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SJ-8912RT AIS Transponder



Instruction Manual

Important Notes

Use SJ-8912RT AIS Transponder, the purpose is to enhance the safety of maritime navigation. Before using , please pay attention to the following instructions :

- The purpose of AIS is received navigation information to monitoring vessels and avoids vessel collision. AIS is a navigation safety aids, it's not part of the navigation equipment, cannot substitute any navigation equipment.
- When fixing AIS, please stay away from the other navigation equipment from more than one meter to avoid interference with other navigation systems.
- Please set up all accessories before turn on the power, to avoid machine damage by Surge.
- The instruction manual only suitable to SJ-8912RT AIS Transponder. Most of the installation steps by the owner or operator independently, for commissioned installation, please contact the SJA authorized agents, any non-authorized dealer to install the machine caused the damage the Company shall not be liable.

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I 、 Product Illustration

Dear Customer, Thank you for purchasing the *SJ-8912RT AIS Transponder*, please read the instructions and placed in easily accessible place for future reference.

SJ-8912RT AIS Transponder is in line with international standards. Receiving navigation information such as MMSI, ship name, ship type, SOG, COG, latitude and longitude to avoid collision with another vessel, In order be able to receive AIS Class A and Class B ship information, it's great help of harbor monitoring and fish boat navigation safety.

Features :

- ▲ Send and receiving AIS messages.
- ▲ Receiving VHF range of all AIS messages
- ▲ GPS Receiver/ RS232 output
- ▲ Standard NMEA 0183 format
- ▲ Easy to install and use
- ▲ The navigation information received by the following table:

Data type	Content
Static information	MMSI, ship name, call sign, IMO, ship type, ship length and width, positioning device.
Dynamic information	MMSI、Latitude and longitude, ship heading, SOG, COG, positioning accuracy, navigation status, timestamp, rate of turn.

▲ The navigation information send by the following table:

Data type	Content
Static information	MMSI, ship name, call sign, ship type, ship length and width, positioning device.
Dynamic information	MMSI、Latitude and longitude, ship heading, SOG, COG, positioning accuracy, navigation status, timestamp.

1.1 Accessories

Before using *SJ-8912RT AIS Transponder*, checking accessories :

SJ-8912RT AIS Transponder Standard Accessories

■ *SJ-8912RT AIS Transponder* × 1



■ Power line × 1



■ RS232 Cable × 1



■ CD × 1



SJ-8912RT AIS Transponder Choice Accessories

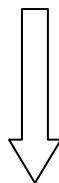
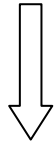
■ GPS Antenna × 1



■ VHF Antenna × 1



1.2 Quick installation guide



1.3 Specifications

The following is the technical specification for the *SJ-8912RT AIS*

Transponder :

Dimensions	174mm × 115mm × 3.4mm
Weight	482 g
Power	DC (7-9V). Average power consumption 4W. Peak current rating 1A.
GPS Receiver (AIS Internal)	IEC 61108-1 compliant
Electrical Interfaces	RS232 38.4k bps
Connectors	VHF Antenna connector (SMA female bulkhead connector) GPS Antenna connector (MINI-XLR male bulkhead connector)
VHF Transceiver	Frequency : 161.975/162.025 MHz
Output Power	33dBm ± 1.5dB
Channel Bandwidth	25kHz
Channel Step	25kHz
Bit Rate	9600 b/s ± 50 ppm (GMSK)
RX Sensitivity	Sensitivity - 107 dBm 25 kHz (message error rate 20%)
Environmental	IEC 60945 Operating Temperature: 0° to 55°C IMO MSC.74 (69) annex 3: ITU-R M.1371-1-1
Indicators	Tx, Silent, Rx, GPS

II 、 Hardware Illustration



1. VHF ANT : VHF connection
2. RS232 OUT : RS232 connect with computer



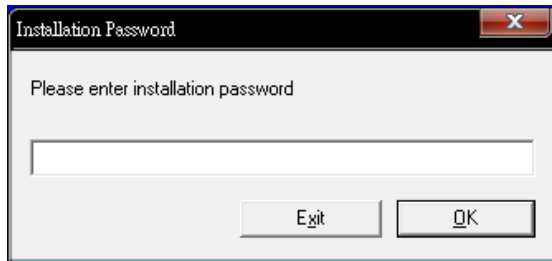
3. GPS : GPS connection
4. Power : Power input DC 9-30V
5. Tx indicator : Light flash, AIS information is sending
6. Silent indicator : Light on, turn off the AIS sending function
7. Rx indicator : Light flash, AIS information receiving
8. GPS indicator : Light on , GPS information receiving
9. Silent button : Turn on or turn off AIS sending function, when press the button for 2-3s,the transmit signal closed, press again to open the transmit function.

III 、 Software Illustration

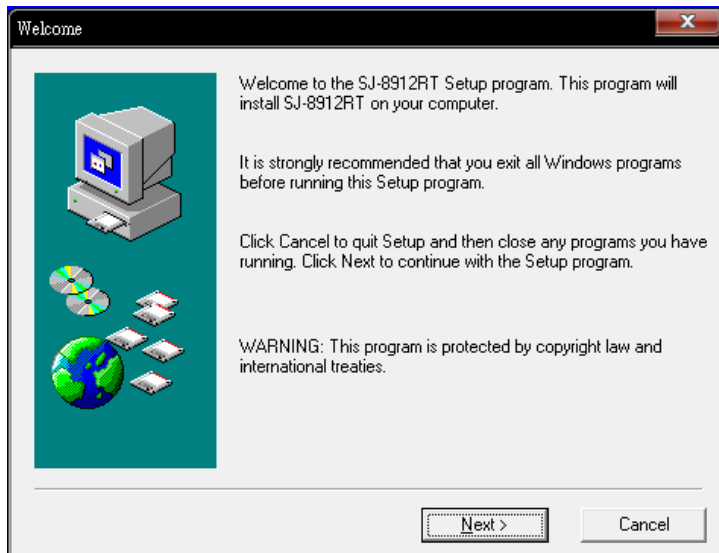
3.1 Install



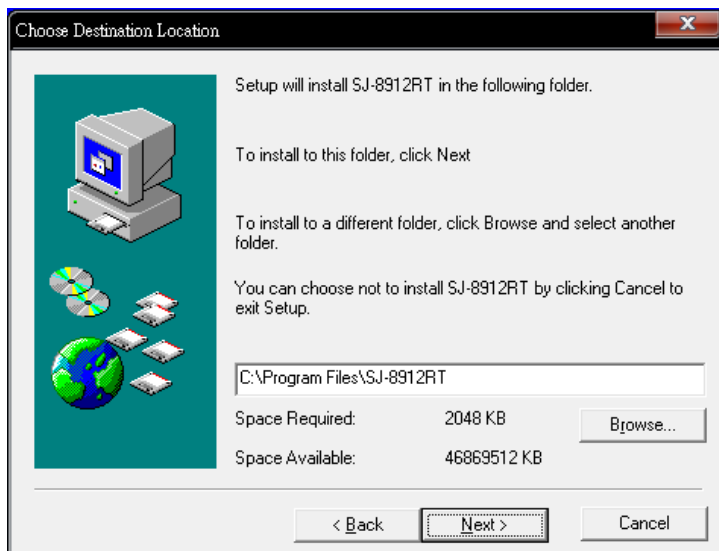
1. Insert CD> Click



2. Installation Password license>

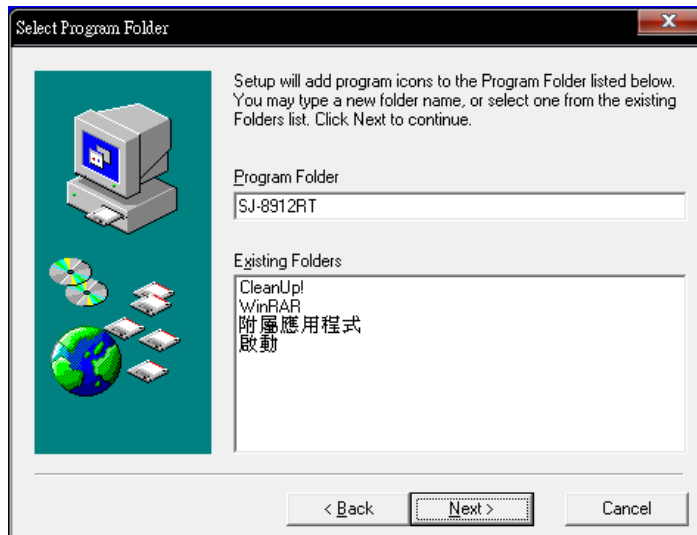


3. Click Next>



(Choose Destination Location)

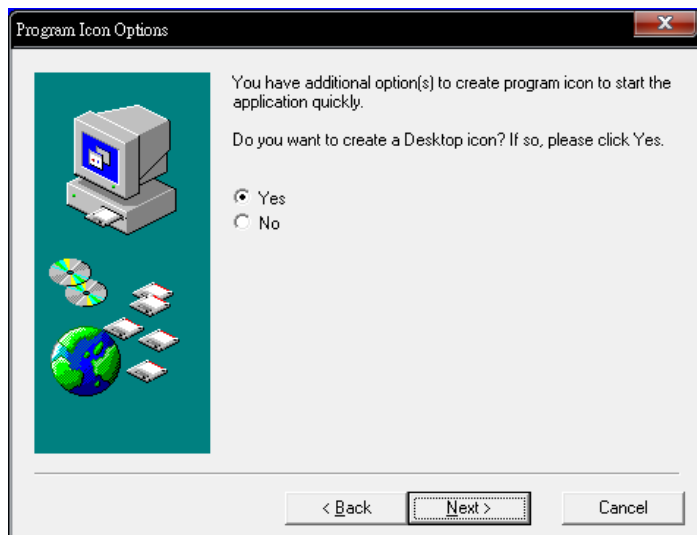
4. Click Next>



(Select Program Folder)

5.

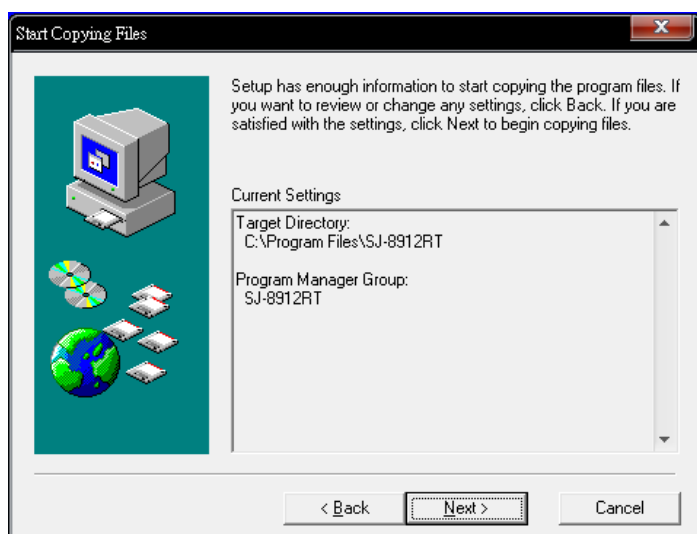
Click Next>



(Choice create a Desktop icon)

6.

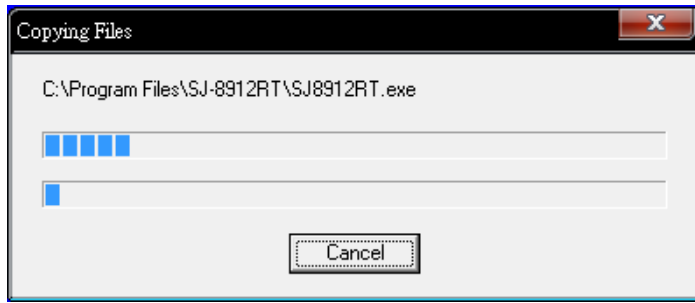
Click Next>



(Start Copying Files)

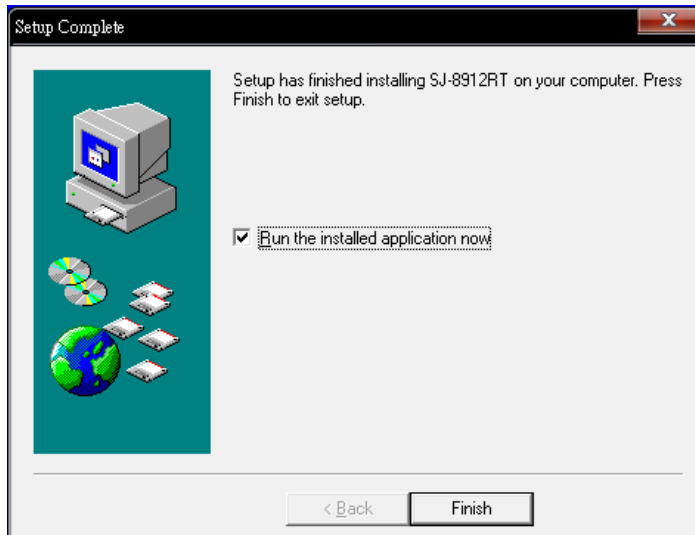
7.

Click Next>



8.

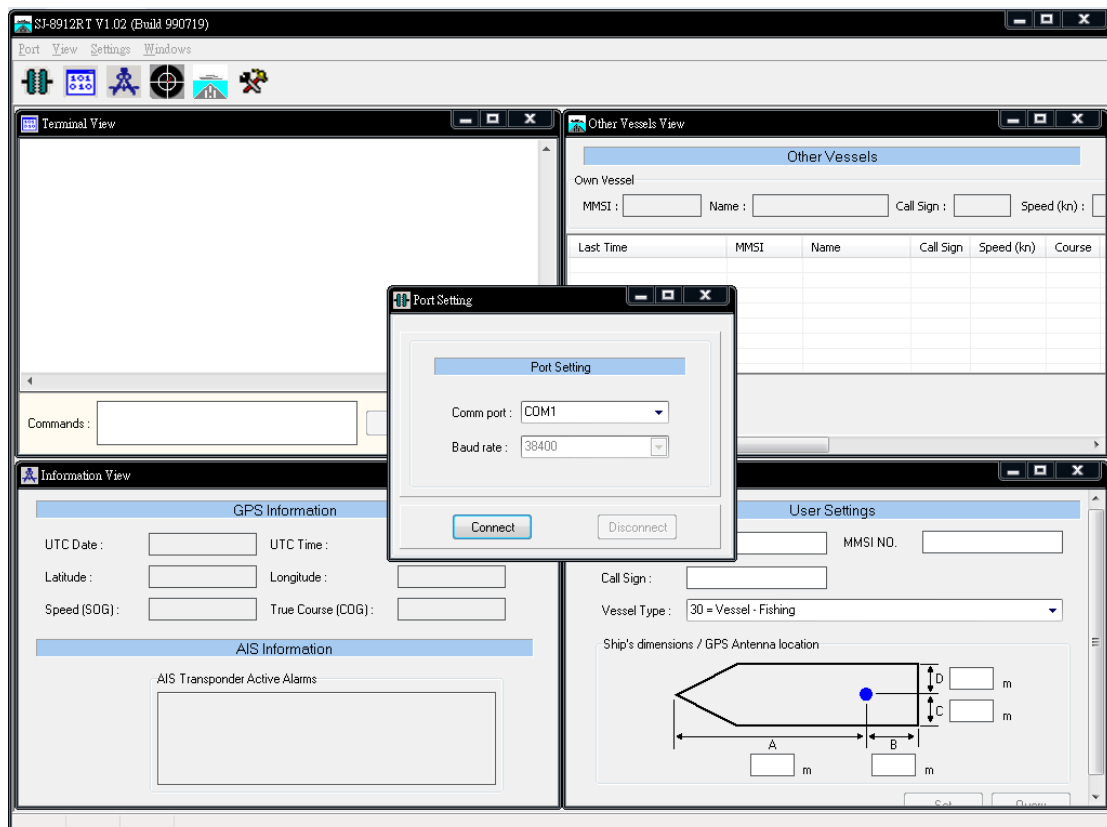
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9.

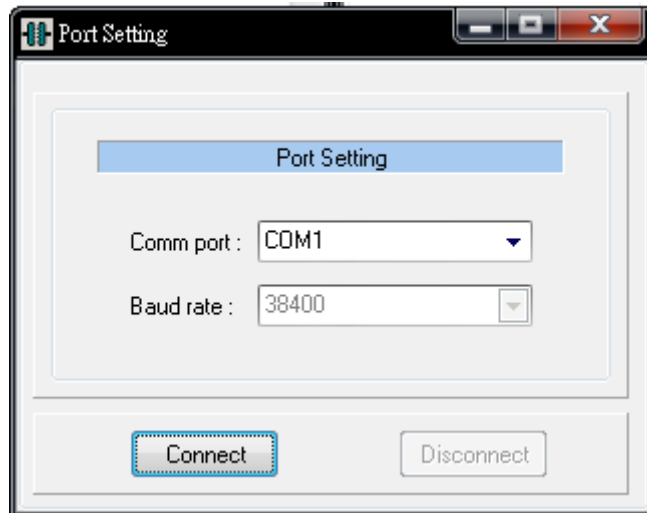
Setup Complete


3.2 Software interface

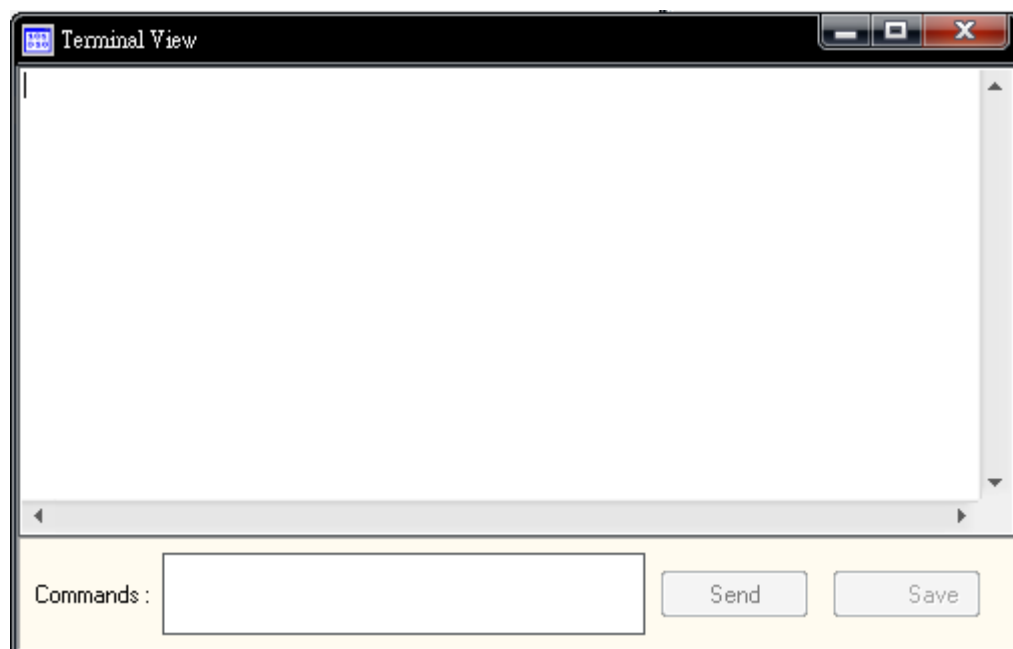



Icon Illustration :

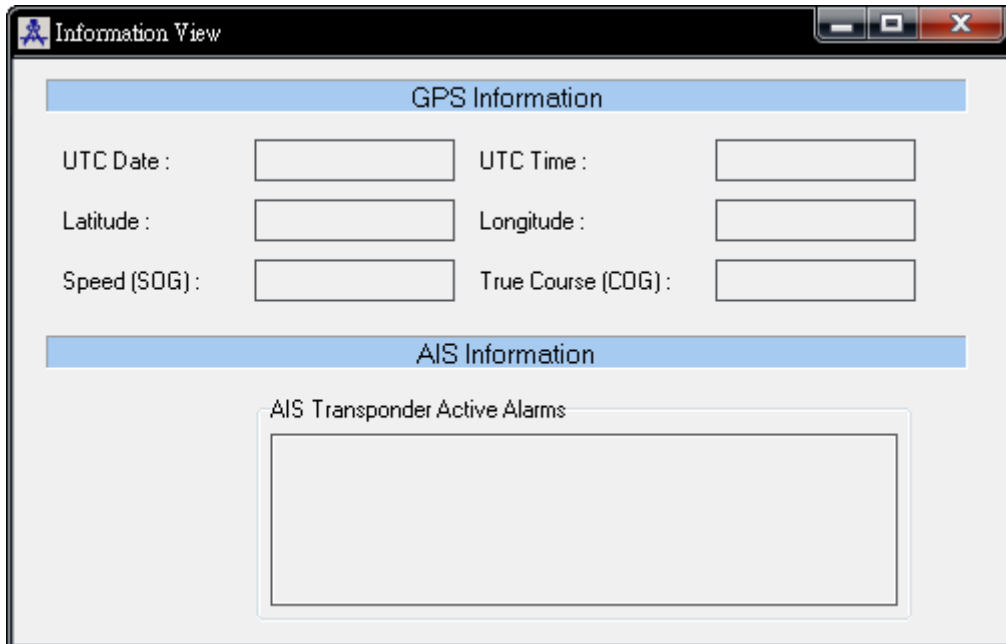
1.  Click the Port Setting and setting the port. *SJ-8912R AIS Receiver* connected to the computer.




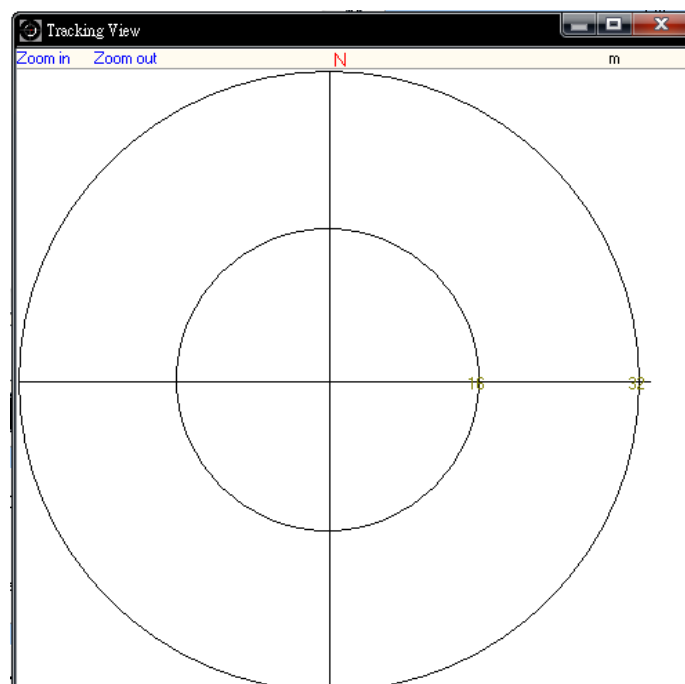
2.  Click the Terminal View, its NMEA 0183 data format output.




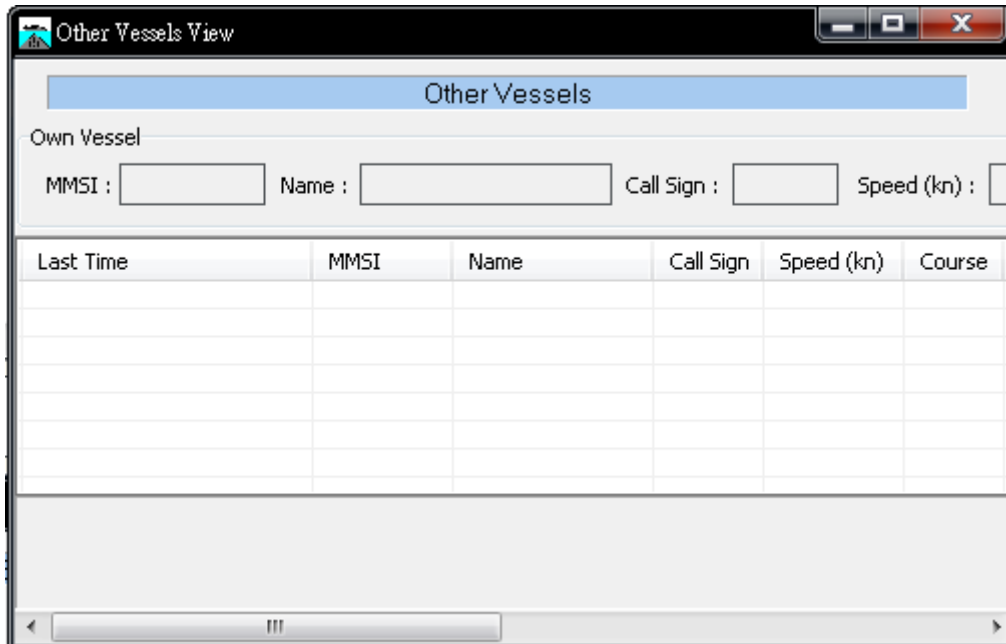
3.  Click the Information View, this function is own ship information (UTC data, time, Lat, Long, SOG, COG).




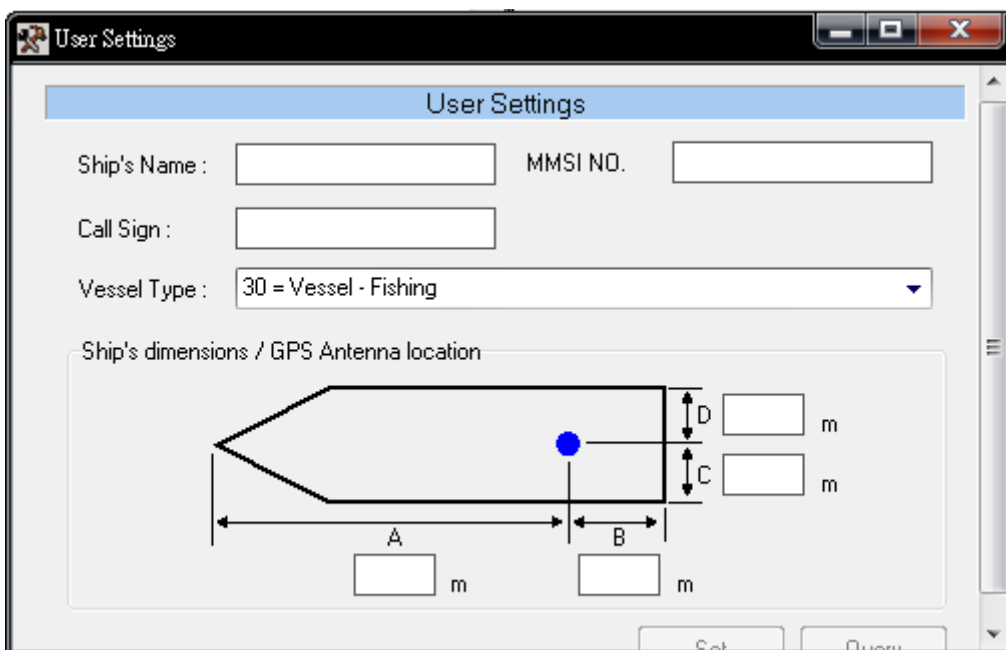
4.  Click the Tracking View, this function is display history track (Zoom in, Zoom out, Range).



5.  Click the Other Vessels View, this function is display all receive ships information.



6.  Click the User Settings ,this function is own ship information set, include :
Ship name, MMSI, Call Sign, vessel type, ship length and width.



IV 、 Fault Resolution

Boot issue	1. Please check power supply, the voltage requirements range from 9-30V DC .
	2. Checking the power cord is to connect correct position.
Can not receiving GPS signal	1. Checking GPS indicator is light, represent GPS get ready.
	2. Checking GPS antenna is to set correct, the plug and cable is not damage.
	3. Checking position of GPS antenna is to set correct.
Can not receiving AIS information	1. VHF antenna aging will cause the reception range is narrow, please adjust position or change another VHF antenna.
	2. Check VHF connector is properly connected.
Can not transmit AIS information	Make sure turn on AIS sending function. Please press the silent button for 2-3s, the transmit function will turn off, and press again the transmit function will turn on.
The computer does not link with the machine	1. Check com port is to link success. Start→ console → tool management system→ computer management→ Device manager→ com port→ confirm a successful connection
	2. In UART configuration interface, make sure the baud rate setting is 38400.

V 、 Warranty & Service

If you have any question of this product. You can help yourself related to the products, through our website, e-mail or phone SJA support engineer.

- ▲ Website : www.sja.com.tw
- ▲ Email : service@sja.com.tw
- ▲ Tel : +886-2-62684-1569
- ▲ Fax : +886-2-62684-1567
- ▲ Address : No. 12, Wulin St., Shulin City, Taipei 238, Taiwan, R.O.C.

(Shulin Industrial Park)

Warranty :

SJ-8912R AIS Receiver warranty period starting from the user purchase date, don't remove the serial label and the company offer **one year** warranty.

Technical maintenance:

Stamp:
