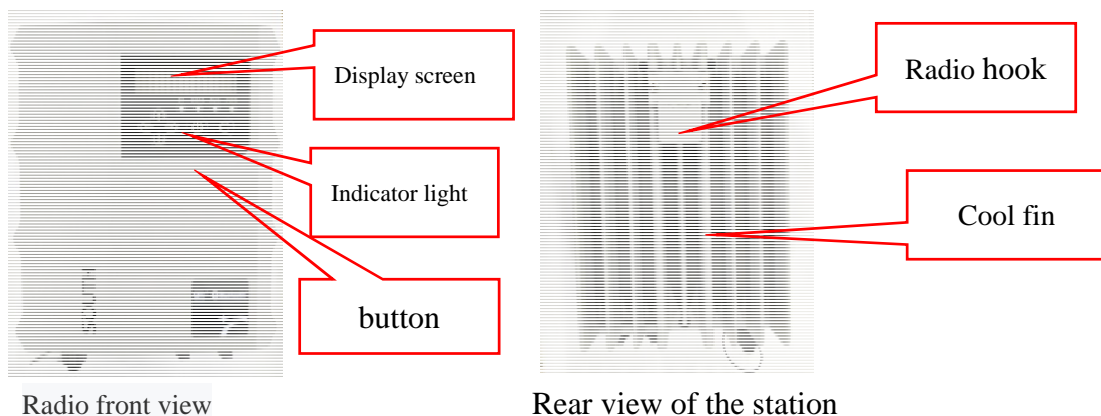# SOUTH 南方卫星导航
SOUTHERN SATELLITE NAVIGATION
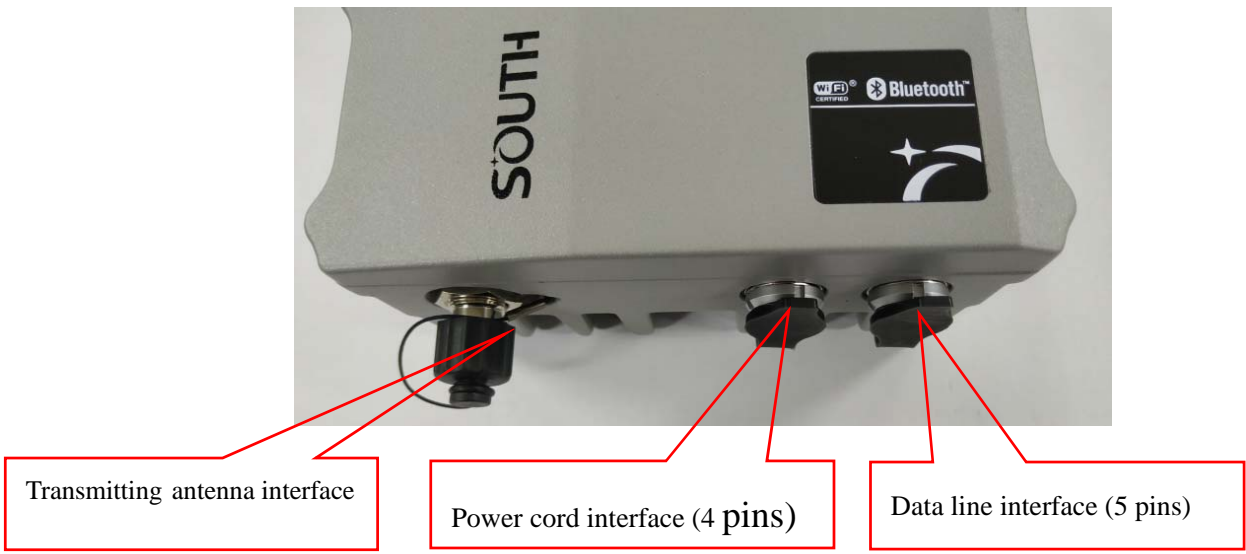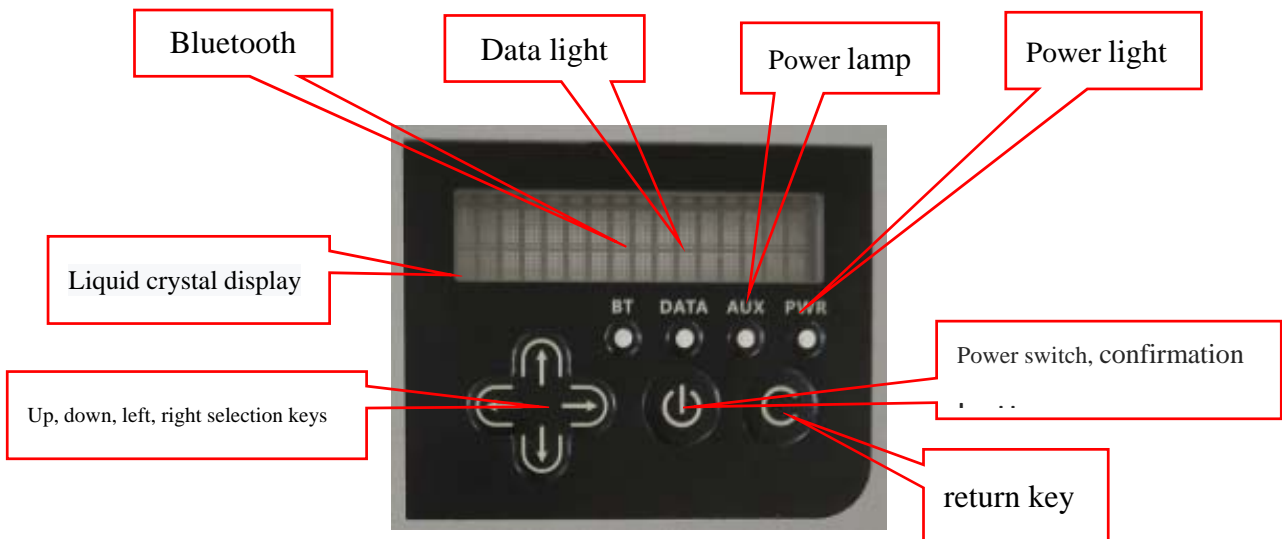
The instruction manual Of S6 external radio

Chapter1.Product introduction

S6 radio is a new intelligent external radio station newly developed by Southern Satellite Navigation. It has the advantages of superior performance, comprehensive functions and easy operation. Especially on the issue of serial frequency of the radio, the S6 radio has built in up to 10 radio protocols and 120 radio channels. Thoroughly solve the unnecessary troubles brought about by the work for the customer. In the characteristics of the wireless use function, the radio and the host can wirelessly transmit data and wirelessly control the radio. The radio station has added a background webpage function, and the operation is simpler and more user-friendly.

Chapter2.Product appearance and accessories

1. The introduction of product appearance

Display screen

Indicator light

button

Radio hook

Cool fin

Radio front view

Rear view of the station

Bluetooth

Data light

Power lamp

Power light

Liquid crystal display

BT DATA AUX PWR

Power switch, confirmation

Up, down, left, right selection keys

return key

Transmitting antenna interface

Power cord interface (4 pins)

Data line interface (5 pins)

SOUTH

型号：砝光 S6
名称：无线数据链
输入：9-16V 10A
频率：410-470MHz
制造商：广州南方卫星导航仪器有限公司
地址：广州市天河区思成路39号4楼A区、5楼A区、6楼A区
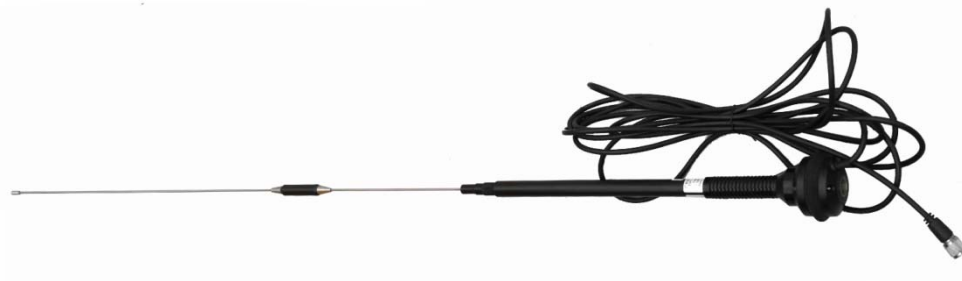
SD31950F1000055

Product nameplate

2. The introduction of Radio accessories：

Radio power cord (4-pin interface)   Radio data cable (5-pin interface)

Radio transmitting antenna

Chapter3. Radio display interface and function introduction

The first display interface: satellite receiver system initialization information interface.

The second display interface: the radio quick setting interface. The above listed radio channel information, the radio channel can be adjusted by pressing the direction selection button and the down button. The following listed radio power information, the radio power can be adjusted by left and right key. Press the enter key to switch to the next screen.

The third display interface: interface of adjusting the radio channel

The fourth display interface: the above listed adjusts the radio power. L represents low power. M represents medium power. H repenesents high power. The following is the tuner protocol interface. (This interface press the confirm button to enter the page turning interface)
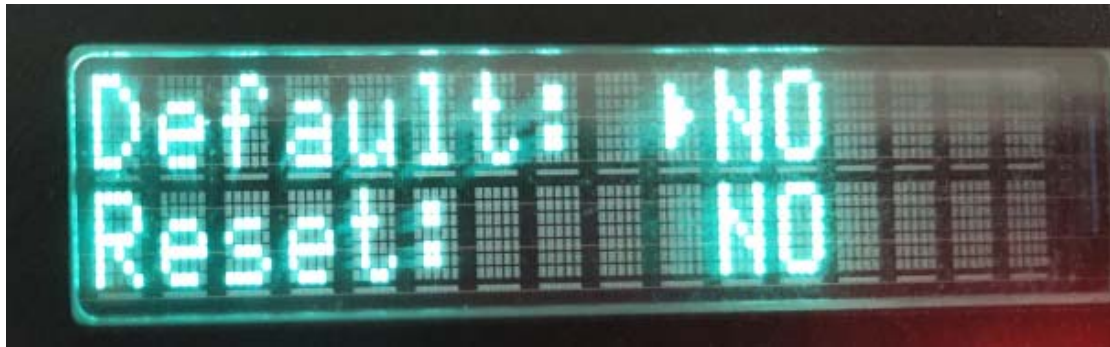

The fifth display interface: the above listed is Bluetooth switch . The following is Bluetooth mode: Slave mode and Master mode.
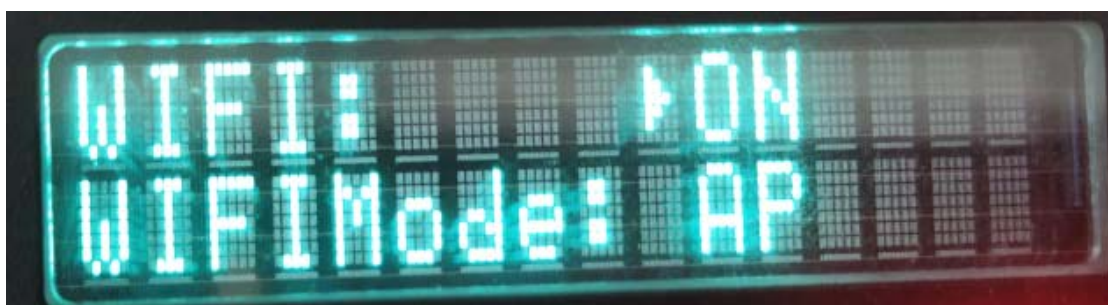
The sixth display interface: the above listed is WIFI switch. The following is WIFI mode ：AP hotspot and CLI client mode interface

The seventh display interface: the above listed is the resets radio factory setting. The following is restarted key. (Please press the enter key after selecting the relevant information to modify the station information)

The eighth display interface: radio body number interface

The 9th display interface: the radio background webpage login IP interface

The 10th display interface: the above listed is host temperature and the following is radio amplifier temperature interface

The 11th display interface: radio firmware version interface

The 12th display interface: Whether to perform the close radio interface (press and hold the power off button for 3 seconds to put this meeting to display this message, press "Confirm" to turn off the radio)

The 13th display interface: the radio interface is being closed.

Chapter 3.The introduction of radio website:

1. Login page

Connect the radio WIFI hotspot, open the web page, enter the radio backstage webpage IP 10.1.1.1 will pop up the login account interface below, enter the account admin password admin to enter the login. (Users are free to choose electronic products to log in)

Radio page as shown below

2 Web page function and usage introduction

2.1 Host status = system information + working status (only displays information and status when no setting function) as shown below.

2.2 Host configuration = host control (settable function) as shown below
Function: 1. Motherboard 2. Radio 3. Network 4. WiFi 5. Bluetooth 6. Sensor 7. EEPROM Start self-test can be a single self-test or all self-test, clear satellite ephemeris. Restore factory settings. Restart the host. Turn off the host.

2.3 Data transmission = serial port setting (settable function) as shown below
Function: Baud Rate. Parity. Data Stream. Enabled. (LEMO Wired Transmission Settings. BLUETOOTH Wireless Transmission Settings)

2.4 Network Settings = WIFI Settings + Bluetooth Settings + Port Mapping (Settable Functions) as shown below

〉 WIFI设置

启用： ☑

工作模式：　　　◉ AP　　　　○ Client

AP_SSID：　SOUTH_0055

AP_Password：　southgnss.com.cn

AP加密方式：　开放 ▼

AP信道：　1 ▼

DHCP IP范围：　○ 192.168.　　.0/255.255.255.0 (默认)

　　　　　　　○ 172.16.　　.0/255.255.255.0 (默认)

　　　　　　　◉ 10.　1　.　1　.0/255.255.255.0

确定　　　　　　取消

蓝牙设置：

启用： ☑

蓝牙MAC地址： 00:25:CA:39:1F:14

可发现： ☑

PIN码： 0

当前可连接远程设备数：

序号	远程设备	FFCOMM通道	远程设备名称	断开当前连接
1				断开
2				断开

高级设置：

工作模式： ⦿ 从模式　　○ 主模式

名称： [0]　　　　　搜索蓝牙　　[▾]

MAC： [0]

连接状态： 断开

搜索状态： 无动作

操作提示： 切换蓝牙工作模式后，请重启主机！

[确定]　　　　　[取消]

> 端口映射

HTTP端口： [80]

FTP端口： [21]

TELNET端口： [23]

[确定]　　　　　[取消]

2.5 Radio settings = radio parameters + radio frequency (settable function)

电台参数

启用: ☑

空中波特率: 9600

数据波特率: 19200

通道号: 41~60

通道: 59

功率: 中

协议: SOUTH

数据源: 五芯串口

最高温度: 90 ℃

最低温度: - 28 ℃

恢复出厂值设置: [恢复出厂值设置]

[确定]   [取消]

电台频率

通道号: 1~20

通道1频率:	460.125	MHZ	通道11频率:	461.125	MHZ
通道2频率:	464.125	MHZ	通道12频率:	461.625	MHZ
通道3频率:	465.125	MHZ	通道13频率:	462.125	MHZ
通道4频率:	466.125	MHZ	通道14频率:	462.625	MHZ
通道5频率:	463.625	MHZ	通道15频率:	467.125	MHZ
通道6频率:	464.625	MHZ	通道16频率:	467.625	MHZ
通道7频率:	465.625	MHZ	通道17频率:	468.125	MHZ
通道8频率:	466.625	MHZ	通道18频率:	469.125	MHZ
通道9频率:	460.125	MHZ	通道19频率:	468.625	MHZ
通道10频率:	460.625	MHZ	通道20频率:	469.625	MHZ

[确定]   [取消]   [恢复默认值]

> 电台频率

通道号： 21~40 ▼

通道21频率：	450.125	MHZ	通道31频率： 450.625	MHZ
通道22频率：	451.125	MHZ	通道32频率： 451.625	MHZ
通道23频率：	452.125	MHZ	通道33频率： 452.625	MHZ
通道24频率：	453.125	MHZ	通道34频率： 453.625	MHZ
通道25频率：	454.125	MHZ	通道35频率： 454.625	MHZ
通道26频率：	455.125	MHZ	通道36频率： 455.625	MHZ
通道27频率：	456.125	MHZ	通道37频率： 456.625	MHZ
通道28频率：	457.125	MHZ	通道38频率： 457.625	MHZ
通道29频率：	458.125	MHZ	通道39频率： 458.625	MHZ
通道30频率：	459.125	MHZ	通道40频率： 459.625	MHZ

确定   取消   恢复默认值

电台频率

通道号： 41~60 ▾

通道41频率： 440.125 MHZ   通道51频率： 440.625 MHZ

通道42频率： 441.125 MHZ   通道52频率： 441.625 MHZ

通道43频率： 442.125 MHZ   通道53频率： 442.625 MHZ

通道44频率： 443.125 MHZ   通道54频率： 443.625 MHZ

通道45频率： 444.125 MHZ   通道55频率： 444.625 MHZ

通道46频率： 445.125 MHZ   通道56频率： 445.625 MHZ

通道47频率： 446.125 MHZ   通道57频率： 446.625 MHZ

通道48频率： 447.125 MHZ   通道58频率： 447.625 MHZ

通道49频率： 448.125 MHZ   通道59频率： 448.625 MHZ

通道50频率： 449.125 MHZ   通道60频率： 449.625 MHZ

确定   取消   恢复默认值

电台频率

通道号： 61~80 ▾

通道61频率： 430.125 MHZ   通道71频率： 430.625 MHZ

通道62频率： 431.125 MHZ   通道72频率： 431.625 MHZ

通道63频率： 432.125 MHZ   通道73频率： 432.625 MHZ

通道64频率： 433.125 MHZ   通道74频率： 433.625 MHZ

通道65频率： 434.125 MHZ   通道75频率： 434.625 MHZ

通道66频率： 435.125 MHZ   通道76频率： 435.625 MHZ

通道67频率： 436.125 MHZ   通道77频率： 436.625 MHZ

通道68频率： 437.125 MHZ   通道78频率： 437.625 MHZ

通道69频率： 438.125 MHZ   通道79频率： 438.625 MHZ

通道70频率： 439.125 MHZ   通道80频率： 439.625 MHZ

确定   取消   恢复默认值

电台频率

通道号:	81~100 ▼

通道81频率:	420.125	MHZ	通道91频率:	420.625	MHZ
通道82频率:	421.125	MHZ	通道92频率:	421.625	MHZ
通道83频率:	422.125	MHZ	通道93频率:	422.625	MHZ
通道84频率:	423.125	MHZ	通道94频率:	423.625	MHZ
通道85频率:	424.125	MHZ	通道95频率:	424.625	MHZ
通道86频率:	425.125	MHZ	通道96频率:	425.625	MHZ
通道87频率:	426.125	MHZ	通道97频率:	426.625	MHZ
通道88频率:	427.125	MHZ	通道98频率:	427.625	MHZ
通道89频率:	428.125	MHZ	通道99频率:	428.625	MHZ
通道90频率:	429.125	MHZ	通道100频率:	429.625	MHZ

确定　　　　取消　　　　恢复默认值

电台频率

通道号:	101~120 ▼

通道101频率:	410.125	MHZ	通道111频率:	410.625	MHZ
通道102频率:	411.125	MHZ	通道112频率:	411.625	MHZ
通道103频率:	412.125	MHZ	通道113频率:	412.625	MHZ
通道104频率:	413.125	MHZ	通道114频率:	413.625	MHZ
通道105频率:	414.125	MHZ	通道115频率:	414.625	MHZ
通道106频率:	415.125	MHZ	通道116频率:	415.625	MHZ
通道107频率:	416.125	MHZ	通道117频率:	416.625	MHZ
通道108频率:	417.125	MHZ	通道118频率:	417.625	MHZ
通道109频率:	418.125	MHZ	通道119频率:	418.625	MHZ
通道110频率:	419.125	MHZ	通道120频率:	419.625	MHZ

确定　　　　取消　　　　恢复默认值

2.6 Firmware upgrade = firmware upgrade + upgrade module (settable function) as shown below

2.7 User Management = User Management (Settable Functions) as shown below

Chapter4. Radio wireless data transmission and control radio station introduction

The wireless connection of radio and RTK.
The Bluetooth of the handbook is connected to the host to set the base station plug-in mode and starts successfully. The handbook disconnects the Bluetooth connection to the radio wifi and enters the radio page 10.1.1.1 for related operation settings. (account and password are admin)

The steps of Web page seting
1.1 Open Web Page > Radio Settings > Radio Parameters > Data Source (Set to Bluetooth) > OK.
1.2 Data Transmission > Serial Port Settings > BLUETOOTH > Baud Rate (corresponding to RTB Host Serial Port Baud Rate) > Parity > Data Flow > Enable (Select) > OK. (Note: LEMO is the setting when using the data cable)
Serial port settings generally do not need special settings, keep the default (as shown below)

1.3 Network Settings > Bluetooth Settings > Advanced Settings > Main Mode (Select Main Mode) > Search Bluetooth > Please select (Select Base Station RTK Host Bluetooth) > OK. (Please restart the radio after switching the Bluetooth working mode. If the restart is not restarted, the setting will not be successful.)

2. Wireless control of S6 radio:

2.1 Connect the S6 radio wifi with mobile phones, handbooks and other Internet-connected electronic products (make sure the radio wifi hotspot is turned on before connecting)

2.2 Enter the dedicated web page 10.1.1.1 (account admin. password admin), select the radio settings to wirelessly control the S6 radio.

Chapter5. The radio parameters of S6

Radio characteristics	Support agreement	SOUTH 9600/SOUTH 19200/SOUTH+ SOUTHx/TrimTalk 450S/TrimMark II TrimMark III/HUACE Hi-Target/Satel 3AS
	Power	RF output power: 10W, 20W, 30W
	Frequency Range	410MHz - 470MHz
	Bandwidth	25KHz
	baud rate	9600/19200
	Number of channels	120
Use interaction	Boot mode	Button boot
	Operation method	Button / Bluetooth software / WIFI webpage
	Display	VFD vacuum LCD screen
	Button	6 buttons, up and down keys switch, left and right button selection, power button confirmation / switch button, C button return
	Indicator light	4 indicators, BT Bluetooth light / DATA data light AUX power lamp / PWR power lamp
Internal communication	WIFI	802.11b/g/n, Support AP hotspots
	Bluetooth	Bluetooth 3.0
Interface information	Dataline interface	Standard RS232 serial port, LEMO 5 core
	Antenna interface	Standard TNC mouthpiece
	Power interface	Power supply four core LEMO
Physical characteristics	Operating temperature	-20℃-55℃
	storage temperature	-40℃-85℃
	Dustproof and waterproof	IP67
	Drop	withstands 1.2m free drop onto hard surface
	Size	144mm*174mm*65.6mm
	Weight	1.5 KG

System characteristics	Wireless connection of base station	support
	Antenna status monitoring	support
	Real-time temperature monitoring	support
	Power dynamic adjustment	support
Electrical characteristics	power input	DC 9-16V
	Reverse polarity	support
	ESD protection	support

FCC Warning

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The PMR antenna(s) used for this transmitter must be installed and operated operating to provide a separation distance of at least 5m from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

Installer must ensure that 100cm separation distance will be maintained between the device (excluding its handset) and users.

Caution: The user is cautioned that changes or modifications not expressly approved by theparty responsible for compliance could void the user's authority to operate the equipment.