

Thank You!

Thank you for choosing Humminbird®, America's #1 name in fishfinders. Humminbird® has built its reputation by designing and manufacturing top-quality, thoroughly reliable marine equipment. Your Humminbird® is designed for trouble-free use in even the harshest marine environment. In the unlikely event that your Humminbird® does require repairs, we offer an exclusive Service Policy - free of charge during the first year after purchase, and available at a reasonable rate after the one year period. For complete details, see the warranty information at the end of this manual. We encourage you to read this operations manual carefully in order to get the full benefit from all the features and applications of your Humminbird® product.

The RF45 SmartCast® product should have:

- One Advanced Remote Sonar Sensor - RSS™
- This RF45 SmartCast® Operations Manual.

If any of these components are missing, please contact our Customer Resource Center at either **1-800-633-1468** or visit our website at **www.humminbird.com**.

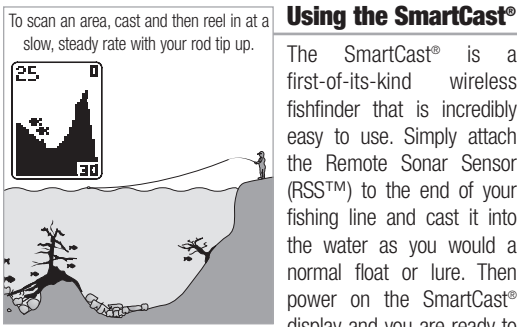
NOTE: The RF45 also comes in an International version that is CE-compliant.

WARNING! Disassembly and repair of this electronic unit should only be performed by authorized service personnel. Any modification of the serial number or attempt to repair the original equipment or accessories by unauthorized individuals will void the warranty. Handling and/or opening this unit may result in exposure to lead, in the form of solder.

WARNING! This product contains lead, a chemical known to the state of California to cause cancer, birth defects and other reproductive harm.

WARNING! The bottom of the RSS™ should not be handled during sonar operation, as this may cause physical discomfort and may result in personal injury in the form of tissue damage. Handle the RSS™ only by the antenna tower when it has been in the water.

WARNING! The RSS™ (Remote Sonar Sensor) is not intended for use by children younger than 6 years old without adult supervision as the RSS™ may represent a choking hazard to small children.



fish. The SmartCast® system uses sonar technology to send sound waves from the RSS™ into the water. The returned "echoes" are transmitted with wireless technology to the SmartCast® and plotted on the display. New information appears on the right. As this information moves to the left a very accurate picture of the underwater world is created, including objects such as the bottom, fish, and structures, as well as the depth of the bottom.

WARNING! The electronic parts in the Remote Sonar Sensor (RSS™) are made to withstand use when casting into water. Because shock from abrupt contact with rocks can damage your RSS™, we do NOT recommend using your RSS™ in water that is less than one foot (0.3 m) deep.

Operational Modes

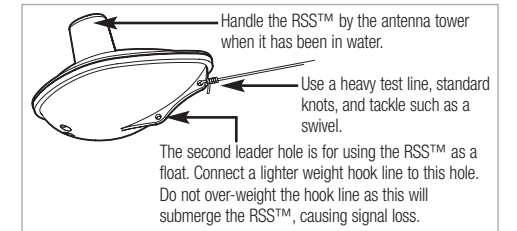
The RSS™ can be used in two distinct ways:

Sonar Graph: The RSS™ can be used to create a sonar graph of the bottom. Cast the RSS™ into the water beyond an area of interest, then reel in the RSS™ at a slow and steady rate. The digital display will provide precise information for bottom contour, depth and structure below the RSS™. Fish and bait fish will be displayed when detected.

Stationary Float: The RSS™ can be used as a float in a stationary location to monitor the area below, giving you a live update as fish approach your bait.

Attaching the RSS™

The line coming from your reel can be tied off to the front hole in the Remote Sonar Sensor (RSS™). If you also wish to use the RSS™ as a conventional float, use the second hole to attach your hook using a lighter weight line. A snag will break the lighter line if you have to break free. Slip line techniques are not recommended because of the higher risk of losing the RSS™. If you do use the slip line method, use a lighter weight line after the lower stop, enabling retrieval of the RSS™ if the lower line with hook breaks away.



CAUTION: You will increase the possibility of breaking your line if you use light test pound line on your reel. The RSS™ is positively buoyant (is buoyant under its own weight plus 0.2 ounces or 5.7 g of bait and lead weight.) The maximum amount of weight for any attachment to the RSS™ is approximately ¼ to ¾ ounces (5.3 g to 5.8 g), and includes the combined weight of any hook, line,



weight, swivel/snap swivel and bait that is attached to the RSS™. The RSS™ itself weighs 1 ounce (28 g), and therefore light test line might break.

NOTE: Store the RSS™ in a dry, non-metallic container, such as a tackle box, in a separate compartment, and isolated from any metallic devices.

RSS™ Power

The Remote Sonar Sensor (RSS™) has a separate, non-replaceable lithium battery that has a shelf life of three years and will last for approximately 500 hours of in-water use (when the nighttime LED is turned off). Discard the used RSS™ in compliance with local laws as you would any electronic component or battery.

The RSS™ will turn on its Sonar Transmitter/Receiver automatically when it is immersed in the water. Once immersed, the RSS™ will begin transmitting the sonar information via radio frequency (RF) to the SmartCast® display. The RSS™ automatically stops using power a few seconds after being pulled out of the water.

WARNING! Do not place the RSS™ in a wet area when not in use as this will turn on the RSS™ and shorten its usable life. Store the RSS™ in a dry area when not in use to conserve power. Never place the RSS™ in a wet area of a boat or on a metal surface that could accidentally power it on.

NOTE: If the RSS™ was used in salt water, rinse it with fresh water before storing it.

Channel A and B RSS™ Units

The Advanced RSS™ may be programmed to either Channel A or Channel B. This A/B Channel option gives you the flexibility to switch to a different channel if another angler is using a SmartCast® unit within 150 feet of your RSS™ to reduce possible interference. See **Changing the Channel on the Advanced RSS™** for details on selecting either Channel A or Channel B.

NOTE: RSS™ units, regardless of channel, may generate erratic depth readings as a result of sonar interference when used in close proximity (closer than 40 feet) to each other or to other sonar devices.

Understanding the Advanced RSS™

The Advanced RSS™ provides the following functionality:

- Water Surface Temperature
- Blinking Light for nighttime use
- Grayscale Sonar Data (only available on those units which support grayscale)
- A/B Channel Select.

Grayscale sonar data and water temperature will be displayed automatically on the screen.

You must manually program the Advanced RSS™ in order to turn the light on or off or to change the RSS™ channel setting to A or B.

Default settings on new products are Light = OFF and Channel = A.

RSS™ Programming Mode

You may change the light setting or the channel type on the Advanced RSS™ using a programming mode that is accessed by touching the wet switch contacts on the bottom of the RSS™.

NOTE: Please read this and the next section BEFORE you try to program the Advanced RSS™ using the wet switch contacts. Specific step-by-step procedures to turn on the light and to change the channel follow this section. You will find it easier to perform these steps once you have grasped the way the programming mode works.

The programming mode allows you to:

- turn on the blinking light
- switch the Advanced RSS™ Channel from A to B.

The SmartCast® display temperature readout provides user feedback to help you make the correct selections. The temperature readout will change on the display to 40°F (4°C), 45°F (7°C), 50°F (9°C) or 55°F (12°C) to signify the following settings.

NOTE: If the temperature readout is set for degrees Celsius then the temperature readout will change on the display to 4, 7, 9 or 12 to signify the following settings:

Light setting:

Temp changes to ...	Means that ...
40°F (4°C)	Blinking light is OFF (factory default)
45°F (7°C)	Blinking light is ON (but only blinks when the Advanced RSS™ is in the water)

Channel setting:

Temp changes to ...	Means that ...
50°F (9°C)	RSS™ is set to CHANNEL A (factory default)
55°F (12°C)	RSS™ is set to CHANNEL B

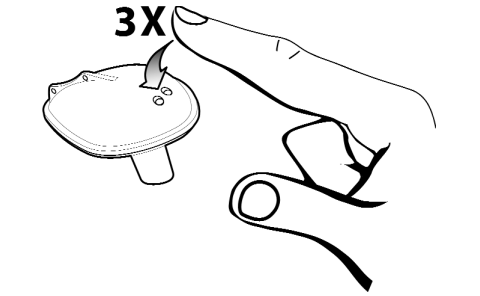
IMPORTANT: The SmartCast® Control Head must be turned on and the CHANNEL SELECT SetUp menu on the Control Head must be set to Channel A (even if the RSS™ is set to Channel B) before you can see the feedback on the Control Head temperature readout.

NOTE: The Advanced RSS™ programming mode will time out after 20 seconds of no user activity, display the Start-Up screen, and return the RSS™ to normal operation.

NOTE: If the temperature display returns to a normal reading, or the Start-Up screen appears on the display, you are no longer in programming mode.

How the Wet Switch™ Works

In the following sections, you will use the wet switch contacts on the bottom of the Advanced RSS™ to enter programming mode and to change the Light and Channel settings. Before you try these procedures for the first time, please read through this section to familiarize yourself with the way the Wet Switch™ works.



Your finger should be moist, but not dripping, before you touch the Wet Switch™. You can achieve the correct dampness by dipping your finger in water, then dabbing your finger twice on a towel.

A "touch" means touching both wet switch contacts at the same time with your moistened finger, using medium pressure. The time between touches needs to be one second or less.

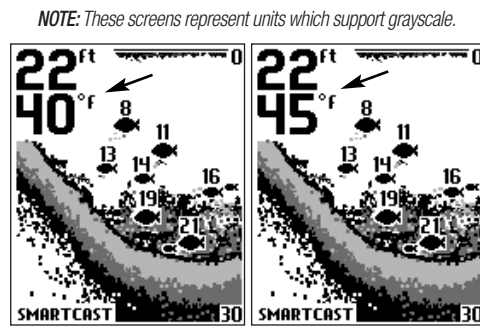
NOTE: Your finger must make contact with both of the wet switch pins simultaneously in order to tap them successfully.

See the procedures that follow for specific instructions on turning the light on or off or changing the channel from A to B.

Turning on the Advanced RSS™ Blinking Light

To turn on the blinking nighttime fishing light:

1. Wet your finger and tap the wet switch on the Advanced RSS™ three times (the time between touches needs to be one second or less) to enter the Light programming mode. The temperature reading on the display will change to show a temperature reading of 40°F (4°C) (blinking light OFF).



NOTE: These screens represent units which support grayscale.

2. To change the setting to 45°F (7°C) (blinking light ON) touch and release the wet switch contacts once more. Wait two seconds and then confirm that the temperature reading on the display has changed to 45°F (7°C). Single touches will toggle the setting between 40°F (4°C) and 45°F (7°C).

NOTE: When the LED is set to ON it will flash every four seconds when the RSS™ is in operation (i.e. when the wet switch is submerged). Even when the LED is set to ON, the LED will not flash unless the wet switch is activated. If you want to test the RSS™ to make sure the LED is set to ON before using the RSS, wet your finger and hold it on the wet switch; if the LED is set to ON, the LED will begin to flash.

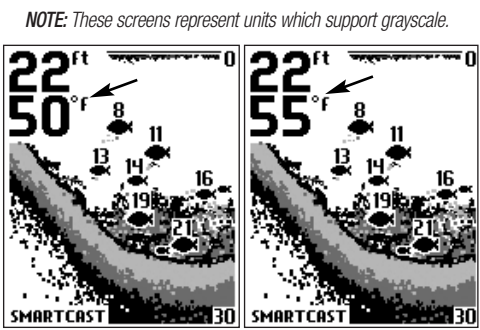
NOTE: Repeat steps 1 and 2 to turn off the LED when finished with night fishing.

3. Once you have made your selection you can either wait 20 seconds for programming mode to time out (the Start-Up screen will appear on the display), or continue immediately to the next procedure to change the channel.

Changing the Channel on the Advanced RSS

To change the channel type on the Advanced RSS:

1. From the Light programming mode (see **Turning on the Advanced RSS™ Blinking Light**), touch and release the wet switch contacts twice more with your moist finger to change from the Light programming mode to the Channel programming mode. The temperature reading on the display will change to show a temperature reading of 50°F (9°C) (channel set to A).



NOTE: These screens represent units which support grayscale.

2. To change the setting to 55°F (12°C) (channel set to B) touch and release the wet switch contacts once more. Wait two seconds and then confirm that the temperature reading on the display has changed to 55°F (12°C). Single touches will toggle the setting between 50°F (9°C) and 55°F (12°C).

3. Once you have made your selection, wait 20 seconds for programming mode to time out (the Start-Up screen will appear on the display).

4. Use the SetUp Channel Select menu on the display to switch the software to match the new channel designation on the Advanced RSS. See **Channel Select (SetUp Menu)** for more information.

CAUTION: Make sure that you change the Channel Selection on the display to match the new Advanced RSS™ Channel before using the Advanced RSS.

Maintenance

Your SmartCast® is designed to provide years of trouble-free operation with virtually no maintenance. Follow these simple procedures to ensure your SmartCast® continues to deliver top performance.

WARNING! Never leave the RF45 SmartCast® product in a closed car or trunk - the extremely high temperatures generated in hot weather can damage the electronics.

RSS™ Maintenance: After using the RSS™ in salt water, wipe the affected surfaces with a cloth dampened with fresh water. The RSS™ Wet Switch™ pins must be rinsed with fresh water after exposure to salt water to prevent corrosion.

If your RSS™ remains out of the water for a long period of time, it may take some time to wet it when returned to the water. Small air bubbles can cling to the surface of the RSS™ and interfere with proper operation. Wipe the face of the RSS™ with a wet cloth to remove them.

If sonar performance becomes weak (i.e., there are bottom gaps or "0" depth readings) the bottom of the RSS™ needs to be cleaned with a drop or two of a 5 to 10 percent solution of liquid dish-washing detergent and water. Use approximately one tablespoon (15 ml) detergent to 8 ounces (237 ml) of water to remove oils from the face of the RSS™, then wipe with a damp cloth.

Troubleshooting

Do not attempt to repair the RSS™ yourself. There are no user serviceable parts inside, and special tools and techniques are required for assembly to ensure the waterproof integrity of the housings. Repairs should be performed only by authorized Humminbird® technicians.

Many requests for repair received by Humminbird® involve units that do not actually need repair. These units are returned "no problem found." If you have a problem with your SmartCast®, use the following troubleshooting guide before calling the Customer Resource Center or sending your unit in for repair.



1. **The SmartCast® loses signal.**
If the SmartCast® is not able to get an RF signal from the RSS™, the display will stop updating (the screen will freeze) and the SmartCast® screen will be displayed after several seconds. Whenever reception is lost or the RSS™ emerges from the water for more than a few seconds, the SmartCast® screen will be displayed until the RSS™ is placed back in the water and reception is regained.

- The SmartCast® system is a line-of-sight wireless product. If objects are placed between the RSS™ and the SmartCast® Display, the reception may be lost.
- The RF45 depth range is 2 to 120 feet (0.6 to 35 meters). Erratic readings may occur in water that is shallower than 2 feet (0.6 m). In addition, because of the nature of sonar, this product is not intended for use in swimming pools or small enclosed bodies of water.
- Reeling the RSS™ too fast can cause loss of signal and the screen will freeze.
- Check the buoyant balance between the RSS™ and your tackle; over 0.2 ounce (5.7 grams) will submerge the RSS™, causing signal loss.
- The RF45 may not obtain its maximum RF distance unless the water is smooth. Waves or chop may reduce the RF range significantly.

NOTE: Retrieving the RSS™ too rapidly, or the repetitive rocking motion of rough water, can result in loss or distortion of the bottom detail on the display. For best bottom detail, perform a smooth and slow reel-in with constant speed and the rod tip up (holding the rod tip low or using a heavy line may cause the RSS™ to submerge and momentarily lose radio contact).

2. **When in very shallow water, I get gaps in the bottom reading and inconsistent digital depth indication.**

The SmartCast® will work reliably in water 2 feet (0.6 meter) or deeper. The depth is measured from the RSS™.

3. **The display shows many black dots at high sensitivity settings.**

You are seeing noise or interference caused by one of several sources. Noise can be caused by other electronic devices. Turn off any nearby electronics and see if the problem goes away. Other sonar devices or any electronic device operating in the 900 mHz range (in the 400 mHz range for International versions) could cause interference with your SmartCast®.

4. **The display shows fluctuating depth readings and excessive clutter, including vertical bars that may be drawn on top of fish icons.**

The SmartCast® system comes with the capability to receive separate signals from a Channel A RSS™ or a Channel B RSS™. Two A- or B-type RSS™ units used simultaneously, as well as one A- and one B-type RSS™ unit used simultaneously, can cause RF interference between each other.

5. **The display jumps and the bottom has an abrupt change; sometimes a vertical line is missing or a black line from top to bottom is displayed.**

This display image jump is due to an automatic change in depth. New returns graphed at a different scale will not match up with the historic data already graphed at a higher or lower scale. Vertical lines can also occur as the radio signal from the RSS™ is lost and then regained in rough water conditions.

Humminbird® One Year Limited Warranty

We warrant the original retail purchaser that products made by Humminbird® have been manufactured free from defects in materials and workmanship. This warranty is effective for one year from the date of original retail purchase. Humminbird® products found to be defective and covered by this warranty will be replaced or repaired free of charge at Humminbird® option and returned to the customer freight prepaid. Humminbird® sole responsibility under this warranty is limited to the repair or replacement of a product that has been deemed defective by Humminbird®. Humminbird® is not responsible for charges connected with the removal of such product or reinstallation of replaced or repaired parts.

This warranty does not apply to a product that has been:

- Improperly installed;
- Used in an installation other than that recommended in the product installation and operation instructions;
- Damaged or has failed because of an accident or abnormal operation;
- Repaired or modified by entities other than Humminbird®.

Please retain your original receipt as a proof of the purchase date. This will be required for in-warranty service.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, OBLIGATIONS OR LIABILITIES ON THE PART OF HUMMINBIRD® AND WILL BE THE CUSTOMER'S EXCLUSIVE REMEDY, EXCEPT FOR ANY APPLICABLE IMPLIED WARRANTIES UNDER STATE LAW WHICH ARE HEREBY LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL PURCHASE. IN NO EVENT WILL HUMMINBIRD® BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY RELATING TO THE PRODUCTS.

Some states do not allow limitations on an implied warranty, or the exclusion of incidental or consequential damages, so the above exclusions may not apply to you. You may also have other rights, which vary from state to state.

International Purchases

A separate warranty is provided by international distributors for units purchased outside the United States. This warranty is included by your local distributor and this distributor maintains local service for your unit. Warranties are only valid in the area of intended distribution. Units purchased in the United States or Canada must be returned to our factory in the United States for service.

Humminbird® Service Policy

Even though you'll probably never need to take advantage of our incredible service policy, it's good to know that we back our products this confidently. We do it because you deserve the best. We will make every effort to repair your unit within three business days from the receipt of your unit at our factory. This does not include shipping time to and from our factory. Units received on Friday are typically shipped by the following Wednesday, units received Monday are typically shipped by Thursday, etc.

All repair work is performed by factory-trained technicians to meet exacting factory specifications. Factory-serviced units go through the same rigorous testing and quality control inspections as new production units.

After the original warranty period, a standard flat rate service charge will be assessed for each repair (physical damage and missing parts are not included). Any repairs made after the original warranty will be warranted for an additional 90 days after service has been performed by our factory technicians. You can contact our Customer Resource Center or visit our website to verify the flat rate repair fee for your product (visit the Product Support section):

<http://www.humminbird.com>

We reserve the right to deem any product unserviceable when replacement parts are no longer available or impossible to obtain. This Service Policy is valid in the United States only. This applies only to Humminbird® products returned to our factory in Eufaula, Alabama. This Service Policy is subject to change without notice.

Returning Your Unit for Service

Before sending your unit in for repair, please contact the factory, either by phone or by email, to obtain a Repair Authorization Number for your unit. Please have your product model name and serial number available before calling the factory. If you contact the factory by e-mail, please include your product model name and serial number in the e-mail, and use Request for Repair Authorization Number for your e-mail subject header. You should include your Repair Authorization Number in all subsequent communications about your unit.

For IN-WARRANTY service, complete the following steps:

- Obtain a Repair Authorization Number from the Humminbird® Customer Resource Center.
- Tag product with your customer name, street address, phone number and your assigned Repair Authorization Number.
- Include a brief written description of the problem.
- Include a copy of your receipt (to show proof and date of purchase).
- Return product freight prepaid to Humminbird®, using an insured carrier with delivery confirmation.

For OUT-OF-WARRANTY service, complete the following steps:

- Obtain a Repair Authorization Number from the Humminbird® Customer Resource Center.
- Include payment in the form of credit card number and expiration date, money order or personal check. Please do not send cash.
- Tag product with your customer name, street address, phone number and your assigned Repair Authorization Number.
- Include a brief written description of the problem.
- Return product freight prepaid to Humminbird®, using an insured carrier with delivery confirmation.

SPECIFICATIONS

RSS™ Specifications:

Power Requirement.....	One non-replaceable Lithium RSS™ Battery
Battery Expected Life.....	3 years (approximately 500 hours of in-water use)
Depth Capability	2 - 120 feet (0.6 - 35 meters)
Sonar Coverage	90° @-10 dB*
Sonar Operating Frequency	125 kHz
Operational Radio Frequency	916.5 mHz (433.92 mHz International)

* Area of bottom coverage equals twice the current depth.



FCC ID: ICLSMG1

Humminbird®

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 received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by Humminbird® could void the users authority to operate the device.

Contact Humminbird®

Your Humminbird® accessory is designed for trouble-free operation and is backed by a one year warranty.

If you have any questions, contact our

Humminbird® Customer Resource Center:

By Telephone
(Monday - Friday 8:00 a.m. to 4:30 p.m. Central Standard Time):
1-800-633-1468

By e-mail
(typically we respond to your e-mail within three business days): custserv@johnsonoutdoors.com

For direct shipping, our address is:

**Humminbird
Service Department
678 Humminbird Lane
Eufaula, AL 36027 USA**



