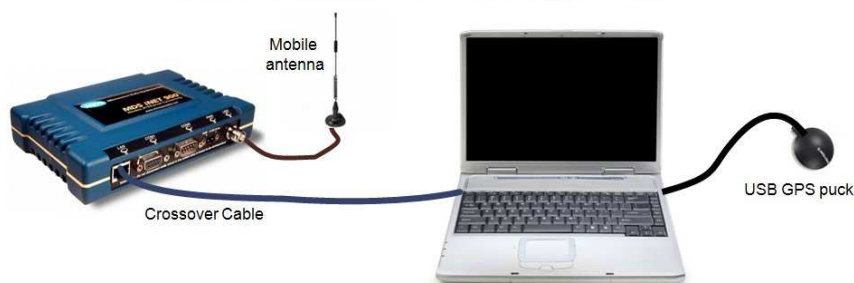


## Twin Eagle Radio Coverage Kit Quick Reference Guide

The Twin Eagle “Data Collector” program was created to automate the process of taking radio coverage measurements in the field. Prerequisites for using the program include:

- A GPS puck has been connected to one of the open USB ports on the collection laptop. Verify that within a few moments after it has been plugged in the red light on the GPS puck begins to blink at approximately one second intervals. This shows that it is sending GPS data to the collection laptop.
- The collection laptop has been connected to its power adapter (if the data collection will require more than two or three hours for completion).

### Connection Guidelines for TEC Radio Coverage Kit



If collecting data from an iNET, iNET-II, or Mercury Radio:

- The network on the collection laptop should be configured so that it has an unused IP address on the same subnet as the mobile radio, the same subnet mask, and the same default gateway.
- Use the Network Manager application to configure these network settings. The collection laptop should be connected to the mobile radio with a crossover cable or through a small switch/hub in the vehicle.

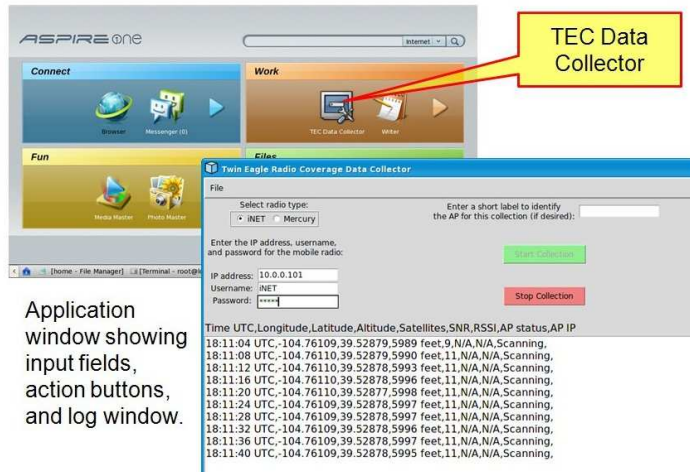
If collecting data from an entraNET Radio:

- A USB-to-Serial adapter should be connected to one of the open USB ports on the collection laptop. The entraNET console cable should be attached to the adapter and to the COM1 port on the radio.

The following steps are included in the “data Collector” program:

1. Select the radio type by clicking a "radio button" for:  
iNET 900/iNET-II 900, entraNET 900, or Mercury 900.
2. Enter the IP address of the mobile radio connected to the computer. At the start of data collection, this IP address will be used to verify network connectivity to the mobile radio. If using an entraNET radio, the IP field is not required and will be set to "COM1" by the program.

3. Enter the Username and Password for authentication to the mobile radio. At the start of data collection, this username and password will be used to verify that a connection can be made to the mobile radio.
4. Enter an *optional* descriptive identifier that will be pre-pended to the data collection file name.
5. Select the RSSI value that will be considered "Red" or "Yellow" when the KMZ file is generated after data collection is completed.
6. Start and Stop the collection of data values.
7. Produce KMZ and Surfer data files from the capture.



Application window showing input fields, action buttons, and log window.

Data entry fields and buttons are provided to allow the user to accomplish these steps.

### Start-Up Checks

When the program begins, it logs the date and time it was started. It also checks to see if another instance of the program is already running. Only one instance at a time of this program is allowed, so a dialog box will appear informing the user of the process ID of the running instance of this program.

Click the "OK" button to acknowledge this message and the program will close automatically. To resolve the issue, find the previously running program and either continue or close that instance.

If another instance of the program does not appear to be running, there may be an orphaned "lock" file in the "/tmp" directory which can be deleted manually (either from the command line or using the File Manager).

### Action Buttons

The following instructions discuss how to use each of the action buttons:

- **Start Collection** -- This button will begin logging radio and GPS data to a new collection file, as well as displaying the data lines in the text window.
- **Stop Collection** -- This button will stop the logging of radio and GPS data. It will close the collection file, and it will generate the Google Earth KMZ and Surfer data files in the "DataLogs" directory.

## File Menu

The File menu contains two options:

1. **Clear the Log Window** -- This option will clear the log window which normally shows status messages in the lower portion of the program window.
2. **Exit** -- This option will gracefully exit the program. When the EXIT option is used the runtime lock file is removed, but this lock file may remain as an orphaned file if the program terminates ungracefully.

## **HOW TO SET THE IP ADDRESS USING NETWORK MANAGER**

The coverage computer has a Network Manager application that allows you to set all of the network parameters for the machine. To start the Network Manager, click on the "Settings" icon which is located near the lower right corner of the main desktop window. In the "Settings" window, click on the "Network Center" icon near the top center of the window.

The "Connection Management" window will appear which will allow you to control the network settings of the coverage computer. For an Ethernet cable connection to the radio, you must configure the "LAN0" network interface. First determine the status of the LAN0 interface:

- If the interface is already "Connected" then you will need to click "Disconnect" in order to edit and apply any new configuration settings.
- If the interface is not already connected, you will see that the "Edit" button is available on the right side of this window.

Click the "Edit" button to change the "Connection Properties" for this network interface. To communicate with any radio, you will need to have an unused IP address on the same subnet as that radio.

On the TCP/IP tab, click the radio button for "use the IP address as follows" and enter the IP address, Subnet mask, default gateway, and primary DNS server information in the appropriate fields.

When you have entered your new configuration settings, click the "Finish" button and the "Connection Parameters" window will close. Now click on "LAN0" to highlight it, and click on "Connect" to start your connection to the radio.

## **HOW TO USE TELNET (and other programs) IN A TERMINAL WINDOW**

The coverage computer supports many useful programs, some of which may require the use of a terminal window. To start a "telnet" session to another network device, you will need to open a terminal window.

- Right-click on the opening screen to get a selection menu.
- Choose "Terminal" to open a terminal window.

- At the command prompt, type the telnet command and the IP address of the remote network device: `>> telnet 10.0.0.101`  
This will begin the telnet session to the remote device.
- If you require help with any of the command line options for "telnet", you can look at the manual page for this command by typing `man telnet` at the command prompt.

#### **GE MDS RADIO VERSIONS SUPPORTED BY THIS PROGRAM**

The Twin Eagle Data Collection program supports these radios and the firmware versions which are compatible with the following:

- MDS Mercury 900-R firmware version 2.5.3
- MDS iNET 900 or MDS iNET-II 900 firmware version 6.6.0
- MDS entraNET 900 firmware version 2.3.3

For additional help using the Twin Eagle Radio Coverage Kit, please contact:

[support@twineagleconsulting.com](mailto:support@twineagleconsulting.com)