



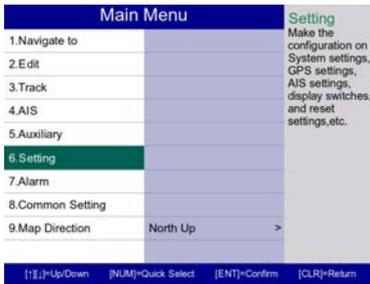
# AIS Class B & Chart Plotter

Quick Reference V1.1

Before using this product manual (Quick Reference), please confirm the menu style of your device. If you use the classic mode, please refer to the operating instructions of the classic mode, if you use the utility mode, please refer to the operating instructions of the utility mode.



classic mode menu style



utility mode menu style

## **INTRODUCTION**

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## **STATEMENTS**

Other products and company names involved in this manual only for identification, those names may be registered trademarks owned by other company. Version information displays in the system only, will not described details in this manual. “XINUO” and “XINUO TECH” mentioned in this manual are all refer to “Xinuo Information Technology (Xiamen) Corporation Limited”.

**NOTES:** This unit is not used for direct navigation. When in actual use, please compare with all available navigation sources, including the information from other navigation aids and actual sea conditions, such as: official chart, visual sightings, radar, tides, hydrology, weather and so on.

**NOTES:**

【 】 : Menu title, such as 【 Main Menu 】 means the basis menu called by the system.

〔 〕 : The symbol on the Keyboard buttons, such as 〔 Menu 〕 means the menu button on the keyboard.

This product manual (Quick Reference) is for reference only. Please refer to the actual product for details. This product manual (Quick Reference) is applicable to the following devices:

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| <input type="checkbox"/> HM-1512 | <input type="checkbox"/> HM-5912N |
| <input type="checkbox"/> HM-1815 | <input type="checkbox"/> HM-5915  |
| <input type="checkbox"/> HM-1817 | <input type="checkbox"/> HM-5917  |

## CAUTIONS

Before turn on the unit, please be sure to read the following cautions to avoid product failure caused by inappropriate operation.

1. Avoid fall down cases damage the product, firmly install your product is necessary.
2. Do not use this product with any other power adapters or the navigator may not work properly; its performance will be affected or even the equipment will be damage because of the different circuit designs. The voltage requirement for this product is DC24V. Do not exceed this voltage range.
3. Do not disassemble the unit by any means or no warranty will be extended.
4. When in use or cleaning, be sure to avoid any liquid or other objects falling into the unit, or this might cause damage or short circuit.
5. Do not place the unit and its accessories in a damp environment or the direct sunlight. Keep the machine in a dry environment.
6. Power supply should be grounded to avoid static and lightning. If not in use, please turn off the system.
7. If the unit cannot position for a long time, check the following: Whether the antenna is installed properly; the connection; any forms of interference around the antenna. Before the starting of the AIS system, make sure that the antenna cable joints are intact; there is no short-circuit or open circuit; and follow the correct procedure. During the start-up stage, do not arbitrarily remove the antenna in order to avoid damages to the equipment.
8. When external temperature is too high, the unit may not function properly, stop using the equipment.
9. Avoid direct sunlight to the LCD screen. You can adjust the angle of the screen anytime to get the best visual effects.
10. When hardware failure occurs (e.g. power lines burned, machine damage or foreign bodies fall into the equipment, etc.), shut down the power immediately and contact with the distributor immediately.
11. Virtually, all data sources contain some inaccurate or incomplete data, the data only for your reference and we cannot guarantee any accident, minor injury or properly damage. All legal responsibility and other obligation will not be taken by XINUO.

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## 1. Product Introduction

The Class B AIS & Chart Plotter supports GPS and BDS dual mode positioning system which can provide more accurate location data, SOG, COG, etc. It built-in Class B AIS module to offer safe navigation information for reference. The software supports multi-language display, the chart can be selected as XINUO MAP or C-MAP(MAX).

## 2. Standard Configuration

HM-1512 & HM-5912N & HM-1815 & HM-5915

ID	Name	Quantity
1	Display	1
2	Bracket	1
3	Power Cable (2m)	1
4	8-Pin Data Cable (1.2m)	1
5	6-Pin Data Cable (1.2m)	1
6	GNSS Antenna (12 m)	1
7	M8 Knob	2
8	Rubber Gasket For M8 Knob	2
9	4.2*20 Screw	4
10	Remote Control	1
11	Remote Control Bracket	1
12	4.8*20 Screw	4
13	Quick Reference	1

## HM-1817 &amp; HM-5917

<b>ID</b>	<b>Name</b>	<b>Quantity</b>
1	Display	1
2	Bracket	1
3	M8 Knob	2
4	M6 Knob	2
5	Rubber Gasket For M8 Knob	4
6	Rubber Gasket For M6 Knob	4
7	Power Cable (2m)	1
8	6-Pin Data Cable (1.2m)	1
9	8-Pin Data Cable (1.2m)	1
10	GNSS Antenna (12 m)	1
11	4.8*20 Screw	4
12	Remote Control	1
13	Remote Control Bracket	1
14	Quick Reference	1

### **3 System Connection Diagram and Serial Port Definition**

#### **3-1 Serial Port Setting Instructions**

##### **3-1-1 Classic Mode**

**Operation:**

- (1) Press [MENU] twice-- **【I/O Settings】** -- **【Signal Detection】** , you can view the input and output sentences.
- (2) Press [MENU] twice-- **【I/O Settings】** -- **【Statement and Baud Rate Settings】** , you can set the baud rate of NMEA0183 and set the output sentences.
- (3) NMEA0183 default output are RMC, GGA, GLL, VTG, APA, APB, BWC, XTE, RMB, BOD.

The baud rate is 38400 of AIS input/output port , others are 4800.

##### **3-1-2 Utility Mode**

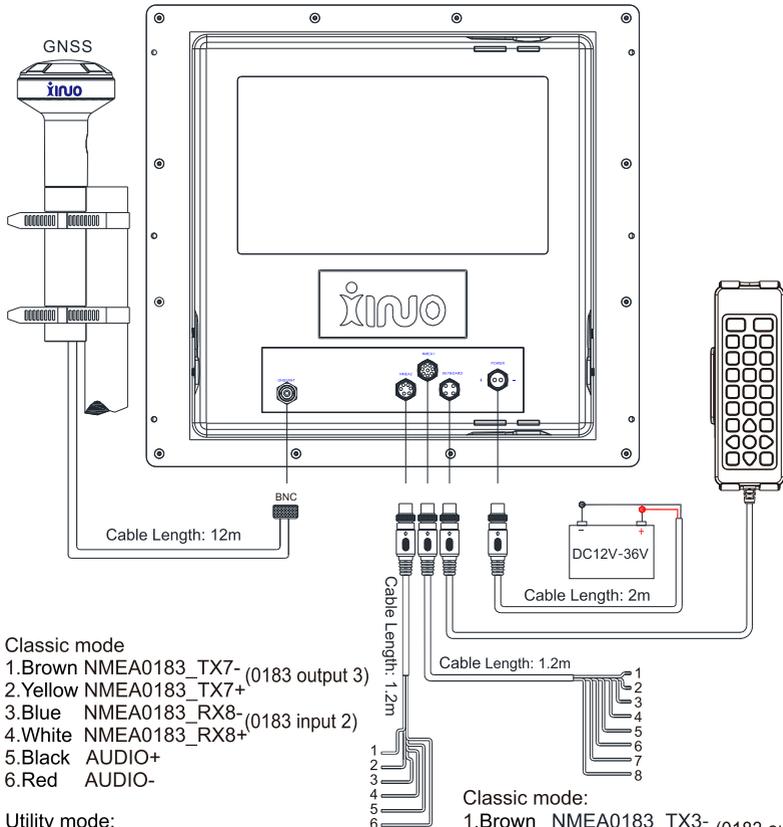
**Operation:**

- (1) **【Main Menu】** -- **【Setting】** -- **【Input and Output Port】** -- **【Signal Detection】** , you can view input and output sentences.
- (2) **【Main Menu】** -- **【Setting】** -- **【Input and Output Port】** -- **【Baud Rate Setting】** , you can set the baud rate of NMEA0183.
- (3) **【Main Menu】** -- **【Setting】** -- **【Input and Output Port】** -- **【Output Settings】** , you can set the output sentences.
- (4) NMEA0183 default output sentences: APB, GGA, GLL, RMC, VTG, XTE, ZDA

The baud rate is 38400 of AIS input/output port ,others are 4800.

### 3-2 System Connection Diagram and Serial Port Definition

#### (1) HM-1817



**Classic mode**

- 1. Brown NMEA0183\_TX7- (0183 output 3)
- 2. Yellow NMEA0183\_TX7+
- 3. Blue NMEA0183\_RX8- (0183 input 2)
- 4. White NMEA0183\_RX8+
- 5. Black AUDIO+
- 6. Red AUDIO-

**Utility mode:**

- 1. Brown NMEA0183\_TX7- (NMEA4)
- 2. Yellow NMEA0183\_TX7+ (NMEA4)
- 3. Blue NMEA0183\_RX8- (NMEA5)
- 4. White NMEA0183\_RX8+ (NMEA5)
- 5. Black AUDIO+
- 6. Red AUDIO-

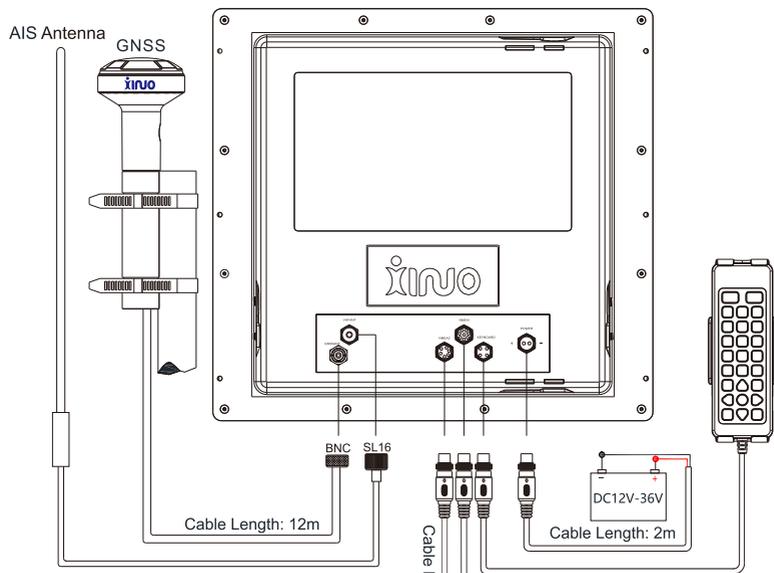
**Classic mode:**

- 1. Brown NMEA0183\_TX3- (0183 output 1)
- 2. Orange NMEA0183\_TX3+ (0183 output 1)
- 3. Yellow NMEA0183\_TX4- (0183 output 2)
- 4. Green NMEA0183\_TX4+ (0183 output 2)
- 5. Blue NMEA0183\_RX5- (0183 input 1)
- 6. White NMEA0183\_RX5+ (0183 input 1)
- 7. Black NMEA0183\_RX1- (AIS input)
- 8. Red NMEA0183\_RX1+ (AIS input)

**Utility mode:**

- 1. Brown NMEA0183\_TX3- (NMEA1)
- 2. Orange NMEA0183\_TX3+ (NMEA1)
- 3. Yellow NMEA0183\_TX4- (NMEA2)
- 4. Green NMEA0183\_TX4+ (NMEA2)
- 5. Blue NMEA0183\_RX5- (NMEA3)
- 6. White NMEA0183\_RX5+ (NMEA3)
- 7. Black NMEA0183\_RX1- (AIS input)
- 8. Red NMEA0183\_RX1+ (AIS input)

(2) HM-5917



Classic mode

- 1. Brown NMEA0183\_TX7- (0183 output 2)
- 2. Yellow NMEA0183\_TX7+ (0183 output 2)
- 3. Blue NMEA0183\_RX8- (0183 input 3)
- 4. White NMEA0183\_RX8+ (0183 input 3)
- 5. Black AUDIO+
- 6. Red AUDIO-

Utility mode:

- 1. Brown NMEA0183\_TX7- (NMEA4)
- 2. Yellow NMEA0183\_TX7+ (NMEA4)
- 3. Blue NMEA0183\_RX8- (NMEA5)
- 4. White NMEA0183\_RX8+ (NMEA5)
- 5. Black AUDIO+
- 6. Red AUDIO-

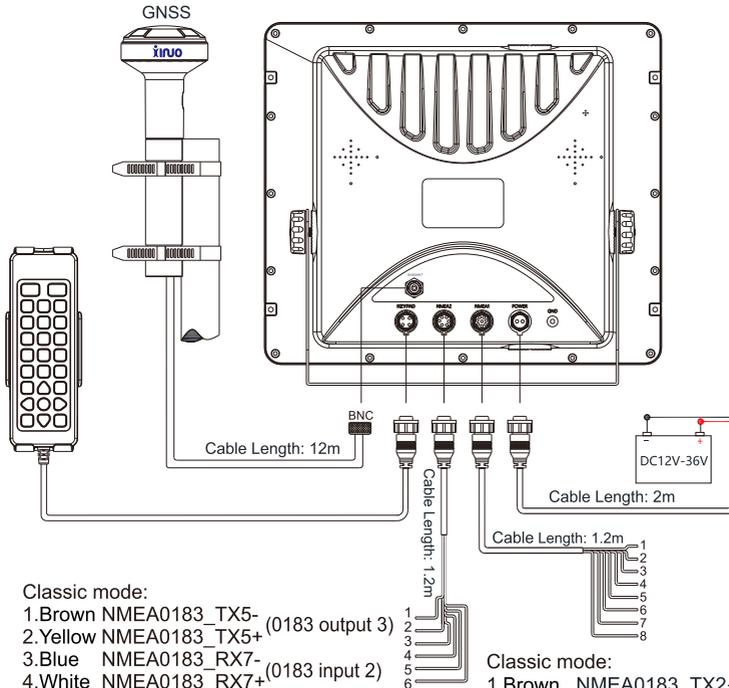
Classic mode:

- 1. Brown NMEA0183\_TX- (AIS output)
- 2. Orange NMEA0183\_TX+
- 3. Yellow NMEA0183\_TX4- (0183 output 1)
- 4. Green NMEA0183\_TX4+
- 5. Blue NMEA0183\_RX5- (0183 input 1)
- 6. White NMEA0183\_RX5+
- 7. Black NMEA0183\_RX6- (0183 input 2)
- 8. Red NMEA0183\_RX6+

Utility mode:

- 1. Brown NMEA0183\_TX- (AIS output)
- 2. Orange NMEA0183\_TX+ (AIS output)
- 3. Yellow NMEA0183\_TX4- (NMEA1)
- 4. Green NMEA0183\_TX4+ (NMEA1)
- 5. Blue NMEA0183\_RX5- (NMEA2)
- 6. White NMEA0183\_RX5+ (NMEA2)
- 7. Black NMEA0183\_RX6- (NMEA3)
- 8. Red NMEA0183\_RX6+ (NMEA3)

(3) HM-1815



Classic mode:

- 1. Brown NMEA0183\_TX5- (0183 output 3)
- 2. Yellow NMEA0183\_TX5+
- 3. Blue NMEA0183\_RX7- (0183 input 2)
- 4. White NMEA0183\_RX7+ (0183 input 2)
- 5. Black AUDIO+
- 6. Red AUDIO-

Utility mode:

- 1. Brown NMEA0183\_TX5- (NMEA3)
- 2. Yellow NMEA0183\_TX5+ (NMEA3)
- 3. Blue NMEA0183\_RX7- (NMEA5)
- 4. White NMEA0183\_RX7+ (NMEA5)
- 5. Black AUDIO+
- 6. Red AUDIO-

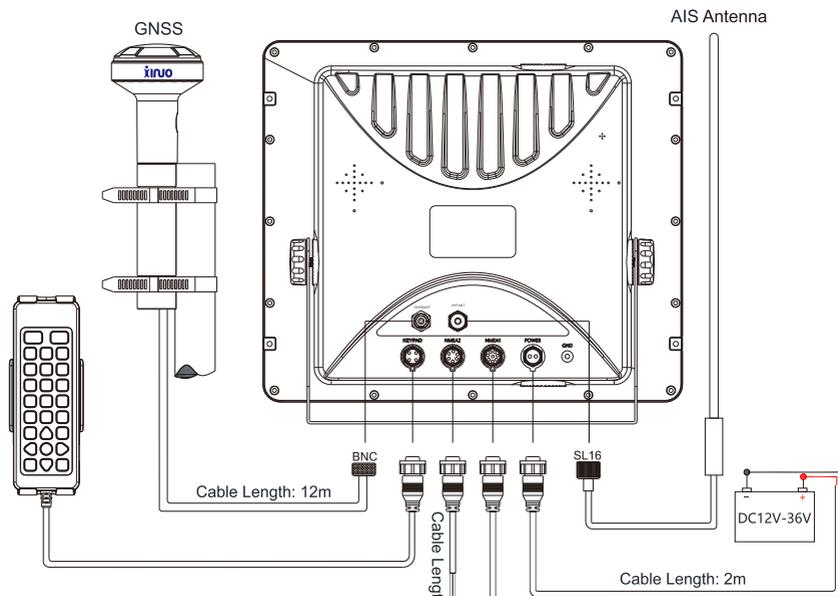
Classic mode:

- 1. Brown NMEA0183\_TX2- (0183 output 1)
- 2. Orange NMEA0183\_TX2+ (0183 output 1)
- 3. Yellow NMEA0183\_TX4- (0183 output 2)
- 4. Green NMEA0183\_TX4+ (0183 output 2)
- 5. Blue NMEA0183\_RX6- (0183 input 1)
- 6. White NMEA0183\_RX6+ (0183 input 1)
- 7. Black NMEA0183\_RX1- (AIS input)
- 8. Red NMEA0183\_RX1+ (AIS input)

Utility mode:

- 1. Brown NMEA0183\_TX2- (NMEA1)
- 2. Orange NMEA0183\_TX2+ (NMEA1)
- 3. Yellow NMEA0183\_TX4- (NMEA2)
- 4. Green NMEA0183\_TX4+ (NMEA2)
- 5. Blue NMEA0183\_RX6- (NMEA4)
- 6. White NMEA0183\_RX6+ (NMEA4)
- 7. Black NMEA0183\_RX1- (AIS input)
- 8. Red NMEA0183\_RX1+ (AIS input)

(4) HM-5915



Classic mode:

- 1. Brown NMEA0183\_TX5- (0183 output 2)
- 2. Yellow NMEA0183\_TX5+ (0183 output 2)
- 3. Blue NMEA0183\_RX7- (0183 input 3)
- 4. White NMEA0183\_RX7+ (0183 input 3)
- 5. Black AUDIO+
- 6. Red AUDIO-

Utility mode:

- 1. Brown NMEA0183\_TX5- (NMEA3)
- 2. Yellow NMEA0183\_TX5+ (NMEA3)
- 3. Blue NMEA0183\_RX7- (NMEA5)
- 4. White NMEA0183\_RX7+ (NMEA5)
- 5. Black AUDIO+
- 6. Red AUDIO-

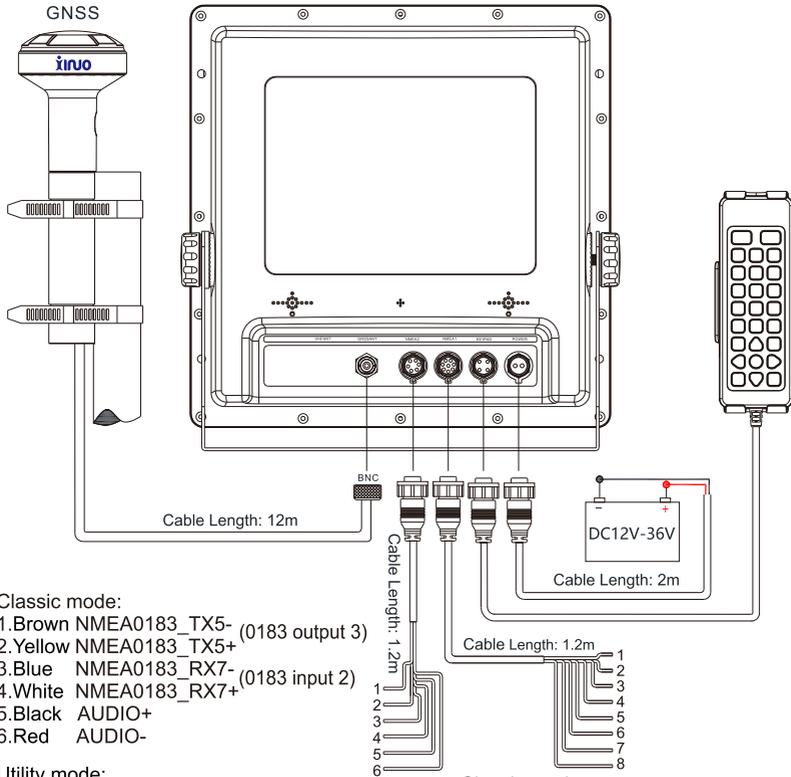
Classic mode:

- 1. Brown NMEA0183\_TX1- (AIS output)
- 2. Orange NMEA0183\_TX1+ (AIS output)
- 3. Yellow NMEA0183\_TX4- (0183 output 1)
- 4. Green NMEA0183\_TX4+ (0183 output 1)
- 5. Blue NMEA0183\_RX6- (0183 input 2)
- 6. White NMEA0183\_RX6+ (0183 input 2)
- 7. Black NMEA0183\_RX2- (0183 input 1)
- 8. Red NMEA0183\_RX2+ (0183 input 1)

Utility mode:

- 1. Brown NMEA0183\_TX1- (AIS output)
- 2. Orange NMEA0183\_TX1+ (AIS output)
- 3. Yellow NMEA0183\_TX4- (NMEA2)
- 4. Green NMEA0183\_TX4+ (NMEA2)
- 5. Blue NMEA0183\_RX6- (NMEA4)
- 6. White NMEA0183\_RX6+ (NMEA4)
- 7. Black NMEA0183\_RX2- (NMEA1)
- 8. Red NMEA0183\_RX2+ (NMEA1)

(5) HM-1512



Classic mode:

- 1. Brown NMEA0183\_TX5- (0183 output 3)
- 2. Yellow NMEA0183\_TX5+ (0183 output 3)
- 3. Blue NMEA0183\_RX7- (0183 input 2)
- 4. White NMEA0183\_RX7+ (0183 input 2)
- 5. Black AUDIO+
- 6. Red AUDIO-

Utility mode:

- 1. Brown NMEA0183\_TX5- (NMEA3)
- 2. Yellow NMEA0183\_TX5+ (NMEA3)
- 3. Blue NMEA0183\_RX7- (NMEA5)
- 4. White NMEA0183\_RX7+ (NMEA5)
- 5. Black AUDIO+
- 6. Red AUDIO-

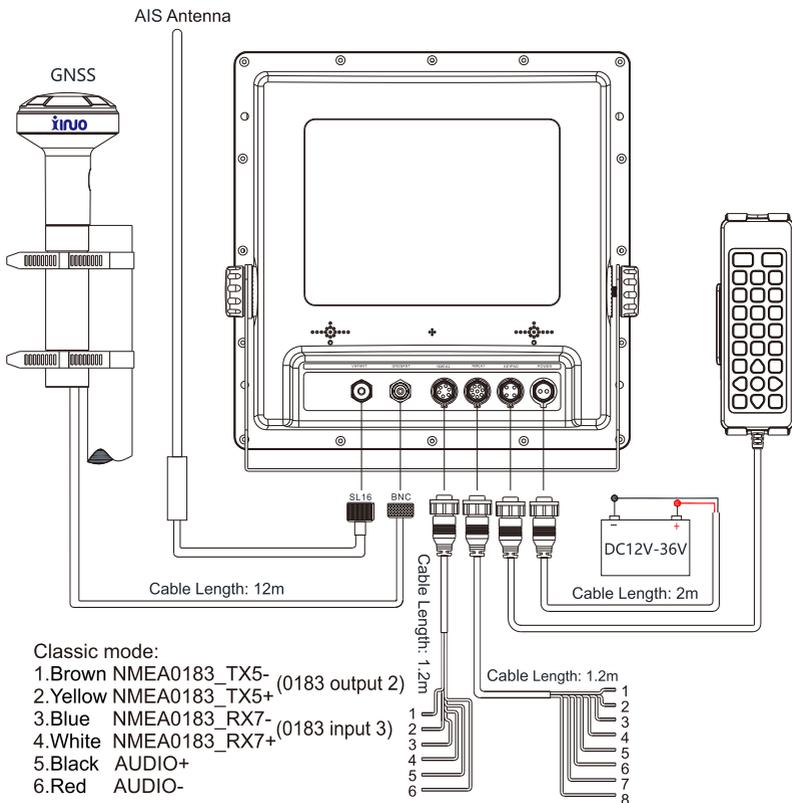
Classic mode:

- 1. Brown NMEA0183\_TX2- (0183 output 1)
- 2. Orange NMEA0183\_TX2+ (0183 output 1)
- 3. Yellow NMEA0183\_TX4- (0183 output 2)
- 4. Green NMEA0183\_TX4+ (0183 output 2)
- 5. Blue NMEA0183\_RX6- (0183 input 1)
- 6. White NMEA0183\_RX6+ (0183 input 1)
- 7. Black NMEA0183\_RX1- (AIS input)
- 8. Red NMEA0183\_RX1+ (AIS input)

Utility mode:

- 1. Brown NMEA0183\_TX2- (NMEA1)
- 2. Orange NMEA0183\_TX2+ (NMEA1)
- 3. Yellow NMEA0183\_TX4- (NMEA2)
- 4. Green NMEA0183\_TX4+ (NMEA2)
- 5. Blue NMEA0183\_RX6- (NMEA4)
- 6. White NMEA0183\_RX6+ (NMEA4)
- 7. Black NMEA0183\_RX1- (AIS input)
- 8. Red NMEA0183\_RX1+ (AIS input)

(5) HM-5912N



Classic mode:

1. Brown NMEA0183\_TX5- (0183 output 2)
2. Yellow NMEA0183\_TX5+ (0183 output 2)
3. Blue NMEA0183\_RX7- (0183 input 3)
4. White NMEA0183\_RX7+ (0183 input 3)
5. Black AUDIO+
6. Red AUDIO-

Utility mode:

1. Brown NMEA0183\_TX5- (NMEA3)
2. Yellow NMEA0183\_TX5+ (NMEA3)
3. Blue NMEA0183\_RX7- (NMEA5)
4. White NMEA0183\_RX7+ (NMEA5)
5. Black AUDIO+
6. Red AUDIO-

Classic mode:

1. Brown NMEA0183\_TX1- (AIS output)
2. Orange NMEA0183\_TX1+ (AIS output)
3. Yellow NMEA0183\_TX4- (0183 output 1)
4. Green NMEA0183\_TX4+ (0183 output 1)
5. Blue NMEA0183\_RX6- (0183 input 2)
6. White NMEA0183\_RX6+ (0183 input 2)
7. Black NMEA0183\_RX2- (0183 input 1)
8. Red NMEA0183\_RX2+ (0183 input 1)

Utility mode:

1. Brown NMEA0183\_TX1- (AIS output)
2. Orange NMEA0183\_TX1+ (AIS output)
3. Yellow NMEA0183\_TX4- (NMEA2)
4. Green NMEA0183\_TX4+ (NMEA2)
5. Blue NMEA0183\_RX6- (NMEA4)
6. White NMEA0183\_RX6+ (NMEA4)
7. Black NMEA0183\_RX2- (NMEA1)
8. Red NMEA0183\_RX2+ (NMEA1)

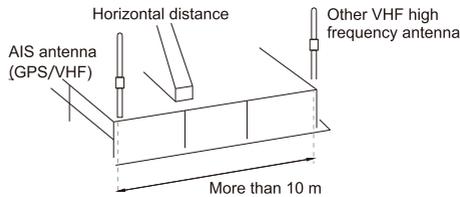
## 4 Installation Instruction

### 4-1 Antenna Installation

#### 4-1-1 VHF Antenna Installation

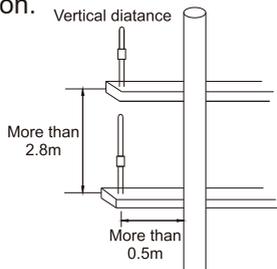
##### Method 1: Horizontal installation

- [1] VHF antenna should be installed in the level  $360^\circ$  without any obstacles.
- [2] VHF antenna should be kept more than 2m away from conductor structure in horizontal position. It also should be kept more than 3m away from the transmitted beam of radar and high power source antenna.
- [3] VHF antenna should be kept more than 10m away from ship's other VHF in horizontal position, if it must be in a same horizontal plane.



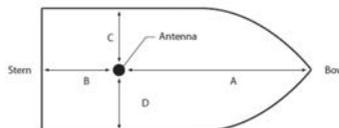
##### Method 2: Vertical installation

VHF antenna must be kept more than 2m away from ship's other VHF antenna in vertical position.



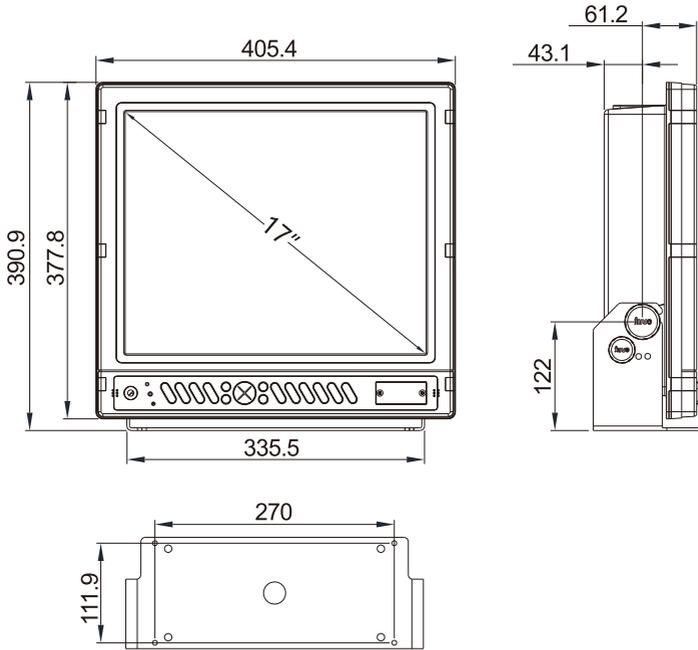
#### 4-1-2 GNSS Antenna Installation

GNSS antenna should be without continuous obstacles in the level  $360^\circ$ , elevation  $5^\circ$ - $90^\circ$ . Apart from more than 3m from the s-band radar and INMARSAT system and other high power antenna beam. Measure A/B/C/D distance data to set up the ship's static parameter.

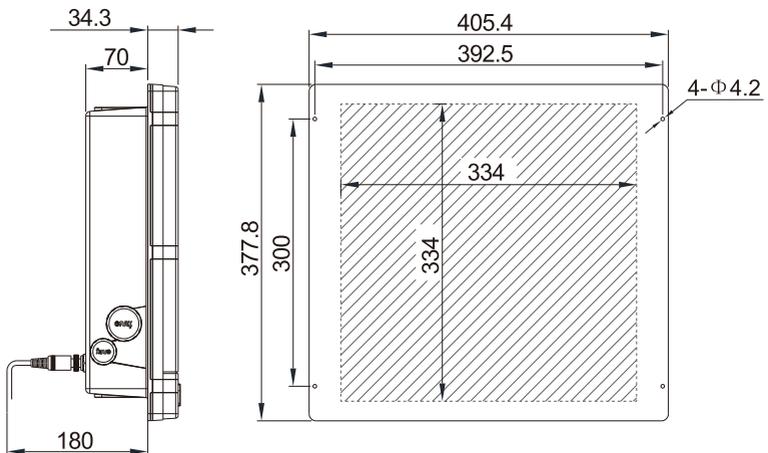


## 4-2 Machine Installation

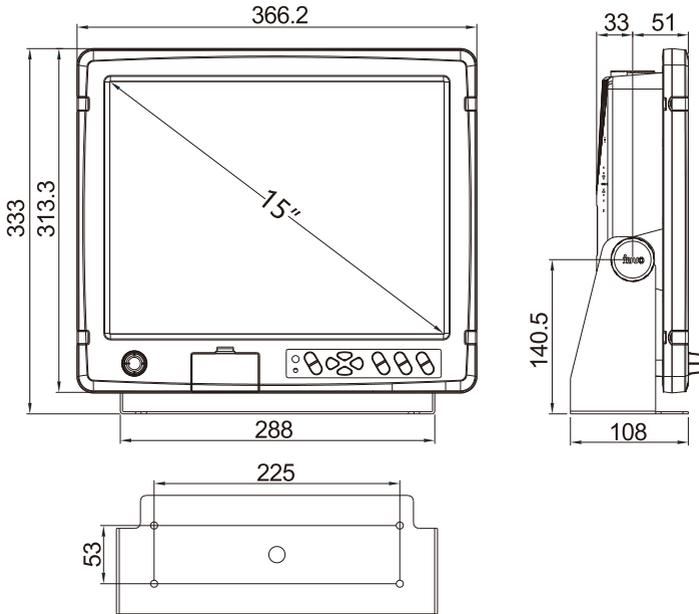
HM-1817&HM-5917 Counter mounting [unit:mm]



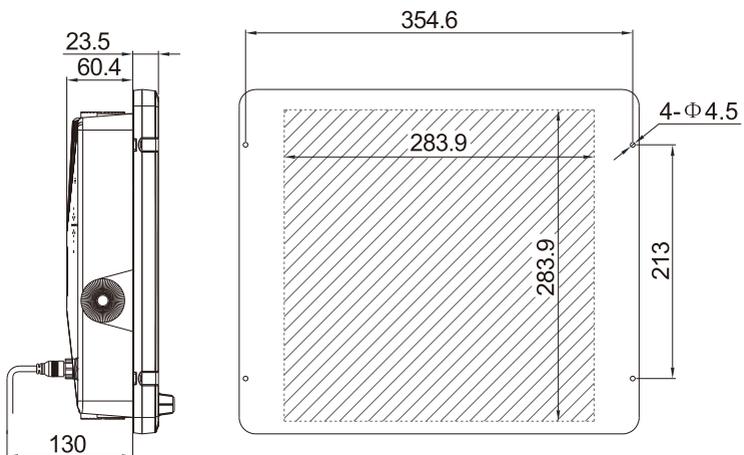
Flush mounting [unit:mm]



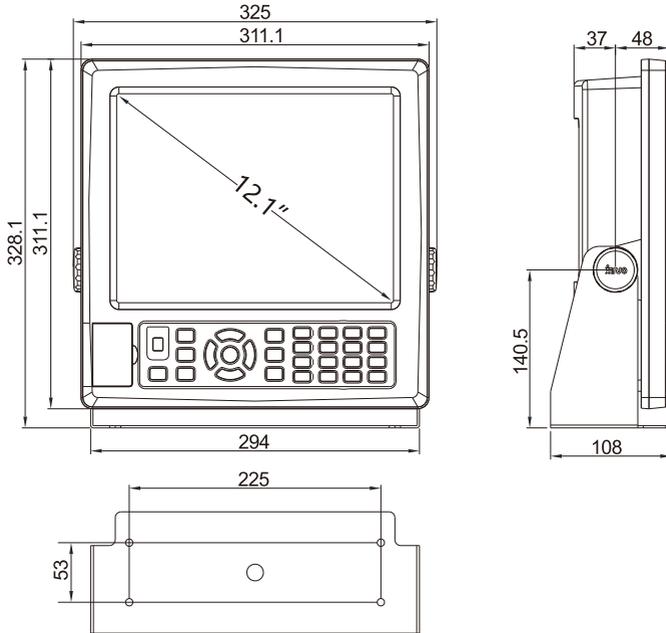
## HM-1815&amp;HM-5915 Counter mounting [unit:mm]



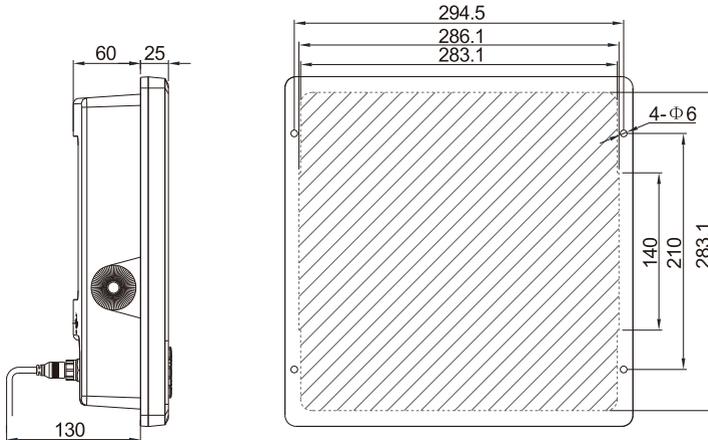
## Flush mounting [unit:mm]



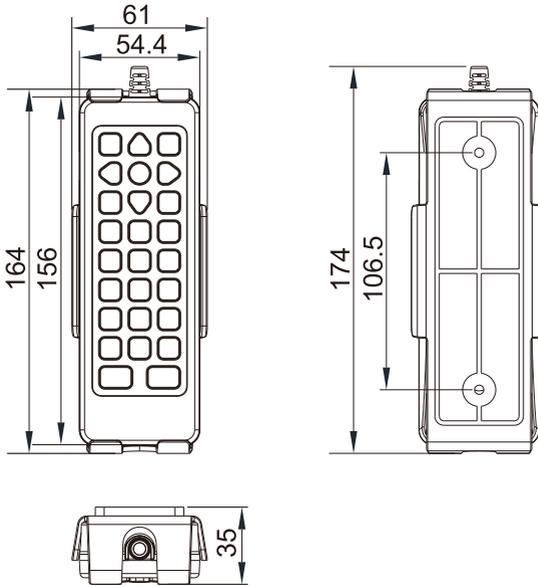
HM-1512&HM-5912N Counter mounting [unit:mm]



Flush mounting [unit:mm]



### 4-3 Remote Control Installation



## 5 Key Description

### 5-1 HM-1817&HM-5917 Key Description

Key	Function Description
〔POWER〕	(1) Rotate to turn on/off; (2) When the device is turned on, rotate to adjust brightness.
〔VOLUME〕	Adjust the volume.
〔ZOOM OUT〕	Zoom out chart and view large-scale chart.
〔ZOOM IN〕	Zoom in chart scale to see a more detailed chart.
〔MENU〕	Open the main menu.
〔ENTER〕	Confirm to carry out operation.
〔CLR〕	Cancel an operation and exit the current operation status.
〔○〕	Center the ship to the screen.
〔↑ ↓ ←→〕	(1) Moving chart positions. (2) When selecting a menu item, it is used for move focus position and page turning.
〔●→〕	<b>Classic mode:</b> (1) When it is on navigation, it navigate to the previous waypoint. (2) When it is not on navigation, it is used for quickly measuring distance.
	<b>Utility mode:</b> When it is on navigation, it navigate to the previous waypoint.
〔→●〕	<b>Classic mode:</b> (1) When it is on navigation, it navigate to next waypoint. (2) When it is not on navigation, it is to set the display mode: Auto/Normal/Day/Gray/Night/Recovery.
	<b>Utility mode:</b> When it is on navigation, it navigate to next waypoint.
〔CHART〕	Quickly to view chart.

Key	Function Description
〔AIS〕	Quickly access to the AIS list.
〔TRACKS〕	Turn on/off track record.
〔PAGE〕	Select the page to display.
〔NAVIGATION〕	<p><b>Classic mode:</b> Quickly to select WPT, route to navigation.</p>
	<p><b>Utility mode:</b>            (1) Cursor display            Waypoint navigation:            Move cursor → press 〔GOTO〕 to add WPT →            Press 〔ENT〕 to navigation.            Cancel navigation:            When it is on navigation → press 〔CLR〕 to cancel            navigation.            Route navigation:            Move cursor → press 〔GOTO〕 to add multiple            waypoints → press 〔ENT〕 to navigation.            Cancel navigation:            When it is on navigation → press 〔CLR〕 to cancel            navigation.            (2) The cursor does not display:            Press 〔GOTO〕 → 【Menu Go To】 → Press            〔GOTO〕 to navigation → press 〔CLR〕 or            〔GOTO〕 to choose whether to cancel the current            navigation.</p>
〔TIDE〕	Quickly open tidal page.
〔ROTATE〕	Rotate the chart direction, rotating 90° each time.
〔HELP〕	<p><b>Classic model:</b> Pop-up help menu.</p>
〔DISPLAY MODE〕	Fast switching display mode: Day/Night.
〔COLOR〕	Quickly change the current track color.
〔MOB\ALM〕	Quickly to add MOB.
〔ROUTE〕	Quickly to create a route.

Key	Function Description
〔WPT〕	Move the cursor to add WPT.
〔MARK〕	Move the cursor to add mark.
〔DIST〕	Move the cursor → Set the starting point → Move the cursor to the target position → The distance measurement can be realized.
USB	Data import, export and upgrade program.

## 5-2 HM-1815&HM-5915 Key Description

Key	Function Description
〔ZOOM IN〕	Zoom in chart scale to see a more detailed chart.
〔ZOOM OUT〕	Zoom out charts and view large-scale chart.
〔↑ ↓ ← →〕	(1) Moving chart positions. (2) When selecting a menu item, it is used for move focus position and page turning.
〔MENU〕	Open the main menu.
〔ENT〕	Confirm to carry out operation.
〔PAGE〕	<b>Classic mode:</b> Cancel an operation.
	<b>Utility mode:</b> (1) Select the page to display. (2) Cancel an operation and exit the current operation status.
〔GOTO〕	<b>Classic mode:</b> Quickly to select WPT, route to navigation.
	<b>Utility mode:</b> (1) Cursor display Waypoint navigation: Move cursor → press 〔GOTO〕 to add WPT → Press 〔ENT〕 to navigation. Cancel navigation: When it is on navigation → press 〔CLR〕 to cancel navigation.

Key	Function Description
〔GOTO〕	<p>Route navigation: Move cursor → press 〔GOTO〕 to add multiple waypoints → press 〔ENT〕 to navigation.</p> <p>Cancel navigation: When it is on navigation → press 〔CLR〕 to cancel navigation.</p> <p>(2) The cursor does not display: Press 〔GOTO〕 → 【Menu Go To】 → Press 〔GOTO〕 to navigation → press 〔CLR〕 or 〔GOTO〕 to choose whether to cancel the current navigation.</p>
〔WPTMOB〕	Move the cursor to quickly add MOB.
〔TRACK〕	Turn on/off track records.

### 5-3 HM-1512&HM-5912N Key Description

Key	Function Description
〔SOS〕 	<p>HM-1512: Quickly enter alarm settings.</p> <p>HM-5912N: Send SOS message.</p>
〔POWER〕 	<p><b>Classic mode:</b> (1) Short press to adjust screen brightness. (2) Long press to power off.</p> <p><b>Utility mode:</b> (1) Long press to power off. (2) Device setting and display mode: Double-click the 〔POWER〕 button → Call up 【Device Settings and Display Mode】 → Press 〔↑〕 〔↓〕 → Select the device setting item → Press 〔←〕 〔→〕 to adjust the parameters.</p> <p>Two display modes: (1) XINUO-MAP mode: normal, day, night, classic. (2) C-MAP mode: normal, day, night, standard, NOAA.</p>

Key	Function Description
[ZOOM IN] 	Zoom in chart scale to see a more detailed chart.
[PAGE] 	Select the page to display.
[ZOOM OUT] 	Zoom out charts and view large-scale chart.
[Center] 	Center the ship to the screen.
[ARROW] 	(1) Moving chart positions. (2) When selecting a menu item, it is used for move focus position and page turning.
[MNEU] 	Open the main menu.
[CLR] 	Cancel an operation and exit the current operation status.
[ENTER] 	Confirm to carry out operation.
[CURSOR] 	Quickly open/close the cursor.
[FN] 	On charts, enter and exit full-screen charts.
[SOUD] 	Adjust the volume.
[MOB] 	Quickly to add MOB.
[ROTATE] 	Rotate the chart direction, rotating 90° each time.
[AIS] 	Quickly access to the AIS list.
[GOTO] 	<p><b>Classic mode:</b> Quickly to select WPT, route to navigation.</p> <p><b>Utility mode:</b>            (1) Cursor display            Waypoint navigation:            Move cursor → press [GOTO] to add WPT →            Press [ENT] to navigation.            Cancel navigation:            When it is on navigation → press [CLR] to cancel navigation.</p>

Key	Function Description
【GOTO】 	<p>Route navigation: Move cursor → press 【GOTO】 to add multiple waypoints → press 【ENT】 to navigation.</p> <p>Cancel navigation: When it is on navigation → press 【CLR】 to cancel navigation.</p> <p>[2] The cursor does not display: Press 【GOTO】 → 【Menu Go To】 → Press 【GOTO】 to navigation → press 【CLR】 or 【GOTO】 to choose whether to cancel the current navigation.</p>
【WPT】 	Move the cursor to add WPT.
【ROUTE】 	Quickly to create a route.
【MARK】 	Move the cursor to quickly add mark.
【DIST】 	Move the cursor → Set the starting point → Move the cursor to the target position → The distance measurement can be realized.
【COLOR】 	Quickly change of current track color.
【TRACK】 	Turn on/off track records.
【→●】 	<p><b>Classic mode:</b> (1) When it is on navigation, it navigate to next waypoint. (2) When it is not on navigation, it is to set the display mode: Auto/Normal/Day/Gray/Night/Recovery.</p> <p><b>Utility mode:</b> When it is on navigation, it is to navigate to next waypoint.</p>
【AUX】 	Quickly to open auxiliary page.
【●→】 	<p><b>Classic mode:</b> (1) When it is on navigation, it is navigating to the previous waypoint. (2) When it is not on navigation, it is used for quickly measuring distance.</p> <p><b>Utility mode:</b> When it is on navigation, it navigate to next waypoint.</p>

### 5-4 Remote Control Description

Key	Function Description
〔ZOOM IN〕 	Zoom in chart scale to see a more detailed chart.
〔ZOOM OUT〕 	Zoom out charts and view large-scale chart.
〔CENTER〕 	Center the ship to the screen.
〔↑ ↓ ← →〕 	(1) Move the chart position; (2) When selecting a menu item, it is used for move focus position and page turning.
〔CURSOR〕 	Quickly to open/close the cursor.
〔PAGE〕 	Select the page to display.
〔MENU〕 	Open the main menu.
〔CLR〕 	Cancel an operation and exit the current operation status.
〔ENTER〕 	Confirm to carry out operation.
〔ROTATE〕 	Rotate the chart direction, rotating 90° each time.
〔AIS〕 	Quickly access to the AIS list.
〔GOTO〕 	<b>Classic mode:</b> Quickly to select WPT, route to navigation.
	<b>Utility mode:</b> (1) Cursor display Waypoint navigation: Move cursor → press 〔GOTO〕 to add WPT → Press 〔ENT〕 to navigation. Cancel navigation: When it is on navigation → press 〔CLR〕 to cancel navigation. Route navigation: Move cursor → press 〔GOTO〕 to add multiple waypoints → press 〔ENT〕 to navigation. Cancel navigation: When it is on navigation → press 〔CLR〕 to cancel navigation.

Key	Function Description
【GOTO】 	(2) The cursor does not display: Press 【GOTO】 → 【Menu Go To】 → Press 【GOTO】 to navigation → press 【CLR】 or 【GOTO】 to choose whether to cancel the current navigation.
【WPT】 	Move the cursor to add WPT.
【ROUTE】 	Quickly to create a route
【MARK】 	Move the cursor to add mark.
【DIST】 	Move the cursor → Set the starting point → Move the cursor to the target position → The distance measurement can be realized.
【COLOR】 	Quickly change the current track color.
【TRACK】 	Turn on/off track record.
【→●】 	<b>Classic mode:</b> (1) When it is on navigation, it navigate to next waypoint. (2) When it is not on navigation, it is to set the display mode: Auto/Normal/Day/Gray/Night/Recovery.
	<b>Utility mode:</b> When it is on navigation, it navigate to next waypoint.
【AUXILIARY】 	Quickly to open auxiliary page.
【●→】 	<b>Classic mode:</b> (1) When it is on navigation, it navigate to the previous waypoint. (2) When it is not on navigation, it is used for quickly measuring distance.
	<b>Utility mode:</b> When it is on navigation, it navigate to the previous waypoint.

Key	Function Description
【MOB】 	Quickly to add MOB.
【POWER】 	<p><b>Classic mode:</b></p> <p>(1) Short press to adjust screen brightness.            (2) Long press to power off.  <b>Note:</b> HM-1817&amp;HM-5917 is invalid.</p>
	<p><b>Utility mode:</b></p> <p>(1) Long press to power off.            (2) Device setting and display mode:            Double-click the 【POWER】 button → Call up  <b>【Device Settings and Display Mode】</b> → Press            【↑】 【↓】 → Select the device setting item →            Press 【←】 【→】 to adjust the parameters.</p> <p>Two display modes:</p> <p>(1) XINUO-MAP mode: normal, day, night, classic.            (2) C-MAP mode: normal, day, night, standard, NOAA.  <b>Note:</b> HM-1817&amp;HM-5917 The long press            of this button has no function.</p>

## 6 Operation Instructions

### 6-1 Track Operation

Track record	Press the [TRACK] to open the track record. The track number, track color and track capacity are displayed on the lower right corner of the chart . Press again to close the track record.
Track color	<p><b>Classic mode:</b> Press [COLOR] to set the color of the current record track. There are 8 colors to choose from, the recording color is displayed on the lower right corner of the chart interface.</p>
	<p><b>Utility mode:</b> Press the [COLOR] button to set the color of the current recorded track. There are 9 colors to choose from, the recording color is displayed on the lower right corner of the chart interface.</p>
Delete track	<p><b>Classic mode:</b></p> <p>(1) Press [MENU] → Enter [Main Menu] page → Select [Track List] → Press [ENT] to enter [Track List] → Select the track that want to delete → Press [ENT] → Pop up [Track Operation] → Select [DeleteTrack] → The track can be deleted.</p> <p>(2) On the chart → Move the cursor → Select the track that want to delete → Press the [ENT] button → Pop up [Track Operation] → Select [DeleteTrack] → The track can be deleted.</p>
	<p><b>Utility mode:</b></p> <p>(1) Press [MENU] → Enter [Main MENU] page → Select [Track] → Press [ENT] to enter [Track] → Select the track that want to delete → Press [MENU] → Pop up [Track Operation] → Select [Delete Track] → The track can be deleted.</p> <p>(2) On the chart → Move the cursor → Select the track that want to delete → When the selected track is flashing red and green → Press the [CLR] button → Pop up the prompt window → Select [Yes] or press [ENT] button → The track can be deleted.</p>

## 6-2 WPT Operation

Add WPT	On the chart → Move the cursor → Press [WPT] → Add WPT.
Delete WPT	<p><b>Classic mode:</b></p> <p>(1) Press [MENU] to enter the [Main Menu] → Select the [Waypoint List] → Press [ENT] to enter the [Waypoint List] → Select the waypoint that want to delete → Press [ENT] → Pop up [Waypoint Operation] → select [Delete Waypoint]</p> <p>(2) On the chart → Move the cursor → Select the waypoint that want to delete → Press [ENT] → Pop up [Waypoint Operation] → Select [Delete Waypoint] .</p>
Delete WPT	<p><b>Utility mode:</b></p> <p>(1) Press [MENU] to enter the [Main Menu] → Select [Edit] → Press [ENT] to enter [Edit] page → Select [Waypoint] → Press [ENT] to enter the [Waypoint] → Press [MENU] → Pop up the [Waypoint Operation] interface → Select [Delete Waypoint] → Press [ENT] → The waypoint can be deleted.</p> <p>(2) On the chart → Move the cursor → Select the WPT that want to delete → When the selected has a red and green frame flashing → Press [CLR] → Pop up the prompt window → Select [Yes] or press [ENT] → The waypoint can be deleted.</p>

## 6-3 Navigation Operation

WPT navigation	<p><b>Classic mode:</b></p> <p>(1) On the chart → Move the cursor → Select the waypoint that want to navigate → Press [ENT] → Pop up the [Waypoint Operation] interface → Select [Call Waypoint] → Press [ENT]</p> <p>(2) Press [GOTO] → Pop up the [Call Navi Data] menu interface → Select [Call Waypoint] → Press [↓] to enter the input box → Input the waypoint number that want to to navigate → Press [ENT] .</p>
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WPT navigation	<p><b>Utility mode:</b></p> <p>(1) On the chart → Move the cursor → Select the waypoint that want to navigate → When the selected has a red and green frame flashing → Press [GOTO]</p> <p>(2) On the chart → Move the cursor → Select the waypoint that want to navigate → When the selected has a red and green frame flashing → Press [ENT] → Pop up the [Waypoint Operation] interface → Select [Navigation] → Press [ENT]</p> <p>(3) The cursor does not display → Press [GOTO] → Pop up the [Menu Go To] menu interface → Select [Waypoint] → Select the waypoint that want to navigate → press [ENT]</p>
Route navigation	<p><b>Classic mode:</b></p> <p>(1) Press [GOTO] to enter the [Call Navi Data] → Press [←] and [→] to select [Forward Navigation] / [Reverse Navigation] → Enter the input box → Input the route number that want to navigate → Press [ENT]</p> <p>(2) On the chart → Move the cursor → Select the route that want to navigate → Press [ENT] → Pop up the route operation interface → Select [Forward Navigation] / [Reverse Navigation] → Press [ENT]</p>
	<p><b>Utility mode:</b></p> <p>(1) On the chart → Move the cursor → Select the route that want to navigate → When the selected has a red and green frame flashing → Press [GOTO] → Select [Forward Navigation] / [Backward Navigation] → Press the [ENT]</p> <p>(2) On the chart → Move the cursor → Select the route that want to navigate → When the selected has a red and green frame flashing → Press [ENT] → Pop up the [Route Operation] interface → Select [Forward Navigation] / [Backward Navigation] → Press [ENT]</p>

Route navigation	<p>(3) The cursor does not display → Press [GOTO] → Pop up the [Menu Go To] menu interface → Select [Route] → Select the route that want to navigate → press [ENT] → Select [Forward Navigation] / [Backward Navigation] → Press [ENT]</p>
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### 6-4 Route Operation

Add route	<p><b>Classic mode:</b></p> <p>(1) Press [ROUTE] to enter the route creation state → Move the cursor → Press [WPT] to quickly add node → Move the cursora again → Press [WPT] to quickly add multiple nodes → Press [ROUTE] to save the route data.</p> <p>(2) The cursor display → Press [ENT] → Pop up [Add...] operation interface → Select [Add Route] to enter the route creation state → Press [WPT] to quickly add node → Move the cursora again → Press [WPT] to quickly add multiple nodes → Press [ROUTE] to save the route data or press [CLR] to quit route editing.</p> <p>(3) Press [MENU] → Select [Route List] → Press [ENT] to enter the [Route List] → Press [ENT] → Pop up the [Route Operation] interface → Select [Add Route] to enter [Route Node List] → Press [ENT] → Pop up [Node Operation] → Select [Create New Node] or [Insert the Waypoint]</p>
	<p><b>Utility mode:</b></p> <p>(1) Press [ROUTE] to enter the route creation state → Move the cursor → Press [Route] to quickly add node → Move the cursora again → Press [ROUTE] to quickly add multiple nodes → Press [CLR] to save the route data.</p>

Add route	<p>(2) The cursor display → Press [ENT] → Pop up [Add...] operation interface → Select [Add Route] to enter the route creation state → Press [ROUTE] to quickly add node → Move the cursora again → Press [ROUTE] to quickly add multiple nodes → Press [CLR] to save the route data.</p> <p>(3) Press [MENU] → Select [Edit] → Press [ENT] to enter [Edit] page → Select [Route] → Press [ENT] to enter the [Route] → Press [MENU] → Pop up the [Route Operation] interface → Select [New] to enter [Add Route] page → Press [MENU] → Pop up [Node Operation] → Select [Add Node] or [Insert Node]</p>
Delete route	<p><b>Classic mode:</b></p> <p>(1) Press [MENU] to enter the [Main Menu] → Select the [Route List] → Press [ENT] to enter the [Route List] → Select the route that want to delete, → Press [ENT] → Pop up [Route Operation] → select [Delete Route]</p> <p>(2) On the chart → Move the cursor → Select the route that want to delete → Press [Enter] → Pop up the operation interface → Select [Delete Route]</p>
	<p><b>Utility mode:</b></p> <p>(1) On the chart → Move the cursor → Select the route that want to delete → When the selected has a red and green frame flashing → Press [CLR] → Pop up the prompt window for deleting the route → Select Select [Yes] or press [ENT] → The route can be deleted.</p> <p>(2) Press [MENU] to enter the [Main Menu] → Select [Edit] → Press [ENT] to enter [Edit] page → Select [Route] → Press [ENT] to enter the [Route] → Press [MENU] → Pop up the [Route Operation] interface → Select [Delete] → Press [ENT] → The route can be deleted.</p>

## 6-5 Mark Operation

Add mark	On the chart → Move the cursor → Press <b>[MARK]</b> → Add mark .
Delete mark	<p><b>Classic mode:</b></p> <p>(1) Press <b>[MENU]</b> to enter the <b>【Main Menu】</b> → Select the <b>【Mark List】</b> Press <b>[ENT]</b> to enter the <b>【Mark List】</b> → Select the mark that want to delete → Press <b>[ENT]</b> → Pop up <b>【Mark Operation】</b> → select <b>【Delete Mark】</b></p> <p>(2) On the chart → Move the cursor → Select the mark that want to delete → Press <b>[Enter]</b> → Pop up the operation interface → Select <b>【Delete Mark】</b></p>
WPT navigation	<p><b>Utility mode:</b></p> <p>(1) On the chart → Move the cursor → Select the mark that want to delete → When the selected has a red and green frame flashing → Press <b>[CLR]</b> → Pop up the prompt window for deleting the mark → Select <b>【Yes】</b> or press <b>[ENT]</b> → The mark can be deleted.</p> <p>(2) Press <b>[MENU]</b> to enter the <b>【Main Menu】</b> → Select <b>【Edit】</b> → Press <b>[ENT]</b> to enter <b>【Edit】</b> page → Select <b>【Mark】</b> → Press <b>[ENT]</b> to enter the <b>【Mark】</b> → Press <b>[MENU]</b> → Pop up the <b>【Mark Operation】</b> interface → Select <b>【Delete】</b> → Press <b>[ENT]</b> → The mark can be deleted.</p>

## 6-6 Display Mode and Brightness Setting

Display mode	<p><b>Classic mode:</b></p> <p>On the chart, when non-route navigation → Press <b>[→•]</b> to set the display mode → Press <b>[←]</b> <b>[→]</b> to select the display mode.</p>
	<p><b>Utility mode:</b></p> <p>Double-click the <b>[POWER]</b> → Pop up <b>【Device Settings and Display Mode】</b> → Select the <b>【Display Mode】</b> → Press <b>[←]</b> <b>[→]</b> to select the display mode.</p>

Brightness setting	<p><b>Classic mode:</b> Press [POWER] to adjust the brightness.</p>
	<p><b>Utility mode:</b> Double-click the [POWER] → Pop up [Device Settings and Display Mode] → Select the [LCD Brightness] → Press [←] [→] to adjust the brightness.</p>

## 6-7 AIS List

AIS ship operation on chart	<p><b>Classic mode:</b> On the chart → Move the cursor → Select an AIS target → Pop up the AIS message → Press [ENT] → Pop up the operation menu → Select [Track Display/Details/Add Monitor/Send/Start Trace]</p>
	<p><b>Utility mode:</b> On the chart → Move the cursor → Select an AIS target → Pop up the AIS message → Press the [ENT] → Pop up the operation menu → select [Join Monitor /Send/Start Trace/Track Display/Details]</p>
AIS list sort	<p><b>Classic mode:</b> Press [MENU] → Pop up the [Main Menu] → Select [AIS Function] → Press [ENT] to enter the [AIS Function] page → Select [AIS Vessel Information] → Press [ENT] to open the AIS list → Press [ENT] to pop up the AIS operation menu → Select [Sort] → Select [MMSI/Distance/SOG/COG/Name] .</p>
	<p><b>Utility mode:</b> Press [MENU] → Pop up the [Main Menu] → Select [AIS] → Select [AIS List] → Press [ENT] to enter the AIS list → Press [MENU] to pop up the AIS operation menu → Select [Sort] → Select [MMSI/Distance/SOG/COG/Name] .</p>

<p>View ship details in the list</p>	<p><b>Classic mode:</b>                  Press [MENU] → Pop up the [Main Menu] → Select [AIS Function] → Press [ENT] to enter the [AIS Function] page → Select [AIS Vessel Information] → Press [ENT] to open the AIS list → Select an AIS target → The ship's details are displayed on the right.</p> <p><b>Utility mode:</b>                  Press [MENU] → Pop up the [Main Menu] → Select [AIS] → Select [AIS List] → Press [ENT] to enter the AIS list → Select select an AIS target → Press [MENU] to pop up the AIS operation menu → Select [Detail] → press [ENT] to view the detail information.</p>
<p>View AIS vessel chart location</p>	<p><b>Classic mode:</b>                  Press [MENU] → Pop up the [Main Menu] → Select [AIS Function] → Press [ENT] to enter the [AIS Function] page → Select [AIS Vessel Information] → Press [ENT] to open the AIS list → Select an AIS target → Press [ENT] to pop up the AIS operation menu → Select [View] → Press [ENT] to jump to the position of the ship on the chart.</p> <p><b>Utility mode:</b>                  Pres [MENU] → Pop up the [Main Menu] → Select [AIS] → Select [AIS List] → Press [ENT] to enter the AIS list → Select an AIS target → Press [MENU] to pop up the AIS operation menu → Select [View] → Press the [ENT] to jump to the position of the ship on the chart.</p>
<p>Correct chinese ship name</p>	<p><b>Classic mode:</b>                  Press [MENU] → Pop up the [Main Menu] → Select [AIS Function] → Press [ENT] to enter the [AIS Function] page → Select [AIS Vessel Information] → Press [ENT] to open the AIS list → Select an AIS target → Press [ENT] to pop up the AIS operation menu → Select [Correct Ship Name] → Press [ENT] to pop up the edit window → Edit chinese ship name.</p>

## 6-8 AIS Fleet Management

Join monitoring	<p><b>Classic mode:</b></p> <p>(1) On the chart → Move the cursor → Select an AIS target → Pop up the AIS message → Press the [ENT] → Pop up the operation menu → Select [Add Monitor]</p> <p>(2) Press [MENU] → Pop up the [Main Menu] → Select [AIS Function] → Press [ENT] to enter the [AIS Function] page → Select [AIS Vessel Information] → Press [ENT] to open the AIS list → Select an AIS target → Press [ENT] to pop up the AIS operation menu → Select [Join Monitoring] → Press the [ENT] to join monitoring.</p>
	<p><b>Utility mode:</b></p> <p>(1) On the chart → Move the cursor → Select an AIS target → Pop up the AIS message → Press the [ENT] → Pop up the operation menu → Select [Add Monitor]</p> <p>(2) Press [MENU] → Pop up the [Main Menu] → Select [AIS] → Select [AIS List] → Press [ENT] to enter the AIS list → Select an AIS target → Press [MENU] to pop up the AIS operation menu → Select [Join Monitoring] → Press the [ENT] to join monitoring.</p>
Modify group settings	<p><b>Classic mode:</b></p> <p>Press [MENU] → Pop up the [Main Menu] → Select [AIS Function] → Press [ENT] to enter the [AIS Function] page → Select [AIS Monitor] → Press [ENT] to enter [AIS Monitor] page → Select an AIS fleet → Press [ENT] to pop up [Group Operation] → Select [Modify Group Settings] → Press [ENT] to modify group.</p>

<p>Modify group settings</p>	<p><b>Utility mode:</b>                  Press [MENU] → Pop up the [Main Menu] → Select [AIS] → Select [Fleet Management] → Press [ENT] to open [Fleet Management] page → Select an AIS fleet → Press [Menu] to pop up the [Fleet Operation] → Press [ENT] to enter the fleet settings page.</p>
<p>Modification group membership</p>	<p><b>Classic mode:</b>                  Press [MENU] → Pop up the [Main Menu] → Select [AIS Function] → Press [ENT] to enter the [AIS Function] page → Select [AIS Monitor] → Press [ENT] to enter [AIS Monitor] page → Select an AIS fleet → Press [→] to enter the member list → Press [ENT] to pop up the [Member Operation] settings page.</p>
	<p><b>Utility mode:</b>                  Press [MENU] → Pop up the [Main Menu] → Select [AIS] → Select [Fleet Management] → Press [ENT] to open [Fleet Management] page → Select an AIS fleet → Press [ENT] to enter the [AIS Fleet Member] → Press [MENU] to pop up the [Member Operation] settings page.</p>

## 6-9 Network management

<p>WiFi connection</p>	<p><b>Classic mode:</b>                  Press the [MENU] twice → Pop up the [Parameter Settings] page → Select [WiFi Management] to Enter WiFi management page → Enter WiFi password for network connection.</p>
	<p><b>Utility mode:</b>                  Press [MENU] → Pop up the [Main Menu] → Select [Settings] → Press [ENT] to enter the [Settings] page → Select [WLAN Settings] to connect to the network.</p>

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## 7 Upgrade Instructions

### 7-1 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.

## 7-2 Online Upgrade

- (1) Connect WiFi on the WiFi management page.
- (2) When reboot the device or every 24 hours, it will automatically detect whether there is a new version. When a new version can be updated, a prompt window will pop up. Press the [ENT] to update it.
- (3) You can also manually detect whether there is a new version or not.

### **Classic mode:**

Press the [MENU] twice to enter the parameter setting, select [About Device] , and then select [Online Upgrade] to manually check and update.

### **Utility mode:**

Press the [MENU] to enter the main menu, select [Auxiliary] , and then select [Online Upgrade] to manually check and update.

## 8 Hardware Configuration

Display Unit	HM-1512	HM-1815	HM-1817
Display Type	Color TFT LCD		
Display Size	12.1 inch	15 inch	17 inch
Display Resolution	800 × 600 pixels	1024 × 768 pixels	1280 × 1024 pixels
Display Brightness	400cd/m <sup>2</sup>	450cd/m <sup>2</sup>	400cd/m <sup>2</sup>
Language	Classic mode. English, Simplified Chinese, Traditional Chinese , Vietnamese		
	Utility mode. English, Simplified Chinese, Traditional Chinese, Vietnamese, Malay, Korean, Turkish, Thai, Greek, Indonesian, Japanese, Burmese, Arabic, Persian		
Display Modes	Classic mode. Standard Chart, GPS data, AIS data, Navigation Chart, Full Chart, 3D Navigation, 3D+Chart, Compass, GNSS		
	Utility mode. Standard Chart, Pure Chart, Simple Chart, AIS Data, Sailing Data , GNSS, 3D Navigation, Compass		
Memory Capacity	50,000 waypoints, 50,000 markers, 500 routes, 1000 tracks		
Interface	3 Ports NMEA0183 Output , 3 Ports NMEA0183 Input (Mutual independent, Baud rate can be set indenptently)		
Chart	Classic mode. XINUO-MAP		
	Practical mode. XINUO-MAP&C-MAP(MAX)		
WiFi	802.11 b/g/n		
Power Supply	DC 12V~36V		
Power Consumption	less than11W ( 24V )	less than12W ( 24V )	less than 15W ( 24V )
<b>Enviromental</b>			
Working Temperature	-15°C~+55°C		
Storage Temperature	-20°C~+60°C		
Waterproofing	IP65		
<b>GNSS</b>			
GNSS Receiver	72 Channels		
Receive Frequency	GPS L1 1575.42MHz. BDS B1 1561.098MHz		
Accuracy	GPS&BDS	2.5m (CEP50% open sky)	
	GPS	5m (CEP50% open sky)	
	BDS	5m (CEP50% open sky)	
Speed Accuracy	0.1m/s (50%@10m/s)		
Time to First Fix	Cold Start < 30s , Hot Start < 1s		
Standards	IMO Resolution A.694(17), IMO MSC 112(73), IEC 61108-1, IEC 61162-1, IEC 60945		

## Quick Reference

Display Unit	HM-5912N	HM-5915	HM-5917
Display Type	Color TFT LCD		
Display Size	12.1 inch	15 inch	17 inch
Display Resolution	800 × 600 pixels	1024 × 768 pixels	1280 × 1024 pixels
Display Brightness	400cd/m <sup>2</sup>	450cd/m <sup>2</sup>	400cd/m <sup>2</sup>
Language	Classic mode. English, Simplified Chinese, Traditional Chinese , Vietnamese		
	Utility mode. English, Simplified Chinese, Traditional Chinese, Vietnamese, Malay, Korean, Turkish, Thai, Greek, Indonesian, Japanese, Burmese, Arabic, Persian		
Display Modes	Classic mode. Standard Chart, GPS data, AIS data, Navigation Chart, Full Chart, 3D Navigation, 3D+Chart, Compass, GNSS		
	Utility mode. Standard Chart, Pure Chart, Simple Chart, AIS Data, Sailing Data , GNSS, 3D Navigation, Compass		
Memory Capacity	Classic mode. 50,000 waypoints, 50,000 markers, 500 routes, 1000 tracks		
	Utility mode. 50,000 waypoints, 50,000 markers, 500 routes, 1000 tracks		
Interface	1 Port AIS Output , 2 Ports NMEA 0183 Output , 3 Ports NMEA 0183 Input (Baud rate can be set indenpently)		
Chart	Classic mode. XINUO-MAP		
	Practical mode. XINUO-MAP&C-MAP(MAX)		
WiFi	802.11 b/g/n		
Power Supply	DC12V~36V		DC18V~36V
Power Consumption	less than12W ( 24V )	less than16W ( 24V )	less than18W ( 24V )
<b>Enviromental</b>			
Working Temperature	-15°C~+55°C		
Storage Temperature	-20°C~+60°C		
Waterproofing	IP65		
<b>AIS Class B</b>			
Frequency	156.025 ~ 162.025MHz		
Bandwidth	25KHz		
Modulation	GMSK/FM		
Data Rate	9600bps		
Number of AIS transmitter	1		
Number of AIS Receiver	2		
AIS Channel A(default)	CH87B (161.975 MHz )		
AIS Channel B(default)	CH88B (162.025 MHZ )		
TX Power Output	2 W		
RX Sensivity	< -107 dBm @ 20% PER		

<b>GNSS</b>		
GNSS Receiver	72 Channels	
Receive Frequency	GPS L1 1575.42MHz. BDS B1 1561.098MHz	
Accuracy	GPS&BDS	2.5m (CEP50% open sky)
	GPS	5m (CEP50% open sky)
	BDS	5m (CEP50% open sky)
Speed Accuracy	0.1m/s (50%@10m/s)	
Time to First Fix	Cold Start<30s , Hot Start<1s	
Standards	IEC 62287-1, IEC 61108-1, IEC 61162-1, IEC 60945, ITU-R M.1371-5, IMO Resolution A.694(17)	

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