ZGP800 Device Configuration

Below are instructions regarding the configuration of the ZGP800C controller to devices (ZGP800A GPS antenna and ZRT100 radio) to carry out general RTK and post processing surveying. Also provided is a couple of pointers on how to find and fix issues that you may have. Images referred to are at the end of the document.

Devices may be configured to the ZGP800C via cables or using a Bluetooth connection. Once the ZGP800C is configured these settings will stay until configuration is changed. i.e. the Bluetooth will connect automatically to the antenna once turned on.

Bluetooth

The status of the Bluetooth connections can be checked by selecting the Bluetooth icon at the top of the screen. This tells you what devices are attached to which port. If they are black then they are currently connected. If they are gray then they are not connected. (Image 1)

There are three Bluetooth ports and each one is configured for a particular device. Port 1: Rover antenna, Port 2: Reference antenna, Port 3: Bluetooth radio.

Note that the first time you connect to a Bluetooth device it will ask for authentication (Image 2). The PIN is "0000".

Radio Configuration (Image 3)

Serial – If the communication to the radio is via the cable then the 1.2m cable with no markings needs to be attached between the ZGP800C and the ZRT100. Once "Serial" is selected then you should be able to scan for channels - "SCAN" (F4)."CH-1" and "CH+1" decrease and increase the channel respectively.

Bluetooth – When using the Bluetooth for the first time you will need to search for the Bluetooth device – "SRCH" (F4). Select the ZRT100 from the list and press "CONT" (F1) (Image 5). This returns you to the previous screen where you can now scan for channels - "SCAN" (F4) or "CONT" (F1). If it is the first time connecting to the Bluetooth device it may take a few seconds to complete the connection. The connection can be checked by selecting the Bluetooth icon at the top of the screen or the Bluetooth light illuminated blue on the ZRT100.

Radio – Is used for selecting the channel on the reference radio. The ZDC211 V-cable needs to be attached to the Satel 3AS reference radio, 12 volt battery and the ZGP800C controller. Once "Radio" is selected then you should be able to scan for channels - "SCAN" (F4).

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Antenna Configuration (Image 4)

Antenna configuration is only for the "rover" GPS antenna – this antenna is connected permanently to the ZGP800C. The reference antenna is configured in the "Setup Reference" Program.

USB cable – If the communication to the antenna is via the USB cable then the 1.2m cable with red markings needs to be attached between the ZGP800C and the ZGP800A. Once "USB cable" is selected select CONT (F1).

Bluetooth – When using the Bluetooth for the first time you will need to search for the Bluetooth device – "SRCH" (F4). Select the ZGP800A from the list and press "CONT" (F1) (Image 5). This returns you to the previous screen, now press "CONT" (F1). If it is the first time connecting to the Bluetooth device it may take a few seconds to complete the connection. The connection can be checked by selecting the Bluetooth icon at the top of the screen or the Bluetooth light illuminated blue on the ZGP800A.

Issues

Reference antenna connected as a rover

If a Bluetooth connection is active on a device then that device will not be visible when searching for a Bluetooth device. Therefore if your ZGP800A is connected as a rover you will not be able to search it as a reference antenna. Turn on the rover antenna and within "Antenna Configuration" for the rover establish the connection to the correct antenna.

It is advisable to distinguish each GPS antenna from each other, by writing the serial number in a visibly on the casing.

If you are carrying out a lot of RTK surveys then make one antenna the reference antenna and the other the rover antenna. Therefore your rover Bluetooth connection is always configured to the correct antenna – save time configuring. A ZGP800A set as a reference once turned on will use the previous configured information and send out corrections – this allows the user to set up the reference on the same mark without going through the "Setup Reference" program.

Breaking Bluetooth connections

If you find you can not solve any Bluetooth problems and you want to break all Bluetooth connection you can do this in the Windows "Bluetooth Manager" (Image 8). Minimise the ZGP800 software (Image 6) and then open the "Bluetooth Manager" from the "Control Panel" (Image 7). Select each of the "Trusted" Bluetooth connections and move them to the "Untrusted" folder. Then press "ok".

All Bluetooth connections will now have to be setup. This includes Bluetooth authentication (Image 2).

Images

The images below are referred to above. With each image is the description of what keys to press to get to the image.

Image 1: Bluetooth Status

Select Bluetooth icon at the top of the screen.

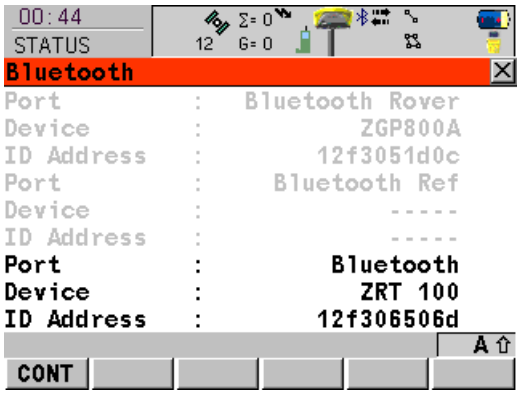


Image 2: Bluetooth Authentication

This will pop up the first time you configure a new Bluetooth device. You need to enter "0000" as the pin number.

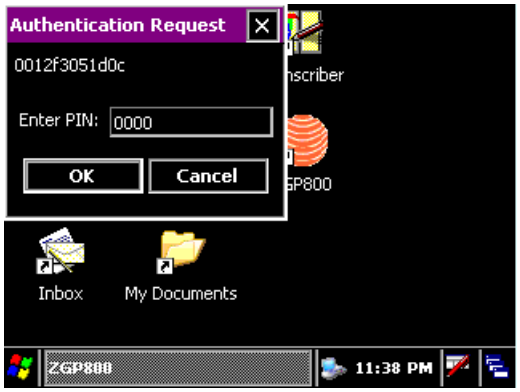


Image 3: Radio Communication Configuration

Config (5) > Comm Config (4) > Select "Radio" > Cont (F1)

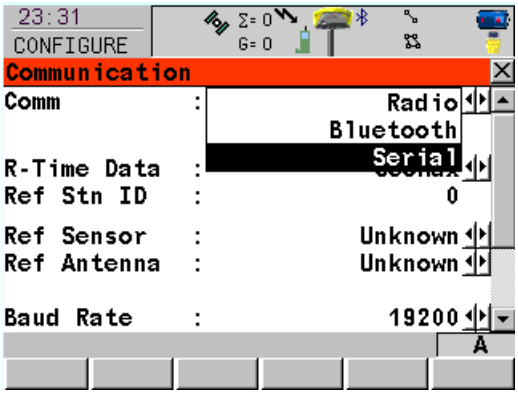


Image 4: Antenna Configuration

Config (5) > Instr Config (2) > Antenna (1)

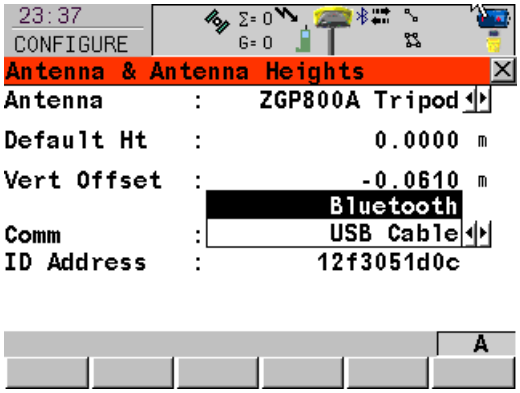


Image 5: Search Bluetooth device

SRCH (F4) (from Antenna or Radio Configuration screen – see above)

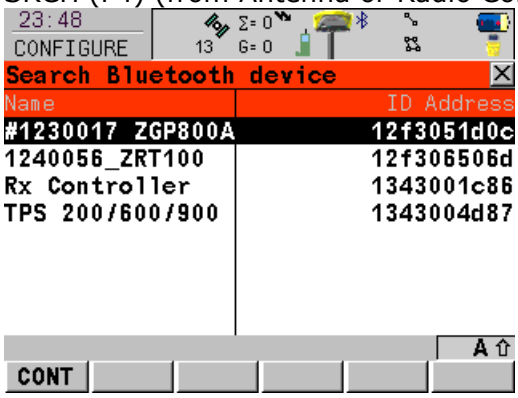


Image 6: Minimizing ZGP800 software to see Windows

Minimise (Shift F5)

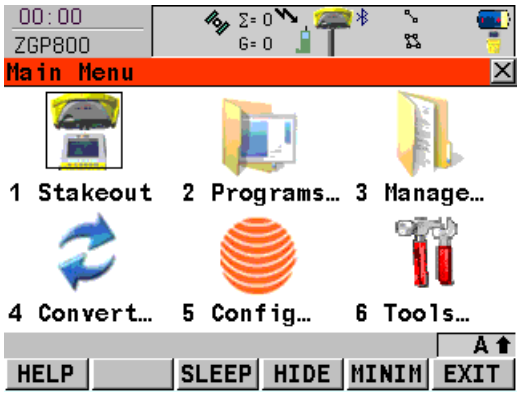


Image 7: Open "Control Panel"

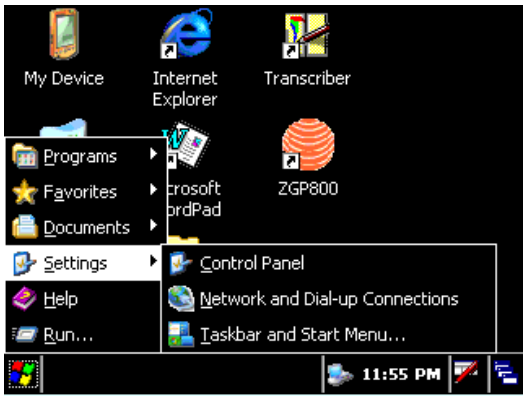
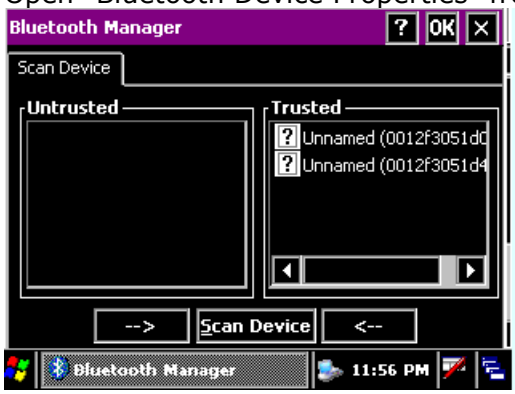


Image 8: Bluetooth Manager

Open "Bluetooth Device Properties" from "Control Panel"



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