NETWORK RTK CONFIGURATION

FOR SOUTH GPS

MODEL: S86
### PREPARATION

Equipments that are necessary when you connect to Hong Kong SatRef through NTRIP include the following:

1. Receiving antenna
2. Controller (installed with EStar 2.0, SOUTH Set and SOUTH Test)
3. Rover unit and SIM card (GPRS activated)
4. Bracket holder for controller
5. Carbon fiber pole

### ILLUSTRATION

![Image of equipment setup](image-url)
The GPRS module is built in the receiver unit. You need to insert the SIM card to the card slot on the back panel of the receiver.

1. Remove the screws of the slot.
2. Remove the card slot, insert the SIM card and restore the slot cover.
### OPERATION

3. Press 🔄 to power on, and press F2 promptly to enter mode settings.

4. Press 🔄 to enter **Mode Select**.
5. Press F2, move the cursor to the third icon for selecting the Rover Mode, and press to confirm.

6. Press F2 to move the cursor to “Edit” icon and modify the differential message type. Return to main menu and press to confirm.
7. Enter the interface of **DATA LINK**, move the cursor to “**Edit**” icon, press to confirm.

8. Change the data link mode to “**GPRS**”, and press to confirm.
9. After all settings are done, the receiver will enter the main interface automatically.

10. Press to enter Module Configuration, move cursor to “CONFIG Mode”.
11. Move the cursor to the second icon, which is for GPRS Configuration.

12. Press , the display will show “Configurating……”, then wait for a few seconds.
13. Take out the controller, press “ENTER” icon on the right side for 2 seconds to power it on.
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<td>14. To enable the connection between controller and receiver, double click the <strong>Bluetooth Manager</strong> icon on the system tray to scan bluetooth.</td>
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<td><img src="image" alt="Bluetooth Manager Icon" /></td>
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**Bluetooth Manager**
15. Press “Scan” icon to scan the adjoining activated bluetooth devices.
16. The system starts bluetooth searching.
17. Then from the list you may find the receiver with the same code as the serial number marked at the bottom of the unit.
18. Double click “Services” button, and a dialog box comes up. Double click “ASYNC” and select **Active**.
19. The system will distribute a COM port for bluetooth connection, usually it would be **COM7** but not always, sometimes it would be other COM port.
20. Run the program “SOUTH Set”. Or you can also find it in “My Device -> Flash Disk”. After it’s activated once, a shortcut will be generated on desktop.
21. Select “Other” in the first drop-down menu and input “7” in the following blank. Then press “Open” icon to connect with GPRS module in the receiver.

Note: you need to input other COM port figure if the system did not distribute COM7 as the specified port.
22. When it’s well connected, you will read “Open COM port Successful!”
23. Input SatRef parameters in the corresponding boxes:

- **Link Mode**: GPRS
- **Work Mode**: VRS_NTRIP
- **IP**: 202.153.107.249
- **Port**: 2101
- **Mount point**: FKP (or other mount point)
- **User**: 
- **Password**: 

![Illustration of South GPRS Module Set interface](image)
**APNSERV**----APN setting. For SIM cards from different mobile communication providers, different inputs shall be applied to the corresponding ones:

- **China Mobile:** cmnet (Sunday: sgprs)
- **PCCW:** pccwdata (New World: internet 3: web-g-three.com.hk)
- **Peoples:** peoples.net
- **Smartone:** smartone-vodafone
- **CSL:** hkcsl

After all settings, press “Set” icon to upload the settings to GPRS module. Then you will read “Set All Parameter Completed!”
24. Quit “SOUTH Set” and run “SOUTH Test”. Or you can also find it in “My Device -> Flash Disk”. After it’s activated once, a shortcut will be generated on desktop.
25. Select “Other” in the first drop-down menu and input “7” in the following blank. Then press “Open” icon to connect with GPRS module in the receiver. When it’s well connected, you will read “Open COM Port Successful!”
26. Select "**SOUTH,OPEN**" from "Send" drop-down menu, and press "Send" icon to send the command to GPRS module. Then the dialing starts processing.
27. When you find the following info shown in the controller, the GPRS module has already connected to SatRef.

“OK CONNECT ICY 200 OK”
28. Some unreadable codes will come up in the “Received Data” box later. That’s differential data.
29. Quit the “SOUTH Test”, and run “EStar2.0” survey program.
30. Select “Set” from the main menu, then go to “COM Port Set”.

Note: you need to input other COM port figure if the system did not distribute COM7 as the specified port.
32. Select “Job” from the main menu, then “New Job” to create a new job file.
33. Input a **Job Name** in the blank.
34. Input **Ellipsoid** parameters.
35. Input **Projection** parameters, and press **Next** icon to go to next page.
36. Press “Next” icon to skip the settings in this page.
37. Input **Seven Parameters** (from WGS-84 to HK-80).
38. Select “Set” from the main menu, and go to “Other Set”, then “Message Type”.

ILLUSTRATION

![Illustration of the software interface with highlighted options: Set, Other Set, Message Type]
39. Select the correct **Message Type**. RTCA, RTCM (including 2.1, 2.3), CMR, RTCM3 are optional. Press “**OK**” to end all settings.
40. Rover is now connected to GRPS and working.

Wait until the “Status” shows “Fixed” (to achieve accuracy of centimeter level) before your survey job.
Note: when it shows “Float”, the HRMS and VRMS values are too high, which is not good for the accuracy.
41. Press the key “A” on the controller to measure a point and press “ENTER” to save the data.

Repeat the above for other points.
42. Settings for SOUTH Set and SOUTH Test are required once only. When you start the work for a second time, just power on the receiver to connect with controller, run EStar2.0 and it will connect to SatRef automatically.
THE END!