XINUO

NT-7001

NAVTEX Receiver

Quick Reference V1.0

Xinuo Information Technology (Xiamen) Corporation Limited

User Instructions

This manual is subject to change without notice. You can get the updates and the information on how to use or operate this product and others from www.xinuo.com, the website of Xinuo Information Technology (Xiamen) Corporation Limited.

Warning: Please read the notes of this manual carefully to know about safety statements and other important information of products.

Declaration: All words like“XINUO” and “XINUO TECH” mentioned here below refer to as “Xinuo Information Technology (Xiamen) Corporation Limited”.

Note: This is a sophisticated electronic equipment, the installation should avoid strong vibration and external impact, do not put anything on the equipment.

Statement: Names of other products and companies mentioned in this user manual are only used for identification. They possibly belong to registered trademarks or copyrights of other companies. Names and versions of software are just displayed on a display, but not described in this manual in detail.

This product manual is for reference only, the specific operation is subject to the actual. This product manual is applicable to the following equipment: □ **NT-7001**

Notes

Before starting the vessel borne navigation equipment, be sure to read following notes carefully to avoid product failures arising from improper operation:

1.Please don’ t place the navigation warning receiver at random without fastening, in order that the equipment won’ t be severely damaged when it falls off because of tossing or other factors during the navigation.

2.Please don’ t use any other power adapter which is not equipped for this product, or else the navigation warning receiver would fail to work for differences in circuit design, or its performances would be affected, and the machine would be even damaged. The voltage of this machine must be DC 24V, and must not go beyond this range.

3.Please don’ t dismantle the navigation warning receiver, or else you will be unable to enjoy the free warranty services if the navigation warning receiver is dismantled by yourself instead of a maintenance engineer authorized by our company.

4.In operating or cleaning the navigation warning receiver, avoid any liquid or other objects falling off inside the equipment, in order not to cause damages to circuit or a short circuit.

5.Please don’ t place the navigation warning receiver and its accessories in damp areas or have them directly exposed to sun. The machines shall be operated under dry conditions.

6.The power supply shall be reliably grounded to avoid static electricity and lightning strike. If the instrument is not used for the time being, please switch the power supply off.

7.When the navigation warning receiver fails to receive the navigation warning message for a long time,check that the antenna is properly

installed firstly;check the antenna for poor contact and occlusion, or for other interference around the antenna.Before startinghe navigation warning receiver, ensure that the ante tnna cable connector is intact without short circuit or open circuit, and then install the antenna in the correct way.To avoid device damage, do not remove the antenna when the device is powered on.

8.In case of over high external temperature, the navigation warning receiver would crash. In this case, please shut down it for the time being, and restart it when it is restored to the normal temperature.

9.In case of any hardware failure (e.g. burnt out power cord, damaged casing or foreign bodies falling inside the machine), please power the machine off and contact the distributor immediately.

Contents

1 Introduction

1.1 Overview of Navigational Warning System

NAVTEX is the abbreviation of Navigational Telex, which is a worldwide shore station telex broadcasting system. Ships equipped with NAVTEX receivers can receive NAVTEX messages broadcast from coastal stations: not only the station ID, but also navigation warnings, weather warnings, SAR and other warnings related to safety at sea. The NAVTEX system is part of the GMDSS required by the IMO and IHO and is a narrowband printed telegraph reception system for ships.

NAVTEX is designed to receive both English and Chinese language text-based maritime safety information broadcast services on the international frequency of 518 KHz and the dialect frequencies of 490 KHz, or 4209.5 KHz. the messages can be broadly classified into the following three categories.

- navigational warnings, such as ice condition reports.
- Meteorological warnings, such as typhoon and wave height.
- Search and rescue operations, including emergencies.

1.2 Frequency of Use of Navigational Warning Systems

Navigational warnings, meteorological warnings, SAR messages and other message are broadcast at 518 KHz in English,and at 490 KHz or 4209.5 KHz in local language.

1.3 Shore Stations and Broadcast Times

The location of the transmitting shore station is determined by the transmitting power and the local wave propagation conditions. The distance of the transmitting shore station is about 250NM to 400NM.

In fact, it is the IMO coordination committee that determines the operational area, ID and transmission time of the transmitting shore

stations. Since each shore station is broadcast every four hours for no more than 10 minutes, there is no overlap in time.

Table 1
Broadcast schedule of NAVTEX (518 kHz)

Area	NAVTEX Shore Station and Identifier	RANGE (NM)	Broadcast Time (UTC)	Broadcast Time (GMT+08:00)
Chinese Mainland	Sanya XI(M)	250NM	02:00, 06:00, 10:00 14:00, 18:00, 22:00	02:00, 06:00,10:00 14:00, 18:00, 22:00
	Guangzhou XI(N)	250NM	02:10, 06:10, 10:10 14:10, 18:10, 22:10	02:10, 06:10, 10:10 14:10, 18:10, 22:10
	Fuzhou XI(O)	250NM	02:20, 06:20, 10:20 14:20, 18:20, 22:20	02:20, 06:20, 10:20 14:20, 18:20, 22:20
	Shanghai XI(Q)	250NM	02:40, 06:40, 10:40 14:40, 18:40, 22:40	02:40, 06:40, 10:40 14:40, 18:40, 22:40
	Dalian XI(R)	250NM	02:50, 06:50, 10:50 14:50, 18:50, 22:50	02:50, 06:50, 10:50 14:50, 18:50, 22:50
Hong Kong Area	Hong Kong XI(L)	N.I	01:50, 05:50, 09:50 13:50, 17:50, 21:50	01:50, 05:50, 09:50 13:50, 17:50, 21:50
Taiwan	Keelung XI(P)	N.I	02:30, 06:30, 10:30 14:30, 18:30, 22:30	02:30, 06:30, 10:30 14:30, 18:30, 22:30
Korea	Chukpyun XI(V)	200NM	03:30, 07:30, 11:30 15:30, 19:30, 23:30	03:30, 07:30, 11:30 15:30, 19:30, 23:30
	Byunsan XI (W)	200NM	03:40, 07:40, 11:40 15:40, 19:40, 23:40	03:40, 07:40, 11:40 15:40, 19:40, 23:40
Russia	Vladivostok XIII(A)	280NM	00:00, 04:00, 08:00 12:00, 16:00, 20:00	00:00, 04:00, 08:00 12:00, 16:00, 20:00
	Kholmsk XIII(B)	280NM	00:10, 04:10, 08:10 12:10, 16:10, 20:10	00:10, 04:10, 08:10 12:10, 16:10, 20:10

Area	NAVTEX Shore Station and Identifier	RANGE (NM)	Broadcast Time (UTC)	Broadcast Time (GMT+08:00)
Japan	Otaru XI(J)	400NM	01:30, 05:30, 09:30 13:30, 17:30, 21:30	01:30, 05:30, 09:30 13:30, 17:30, 21:30
	Kushiro XI(K)	400NM	01:40, 05:40, 09:40 13:40, 17:40, 21:40	01:40, 05:40, 09:40 13:40, 17:40, 21:40
	Yokohama XI(0)	400NM	01:20, 05:20, 09:20 13:20, 17:20, 21:20	01:20, 05:20, 09:20 13:20, 17:20, 21:20
	Moji XI(H)	400NM	01:10, 05:10, 09:10 13:10, 17:10, 21:10	01:10, 05:10, 09:10 13:10, 17:10, 21:10
	Naha XI(G)	400NM	01:00, 05:00, 09:00 13:00, 17:00, 21:00	01:00, 05:00, 09:00 13:00, 17:00, 21:00
Thailand	Bangkok Radio XI(F)	200NM	00:50, 04:50, 08:20 12:20, 16:20, 20:20	00:50, 04:50, 08:20 12:20, 16:20, 20:20
Indonesia	Jayapura XI(A)	300NM	00:00, 04:00, 08:00 12:00, 16:00, 20:00	00:00, 04:00, 08:00 12:00, 16:00, 20:00
	Ambon X1(B)	300NM	00:10, 04:10, 08:10 12:10, 16:10, 20:10	00:10, 04:10, 08:10 12:10, 16:10, 20:10
	Makassar XI(D)	300NM	00:30, 04:30, 08:30 12:30, 16:30, 20:30	00:30, 04:30, 08:30 12:30, 16:30, 20:30
	Jakarta XI(E)	300NM	00:40, 04:40, 08:40 12:40, 16:40, 20:40	00:40, 04:40, 08:40 12:40, 16:40, 20:40
Malaysia	Penang XI(U)	350NM	03:20, 07:20, 11:20 15:20, 19:20, 23:20	03:20, 07:20, 11:20 15:20, 19:20, 23:20
	Miri XI(T)	350NM	03:10, 07:10, 11:10 15:10, 19:10, 23:10	03:10, 07:10, 11:10 15:10, 19:10, 23:10
	Sandakan XI(S)	350NM	03:00, 07:00, 11:00 15:00, 19:00, 23:00	03:00, 07:00, 11:00 15:00, 19:00, 23:00
Singapore	Singapore XI(C)	400NM	00:20, 04:20, 08:20 12:20, 16:20, 20:20	00:20, 04:20, 08:20 12:20, 16:20, 20:20

Area	NAVTEX Shore Station and Identifier	RANGE (NM)	Broadcast Time (UTC)	Broadcast Time (GMT+08:00)
Philippines	Manila XI(N.I)	320NM	N.I	N.I
	Puerto Princesa XI(N.I)	320NM	N.I	N.I
	Davao XI(N.I)	320NM	N.I	N.I
Guam area	Guam XI(V)	100NM	01:00, 05:00, 09:00 13:00, 17:00, 21:00	01:00, 05:00, 09:00 13:00, 17:00, 21:00
Vietnam	HoChiMinh City X1(X)	400NM	03:50, 07:50, 11:50 15:50, 19:50, 23:50	03:50, 07:50, 11:50 15:50, 19:50, 23:50
	Danang XI(W)	400NM	03:40, 07:40, 11:40 15:40, 19:40, 23:40	03:40, 07:40, 11:40 15:40, 19:40, 23:40

Description: NAVTEX (518 kHz) in the table above. In case of any adjustment, the latest announcement shall prevail.

1.4 Format of Message Content

The broadcast information format of NAVTEX is sa follows:

ZCZC B1B2B3B4 Message NNNN

The information format is explained as follows:

① ZCZC : Start character

② B1(A-Z) : flat-pad ID

③ B2(A-Z) : type of message

④ B3B4(00-99) : message serial number, Use "00" for special cases (Such as the SAR message)

⑤ Message : message content

⑥ NNNN : end mark

(1) Message type descriptions are given as follows:

Message type	Illustration
A※	Navigational Warning
B※	Meteorological Warning
C	Ice Report
D※	Search And Rescue Information / Piracy And Armed Robbery
E	Meteorological Forecast
F	Pilot Message
G	AIS Message
H	LORAN-C Message
I	Reserved Presently Not Used
J	SANTNAV Message
K	Other Electronic Navigational Aid System Message

Message type	Illustration
L※	Navigational Warning (additional)
M to Y	Reserved Presently Not Used
Z	QRU (no message on hand)

(2) B3B4 serial number

Serial number (B3B4) – The serial number of the NAVTEX message is 01 to 99.

This string number is given by NAVTEX coordination station, and the special serial number "00" is only used for important information. For example, rescue, as long as any information is received, it will be unconditionally displayed or printed, except "00", other serial information will be stored and printed after receiving, so as to avoid repetition.

(3) End mark

NNNN : The end of the received message (Indicates the end of message).

2 Product Profile

2.1 Product Characteristics

The Navigation Warning Receiver NT-7001 has the following functional features:

- Built-in English channel (518 KHz) and local channel (490/4209.5KHz).
- The structure design is exquisite and light, easier to install and operate.
- With power fault protection function, automatically cut off the power supply when the input power supply exceeds the DC: 10V-36V range.

- It can display the receiving frequency of the receiving messages.
- With the receiving fault display.
- With the equipment self-inspection function, it can automatically detect the internal status of the equipment.
- With the equipment self-inspection function, it can automatically detect the internal status of the equipment.
- When A, B, D messages are received, the screen will display the message, the LED will blink, and the device will sound an alarm.
- The received transmitter station and messages type can be selected on demand.
- More than 800 received messages can be stored (assuming 1,600 characters for each message).
- Any received information can be saved for 72 hours.
- It can reject or receive any transmitter station ID and an ID of any message type.
- Not store code error rate above 33% or display abnormal reception message.
- It can connect the printer and print the received messages on the paper.

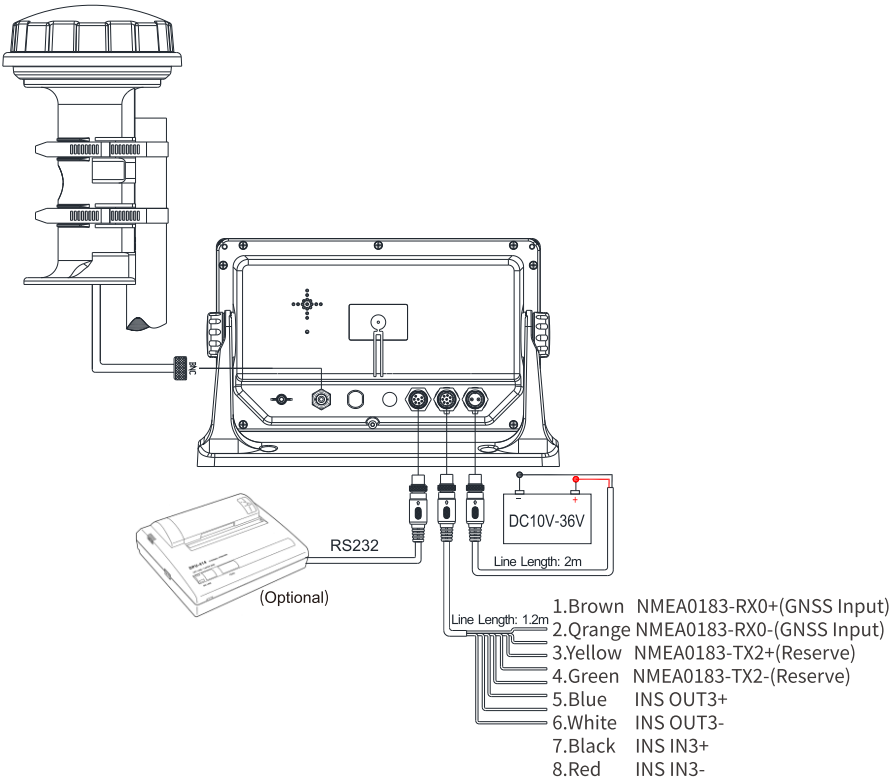
2.2 Accessories List

No	Name of item	Quantity
1	Host (8 inch)	1
2	Antenna	1
3	Antenna Cable (15M)	1
4	Antenna bracket	1
5	Power Cable (2M)	1
6	8 pin data cable (1.2M)	1

No	Name of item	Quantity
7	Printer data cable (1.2M)	1
8	Fittings bag	2
9	Printer (optional)	1
10	User manual	1

2.3 Hardware Components

The navigation warning receiver NT-7001 consists of a display, active antenna and printer.



2.4 Device Interface Description

(1) The 2-core port is the power input port, the power input range is 10~36V;

Terminal position	Description
1	DC+
2	DC-

(2) The 8-core port is the input and output port of the NMEA0183 statement.

① RX0 is an input port for the GNSS location statement;

Terminal position	Description
1	Connect to the integrated navigation system GNSS positioning statement output port (+)
2	Connect to the integrated navigation system GNSS positioning statement output port (-)

② TX2 and TX3 are INS output ports that can output statements contain NRX:

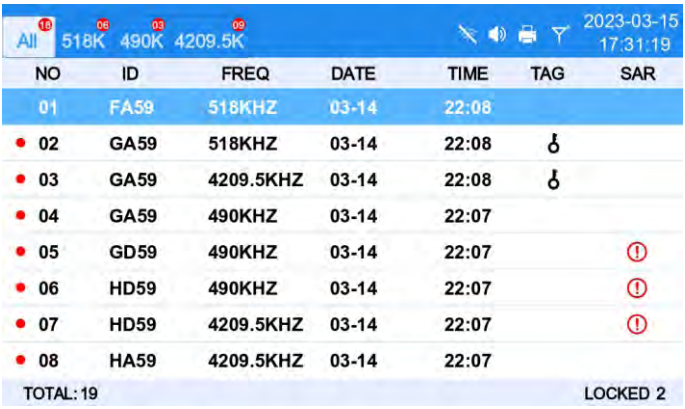
NRX、NRM、ALR、ACN、ACK、ALF、ALC、ARC、HBT

Terminal position	Description
3	Connect to the input port of the integrated navigation system (+)
4	Connect to the input port of the integrated navigation system (-)
5	Connect to the input port of the integrated navigation system (-)
6	Connect to the input port of the integrated navigation system (-)

③ RX3 is the INS output into the port, can be input statements contain NRM, ACK, ACN statements.

Terminal position	Description
7	Connect to the output port of the integrated navigation system (+)
8	Connect to the output port of the integrated navigation system (-)

2.5 Equipment Introduction



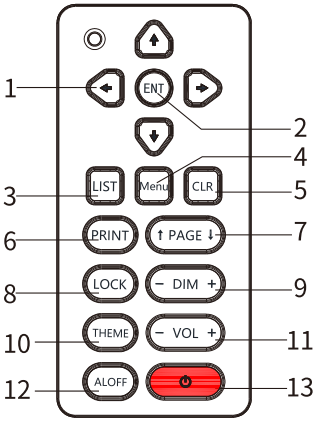
① Display: used to display the received messages;

② LED：LED will flash when the equipment receives search and rescue information, warning information and abnormal alarm, equipment;

③ Function keyboard；

④ SD card slot and USB:You can insert the SD card and U disk for upgrade;

2.6 Introduction of Equipment Keyboard



No	Name of item	Description
1	Direction key	Available for moving the focus.
2	ENT	Used to confirm an operation.
3	LIST	Open the messages list.
4	Menu	Enter the menu.
5	CLR	Used to return to or cancel an operation.
6	PRINT	When the device is located on the list interface, press print, then print the list content. When the device is located on the message content interface, press Print to print the message content. When the device is located on any other page, press print, then no reaction.
7	PAGE	Used for page-turning operations
8	LOCK	When you select a message or are in the message content interface, press the lock button to unlock / unlock the message. Messages are not automatically deleted when they are locked state

No	Name of item	Description
9	DIM	Adjust the screen brightness value
10	THEME	Used for changing the theme style
11	VOL	Adjust volume size
12	AlOFF	Used for performing the alarm operations
13	Power	Device on / off

3 Equipment Installation

3.1 Antenna Installation

3.1.1 Installation Requirements

① No shelter, high position place (will not be blocked by the mast, bridge top, chimney, etc).

② In order to ensure the receiving effect, the antenna should be installed vertically, far away from MF / HF and radar antenna, otherwise it will affect the receiving sensitivity and even damage the equipment.

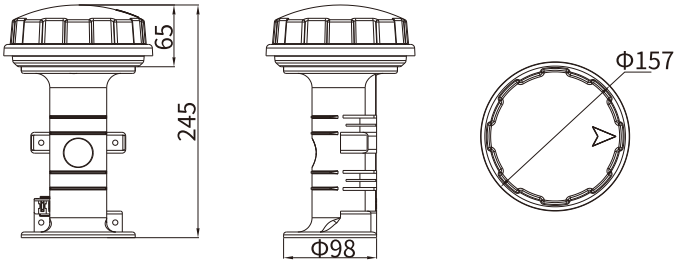
③ If conditions permit, you should find the most suitable place for the antenna installation.

3.1.2 Installation Steps

① Attach the antenna on the pipe with stainless steel tie band (ϕ 40~ ϕ 64) (ϕ 23~ ϕ 43).

② The antenna cable is then connected to the antenna through the pipe.

(units：mm)



3.2 Display Installation

3.2.1 Installation Requirements

① More than 1 meter away from the electric compass;

② The grounding wire is as short as possible;

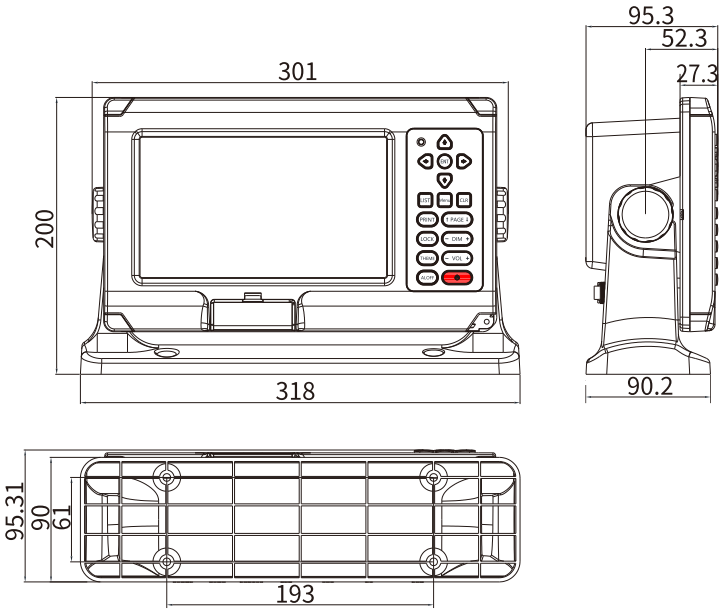
③ Avoid direct sunlight exposure, stay away from the heat source, and avoid strong vibration.

④ Its cable wiring as far as possible from the transmitter, radar cable.

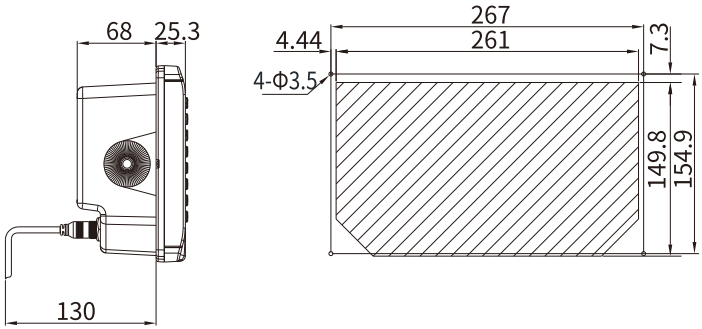
⑤ Keep away from fans, exhaust pipes and vents whenever possible.

3.2.2 Installation Diagram

Countertop Mounting (units: mm)



Flush Mounting (units: mm)



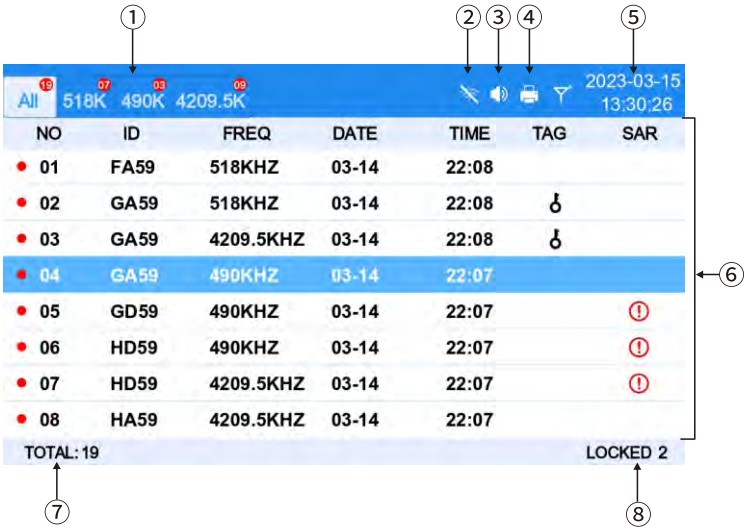
4 Operation Introduction

4.1 Equipment Switch

Start on: Short press the power button to start the device.

Shutdown: Long press the power button to shut down the device.

4.2 Main Interface Introduction



① Message Frequency

Function Declaration:

The frequency of received messages can be quickly screened, contain all and 518KHz, 490KHz, 4209.5KHz respectively. The number of currently unread messages is also displayed on the label.

- ALL:The list displays messages of all frequencies, arranged in the order of time received.
- 518K:The list shows only messages of 518KHz frequency.
- 490K:The list shows only messages of 490KHz frequency.
- 4209.5K:The list shows only messages of 4209.5KHz frequency.

Operation Declaration:

The general default focus is at the first message of the list,Press Cancel, and focus back to the frequency label,press[←]and[→]can change focus bit,and select the frequency that you want to view,Press the [ENT] key to enter the interface of the corresponding frequency.

② **WIFI Icon**

When WIFI is connected, the icon  is displayed;when WIFI is not connected, the icon  is displayed.

③ **Sound Icon**

Function Declaration:

It is used to display the status of the current device key tone, when the key tone is turned on,the icon is shown as  ;When the key tone is turned off,the icon is shown as  .

④ **Printer Icon**

Function Declaration:

It is used to display the connection status of the current printer. When the printer is connected normally,the icon is shown as  . When the printer is not connected, the icon is shown as  .

⑤ **Time Display**

Function Declaration:

Displays the current time, which can be divided into the UTC time and the local time.

⑥ **Message List**

Function Declaration:

The message list is used to display the list of received messages. The field contains NO,ID(B1B2B3B4),frequency,date,time,lock state、Search and rescue information.At the same time, when there is a small red dot in front of the information means that the information has not been viewed.

- **NO**：According to the order of arrangement, The first one is shown as [01], and then go down.
- **ID**:Launch pad ID, information type, information series number.
- **FERQ**:Show the frequency of this information.
- **DATA**:Displays the date when the information was received.
- **TIME**:Displays the time when the information was received.
- **TAG**:Shows whether the information is in a locked state.
- **SAR**:When the received message type is class D, it is the search and rescue information.

Operation Declaration:

- **Quick page**:Press the [↑ PAGE] or [↓ PAGE] button on the list interface to quickly turn the page quickly.
- **Lock messages**:Press the [LOCK] button on the list screen,You can lock in the information,then the lock identity will appears in the list,it ensures that this message is not deleted when the messages number reaches 600 pieces.
- **Unlock message**：In the list interface,select the locked information and press the [LOCK] key to unlock the message,the lock identity on the list disappears,When the messages reaches 600 pieces, the message will be deleted automatically.
- **View message details**：Select the message to view in the list,and press [ENT] button to view the message details.

⑦ **TOTAL**

Function Declaration:

It displays the total amount of information received by the current device.

⑧ **LOCKED**

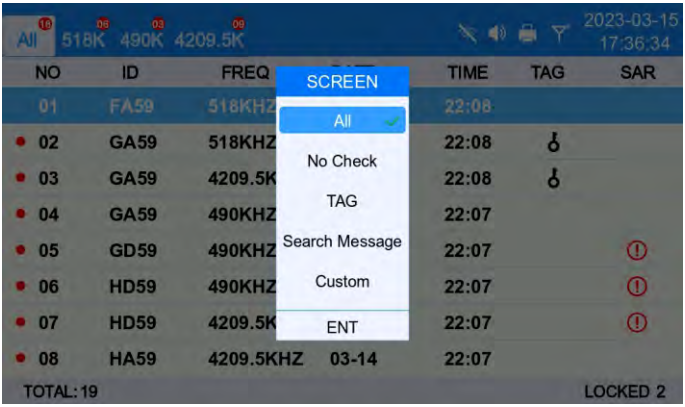
Function Declaration:

It displays the amount of information currently locked.

⑨ Screen

Function Declaration:

Users can quickly screen the information for the different states in the list.Message status is divided into all,no check, locked, search and rescue information, and custom.



Operation Declaration:

Press the [LIST] button to enter the filter message interface.

- **ALL**:When selecting "All", the current list displays all received message.
- **No Check**:When selecting "No Check", the current list displays only information that is not viewed.
- **TAG**:When selecting "TAG", the current list displays only the locked information.
- **Search Message**:When "Search Message" is selected, the current list only displays the Search and rescue information,the other message will not displayed.
- **Custom**:When "Custom" is selected,you can customize the input ID and filter it.

You can also select multiple states of messages displayed in the list.

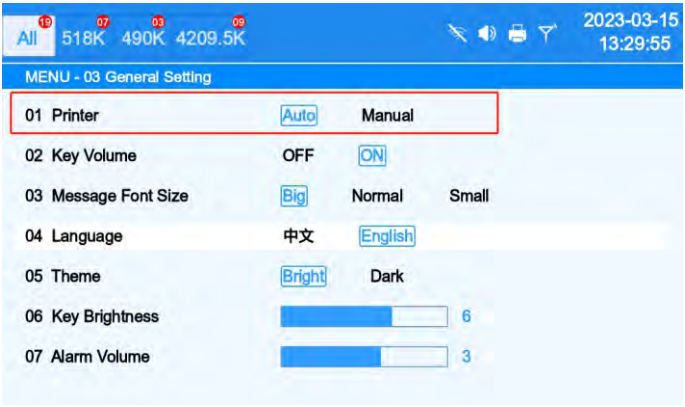
4.3 Printing

This system supports two printing modes: automatic printing and manual printing.

- **Automatic mode**:When the message is received, the message will be automatically printed.
- **Manual print mode**:You need to press [PRINT] button to print the message.

4.3.1 Printing Mode

Press [Menu], enter the menu page, then select [General Setting], and select [Printer] to switch the printer mode.



4.3.2 Printer Baud Rate Setting

Press [MENU] to enter the menu page, then select "Advance Setting",and select "Baud Rate Setting",choose the required port rate on the "Printers" line,4800 BPS, 9600 BPS and 38400 BPS can be selected.

4.3.3 Printer Test

When the printer is connected, the printer can be tested first to check whether it can print normally.Press [MENU] to enter the menu page, then select "Self Test",and select "Printer Test" to enter test interface,press [ENT] to printing test content,and check if the printer can print properly.

4.3.4 Print Content

(1) Automatic Mode

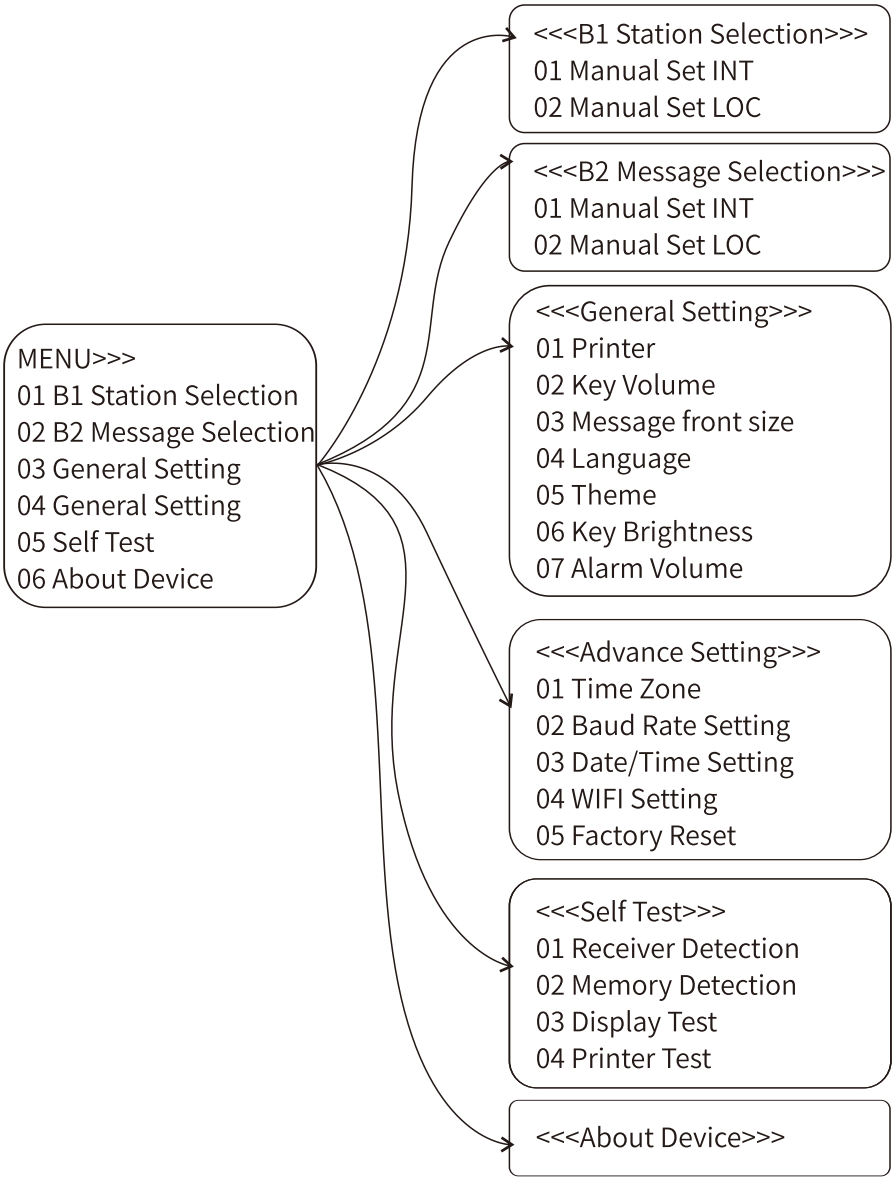
When the print mode is set to Auto mode,select the type of message to be automatically printed in[Station Selection] and [Message Selection],this message will be printed automatically when it is received.

(2) Manual Mode

- When the interface is located in the list interface,press [PRINT] button to print the list contents.
- When the interface is located in the message content, press [PRINT] button to print the message contents.
- When the interface is located on another page, press [PRINT] button will be no reaction.

4.4 Menu Description

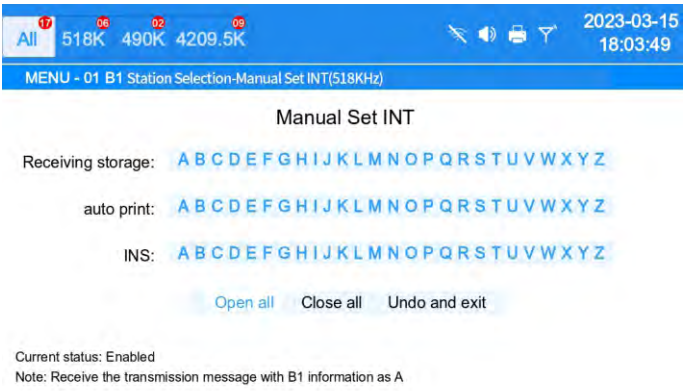
Schematic diagram of the menu structure:

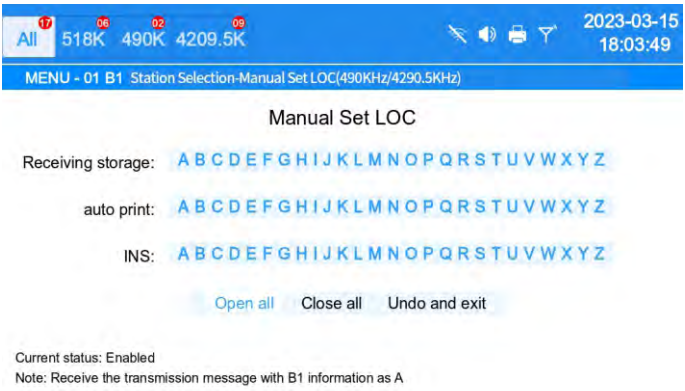


4.4.1 Station Selection

Function Declaration:

You can customize the international and local frequency transmitters that users want to store, print, and output.By default, it supports the storage, printing and output of all transmitters to the integrated navigation system.





Operation Declaration:

(1) Press [MENU] button to enter the "MENU" page, select "Manual Set INT" or "Manual Set LOC" from "B1 Station Selection", enter setting interface, you can customize the international or local

transmitter messages that you want to store, print and output to the integrated navigation system.

(2) Press the direction button to select the focus to be set,and press the [ENT] button to open or close. The font appears light blue when on and gray when off.

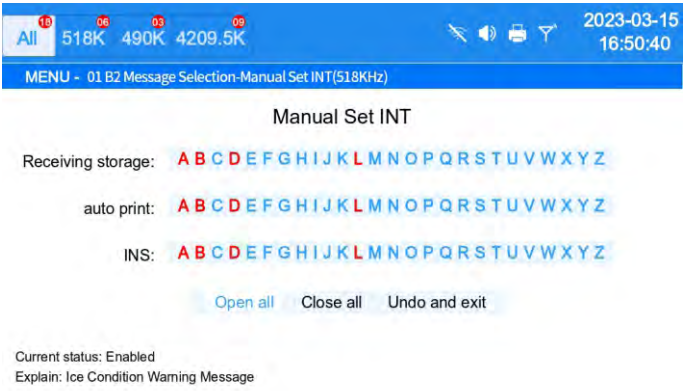
(3) You can select [Open All] or [Close All] to open or close all transmitters.

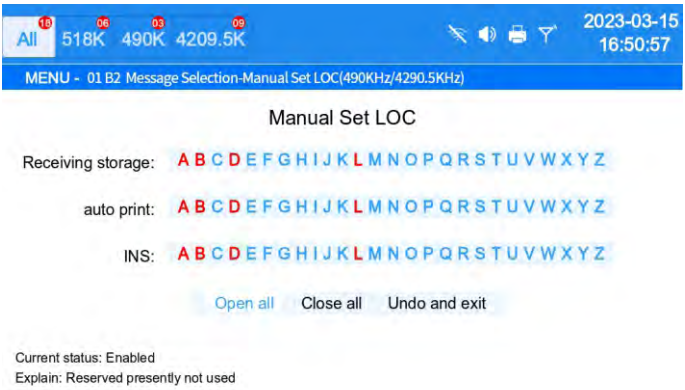
(4) Press the [CLR] button to exit the page and save the Settings. The user can also select [Undo and exit] and press the [ENT] button to exit without saving the settings.

4.4.2 Message Selection

Function Declaration:

You can customize the type of international and local frequency information that the user wants to store, print, and output to the integrated navigation system.By default, it supports storing, printing, and exporting all types of messages to the integrated navigation system.A, B, D, and L are important messages types and cannot be disabled.





Operation Declaration:

(1) Press the [MENU] button to enter the menu page, select"Manual Set INT" or "Manual Set LOC" from "B2 Message Selection", enter setting interface,you can customize the type of international or local frequency messages you want to store, print, and output to the integrated navigation system.

(2) Press the direction button to select the focus to be set,and press the [ENT] button to open or close. The font appears light blue when on and gray when off.

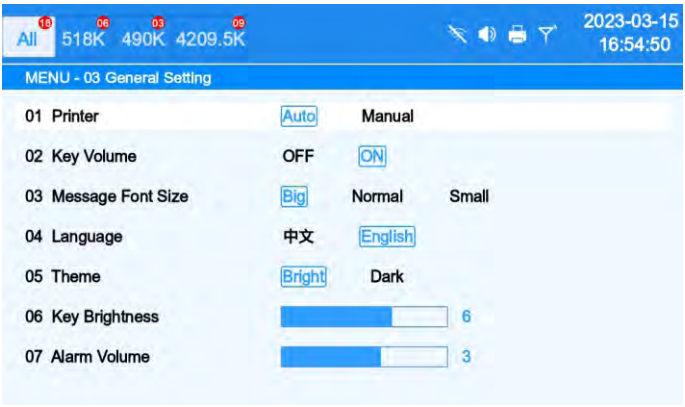
(3) You can select "Open All" or "Close All "to open or close all transmitters.

(4) Press the [CLR] button to exit the page and save the Settings. The user can also select "Undo and exit" and press the [ENT] button to exit without saving the settings.

4.4.3 General Setting

Function Declaration:

It is used to set basic functions of the device.The setting items include printer, key volume, message font size, system language, system theme, key brightness and alarm volume.



Operation Declaration:

Press the [MENU] button to enter the menu page, select "General Setting", move the focus and save the options by the [ENT] button. The settings are described as follows:

(1) Printer

You can set the printing mode of the printer to automatic printing or manual printing.

When the print mode is set to automatic mode and messages are set to automatic print in station selection and message selection, the device will prints messages after receiving them automatically .When the manual mode is set, you can press the [Print] button when the screen is on the list page or message content page to print the content.

(2) Key Volume

When set to open, press the keyboard will have a key sound, and

using the volume key to adjust the key sound size. When set to off, there will be no key sound when pressing the keyboard.

(3) Message front size

Users can set the size of the message font, divided into three specifications, including large, medium and small.

(4) Language

The system supports two languages, Chinese and English.

(5) Theme

The system supports two theme modes: blue and black.

(6) Key Brightness

The system supports adjustment of key brightness.

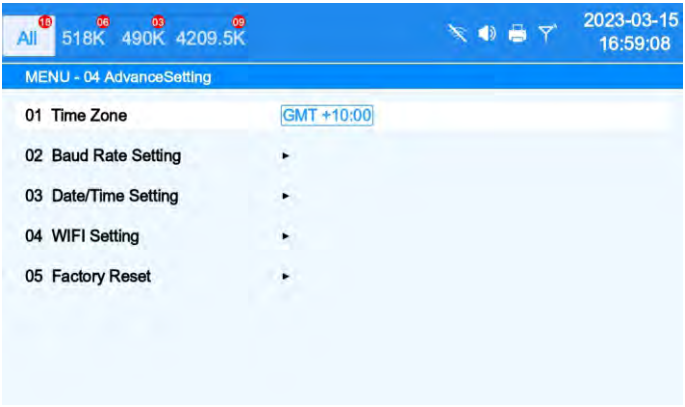
(7) Alarm Volume

The system supports adjustment of alarm volume.

4.4.4 Advance Setting

Function Declaration:

You can set the baud rate, time zone, date and time, WIFI settings and restore factory setting.



Operation Declaration:

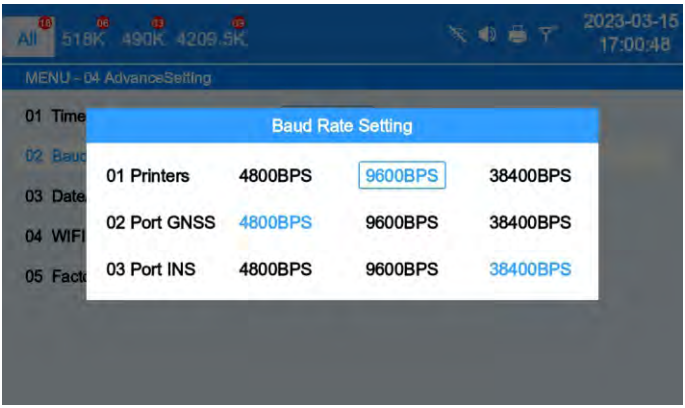
Press the [MENU] button to enter the menu page, select "Advance Setting", move the focus and save the options by the [ENT] button. The settings are described as follows:

(1) Time Zone

The user can set the corresponding time zone based on the navigation area.

(2) Baud Rate Setting

You can set the baud rate of the printer, GNSS port, and INS port.



① Printer baud rate Setting

This device can match the baud rate of 4800, 9600, 38400 printers. The user can set the baud rate to match the printer through this setting item. The factory default baud rate is 9600.

② Baud rate of the GNSS port

The GNSS input port allows you to input the positioning statements of the navigation device to the local device. The GNSS input port supports switching between 4800 baud rate, 9600 baud rate, and 38400 baud rate. The factory default baud rate is 4800.

③ Baud rate of the INS port

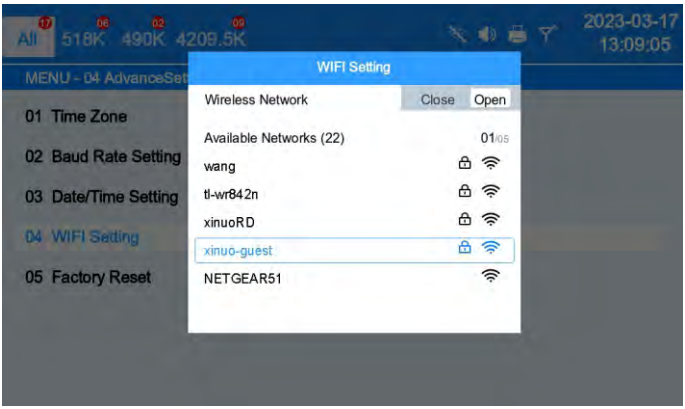
The INS port of the device supports switching of 4800, 9600 and 38400 baud rates, which can match various types of integrated navigation systems on the market. The factory default baud rate is 38400.

(3) Date/Time Setting

You can set and adjust the local time.

(4) WIFI Setting

Enter the WIFI setting item, view the list of available wireless networks nearby, select the wireless network to connect to, and enter the password. After the successful connection, the wireless logo will be displayed on the interface.

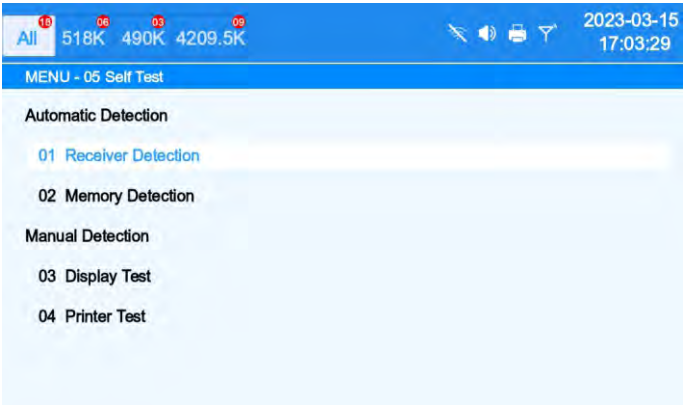


(5) Factory Reset

It can be used to restore factory Settings

4.4.5 Self Test

When the equipment is abnormal, it can carry out system self-detection, including receiver detection, memory detection, display detection, printer detection.



(1) Receiver Detection

Four frequencies can be detected. After pressing the [ENT] button, the receiving status of all frequencies will be detected in turn.

(2) Memory Detection

It used to check whether the storage function is normal. When the user presses the [ENT] button, the memory function will be detected automatically.

(3) Display Test

It is used to test whether the display is normal. When the user presses the [ENT] button, the screen is detected and the screen is checked for damage by observation.

(4) Printer Test

It is used to test whether the printer is working properly.Connecting the printer, set the correct baud rate, and press [ENT] to see if the printer printed anything.

4.4.6 About Device

Displays device information, such as product name, model, software version, and hardware version.

5 Upgrade

Users can use a USB flash disk or SD card to upgrade the software, and also can upgrade online by connecting to a wireless network.

5.1 Local Upgrade

Use the USB flash drive to upgrade the software, it can retain the original data, such as: track, route and other data. You can upgrade the software by following these steps.

(1) Format the USB disk to FAT32 format

(2) Update File Download

You can find the upgrade link on the official website of Xinuo Information Technology (Xiamen) Corporation Limited or the Wechat Public Number (or from the dealer). Click the download link to download update file.

(3) Unzip Files

(4) Upgrade Software

① Turn off the device.

② Insert the USB disk into the USB port.

③ Restart the device,the upgrade process and information will be displayed automatically on the screen, indicating that the device is upgrading the program.

④ After the upgrade is completed, upgrade successfully will be reminded on the screen. Please unplug the USB disk and restart the device again.

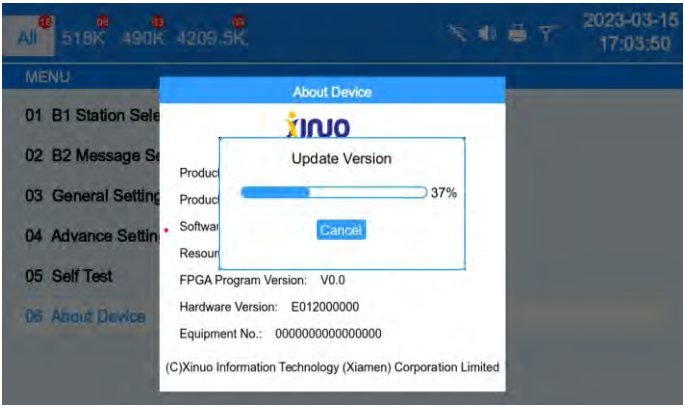
After completing these steps, the device upgrade is successful.

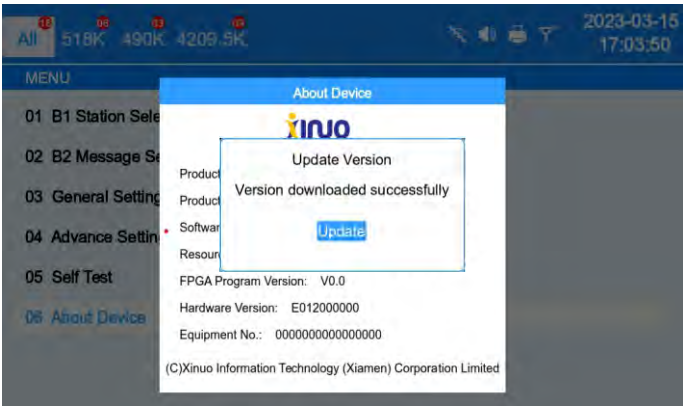
5.2 Online Upgrade

(1) Connect WIFI on the WIFI management page.

(2) Users can view the current version information, including the product name, product model, software version, hardware version, and device number. When the software is updated,

the[·]logo will appear after the software version. In the case of wireless connection,press[ENT]button to download the software installation package. After the download,press[ENT] to automatically restart the device,and the software update is successful.





6 Hardware Configuration

Display Unit	
Display Type	Color TFT LCD
Size	8 inch
Resolution	1024×600pixels
Brightness	500cd/m^2
Power Supply	10-36V
Power Consumption	＜10W
Power Protection	Overvoltage protection, overcurrent protection, Power backconnection protection
Receive Frequency	518KHz(International), 490KHz/4209.6KHz(local)
Modulation Mode	F1B
Sensitivity	2uVe.m.f.(50ohms),＜4% Error rate
Antenna	50 ohms impedance
Memory Capacity	⩾800 Messages
Printer	DPU-414（Optional）
Interface	NMEA(RS422)、INS(RS422)、printer（RS232）、Alarm
Upgrade Mode	USB、SD
Environmental	
Working Temperature	-15°C~+55°C
Storage Temperature	-30°C~+70°C
Host Protection Level	IP65
Antenna Protection Level	IP66

Attachment 1: Care and Maintenance

1.Daily Maintenance

(1) In order to make the equipment more durable, please be careful when using it. It is better to ask a qualified engineer for regular maintenance.

(2) Ensure that the power supply voltage of the device ranges from DC 12 to 24V.

(3) Pay attention to the current consumption under normal reception and standby condition. Please shut down the machine in time for check when abnormal occurs.

(4) Please do not attempt to take apart or repair the equipment except by XINUO engineers or authorized engineers,otherwise, the device may be damaged. If the device is faulty, contact the agent or the manufacturer.

(5) Please use soft fabric to clean device components such as keyboards and monitors.

(6) Check the antenna and tighten the loose fastening screws.

(7) When printing, the printer is out of paper when the indicator light will blink, should be timely replenished paper.

(8) When a fault appears, please contact the agent or the relevant department of the manufacturer and do not attempt to take the device apart. (For details, see the troubleshooting methods) .

2.Troubleshooting

No	Fault Phenomenon	Cause of Failure	Solution
1	Device failure to start.	The power supply is abnormal.	Check the power supply and cables, and replace them if necessary.
		Power key damage.	Replace the power key.
2	The screen does not display.	The LCD cable is loose.	Check the LCD cable.
		Power Fault.	Check the power supply connected to the LCD .
		CPU Fault.	Repair or replace CPU.
		LCD Fault.	Replace LCD.
		The LCD brightness is abnormal.	Adjust brightness.
3	No alarm sound.	Horn Fault.	Repair or replace horn.
		CPU Fault.	Repair or replace CPU.
4	Unreceived	Antenna Fault.	Check whether the antenna is disconnected.
			Check antenna position.
			Check broadcast time.
			Check the active antenna voltage(DC 7-9V) .
		The station or messages type is not set correctly.	Reference to 4.4.1,4.4.2
		Receiver Fault.	Replace the mainboard.
		Main Unit	Check the mainboard

No	Fault Phenomenon	Cause of Failure	Solution
5	Printer non-response.	Power Fault.	Check the supply voltage for the printer.
			Check for cable polarity or for cut-off.
6	The printer is not printed.	Printer Problem.	Check the data cable.
			Check the settings of the print port.
			Check for the adequacy of the paper.

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