

Tracker2_{and the} Nüvi350

Quickstart Guide

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Tracker2 and the NUVI 350

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I decided to bash this together after running into some very obvious (at a later stage) pitfalls.

This edition is by no means the final. Hopefully ill get some contributions and fire them all in here. If you feel I have made a mistake or have something to add, be sure to send me an e-mail. Paul@paulsnet.org

If the book was of use to you I would love to know.

Enjoy!

Acknowledgments

Big thanks to Mike Wren - N2QDK for giving me some screen-shots and information from his aprs adventures in his area. Which happens to be aprs busy.

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1 First Things First

Introduction

OK. You have yourself a Garmin Nüvi 350 and a Tracker2. The nüvi can be used very efficiently as an aprs client, with full moving station plotting on the built in (rather good) map and full message TX and RX. Quite impressive if you ask me.

The only other ingredient you need is the magic Garmin cable that skillfully fills in the communication from the tracker2 to the sat-nav unit.

If you cheap out, and decide to go for the flying lead version of the cable (just like I did) you'll need to connect it up correctly to a DB9 connector. The pin-outs are as follows:

Colour	Function	Ot2	T2135
Yellow:	data out	Pin2	Pin3
White:	data in	Pin3	Pin2
Black:	ground	Pin5	Pin5

The cable works by (obviously) sending the serial data too and from the tracker2, but not so obviously it connects the unnumbered pin (pin 5, the one not used for USB) to ground through an 8.2k resistor to

tell the nuvi that a serial accessory is connected.

Get yourself connected

Firstly you'll need to plug in the FMI cable to the port at the side. Note it **MUST** be the port at the side and secondly plug the DB9 connector into the back of the tracker 2. I feel stupid writing this, and there is probably no need. But just incase your attempting this with a few Guinneses in ya ;)



Another Problem I ran into was that I was doing this all without the tracker being in the cradle, and without the external power connected. The external power **MUST** be connected!! I cant emphasize that enough, I spend almost 2 hours trying to figure out why my skillfully soldered lead wasnt working.



Configuring your tracker

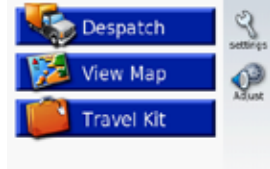
Again, scot has made it relatively easy to configure your tracker. But I'll talk about it anyway. Aside from inputting your call sign and all the rest of it. All you have to do is select port a and set it to



garmin. Unless you have it plugged into port B, in which case you set port b to Garmin. Otherwise you just set port A to garmin and the tracker takes care of the rest. You don't even have to set a baud rate. Just write the configuration to the tracker and your ready to run.

Lighting 'er up!

With your tracker turned on, simply plug it in (taking note of the easily made mistakes previously mentioned) and fire it up.

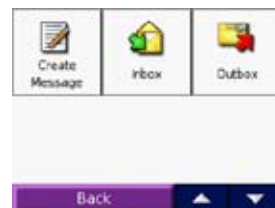


You should be greeted with the screen shown on the left. If your not, Hopefully the following list will help

- ◆ Confirm you have the port set to Garmin (in both profiles if you're using profile switching).
- ◆ Check the wiring on the DB9 connector.
- ◆ Make sure the tracker is powered.
- ◆ Make sure the Nuvi is powered!!
- ◆ Reboot both the tracker and the nuvi ,making sure you power the tracker first.

Great, now what?

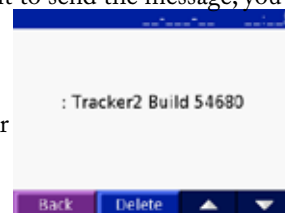
Now the fun begins! Firstly lets check everything is up and running. If you're in an aprs busy area, with a bit o' luck there are call signs appearing on your map already. If your the only aprs user in your area (like me) then lets see if the Nuvi is talking to the tracker OK.



Tap dispatch -> Messages

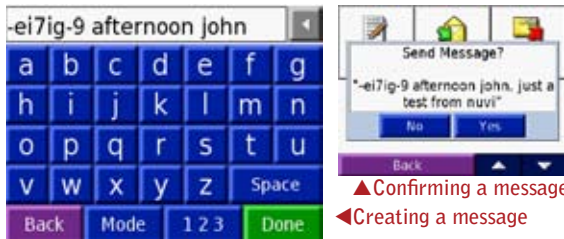
Then select "Create Message"

Input the text, "--version" and hit "send". After confirming you really do want to send the message, you should immediately get a popup saying you have a new message received stating the version of your tracker. Amazing 'eh?



OK, so its working...

Yes sir, your up and running. You now deserve beer. Once you have whole-heartedly consumed that wander over to chapter 2 and we'll start to talk about what this system can really do. Or you could just head over there now, and save the beer for later? Your choice....



fiddling with leads, laptops and bulky software to send and receive messages. You now have it ready to go whenever your nuvi is turned on.

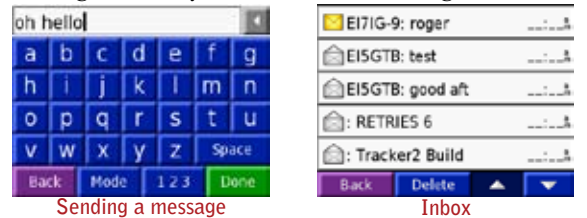
The messaging is quite simple once you get to grips with it. To send a message to a particular callsign. You select "Despatch" => "Messaging" => "Create Message". Then, prefix the callsign with a hyphen (-) type the callsign, leave a space and type your message. When your done, simply hit done. You will then be asked to confirm the message. And once you hit "Yes" the message is beamed off to the magic message function in the tracker2. It then will try to send the message to the amount of times set in the RETRY parameter. A default of 6 times. While the tracker has not received an ack. it will display the message in your outbox as "Sending". Once the ack is received, an envelope icon will appear beside the message, and the time at which the ack was received.

The Nuvi can also be used to configure your tracker. Most commands can be issued to the tracker by prefixing the command with 2 hyphens (--). Any word after these 2 hyphens (with no spaces) will be sent to the tracker as a command. I.e, as we sent when we were testing to see if we had connected everything up properly. Create a message, and type --version, the tracker will then reply as a message with the output from this command.

***** to test *****

If you type for instance "--retries 4" it will change the retry parameter to 4.

The beauty about the whole system, is that when you are driving around in the map view, and you receive a message, the tracker displays an envelope and an exclamation mark in the lower left corner of the map. Tapping this brings you to your inbox where you can see you received message. Then, to save time in replying to this message, you can go to create message and just type your message normally, this will send a message to the



callsign of the person who last sent you a message.

The main things to note from the messaging point of view are:

1. when sending a message to a callsign, only use one hyphen,
2. when you want to issue a command to the tracker, use 2 hyphens.
3. If you receive a message from someone to which you wish to reply, you don't need to include the callsign. It will send the message to the callsign of the last received message.

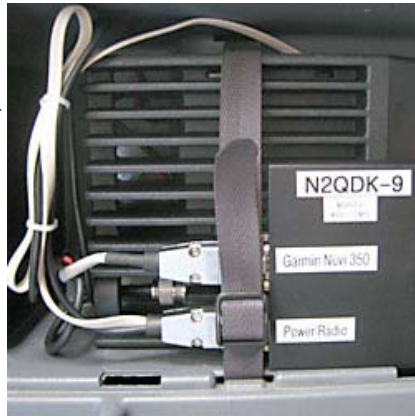
X Example Installations

N2QDK-9

Mike Wren - N2QDK installed a tracker2 and a Nuvi 350 in his Toyota Rav 4.

“It has taken me about two years of fiddling with different equipment to get to this point. Nice and simple, with the absolute minimum wires.”

Mikes radio (FT-FT-2800m) and Tracker2 fits neatly into a compartment in the boot. And with the lid on, you would never know the high tech gadgetry that lurks beneath.



“What you can’t see



is the 10 gauge wire that’s connected to the positive battery wiring harness, runs through the firewall, and runs to the back cargo area. The 2003 RAV4 does offer a switched

cigarette lighter jack just below the cargo compartment. When the ignition is off, power is cut. This isn’t useful for me as I wanted an always-on solution, with the obvious caveat that if I don’t drive my vehicle within three or four days, I may come back to a dead battery. Eventually I’ll put a toggle switch in to allow easy switching between always-on power and ignition switched power.”

Proof that Its one of the neatest solutions out there. Even an aprs guru could sit in the passenger seat and not realise the powerful aprs capabilities right at the

drivers fingertips. Mikes installation is a tribute to one thing that doesnt describe me well, tidy.



