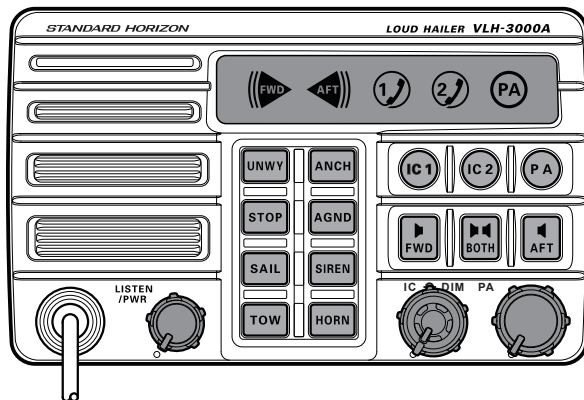# STANDARD HORIZON
Nothing takes to water like Standard Horizon

VLH-3000A
30 Watt Loud Hailer

Manual

TABLE OF CONTENTS

1. GENERAL INFORMATION

The STANDARD HORIZON VLH-3000A is a marine Loud Hailer that operates as a multifunction unit. It has three modes:

❍ Hail/Listen-Back
❍ Intercom
❍ Automatic Signalling

In the **Hail/Listen-Back** mode, the Loud Hailer can send   ed audio signals to a PA horn and then listen back for signals coming in from the PA horn.

In the **Intercom mode**, the Load Hailer can have private conversations with up to two MLS-300i intercom stations.

In the **Automatic Signaling** mode, the Loud Hailer can send different kinds of signals used mostly to alert nearby vessels to the presence and approximate position, and to indicate the vessel's status or maneuverability limitation.

Your Loud Hailer requires 13.8 VDC (±20 %) power input. The VLH-3000A maximum PA speaker output is 30W.

2. PACKING LIST

When the package containing the Loud Hailer is first opened, please checkit for the following contents:
- **VLH-3000A** Loud Hailer (with Microphone)
- Mounting Bracket (with attaching hardware and hanger kit)
- Owner's Manual
- Power Cord
- Dust Cover

3. OPTIONS

|	
MMB-84	Flush mount bracket
MLS-300i	Loud Hailer Intercom Speaker (with CALL button)
MLS-300	External Speaker
MLS-310	
220SW	4.5" Round PA/Hailing horn
240SW	5" x 8" Rectangular PA/Hailing horn

4. INSTALLATION

4.1 Optional MMB-84 Flush Mount Installation

1. To assist in   mounting, a template has been included. Use this

2. Use the template to mark the location where the rectangular hole is to
   h to
   accommodate the VLH-3000A (at least 4.5 inches or 11.5 cm deep).
   There should be at least 1/2 inch (1.3 cm) between the VLH-3000A's
   heatsink and any wiring, cables or structures.
3. Cut out the rectangular hole and insert the VLH-3000A.
4. Fasten the brackets to the sides of the VLH-3000A with the lock
   washer nut combination; so that the mounting screw base faces the
   mounting surface (see Figure 1).
5. Turn the adjusting screw to adjust the tension so that the VLH-3000A
   is tight against the mounting surface.
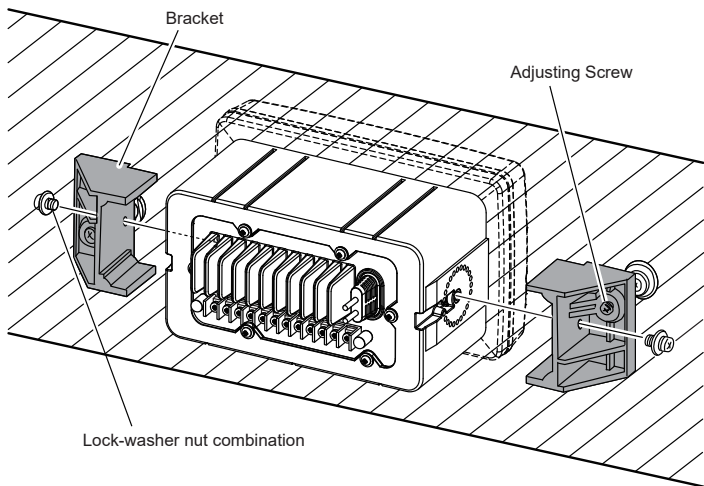
Figure 1. MMB-84 Flush Mount Installation

4.2 Electrical Installation

The rear panel of the VLH-3000A contains:

• A DC Power Cord
• A terminal strip for the External Speaker, two PA Horns, and two MLS-300i Intercom Speakers.

Refer to Figure 2 and complete the following steps for the electrical installation.
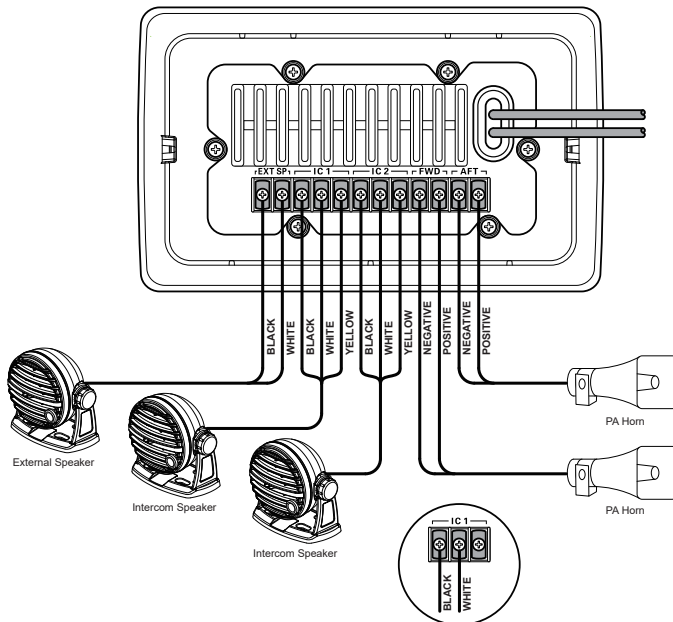
Figure 2. Electrical Connections

NOTE

The terminal strip is not waterproof. Care needs to be taken when installing so it is not directly exposed to the elements.

1. Use the supplied Power Cord assembly for power connection. Connect the red wire to the "Positive (+)" terminal, and the black wire to the "Negative (–)" terminal of the power source.

CAUTION
**Reverse polarity connections will damage the VLH-3000A.**

---

2. Use #22 AWG (or larger) stranded, plastic-jacketed wire to connect the PA Horns ("FWD" and "AFT" terminals) and Intercom Speakers ("IC1" and "IC2" terminals).

3. An external 4-Ohm 6 W speaker may be connected ("EXT SP" terminal), if desired.

4. For the PA Horn, it is recommended that a 4-Ohm 30 W horn speaker be used. Also note that an 8-Ohm speaker may be used, but the loudness will be reduced.

5. The VLH-3000A can use the optional MLS-300i Intercom Speaker. This is connected to any of the Intercom terminals ("IC1" or "IC2").

6. See Detail "A" in Figure 2, If a 2-wire speaker (such as a MLS-300 External Speaker) is connected to the Intercom terminals ("IC1" or "IC2"), the positive wire should be connected to the center terminal and negative wire should be connected to the left-hand terminal. Do not connect the any wire to the right-hand terminal! If you connect one of the wires of a 2-wire speaker to a right-hand terminal, the speaker will beep continuously when turned on.

7. Put the supplied Protection Cover to the terminals to avoid a short circuit.

5. CONTROLS AND SWITCHES
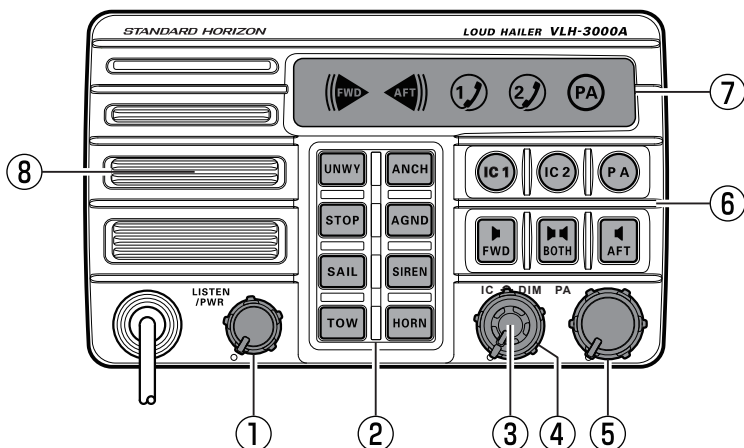
① **LISTEN/PWR Knob**

Turns the VLH-3000A on and off as well as adjusts the volume level of the built-in speaker or external speaker in the LISTEN-BACK mode.

② **AUTOMATIC SIGNALING Buttons**

③ **IC Knob**

Adjusts the volume level of the Intercom Speaker in the INTERCOM mode.

④ **DIM Knob**

Adjusts the display/keypad illumination for a comfortable brightness level.

⑤ **PA Knob**

Adjusts the PA horn level in the HAIL or AUTOMATIC SIGNALING mode.

⑥ **KEYBOARD**

IC 1 - Activates the Intercom Speaker 1.

IC 2 - Activates the Intercom Speaker 2.

PA - Activates the PA horn.

FWD - Activates the Forward (Front) PA horn.

BOTH - Activates the both Forward (Front) and Aft (Rear) PA horns.

AFT - Activates the Aft (Rear) PA horn.

⑦ **DISPLAY**

(FWD) - Indicates the Forward (Front) PA horn is selected.

(AFT) - Indicates the Aft (Rear) PA horn is selected.

(1♪) - Steady: Indicates Intercom Speaker 1 is selected.
   Blink: Intercom 1 is calling the VLH-3000A.

(2♪) - Steady: Indicates Intercom Speaker 2 is selected.
   Blink: Intercom 2 is calling the VLH-3000A.

(PA) - Indicates the PA horn is selected

⑧ **INTERNAL SPEAKER**

Provides audio from intercom speakers or PA Horn.

⑨ **INTERCOM Buttons**

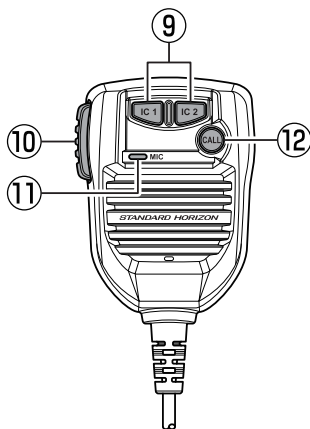**IC 1** - Activates the Intercom Speaker 1.

IC 2 - Activates the Intercom Speaker 2.

⑩ **PTT Button**

Activates the microphone.

⑪ **MICROPHONE**

Speak into the Mic while the PTT button is press to transmit audio to the PA horn or the Intercom Speaker.

⑫ **CALL Button**

Used only when a Intercom Speaker is connected to IC1 or IC2. When pressed produces a beep in the connected Intercom Speaker.

6. OPERATION

This section contains operating instructions for the VLH-3000A.

6.1 Switching Power On/Off
1. Rotate the **LISTEN/PWR** knob clockwise to turn on the VLH-3000A.
2. To turn the VLH-3000A off, turn the **LISTEN/PWR** knob fully counter-clock-wise.

6.2 Hail/Listen-Back
1. Press the **PA** button to activate the PA horn, then select the output PA horn by pressing the **FWD**, **BOTH**, or **AFT** button.
2. Adjust the **LISTEN/PWR** knob to approximately 10 o'clock position, if necessary turn clockwise to increase the internal (or external speaker when connected) speaker volume.
3. Adjust the **PA** knob to approximately 10 o'clock position.
4. Press the microphone **PTT** button, then speak clearly with your mouth about one inch (2.5 cm) from the microphone. Rotate the **PA** knob with the **PTT** button pressed to adjust the PA horn output level. The PA horn output level can be set from 0 to 30 watts.
5. Release the microphone **PTT** button. The PA horn will automatically act as a microphone and the incoming audio signal will be heard from the built-in or external VLH-3000A speaker. This is called Listen-Back.
6. Rotate the **IC** knob to increase or decrease the Listen-Back volume.

6.3 Intercom
To use the Intercom feature of the VLH-3000A, optional Intercom Speaker are necessary. The following are available from your Dealer:

MLS-300i - Intercom Speaker with PTA (Push To Alert)
1. To activate the Intercom Speaker(s), press the following keys:

   IC1 - to activate Intercom Speaker 1
   IC2 - to activate Intercom Speaker 2
2. Make sure the VLH-3000A is in the HAIL mode, and press the micro-phone **PTT** button. Speak clearly with your mouth about one inch (2.5 cm) from the microphone.
3. To use the LISTEN-BACK mode, release the microphone **PTT** button. The activated Intercom Speaker will automatically act as a micro-phone and the incoming audio signal will be heard from the built-in/external VLH-3000A speaker.

4. Rotate the **IC** knob to increase or decrease the Listen-Back volume.

5. PTA (Push To Alert) feature: If the VLH-3000A in any other mode, the Intercom Speakers can alert the VLH-3000A by pressing the **PTA** button on the MLS-300i. The VLH-3000A will produce a beep to indicate a call from Intercom Station 1 of 2. At same time, "①" or "②" icon will blink. Press the corresponding intercom key to activate the Intercom Speaker. If the calling intercom speaker is already activated, the icon will light continuously.

6. Adjust the volume of the internal/external speaker by rotating the **LISTEN/PWR** knob.

6.4 Automatic Signaling

Automatic Signaling may be transmitted through the forward, aft or both PA horns.

1. Select the PA horn to be used by pressing the **FWD**, **BOTH**, or **AFT** button.

2. Press the one of the **AUTOMATIC SIGNALING** button to send the de-sired signal to the selected PA horn:

Fog Horn Signaling

UNWY (Underway): Sends one 5 second blasts ever 2 minutes.

STOP: Sends two 5 second blasts (separated by 2 seconds)ever 2 minutes.

SAIL: Sends one 5 second blasts followed by two 1 second blasts (separated by 2 seconds) ever 2 minutes.

TOW: Sends one 5 second blasts followed by three 1 second blasts (separated by 2 seconds) ever 2 minutes.

ANCH (Anchor): Sends one 5 second rings every 1 minute.

AGND (Aground): Sends one 11 second rings every 1 minute.

Passing signals

SIREN: Sends a varying pitch (yelping) tone while pressing the microphone **PTT** button.

HORN: Sends a passing signal while pressing the micro-phone **PTT** button.

NOTE

The horn function is useful while underway to alert another vessel of your intention. A short blast is a press of the PTT for 1 second and a prolonged blast is a press of the PTT for 2 seconds:

- one short blast to mean "I am altering my course to starboard";
- two short blasts to mean "I am altering my course to port";
- three short blasts to mean "I am operating astern propulsion."

3. Rotate the **PA** knob to adjust the AF output level. The AF output level can be set from 0 to 30 watts.
4. When the Fog signal or Siren and Horn signals are not transmitted to the PA horn, turn the **LISTEN/PWR** knob to increase or decrease the listen back volume from the PA horn.
5. Press the **PA** button to disable the Automatic Signaling feature.

FOG HORN TIMING CHART

The fog horn function sounds a horn repeatedly until the function is turned off.

TYPE	PATTERN	USAGE
UNDERWAY	One 5 second blasts every 120 seconds.	Motor vessel underway and making way.
STOP	Two 5 second blasts (separated by 2 seconds) every 120 seconds.	Motor vessel underway but stopped (not making way).
SAIL	One 5 second blasts followed by two 1 second blasts (separated by 2 seconds) every 120 seconds.	Sailing vessel underway, fishing vessel (underway or anchored), vessel not under command, a vessel restricted in her ability to maneuver (underway or at anchor), or a vessel towing or pushing another ahead.
TOW	One 5 second blasts followed by three 1 second blasts (separated by 2 seconds) every 120 seconds.	Vessel under tow (manned).
AGROUND	One 11 second rings every 60 seconds.	Vessel is aground.
ANCHOR	One 5 second rings every 60 seconds.	Vessel is at anchor.

7. FOG ALERT TONE FREQUENCY

This section allows you to select the Alert Tone Frequency for the Auto-matic Signaling Operation. Available selections are "150 Hz" through "850 Hz" in 50 Hz steps. The default Alert Tone Frequency is 400 Hz.

1. Press and hold in the **PA** button while turning the VLH-3000A on by rotating the **LISTEN/PWR** knob.
2. Blinks "**FWD**" and "**AFT**" icon and the **UNWY**, **STOP**, **SAIL**, and **TOW** buttons glows red corresponding to the current Alert Tone Frequency(see chart below).
3. Switch the **UNWY**, **STOP**, **SAIL**, and **TOW** button to the desired Alert Tone Frequency.
4. Press and hold the **PA** button for one second to save the new setting.
5. Turn the VLH-3000A off, then turn the VLH-3000A back on, and begin nor-mal operation.

Alert Tone Frequency	Automatic Signaling Button			
	UNWY	STOP	SAIL	TOW
150 Hz	Green	Green	Green	Red
200 Hz	Green	Green	Red	Green
250 Hz	Green	Green	Red	Red
300 Hz	Green	Red	Green	Green
350 Hz	Green	Red	Green	Red
400 Hz	Green	Red	Red	Green
450 Hz	Green	Red	Red	Red
500 Hz	Red	Green	Green	Green
550 Hz	Red	Green	Green	Red
600 Hz	Red	Green	Red	Green
650 Hz	Red	Green	Red	Red
700 Hz	Red	Red	Green	Green
750 Hz	Red	Red	Green	Red
800 Hz	Red	Red	Red	Green
850 Hz	Red	Red	Red	Red

8. MAINTENANCE

The inherent quality of the solid-state components used in the VLH-3000A will provide many years of continuous use. Taking the following precautions will prevent damage to the VLH-3000A.

• Keep the rear terminal strip from being directly exposed from direct water spray

• Ensure that the supply voltage to the transceiver does not exceed 16 VDC or fall below 11 VDC.

• Use only STANDARD HORIZON-approved accessories and replacement parts.

In the unlikely event of serious problems, please contact your Dealer or our repair facility. Address and phone numbers for this facility, as well as warranty information, are contained in section "9 WARRANTY".

8.1 Replacement Parts

Occasionally an owner needs a replacement mounting bracket or knob.

Commonly requested parts, and their part numbers are listed below.

• **Power Cord**: T9027107B
• **Dust Cover**: RA077220A
• **LISTEN/PWR Knob**: RA078550A
• **IC Knob**: RA6100800
• **DIM Knob**: RA6095100
• **PA Knob**: RA078540A
• **Mounting Bracket**: RA077320A
• **Mounting Bracket Knob**: RA0978600
• **Microphone Hanger**: RA0458800

8.2 Factory Service

In the unlikely event that the radio fails to perform or needs servicing, please contact your Dealer or Marine Division of YAESU U.S.A.

An "RA" Return Authorization number is not necessary to send a product in for service. Include a brief note describing the problem along with your name, return address, phone number, and proof of purchase.

8.3 Troubleshooting Chart

Troubleshooting Chart		
Symptom	**Probable Cause**	**Remedy**
Fuse blows	Reversed power wires.	Check the power cable for DC voltage, or replace the fuse (7 A, 250 V).Make sure the red wire is connected to the positive (+) battery post, and the black wire is connected to the negative (-) battery post. If the fuse still blows, contact your Dealer.
Beeps when connecting an intercom speaker.	Incorrect intercom speaker connection.	Refer to connection diagram for proper connections.
Sound is not emitted from the external speaker.	Incorrect intercom speaker connection.	Refer to connection diagram for proper connections.

9. WARRANTY

PLEASE NOTE

The following "Limited Warranty" is for valid for products that have been purchased in the United States and Canada. For limited Warranty details outside the United States, contact the dealer in your country.

To receive warranty service in Europe, for European Sourced products, the purchaser must return the Product, shipment and insurance prepaid to the purchasing dealer or authorized Service Centre in Europe.

STANDARD HORIZON LIMITED WARRANTY

STANDARD HORIZON (the Marine Division of Yaesu Musen Co. Ltd) warrants, to the original purchaser only, each new Marine Product ("Product") manufactured and/or supplied by STANDARD HORIZON against defects in materials and workmanship under normal use and service for a period of 3 years from the date of purchase.

In the event of a defect, malfunction or failure of the Product during the warranty period, STANDARD HORIZON's liability for any breach of contract or any breach of express or implied warranties in connection with the sale of Products shall be limited solely to repair or replacement, at its option, of the Product or part(s) therein which, upon examination by STANDARD HORIZON, appear to be defective or not up to factory specifications. STANDARD HORIZON may, at its option, repair or replace parts or subassemblies with new or reconditioned parts and subassemblies.

STANDARD HORIZON will not warrant installation, maintenance or service of the Products. In all instances, STANDARD HORIZON's liability for damages shall not exceed the purchase price of the defective Product.

STANDARD HORIZON will pay all labor and replacement parts charges incurred in providing the warranty repair service except where purchaser

abuse or other qualifying exceptions exist. The purchaser must pay any transportation expenses incurred in returning the Product to STANDARD HORIZON for service.

This limited warranty does not extend to any Product which has been subjected to misuse, neglect, accident, incorrect wiring by anyone other than STANDARD HORIZON, improper installation, or subjected to use in violation of instructions furnished by STANDARD HORIZON, nor does this warranty extend to Products on which the serial number has been removed, defaced, or changed. STANDARD HORIZON cannot be responsible in any way for ancillary equipment not furnished by STANDARD HORIZON which is attached to or used in connection with Products, or for the operation of the Product with any ancillary equipment and all such equipment is expressly excluded from this warranty.

STANDARD HORIZON disclaims liability for range, coverage, or operation of the Product and ancillary equipment as a whole under this warranty.

STANDARD HORIZON reserves the right to make changes or improvements in Products, during subsequent production, without incurring the obligation to install such changes or improvements on previously manufactured Products. The implied warranties which the law imposes on the sale of this Product are expressly LIMITED, in duration, to the time period specified above. STANDARD HORIZON shall not be liable under any circumstances for consequential damages resulting from the use and operation of this Product, or from the breach of this LIMITED WARRANTY, any implied warranties, or any contract with STANDARD HORIZON. IN CONNECTION WITH THE SALE OF ITS PRODUCTS, STANDARD HORIZON MAKES NO WARRANTIES, EXPRESS OR IMPLIED AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, EXCEPT AS EXPRESSLY SET FORTH HEREIN.

Some Countries in Europe and States of the USA do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how an implied warranty lasts, so the above limitation or exclusions may not apply. This warranty provides   rights, there may be other rights available which may vary between countries in Europe or from state to state within the USA.

10. SPECIFICATIONS

Input Voltage: 13.8 VDC ±20%
Maximum Current: 7 A
Operating Temperature Range: -4 °F to +131 °F (-20 °C to +55 °C)
Storage Temperature Range: -22 °F to +158 °F (-30 °C to +70 °C)
Water Integrity Performance: IPX7 (3 ft for 30 min) for the front panel
Dimensions: 4.3" H x 7.1" W x 5.5" D
                                 (110 H x 180 W x 140 D mm)
Flush-Mount Dimensions: 3.6" H x 6.5" W x 4.5" D
                                 (92 H x 165 W x 115 D mm)
Weight (Approx.):   2.97 lbs (1.35 kg)
Microphone Impedance: 2 kΩ
Microphone Sensitivity: 10 mV
Speaker Impedance:
        Internal Speaker   8 Ω
        External Speaker   4 Ω
        Intercom Speaker   4 Ω
        PA Horn   4 Ω
Maximum Output Power:
        Internal Speaker   2.0 Watts (@8 Ω, 10 % distortion)
        External Speaker   4.0 Watts (@4 Ω, 10 % distortion)
        Intercom Speaker   4.0 Watts x 2 CH (@4 Ω, 10 % distortion)
        PA Horn   30 Watts x 2 CH (@4 Ω, 10 % distortion)
Fog Horn Frequency: 150 - 850 Hz (Adjustable, 50 Hz multiple)

Standard Horizon reserves the right to make changes and enhancements to products at our discretion. Current specification are therefore subject to change without notice.

11. FCC NOTICE

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Declaration of Conformity

We, Yaesu UK Ltd. certify and declare under our sole responsibility that the following equipment complies with the essential requirements of the Directive 1999/5/EC and 2011/65/EU.

Type of Equipment	Loud Hailer
Brand Name	STANDARD HORIZON
Model Number	VLH-3000A
Manufacturer	YAESU MUSEN CO. LTD.
Address of Manufacturer	Tennozu Parkside Building, 2-5-8 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002 Japan

Applicable Standards:
This equipment is tested to and conforms to the essential requirements of directive, as included in following standards:

Safety 1999/5/EC Art. 3(1)(a)	EN 60950-1:2006 + A2:2013
EMC 1999/5/EC Art. 3(1)(b)	EN 61000-6-1:2007
	EN 61000-6-3:2007+A1:2011
ROHS2 2011/65/EU Art. 7 (b)	EN 50581:2012

Check out the collection of marine fish finders we offer.