

Introduction: The purpose of this document is to provide a quick start guide to using CQ/X with a GPS. It covers all phases of a GPS-enabled mobile operation in a QSO party including route planning, trip execution, and finally trip reporting. It assumes that the following are available:

- Streets and Trips 2010 or later [Also see note below]
- CQ/X 1.8.0 with Patch 180-01 or later
- SimGPS from Patch 180-01 or later.
- Google Maps (GM)

Streets and Trips (S&T) is an excellent tool for planning your route as it shows county lines, and, beginning with the 2010 version, has the capability to export a route in GPX format for use by other applications including CQ/X. However, it does not provide the capability to export the sequence of lat/lon values describing the route and for that purpose we use Google Maps. [Note: It may also be possible to export GPX from a late version of Street Atlas]

Route Planning

In the following be sure you have the QSO party selected in CQ/X for which the trip is being planned. If the QSO party covers two days it is best to develop a separate route for each day using the following steps.

1. Use S&T to develop a preliminary route to cover the desired counties.
2. Export the route from S&T as waypoints in GPX format
3. Use the CQ/X menu item QPTools | Convert GPX to KML to convert the file from step 2 to a KML file for use by Google Maps. Note: this converter may also be under the GPS menu.
4. Start up GM and Create a Map to hold your route
5. In GM Edit mode import the KML created in Step 3
6. Right click on the line created in GM and select “Turn on Snap to Roads”
7. It is now a good idea to check the GM map for any loops and to make sure that the route is what you planned. If necessary, use the Edit mode in GM to remove unnecessary points and to modify the route. Be sure to save your map and close GM.
8. Open GM and select the map you created in step 4 and saved in step 7.
9. There will be four links on the map labeled “Rate this map”, “Write a comment”, “KML” and an icon link. Click on the KML link to download a file of lat/lon values describing the route.
10. Use the file from step 9 and the CQ/X menu item QP Tools | Build Plan Using a Google Map to import the lat/lon values and determine the county line crossings.
11. It is a good check of the Google Map data to write the crossings back to Streets & Trips. To do this use the button labeled “Export as CSV Text” to save the crossings in a format that can be imported into S&T. You can then use S&T data import to bring in the crossings. Examine the crossings in S&T to make sure they are all on your designed route. Also see note at the end on adjusting the pushpin properties to give best results.
12. Use CQ/X menu item QP Tools | Perform Timing Analysis to check the feasibility of driving your route in the allotted time, while allowing time for

- refueling and stopping in short counties to work the pileup and allowing for possible lunch and/or dinner breaks.
13. Back in S&T traverse around your route placing a pushpin at each of the waypoints you want to track in CQ/X. It is recommended that a pushpin be placed at each change of highway and that naming of the waypoint be done in such a way that the name describes the action to be taken at that junction. For example if the action to be taken at a junction is to make a left turn from highway US190 to I45 north you might label the waypoint as LT US190-I45N. Once you've labeled all the junctions and have saved the map, do an export of the route as a GPX file.
 14. Now import the waypoints in the GPX file from step 13 into CQ/X using menu item **GPS | Define Waypoints**.
 15. Use CQ/X menu item **Options | Configure User-Supplied Help** to link the (S&T) trip file from step 13 with CQ/X for use during the contest. This will cause a menu item for starting S&T with the trip file to be setup on the CQ/X Help Menu under User-Supplied Help and avoids having to remember where the S&T file resides.
 16. If desired use menu item **QPTools | Post Route Plans** to connect to the County Hunter website to post your route and any comments using cut and paste.
 17. That completes the route preparation. If you want to simulate the route, start up SimGPS (the exe is in the GPS_Simulator directory) and use it with the GM file from step 9 as input to create a file of GPS sentences describing the route. Use the sentences to drive SimGPS and the crossings created as a text file in step 10 as way points to enable starting the simulation near a county line crossing.

Other Preparations

1. Use **Keyer | Edit Message Template** to define the format of your messages. Insert embedded symbols in the messages by first positioning the cursor at the desired point of insertion and right-clicking and selecting the desired symbol from the pop-up menu. Once you are satisfied with your messages Update the Template. The messages are now ready to be changed as you advance through the counties and work stations. **Note: It is important to perform this step even if you plan to operate only SSB since the program obtains logging information from these messages.**
2. Use **Keyer | Assign Function Keys** to assign tasks to the function keys. See the document "User Notes for Mobile Ops" which can be accessed from the CQ/X menu item **Help | User Notes for Mobile Ops** for a typical assignment of function keys.
3. Use **Radio | Connect/Disconnect** or **Keyer | Connect/Disconnect** to assign the radio, keyer and GPS to their respective ports. Be sure to connect and test each device. The next time you close the application be sure to answer Yes to the question "Save New Port Assignments" so that you can easily reconnect all devices to their proper ports. It is also a good idea to have a diagram or notes handy describing which devices are attached to which ports.

On Startup/Restart of the program

If you have previously setup the following there is no need to do it again as the restart will reset them. If you have not set them up the configuration wizard will prompt you through most of the following steps or you can skip the wizard and perform them without the prompts.

1. Use **Radio | Connect/Disconnect** to connect devices to their respective ports. If you have saved your port assignments you can use the button labeled “Restore Connect Close” to restore all device connections, connect the devices, and then close the dialog.
2. Use **GPS | GPS Advises County Change** to set the desired GPS Advisory mode. If you choose AUTO the program will automatically change your messages to correspond to the current county and will locate the next county crossing. If there is more than one crossing defined for the current county the program may ask you to resolve the uncertainty. (Use **GPS | Resolve Multiple County Crossings or click on the Multiple Counties panel**)
3. Use **GPS | Set Parameters** to define and/or import any waypoints and to set up pass through of GPS information to a mapping program such as Streets and Trips. You can also set up any GPS logging features at the same time. Note that a default QSL-Ready log is automatically setup so there is nothing to do if that type of logging is all that is desired.
4. One approach to using real-time mapping is to define the mapping program in the User-Defined Help and then to start it from the Help menu. This latter approach avoids the problem of having to remember where the file defining the trip is located. See on-line help for how to set up User-Defined help.
5. In the mapping program connect it to GPS information for real-time position tracking by specifying a port that is connected via a null modem to the GPS Pass Through port defined in step 3 above. Consider using virtual serial ports to save two physical ports. The recommended software for virtual serial ports is vspManager which is free for amateur radio use.
6. If you have defined your route highway changes and other important waypoints to CQ/X be sure to activate the Multi-Waypoint Tracker using menu item Track Multiple Waypoints under the GPS menu. The tracker will keep you advised of the distance to the next waypoint or highway change.

During the contest

1. Send CQ (in CW mode using the key you assigned to the CQ message) or using Shift+Spacebar, or using the Enter key if you have specified Sent CQ with Enter Key under the Keyer menu.
2. Enter call of responder and press Enter to send your exchange info
3. Enter received exchange information separated by spaces in any order, referring to the Check grid, if desired, to insure proper interpretation
4. Press Enter to log the contact and send the CQT (TU) message. If the contact won't log refer to the Check grid to see what might be missing. If you have assigned a key to SEND_CQT_NOLOG and you wish to send CQT while fixing the exchange information use that key.

5. See the document “User Notes for Mobile Ops” which can be accessed from the CQ/X menu item Help | User Notes for Mobile Ops for a typical assignment of function keys.

After the contest

1. Use **File | Finalize Logs** to convert the internal log (...\\CQxClientLogView.log) to Cabrillo format. Enter any soapbox comments including statistical results and then use the Browse button to specify the file where the final log is to be kept.
2. If a separate summary sheet is required use **QPTools | Prepare Summary Sheet** and the Browse button to specify the file where it is to be saved. It is good idea to create a separate directory in which to save all results from each contest.
3. If desired, or required by the contest, use **QPTools | Prepare County Logs** to prepare individual logs for each county.
4. Use **File | Post to 3830 Reflector** to connect to the site to file your 3830 report.
5. Of course, don't forget to also submit your log to the sponsor!

After after the contest

It would be greatly appreciated if you would provide feedback regarding your experience (good or bad) using the program including any suggestions for improvements. Provide comments to no5w.chuck@gmail.com or to [cxsupport@no5w.com](mailto:cqxsupport@no5w.com)

Have a safe trip and enjoy the party,

73/Chuck/NO5W