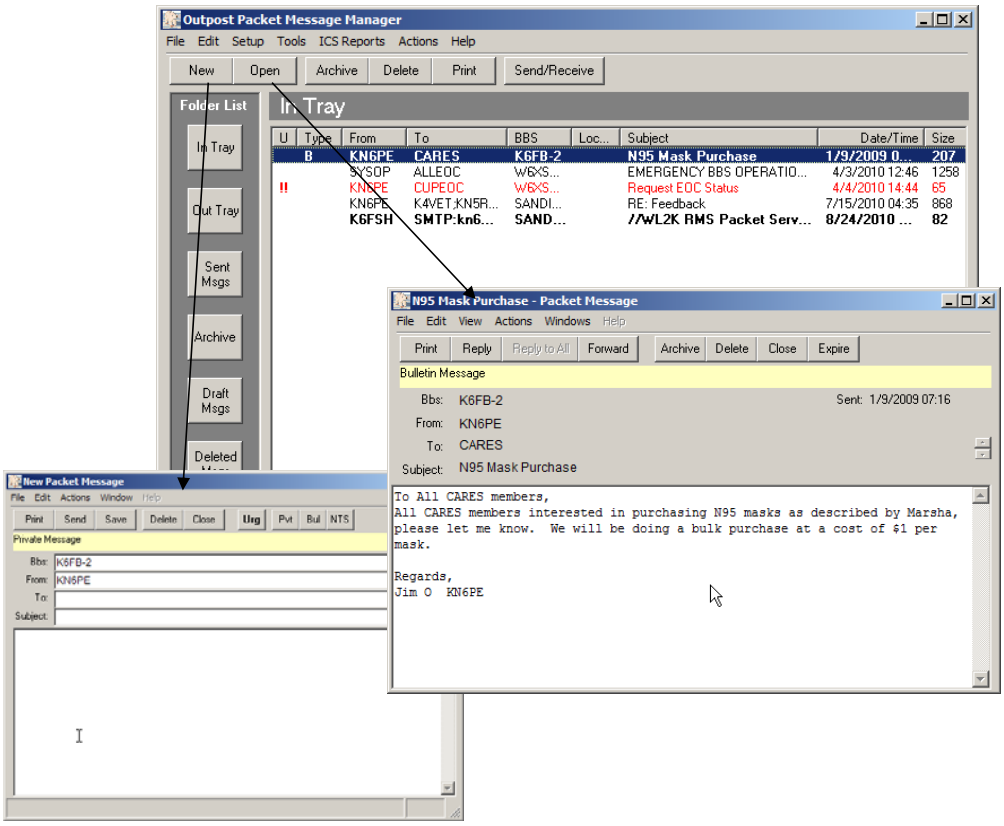


Figure 31: Message Windows for editing and viewing

The message form helps get a message put together quickly and formatted the way you want it to look. Several fields are filled in automatically, and the **Tools > Message Settings** form provides plenty of controls and options that further enhance the message setup process.

7.2 The Edit Message Window

This form lets the user create and edit a message prior to it being sent. Note that in the figure below, all fields are enabled and are available for editing.

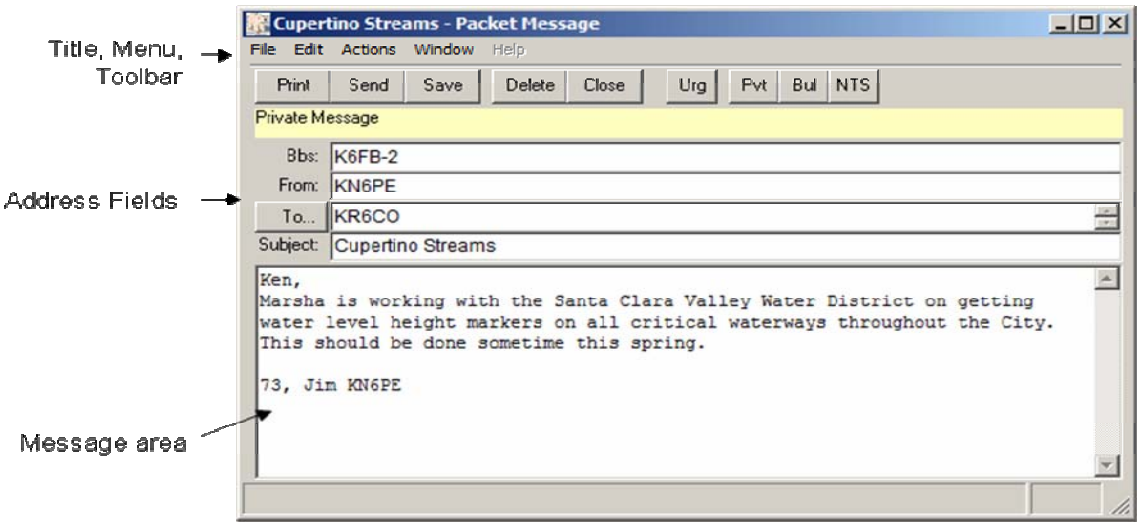
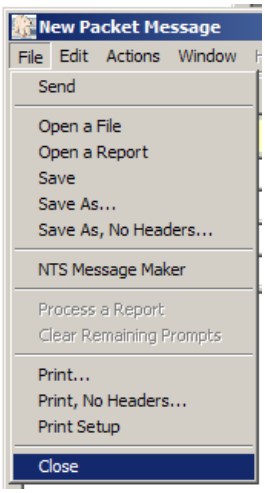
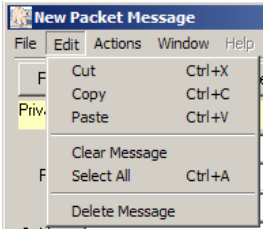
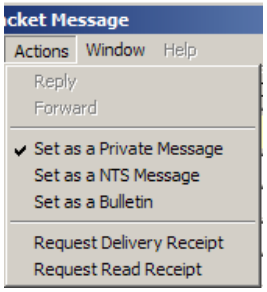


Figure 32: Message Window Layout

NOTE: Some of the more common menu items are also implemented as Tool Bar buttons. See the associated menu item below for their description.

Menu	Description
File  	**Send**: Outpost checks that all fields are filled in, saves the message to the Out Tray, and then closes the Message Form. This function is also a button on the toolbar. **Note:** If the message is greater than 10,000 characters, a warning is issued. If the user presses OK, then the message is truncated to 10,000 characters. **Open a File**. Prompts the user to select a text file from the system file area. Once selected, the file's contents are loaded into the message area. **Open a Report**. Prompts the user to select an On-Line Report from the system file area. Once selected, three things happen: (i) the file's contents are loaded into the message area, (ii) any embedded <tags> are replaced, and (iii) the cursor positions to the first data input point. See *Section 14 Online Reports* for more details. **Save**. Checks that at least the Subject field is filled in, saves this message to the DRAFT Folder, and then

Menu	Description
	closes the Message. **NOTE:** If message is saved as a Draft message, Outpost will set the main listing *Type* field to the word "DRAFT". Once cleared, the Type field reverts to " ", "B", or "NTS" to indicate the message type. If the message is greater than 10,000 characters, a warning is issued. If the user presses OK, the message is truncated to 10,000 characters. This is also a button on the toolbar. **Save As.** Allows the user to save the message to an ASCII text file on the system disk. Address information is also saved, but not in a format that can be reloaded back into the message heading fields. **Save As, No Headers**: Saves the body of the highlighted message to an ASCII text file without the message headers (From, To, Date, Subject). **NTS Message Maker**. Brings up a form that guides the user through the steps for creating and addressing an NTS-compatible packet message. **Process a Report**. Causes Outpost to start searching a loaded On-line report for input prompts. This option is enabled only after an **Open a Report** menu option (above) is performed. **Clear Remaining Prompts**. Causes Outpost to remove all remaining On-Line Report prompts. This option is enabled only after an **Open a Report** menu option (above) is performed. **Print**. Allows the user to select a printer, and then print the currently highlighted message to the printer. **Print, No Headers**. Same as **Print** above, but no message header (BBS, From, To, Subject, Date) is printed. **Print Setup**. Allows the user to select a default printer for Outpost. **Close**. Closes the form without saving or sending any message started.
Edit  	**Cut**: Copies and deletes any highlighted text from any field. The text is placed in the MS-Windows clipboard. **Copy**: Copies any highlighted text in any field. The text is placed in the MS-Windows clipboard. **Paste**: Inserts text from the clipboard at the position where the cursor is located. **Clear Message**: Erases the contents of this message.

Menu	Description
	Select All: Selects all text in this message. **Delete Message**: Deletes this message without saving it.
Actions  	**Set as a Private Message.** Sets this message as a Private Message. It will be sent with the SP command. This function is also a button on the toolbar. **Set as a NTS Message.** Sets this message as a NTS Message. It will be sent with the ST command. This function is also a button on the toolbar. **Set as a Bulletin Message.** Sets this message as a Bulletin Message. It will be sent with the SB command. This function is also a button on the toolbar. **Request Delivery Receipt.** Requests that the receiving Outpost station automatically send back a message indicating that the message was downloaded and received. **Request Read Receipt.** Requests that the receiving Outpost station automatically send back a message indicating that the message was opened.
Window	**Reset form to Normal**: Occasionally, the form will get stuck in either a minimized state or a maximized state, and cannot be restored to a movable window. This button resets the form to the default setting.
Help	No On-line help enabled. Points the user to this User Guide.
URG	***Tool Bar only*** **–** Sets this message as an Urgent Message. See the examples of how an Urgent Received message is displayed.

7.3 The Viewing Message Window

This form is for viewing received messages (found in the In Tray) or sent message (located in the Sent Folder). None of the address or message fields are can be changed.

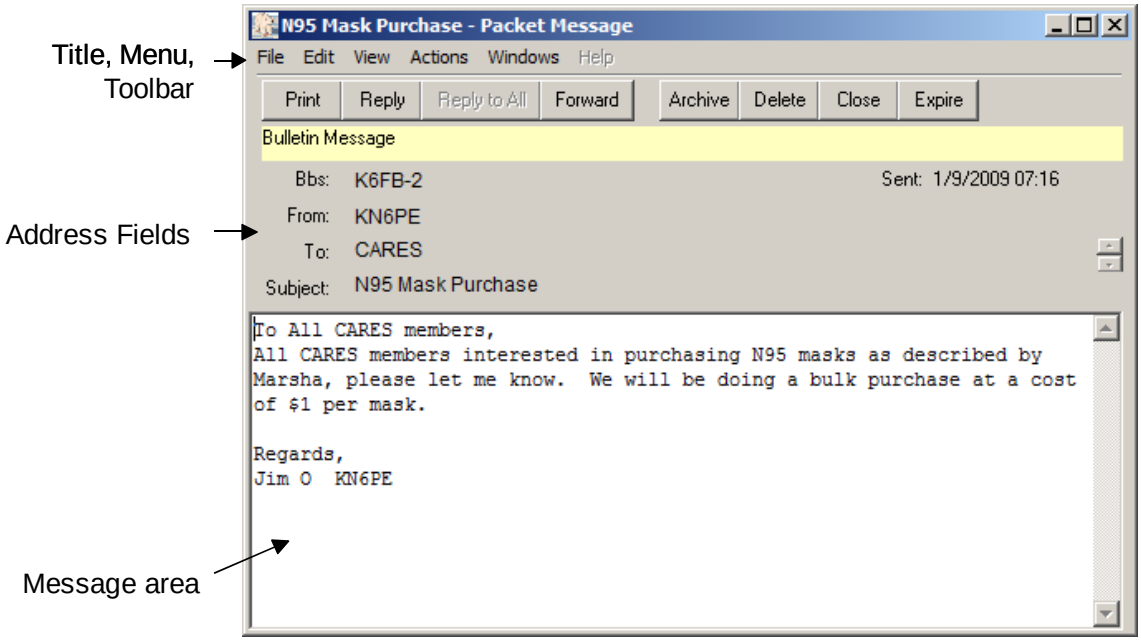
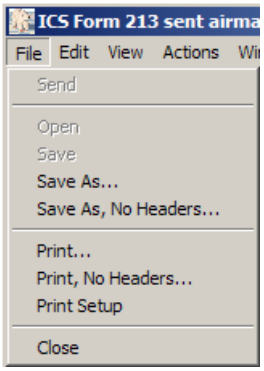
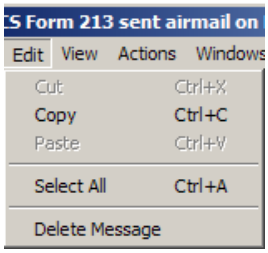
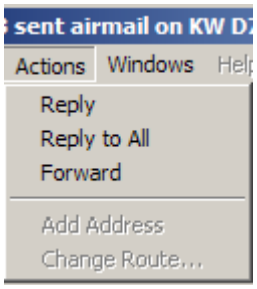


Figure 33: Message Viewing Window Layout

NOTE: Some of the more common menu items are also implemented as Tool Bar buttons. See the associated menu item below for their description.

Menu	Description
File  	**Save As.** Allows the user to save the message to an ASCII text file on the system disk. Address information is also saved, but not in a format that can be reloaded back into the message heading fields. **Save As, No Headers**: Saves the body of the highlighted message to an ASCII text file without the message headers (From, To, Date, Subject). See the **General Settings** menu for information on enabling this feature. **Print**. Allows the user to select a printer, and then print the currently highlighted message to the printer. **Print, No Headers**. Same as **Print** above, but no message header (BBS, From, To, Subject, Date) is printed. **Print Setup**. Allows the user to select a default printer for Outpost. **Close**. Closes the form without saving or sending any message started.

Menu	Description
Edit  	**Copy**: Copies any highlighted text in any field. The text is placed in the MS-Windows clipboard. **Select All**: Selects all text in this message. **Delete Message**: Deletes this message without saving.
Actions  	**Reply**: For an existing message, opens a new message window, initializes the address fields, and formats the original message as a Reply Message. **NOTE:** BBS field is set to the BBS from where this message came. **Reply to All**: Similar to Reply, this option is enabled when a message is received from a Winlink RMS, or CMS node and has multiple addressees in the **To**: field. **Forward**: Forwards the message by opening a new message window, initializes the address fields, and formats the original message as a Forwarded Message. **NOTE:** BBS field is set to the currently defined BBS, not necessarily the BBS from where this message came. **Add Address**: This option is enabled when an address book packet message is received. Outpost lets you send Address Book entries to other users. When an Address Book entry is received, the user can add this address to the local Outpost Address Book. **Change Route:** This option is enabled when an ICS 213 message is received. This menu lets the user change the message routing to a different named Ics213mm.exe user. See the *ICS 213 Message Users Guide* for details.
Windows	**Reset form to Normal**: Occasionally, the form will get stuck in either a minimized state or a maximized state, and cannot be restored to a movable window. This button resets the form to the default setting.
Help	No On-line help enabled. Points the user to this User Guide.
Archive	Closes and moves the message to the Archive folder.
Expire or Accept	***Tool Bar only*** – The label on this button changes depending on the type of message being viewed: 1. For received PRIVATE messages, this button is hidden. 2. For received BULLETINS that <u>you</u> send, this

Menu	Description
	button displays **Expire**. By pressing this button, you are prompted to confirm that you want Outpost to delete your Bulletin off of the BBS during the next Send/Receive Session. 3. For NTS messages that someone else sent, this button says **Accept**. By pressing this button, you are agreeing to service the NTS message that is open, and want Outpost to delete the NTS message off of the BBS during the next Send/Receive Session.

7.4 Address information

Field	Description
BBS	When opening a new message, this field is set to the currently selected BBS. However, it could be changed to a different BBS if desired. For received messages, this field contains the name of the originating BBS.
From	For new messages, this field is set to the currently configured Station Call Sign or Tactical Call (if enabled). **NOTE:** This field cannot be changed once the message form is open. To change, close the message, go to Setup > Identification, and name the operator change there. When viewing a received message, this field contains the Station Call Sign or Tactical Call of the sending station.
To	Outpost supports three types of addresses: • FCC Call Sign or Tactical call of the station to which this message is to be delivered. • **Hierarchical addressing** is supported for forwarding beyond the BBS. This is in the form (i.e.): **KN6PE@N0ARY.#NCA.CA.USA.NOAM**. • **Winlink RMS/CMS messages**, the To Field can hold multiple addresses separated by semicolons. A Winlink address can be any legal call sign or an internet email address. Email addresses must have the "**SMTP:**" prefix so that the destination address looks something like this: **SMTP:kn6pe@arrl.net**. Bulletins and Tactical Calls cannot be used with the Winlink system. For new messages, destination addresses can be entered directly or as part of an Address Book entry (alias or distribution list). Additionally, one or more entries can be entered at a time thereby sending the message to one or more recipients. This happens differently depending on the BBS that is being used.

Field	Description
	For received messages, this field contains the address of the destination station. For Winlink, all destination addresses are listed. ***NOTE:*** See *Section 9 Using the Address Book* for details on setting up Distribution Lists
Subject	For new messages, enter a subject for this message. When viewing an existing message, this field contains the subject of the message.

7.5 Message Area

The Message Area is a free-form text area that supports cut and paste, tabs (**Cntl-Tab**), word-wrap, text importing, and other simple formatting functions. Rich Text formatting is not supported.

Because of packet's ultimate transmission speed, packet messages should be long enough to convey the intended meaning while being short enough to conserve bandwidth and minimize channel congestion.

NOTE: Most HF BBSs have a 3,000-character limit on packet messages. If you must send large messages, it is recommended that you break them up into smaller messages to reduce channel contention.

NOTE: Outpost enforces a hard 10,000-character limit for sent and received messages. If the out-going message is greater than 10,000 characters, a warning is issued and the message is truncated. For incoming messages, Outpost will truncate the message up to 10,000 characters, and then write the entire message to the Session Log file.

7.6 Creating a message

The Steps for creating a message are:

1. From the main Outpost Window, click on the **New** button. A new message form will open. The **BBS:** and **From:** fields will be pre-loaded with the current system information. These can be changed if necessary.
2. Enter the **To:** (Destination) call sign or tactical call sign. For Winlink, multiple addresses can be entered when separated by a semicolon. Or, you can enter an Address Book entry by pressing the **To:** button. See *Section 9 Using the Address Book* for details.
3. Enter the **Subject:**. Up to 128 characters of subject can be entered. However, this does not imply that the receiving BBS can actually support that number of characters.
4. Enter the **Message**. Outpost will wrap around any text that reaches the right side of the form. If you are sending it to another Outpost station, line-wrap is handled correctly and all formatting is preserved. Message length is limited to 10,000 characters.

NOTE: For non-Outpost users, the message may not look as "neat" at the receiving end due to limitations of the receiving program and its ability (or inability) to handle line wraparounds.

5. Verify the **message type**. From the **Actions** Menu, set the message type (Private, NTS, or Bulletin) if you want something different from the default Private message type. The message type is displayed in the highlighted area below the Tool Bar buttons.

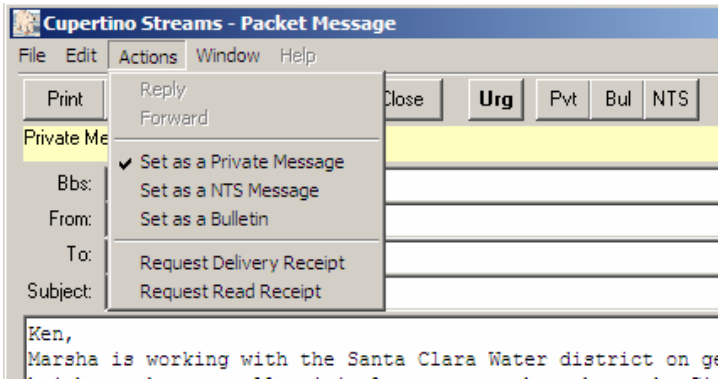


Figure 34: Selecting the Message Type

6. The Message Type can also be set using the three buttons on the message form:
   - Pvt: Private
   - Bul: Bulletin
   - NTS: NTS message
7. When you are done with your message and satisfied with the way it looks and reads, press the **Send** button. The message is placed in the Out Tray and will be transmitted during the next Send/Receive Session.
8. If you are not done, you can press the **Save** button. The message is saved into the Draft folder. You can retrieve, edit, and **Send** it later.

7.7 Creating an Urgent Message

Outpost allows you to set a message so that it is indicated as an **URGENT** message at the receiving end. To do this, proceed as follows:

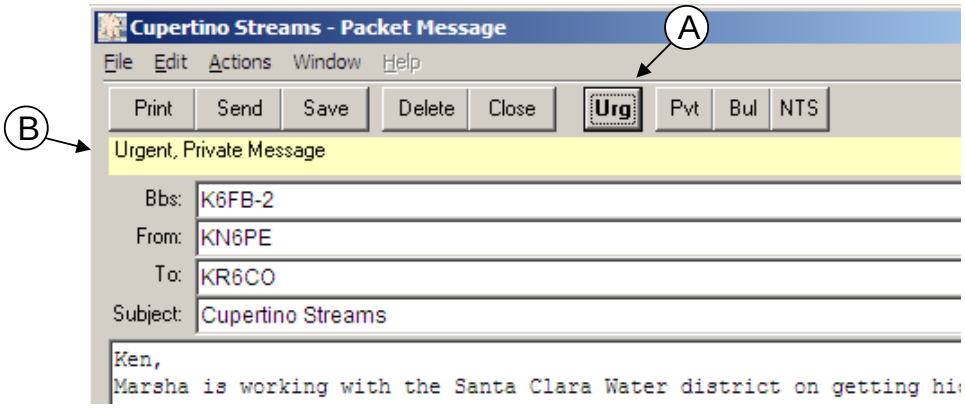


Figure 35: Setting Message to Urgent

1. On the Message form, press the **Urg** button (**A**). The message header (**B**) shows it is to be sent as an Urgent Message. Pressing the **Urg** button again changes the message back to non-urgent.

2. Once the message is retrieved by the receiving station, it is listed in the In Tray with all the other messages, and indicated as Urgent by:
   (i) 2 red "**!!**" in the "**U**" (Urgent) column, and
   (ii) highlighted message listing in **RED** (**C**).

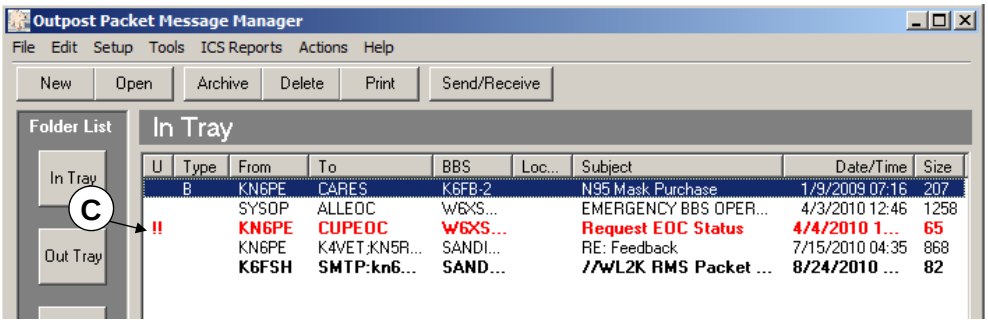


Figure 36: Receiving an Urgent Message

3. The message will continue to remain listed in red until it is deleted from Outpost, forwarded, or replied to. The message will also change from **BOLD** text to unbolded text to indicate that it has been opened and read.

7.8 Requesting Message Receipts

Outpost allows you to request a Delivery Receipt and a Read Receipt from the receiving Outpost station.

- A **Delivery Receipt** is a request for notification that the message you sent was actually downloaded by Outpost on the receiving station. It <u>does not mean</u> that it was stored on the BBS.

  Once the receiving station retrieves their packet messages, during the same Send/Receive Session when the message was downloaded, Outpost automatically formats and sends back a short Delivery Receipt message to the requesting station. No user interaction is required.

- A **Read Receipt** is a request for notification that the Sent Message was actually opened. It does not guarantee that the message was actually read or understood.

  When a received message containing a Read Receipt is opened, Outpost automatically formats a short Read Receipt message. This message will be sent back to the requester during the next Send/Receive Session.

Both Delivery and Read receipts can be requested at the same time if desired.

To request a delivery or read receipt, from the message form, press **Actions > Request Delivery Receipt** or **Request Read Receipt.**

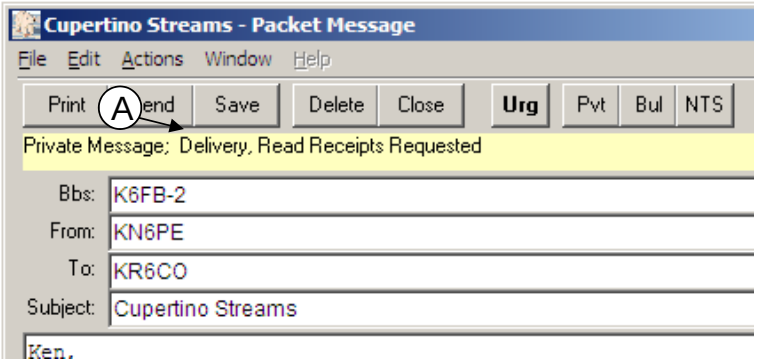


Figure 37: Setting up a message with Receipt Requests

After the message is delivered to the receiving station, the requesting station sees the following:

- An entry in the message listing indicating a Delivery Receipt (B)
- A short Delivery Receipt message containing date and time details of the receipt.

A similar message listing and message is returned for Read Receipts.

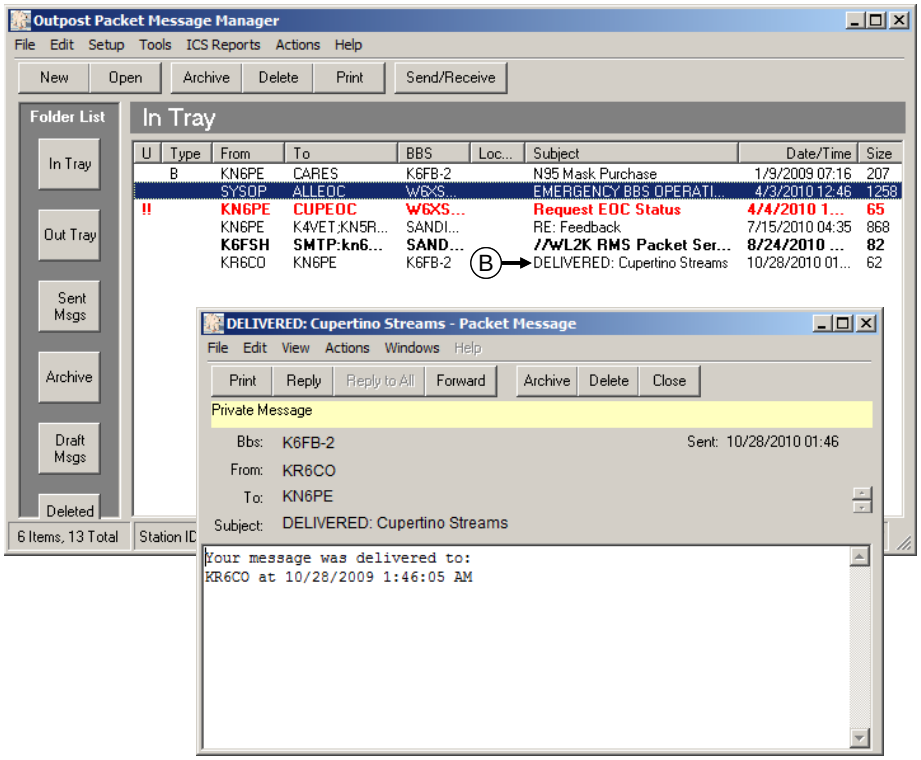


Figure 38: A Delivery Receipt Message

7.9 Forwarding or Replying to a message

Messages that you receive from another packet station can be forwarded to a different user, or replied back to the originator. Outpost helps with the formatting so that the original message can be referenced.

1. **Forward**. After you select a message for viewing from the Outpost main window, you can press **Forward**. This action does the following:
   - A new copy of the message is created and reformatted with an "original message" header. The original message is preserved.
   - The **From:** field is set to the current Station Call Sign.
   - The **To:** Field is cleared and should be set to the station to receive this message.
   - The user can now add or edit the text message as appropriate.
   - Press **Send** when done.

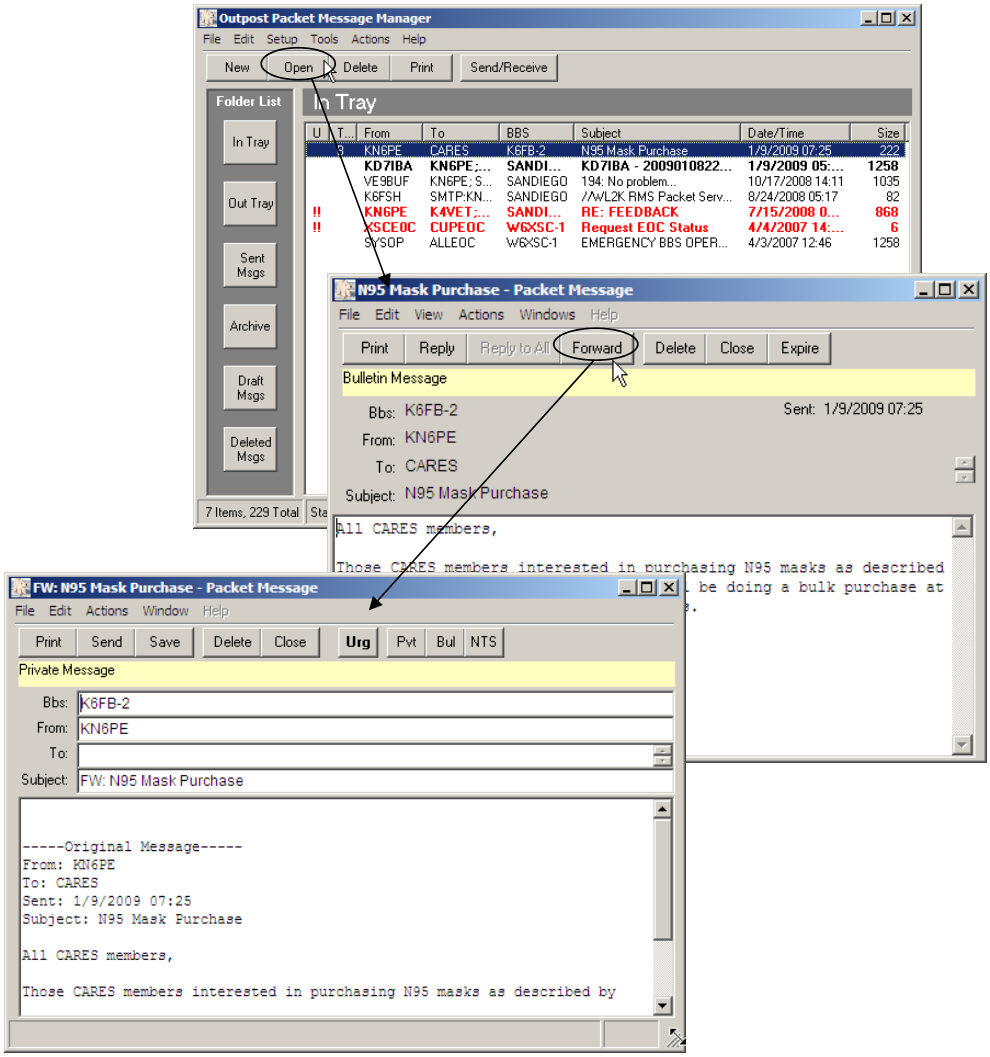


Figure 39: Forwarding a message

2. **Reply**. This command operates exactly the same as the **Forward** with the following exception:
   - The **From:** and **To:** fields of the original message are swapped so that the message will be sent back to the originator.

7.10 Forward and Reply Considerations

1. The Forwarding and Replying feature does add text to the message that (i) may not always be needed, and (ii) consumes channel bandwidth. This should be of particular concern if the packet channel is heavily used.

   If you need to reply to a message, consider editing the original message of unnecessary text to reduce the message bulk, provided you do not alter the meaning you want to communicate. Your organizational policies on handling Forwards and Replies should be considered.

2. When replying or forwarding a message, the message type is set according to the Message Settings found at **Tools > Message Settings**. Regardless of the setting, you can override this setting from **Actions** Menu by setting the message type as described above (Private, NTS, or Bulletin).

7.11 Sending a text file

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

1. From the main Outpost Window, click on the **New** button. Fill on the **To:** and Subject: fields.
2. Select **File > Open**. Navigate to the directory where the file resides and select the file. Press **OK**.
3. The text will be loaded into the Message area and the message title is set to the text file name.

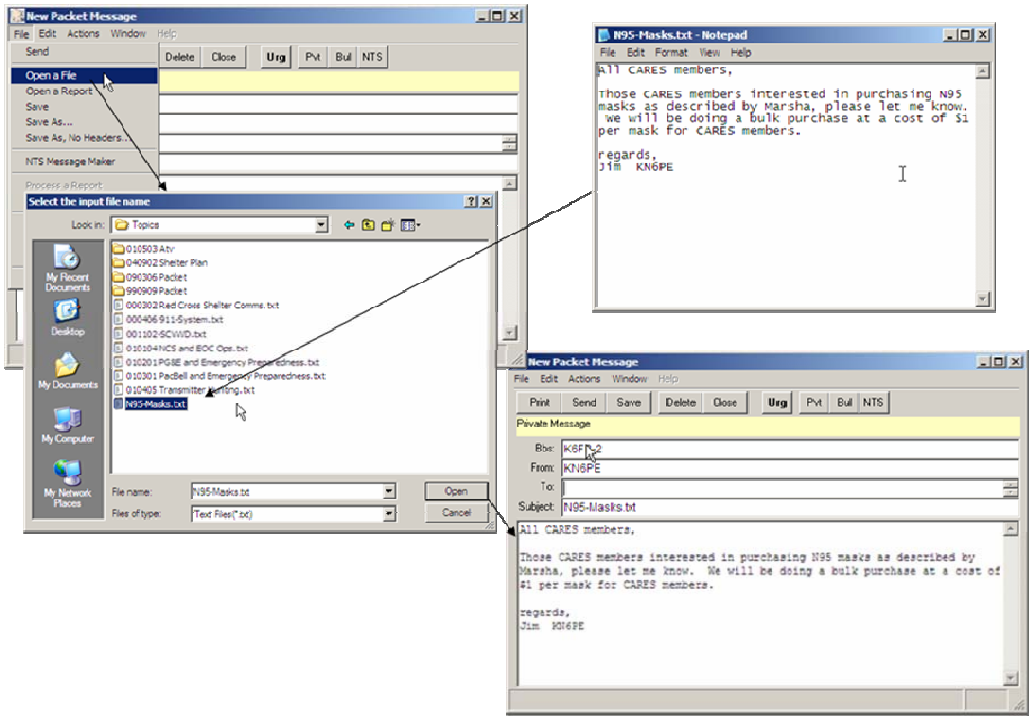


Figure 40: Sending a text file

8 Customizing Message Settings

8.1 Introduction

While Outpost works fine "out of the box," it does provide several options for controlling how the program behaves, particularly around **Message Settings**.

There are several options that you can set to control how messages are handled. These settings are accessed from the main Outpost menu
Tools > Message Settings…

The form is made up of a series of Tabs across the top. These tabs are:

Tabs	Description
New Messages	Describes how new messages are set up. See the field descriptions below.
Msg Numbering	Set up message numbering options.
Replies/Forwards	Chooses how replies and forwards are handled.
Tracking	Allows the user to set global Delivery and Read Receipt requests.
Deleting	Controls for what happens when you delete a message.
Advanced	The controls on this tab are used for interacting with external programs that can create messages in Outpost.

The following sections describe these tabs in detail.

8.2 Settings for New Messages

First Tab: This menu controls how messages are created.

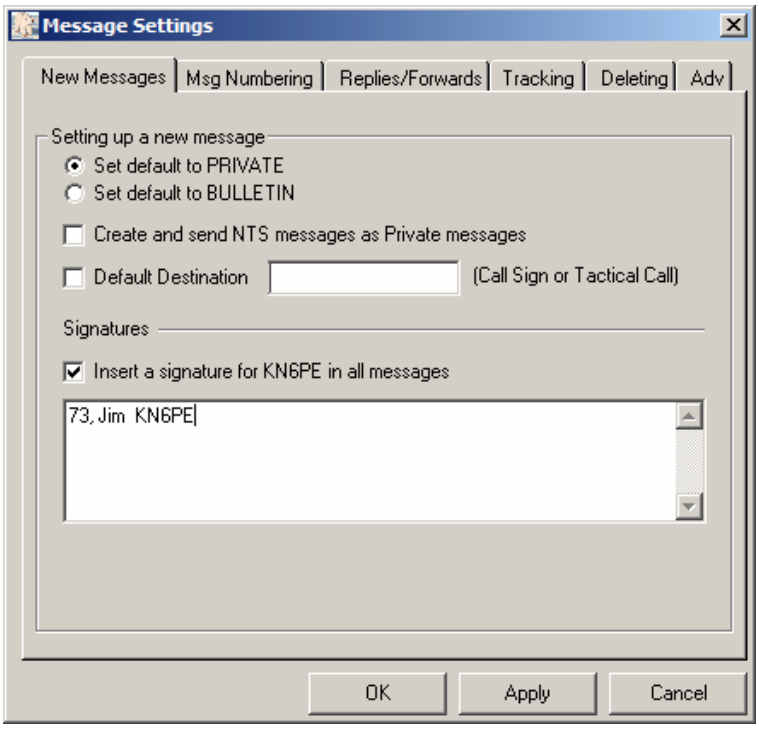


Figure 41: New Messages Tab

This set of options control how Outpost handles new messages.

Control Group	Description
Message Type Default:	**Set Default to Private**: When set, a new message defaults as a Private message. Usually, most messages are sent as Private Messages to ensure that only the recipient sees the message. **Set Default to Bulletin**: When set, a new message defaults as a Bulletin. **NOTE**: If an NTS message is created, the default is overridden and the message is set as an NTS message. **Default**: Set as Private
Create and Send NTS messages as Private messages	Several users prefer the NTS message format for passing messages with the intent for their messages to stay "local". In these cases, the standard NTS address that Outpost generates is not required. This option overrides the NTS addressing controls and allows the message to be created and sent as a Private Message. When checking this option, on sending a message, the SP (Send Private) command is used instead of the ST (Send Traffic) command. The user needs to fill in the

Control Group	Description
	destination. **Default**: UNCHECKED
Default Destination	For stations operating in the field or at a local municipality, it may be typical for them to address the bulk of their message traffic to the same Operational Area EOC or some other station. To reduce the risk of addressing errors, the user can enter a default destination address. To use this feature, check the Default Destination box, and then enter the destination address in field provided. The next time a new message is created, the **To:** field on the message form is automatically filled in with this address. If necessary, this field can be subsequently changed for "one-off" messages going elsewhere. **Default**: Not Set
Signature	Inserts the specified signature text into the body of all new messages. This is a free-form text field and can be as large or small as necessary. However, keep in mind that excessive signatures add channel traffic. Careful consideration should be taken when defining a signature. A separate signature file is set up for each user.

8.3 Settings for Message Numbering

This menu controls how message numbering is applied to a message.

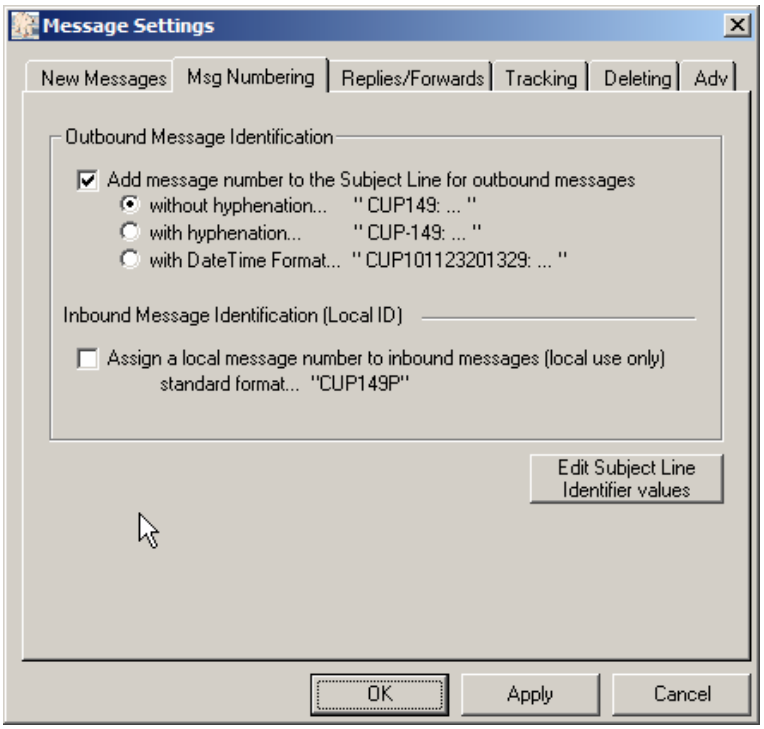


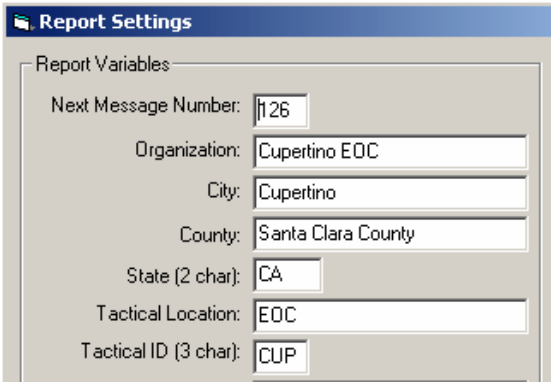
Figure 42: Message Numbering Tab

Outbound Message Identifier

It is good operating practice (if not a requirement of your organization) that all messages be uniquely identified so that they can be subsequently referenced. This option automatically places a unique message identifier in the subject line for each message created.

To automatically add a message number/identifier to the subject line, do the following:

1. On this form, press the **Edit Subject Line Identifier values** button, or Select **Tools > Report Settings...**



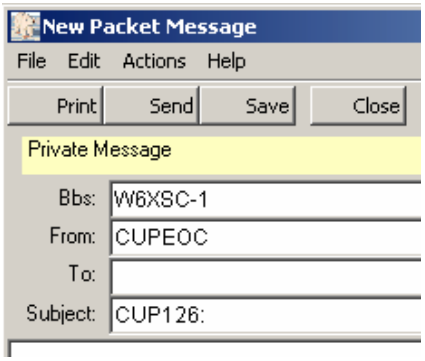
2. Verify the "Next Message Number" field is set to the first number with which you want to start your message numbering.
3. Verify the "Tactical ID" field is set to any special 3-character string identifier you may be using. This field is Optional.
4. Press **OK** when done.
5. Select **Tools > Message Settings...**
6. Click on "Add Message Number to Subject Line".
7. Press **OK** when done.

For instance, suppose this option is checked and the **Report Settings** form is filled in as follows:

In Santa Clara County, CA, "CUP" is the 3-character county designation for the City of Cupertino. The next time a new message is created, Outpost automatically places a message identifier in the subject line in the following format:

<tactical id><next message number>:

So, assuming the above report settings, the following is the result the next time a message is created:



At this point, the user can enter additional subject line text following the identifier. In Santa Clara County, the combination of the Tactical ID and the Message Number uniquely identifies this message for the County EOC.

The next message created after the above message would have the Message Identifier of "CUP127: ", and so on (see the next section for the exception).

These options control how Outpost assigns message Identification numbers to a message.

Control Group	Description
Outbound Message Identification	When checked, any message that you create will have a message identifier assigned. **Without hyphenation:** the 3 character tactical Identifier and number are side by side. **With hyphenation:** the 3 character tactical Identifier and number are separated by a single dash character "-". This is useful if your 3 character Tactical Identifer contains numbers such a "F12" for Fire Station 12. **Data Format:** the 3 character tactical Identifier followed by a 12 digit numeric date/time string in the format: yymmddhhmmss.

Control Group	Description
	NOTE: If the Tactical ID is left blank on the Report Settings form, then only the number is entered in the subject line. Default: UNCHECKED

Inbound Message Identifier

There are some municipalities that require that all messages, both outgoing and incoming, be identified with a Local Message ID. Outpost can now optionally assign all incoming messages with a Local Message ID (LMI). Once this option is enabled, this field and its value will show up as follows:

1. Message Listing: The LMI field will be visible as part of the base message listing for all folders. If not used, the field can be shrunk so that it is not displayed.
2. Message Display: If an LMI value is assigned, it will be presented on the message form.
3. Read and Delivery receipts: The LMI value will be added to all receipts sent back to the original sending station.
4. ICS309 Comm Log: The LMI value is optionally included in the ICS 309 Communications Log report.

Control Group	Description
Inbound Local Message Identification (LMI)	When checked, all informational messages that you receive will have a message identifier assigned. Administrative messages (READ:, DELIVERED) messages will not have an LMI assigned. **Assign a Local Message Number…:** When checked, the LMI will be assigned. Default: UNCHECKED

NOTES

1. The LMI value will have a "P" listed after it to indicate it as a Packet Message. This should help the EOC staff differentiate it from other types of messages that are coming in.
2. In the event there is a need to change or remove the "P", this is done by editing the Outpost.ini file directly in this section:

```
[MESSAGE PREFERENCES]
    :
LMIsuffix=P
    :
```

After editing this value, save the file, and restart Outpost.

8.4 Settings for Replies and Forwards

The 3rd tab controls how a message behaves when it is selected for Replying or Forwarding.

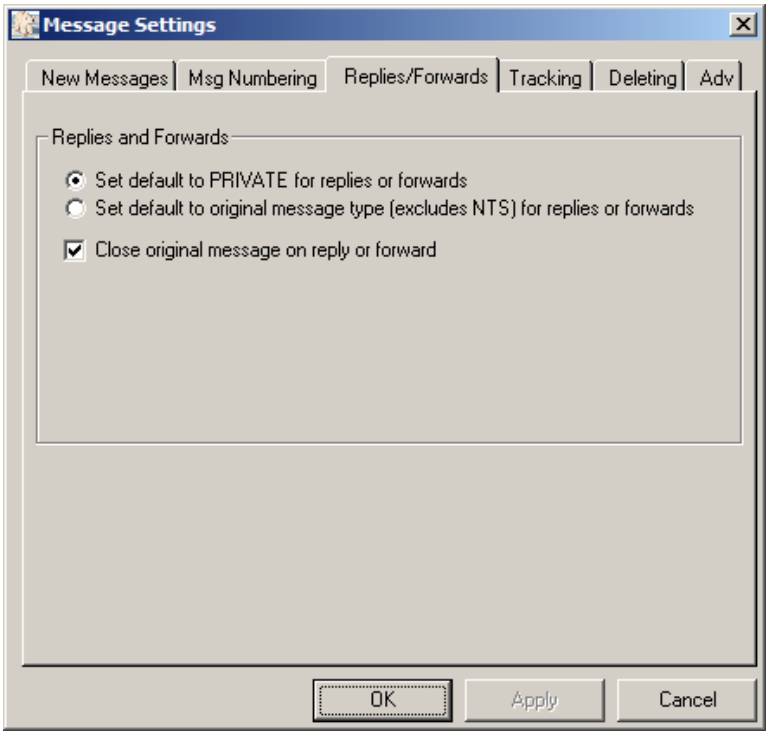


Figure 43: Replies/Forwards Tab

The following table summarizes the options available.

Controls	Description
Replies/Forwards defaults	**Set default to Private Message**: When this option is checked and when replying to or forwarding a message, regardless of the original message type, the message will be set as a Private message. **Set default to Received Message Type**: If this item is checked and when replying to or forwarding a message, the message type will be set to be the same as the original message type. **NOTE:** This option excludes NTS messages. **Default**: Set to Private
Close original message…	To avoid desktop clutter, checking this box will close the original message after selecting it for replying or forwarding. If you want to leave the original message open while completing a reply or forward message, uncheck this box. **Default**: CHECKED: close message on reply or forward.

8.5 Tracking Messages

The 4th tab controls how Outpost handles global message receipt requests.

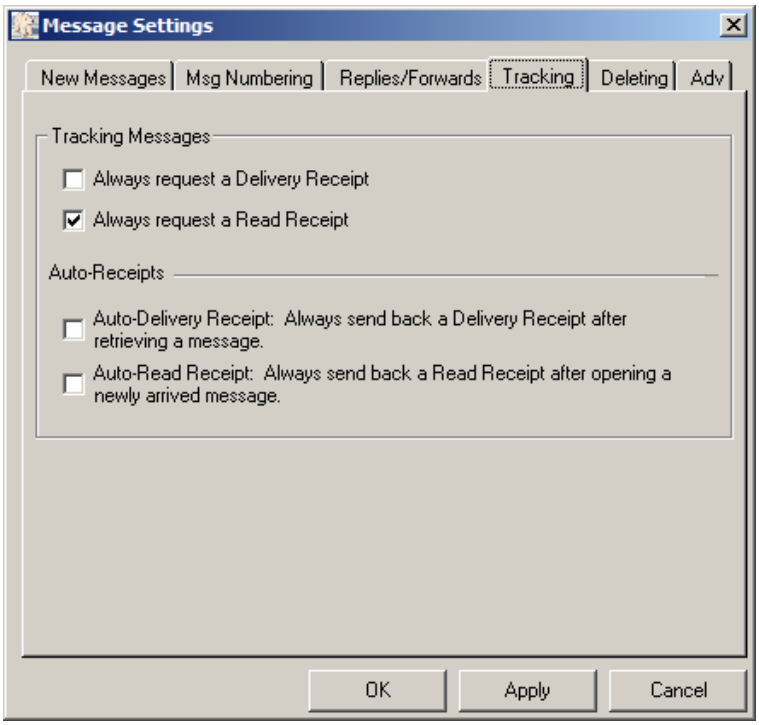


Figure 44: Tracking Tab

The following summarizes the options available.

Controls	Description
Always request a Delivery Receipt.	This option is set by the **originating station**. When this setting is checked, all messages will be sent with a Delivery Receipt request set. This option can be overridden for individual messages at the time the message is being created.
Always request a Read Receipt.	This option is set by the **originating station**. When this setting is checked, all messages will be sent with a Read Receipt request set. This option can be overridden for individual messages at the time the message is being created.
Auto-Delivery Receipt	This option is set by the **receiving station**. Sometimes it is useful for the receiving station to send an acknowledgement that the message was delivered. This option sends a Delivery Receipt for Private and NTS messages back to the originating station, REGARDLESS of whether a Delivery Receipt was requested by the originating station. Bulletins are skipped.
Auto-Read Receipt	This option is set by the **receiving station**. Sometimes it is useful for the receiving station to send an acknowledgement that the message was read. This option sends a Read Receipt for Private and NTS

Controls	Description
	messages back to the originating station, REGARDLESS of whether a Read Receipt was requested by the originating station. Bulletins are skipped.

8.6 Settings for Deleting Messages

The 5th tab controls how outpost handles deleting messages.

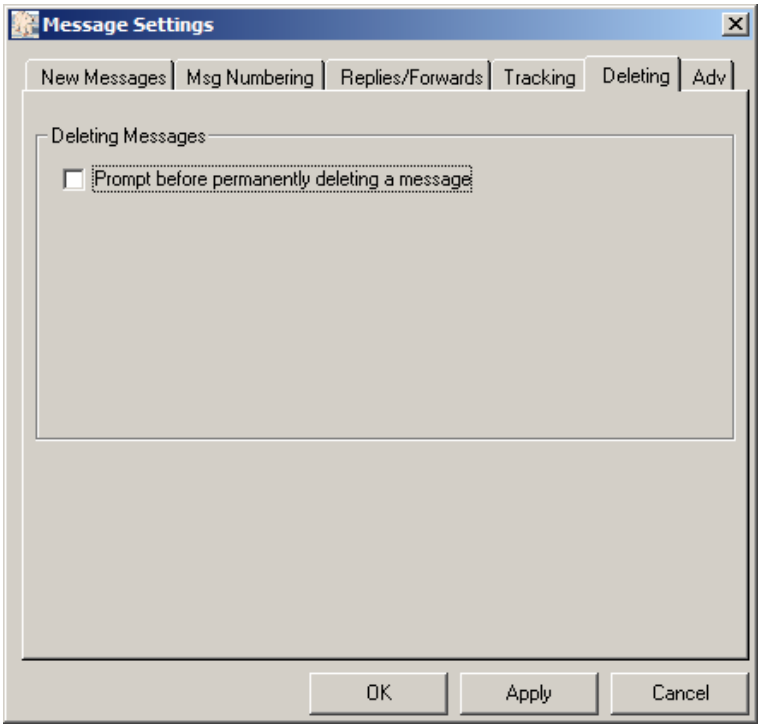


Figure 45: Deleting Tab

The following summarizes the options available.

Controls	Description
Deleting Messages	In general, deleting a message from any folder (other than the **Deleted Mgs** folder) will cause the selected message to be moved to **Deleted Mgs** folder. However, deleting a message from the **Deleted Mgs** Folder permanently deletes the message from Outpost. This option determines whether the user is prompted to confirm that they really want to permanently delete the message. **Default**: CHECKED; prompt before final delete

8.7 Advanced Settings

PacFORMS is a system of browser-based (HTML) forms that provide a user-friendly way to enter specific information ultimately to be transmitted by Packet radio. Field labels and blank fields are not sent. Similarly, Ics213 Messaging is a different message capture form that also sits outside of, and interacts with Outpost. Both rely on the *Opdirect Message Capture System*, a program for receiving messages from these 2 sources.

See: **http://www.scc-ares-races.org/pfpublic/pacforms.html** for details.

The 5th tab controls how Outpost handles these external message sources.

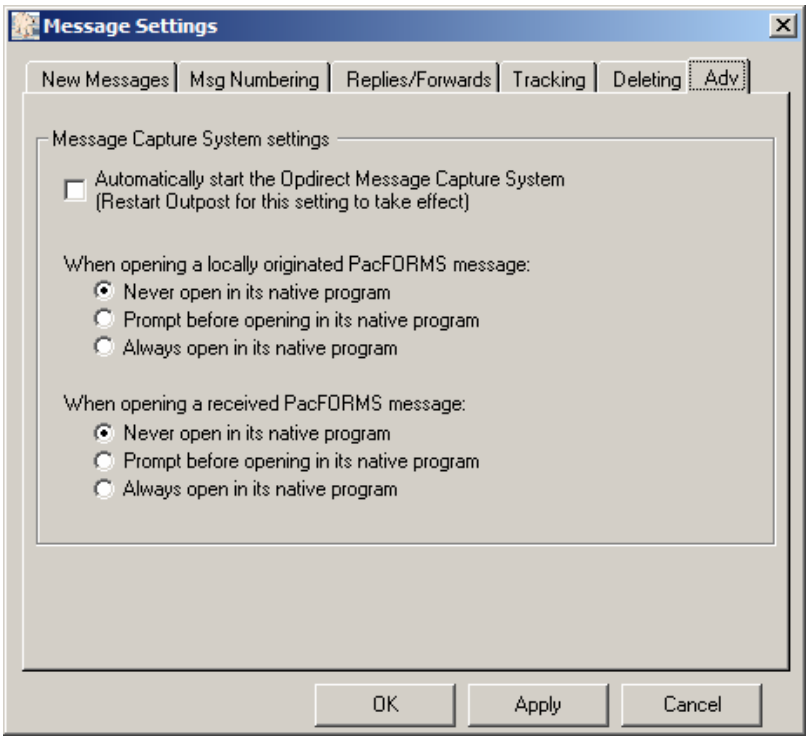


Figure 46: Advanced Tab

Controls	Description
Automatically enable Opdirect	The **Opdirect.exe** program is delivered with Outpost and listens for and processes incoming message from PacFORMS and Ics213mm.exe. If you intend to use either of these 2 reporting programs, you MUST turn on **Opdirect.exe**. Once checked, you will have to restart Outpost. If the **Opdirect.exe** program is missing from the Outpost directory, this option is not enabled. **Default**: UNCHECKED
When opening a locally created PacFORMS…	This option is used with the PacFORMS solution. If the 2nd or 3rd option is selected and Outpost detects a locally submitted PacFORM message when opened in the Outpost Message form, Outpost will automatically pass the message to the **pac-read.exe** program for displaying in its native HTML form. **Default**: Never open in its native program
When opening a received PacFORMS…	This option is the same as the above, but applies to PacFORMS messages received from a remote station. **Default**: Never open in its native program

9 Using the Address Book

9.1 Introduction

In general, the Address Book implementation required revisiting the entire packet message addressing scheme to take advantage of the capabilities that one specific address book feature delivers: ***Distribution Lists***. But first, here is a list of the features that the Address Book supports.

Multiple address formats

The AX.25 packet world has evolved into a mix of different address types that Outpost can support. These are:

Call Sign	**KN6PE** The most common addressing scheme used. This works with all BBS/PBBSs out there.
Tactical Calls	**CUPEOC** Tactical Calls are supported by Outpost and make an assignment operator-neutral.
Hierarchical Address	**KN6PE @K6KP** **KN6PE @K6KP.CA.USA.NOAM** **KN6PE @K6KP.#NCA,CA.USA.NOAM** The different variations of these address types depends on the destinations and the capabilities of BBS in use (such as using White Pages).
NTS	**95014 @NTSCA** This is a variation of the Hierarchical addressing scheme, and is treated differently on a BBS.
SMTP	**kn6pe @arrl.net** **SMTP:kn6pe@ arrl.net** The xNOS and Winlink BBS families support standard smtp address with only a minor difference with declaring the address in the TO: field.

Address Book entries

Single User entries. When you create an address book entry for a single address, you essentially are creating an *Alias*. You can define a friendly name (such as JIMOB) and associate it with a single address for those hard-to-remember call signs or email addresses (such as KN6PE or kn6pe @arrl.net).

Distribution List entries. Multiple addresses can be entered under a single friendly name to create a Distribution List (DL).

Other information can be associated with the entry as well, such as phone numbers, agency names, and general free-form text fields.

When creating a message with an Address Book entry, the single or DL names are entered into the TO: field as usual, with the "+" sign in front of alias name (+JIMOB or +SCC-RACES). The "+" sign tells Outpost that this is an address book entry, and not a directly entered address.

Forwarding Address Book Entries

You can share your address book entries by forwarding them to another Outpost users. These packet messages will be the bare minimum made up of the entered data that can be loaded into the recipient's address book at his/her discretion.

Mixed-use To: lines

Initially, any Winlink user who populated a bunch of addresses onto the **TO:** field was managing the distribution list in his/her head. Now, Outpost users can enter addresses, single user address book entries, DLs, or in any combination.

Address Book substitution at message send time

Once an Outpost message is being processed for sending, Outpost checks the **To:** line for any address book entry, and expands it into its defined address(es).

Winlink naturally handles lists of addresses, so Outpost will do nothing more than expand any address book entries into their defined addresses, and then be sent as is. Winlink will manage distributing the message as it does today.

For JNOS, if Outpost detects multiple addresses on the **To:** line, when performing a Send, it changes the **SP** (Send Private) command with the **SC** (Send Copies) command, and formats the message so that a single message is send to multiple addressees. Like Winlink, JNOS then manages distributing the message as it does today.

Other than Winlink and JNOS, there is no other known BBS that supports handling a list of addresses within one message. When Outpost encounters a DL for a non-WL2K/JNOS BBS, it will expand the distribution list and create one packet message for each distribution list entry. So, a DL with 5 entries will result in 5 messages being sent, one to each recipient.

Duplicate address checking at message send time

With the advent of DLs and the ability to add multiple destinations on a message, the risk of creating duplicate messages goes up. While not really an issue on the internet side, this is a problem for RF-sent messages since many environments are still operating at 1200 baud and duplicate messages needlessly consume bandwidth. Regardless of the BBS, all **To:** lines will be checked for duplicate entries. If duplicates are found, then they are removed.

Address type checking at message send time

One of the Outpost features is to "discover" the type of BBS being used at the time you initiate a Send/Receive Session. Because not all BBSs support all address formats, Outpost will check the **To:** line and each address format against the BBS to ensure that no inappropriate address formats are sent. Address type checking is performed against this table:

BBS/PBBS Types	**Address Types**		
	Call Sign	Hierarchical/NTS	SMTP
All Kantronics All MFJ All AEA/Time Wave	✓	✓	
AA4RE	✓	✓	
BPQMailChat	✓	✓	✓
DXNET	✓	✓	
F6FBB	✓	✓	
HAMSERV	✓	✓	
JNOS, TNOS, SNOS	✓	✓	✓
MSYS	✓	✓	
N0ARY	✓	✓	✓
NNA	✓	✓	
OpenBCM	✓	✓	
RLI	✓	✓	
WL2K (RMS, CMS)	✓		✓

9.2 Address Entry

This section describes how an address book entry is set up.

The form for making and reviewing Address Book entries is accessed from the main Outpost menu **Setup > Address Book…**

The form is made up of 2 Tabs across the top. These tabs are:

Tabs	Description
Address Entry	This tab contains that critical definition items for an address entry.
Contact information	Additional (and optional) information can also be entered to further define an entry.

The following sections describe these tabs in detail. The 1st Tab is the Address Entry Tab.

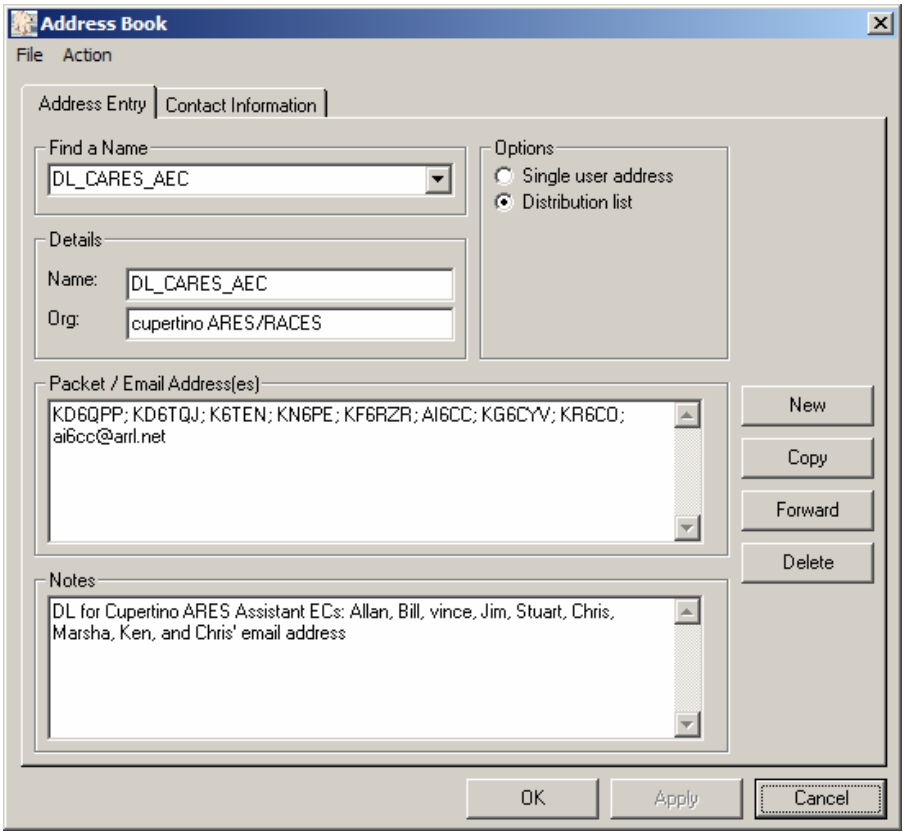


Figure 47: Address Entry Tab

This tab has the following fields:

Fields	Description
Find a Name	A Pull-down menu of the address entries previously entered in Outpost. After pressing the **New** button, this field is hidden and not used. **Default**: the first address entry listed.

Fields	Description
Details	**Name:** When **Finding a Name**, this field shows the name of the address picked by the above pull-down menu. When creating a new entry, this is the field for entering the friendly name for the new address book entry. **Org:** *Optional*, This field lets you enter an organization name for this address entry. **Default**: Blank
Options	**Single User Address.** Click this option if you are defining a single user address. When this option is checked, the address field will not let you enter in spaces, commas, or semi-colons typically used to separate more than one address entry. **Distribution List.** Click this option if you are defining a distribution list. When this option is checked, you can enter one or more addresses in the address field separated by spaces, commas, or semi-colons. **Default**: Single User Address
Packet / email Addresses	Enter one more addresses in this field. See the rules for separating addresses for distribution lists in the options description above.
Notes	*Optional;* Enter any free-form comments or notes for this particular address.

The following describes the controls that are available.

Controls	Description
New	Sets up a new address book entry. All fields on the menu are either cleared or set to their default settings.
Copy	Lets the user to copy or *Clone* the currently displayed address entry. When pressed, the friendly name is used along with the words "--COPY_OF" appended to it to ensure it is a unique name. This name can then be changed, along with the other fields for this entry.
Forward	Lets the user forward the currently displayed address entry as a packet message. This is a good way to ensure that users within your operating group are using the correct addresses for common messaging when Bulletins do not make sense.
New Message	*Action Menu only*, creates a new message addressed to the entry being displayed.

Controls	Description
Delete	Lets the user delete the currently displayed address entry. The user will prompted whether they really want to delete the entry.
OK	Same as Apply, but closes the menu on completion if the field validation is successful.
Apply	Causes all required fields to be validated. On completion, the address entry menu remains open. The Apply button becomes enabled as soon as any field is changed by an update to an existing configuration or by creating a new address book entry.
Cancel	Cancels any changes that may have been made to the form, and the form is closed.

The 2nd Tab holds optional contact information on this address entry.

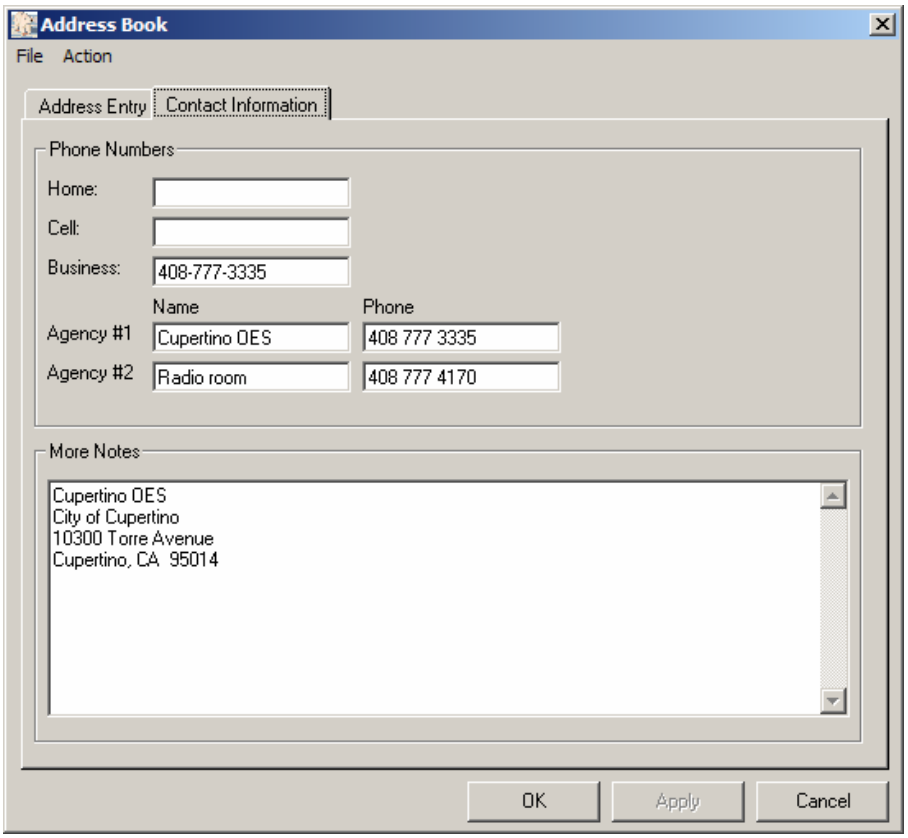


Figure 48: Contact Information Tab

The following summarizes the fields available.

Fields	Description
Phone Numbers	**Home.** *Optional*, fields for entering a home phone number. **Cell.** *Optional*, fields for entering a cell phone number.

Fields	Description
	Business. *Optional*, fields for entering a business number. **Agency #1, #2.** *Optional*, Name and phone numbers for any agency associated with this entry. **Default**: Blank
More Notes	*Optional,* Enter any free-form comments or notes for this particular address. This could be directions, special instructions for these individuals, etc. **Default**: Blank

9.3 Thoughts on address naming standards

Think about how you will use your address book entries. Because Outpost will confirm that address type (Call sign, hierarchical, smtp) against the BBS type, it will aggressively try to avoid an address error at send/receive time. HOWEVER, this may give you a false sense of security that any message you create will ALWAYS get delivered to the end user regardless of the BBS. THIS IS NOT THE CASE (see *Section 9.1* on Address Type Checking for this discussion).

One suggestion is to create addresses for different BBS Types. For instance:

DL_CARES_AEC	A DL used for a local KPC3 PBBS
DL_CARES_WL2K	A DL used for a local RMS node with smtp addresses
JIMO_HOME	A single address entry of my home email
JIMO_JNOS	A single address entry to my home JNOS node

Defining such an addressing scheme is purely optional. But if you intend to share distribution lists, you may want to agree to some address naming standard to keep the confusion and training factor to a minimum.

9.4 Setting up a new Address Entry

Unlike setting up TNCs or BBSs, creating address book entries is strictly optional and would be used more as a productivity enhancer rather than a requirement. While you can still enter addresses directly into Outpost's message form, creating address book entries helps cut down on typing errors by defining the address once, and then using it over and over again.

Set up a new Address Entry as follows:

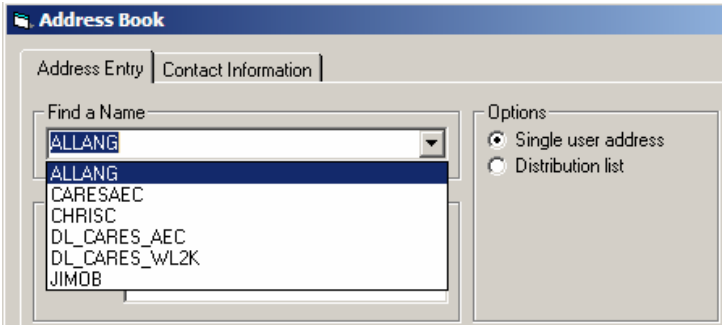
1. Select Outpost's **Setup > Address Book…,** then press the **New** button.
2. Enter a Friendly Name. This is the name that you can use to identify the entry.
   - For Single entries, it could be the individuals' name, initials, or some other description.
   - For Distribution Lists, it could be an organization or group name. Whatever you use, I recommend you keep it short and memorable.
3. Check the Address Type option. Select either Single Address Entry or Distribution List.
4. Enter the Address. Depending on the selected address type, enter one or more addresses as appropriate. Regardless of the Address Type option you choose, you must enter at least one address.

5. Fill in other optional fields.
6. Press **Apply**. This will validate that all required fields are filled in correctly, and leave the form option. Or, press **OK** to validate and close this form.

9.5 Finding and updating an existing Address Entry

Once you have address entries, you can review or update them whenever you want. Update an entry as follows:

1. Select Outpost's **Setup > Address Book…,** then use the pull-down menu to review the list of addresses.

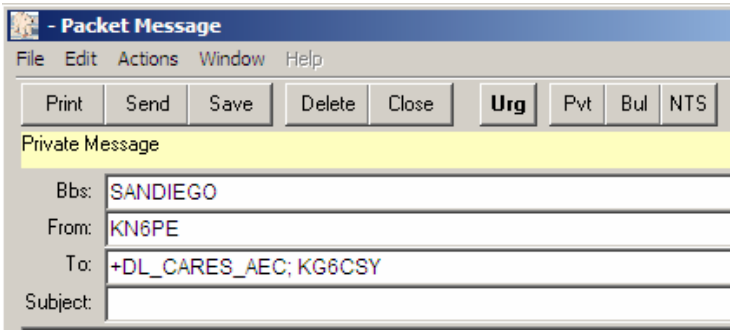


2. Click on the name you wish to review or update. That entry will be loaded.
3. Make whatever changes you want to this entry, then press **OK**.

9.6 Using Address Book entries in messages

Once you have your address entries defined, you can use them in messages. For Outpost to know you are using an Address Book entry, place a "+" plus sign in front of the entry. To use an Address Entry as follows:

1. From Outpost's main menu, press **New** to open a new message.
2. In the **To:** Field, enter the address entry. If you are entering multiple entries, separate them with spaces, commas, or semi-colons.
3. As soon as you tab out of the field, Outpost will clean-up all entries (case and separators).

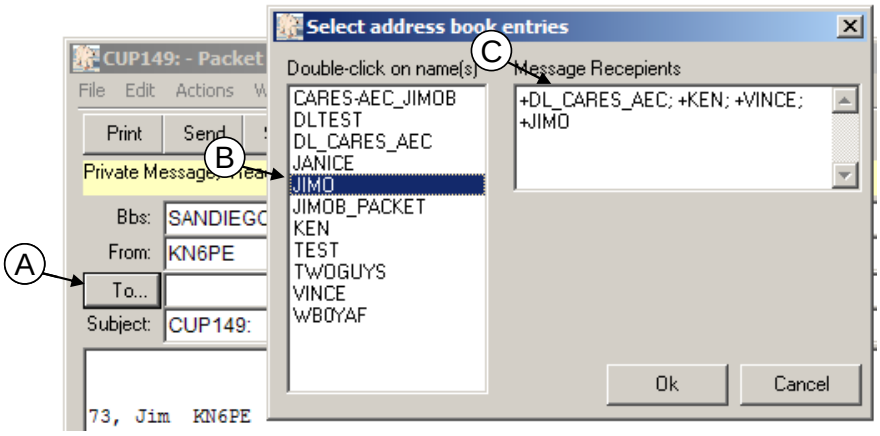


HINT: Double-clicking on an Address Book Entry will immediately open the Address Book to that entry. This is a good way to confirm you want this message going to this list of people, or want to make changes to the list on the fly.

HINT: Avoid dashes "-" in names if you want to double-click on an entry… Windows does not pick up the entire DL entry as a single word; the underline "_" character works fine.

9.7 Auto-picking an Address Book entry

With the message form open, note that the message's **To:** field is a selectable button.



To select existing address book entries,

1. Press the **To: (A)** will open the address book quick pick form.
2. Scroll through the list of addresses and double-click on each entry to be added **(B)**.
3. As the address entries are added, they are formatted and listed to the right of the form **(C)**. Any number of entries can be added.
4. Press **OK** when done and the selected message recipients will be appended to the **To:** field.

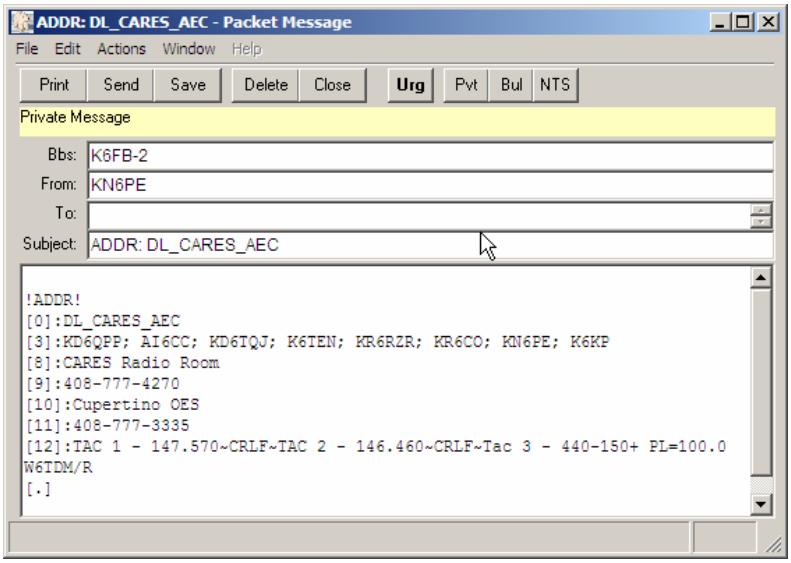
9.8 Forwarding Address Book entries

While having a DL or other Address Book entry is good for your personal productivity, having the same lists used by members of your communications team improves the productivity and efficiency of the entire team. This could be a DL of your immediate response team, a DL of SMTP addresses you use for Winlink forwarding, or just a general update on yourself in terms of your contact information.

Regardless with how you use the Address Book, Outpost lets you share entries with your team by forwarding it as a packet message.

You can share an Address Entry as follows:

1. Select Outpost's **Setup > Address Book…**
2. Use the pull-down menu to find the address you want to forward. Once you have it, press the **Forward** button.
3. Outpost will create a new message with a compact list of the address book entry fields.
4. Note the layout of this message:
   - **!ADDR!** begins the address book entries
   - **[.]** ends the address book entries



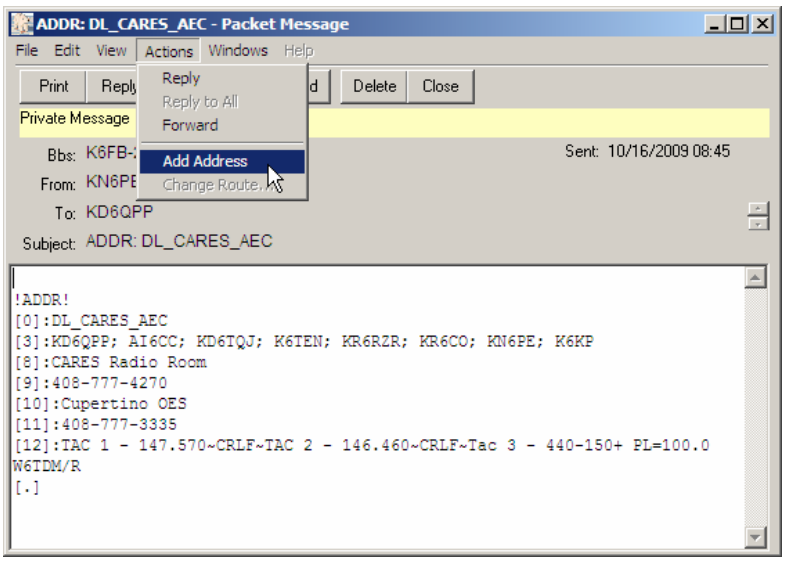
5. Complete the message as usual:
   - Fill in the destination To: field
   - Make any changes to the Subject Line
   - Set the Message type as Private or Bulletin
   - Add any additional message text that you want.
   - Press **Send**.

NOTE: You can add text Before the **!ADDR!** tag or after the **[.]** tag. DO NOT place any additional text in between these tags!

9.9 Receiving Address Book entries

On the receiving end, an Address Book message will be retrieved like any other message. However, it is up to the recipient to determine whether they want to add it to their local Address Book or not.

1. Retrieve your messages as you usually do, and then open the message.
2. Press the **Actions > Add Address** menu option to add this address to your address book. This option is enabled only when an Address Book entry is received.



3. If an entry by the same name exists, you will be prompted if you want to overwrite it.

10 Customizing the Send/Receive Session

Outpost provides several options for controlling how the Send/Receive Session executes. The control options are accessed from the Outpost main menu, **Tools > Send/Receive Settings…** .These settings are discussed here.

10.1 Automating the Packet Session

Messages can be sent to the BBS whenever the **Send/Receive** button is pressed on the main Outpost form.

However, if Outpost is used as part of an ARES/RACES network for moving packet traffic within an Operational Area, then having the means for automatically sending outgoing traffic and polling the BBS for incoming traffic on a periodic basis allows Outpost to operate unattended, thereby making more efficient use of the emergency responder staff.

The 1st Tab, Automation, controls how Send/Receive Sessions will be executed.

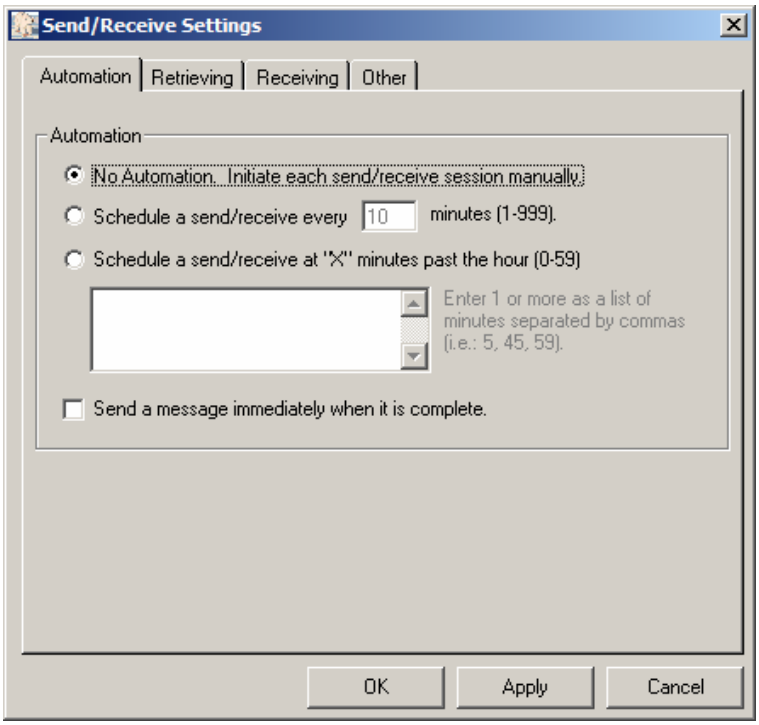


Figure 49: Send/Receive Automation Menu

Operation	Description
No automation	When this option is checked, no automatic initiation of Send/Receive Sessions occurs. This means that, to initiate a session, the user needs to: ▪ Press the **Send/Receive** button on the Outpost main form, or ▪ Have Outpost send the message immediately after a message is created (discussed below).

Operation	Description
Schedule… every "X" minutes	Interval Scheduling: when this option is checked, Outpost will initiate a Send/Receive Session every "X" number of minutes. The timing for this is determined by the operator, with valid settings ranging from 1 to 999 minutes (about 16 hours and 40 minutes). To use this feature: ▪ Check the "Schedule a send/receive every [ ] minutes." box. ▪ Enter the number of minutes between sessions. ▪ Press **OK**. ▪ The time remaining until the next Send/Receive Session will be displayed on the status bar, bottom right, just to the left of the System Time. ▪ To disable this setting, check the "No Automation" button, then press **OK**. See the **Automaton Considerations** section below for more information about how to use Send/Receive Automation.
Schedule… at "X" minutes past the hour	Slot Time Scheduling: You may want to explicitly control when a Packet Session is to run. This is handled by using a concept known as "slot times." Valid slot times are in the range of 0 to 59, and correspond to the minutes pass the current hour. To use this feature: ▪ Check the "Schedule a send/receive at "X" minutes past the hour." box. ▪ Enter any number of absolute times in minutes when you want Outpost to run. The times are the minutes during an hour when a session will run. For instance, entries of 2, 17, 32, and 47 mean 2 minutes past the hour, 17 minutes past, etc. ▪ Press **OK**. ▪ Based on the current PC system time, Outpost will determine the next time to run a Packet Session, and the time remaining until that session will be displayed on the status bar, bottom right, just to the left of the System Time. ▪ To disable this setting, check the "No Automation" button, then press **OK**. See the **Automaton Considerations** section below for more information about how to use Send/Receive Automation.
Send a Message immediately when it is complete.	This setting causes Outpost to initiate a Send/Receive Session immediately on completing a message and it is validated by pressing the **Send** button on the message form. A full Send/Receive Session will run. This option does not have any impact on any other

Operation	Description
	existing Automation timing that may already be selected. The session timer will continue to count down to the time of the next Packet Session regardless if it is 15 minutes from now or 30 seconds from now.

Automation Considerations

In general, automatic message retrieval allows Outpost to be physically located in the radio room and periodically check for incoming or out-going messages. This meets the requirement for having a control operator present.

The rules around applying automatic message retrieval timing must be worked out within your Operational Area. For instance, in a configuration with a low traffic/low station count, setting an interval time of 10 to 15 minutes may work with little or no collisions. However, this may not be the case with a high traffic volume or a large number of stations needing access to a single BBS.

For instance, consider an environment of 5 Hospitals needing access to a single BBS on a single frequency. If the objective is to avoid any transmission collisions and maximize the times to check for messages, then the 5 Hospitals could be coordinated and assigned time slots with 3 minute intervals. For instance:

	Slot times			
	Slot 1	**Slot 2**	**Slot 3**	**Slot 4**
Hospital 1	0	15	30	45
Hospital 2	3	18	33	48
Hospital 3	6	21	36	51
Hospital 4	9	24	39	54
Hospital 5	12	27	42	57

Similarly, 8 hospitals could be assigned time slots with 2 minute intervals:

	Slot times			
	Slot 1	**Slot 2**	**Slot 3**	**Slot 4**
Hospital 1	0	15	30	45
Hospital 2	2	17	32	47
Hospital 3	4	19	34	49
Hospital 4	6	21	36	51
Hospital 5	8	23	38	53
Hospital 6	10	25	40	55
Hospital 7	12	27	42	57
Hospital 8	14	29	44	59

In the above case, Hospitals 8 and 1 are within 1 minute of each of their slots and some contention may result.

- Most BBS's are very robust and can handle multiple connections at the same time. There is no requirement to avoid concurrent access to a channel by multiple Outpost users. Channel contention is still handed by the TNC.
- When configuring the Outpost environment with time slots, all Outpost deployment teams should take into account available transmission speeds (1200

vs. 9600 baud), expectations for packet traffic volume, number of packet stations on a channel, and the willingness of served agencies to accept delays due to time-outs when channel contention occurs. Some experimenting may be required.

- Not all slot times need to be filled in. At least 1 time slot must be configured for this feature to be used.
- There could be situations where some packet stations may generate more packet traffic then others and need access at least 4 times an hour. Other stations may need fewer slots. Again, these assignments should be carefully planned and coordinated to fully optimize the channel.

10.2 Selecting messages for retrieval

The 2nd tab allows you to configure Outpost to selectively retrieve messages from the BBS:

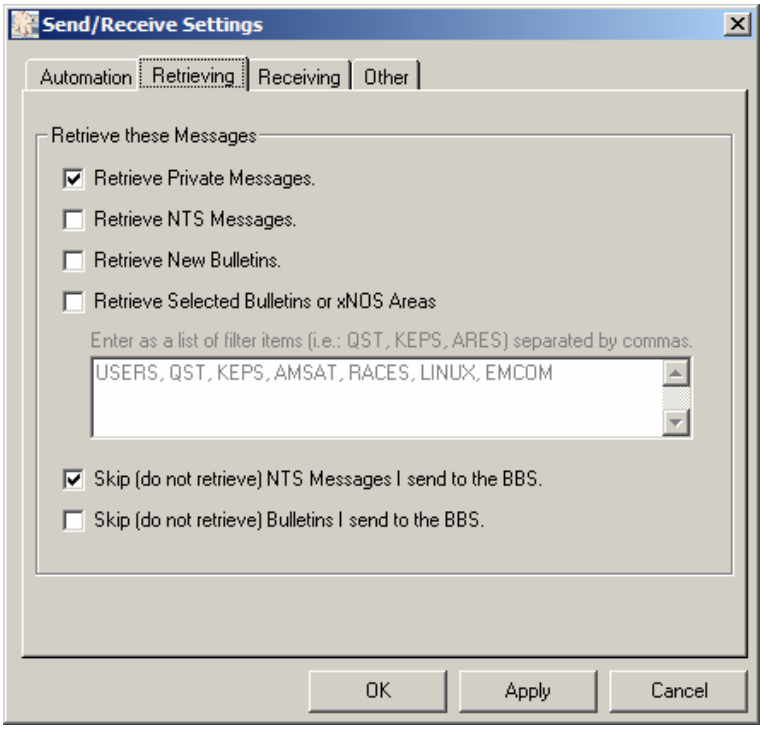


Figure 50: Retrieving Menu

Operation	Description
Retrieve Private Messages	Private messages are addressed to an individual. Once Outpost retrieves and stores a private message, the message is deleted off of the BBS (unless configured to do otherwise).
Retrieve NTS Messages	NTS messages are identified by an address that includes a zip code and state (95014@NTSCA). Once Outpost retrieves and stores an NTS message, the user has the option to accept the message for servicing and direct Outpost to delete it off of the BBS. See the section on the Message Form for details. Not accepting the message for servicing leaves the NTS

Operation	Description
	message on the BBS for someone else to pick up.
Retrieve Bulletins	Bulletin messages are addressed to anyone who can access the BBS. Outpost will not attempt to delete retrieved bulletin messages off of the BBS. If you originated the message and retrieved it, when you view the message, the **Expire** button is enabled. By pressing **Expire**, the Bulletin will be deleted the next time you perform a Send/Receive Session. When Retrieve Bulletins is selected, the **Retrieve Messages based on Filters** option is unchecked.
Retrieve Selected Bulletins or xNOS Areas	This option does the same thing for standard BBS and xNOS systems, however the manner it does it is different for each. **Non-xNOS Systems** The selected messages are one or more messages that satisfy the entered filter or mask. Sometimes referred to categories, the LC command on some BBSs return the list of categories that are present. At least 1 filter must be entered. **NOS Systems (JNOS, TNOS, SNOS, etc)** The NOS systems organize these messages in *Areas*. The filters or masks entered in the form essentially guide Outpost to these Areas where the L command is then performed. Regardless of the BBS, Outpost will perform a message list and retrieval for each filter mask or NOS area that is identified. Any number of masks or areas can be entered. When Retrieve Messages based on Filters is selected, **Retrieve Bulletins** option is disabled. See **Filtered Retrieval Considerations** below for more details on this feature.
Skip NTS Messages I sent to the BBS	NTS messages that you originate will normally be retrieved. If this option is checked, the NTS messages you originated will not be retrieved, thereby reducing channel contention by not downloading a message that is now currently in your Sent Folder.
Skip Bulletins I sent to the BBS	Bulletins that you originate will normally be retrieved. If this option is checked, the bulletins you send will not be retrieved, thereby reducing channel contention by not downloading a bulletin that is now currently in your Sent Folder. However, you will not be able to delete this bulletin without retrieving it and pressing the Expire button on the bulletin's message form.

Filtered Retrieval Considerations

When Emergency Response Organizations rely on a networked BBS for their message traffic where operational and non-operational traffic may be present, or when a BBS is used to post a variety of bulletin data, retrieving ALL bulletins is neither an effective option nor an efficient use of the frequency.

Most BBSs offer one or more commands that allow the user to retrieve messages based on the destination (**To:**) Call Sign or the message's category (category @ route). Outpost supports the capability to selectively retrieve messages during a Packet Session based on the message list-matching capabilities of the BBS.

A cursory check of a few BBSs shows that there are different commands for filtered message listing. Some of these commands are:

`L>` *`string`*	List the messages where "*string*" matches the call sign of the destination address; could match the category field in a destination address (category @ route). BBS: AA4RE, F6FBB, some TNC PBBSs.
`L` *`string`*	List the messages where "*string*" matches the category field in the destination address (category @ route). BBS: MSYS
`A` *`string`* `L`	A (Area) command followed by "*string*" moves the user from the logged on area (i.e.: KN6PE) to the new area. The L command then lists the messages in the area. BBS: JNOS, TNOS, SNOS, other NOS derivatives

NOTE: Check your BBS for the exact command options for selective retrievals.

The Filtered Retrieval Option is intended for selective retrieval of BULLETIN messages. This means:

1. The "Retrieve Private Message" option should still be used to retrieve private messages addressed to you since Outpost will attempt to delete private messages just retrieved off of the BBS.
2. Selectively retrieved messages are bulletins; no attempt will be made to delete them off of the BBS.
3. BBS retrieval rules apply: if a selectively retrieved message was previously downloaded and is still on Outpost, no attempt is made to download it again.

Other Considerations

- If a Bulletin is sent to a specific individual (such as KN6PE) instead of a general category (such as ALLCTY, etc.), that message will be picked up as a Private message regardless of the BBS message setting and is subject to the Private Message handling rules described above. However, the receiving Outpost station will not be able to delete it because it was not the author of the Bulletin. Only the originators of Bulletins can delete the bulletin.
- NTS messages will be deleted from the BBS only after the user accepts the message for servicing. If you have no intention of servicing an NTS message, DO NOT ACCEPT THE MESSAGE. If you accidentally accept an NTS message, please post it back to the BBS so someone else can service it.

10.3 Once a message is received

The 3rd tab handles the settings once a message is downloaded by the receiving station.

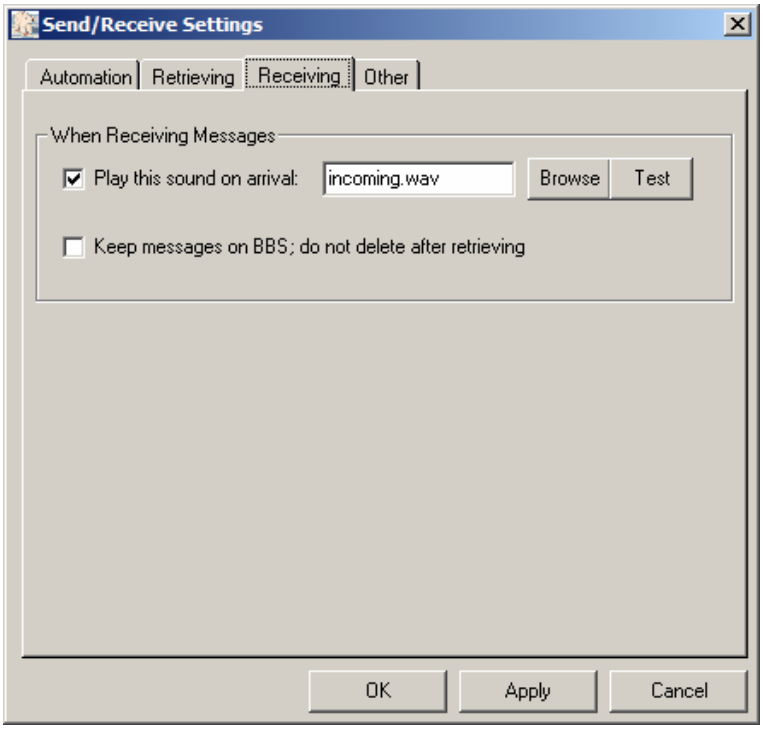


Figure 51: Receiving Menu

Operation	Description
Play this sound on arrival	This option allows you to select a .wav file to be played when a message is saved in Outpost. The user can browse for a .wav file, select it, and test it to confirm that it is suitable for their environment. See the Play on Arrival Considerations below.
Keep on BBS, do not delete after retrieving	There are cases where it may be desirable to leave Private or NTS messages on a BBS after they are downloaded. For instance, a municipality or response team may be operating 2 Outpost stations in different locations under the same Operational Call sign (if the BBS supports it) and wants both stations to see messages specifically intended for them.

Play on Arrival Considerations

This feature requires that an operational Sound Card is installed in the Outpost PC. Once you choose a .wav file, pressing the "**Test**" button will cause the .wav file to play. If there is a problem with the file or the sound card, a sound card is not installed or enabled, then Outpost will issue a "beep" instead.

Three .wav files are included with the Outpost distribution as examples for how this feature could be used.

- Sound38.wav – a very obnoxious alarm. If you use this file with the sound turned up, you will definitely know when a message arrives.
- Sound136.wav – used for Notifications.
- incoming.wav – a spoken notification. The phrase "Attention, incoming packet message" is spoken.

Essentially, you can use any .wav file found on your system, or create your own. The "incoming.wav" file was created using the Microsoft "Sound Recorder" program that comes standard with Windows.

10.4 Other Settings

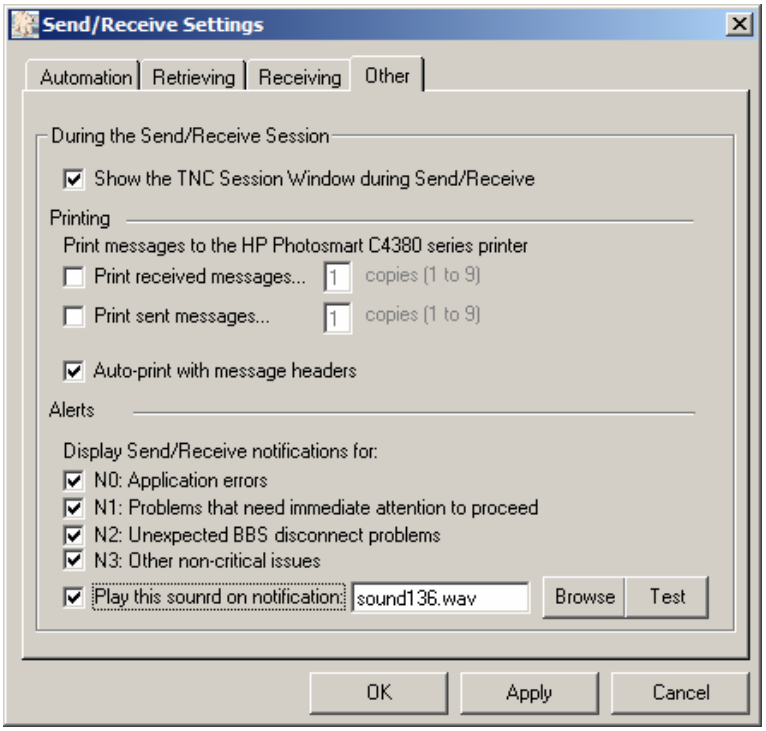


Figure 52: Other Menu

The 4th tab has the following options.

Groups	Description
Show Packet Session Window	When the Send/Receive Session runs, a window pops up and displays the transactions between Outpost and the TNC. To hide this window, uncheck this option. **Default:** checked

Groups	Description
Print received messages	Checking this box will cause Outpost to print each new message received on their arrival. This is useful to expedite routing incoming messages to the EOC or Operational Area staff. The number of copies can be specified. See the Print Messages Considerations below. **Default:** unchecked, 1 copy
Print sent messages	Checking this box will cause Outpost to print each message that was successfully sent. The number of copies can be specified. See the Print Messages Considerations below. **Default:** unchecked, 1 copy
Auto-print with message headers	If the above print options are checked, checking this box will cause Outpost to print the messages with the message headers. Unchecking this box will cause only the message text to be printed. This may be desirable if you are sending or receiving report-formatted messages and do not want the clutter of the packet message header. **Default:** Checked
Display Notifications	Causes a notification window to be displayed in the event there is a problem during the Send/Receive Session. The window stays up even after the Send/Receive Session window closes. See Notifications Considerations below. **Default:** N0, N1, N2, N3 checked
Play this sound on notification	This option allows you to select a .wav file to be played when a notification window pops up. The user can browse for a .wav file, select it, and test it to confirm that it is suitable for their environment. **Default:** checked

Print Message Considerations

This feature requires a printer to be configured. If no printer is installed, this feature is disabled.

Notification Considerations

During an unattended Send/Receive session, something may cause an unexpected BBS disconnect or error condition that may go unnoticed. Outpost will now generate a pop-up notification message for the following conditions:

- BBS type could not be identified.
- Unexpected BBS disconnect while sending messages
- Unexpected BBS disconnect while retrieving the list of messages.

- Unexpected BBS disconnect while retrieving a BBS message.
- Unexpected BBS disconnect while attempting to delete a BBS message.
- BBS <name> does not support multiple destinations addressing
- Addressing problems such as Address type does not match BBS type.

The notification will be displayed in a pop-up message window that remains on the screen even after the Send/Receive Session ends. On receiving a notification, an alert signal (beep if no sound card is available) will also be sounded. Notifications can be turned off if necessary.

NOTE: Other conditions may be added as situations of concerns are identified.

11 Packet Session Manager

11.1 Introduction

The Packet Session Manager is the Outpost message processor that manages the entire interaction with the BBS through the selected interface (TNC, AGWPE, or Telnet). It initiates all commands needed to configure the interface and connect to the BBS, detects all TNC and BBS prompts, and controls the sequence of events to send and receive messages.

After pressing **Send/Receive** from the Outpost main window, or if Send/Receive Automation is enabled, the following window opens and reports on the progress of the session.

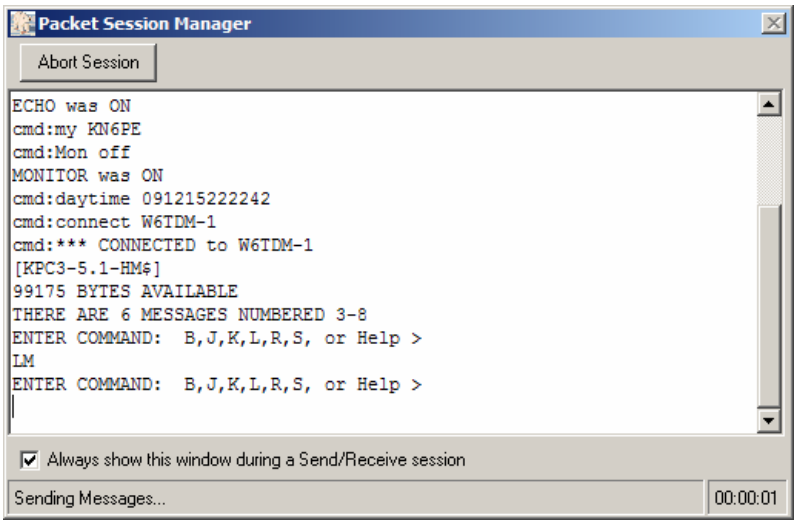


Figure 53: Serial Port Packet Session Manager Screen

11.2 Toolbars

Because the Packet Session Manager is an automated process, there is only one control on this form.

Control	Description
Abort Session	Attempts to terminate the Packets Session. Depending on where you are during the Packet Session, the control will perform differently. Prior to completing a BBS connection, the session is terminated. After a BBS connection is established, Outpost attempts to force a disconnect from the BBS.
Always show this window…	Unchecking this box immediately minimizes this window, and causes it to be minimized for subsequent Packet Sessions. However, the Packet Session window will be available on the Windows Task Bar.

11.3 Status Line

On the bottom of the form, status messages are displayed describing where you are during the session.

Item	Description
Status	Displays the current activity that the Packet Session Manager is performing.
Session Timer	Displays the time the Session has been in progress in minutes and seconds. This timer is reset to zero at the beginning of each session.

11.4 How the Packet Session Manager works

The Packet Session Manager process relies on the correct configuration of the Interface and BBS. During the configuration of these two items, various TNC (for Serial Port interfacing) or BBS prompts are set up, added, or changed by the user. The accuracy of setting these commands and prompts is critical to the correct operation on the Packet Session Manager.

The following describes the general flow of the Packet Session Manager. Other than the interface initialization, the process is essentially the same.

Step	Description
1. Start-up	The Packet Session Manager is scheduled either manually from the Outpost Main form by pressing the **Send/Receive** button, or automatically. Prior to doing anything, a check is made to ensure: (i) Outpost has an Call Sign set as the Station ID, (ii) an interface is selected, and (iii) a BBS is selected. If any of these are missing, an error message is shown. This error will also disable any automatic Send/Receive settings that were previously defined. Automatic scheduling can be set up by selecting the time interval between Packet Session runs. Once a Send/Receive Session ends, it will wait for the time period to expire before running again. This is enabled from the **Tools > Send/Receive Settings** menu.
2. Interface Initialization	Depending on the interface type selected, the interface initialization sequence is different. However, the end result is to get to the point where Outpost can log on to the BBS. See the following 3 sections for specifics on the different interface initiation sequence.

Step	Description
3. BBS Log-on and Auto-Prompt Detect	For an RF-based connect (TNC Serial or AGWPE) and before issuing the connect command, Outpost checks to see what Path was defined to this BBS. 1. For a **Direct Path**, the connect command is formatted and sent. 2. For a **Digipeat Path**, the connect command with the via station names is formatted and sent. 3. For a **KA-Node/NETROM Path**, Outpost performs a series of connect requests to each defined Node, looks for a successful connect prompt, and then issues the next connect request command. Finally, once at the last node, it performs the BBS connect request. If the AA4RE BBS with Tactical Call customization box was checked during the BBS Setup, Outpost looks for the Tactical Call prompt and responds with the Tactical Call previously entered in the Log-on window. Outpost then looks for a “>” character from the BBS. This is the minimal prompt that all BBSs use. Outpost looks back over the line of text immediately preceding the “>” and builds up the BBS prompt from that string (up to 8 characters). Outpost also looks for the SID to determine the BBS type. The SID tells Outpost how to parse the message list and process all retrieved messages.
4. Process Bulletin or NTS Deletes	For bulletin messages, you can issue an **Expire** Bulletin command for a bulletin you previously posted. Additionally, for NTS messages, you can **Accept** an NTS message by deleting it off of the BBS. This step of the Send/Receive Session issues the deletes for messages on the BBS for either of the above 2 cases.
5. Send Messages	Outpost checks for valid messages in the Out Tray that are addressed to this BBS. A valid message is any message that has been checked by pressing the **Send** button in the Message form. **NOTE:** Pressing **Send** ensures all fields are validated and complete. Opening a previously validated message in the Out Tray, then pressing **Save** will not perform the validation, and the message will not be sent. For each type of message (Private, Bulletin, NTS), Outpost uses the appropriate BBS Send command to format the message for sending, adds all receipt requests, sets the Urgent flag if directed, and then sends

Step	Description
	the message. After the message is sent and a valid BBS prompt is received, Outpost does the following: 1. checks the "Print on Sending" option to determine if a sent message should be printed, 2. moves the just-sent message from the Out Tray to the Sent Msgs Folder, 3. changes the message status to "Sent," and 4. sets the message time to the time it was sent. Outpost repeats this process until all valid messages are sent.
6. Retrieve Messages	Outpost retrieves messages based on the Retrieve Message option settings: 1. Checks which messages should be retrieved. Any combination of Private, NTS, Bulletin, and Selected messages can be selected. Also, if no message type is selected, no messages are retrieved. 2. Checks the "Keep Messages on BBS" option to determine if the downloaded messages should be deleted. 3. Checks the "Print on Receiving" option to determine if new messages should be printed. 4. Checks the "Play on Arrival" option to determine if a .wav file needs to be played. These settings can be made from the **Tools > Send/Receive Settings…** menu. Assuming there are messages to be retrieved, the retrieval process begins with Outpost sending the appropriate BBS List command (LM, LB, LT) to generate a listing of private messages, bulletins, or NTS messages. For each message found in the BBS message list, Outpost does the following: (i) issues a BBS Read <message number> command, (ii) receives the message from the BBS, (iii) decodes the message's Date/Time, (iv) determines if there are any receipt tags, then (v) stores the message in the In Tray. ***A note on Selected Retrievals***: An unlimited number of filter masks can be defined on the **Send/Receive Settings** form. If "**Retrieve Selected Bulletins…**" is checked, then for each filter mask defined, Outpost will generate the list of BBS messages that satisfy that filter, and then retrieve those messages.

Step	Description
	A note on Bulletins: Because only the originator or SysOp can delete bulletin messages, an additional check is performed before retrieving a bulletin. If a bulletin shows up on the BBS message list, Outpost first checks to see if it has previously downloaded that bulletin based on the BBS Msg Number and BBS Name combination associated with each message that Outpost retrieves. If a match is found anywhere on Outpost (regardless of the folder), then the bulletin is not downloaded. If no match is found, then the bulletin is downloaded. After storing a received message in the In Tray, and depending on the message type, Outpost does 1 of 2 things: • For Private messages, Outpost will either keep or delete the received message from the BBS based on the **Tools > Send/Receive Settings**. • For NTS and Bulletin messages, Outpost will not attempt to delete the message at this point. See Step 4 above for details. ***A note on undeleted Private messages***: If the user has enabled the setting to "Keep messages on the BBS" option, than a similar check is performed each time the Packet Session is run to ensure duplicate messages are not downloaded. Once this option box is unchecked, the message then will be deleted off the BBS next time Outpost runs.
7. Send Receipt Messages	Prior to ending a session, any pending Message Receipts are sent out. This second "Send" cycle allows for incoming messages with Delivery Receipt requests to be immediately processed without waiting for another session.
8. BBS Log off	Outpost sends the command to exit the BBS. After the BBS disconnects, if a Digipeat or KA-Node/NetROM Path was used, Outpost assumes that all intermediate stations will disconnect in turn, leaving Outpost looking at the local TNC prompt. The command is considered successful when a TNC prompt is detected for a direct serial or AGWPE connection, or other termination status is detected for Telnet.
9. Interface Shut-down	Finally, the interface is shut down based on the interface type. See the following 3 sections for details.

11.5 Serial Port Packet Session Specifics

Outpost's Serial Port operations follow a standard method for setting up and communicating to a device on a Comm Port.

Step	Description
1. Start-up	See the description above. Once Startup is complete, the serial port process picks up from here.
2.1 Initialize the Comm Port	Comm Port initialization is performed at the beginning of each Packet Session where a Serial Port Interface is selected. Because Ipserial.exe (Outpost's Terminal Emulator program) may be running and monitoring the channel, Outpost looks for ipserial.exe and sends that program a Comm Port disconnect command. This ensures that the Send/Receive Session can connect without a Comm Port contention error. The Comm Port is then initialized based on the data entered into the Comm Port Settings menu, and then the port is opened. If the port is already in use by another program (other than Ipserial.exe), an error message is displayed, and the session ends.
2.2 TNC initialization	The TNC is initialized each time the Packet Session is run. The first command Outpost sends to the TNC is a "b." While the command typically causes the TNC to reply with its Broadcast status, it also forces a TNC prompt to be displayed (if the TNC is working correctly). Outpost looks to see if the TNC sent back a TNC Prompt string as defined during TNC Setup. On detecting the prompt, a "TNC ok" message is displayed in the status window at the bottom of the display. Outpost then sends the following commands to set up the TNC: • Echo. Forces the TNC echo status to "On". This causes the TNC to echo all Outpost commands sent to the TNC back to the Packet Session Manager window. • Mycall call_sign. Sets the TNC to the call sign that is currently the Outpost call sign. • Monitor. Forces TNC channel monitoring to OFF. This prevents the TNC buffer from filling up with unwanted text in between Packet Sessions. • Date/Time. Sets the TNC to the date and time of the host computer. Outpost then checks if a TNC Initialization File was defined. If so, it reads each command in the file, and sends it to the TNC.

Step	Description
Normal Packet Session processing	See steps 3 through 7 above
8. Close Comm Port	The process is reversed after disconnecting from the BBS. Outpost checks if a TNC Initialization File was defined and post-session commands are defined. If so, it reads each command in the file, and sends it to the TNC. If Tactical Call is turned on, Outpost builds up a text string containing the legal call sign, the tactical call sign that was used, and an optional test string as defined at the **Setup > Identification…** menu. A TNC command is issued to put the TNC into an Unproto (Converse) Mode, and then broadcasts the station identification string. The Comm Port is closed thereby allowing other programs to access the serial port without closing Outpost. To re-instate any Ipserial.exe monitoring that was set up, Outpost looks for ipserial.exe and sends a Comm Port Connect command. This causes Ipserial to reconnect to the Comm Port and send the **Mon On** command (if configured) to resume monitoring. The Send/Receive Session window then closes.

11.6 AGWPE Packet Session Specifics

Outpost's AGWPE implementation follows the standard interface approach as specified by SV2AGW. The AGWPE sequence of events is as follows:

Operation	Description
1. Start-up	See the description above. Once Startup is complete, the AGWPE process picks up from here.
2.1 Connect to TCP/IP Interface	The first action for an AGWPE interface is to establish a TCP/IP connection with the AGWPE program. Outpost uses the previously identified Host Name (or IP Address) and Port number to establish the connection with the AGWPE Program. Outpost attempts to establish the connection, and then tests to determine if the connection succeeded. If the connection failed, an error message is displayed, and the session ends. Connection failures will be caused by AGWPE not running or the Host name or Port information being incorrect.

Operation	Description
2.2 AGWPE Log on & Registration	Once a connection is established, Outpost does 2 things: 1. If an AGWPE logon was identified as being required, Outpost sends the Logon and Password command sequence. 2. Outpost registers itself with the AGWPE program under the call sign of the currently defined Station ID. While AGWPE does not return an error on a logon/ password failure, it does indicate if the registration failed. Reasons for a failed registration attempt are: (i) the logon/password is required but were missing, (ii) the logon/password was required but was incorrect, (iii) Outpost is already registered with AGWPE under this station ID.
Normal Packet Session processing	See steps 3 through 7 above
8. AGW Disconnect	Outpost sends a BBS disconnect command and looks for the disconnect message. If Tactical Call is turned on, Outpost builds up a text string containing the legal call sign, the tactical call sign that was used, and an optional test string as defined at the **Setup > Identification…** menu. An AX25 Unproto frame is sent with the station identification string. Finally, Outpost sends a TCP/IP disconnect command, and then an AGWPE Unregister request. Short of an AGWPE failure, this sequence will process correctly.

11.7 Telnet Packet Session Specifics

Outpost's Telnet implementation follows the standard Telnet protocol. The sequence of events is as follows:

Operation	Description
1. Start-up	See the description above. Once Startup is complete, the Telnet process picks up from here.
2.1 Connect to TCP/IP Interface	The first action is to connect to establish a TCP/IP connection to the Server on which the BBS resides. Like AGWPE, Outpost uses the previously identified Host Name (or IP Address) and Port number to establish the connection with the BBS Server. Outpost attempts to establish the connection, and then tests to determine if the connection succeeded.

Operation	Description
	If the connection failed, an error message is displayed, and the session ends. Connection failures will be caused by network problems or the Host name or Port information was incorrect.
2.2 BBS Server Log on	Not all BBS servers reply with a logon prompt after a successful connect. The user may need to hit Enter to get the prompt. After connecting to the server, Outpost immediately sends the logon. If the BBS needed a "kick' to get the prompt, sending the logon name is the kick it needs and the logon name will look out of sequence to the BBS logon prompt. However, this does work since the sent logon name is buffered at the application until needed. Next, Outpost watches for the Password prompt, and sends the password upon the prompt's receipt. It then looks for the BBS prompt. Once it sees this, Packet Session processing continues as usual. If there is an error with the logon sequence, Outpost thinks it is waiting for the BBS prompt when instead the Logon sequence is probably being presented again. Here is where the Network timeout value comes in. Outpost waits the value of the timeout, and then exits with an error message.
Normal Packet Session processing	See steps 3 through 7 above
8. Telnet Disconnect	Outpost sends TCP/IP a disconnect command, and exits.

12 Using Tactical Calls

12.1 Introduction

Many governments define a tactical call sign as “a call sign that identifies a tactical command or tactical communication facility.”

Amateur Radio operators use Tactical Calls to identify an assignment with which message traffic is exchanged. Because several different operators may be assigned to a specific location over time, a Tactical Call makes the assignment "operator neutral," thereby allowing the operators to change without having the assignment name change.

Some examples of tactical calls are:

- Cupertino Fire — A fire station in the City of Cupertino
- Staging 1 — A resource staging area
- County EOC — The county’s Emergency Operations Center

Amateur Radio voice nets have used tactical call signs for years. However, the flexibility of tactical calls has been elusive in the packet radio world due to a variety of limitations and constraints. Ideally, tactical call support for packet should be implemented at the BBS. All out-of-the-box BBSs do not explicitly support the use of Tactical Calls.

As a result, Outpost implements Tactical Calls that is usable on all types of BBSs.

12.2 How it works

Outpost's implementation of tactical calls is based on substituting a tactical call designator in place of the standard Call Sign for message creation (From:), TNC initialization (my <call>), and BBS activities (List Mine). Almost all BBSs do not inherently support tactical calls. However, experimentation has shown that a tactical call can be structured to satisfy the log-on and call-sign checking of a BBS, and can achieve the intent of what Tactical Calls can offer.

While the Outpost implementation is not totally fool-proof and does have some limitations, Outpost does give packet users the look and feel of tactical calls while operating within the Federal Communications Commission (FCC) rules.

12.3 Is it legal?

Stations that use a tactical call must also identify with their legally assigned call sign. In the United States, the FCC addresses the subject of station identification in Part 97.119, and states that each amateur station “… must transmit its assigned call sign on its transmitting channel at the end of each communication, and at least every 10 minutes during a communication, for the purpose of clearly making the source of the transmissions from the station known to those receiving the transmission. No station may transmit unidentified communications or signals, or transmit as the station call sign, any call sign not authorized to the station.”

NOTE: AX.25 is the underlying protocol that makes packet work. The AX.25 Link-Layer Protocol Specification complies with the X.25 specification with the exception of:

1. an extended address field, and
2. the addition of an Unnumbered Information (UI) Frame.

The extended address field of every frame is encoded with the station of origin and destination amateur call signs. In short, under typical use, every time an AX.25 packet is transmitted, it essentially identifies the transmitting station and satisfies the requirements of Federal Communications Commission (FCC) Part 97.119. For more information, see: AX.25 Amateur Packet-Radio Link-Layer Protocol document found at http://www.tapr.org/pub_ax25.html.

There are three points to reiterate:

- Under FCC rules, station identification must occur at the end of each communication, and at least every 10 minutes during a communication.
- The FCC rules do not state that the expanded AX.25 address field with embedded Call Sign is required for packet station identification. While the AX.25 implementation satisfies the requirement, this is not the only method that the requirement could be met.
- Outpost satisfies the requirement for legal station identification by transmitting the user's valid station call sign at the end of each Send/Receive session.

12.4 Picking tactical calls

You will have to experiment with your BBS to see to what extent it supports a tactical call. The following information is based on tests with 3 typical BBSs. Your results may vary.

KPC3 PBBS

This PBBS is very flexible and can allow almost any type of Tactical Call structure. The tactical call must be no more than 6 characters long.

The following are examples of usable tactical calls:

`CUPFD`	A fire station in the City of Cupertino
`STAGE1`	A resource staging area supporting a fire line
`CUPEOC`	Emergency Operations Center at the City of Cupertino

F6FBB BBS

This BBS performs limited call sign validation when you first connect to the BBS. Testing indicates that the call sign needs to include at least one number to be confirmed as a valid call sign.

As an example, in Santa Clara County, the County Hospital system implemented a packet network for its 11 regional hospitals using the F6FBB BBS as its packet mail drop. These hospitals were assigned a tactical call with the structure of <#xxxxx >. For instance:

`1MVECH`	Mountain View El Camino Hospital
`1PASMC`	Palo Alto Stanford Medical Center
`1SJVMC`	San Jose Valley Medical Center
`1SJGSH`	San Jose Good Samaritan Hospital

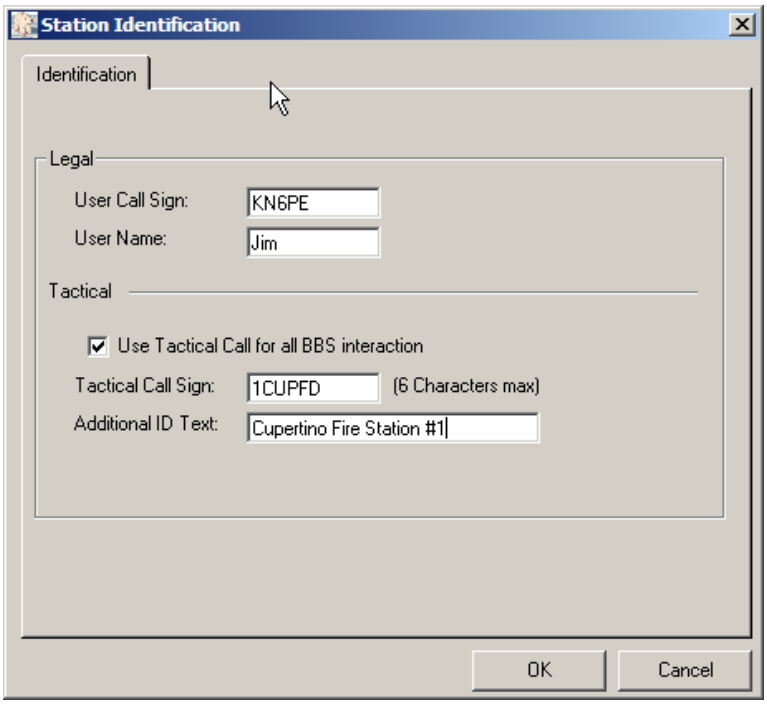
The basic tactical call format that was used above is:

```
1 CC HHH
 \ \  \____3 letter abbreviation for the hospital name
  \ \______2 letters for the city in which the hospital is located
   \_______the number "1"; arbitrary, satisfies F6FBB's need to see a digit
```

As a check of the above, when a user manually sets up his TNC with the command `my 1MVECH` (sets the TNCs call sign), on connecting to the F6FBB BBS, the BBS does not complain and asks the `1MVECH` user to register. In short, the "#xxxxx" structure satisfies the F6FBB call sign checking logic.

12.5 Setting up tactical calls

To set up a tactical call, do the following:



Manual Confirmation

1. Pick a tactical call structure based on your BBS TYPE. See the description above on how to experiment with tactical calls.
2. Run Ipserial.exe or some other terminal emulator
3. Set your TNC to the Tactical Call with the mycall command.
4. Issue the BBS connect command.
5. Verify the BBS does not generate an error. If so, you may need to pick a different Tactical Call format. If it prompts you to register, register this logon.

Outpost Setup

6. Select **Setup > Identification...**
7. Check the Tactical Call box
8. Enter your Tactical Call Sign
9. Enter an optional ID text.
10. Press **OK** when done.
11. Send/Receive to confirm to can connect without problems.

13 NTS Message Maker

NOTE: NTS and NTS Packet are significant topics by themselves and a detailed review is beyond the scope of this document. For more information on NTS Packet, see the document titled: ***Introduction to the National Traffic System*** available on the Outpost website.

13.1 Introduction

Outpost supports NTS with the NTS Message Maker. This tool formats an NTS message by presenting the user with a form that enforces the addressing and formatting rules required to comply with standard NTS-formatted packet messages.

This section describes the NTS Message Maker form and how it works. Refer to this figure as part of the example explained in subsequent paragraphs.

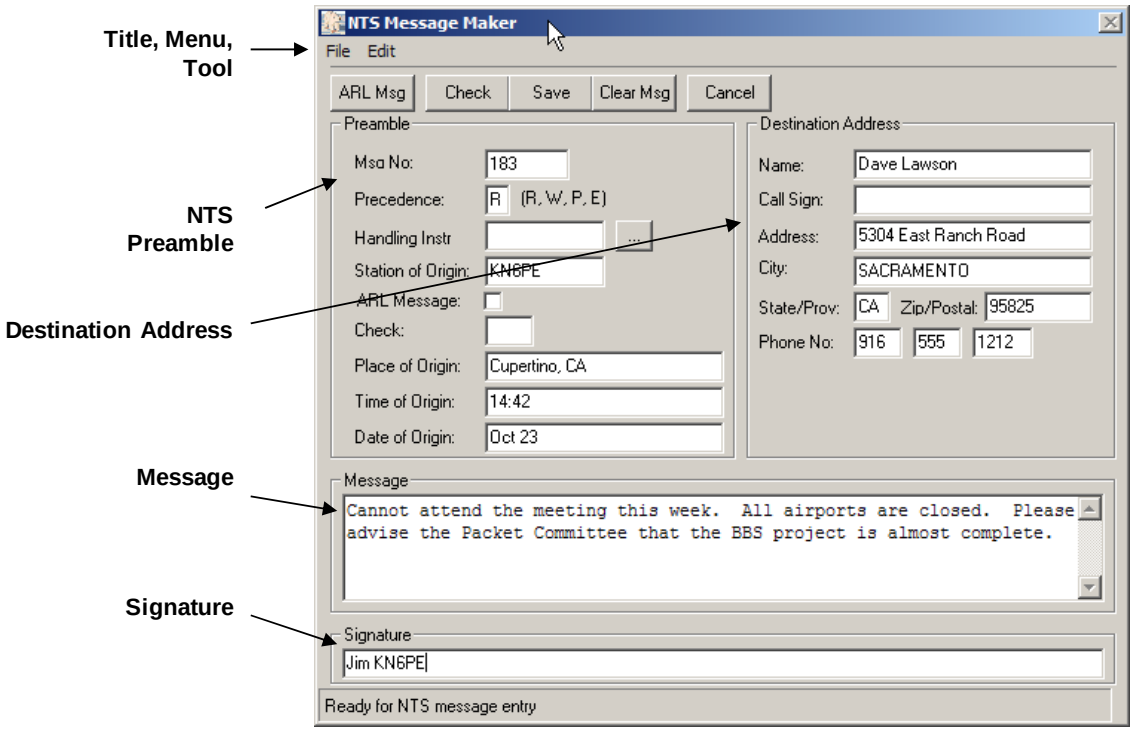


Figure 54: NTS Message Maker Form

13.2 Menus and Toolbars

The following controls are provided as part of the drop-down menus.

Menu	Description
File	**Close**: Closes the NTS Message Maker form without saving the message. Pressing the button will cause any message entered to be lost.
Edit	**Cut**: Copies and deletes any highlighted text in any field. The text is placed in the MS-Windows clipboard.

Menu	Description
	Copy: Copies any highlighted text in any field. The text is placed in the MS-Windows clipboard. **Paste**: Inserts text from the clipboard at the position where the cursor is located. **Clear Message**. Clears only the Address, Message, and Signature fields. **Clear All**. Clears all fields on the form.

Additionally, the following toolbar controls are also provided.

Controls	Description
ARL Msg	Brings up a form that allows the user to select a Routine or Emergency ARL message. Once a message is selected, the user is prompted for any embedded data needed to complete the message.
Check	This button does the following: • Checks to make sure that all required fields are filled in. If a required field is missing, the field is highlighted. • Reformats the Message Text to be consistent with NTS packet formatting rules. This includes replacing each period (.) with an "X" and reformatting the message so there are only 5 words per line. The Preamble "Check" field is filled in with the number of words in the message.
Save	Performs a Check of the message (same as above), then saves the message to the Message Form. The message form fields are filled in per the standard NTS packet message format.
Clear Message	Clears the Address, Message, and Signature fields.
Cancel	Closes the NTS Message Maker form without saving the message. Pressing this button will cause any message entered to be discarded.
Handling Instr Browse Button	Located to the right of the **Handling Instr** field in the Preamble. Brings up a form that allows the user to select a Handling Instruction. Once a message is selected, the user is prompted for any embedded data needed to complete the entry.

13.3 NTS Preamble

The following fields are part of the NTS Preamble.

Field	Description
Msg No.	**Required field**. This is a sequential number beginning with 1 each month or year to be assigned by the originating station. Outpost stores the last NTS preamble used. The Message Number is automatically incremented with each new message.
Precedence	**Required field**. The Precedence is a single character to be entered in this field. The four categories of Precedence are: **E - EMERGECNY**: Any message having life or death urgency to any person or group of persons. This includes official messages to welfare agencies during emergencies requesting supplies, materials, or instructions vital to relief of stricken populace in emergency areas. Use the abbreviation "E" in the packet message. **P - PRIORITY**: Important messages having a specific time limit. Official messages not covered in the Emergency category are covered here. Use the abbreviation "P" in the packet message. **W - WELFARE**: A message that is either (a) an inquiry as to the health and welfare of an individual in the disaster area or (b) an advisory or reply from the disaster area. Use the abbreviation "W" in the packet message. **R - ROUTINE**: Most traffic normally will bear this designation. During a disaster, Routine traffic should be handled last or not at all when circuits are busy with other traffic. Use the abbreviation "R" in the packet message.
Handling Instr	Optional field. Handling instructions (HX) serve to convey any special instructions to handling and delivering operators. The following definitions apply: HXA <u>number</u> - Collect landline (phone calls) delivery is authorized by the addressee within <u>number</u> miles (if no number, authorization is unlimited). Enter only "A number" HXB <u>number</u> - Cancel message if not delivered within <u>number</u> hours of filing time; service the originating station. Enter only "B number" HXC - Report date and time of delivery (TOD) to originating station. Enter only "C" HXD - Report to originating station the identity of station from which received, plus date and time. Report identity of station to which relayed, plus date and time, or if delivered report date, time, and method

Field	Description
	of delivery. Enter only "D" HXE - Delivering station get reply from addressees, originate a message back. Enter only "E" HXF number - Hold delivery until number (date). Enter only "F number" HXG - Delivery by mail or landline toll call is not required. If toll or other expenses are involved, cancel message and service originating station. Enter only "G" ***HINT:*** Use the Handling Instruction Browse Button to the RIGHT of the field to see the definitions and prompt for all required information.
Station of Origin	**Required field**. This is the first amateur station to handle the message. Typically, this would be you and your call sign if you are transmitting the message.
ARL Message	Optional Field. This is a check-box indicating this is an ARL message. These messages include an ARL message number in the body of the text. Check this box if an ARL message number is used. This box is automatically checked if the ARL Msg button is used to select an ARL message.
Check	**Required Field**. This is the number of words in the text of the message. This field will automatically be updated whenever the **Check** or **Save** buttons are pushed. If you enter a value in this field, it will be overwritten.
Place of Origin	Optional Field. This is the general location where the message originated (not necessarily location of station origin) and is usually a city and state, or occasionally an event, such as 2009 Moffett Air Show, CA. If the City and State tags are filled in on the **Report Settings** form, then this field automatically will be set with <city>, <state>.
Time of Origin	Optional field. This field is automatically set to the PC system clock in the format hh:mm (i.e.: 12:30).
Date of Origin	**Required field**. Usually is mmm dd format (i.e.: Sep 18) and must correspond with date that this message was first entered into the NTS system.

13.4 Destination Address

The following fields are part of the NTS Message Destination Address.

Field	Description
Name	**Required field**. The name of the individual to whom this message is to be delivered.
Call Sign	Optional field. If the recipient is an Amateur Radio Operator, enter his or her call sign here.
Address	Optional field. Street address if available.
City	**Required field**. The city where the recipient lives.
State/Prov	**Required Field**. The state or province where the recipient lives.
ZIP/Postal Code	**Required Field**. The 5 U.S. digit zip code or the 6 or 7 character Canadian Postal Code where the recipient lives.
Phone Number	Highly Desirable (but optional) Field. If a phone number is known, enter the Area Code, exchange, and number.

13.5 Message Text and Signature

The last two fields hold the body of the message and the signature.

Field	Description
Message text	**Required Field**. If possible, the text should be limited to 25 words.
Signature	**Required Field**. This is the signature (and call sign of the message was sent from another Amateur radio Operator) of the person sending the message. This is not necessarily the person who is sending the message by packet.

13.6 Creating an NTS message

Refer to the example in *Figure 54: NTS Message Maker Form* for how the form was initially filled in. The general steps for using the NTS Message Maker are:

1. From the Outpost main menu, press **New** to open the Message form.
2. From the Message form, select **File > NTS Message Maker**.
3. Fill in the fields. When done, press **Check** to validate the entries and complete the message formatting. If any required fields are missing, that field will be highlighted.
4. When done, press **Save**. The Message form is filled in with a correctly formatted NTS message.
5. From the Message form, press **Send**.

13.7 Finishing up an NTS message

Once the message is composed and all fields are filled in (per the figure above), press the **Check** button and Outpost updates the Preamble's "Check" and Message fields. Also, the status line indicates the results of the check. The following is what the above message would look like after **Check** is pressed.

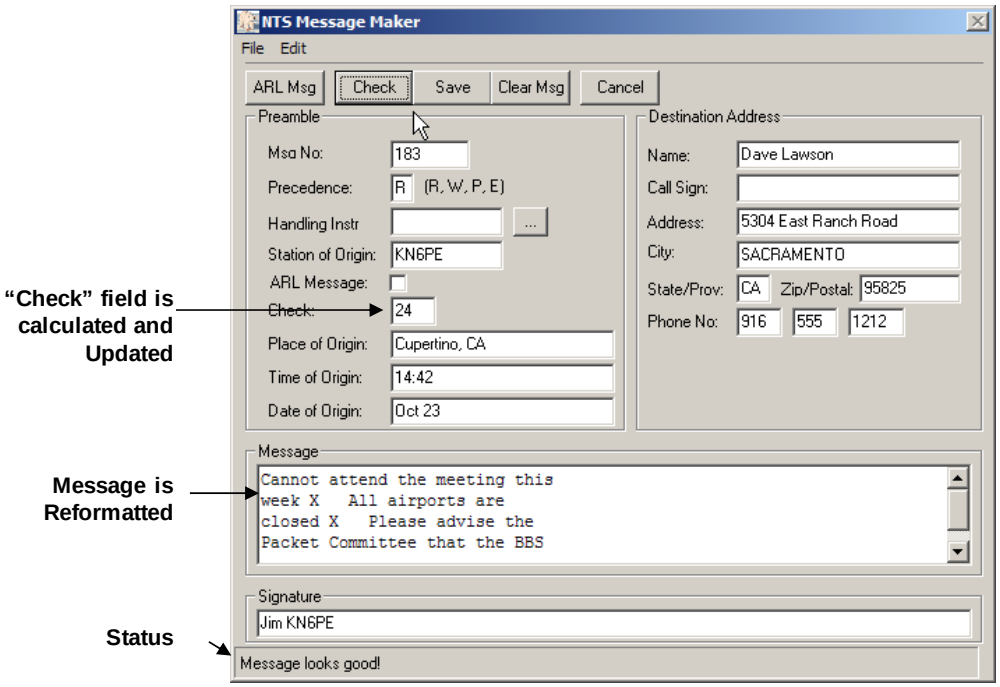


Figure 55: NTS Message Maker after performing a Check

Next, press the **Save** button. Outpost writes the contents of the NTS Message Maker back to the Message form. Note the Message Type is set to NTS.

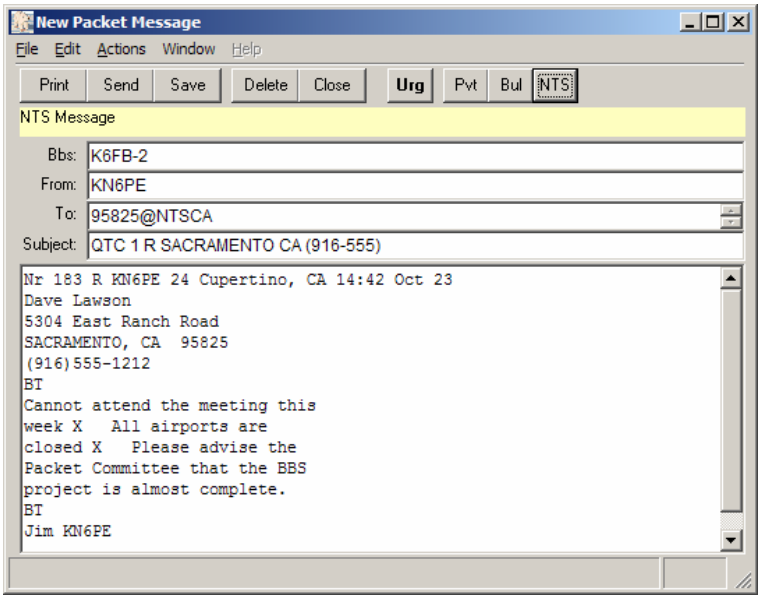


Figure 56: NTS Message written to the Message Form

Finally, press the **Send** button. The NTS message shows up in the Outpost Out Tray and will be sent during the next Packet Session.

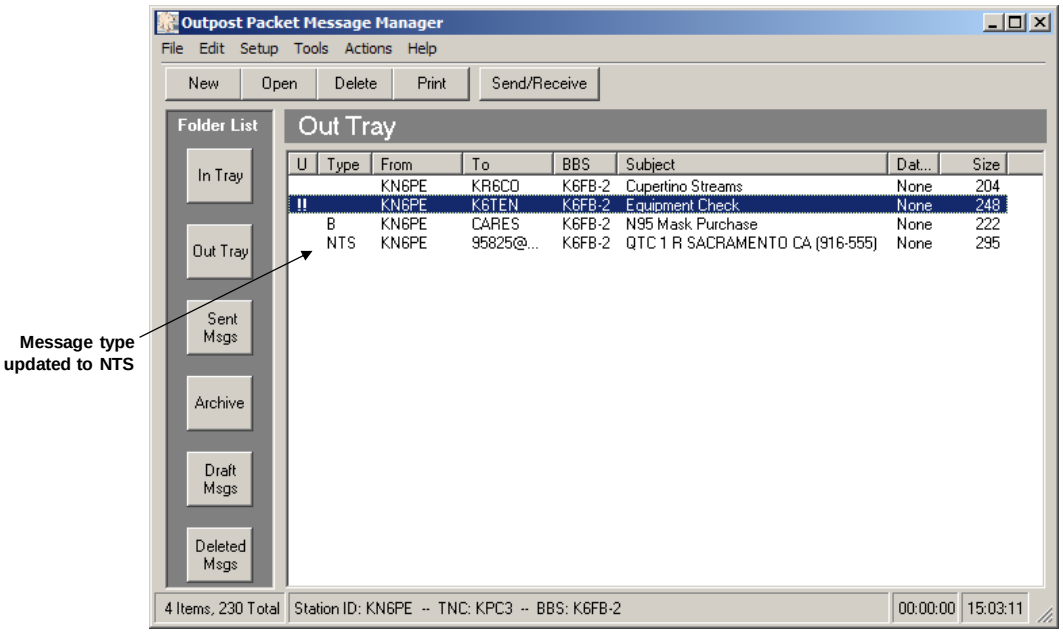


Figure 57: An NTS Message in the Out Tray

13.8 Selecting an ARL Message

Outpost lets the user select and apply one or more ARL standard messages to an NTS message. This works as follows:

1. From the Outpost main menu, press **New** to open the Message form.
2. From the Message form, select **File > NTS Message Maker**.
3. Fill in the Preamble and Destination Address fields as described above.
4. Press the **ARL Msg** button. The ARL Dialog box opens. The controls and fields associated with this dialog box are as follows:

Controls	Description
Message Type	Toggles between the list of Routine and Emergency ARL messages.
Next, Previous	Selects the next or previous ARL message based on the type selected.
Apply	Takes the ARL message and applies it to the NTS message.
Cancel	Cancels this operation.

Field	Description
ARL Number	The literal ARL number of the selected message.
Message Text	The message text associated with the selected ARL number. Some ARL messages require additional information to be provided by the user to complete the message. This information can be found between the "<" and ">" characters.

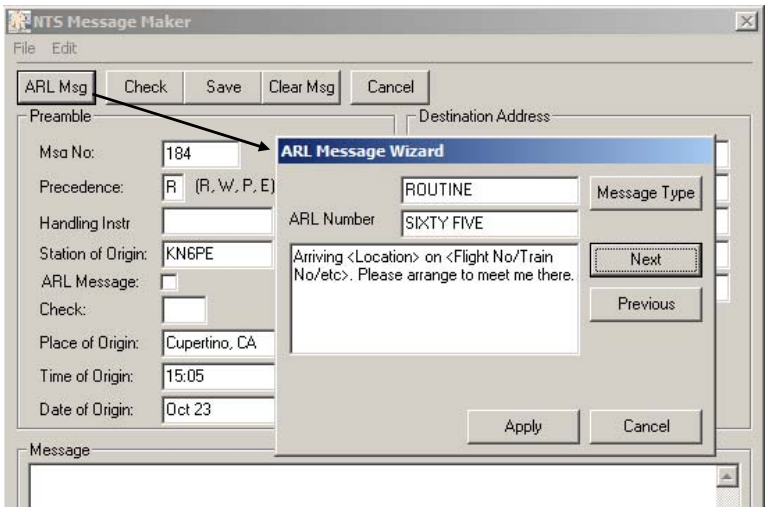


Figure 58: Defining an ARL Message

5. Select the Message Type (either Routine or Emergency). Using the **Next** and **Previous** buttons, select the desired message. Press **Apply** when done.
6. If additional information is required to complete the message, the user will be prompted for the fields that are required. In the above example, 2 additional prompts are issued: one for "Location", and one for "Flight No/Train No/etc".
7. After the field is filled in (not shown here), the message is inserted into the NTS Form.
8. Complete the balance of the NTS message as previously described.

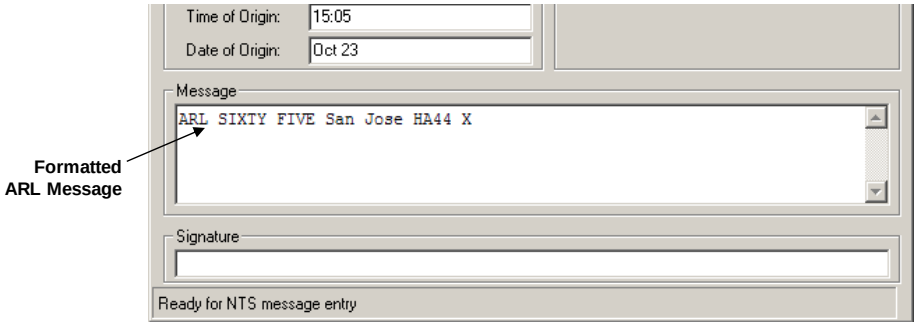


Figure 59: A completed ARL Message

14 Online Reports

Several ARES/RACES organizations have developed standard reporting tools and formats for collecting and transmitting information over packet. In some cases, automated tools have been used to generate the reports using pre-defined forms that could be interpreted for efficient processing. Online Reports is how Outpost addresses this requirement.

14.1 Introduction

An Online Report begins as a report form template that is developed outside of Outpost and saved as standard ASCII file. When loaded into an Outpost message, the form's embedded "tags" are updated automatically and the user is prompted to enter information in specific locations on the report form.

There are three things that need to occur for Outpost to generate an Online Report that is ready for sending:

1. Set up the report values
2. Create the report form (template)
3. Process the report form in an Outpost message window

This section describes these steps.

14.2 Setting up the Report Values

Report values refer to information that is typically referenced by one or more reports. By defining these values up front, then referencing them with embedded <tags> in the report form, the report can be quickly filled in and sent on its way.

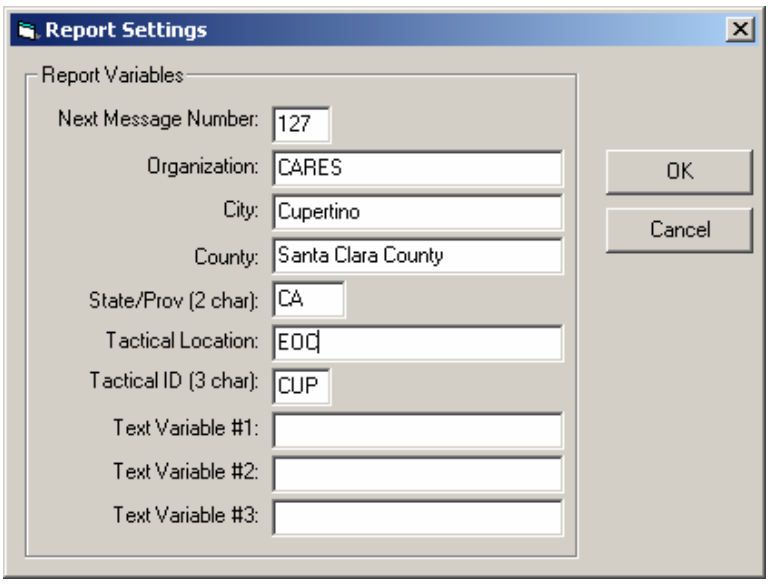


Figure 60: Report Settings Menu

To fill in the report variables, do the following:

1. From the Outpost main menu, select **Tools > Report Settings…**

2. Fill in the fields. When done, press **OK**.

Typically, defining report values only has to be done once for all reports. Once these fields are filled in, the report values will be referenced by a Report Form during processing. See the Tag Definitions below for a description of these fields.

14.3 Creating the Report Form

Report forms are essentially ASCII text files that are post-processed by Outpost to create the final report. The report form consists of 3 kinds of text entries:

- General text. This is canned text that is context-setting information to be sent as the report.
- Tags. Tags are variables that are embedded into a Report Form and then substituted with either automatic values or the values defined and stored by the "Report Settings" form.
- Prompts. A prompt is the character that is used to indicate the location where a user needs to input text for the report. Outpost uses the equal sign (**=**) as the prompt character.

Tag Definitions

The following table lists the report form tags and their meaning. Note the source from where the tag information originates.

Table 1: Definition of Report Tags

Tag name	Description
<D>, <date1>	Date. The current system date, the format being: mm/dd/yy (example: 5/21/04). Source: Automatic Value
<date2>	Date. The current system date, the format being: dd-mmm-yyyy (example: 21-May-2004). Source: Automatic Value
<T>, <time>	Time. The current system time, the format being: hh:mm (24 hour format). Source: Automatic Value
<M>, <msg#>	Message Number. The next message number as maintained by the application. Source: Report Setting Form
<C>, <call>	Call. The currently defined Station ID. Go to the Outpost menu **Setup > Identification…** to change. Source: Automatic Value
<name>	User Name. The name entered at the Station ID form. Source: Automatic Value
<bbs>	BBS. The currently selected BBS name. Source: Automatic Value
<subj>`text`	Subject. The text immediately following the <subj> tag is appended to the Subject Line. This tag should be on its own line with no other tags. It will not be included in the body of the report.
<to>`dest`	To. The text immediately following the <to> tag is set in the To: address message field. This tag should be on its

Tag name	Description
	own line with no other tags. It will not be included in the body of the report.
<org>	Organization. The organization to which the sending station is affiliated, such as Cupertino ARES, Lake County RACES, etc. Source: Report Setting Form
<city>	City. The City name. Source: Report Setting Form
<county>	County. The County name. Source: Report Setting Form
<state>	State. The 2-character representation of the state. Source: Report Setting Form, "State/Prov" field
<province>	Province. The 2-character representation of the Province. Source: Report Setting Form, "State/Prov" field
<tacloc>	Tactical Location. A reference to a location that is supporting a response, such as Quinlan Shelter, Deerfield Fire Station, or First Aid #1. Source: Report Setting Form
<tacid>	Tactical ID. A 3-character string that can be used as a prefix to the message number to further ensure the message's uniqueness. Source: Report Setting Form
<text1>	User-defined field. This is 1 of 3 user-defined fields. This field is also used as part of the Supplemental Tactical Call ID. Source: Report Setting Form
<text2>	User-defined field. This is 2 of 3 user-defined fields. Source: Report Setting Form
<text3>	User-defined field. This is 3 of 3 user-defined fields. Source: Report Setting Form
=	Prompt. Causes Outpost to position the cursor at this location for the user to enter text.
/ comment	Comment. Any text following this is considered a comment that will not be included when loaded into Outpost. The "/" character must be the 1st character on a line. If the "/" character is any place else, it is considered part of the report.

Tag Considerations

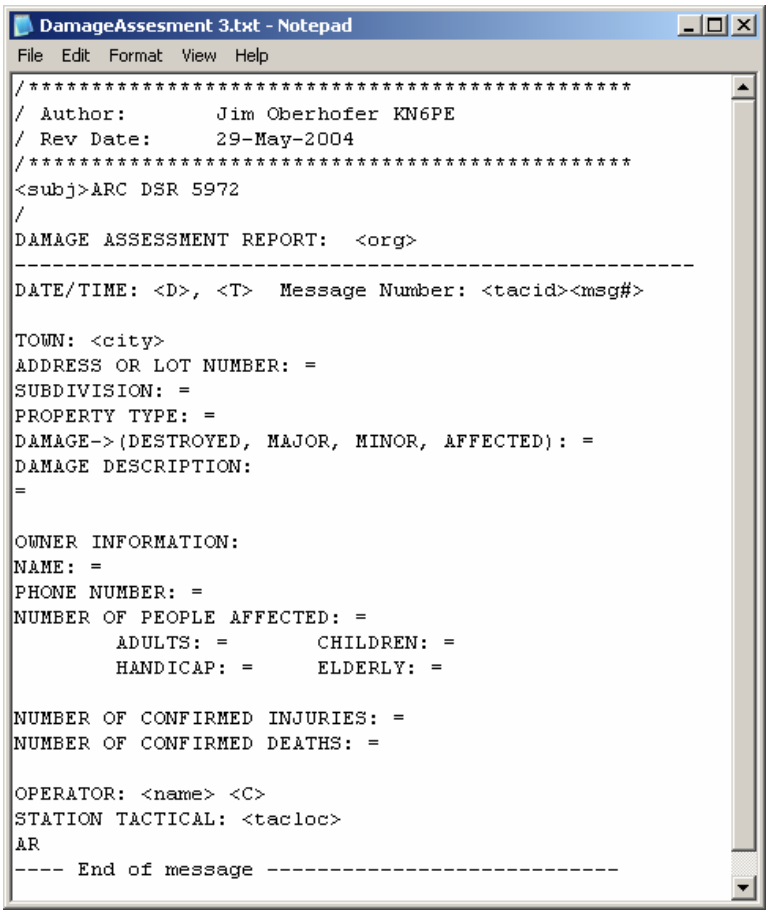
- There are a few report variables that have 2 methods for representing them. Either method is valid.
- Tags can be entered as either upper or lower case.
- The same tag can be entered more than once in a report form.

- When using the user-defined tags, care must be taken to ensure all users interpret the fields the same way in particular if a Report Form with user-defined tags are shared among several stations.
- If any field on the Report Settings menu is left blank, and a tag referencing that field is used, the tag will be replaced with nothing.

Creating the Report Form

Report Forms can be created with any text editor PROVIDED it can produce an ASCII text file. The two text editors that are standard with MS Windows are Notepad and Wordpad. Additionally, any other word processor can be used provided it can produce an ASCII file.

The following is a sample report form developed with Notepad. Note the different tags used throughout the report, the comment lines (/), and the prompt locations (=) where user input is required.


DamageAssesment 3.txt - Notepad

File Edit Format View Help

```
/**************************************************
/ Author:       Jim Oberhofer KN6PE
/ Rev Date:     29-May-2004
/**************************************************
<subj>ARC DSR 5972
/
DAMAGE ASSESSMENT REPORT:  <org>
-------------------------------------------------------
DATE/TIME: <D>, <T>  Message Number: <tacid><msg#>

TOWN: <city>
ADDRESS OR LOT NUMBER: =
SUBDIVISION: =
PROPERTY TYPE: =
DAMAGE->(DESTROYED, MAJOR, MINOR, AFFECTED): =
DAMAGE DESCRIPTION:
=

OWNER INFORMATION:
NAME: =
PHONE NUMBER: =
NUMBER OF PEOPLE AFFECTED: =
        ADULTS: =       CHILDREN: =
        HANDICAP: =     ELDERLY: =

NUMBER OF CONFIRMED INJURIES: =
NUMBER OF CONFIRMED DEATHS: =

OPERATOR: <name> <C>
STATION TACTICAL: <tacloc>
AR
---- End of message ----------------------------
```

Figure 61: Report Form in Notepad

Once the report form is created, it should be stored in a common location with other report form files. The recommended place is the in the `..\reports` subdirectory.

14.4 Processing the Report Form

With the Report variables and Report Form defined, you are ready to process the report.

To process a report form, do the following:

1. From Outpost, select **New** to open a new message form.
2. From the Message Form menu, select **File > Open Report**. A file selection menu will open to the report directory you defined in the **Directory Settings** menu.
3. Select the Report Form to be processed, and then press **OK**.

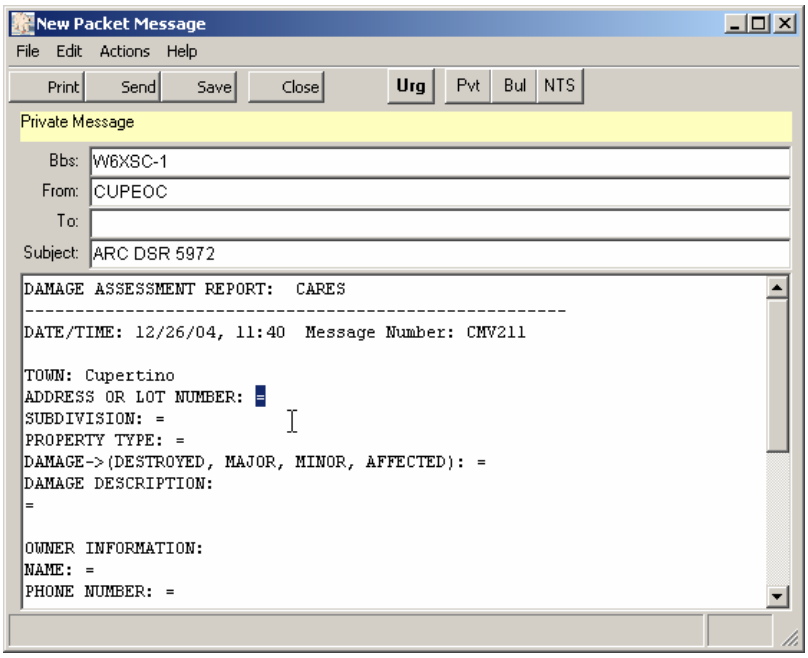


Figure 62: Report Form in Message Window

4. Once the form is loaded, all <tags> are substituted with their automatic (date and time) and Report Setting (Tactical ID, Message number, and City) values.
5. Next, the cursor is positioned over the first prompt (=). Type over the prompt (=) to answer that question, then press **Cntl-TAB** or **Right-Mouse-Click** to progress to the next prompt.
6. Continue entering all requested information until all prompts are replaced. You will be prompted if you want to start from the top, or tell you that there were no prompts found.
7. To re-start prompt processing if you stop, select **File > Process a Report**.
8. To clear any remaining Prompts that are not to be filled in, select **File > Clear Remaining Prompts**.
9. When done, fill in the balance of the Message header (To:, Subject:, etc) and press **Send**.

15 Interactive Packet Window

15.1 Introduction

There are times when you want to directly interact with either the TNC or the BBS for channel monitoring, system maintenance or troubleshooting. Outpost includes an interactive packet (IP) capability where the user can directly interact with the TNC or BBS. This section describes this feature.

There are 3 separate Interactive Packet programs that are called by Outpost to support the different interface methods: serial port TNCs (Ipserial.exe), AGWPE (Ipagwpe.exe), and Telnet (Iptelnet.exe). The menus and controls on all 3 programs are essentially the same, with minor variations to deal with the key interface differences.

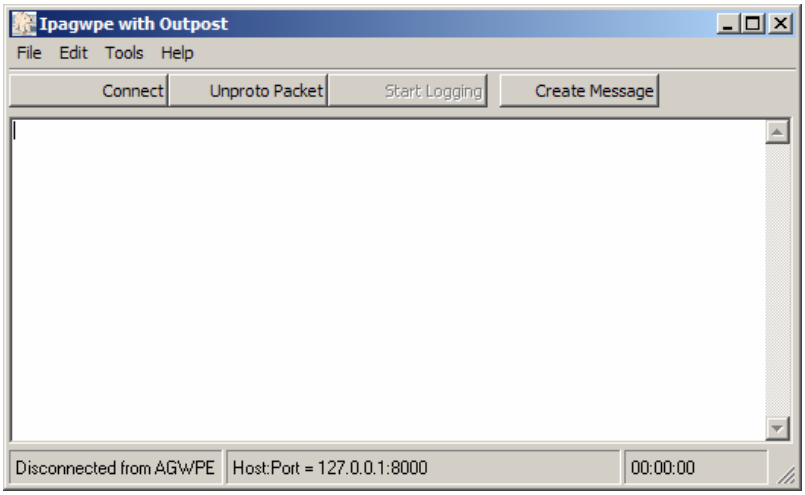


Figure 63: AGWPE's Interactive Packet Window

15.2 Menus, Tool Bar

The following describes the Interactive Packet Program menus:

Menus	Description
File	**Print**. Currently disabled. **Comm Setting**. SERIAL PORT ONLY. Sets up the serial port where the TNC is located. **AGWPE Settings**: AGWPE ONLY. Setup screen for identifying the AGWPE server, port, and logon information. **Pick Via Stations**: AGWPE ONLY. Identifies the list of via stations needed to get to the BBS. **Telnet Settings**: TELNET ONLY. Setup screen for identifying the BBS server and port information. **Exit**: Causes the program to exit.

Menus	Description
Edit	**Cut**: Copies and deletes any highlighted text from any field. The text is placed in the MS-Windows clipboard. **Copy**: Copies any highlighted text in any field. The text is placed in the MS-Windows clipboard. **Paste**: Inserts text from the clipboard at the position where the cursor is located. **Select All**: Takes a copy of the entire contents of the IPW window and copies it to the MS-Windows clipboard.
Tools	**Font**. Allows the user to change the font, Font style, and Size of all text in the window. **AGWPE Version**. AGWPE ONLY. Returns the version of the currently running AGWPE program. This menu option is enabled once you are connected to AGWPE. **Show AGWPE Packets**. AGWPE ONLY. When turned on, displays all raw AGWPE packets that are sent to and returned from the AGWPE Program. **Log to Text File**. Sets up the file that will be used to log all activities that occur once the **Start Logging** button is pressed.

The following controls manage how the program executes:

Controls	Description
Connect	The connect button does different things depending on whether you are running the Serial Port, AGWPE, or Telnet version of Interactive Packet. **Serial Port** Pressing Connect opens the Comm Port and sends a Carriage Return to the TNC. If the TNC is connected and turned on, you should see the TNC prompt. The Comm port is also automatically opened when the user starts to type in the IPW text window. If the Comm Port is open to another Outpost process (Outpost's Packet Session Manager) or program, an error will be displayed. Pressing **Disconnect** closes the Comm port. **AGWPE** Pressing Connect initiates the AGWPE sequence. 1. The user is prompted to enter his/her call sign. The last call sign used is entered as the default entry. Then, the program attempts to register this call sign with AGWPE.

Controls	Description
	2. If the registration is successful, the user is then prompted to enter the BBS to which he/she wants to be connected. The last BBS name previously entered is listed as the default entry. AGWPE attempts to connect to the BBS. If the BBS is not reachable, AGWPE times out and reports an error. 3. If the AGWPE performs a connect, the user can then interact with the BBS as usual. **Telnet** Pressing Connect initiates the Telnet connect sequence. The program connects to the Telnet server, and the user is presented with the logon prompt. Once you log on, you can interact with the BBS as usual.
Unproto Packet	AGWPE only. Initiates the AGWPE registration, then allows the user to type anything they wish in the text window. These packets will immediately be sent out. Press **Disconnect** exit from the current AGWPE session.
Disconnect	After the Connect sequence is initiated, the text on the Connect button changes to **Disconnect**. When this button is pressed, the Interactive Packet program will initiate a disconnect from the specific interface to which it is connected. In all cases, the disconnect is final. Once pressed, the button changes back to read **Connect**.
Start Logging	The Start Logging button is enabled once a file is selected and available for logging (Menu: **Tools > Log to Text File**). On pressing the Start Logging button, all subsequent text displayed in the text window will be written to the file regardless of whether it was entered by the user or returned from the device
Stop Logging	After the Logging is started as described above, the Start Logging button changes to read **Stop Logging**. When Stop Logging pressed, all logging to the file is stopped, and the button changes back to read **Start Logging**. If Start Logging is pressed again, the data is appended to the same file previously opened.
Create Message	Allows the user to create an Outpost message from any highlighted portion of the text window. If no text is highlighted, an error occurs.

Controls	Description
	If the Interactive packet program is not in the same directory as the Outpost.exe program, this button will be disabled.