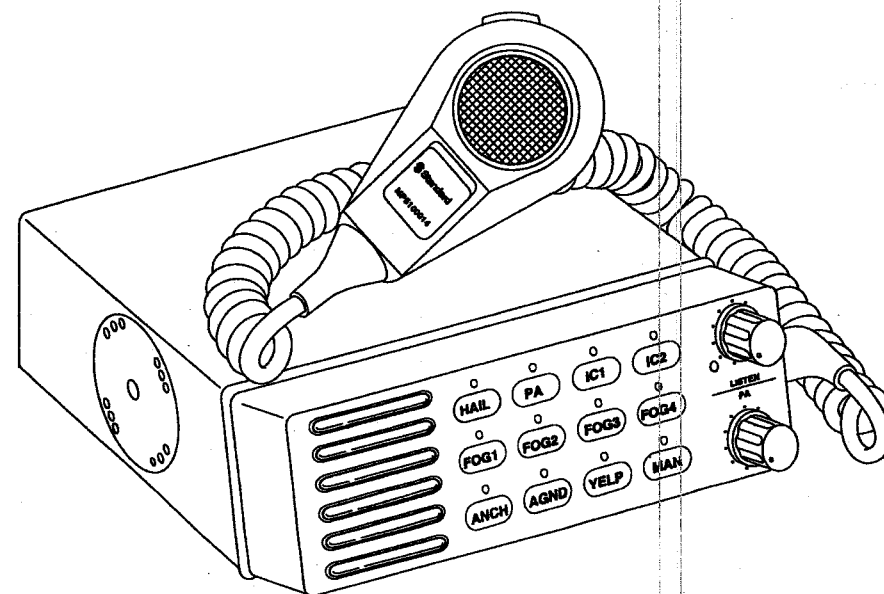


# LH5 Loud Hailer

## Owner's Manual

### Contains:

- Warranty
- Installation
- Controls
- Operation
- Specifications
- Maintenance and Care



 **Standard**  
Communications

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 **Standard**  
Communications

# LIMITED WARRANTY

Standard Communications Corp. (SCC) warrants, to the original consumer purchaser ("the Purchaser") only, that each new Marine Product will be free from defects in materials and workmanship under conditions of normal use and service for a period of OF TIME FROM THE DATE OF PURCHASE AS FOLLOWS:

Loud Hailer - 3 years

Associated Accessories - 1 year

To receive warranty service, the Purchaser must deliver the Product, transportation and insurance prepaid, to SCC Standard Communications Corp., 4876 W. North Temple, Salt Lake City, Utah 84116. Include proof of purchase indicating model, serial number, and date of purchase. SCC will return the Product to the Purchaser freight prepaid. Products purchased prior to January 1, 1991 will bear the SCC warrant terms in effect prior to that date.

In the event of a defect, malfunction or failure of a Product during the warranty period, SCC'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 SCC, shall appear to be defective or not up to factory specifications. SCC may, at its option, repair or replace parts or subassemblies with new or reconditioned parts and subassemblies. Parts thus repaired or replaced are warranted for the balance of the original applicable warranty.

SCC will not warrant installation, maintenance or service of the Product. In all instances, SCC's liability for damages shall not exceed the purchase price of the defective Product. This warranty only extends to Products sold within the 50 States of the United States of America and the District of Columbia.

SCC will pay all labor and replacement parts charges incurred in providing the warranty service except where purchaser abuse or other qualifying exceptions exist. The Purchaser must pay any transportation expenses incurred in returning the Product to SCC 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 SCC, improper installation, or subjected to use in violation of instructions furnished by SCC, nor does this warranty extend to Products on which the serial number has been removed, defaced, or changed. SCC cannot be responsible in any way for ancillary equipment not furnished by SCC which is attached to or used in connection with SCC's Products, or for the operation of the Product with any ancillary equipment and all such equipment is expressly excluded from this warranty. SCC disclaims liability for range, coverage, or operation of the Product and ancillary equipment as a whole under this warranty. SCC 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. SCC 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 SCC. IN CONNECTION WITH THE SALE OF ITS PRODUCTS, SCC 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 states do not allow limitations on the duration of the warranty or exclusions or limitations of incidental or consequential damages, so these limitations or exclusions may not apply to you. This warranty gives you specified legal rights which vary from state to state.

## CUSTOMER RECORD

Purchase Date: \_\_\_\_\_

Purchased From: \_\_\_\_\_

Equipment Model No: LH5 Loud Hailer

Equipment Serial No: \_\_\_\_\_

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# GENERAL INFORMATION

## General

The Standard Communications Corporation (SCC) Model LH5 is a marine Loud Hailer that operates as a multifunction unit. It has three modes:

- Hail/Listen-Back
- Intercom
- Automatic Signaling

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

In the **Intercom** mode, the Loud Hailer can have private conversations with up to two 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 of the signaling vessel, and to indicate the vessel's status or maneuverability limitation.

Your Loud Hailer requires 13.8 VDC ( $\pm 20\%$ ) power input. Its maximum power output is 20 Watts.

## Options

Certain external equipment is necessary for a complete system. Because the need for this equipment varies depending on the installation and the owner's needs, this equipment is offered as options, available from your SCC Dealer.

Option	Description
201S	Extension speaker with RCA phono plug, available in white, brown, and gray. May also be used as an intercom speaker.
230SW	PA Speaker, 4-Ohm, 30 Watts.
CHS03	Telephone-type intercom handset with wall bracket.
CSK202	Bracket-mount intercom speaker with push-to-alert button.
CAW50	50-foot intercom cable.
CAW100	100-foot intercom cable.
CMB10	Anti-theft Mounting Bracket.
CMB11	Flush-Mount Bracket (white, black, or brown).
DC23	Dust Cover.

# INSTALLATION

## Pre-Installation Considerations

1. Locate the unit where it will be protected from direct exposure to water spray or rain.
2. Keep in mind that the cables for the PA horn, intercom speakers, external speaker (if desired), and the power source must be connected to the unit.
3. Mount the unit so that the controls and microphone are both visible and accessible.
4. Do not locate the unit or external speaker close to a compass. Both the microphone and speaker contain permanent magnets which could cause erroneous compass readings.

## Installation With the Supplied Mounting Bracket.

With the supplied mounting bracket, the unit can be mounted suspended from an overhead structure or sitting on top of a structure as shown in Figure 1. Within the mounting bracket, the unit can be rotated to tilt up or down. To rotate the unit within the supplied mounting bracket, remove the two mounting knobs, rotate the unit to the desired angle, and replace and tighten the mounting knobs.

The unit is supplied with its face angled up within its case approximately 20 degrees. This can be easily changed so that it tilts down by 20 degrees instead, if desired. Figure 2 shows the two angles that the face can be positioned. The following procedure tells how to change the angle:

1. Remove the two screws on the rear of the LH5.

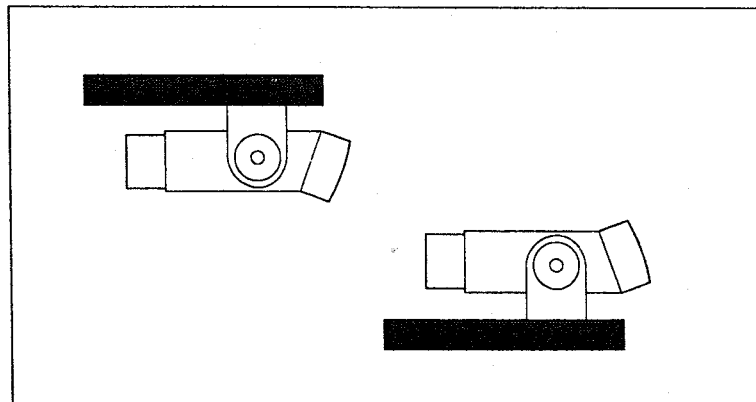


Figure 1. Standard Mounting

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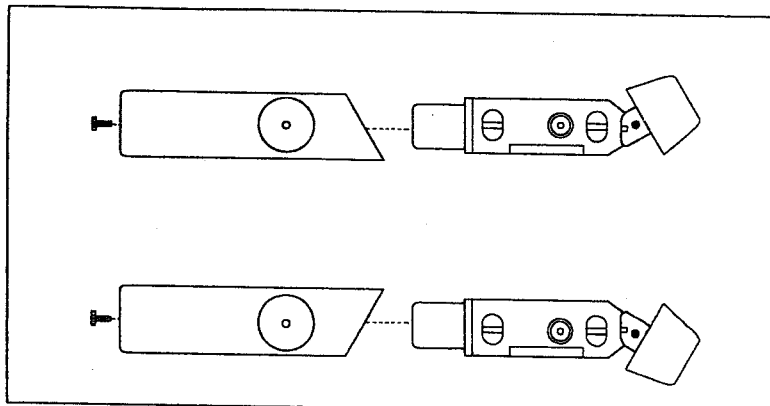


Figure 2. Tilting the Face of the LH5

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2. Slide the main case off the LH5.
3. Adjust the face to the desired position by tilting it up or down. See Figure 2.
4. Replace the main case according to the angle of the face.
5. Re-install the two screws that were removed in step 1.

### Installation With the Optional CMB10 Mounting Bracket

Refer to Figure 3 for the following procedure.

1. Remove two screws on the rear of the LH5 and slide the main case off.
2. There are three indentations on the top and the bottom of the LH5 case. Depending on the desired installation position, drill three holes through the top or bottom of the case, using the indentations as drill guides.
3. From inside the case, install the three special screws supplied with the CMB10 through the new holes. Ensure that the screws fit snugly in the holes.
4. From outside the case, secure the three special screws with the flat washers and nuts included with the CMB10.
5. Tighten the nuts using the special wrench/key and Allen wrench included with the CMB10.
6. Slide the case back onto the LH5 and secure it with the two screws removed in step 1 above.
7. Use 6 screws or bolts (not provided) to attach the CMB10 in the desired location in your boat. The CMB10 should be installed with its two soft rubber strips exposed; they will press against the LH5 to hold it firmly in place and eliminate vibration.
8. Connect the power and speaker cables to the LH5.

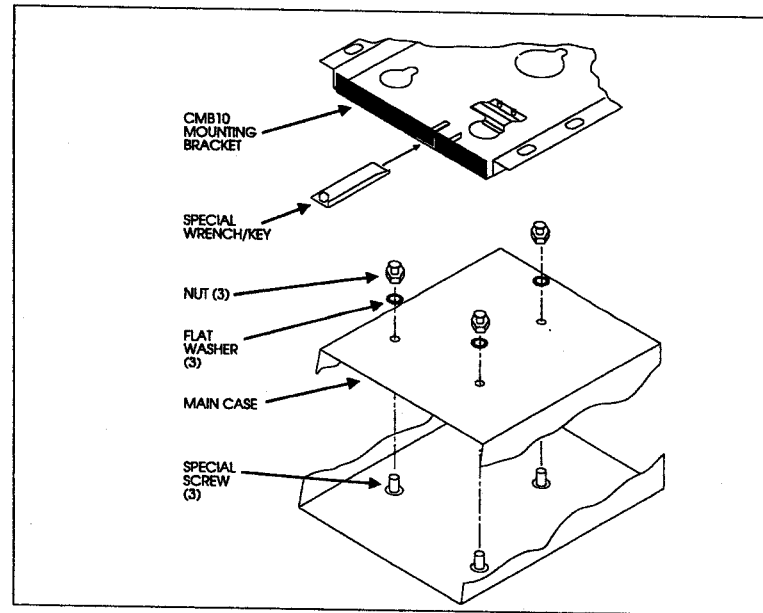


Figure 3. CMB10 (Optional) Mounting Bracket Installation

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9. Slide the three special screws on the LH5 case into the slotted holes in the CMB10 until the LH5 snaps firmly into place. It will be necessary to slightly compress the soft rubber strips on the bracket (see step 7).
10. The LH5 is now locked firmly in place and can only be removed using the wrench/key provided.

### CAUTION

**DO NOT LOSE THIS SPECIAL KEY (SCC PART NUMBER 4618070210); THE LH5 WILL BE ALMOST IMPOSSIBLE TO REMOVE WITHOUT DAMAGE UNLESS THIS KEY IS USED!**

11. To remove the LH5, insert the special wrench/key into the key slot as shown in Figure 3. The LH5 can then be removed by simply pulling it forward.

### Installation With the Optional CMB11 Flush-Mount Bracket

Refer to Figure 4 for the following procedure:

1. Use the template supplied with the CMB11 to mark a rectangular hole (5-7/8 x 2-3/8 inches) and the screw locations. Confirm that the space behind the

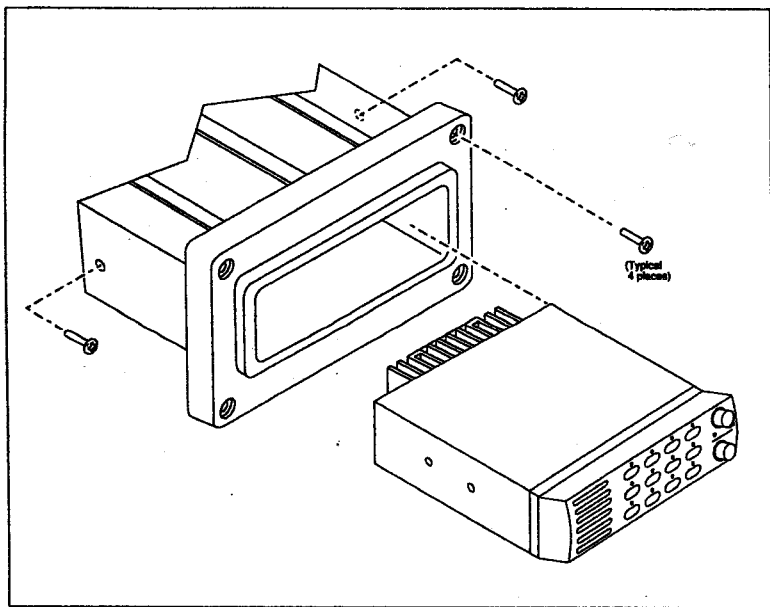


Figure 4. CMB11 (Optional) Flush-Mount Bracket

5014

dash or panel is deep enough to accommodate the LH5. Provide at least 1/2 inch space between the rear of the LH5 and any structure or cables.

2. Cut out the rectangular hole. Confirm that the holes for the screws have been marked clearly as stated in Step 1.
3. Insert the LH5 into the CMB11 and fasten with the two screws provided with the CMB11.
4. Slide the CMB11 and the LH5 into the rectangular hole. Fasten into the rectangular hole with the four screws supplied with the CMB11.

### Electrical Installation

The rear panel of the LH5 contains:

- An external speaker jack
- A DC power cord
- A terminal strip for the PA horn and two intercom speakers

Refer to Figure 5 and complete the following steps for the electrical installation:

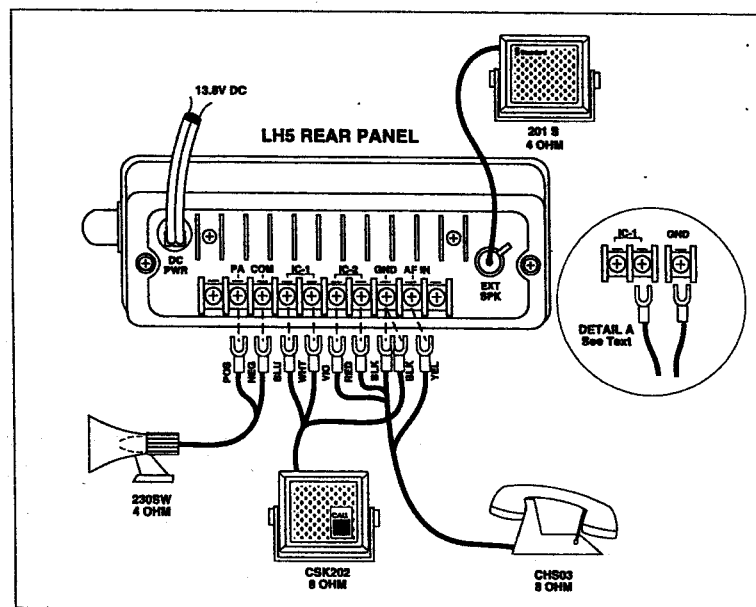


Figure 5. Electrical Connections

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1. Use the supplied power cord assembly for power connection. Connect the red wire to the "+" terminal, and the black wire to the "-" terminal of the power source.

### CAUTION

**IRREPARABLE DAMAGE CAN RESULT FROM CONNECTION TO THE WRONG POWER SOURCE POLARITY!**

2. Use #22 AWG (or larger) stranded, plastic-jacketed wire to connect the PA horn and intercom speakers.
3. An external 4-Ohm speaker with RCA phono plug may be installed, if desired. This should be connected to the EXT SPK (external speaker) jack on the rear of the LH5. NOTE: This will disable the LH5 internal speaker.
4. For the PA horn, it is recommended that a 35-Watt horn speaker be used. Also note that an 8-Ohm PA speaker may be used, but the loudness will be reduced.
5. The LH5 can use the optional CHS03 telephone-type intercom handset, CSK202 speaker, or 201S speaker (in any combination). These are connected to any of the IC connectors, IC-1 and IC-2. When these options are used, refer to the installation and operating instructions supplied with them.

6. See Detail A in Figure 5. If a 2-wire speaker is connected to IC-1 or IC-2; one wire should be connected to the right-hand terminal and the second wire should be connected to the GND terminal, *not the left-hand IC terminal!* If you connect one of the wires of a 2-wire speaker to a left-hand IC terminal, the Loud Hailer will beep continuously when turned on.

## CONTROLS

Refer to Figure 6 for the location of LH5 controls. Sections A, B, C, D and E below explain each control.

### A. LISTEN-BACK Volume Control & Power Switch

- Turns on power when rotated clockwise
- Turns off power when rotated fully counterclockwise to the click position.
- Adjusts the volume level of the built-in speaker or external speaker in the LISTEN-BACK mode.

### B. PA Volume Control

- Adjusts the PA horn or intercom speaker(s) volume in the HAIL or AUTOMATIC SIGNALING mode.

### C. KEYBOARD

- PA - Activates the PA horn.
- IC1 - Activates Intercom speaker IC1.
- IC2 - Activates Intercom speaker IC2.
- HAIL - Activates the HAIL/LISTEN-BACK mode.

In the HAIL/LISTEN-BACK mode:

When microphone PTT (push-to-talk) button is pressed, words spoken into the microphone are amplified and sent to the PA horn or to the intercom speaker activated. Note: *Only the PA horn or an intercom speaker can be activated at a time.*

When the PTT button is released, the PA horn or intercom speaker (whichever is activated) acts as a microphone. Sounds in the vicinity of the PA horn or intercom speaker will be amplified by the LH5 and heard on its internal or external speaker.

### D. MICROPHONE PTT BUTTON

- Activates the microphone

### E. INTERNAL SPEAKER

- Provides audio from intercom speakers or PA Horn

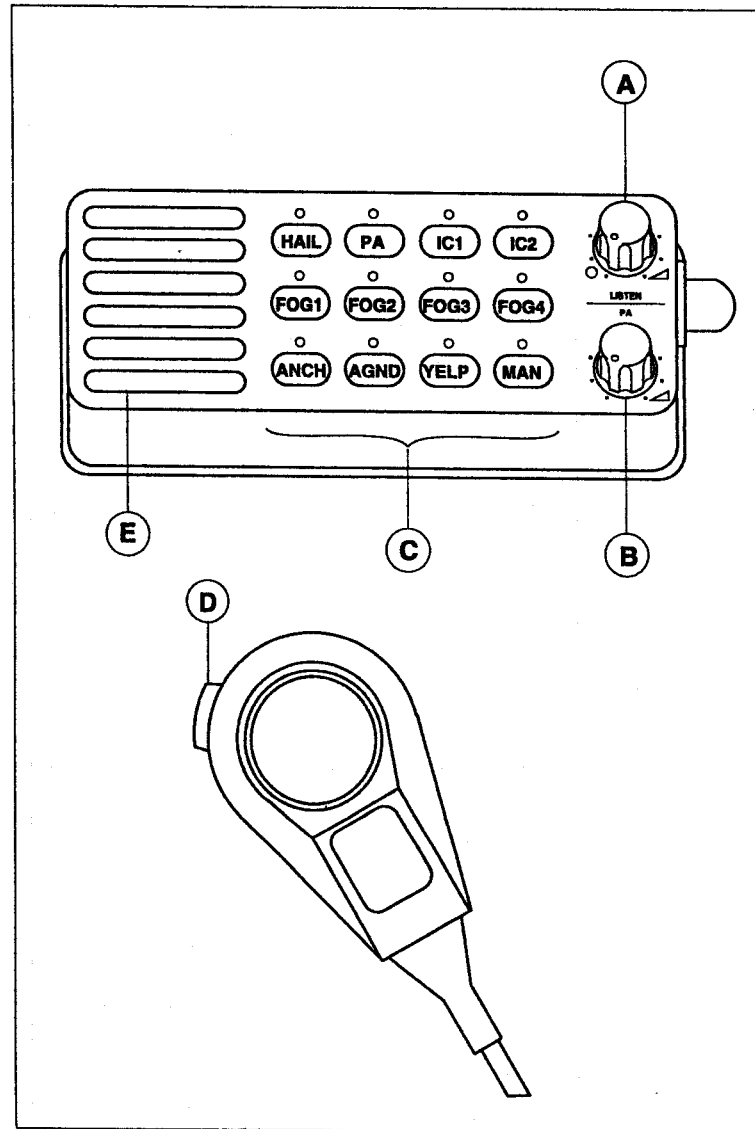


Figure 6. Controls

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# OPERATION

This section contains operating instructions for your LH5.

## Hail/Listen-Back

1. Turn on the LH5 by rotating the LISTEN-BACK Volume Control/Power Switch clockwise. The Loud Hailer will automatically go to the HAIL mode, and the PA horn will be activated. The respective LEDs above the HAIL and PA keys will light.
2. If you want to activate one of the intercom speakers, press either the IC1 or IC2 key. The LED above the key that was pressed will light, indicating that it is activated. Otherwise the PA horn will remain activated. To shift to another speaker/horn, press the key corresponding to the desired speaker/horn.
3. Only one PA horn or intercom speaker can be activated at a time.
4. Adjust the LISTEN-BACK Volume Control/Power Switch to approximately 1/3 of its rotation to regulate the volume of the input audio on the LH5 built-in/external speaker.
5. Adjust the PA volume control to approximately 1/3 of its rotation to regulate the output audio level.
6. When the LH5 is in the HAIL mode (the LED above the HAIL key lit), press the microphone PTT button. Speak clearly with your mouth about one inch from the microphone.
7. To use the LH5 in the LISTEN-BACK mode, release the microphone PTT button. The activated horn or intercom speaker will automatically act as a microphone and the incoming audio signal will be heard from the built-in or external LH5 speaker.

## IC (Intercom)

To use the intercom feature of your LH5, optional intercom speakers are necessary. The following are available from your SCC Dealer:

- CHS03 - Telephone-type handset with PTA (push-to-alert button)
- CSK202 - Bracket-mount speaker with PTA
- 201S - Mobile Speaker

Any combination of the above options may be used as intercom speakers with the LH5. Operating instructions are included with each option.

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 LH5 is in the HAIL mode, and press the microphone PTT button. Speak clearly with your mouth about one inch from the microphone.

3. To use the LISTEN-BACK mode, release the microphone PTT button. The activated intercom speaker will automatically act as a microphone and the incoming audio signal will be heard from the built-in/external LH5 speaker.
4. CALL WAITING feature: If the LH5 is in any other mode, the intercom speakers can alert the LH5 by pressing the PTA button on the CSK202 or CHS03. An LH5 internal beeper will also sound to indicate a call from the intercom speaker. At the same time the LED above the calling intercom speaker will blink. Press the corresponding key to activate the intercom speaker. If the calling intercom speaker is already activated, the LED will light continuously.
5. Adjust the volume of the built-in/external speaker by rotating the LISTEN-BACK volume control.

## Automatic Signaling

Automatic signaling is typically transmitted through the PA horn, but the LH5 can also send these signals to the intercom speaker(s). **Additional information on signaling is given in the next section: MORE ABOUT SIGNALS.**

1. Press the PA key to activate the PA horn or IC1 or IC2 to activate the intercom speaker(s).
2. Press one of the following front-panel keys to send the desired signal:

**FOG1** - Sends a 5-second blast. Repeats every 2 minutes.

**FOG2** - Sends two 5-second blasts. Repeats every 2 minutes.

**FOG3** - Sends a 5-second blast followed by two 1-second blasts. Repeats every 2 minutes.

**FOG4** - Sends a 5-second blast followed by three 1-second blasts. Repeats every 2 minutes.

**ANCH** - Sends a 5-second rapidly ringing bell. Repeats every minute.

**AGND** - Sends 3 strokes of a bell followed by 5 seconds of rapid bell ringing, followed by 3 strokes of a bell. Repeats every minute.

**YELP** - Sends a varying pitch (yelping) tone. Used by coast guard and patrol vessels. Press the YELP key and then keep the microphone PTT button pressed to send the signal.

**MAN** - For passing signals, press this key and then the microphone PTT button for a duration and frequency depending on the desired signal.

## MORE ABOUT SIGNALS

The following list is a summary of signals used in restricted visibility such as rain or fog. These signals serve two purposes: they alert nearby vessels to the presence and approximate position of the signaling vessel, and they indicate the vessel's status or maneuvering limitations.

### Power-Driven Vessels Underway

A power-driven vessel making way through the water must sound one prolonged blast at intervals of not more than two minutes (LH5 FOG1 button).

A vessel underway but making no headway through the water must sound, at the same two-minute intervals, two prolonged blasts separated by an interval of about two seconds. (LH5 FOG2 button)

A vessel towing or pushing another, a vessel not under command, a vessel restricted in her ability to maneuver, and a fishing vessel underway or anchored all sound the same signal: one prolonged blast followed by two short blasts (LH5 FOG3 button).

### Sailing Vessels Underway

A sailing vessel underway uses the same signals in restricted visibility conditions as a towing or fishing vessel: one prolonged blast followed by two short blasts (LH5 FOG3 button).

### Vessels At Anchor

A vessel at anchor must, at intervals of not more than one minute, ring its bell rapidly for about 5 seconds (LH5 ANCH button). If the vessel is 100 meters or more in length, the bell must be sounded in the forward part of the vessel, and immediately thereafter the bell must be sounded rapidly in the aft part of the vessel.

### Vessels Aground

A vessel aground must, sound 3 bell strokes (each stroke about one second apart), followed by 5 seconds of bell ringing, and then a second set of 3 bell strokes. This must be repeated at 1-minute intervals (LH5 AGND button).

A vessel aground may also sound an appropriate whistle signal on detecting the approach of another vessel, if there is the possibility of collision. It could be a short-long-short signal, or the letter "U" of the International Morse Code (short-short-long). Press the LH5 MAN button and then the microphone PTT button to produce this signal.

### Vessels Being Towed

If manned, a vessel being towed (or the last vessel, if several are being towed in a string) must sound a signal of four blasts at intervals of not more than two minutes. When possible, this signal should be sounded immediately after the signal of the towing vessel (Power-Driven Vessels Underway).

## SPECIFICATIONS

Functions	Hailer/Intercom/Signaling
Nominal Input Voltage	13.8 VDC $\pm$ 20%
Maximum Current	5A
Dimensions	2.4-H x 5.8-W x 7.2-D in. 60-H x 145-W x 180-D mm.
Weight	1.98 Lb. (0.9 kg)
Microphone Impedance	Low Impedance
Audio Frequency Response	
at 100 Hz	-3 dB
at 8000 Hz	-3 dB
Fog Horn Frequency	400 Hz $\pm$ 10%
Speaker Impedance	
Horn	4 Ohms
Remote Intercom	8 Ohms
External	4 Ohms
Output Power	
PA Output	20 Watts max.
IC Output	4.5 Watts max
External Speaker	6.0 Watts max

## MAINTENANCE

The LH5 requires no routine maintenance. However, proper care and good judgment will ensure a long and trouble-free life. The following guidelines will assist you in maintaining the unit's peak performance:

Protect the LH5 from exposure to water spray, rain, or other inclement weather conditions.

Avoid operating the LH5 on a supply voltage of less than 11 VDC or more than 16.5 VDC.



## TROUBLESHOOTING

The following chart will assist in determining if service is required. It includes the most common user-correctable problems that can occur.

TROUBLESHOOTING CHART		
SYMPTOM	PROBABLE CAUSE	SOLUTION
Fuse blows	Battery Polarity	Check polarity of power cable connections. Replace fuse with 5A 32V fuse. If fuse still blows, contact a marine electronics technician or your SCC Dealer for service.
Beeps when connecting an Intercom speaker	Incorrect intercom speaker connections.	Refer to connection diagram for proper connections.
External speaker will not plug into EXT SPK Jack	Incorrect connector on speaker	EXT SPK Jack will only accept RCA phono plug

## FACTORY SERVICE

In the unlikely event that your LH5 fails to perform or needs servicing, please contact the following:



**U.S. Headquarters:**  
10900 Walker Street • Cypress, CA 90630