Getting Started With D-RATS
A Quick Start Guide

D-RATS is a free, easy to use, multi-platform program for data communications with D-STAR devices or through the Internet. The software can be run on Windows, MacOS and Linux/UNIX computers. D-RATS provides many functions including:

- Instant messaging style chat
- Addressable messaging with attachments to other online stations, SMTP email addresses, Winlink 2000 addresses
- Send forms (predefined forms included, define custom forms)
- Unattended file transfer (all file types)
- Position reporting with included maps
- Repeater proxy software links radio, Internet clients

Step 1 – Download and Install

Download the program at http://www.d-rats.com for your operating system and install to your computer.

Step 2 – Set Preferences

Prior to using D-RATS there are a number of preferences that must be configured. These can be accessed by selecting File > Preferences:
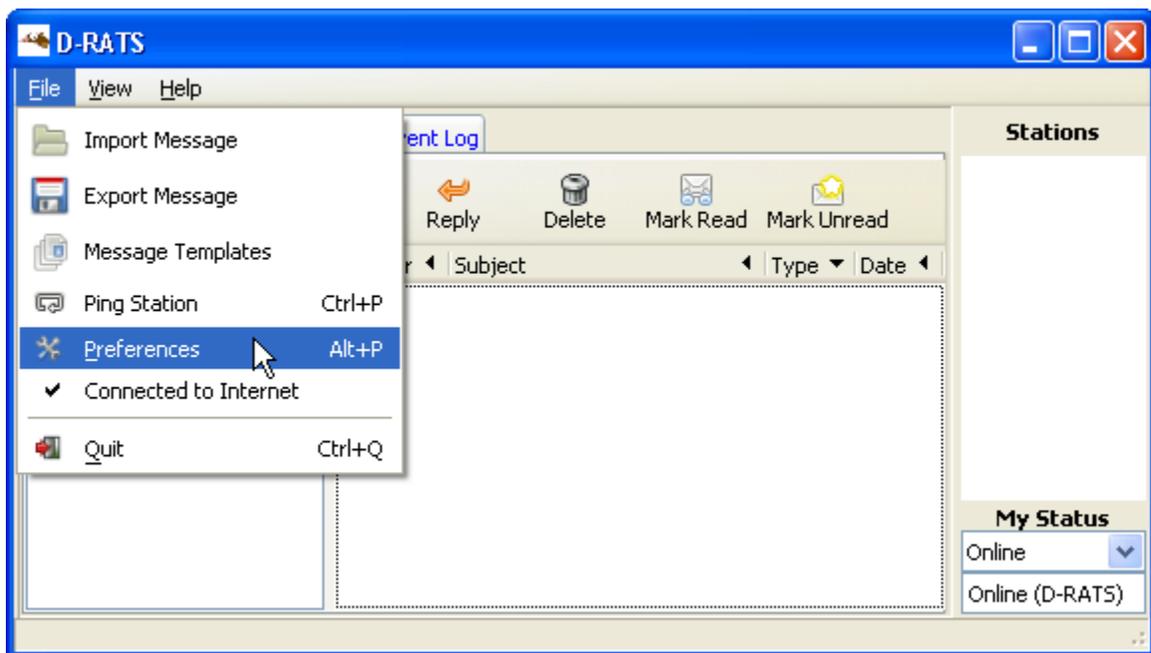
A list of configurable item groups will appear in the left hand column. The following subsections describe the options contained in each group.
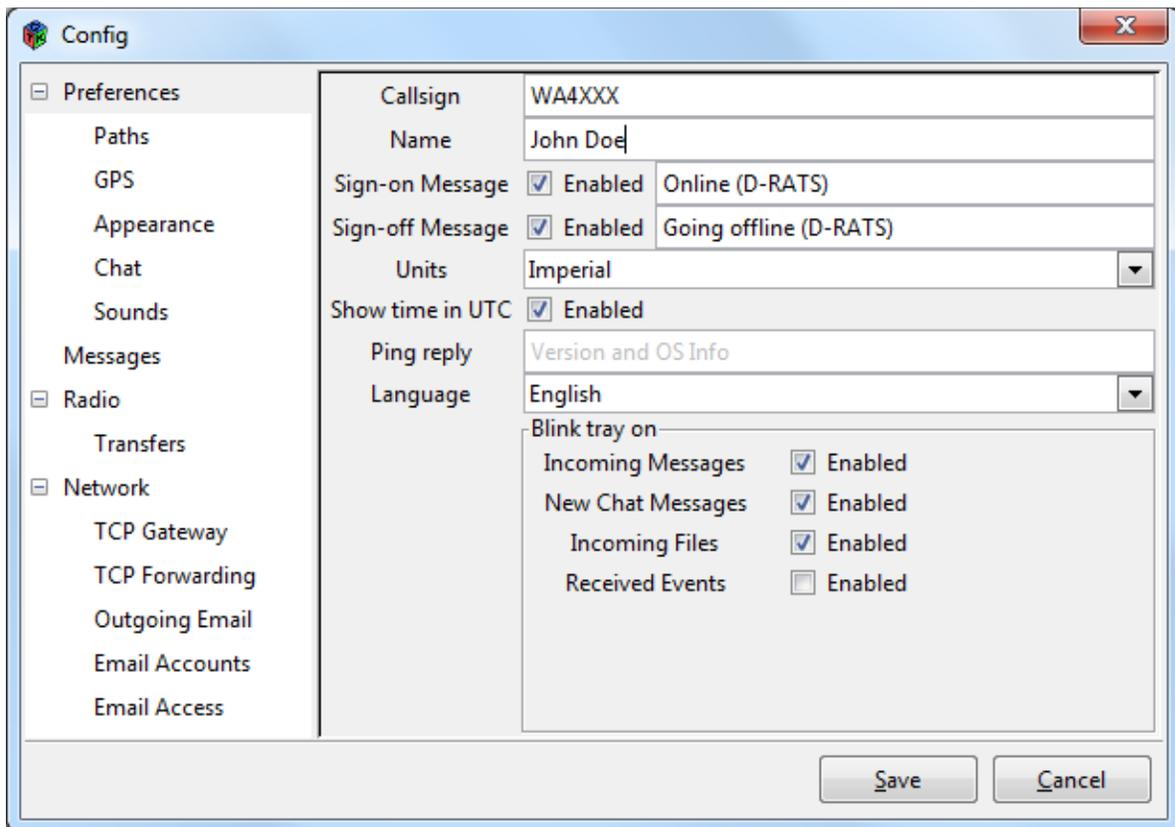
- **Callsign**: Normally, your FCC callsign is entered. Optionally, a tactical callsign may be used. The callsign will identify the station for chat, messaging and file transfer. When sending to this station the callsign entered above is used to address the station.
- **Name:** Enter your name or location (ex. EOC, Shelter 1)

For a quick start, leave all other information at its default value.

Step 3 – Set Paths

Under Paths, you may leave these at their default value or define a different folder. The important one is the File Transfer Path. This folder is used in File Transfers as your local location for remote stations to view and download your files. Files uploaded to your station are placed here.
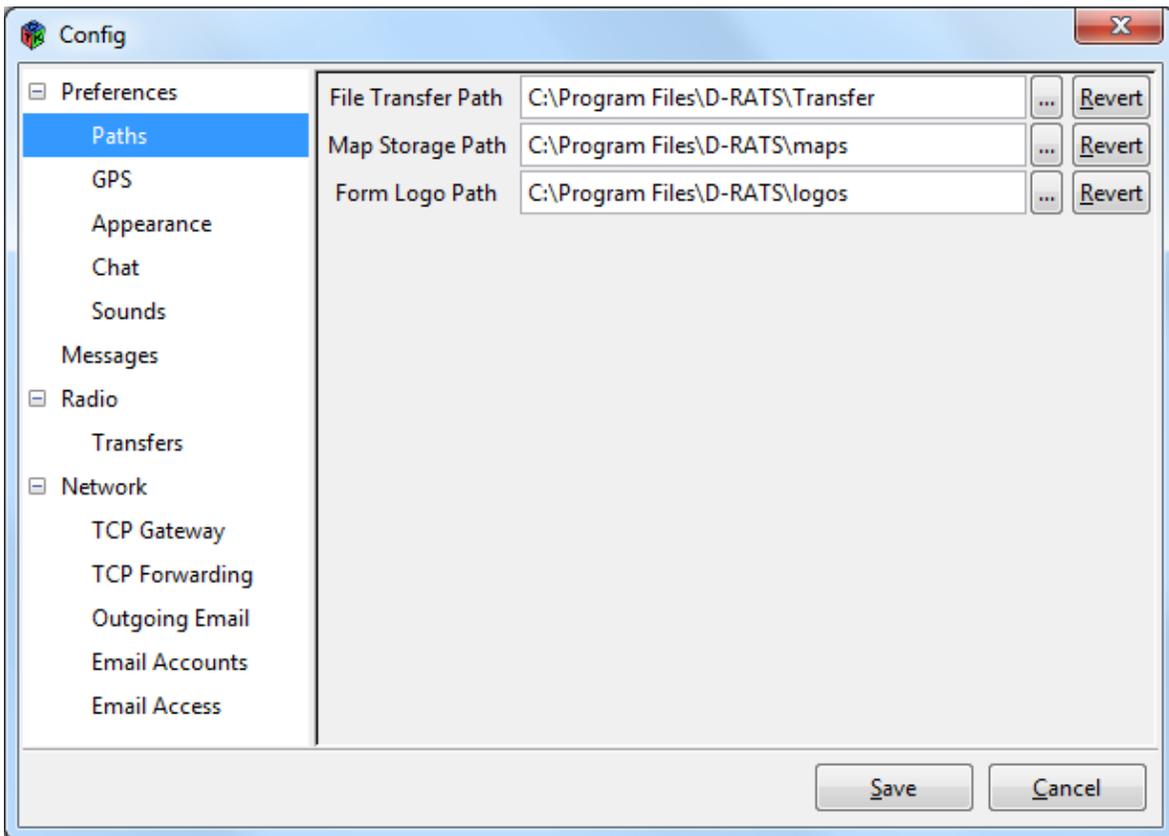
Step 4 – Define Radios

In this section, you will define the connections D-RATS will use to communicate. If connecting to a D-STAR radio, the GPS settings must be disabled in the menus of the radio. The table below provides the information for most Icom radios needed to define a radio in this section and set he menu selections.

Radio	Rate	Radio settings required for D-RATS to function
IC-80AD	9600	DATATX = AUTO, GPS-TX = OFF, GPS.ATX = OFF
IC-U82	9600	ATX = ATXON, SPD = SPD96
IC-V82	9600	ATX = ATXON, SPD = SPD96
IC-91AD	38400	DV DATA TX = AUTO, GPS TX = DISABLED, GPS AUTO TX = OFF
IC-92AD	38400	DV DATA TX = AUTO, GPS TX = DISABLED, GPS AUTO TX = OFF
IC-2200	9600	ATX = ATXON, SPD = SPD96
IC-2820	9600	DV DATA TX = AUTO, GPS TX = DISABLED, GPS AUTO TX = OFF, UT123 must be installed
ID-800H	9600	DVT = DVTAT, SPD = SPD96
ID-880H	9600	DATATX = AUTO, GPS-TX = OFF, GPS.ATX = OFF
ID-1	19200	DV DATA TX = AUTO, Cannot use PC application

To use D-RATS with a D-STAR radio, it must be defined in the Radio section of the Preferences as below.
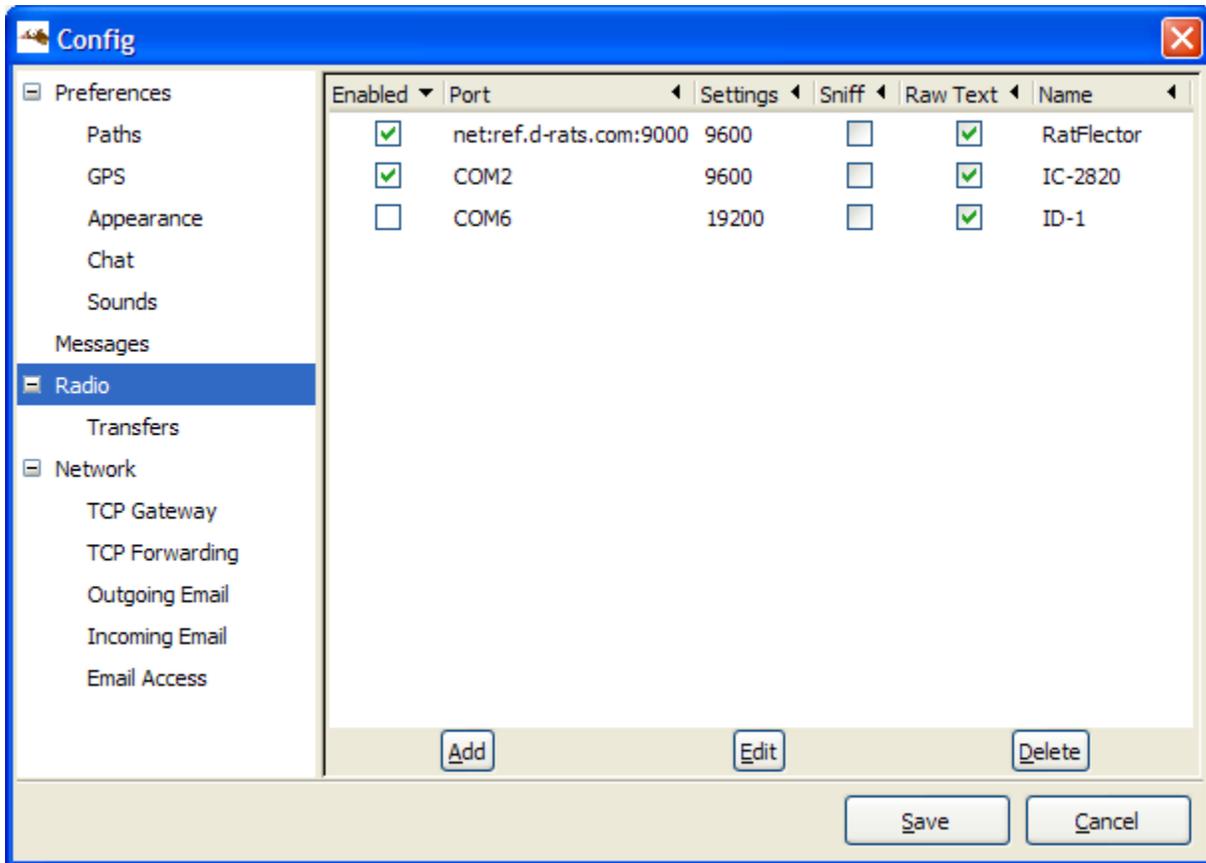
From the Config > Radio screen, click "Add" and select Type as Serial if connection to the radio with a serial cable. This is the normal connection type for a radio. Select the Serial Port that your data cable connects to on the computer. If you are using a USB to Serial adapter or a serial cable with a USB connection, you must locate the COM port number. In Windows, select START, Control Panel, System and Device Manager. Under Ports, you will see the COM Port assigned. The Baud Rate is dependent on the radio settings. The default baud rate is shown in the table above for each radio. You may add a Name to add a unique name to this radio. Click Add to save the configuration.
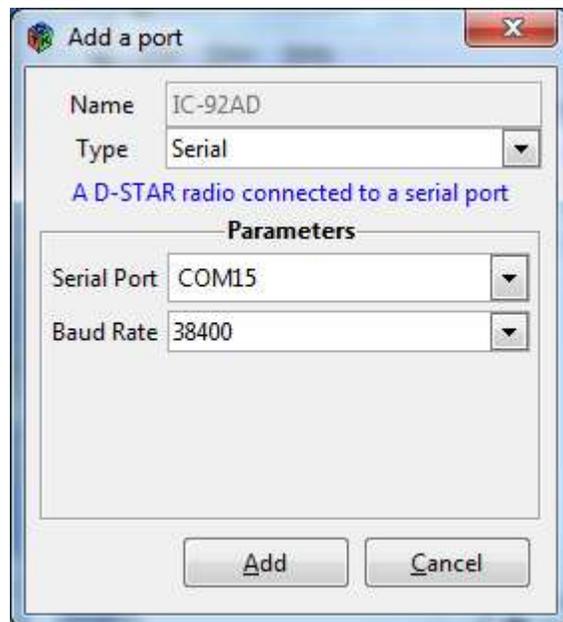
On the Config > Radio screen, ensure that the box is checked for the radio you have defined and wish to use.

To connect to the Internet (without a D-STAR radio), you will define and use a Repeater Proxy also known as a Ratflector. These are used to connect D-RATS Internet users together and may also connect to a D-STAR radio to link RF users as well. The Ratflector you use is determined by the D-RATS Administrators in your area. A default Ratflector is usually defined in D-RATS, but you may configure one just as you configure a radio.

From the Config > Radio screen, click Add and select Network. Under Host, add the address of the Ratflector you intend to use. "ref.d-rats.com" is a public ratflector available for general use by Internet users and generally has activity anytime. Port 9000 is the default port used by most all ratflectors.
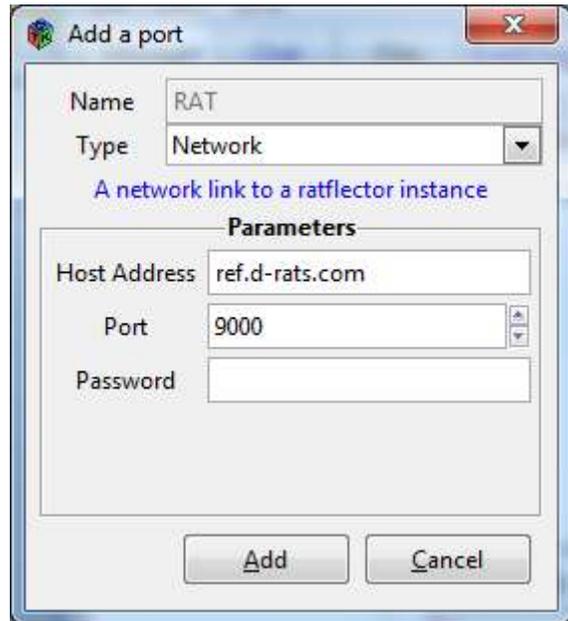
Click Add to save your configuration. On the Config > Radio screen, ensure that the box is checked for the radio you have defined and wish to use.

Step 5 – Transfers

This section defines the parameters used for communicating between D-RATS stations. Under Block Size, the larger the value, the more efficient the transfer is on a good connection. On a bad connection, setting this to be smaller reduces the amount of data that must be re-sent in the event of a bit of corruption. Normally, the default value of 512 is good. Normally the default values for the other settings are good for most situations. Make sure the "Remote file transfers" box is checked.
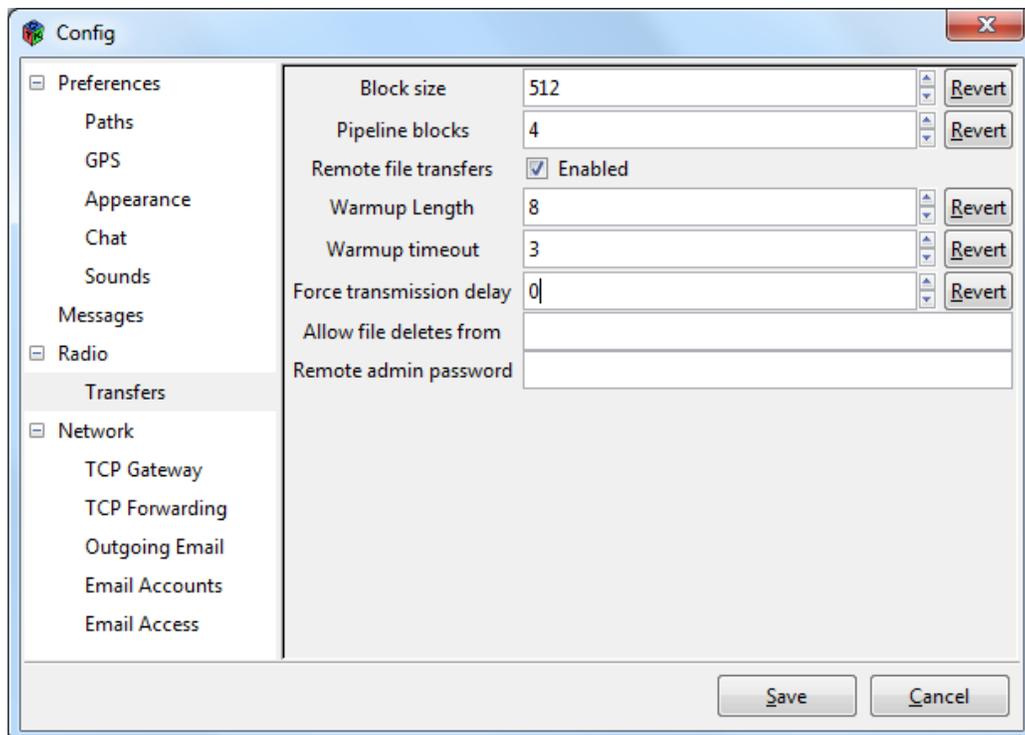
Step 6– Messages

This section defines how messages are handled in D-RATS. The settings below are suggested. For the "My Winlink SSID" setting, any valid SSID may be used.
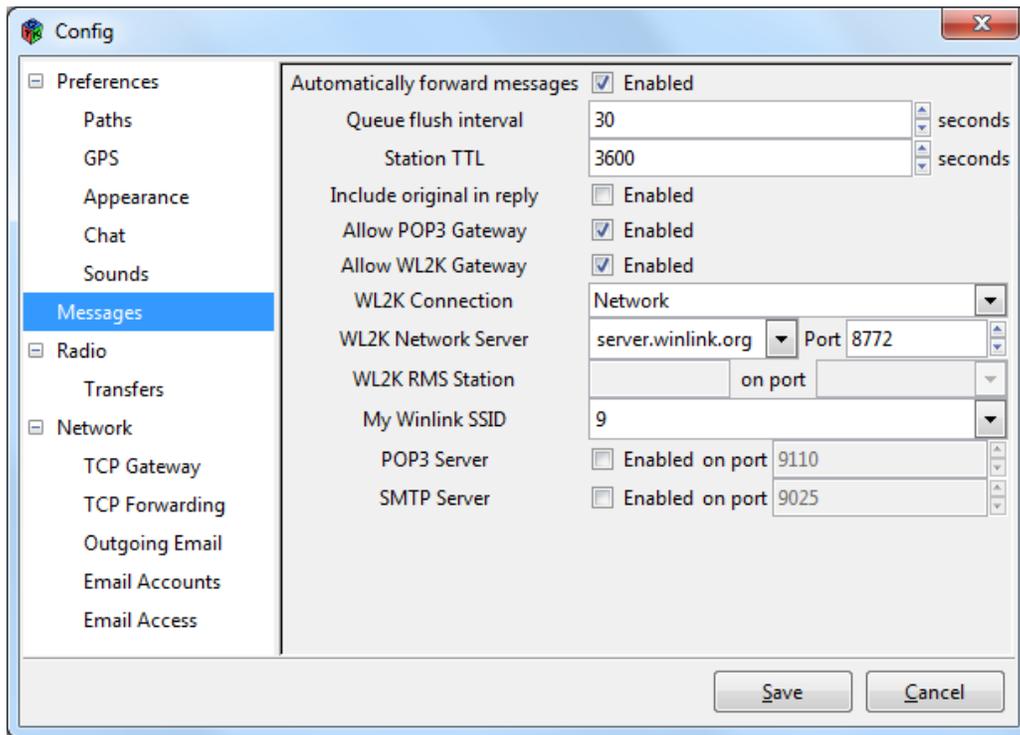
NOW LET'S USE D-RATS

Upon opening D-RATS, you will see four tabs across the top of the screen (Messages, Chat, Files and Event Log). Whenever there is activity in any of the modes, the program border will flash and the tab with activity will turn blue.

Let's start with Chat. Select the Chat tab. You may expand the screen size by grabbing a corner with your mouse and dragging to the desired size. If you selected the public Ratflector (ref.d-rats.com) under Radios, a list of online stations will appear on the righ side of the screen under Stations. If none appear, with you mouse inside the t area, right-click and select Ping all Stations. You should see a list as stations reply to your ping. You can chat with the online stations by typing your message in the area near the bottom of the screen as shown below.

Stations online show in this area
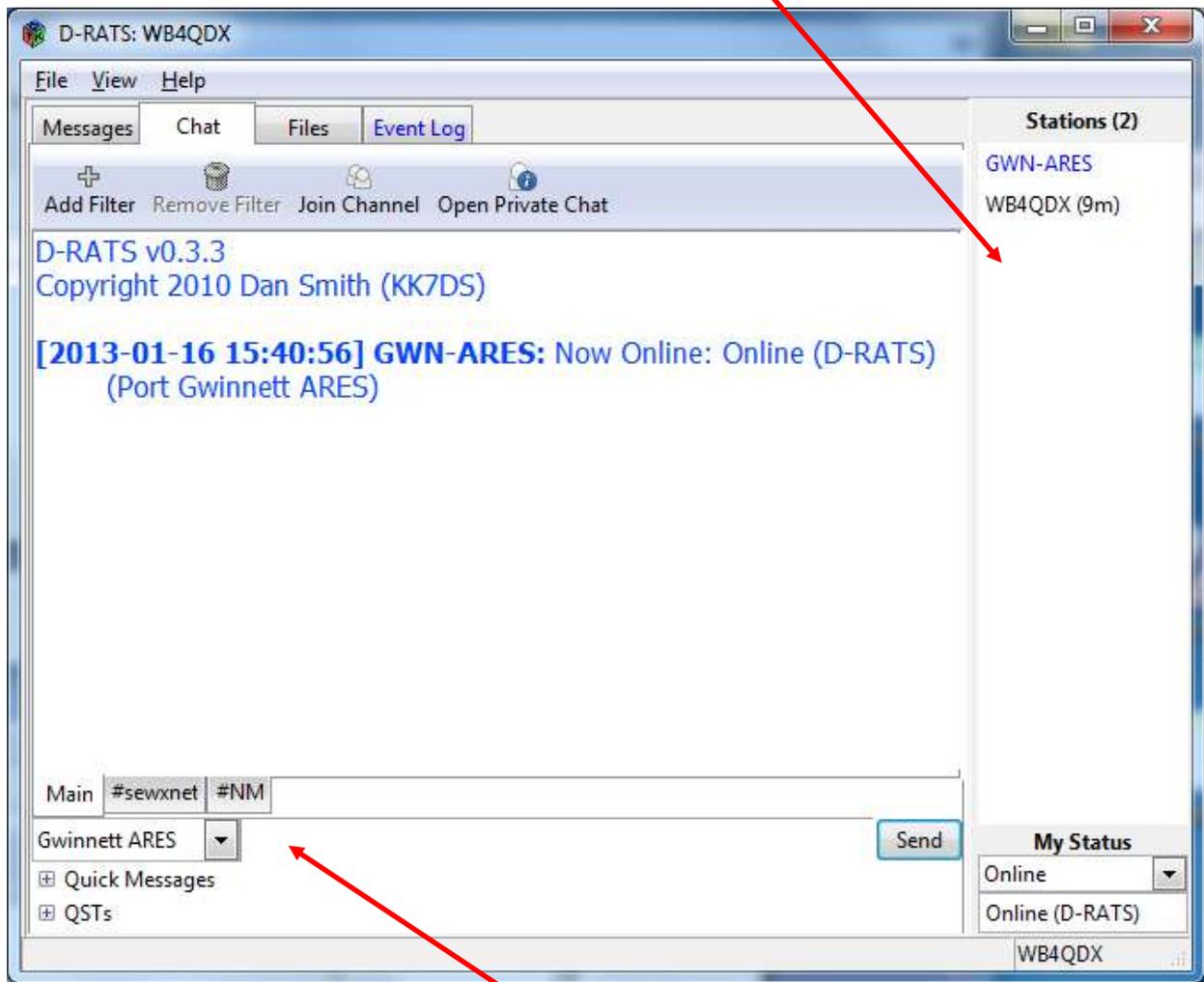
Type your message in this area, then press Enter

Next, let's send a message to another station. Click on the Messages tab at the top. The Messages tab looks like many email clients with a familiar Inbox, Outbox, etc., and New, Forward, Reply, etc.
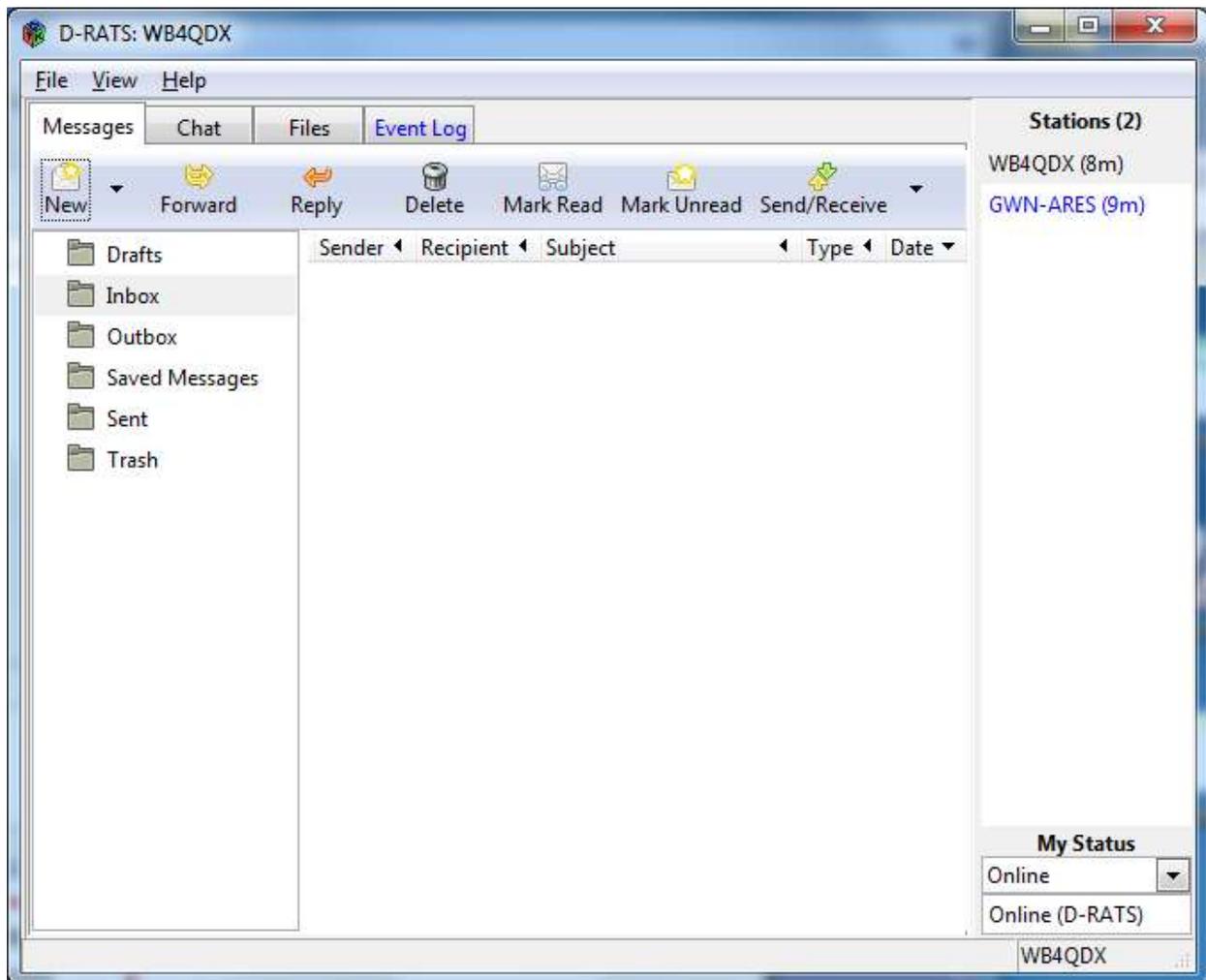
To send a regular message to another station, click New and either Memo or Email. Type in the Destination callsign . Remember, this can either be the actual callsign or a tactical callsign. To ensure the correct destination, ping all stations as in Chat and use the station name exactly as it appears. If the desired station is not online, you must still use the exact destination callsign, but the message will not leave your Outbox until the stations is online.

Type a subject and your desired message and click Send. After a short delay, you message will begin to send as seen on the staus line at the very bottom of the main screen.
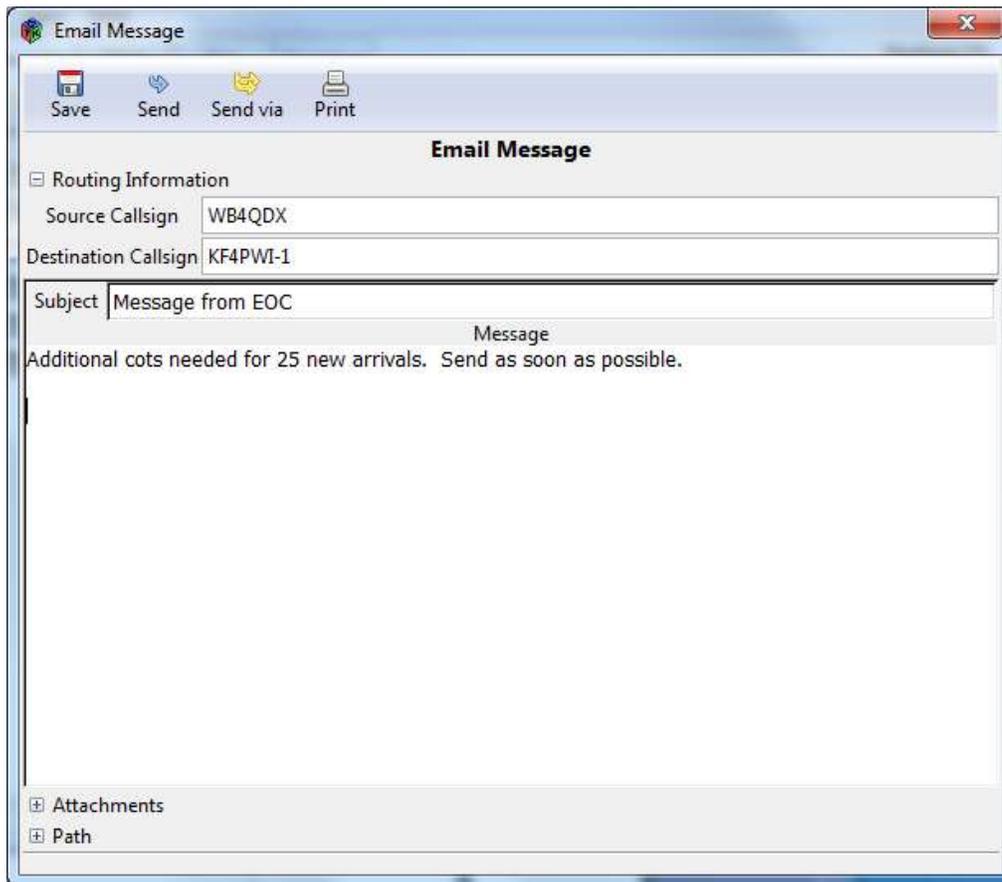
To send a form such as an ICS-213, select New and the desired form from the list. A standard ICS-213 form is included with D-RATS. Fill in the information and select Send. Only the contents of the form will be transmitted for efficiency and the form will be populated on the receiving end.

The receiving station can click Print to view the form as it actually appears for delivery to the recipient.
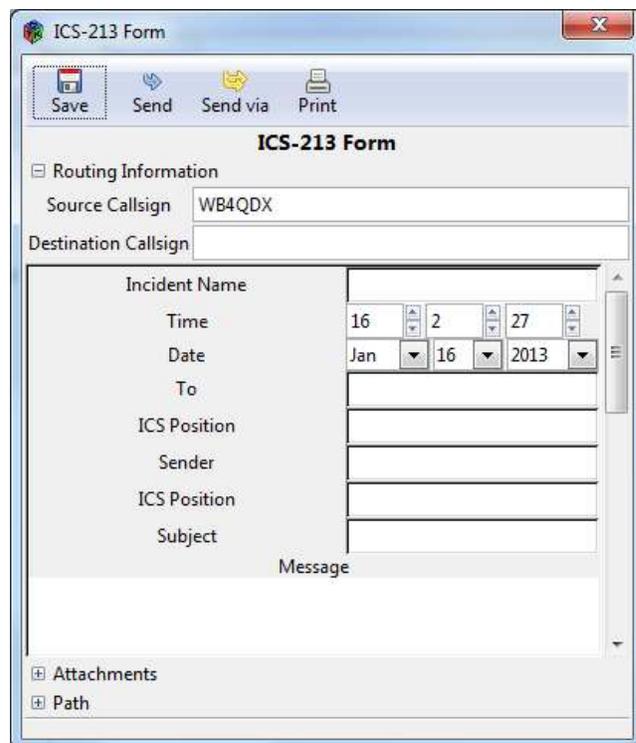
To open messages or forms received, click on Inbox and click on the desired message to open.

Our final Quick Start function is File Transfer. Click on Files to begin. The left hal of the screen shows any files on your local computer in the folder you defined in the initial configuration for file transfers. Files that are transferred to your station from a distant station will be stored there as well. ***A station must be online to send or receive files.***

To upload a file to a distant station, first connect to that station. If there callsign/name shows on the right side of the screen under Stations, you may select them in the Staion drop down box and click Connect. The station will show connected on the status line at the bottom of the screen when connected. If there are files in the remote station's folder, you will see a list of files on the right half of the screen. Select the file you wish to upload to the distant station, by highlighting it on the left side and click Upload. The file transfer will begin and progress will be shown on the status line at the bottom.
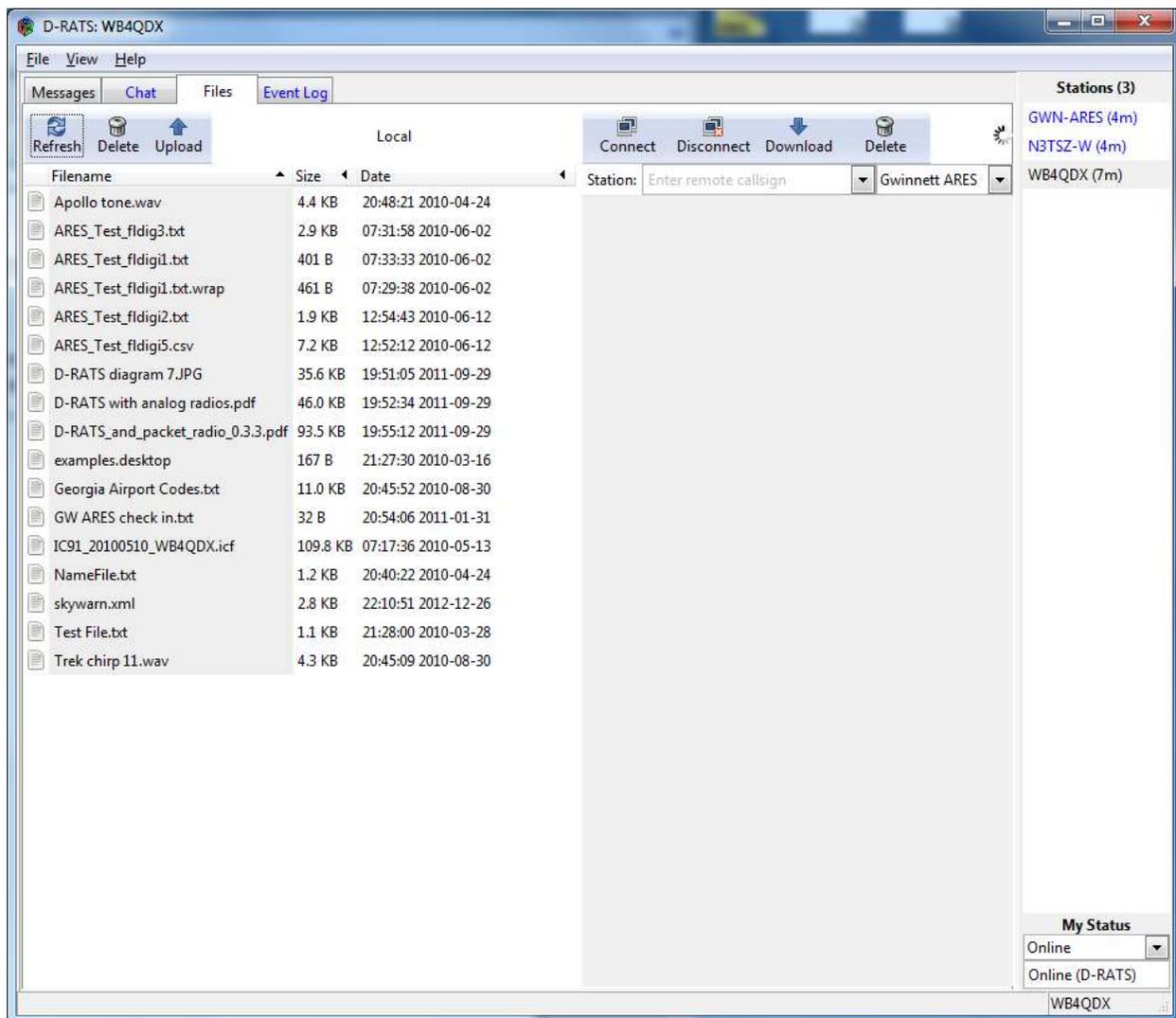
To download a file from a distant station, again make sure you are connected to that station. Click on the file on the right side of the screen hightlightin the file and click Download. Again, the file tansfer progress will be show at the bottom of the screen, Be sure to Disconnect from the distant station when you are are finished tansfering files.

The Event Log tab provides a convenient log of all activities and provides a date and timestamp for each activity.

These are the basic functions of D-RATS. There are other functions and features that can be used. For a complete description of these features and their functions, you may view D-RATS Documentation at the website at http://www.d-rats.com/documentation/.