USER MANUAL

TWO-WAY VHF RADIOTELEPHONE
NTW-1000

NTW-1000 UM.E 20250717-07

NOTICE TO USERS

- Thanks for purchasing this product NTW-1000 TWO-WAY VHF RADIO TELEPHONE.
- Please read this manual carefully to ensure proper use before installation and use of the NTW-1000.
- NSR will assume no responsibility for the damage caused by improper use or modification of the product or claims of loss of profit by a third party, and shall in no event be liable for any loss of profit or any commercial damage, including but not limited to special, incidental, consequential, or other damage.
- The software version in your product may be different from that described in this manual. Such differences will not affect the performance of the product. NSR reserves the right of continuous improvement on products both in software and in hardware without any prior notice.
- NSR is devoted to publishing and maintaining this user manual. As we continue to improve our products to satisfy customers' needs, the information in this document is subject to change without prior notice. NSR does not make any representations or warranties (implied or otherwise) regarding the accuracy and completeness of this document
- The copyright of this manual is owned by the manufacturer, NEW SUNRISE CO., LTD (NSR). Prior written permission is required for copying or reproducing the manual or part of the manual.
- Please keep the manual for your future reference.

WARNING:

The lithium battery is used in this product, which is not allowed to be modified, shorted or burned.
The emergency lithium battery supplied with NTW-1000 is only for use in emergencies. As a one-time battery, the emergency battery should be replaced by a new one if it has been used, no matter how long.
If the protection seal on the battery is taken off, the battery is regarded as having been used before.
The battery should be replaced when the marked expiry date is reached, even if it has never been used.
Dispose of the lithium batteries carefully. The lithium batteries should have two poles insulated prior to disposal because the remaining power could cause severe harm to human beings. Local regulations should be followed when batteries are disposed of in order to protect your environment.

MODIFY RECORD

No.	Modify by	Date	Paragraph	Revision	Reason
1	Q/A	2012/03/31		01	First edition
2	Q/A	2016/03/18	6.3, 6.4, 6.5	02	Increased emergency battery, rechargeable battery, charger model
3	Q/A	2018/06/14	ALL	03	General modification
4	Q/A	2018/12/19	APPENDIX 2	04	DOC added
5	Q/A	2022/05/16	3	05	General modification
6	Q/A	2024/09/27	ALL	06	Some modification
7	Q/A	2025/07/17	ALL	07	Some modification

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1. OVERVIEW

NTW-1000 is a two-way VHF radiotelephone for use on-board and on-scene communication, as part of GMDSS.
NTW-1000 includes 19 VHF simplex channels assigned to marine use by ITU. The frequency range of those channels is 156.025MHz ~ 162.000MHz.
NTW-1000 can also be used as a normal VHF radiotelephone simply by upgrading the s/w into full ITU channels.
NTW-1000 is designed to comply with IMO Res. A.694 (17), A.809 (19), MSC.36 (63), MSC.97 (73), MSC.515 (105), ITU-R M.489-2 (10/95), IEC 60945 (2002) incl.+ Corrigendum 1 (2008), IEC 61097-12 (1996) + Amend 1:2017.

Main features are:

- Small, lightweight and easy-to-use. Capable of being brought and operated easily by unskilled personnel, even while wearing gloves.
- Watertight design, not unduly affected by seawater or oil.
- A primary battery has sufficient capacity to ensure 8 hours of operation at its highest rated power with a duty cycle of 1:9 and a shelf life of at least 4 years.
- Either a primary battery or a secondary battery is available.
- Clearly visible orange color. Easily identified, even in a dark place.
- An external MIC/Speaker can be attached.

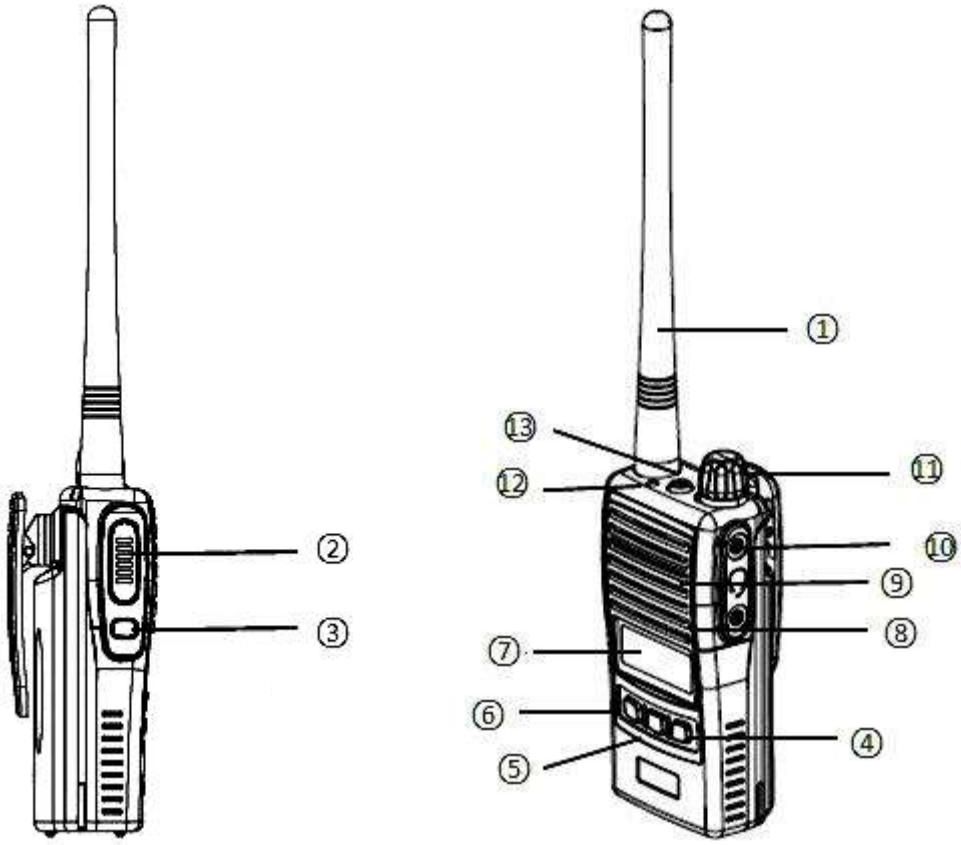
2. PRODUCT DESCRIPTION

2.1 Product Composition

Equipment list for NTW-1000:

No.	Item	Type	Q'ty	Part No.	Remarks
1	**Standard**				
1.1	Transceiver & Antenna	NTW-1000	1	N991610	
1.2	Emergency Battery	NBT200	1		Primary Battery
1.3	Wrist Rope		1		
1.4	Belt Clip		1		
2	**Optional**				
2.1	Recharge Battery	NBT200C	1	N593020	Secondary Battery
2.2	Battery Charger	NBT200CU	1	N501611	
2.3	AC/DC Adapter	NBT200CUA		N501612	

2.2 Description of Components



(1) Antenna

(2) PTT Key
Press to transmit.

(3) SQ LEVEL selection / Receiving Check Key
Used to set SQ LEVEL.
Press and hold this key for over 2 seconds to monitor on an appropriate channel ( ) with beep sound.
To stop the function, press the key once again.

(4) Up Key
Change the channel or select an alternative.

(5) Enter Key
Confirm the selection or change to the sub-menu.

(6) Down Key
Change the channel or select an alternative.

(7) LCD
Indicates channel number, current status of battery, selected function, etc.

(8) Microphone
When transmitting, the microphone shall be positioned at a distance of 5~7cm from your mouth.

(9) Speaker

(10) External Earphone/MIC and Programming Jack Socket
External EAR/MIC can be connected via this jack.
If this has been connected, the internal microphone and speaker are muted.

(11) Power on / off and Volume Control Switch
Used as an ON/OFF switch. When power has been turned ON, it can be used for adjusting a sound level.

(12) LED

Indicate transmitting/receiving status by color in red and green correspondingly.

(13) CHANNEL 16

Press the key to change to CH 16 immediately.

2.3 Display on LCD

(1) H / L: Transmitting Output Power - H(3 W), L(0.5W).

(2) : Button Lock.

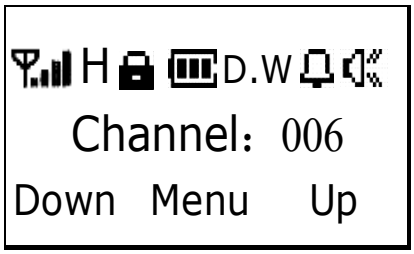
(3) : Battery Level Indicator.

(4) D.W : Dual Watch Mode.

The dual watch mode allows CH 16 to be watched when the other channel is activated. Refer to Section 5.4.

(5) : BEEP.

(6) : Receiving Status Indicator.



3. SPECIFICATIONS

- **Frequency range:** 156.025～157.425 MHz (TX)
  156.050～162.000 MHz (RX)
- **Output Power:** HIGH 3.0W / LOW 0.5W
- **Communication Methods:** Simplex
- **Usable Channels:** 19 Channels (default)
- **Channel Space:** 25kHz
- **Warming Up Time:** Within 5 Secs
- **Battery Voltage:** DC 9V (Emergency Battery)
  DC 7.2V (Rechargeable Battery)
- **Battery Storage:** 4 years on board (see Note 1)
- **Operating Time:** Over 8 Hours (TX 10%, RX 10%, standby 80%)
- **Operating Temperature:** -20°C~ + 55°C
- **Compass Safe Distance:** 0.2m
- **Dimension:** 56 (W)× 46.2 (D)× 256 (H) mm
- **Weight:** Transceiver+Antenna: 150g
  Transceiver+Antenna+Emergency Battery: 200g
  Transceiver+Antenna+ReChargeable Battery: 250g

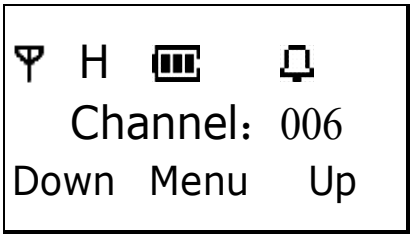
*** Note 1:**

It is recommended that the battery can be stored at the dealer/agent max 1 year since purchased, and it should be replaced in 4 years after being supplied to a vessel.

4. GENERAL OPERATION

4.1 Power ON/OFF

- **Power ON**
  Turn the ON/OFF knob clockwise to switch ON the equipment and the latest established status, including channel number and usable battery capacity, will be displayed.
  It will take 1 second from power ON to the standby condition.



- **Save the latest established data**
  Turn the ON/OFF knob counterclockwise to switch the power OFF.
  Now, if you switch it ON again, the latest used channel number, squelch level, output power level and other established menu items will be loaded automatically.

Attention: The ON/OFF status of the Dual Watch Function is also saved.

4.2 Channel Selection

To establish the desired channel number, use ▲ or ▼ (UP/DOWN) key on the front of the equipment.

Press ▲ or ▼ (Up/Down) key to change the channel number one by one quickly. Pressing ▲ key via the highest channel number will make a move to the lowest channel number, and pressing ▼ key via the lowest channel number will make a move to the highest channel number.

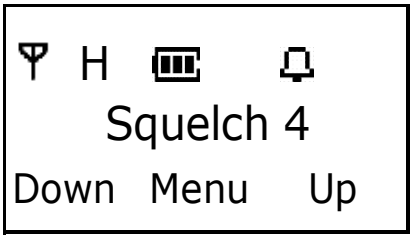
Press 16 key beside the antenna on the topside of the equipment to establish CH 16 instantly.

It could also be established through general channel selection.

Attention:

The simplex channels from ITU VHF channels assigned for maritime mobile service have been established and only these channel numbers could be selected.

4.3 Squelch Level Adjustment



Press SQ ( ) key located on the left side of the equipment. The squelch level is ready to be adjusted.

Select a desired squelch level by using or key, and press (Enter) key to ensure the selected squelch level. Then the display will return to the initial screen.

Attention:

1. **If or key is not pressed within 3 seconds, the value on the display will be established as a squelch level automatically and then will return to the status of the initial screen.**
2. **The value of the squelch level has been established at 8 by default.**

4.4 Transmission

To transmit on the current channel in receiving or standby mode, press (PTT) key on the left side of the equipment and communicate simultaneously by positioning the microphone near your mouth.

Release (PTT) key to stop speaking and return to receiving or standby mode.

By pressing (PTT) key for transmission of a message, the Tx/Rx indicator will be lit up with red color on the upper right of the front.

4.5 Reception

Receive on the currently established channel without pressing any key.

If any signal has been detected in standby mode, the TX/RX indicator will be lit up with green color and mark will appear on the display.

Attention: ***Receiving is impossible while the PTT key is pressed.***

4.6 Receiving Function Check

This function ensures that the receiving function is active.
Press SQ key for more than 2 seconds to activate receiving and press SQ key for a second time to stop receiving.

4.7 Volume Level Adjustment

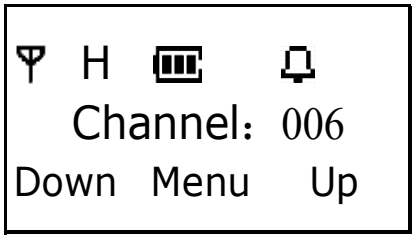
To adjust the volume of the receiving sound, turn the ON/OFF knob in the desired direction.
Turn it clockwise to raise a receiving sound and turn it counterclockwise to reduce it.

Attention: Turning to the maximum in counterclockwise direction will reduce the receiving sound till powered off.

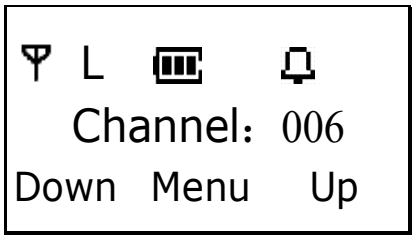
5. SETUP FOR OPTIONAL FUNCTIONS

5.1 TX Power Level

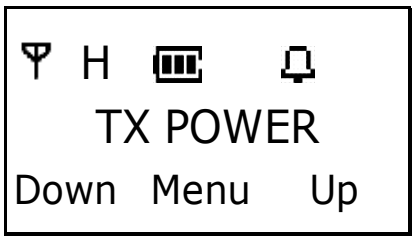
- First of all, ensure that which power level has been established in the receiving or standby mode. The High is displayed as “H”.



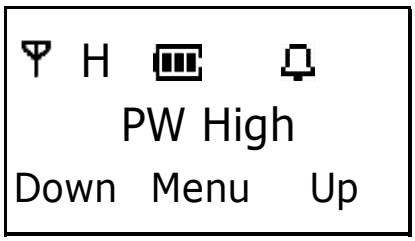
- The Low is displayed as “L”.



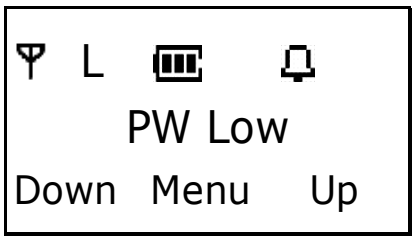
- To change the current power level, press ↵ key to enter the optional menu mode. The display appears to be as “TX POWER”.



- Press ↵ key in the above status to enable transmitting power level to be changed.



- Press ▲ or ▼ key and then press ↵ key to enable a desired power level to be set.



Attention:

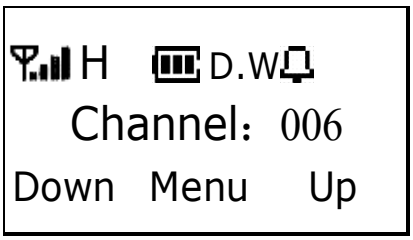
1. If ▲ or ▼ key is not pressed within 3 seconds, it will return to the initial screen.

2. Channel 15 and channel 17 are fixed at L (0.5W).

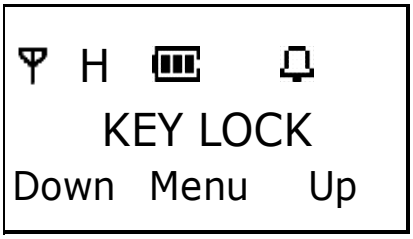
5.2 Key Locking

This function is used to prevent an inadvertent establishment resulting from carelessness or mistake of the operator.

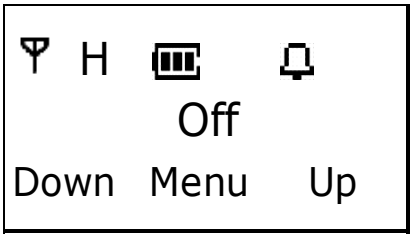
If this function is established, all keys, excluding the PTT switch, the Receiving Check key and the 16 key on the topside of the equipment, couldn't be activated.



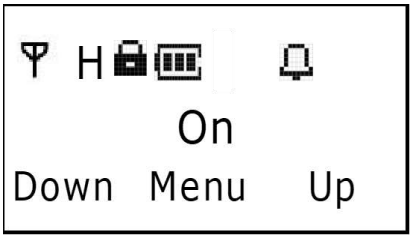
- If the key locking function isn't set, a lock mark " " will not be shown on the initial screen.



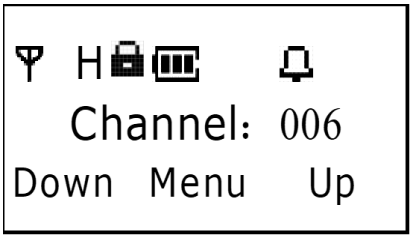
- Press key to enter the optional menu mode. Press or key several times so that the display indicates "KEY LOCK".
- Press key to activate or release the key locking.



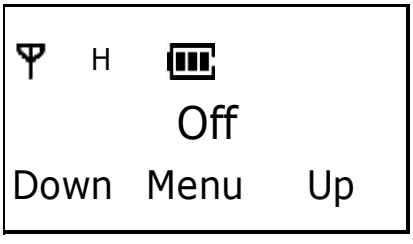
- If it is displayed as "Off", press or key within 3 seconds consequently to choose the "On" status. Press key within 3 seconds consequently to confirm the operation.



- When the key locking function is set, " " appears on the initial screen..



- To release the key locking, the key should be pressed for more than 2 seconds. Then press or key within 3 seconds consequently to choose the "Off" status.

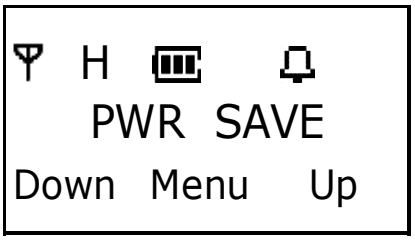


Attention: Even if key locking has been established, PTT switch, Receiving Check key and CH.16 key are operational.

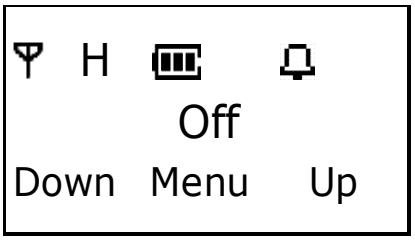
5.3 Battery Save Mode

This function is to prolong the usable time of the battery by decreasing the power consumption in unnecessary devices.

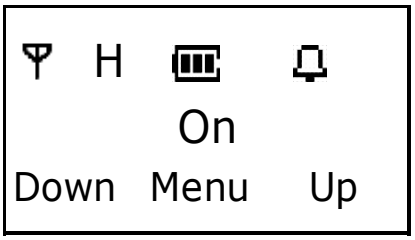
- To establish the economy battery mode, press ↵ key to enter the optional menu mode. Press ▲ or ▼ key within 3 seconds consequently in the above status until “PWR SAVE” is shown.



- Press ↵ key again within 3 seconds consequently in the above status to ensure the current status is “On” or “Off”. If it hasn't been established for the economy battery mode, “Off” is shown.



- To establish the economy battery mode, press ▲ or ▼ key to choose “On” and then press ↵ key to ensure it.

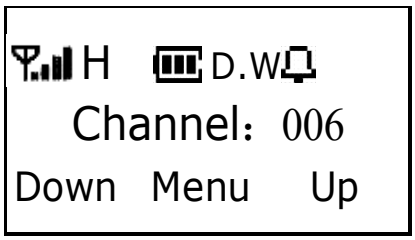


Attention: Battery save mode has been set to “Off” by default.

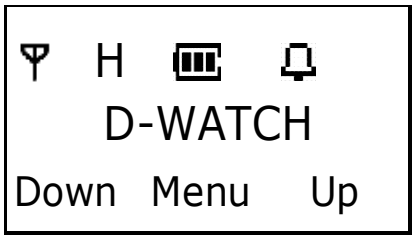
5.4 Dual Watch

This function allows the receiving on CH 16 emergency channel together with the current channel simultaneously.

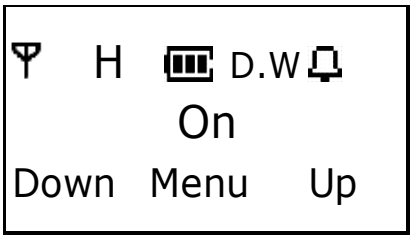
- The DW mark on the screen means that the dual watch function has been established.

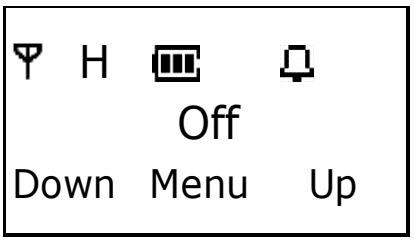


- Press ↵ key to enter the optional menu mode. “D-WATCH” is shown.



- Press ↵ key within 3 seconds consequently in the status and then “On” or “Off” is shown.

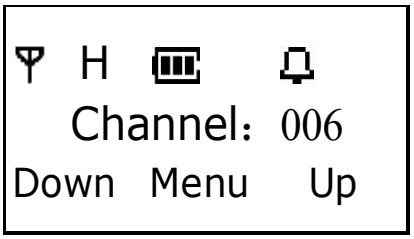




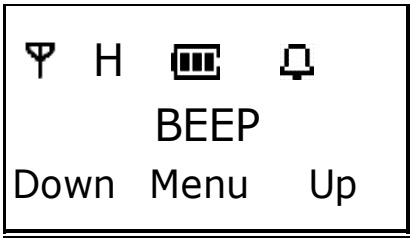
Attention：Dual watch mode has been set to “Off” by default.

5.5 Beep Establishment

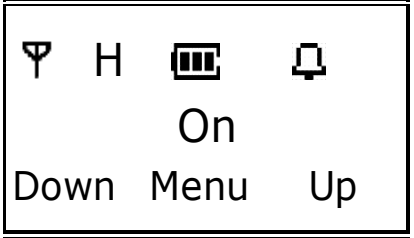
- This function is established to generate or mute an audible tone, such as “Pi-” sound, when any key except the PTT switch is pressed. The bell mark “ 🔔 ” on the LCD indicates that the beep has been established.



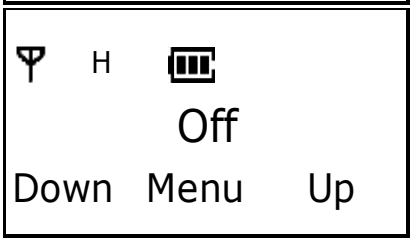
- Press ↵ key to enter the optional menu mode. Press ▲ or ▼ key several times until “BEEP” is shown.



- To continue, press ↵ key within 3 seconds consequently. If the beep has been established already, “ 🔔 ” is shown.



- If the beep hasn't been established, the bell mark “ 🔔 ” won’t show on the initial screen and “Off” is shown.



Attention:

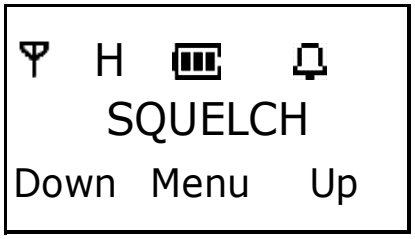
1. Press ▲ or ▼ key to choose “On” or “Off” status and press ↵ key within 3 seconds consequently to ensure the desired status is shown.

2. Beep mode has been set to “On” by default.

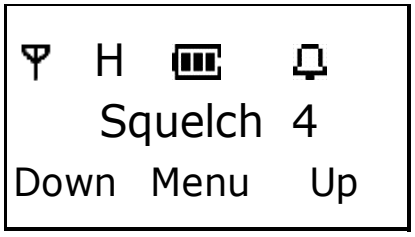
5.6 Squelch Level

This function has been mentioned already in Section 3.3 “Squelch Level Adjustment”.
The squelch level can also be established in the optional menu mode.

- Press ↵ key to enter the optional menu mode. Press ▲ or ▼ key several times until “SQUELCH” is shown.



- Select a desired squelch level by using ▲ or ▼ key and then press ↵ key within 3 seconds consequently to ensure the selected squelch level. Then the display will return to initial screen.

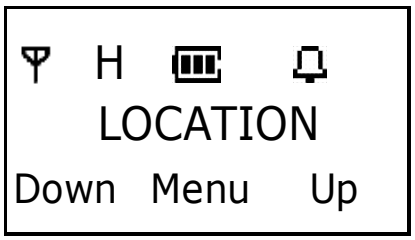


Attention：The value of the Squelch Level has been set to “4” by default.

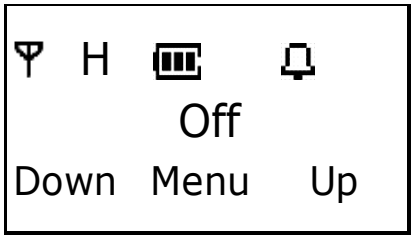
5.7 Location Indication

This function is to locate the equipment easily. If this function has been established, the LED for Tx/Rx indication will blink every 15seconds with green color to locate the equipment in the darkness.

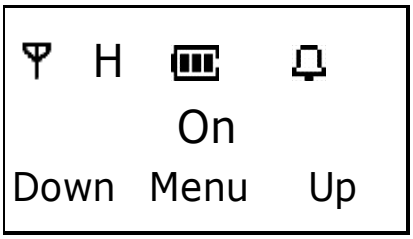
- To establish the location indication mode, press ↵ key to enter the optional menu mode.
  Press ▲ or ▼ key within 3 seconds consequently in the above status until “LOCATION” is shown.



- Press ↵ key again within 3 seconds consequently in the above status to ensure the current status is “On” or “Off”.
  If it hasn't been established for the location indication mode, “Off” is shown.



- To establish the location indication mode, press ▲ or ▼ key to indicate “On” and then press ↵ key within 3 seconds consequently to ensure it.



Attention：Location indication mode has been set to “Off” by default.

6. BATTERY & CHARGER

6.1 Install the Battery

- Press the battery against the transceiver.
- Push the battery upside in position.

6.2 Remove the Battery

- Press the black battery lock hardly with one hand.
- Pull the battery with the other hand.

Attention:

The battery cannot be easily removed if the black battery locks are not pressed enough to release.

6.3 Emergency Battery

The emergency lithium battery supplied with NTW-1000 is only for use in emergency situations. As a one-time battery, the emergency battery should be replaced by a new one if it has been used, no matter how long.
If the protection seal on the battery is taken off, the battery is regarded as being used.
The battery should be replaced when the marked expiry date is reached, even if it has never been used.

Attention:
Do not charge the battery.

Notice:
It's very important to replace with a battery pack originally supplied/made by NSR, when the battery expires. NSR guarantees the quality of NSR products only when the original NSR battery pack is used.
When the product was tested and type approved, NSR battery pack was an integral part of the product. If a counterfeit battery pack is used on NSR product, the product will automatically lose the guarantee of all type approval certificates, and then, NSR will be exempted from the responsibility of warranty and other service guarantees. The counterfeit battery pack will affect NSR product from operating properly.

6.4 Recharge Battery

The recharge battery used for NTW-1000 is a fast-charging battery with stability and high reliability.
The battery should be fully charged before using for the best capacity and safe operation.
Don't charge the battery with the charger not supplied by NSR because the

battery is designed to use only the dedicated charger of the manufacturer.
If the battery is assembled with the transceiver, it should be charged when the transceiver is powered off.
Don't let the battery be short-circuited.
The capacity of the recharge battery is 2200mAh.

6.5 Battery Charger

6.5.1 Specifications:

- Input voltage: **DC 12V/1A**
- Charging time: **Around 160 minutes**
- Operating temperature: **0℃ ~ +40℃**
- Charging current: **850mA (± 10%)**

6.5.2 Charging the battery

The charger can be used to charge the batteries in three ways:

- Only one battery.
- Only one battery assembled with the transceiver.
- One battery and the other battery assembled with the transceiver together.

The charging status can be identified from the LED indicator as below:

*** Charger LED indicator**

Red LED	Charging
Green LED	Fully charged
Yellow LED	Charging pending or battery overheating
Red LED is blinking	Battery malfunction or pre-charging mode

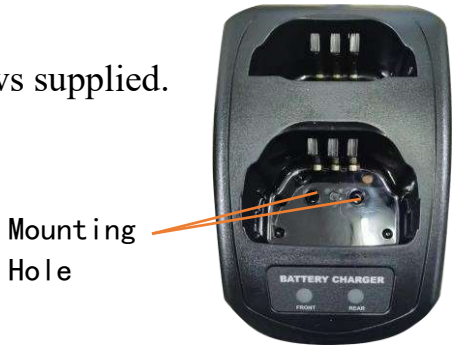
Two LEDs, FRONT and REAR, will indicate the charging status for the two batteries respectively.

6.5.3 Fast charging

In case of that the batteries are fully discharged, the charger goes into Pre-Charge Mode, in which the LED indicator blinks red.
Leave the fully-discharged battery to be charged for ten minutes until the normal voltage is reached. Then release the battery from the charger and put it back. The charger enters Fast-Charge Mode, and the LED indicator stays red instead of blinking.

6.5.4 Install the charger

The charger can be mounted on the table.
Fix the charger on the table with the two screws supplied.



Attention 1:

1) It is strictly prohibited to attempt to pry open the battery cover.
2) Do not charge the NBT200.
3) Do not throw the battery into a fire.
4) Do not expose the battery to an environment with a temperature higher than 70°C.
5) Short-circuiting the positive and negative poles is strictly prohibited, and the poles should be well insulated with tape after the battery is replaced.

Attention 2:

Dispose of the lithium batteries carefully. Lithium batteries should have two poles insulated prior to disposal because the remaining power could cause severe harm to human beings. Local regulations should be followed when batteries are disposed of in order to protect your environment.

Attention 3:

The transportation of the battery pack must strictly comply with regulations on the transportation of lithium batteries. Before transportation, each battery should be packed (insulated) well to prevent exposure.

7. MAINTENANCE

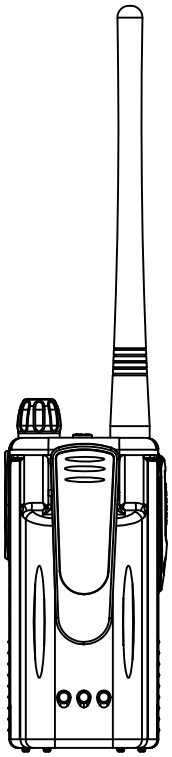
The below troubleshooting table provides common symptoms of troubles and means to rectify them. Even if it is impossible to restore to normal operation, don't attempt to check inside the equipment. Any repairs should be done by a qualified technician.

SYMPTOM	INSPECTION
Can't turn on the power	● Confirm that the battery has been assembled in its place properly. ● Separate the battery from the transceiver to ensure that the contact plane not to be wetted or covered with the dust. If the contact plane between battery and transceiver is wetted or covered with the dust, clean and dry it with a piece of cloth. ● Ensure whether battery has been discharged completely. The Secondary Battery could be charged through the battery charger. The Primary Battery should be purchased from the authorized agency due to charging is impossible. ● Contact the manufacturer or its authorized dealer for service.

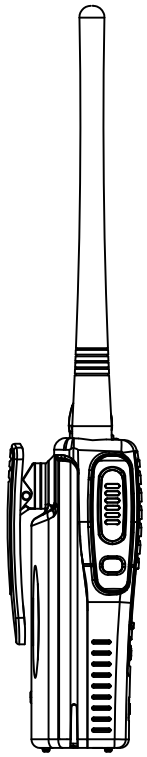
APPENDIX SIZE DRAWINGS

Drawing No.	Description
NTW1000-ID-001	NTW-1000 TWO-WAY RADIO SIZE DRAWING
NTW1000-ID-002	NBT200CU BATTERY CHARGER SIZE DRAWING

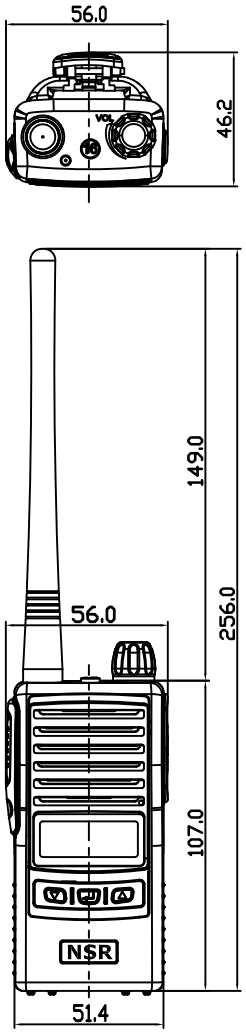
NTW-1000, TWO-WAY RADIO LAY-OUT



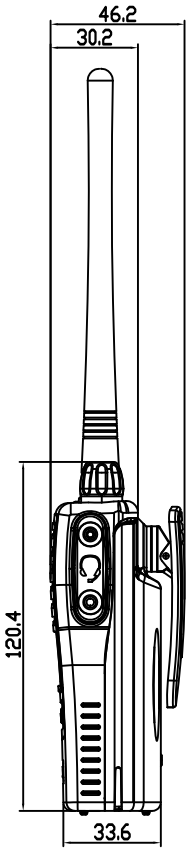
BACK VIEW



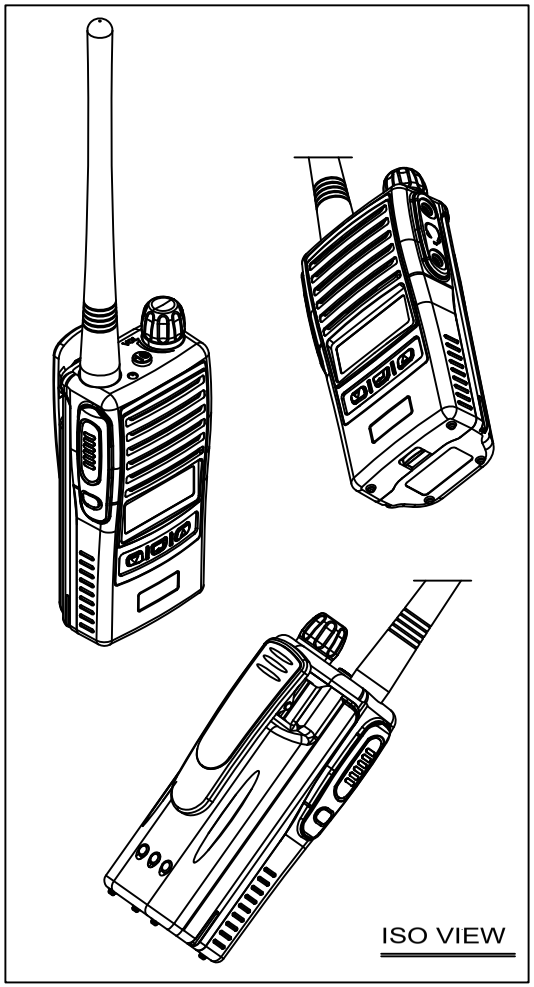
LEFT SIDE VIEW

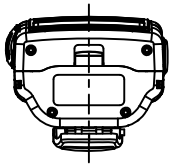


FRONT VIEW



RIGHT SIDE VIEW



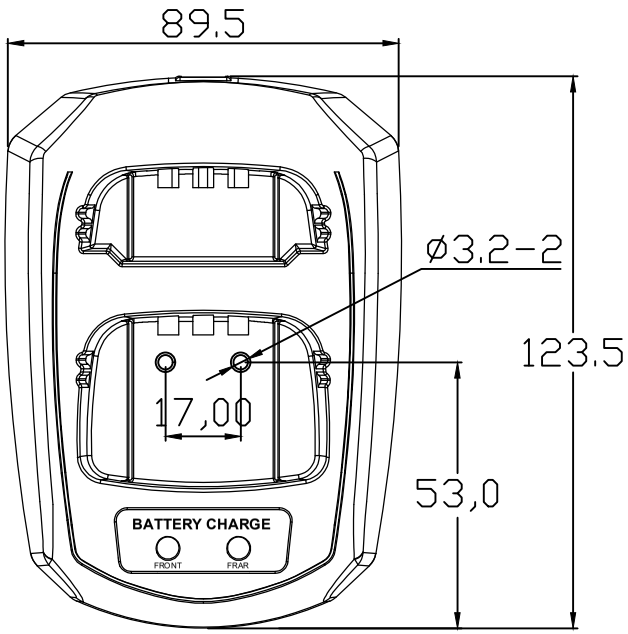


BOTTOM VIEW

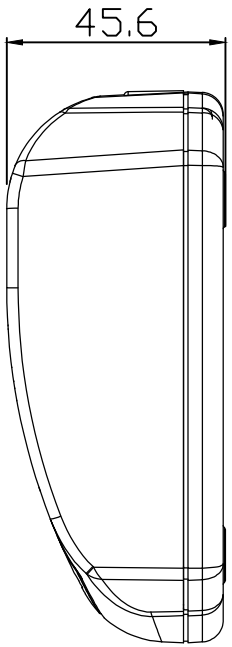
NO.	DATE	REVISION & DESCRIPTION	REVIEWED	CHECKED
0			SIGNATURE	

APPLICATION	NTW-1000 TWO-WAY RADIO SIZE DRAWING						
DATE	2020-01-14	ITEM	NTW-1000	TWO WAY RADIO	SIZE	A4	
APPROVAL		SCALE	N/S	UNIT	mm		
CHECKED		NSR marine	NEW SUNRISE CO., LTD.				
DRAWING							
DWG NO.	NTW1000-ID-001						

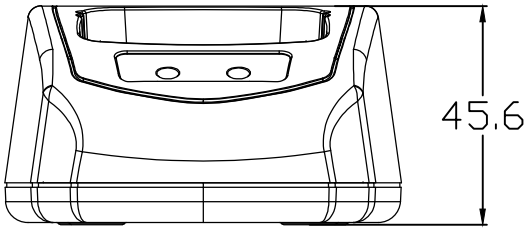
NO.	DATE	REVISION & DESCRIPTION	REVIEWED	CHECKED
0			SIGNATURE	



FRONT VIEW



SIDE VIEW



BOTTOM VIEW

APPLICATION	NBT200CU BATTERY CHARGER SIZE DRAWING		
DATE	2024-12-07	ITEM	SIZE A4
APPROVAL		SCALE N/S UNIT mm PRO-JECTION	▽▽▽▽1.6S ▽▽▽6.3S ▽▽12S ▽100S
CHECKED		NSR	NEW SUNRISE CO., LTD.
DRAWING			
DWG NO.	NTW1000-ID-002		

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July, 2025