

SOUTH S1 external UHF radio

Technician Manual

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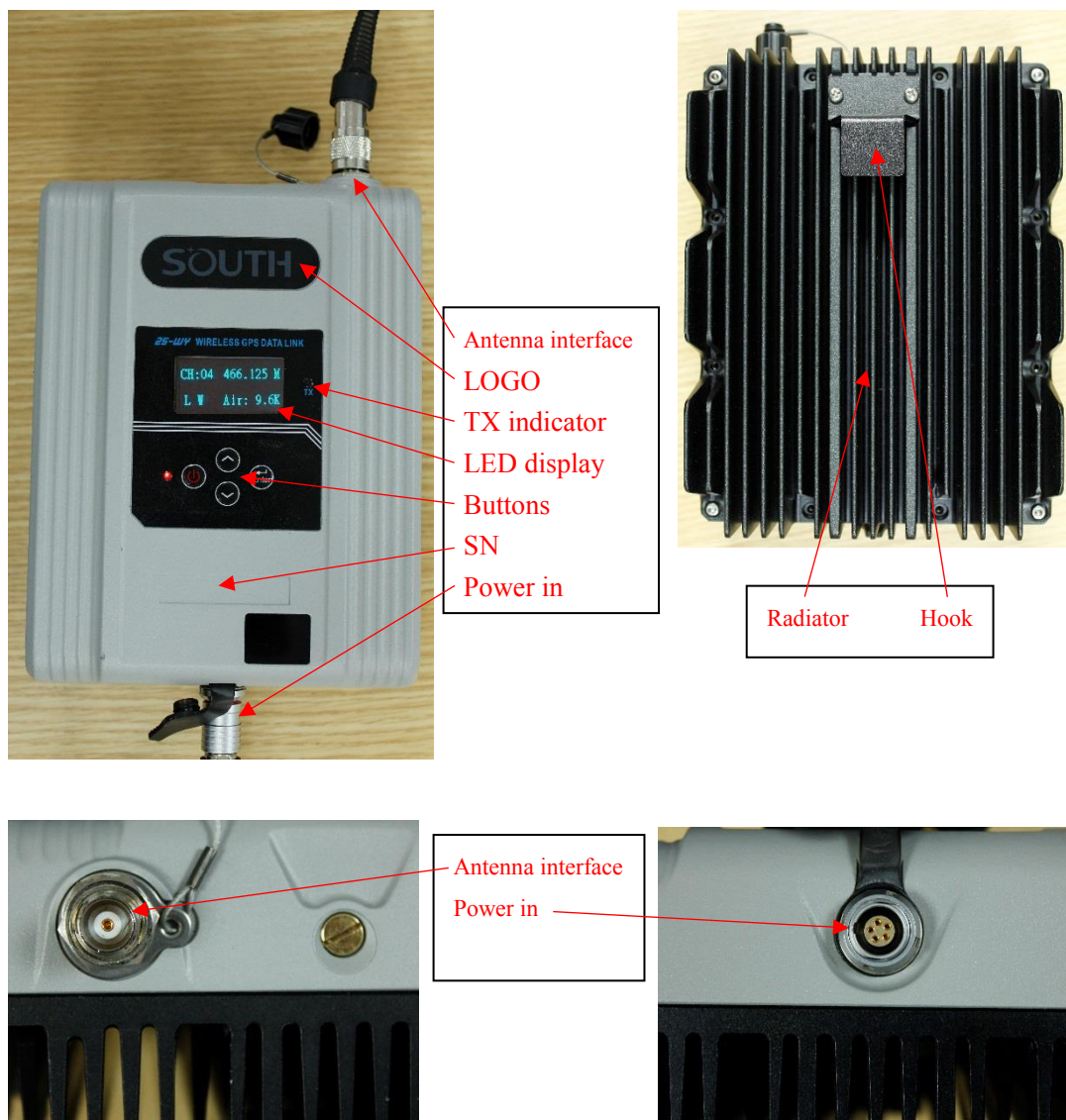
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1 Introduction

- Supports SOUTH/Trimble protocol, 410~470MHz, compatible with S82, S82 and Galaxy series(G1, G1plus, G6).
- Air baud rate 9600/19200bps, GMSK modulation, baud rate 9600/19200/38400bps.
- LED display to show radio information, you can change radio frequency and protocol via the radio buttons directly. You can also configure the radio via an Android app.

2 Hardware



3 Basic operation

3.1 Buttons



-  Power button: Press the Power button for 3 seconds to power on the radio, press the power button 1 second to turn off the radio.
- Power indicator: the indicator will on after turning on the radio.
- TX indicator: the indicator will blink when the radio is transmitting.
-  Up: press to left/up.
-  Down: press to right/down.
-  Enter: press to enter/confirm.

3.2 Display



Low Power alert: the display will show “POWER LOW” if the power voltage is less than 10V.

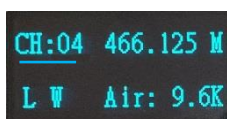


Sleep mode: if no operation on the radio buttons for 10 minutes, the display will shut down to save power, the power indicator light will still on, TX indicator light will continue blink.

3.3 Operation

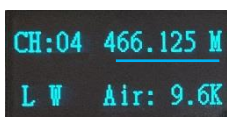
Press   to select the parameter you want to modify, press  to enter this parameter setting, press   to modify it, press  to confirm and exit the setting.

3.3.1 Channel (CH)



Press   to CH setting, press  to start radio channel setting, press   to modify it, press  to confirm and exit the setting.

3.3.2 Frequency



Press   to frequency setting, press  to start radio frequency setting, press  to move the cursor, press  to modify the frequency, press  to confirm and exit the setting.

(Frequency range: 410MHz ~ 450MHz, or 450MHz ~ 470MHz.

If one of the channels frequency is in 410MHz ~ 450MHz, the other channels frequency will be in 410MHz ~ 450MHz too. Otherwise if one of the channels frequency is in 450MHz ~ 470MHz, the other channels frequency will be in 450MHz ~ 470MHz too.

If one of the channels frequency changes from 450MHz ~ 470MHz to 410MHz ~ 450MHz, the other channels frequency will automatically reduce 40MHz. Otherwise if one of the channels frequency changes from 410MHz ~ 450MHz to 450MHz ~ 470MHz, the other channels frequency will automatically pluse 40MHz.

see below example:

Example 1	CH1	CH2	CH3	CH4	CH5	CH6
Previous frequency	463.125	464.125	465.125	466.125	463.625	464.625
new frequency	444	424.125	425.125	426.125	423.625	424.625
Example 2	CH1	CH2	CH3	CH4	CH5	CH6
Previous frequency	411.05	412.05	413.05	414.05	415.05	416.05
new frequency	463.125	452.05	453.05	454.05	455.05	456.05

)

3.3.3 Power mode



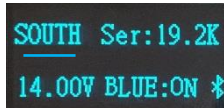
Press   to Power mode setting, press  to start power setting, press   to choose L (10W) or H (25W), press  to confirm and exit the setting.

3.3.4 Air (Air baudrate)



Press   to Air baudrate setting, press  to start Air baudrate setting, press   to choose Air baudrate 9.6/19.2/38.4KHz, press  to confirm and exit the setting.

3.3.5 Protocol



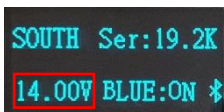
Press   to protocol setting, press  to start the setting, press   to choose protocol SOUTH / Trimble, press  to confirm and exit the setting.

3.3.6 Serial port baudrate



Press   to serial port baudrate setting, press  to start the setting, press   to choose serial port baudrate 9.6/19.2/38.4KHz, press  to confirm and exit the setting.

3.3.7 Power voltage



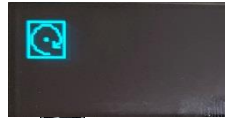
Here it shows the power voltage.

3.3.8 Bluetooth



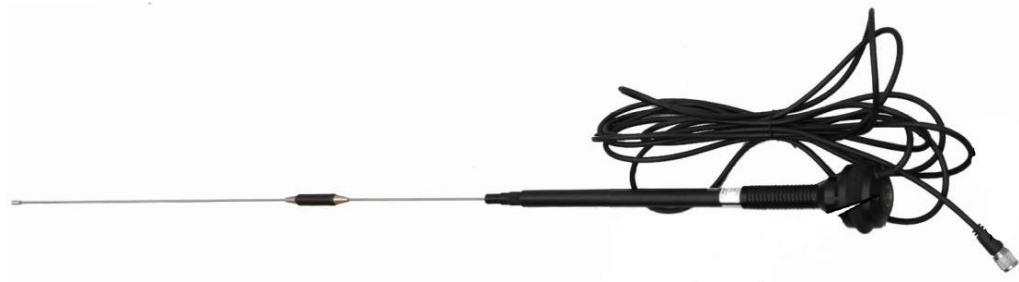
Press   to Bluetooth setting, press  to start the setting, press   to turn on/off Bluetooth, press  to confirm and exit the setting.

3.3.9 reset



Press   to reset setting, press  to confirm reset.

4 Accessories



- UHF TX antenna:



- Cable line

5 Specification

UHF	protocol	SOUTH/TRIMBLE
	Power	10W, 25W
	Frequency	410MHz~470MHz
	Interval	12.5KHz/25KHz
	Rx sensitivity	$\leq 0.25\mu V(12dB SINAD)$
	Air baud rate	9600/19200/38400
	Port baud rate	9600/19200/38400
	Channels	16
Interface	Display	1.54 inch LCD
	Buttons	4 buttons
	Indicator	2 indicator light
Communication	Bluetooth 4.0	
	5-pin LEMO external power port +RS232	
	TNC connector	
Physical	Operation Temp	-40°C~80°C
	Storage Temp	-40°C~85°C
	Waterproof/Dustproof	IP67
	Shockproof	1m
	Size	165*135mm
	Weight	2.3KG