Raymarine®

DSM300 & DSM30 Digital Sounder Module

Installation Manual

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Important Information

Raymarine DSM300 and DSM30 Digital Sounder Modules provide echo sounder data that can be displayed on Raymarine E Series, C Series, and hsb^2 PLUS (Pathfinder) Series display units.

This manual contains important information for installing and maintaining your Digital Sounder Module. Raymarine's Technical Services representatives or your local dealer will be available to answer any questions you may have.

Instructions on how to operate the fishfinder application can be found in the handbook for your particular display system.

Intended Use

DSM300 and DSM30 Digital Sounder Modules are intended for depth finding and fishfinding purposes on recreational (non-IMO/SOLAS class) boats. Echo sounders require an appropriate Raymarine transducer and interconnecting cable.

Safety Notices

This equipment must be installed and operated in accordance with the instructions contained in this manual. Failure to do so can result in personal injury and/or navigational inaccuracies. In particular:

CAUTION: High Voltage

Digital Sounder Modules contains high voltages. Adjustments require specialized service procedures and tools only available to qualified service technicians – there are no user serviceable parts or adjustments. The operator should never remove the cover or attempt to service the equipment.

CAUTION: Transducer Cable

Removing the transducer cable from the rear of the DSM300 or DSM30 while the sounder module is powered on can cause sparks. Only remove the transducer cable after power has been removed from the DSM. As with any electronic device, be sure the sounder module is mounted where it is well ventilated and free from gasoline fumes.

If the transducer cable is accidentally removed while the DSM is powered on, remove power from the sounder module, replace the transducer cable, and then return power to the module. As a safety feature, the sounder module only recognizes that the transducer is connected at power-up.

EMC Conformance

All Raymarine equipment and accessories are designed to the best industry standards for use in the recreational marine environment.

The design and manufacture of Raymarine equipment and accessories conform to the appropriate Electromagnetic Compatibility (EMC) standards, but correct installation is required to ensure that performance is not compromised.

Declaration of Conformity

Raymarine plc declare that the DSM300 and DSM30 Digital Sounder Modules are in compliance with the essential requirements of EMC directive 2004/108/EC.

The original Declaration of Conformity certificate may be viewed on the relevant product page at www.raymarine.com.

Product Disposal



Waste Electrical and Electronic Equipment (WEEE) Directive

The WEEE Directive requires the recycling of waste electrical and electronic equipment. While the WEEE Directive does not apply to some of Raymarine's products, we support its requirements as part of our environmental policy and we ask you to be aware of how you should dispose of this product.

The wheelie bin symbol found on our products signifies that it should not be disposed of in general waste or landfill. Please contact your local dealer, national distributor or Raymarine Technical Services for information on product disposal.

Warranty

To register your Digital Sounder Module ownership, please take a few minutes to fill out the warranty registration card found at the end of this handbook. It is very important that you complete the owner information and return the card to the factory in order to receive full warranty benefits.

Chapter 1: DSM Installation

1.1 Introduction

This chapter provides details for mounting the DSM300 and DSM30 and connecting to the display.

For the system to display depth, water temperature and speed, you must install the transducer type(s) capable of transmitting the appropriate data.

Planning the Installation

Before you install your system, plan the installation, considering:

- Location of the sounder module, as described in Section 1.3
- Cable Runs, as described in Section 1.5
- Correct transducer for your application

EMC Installation Guidelines

All Raymarine equipment and accessories are designed to the best industry standards for use in the recreational marine environment.

Their design and manufacture conforms to the appropriate Electromagnetic Compatibility (EMC) standards, but correct installation is required to ensure that performance is not compromised. Although every effort has been taken to ensure that they will perform under all conditions, it is important to understand what factors could affect the operation of the product.

The guidelines given here describe the conditions for optimum EMC performance, but it is recognized that it may not be possible to meet all of these conditions in all situations. To ensure the best possible conditions for EMC performance within the constraints imposed by any location, always ensure the maximum separation possible between different items of electrical equipment.

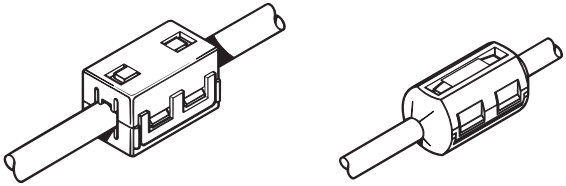
For optimum EMC performance, it is recommended that wherever possible:

- Raymarine equipment and cables connected to it are:
  - At least 5 ft (1.5 m) from any equipment transmitting or cables carrying radio signals, e.g., VHF radios, cables and antennas. In the case of SSB radios, the distance should be increased to 7 ft (2 m).
  - More than 7 ft (2 m) from the path of a radar beam. A radar beam can normally be assumed to spread 20 degrees above and below the radiating element.

- The equipment is supplied from a separate battery from that used for engine start. Voltage drops below 10 V and starter motor transients can cause the equipment to reset.
  This will not damage the equipment, but may cause the loss of some information and may change the operating mode.
- Raymarine specified cables are used. Cutting and rejoining these cables can compromise EMC performance and must be avoided unless doing so is detailed in the installation manual.
- If a suppression ferrite is attached to a cable, this ferrite should not be removed. If the ferrite needs to be removed during installation it must be reassembled in the same position.

Suppression Ferrites

The following illustration shows typical cable suppression ferrites used with Raymarine equipment. Always use the ferrites supplied by Raymarine.



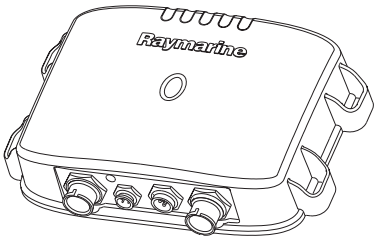
Connections to Other Equipment

If your Raymarine equipment is to be connected to other equipment using a cable not supplied by Raymarine, a suppression ferrite must always be attached to the cable that is closest to the Raymarine unit.

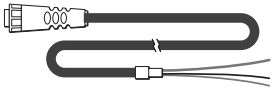
1.2 Unpacking and Inspecting the Components

Unpack your system carefully, to prevent damage to the equipment. Save the carton and packing, in case you need to return the unit for service. Check that you have all the correct system components:

DSM300



DSM300 Digital Sounder Module, part no. E63069



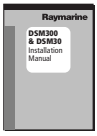
Power Cable, 3m part no. R69053



C Series Network Cable, 3m part no. E65010



hsb^2 adapter, 4-pin to 3-pin part no. R69081



Installation Manual, part no. 87080



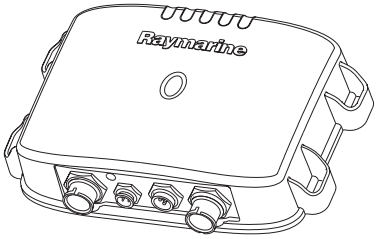
Operation Manual for PLUS Displays, part no. 81249



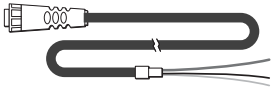
Mounting Screws, No.8 (x4)

D9598-1

DSM30



DSM30 Digital Sounder Module, part no. E63074



Power Cable, 3m part no. R69053



Mounting Screws, No.8 (x4)



C Series Network Cable, 3m part no. E65010



Installation Manual, part no. 87080

D9599-1

A 3m-long cable is included for connecting your sounder module to a C Series or hsb² PLUS (Pathfinder) Series display. Longer cables and connection cables for other types of systems must be purchased separately.

Note: *C Series displays have 4-pin connectors while the older hsb² PLUS Series displays have a 3-pin configuration. This requires that you use a 4-pin to 3-pin adapter (Raymarine part number R69081) when connecting a sounder module to an hsb² PLUS Series display. This adapter is included with the DSM300 but must be ordered separately with a DSM30.*

Select from the following cable options:

Cable Options

System	Cable	Part No.
E Series	SeaTalk^hs Network Cable, RJ-45, 1.5m	E55049
	SeaTalk^hs Network Cable, RJ-45, 5m	E55050
	SeaTalk^hs Network Cable, RJ-45, 10m	E55051
	SeaTalk^hs Network Cable, RJ-45, 20m	E55052
C Series	C Series Network Cable, 4-pin-to-4-pin, 10m	E65011
hsb² PLUS Series (Pathfinder)	hsb² In Line Terminator	R58117
	hsb² Splitter Cable	E55040
	hsb² Adapter Cable, 4-pin to 3-pin	R69081

1.3 Selecting Sounder Module Mounting Location

DSM300 and DSM30 sounder modules are waterproof to IPX-7 is and is designed to be mounted either above or below deck.

Mount the DSM where it is:

- protected from physical damage and excessive vibration
- protected from prolonged exposure to rain, salt spray and direct sunlight
- well ventilated
- as close to the transducer as possible

Do not locate the DSM:

- in the engine compartment
- on the main console

When planning the installation, the following should be considered to ensure reliable and trouble free operation:

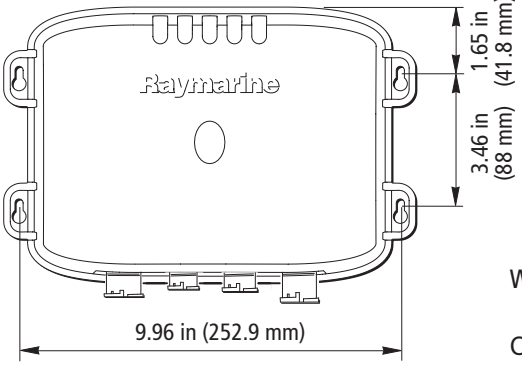
- **Access:** There must be sufficient space below the unit to enable cable connections to the panel connectors, avoiding tight bends in the cable.

- **Interference:** The selected location should be far enough away from devices that may cause interference, such as motors, generators, and radio transmitter/receivers. (See the EMC guidelines earlier in this chapter.)
- **Magnetic compass:** Mount the unit at least 3 ft (1 m) away from a magnetic compass.
- **Cable runs:** The unit must be located near a DC power source. The power cable supplied is 10 ft (3 m).
- **Environment:** Provide good ventilation to prevent overheating.

CAUTION: Do Not Remove the Transducer Cable
Removing the transducer cable from the sounder module while power is turned on can cause sparks. As with any electronic device, be sure the sounder module is mounted where it is well ventilated and free from gasoline fumes.

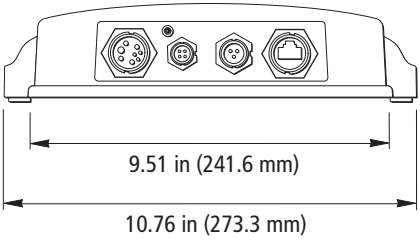
1.4 Mounting the Sounder Module

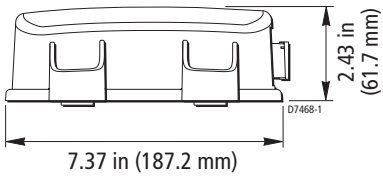
The DSM can be mounted either above or below deck using the supplied hardware. To allow for ease of cable connection, mount the sounder module so that the cables hang below the unit.



Weight: 2.2 lbs (1.0 Kg)

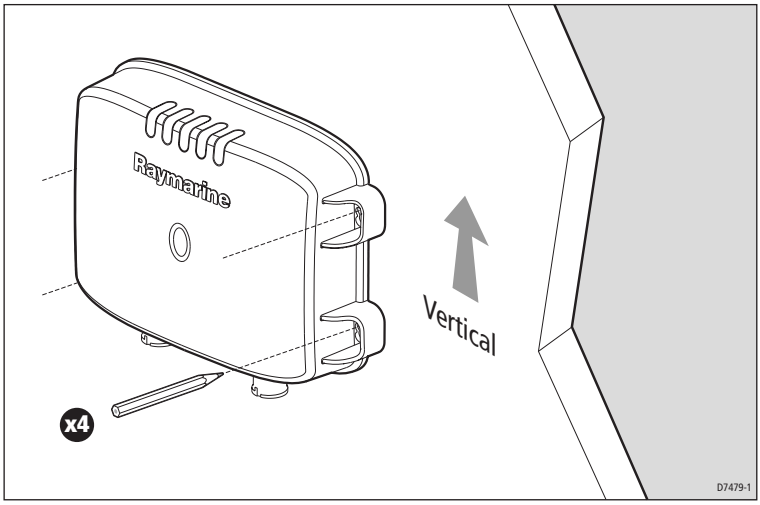
Compass Safe Distance: 39 in (1 m)



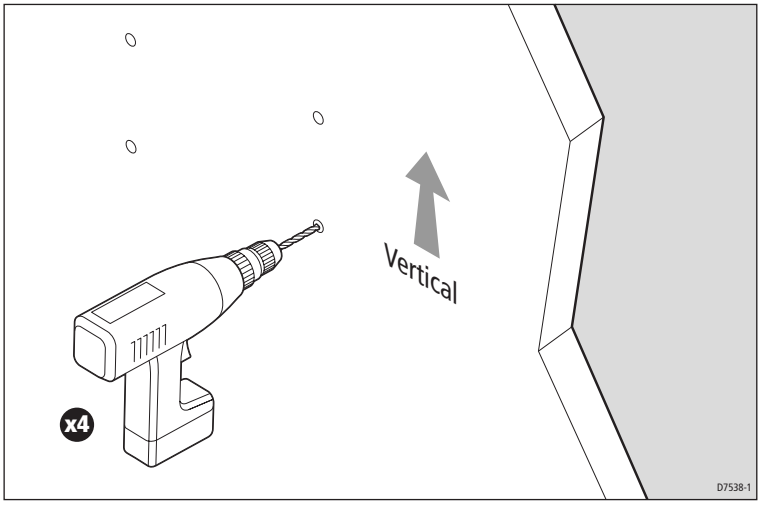


To mount the DSM:

1. Hold the module in the location where you want to mount it, making sure it is perpendicular to the deck.
2. Mark the location of the four key holes onto the mounting surface.

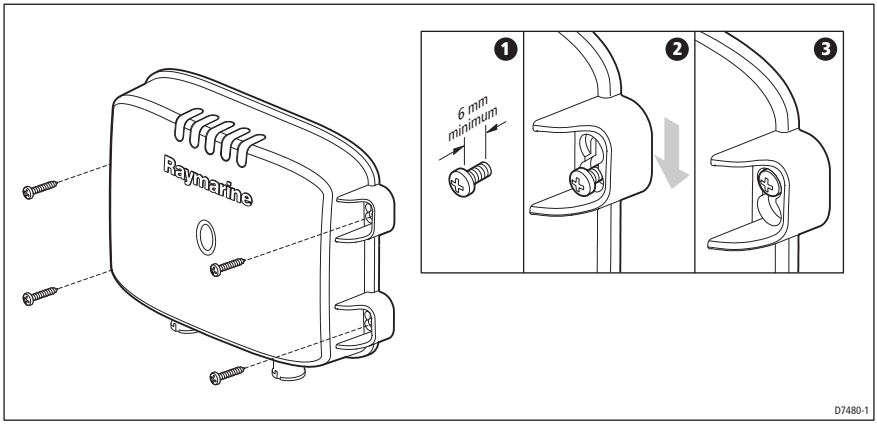


3. Drill a 9/64" pilot hole at each of the marked locations.

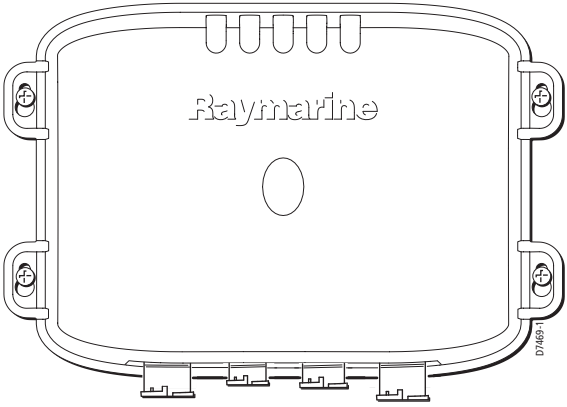


Note: *For fiberglass with a gelcoat surface, you should overdrill the surface to prevent the gelcoat from chipping when driving in the screw. Before drilling the pilot hole, hand drill the marked location with an oversized bit and countersink to approximately 3/8" diameter.*

4. Drive the supplied #8 screws into the pilot holes. Screw them in about half way.
5. Mount the module to the surface, slipping the screw heads through the four key holes.
6. Press the module downward so the screws align with the narrow end of the keyholes.



7. Tighten the screws. Do not overtighten.



1.5 Cable Runs

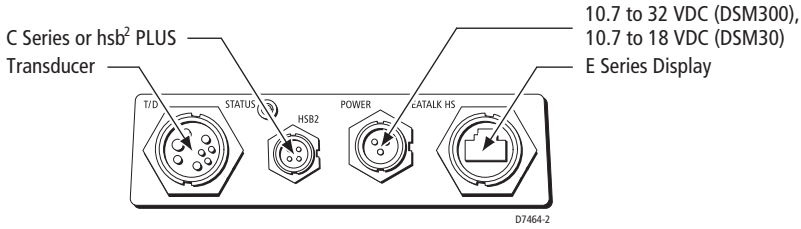
Consider the following before installing the system cables:

- You will need to attach power, transducer, and display cables.
- All cables should be adequately secured, protected from physical damage, and protected from exposure to heat.
- Avoid running cables through bilges or doorways, or close to moving or hot objects.
- Avoid sharp bends.
- Use a watertight feed-through wherever a cable passes through an exposed bulkhead or deckhead.
- Secure cables in place using tie-wraps or lacing twine. Coil any extra cable and tie it out of the way.

1.6 System Connections

The connector panel provides the following connection sockets:

- **T/D,** 7-pin socket for connecting to the transducer
- **HSB2**, 4-pin socket for connecting to a C Series or hsb^2 PLUS Series display
- **POWER**, 3-pin socket; two for connecting to boat's DC power and one RF ground (screen) connection
- **SEATALK HS,** RJ-45 socket for connecting to an E Series display



CAUTION:
To protect exposed pins, please place the attached dust cover over the socket (4-pin or RJ-45) to which you are not connecting a cable.

Transducer Connection

A 30 ft (10 m) cable is supplied with the transducer. This cable has a connector plug (with an outer nut that you must attach) at one end for attaching to the "T/D" connector on the sounder module. Optional extension cables are available.

CAUTION: Do Not Cut or Splice the Transducer Cable

- **There is high voltage on the transducer cable. Splicing could create a safety hazard.**
- **Cutting the transducer cable severely reduces sonar performance. If the cable is cut, it must be replaced—it cannot be repaired.**
- **Cutting the transducer cable will void the warranty and invalidate the European CE mark.**

DC Power Connection

The DSM300 is intended for use on boat's DC power systems rated from 10.7 V to 32 V. The DSM30 is intended for use on boat's DC power systems rated from 10.7 V to 18 V (12 volt systems only).

The power connection to the unit should be made at either the output of the battery isolator switch or at a DC power distribution panel. Power should be fed directly to the DSM via its own dedicated cable system and protected by a thermal circuit breaker or fuse on the red (positive) wire that is installed close to the power connection.

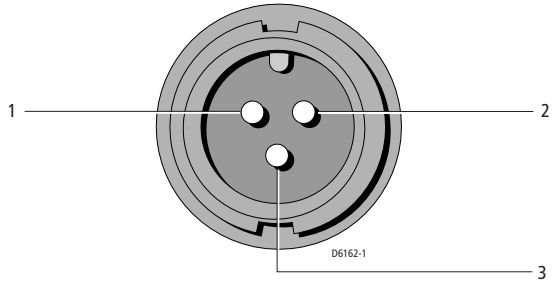
A10 ft (3 m) power cable is supplied with the unit. This cable has a connector plug at one end for attaching to the "POWER" connector on the sounder module and 3 wires at the other end for connecting the power supply. The power cable may be extended by up to 60 ft (20 m) using a wire gauge of AWG 12 or greater.

The RED wire must be connected to the feed from the positive (+) battery terminal and the BLACK wire to the feed from the negative (–) battery terminal. The shield wire (drain) should be connected to the boat's RF ground. See "Ground Connection" on page 18.

Install a quick blow 8 amp fuse on the red (positive) wire.

CAUTION: If the power connections are accidentally reversed the system will not work. Use a multimeter to ensure that the input power leads are connected for correct polarity.

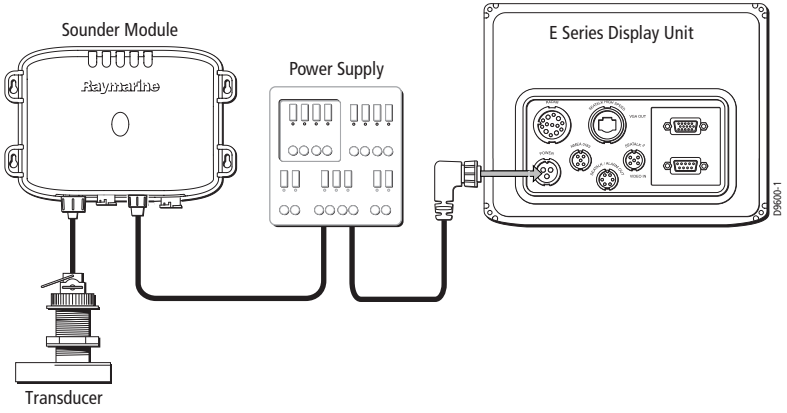
DC power is connected at the 3-pin POWER connector on the unit's connector panel. The connector (viewed from the outside) and pin functions are shown in the following diagram and table.



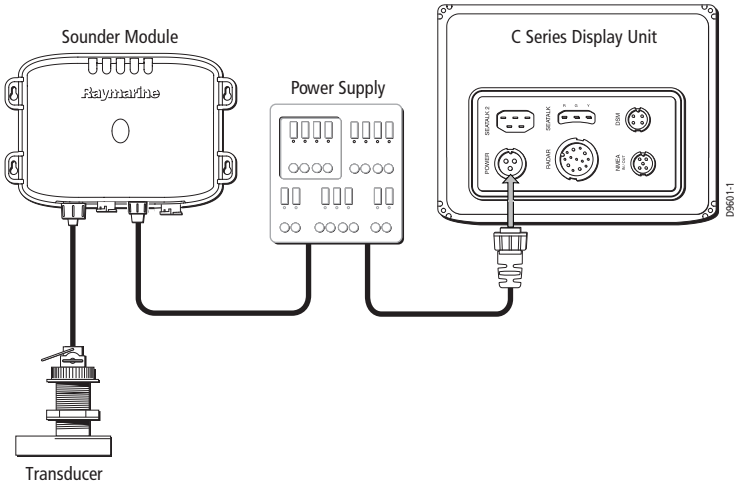
Pin No.	Function	Color
1	Battery positive	Red
2	Battery negative	Black
3	Shield (drain wire)	No insulation

There is no power switch on the DSM. The unit turns on when the power cord is attached to boat's power and plugged into the POWER connector on the connector panel.

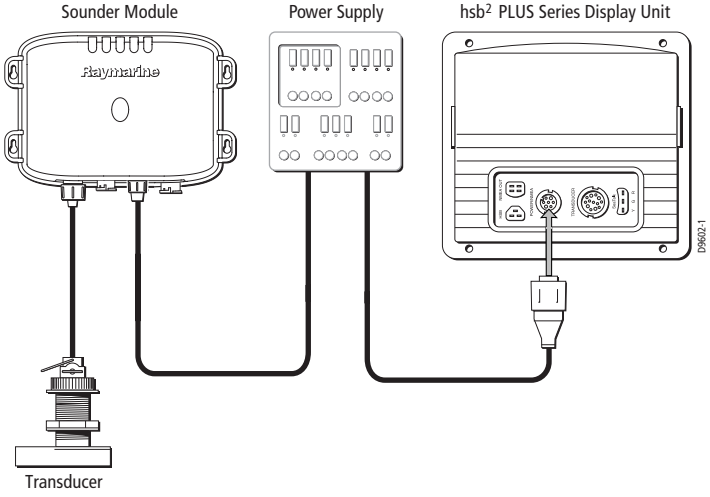
Note: *You should locate the DSM so that the power cord can be easily removed, if necessary. If the sounder is placed in a difficult-to-reach location, Raymarine strongly suggests installing an on/off switch on the DSM power cord at a point where it is easily accessible.*



Power Connections with an E Series Display



Power Connections with a C Series Display



Power Connections with an hsb^2 PLUS Series Display

Ground Connection

It is important that an effective RF ground is connected to the system. A single ground point should be used for all equipment. You can ground the sounder module by connecting the drain wire (shield) of the Power Input cable to the boat's RF ground. If you need to extend the wire, the extension wire should be an 8 mm braid or AWG 10 multi-stranded cable. If your boat does not have an RF system, connect the drain wire to the negative battery terminal.

The DC system should be either:

- Negative grounded, with the negative battery terminal connected to the boat's ground.
- Floating, with neither battery terminal connected to the boat's ground.

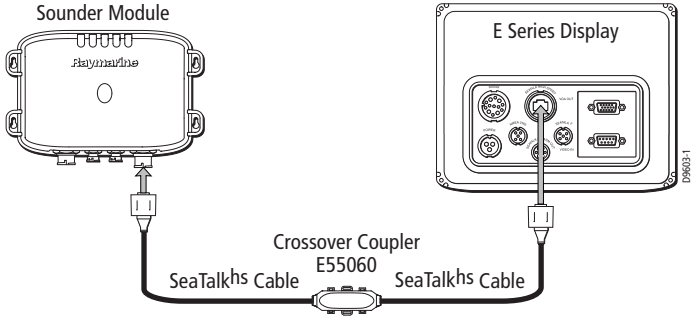
This system is not intended for use on "positive" ground vessels.

1.7 Display Configuration

The DSM must be connected to an hsb² PLUS Series, C Series or E Series display unit to show echo sounder data. How you configure your sounder module depends on the type of display to which you will be connecting it.

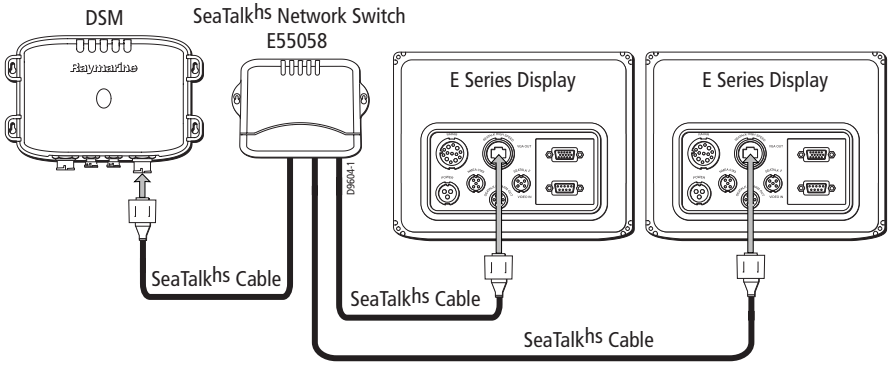
Configuring E Series Displays

The E Series system operates on the SeaTalk^{hs} network. E Series cables have an RJ-45 modular connector that attach to the "SEATALK HS" connector on the sounder module. See "Cable Options" on page 10 for a list of available E Series cables. When the DSM is used with a single display, connection is made via a SeaTalk^{hs} Crossover Coupler.



Configuring an E Series System - Single Display

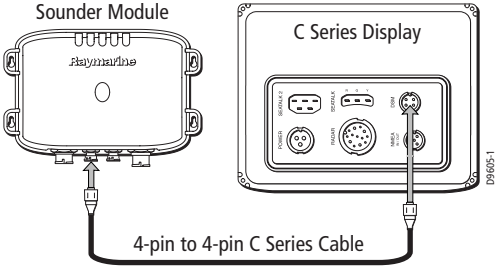
When used in a multiple display system, connect the DSM to the SeaTalk^{hs} Network Switch.



Configuring an E Series System - Multiple Displays

Configuring C Series Displays

The C Series system uses cables with a round 4-pin twist-lock network connector. A 3m-long C Series cable is included with your sounder module and is also available in a 10 m length (Raymarine part number E65011). The display cable attaches to the 4-pin male connector labelled "HSB2" on the connector panel of the sounder module.



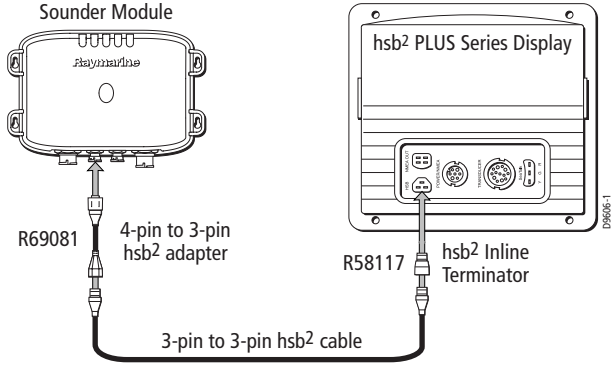
Configuring a C Series System

Configuring hsb² PLUS (Pathfinder) Series Displays

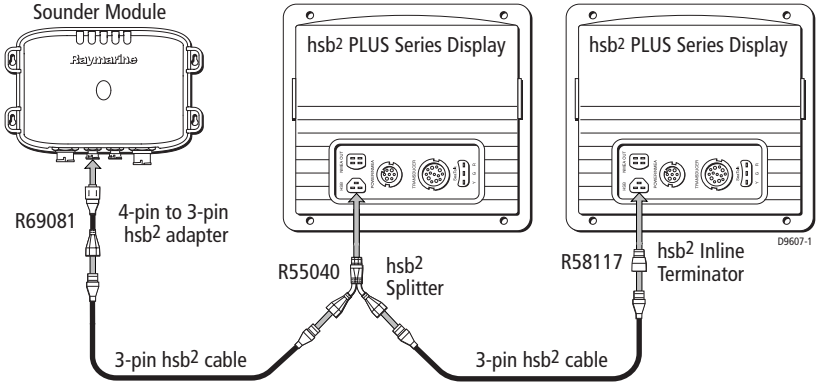
hsb² PLUS network cables have a triangular 3-pin connector on both ends. When using the DSM with an hsb² PLUS Series display, connect the supplied 4-pin to 3-pin hsb² adapter between the sounder module and the network cable.

The hsb² system must be terminated at both ends of the network. If a PLUS Series display is the last device on the network, an inline terminator is installed on the cable where it connects to the display. The network connection in the DSM, however, is internally terminated; it does not require an inline terminator.

Because the sounder module is internally terminated, it must be installed at the end of the hsb² network. You must not use an inline terminator on the DSM end of the network. If an hsb² splitter is used, connect it to a display and not to the DSM.



Configuring an hsb² PLUS System - Single Display



Configuring an hsb² PLUS System - Multiple Displays

Chapter 2: Maintenance and Problem Solving

This chapter provides information on routine maintenance and on possible causes of problems you may experience with your Digital Sounder Module.

2.1 Maintenance

CAUTION:
The sounder unit contains high voltage. Adjustments require specialized service procedures and tools only available to qualified service technicians. There are no user serviceable parts or adjustments and the operator should not attempt to service the equipment. The operator should not remove the rear cover of the module.

Routine Checks

The sounder module is a sealed unit. Maintenance procedures are therefore limited to the following periodic checks:

- Examine the cables for signs of damage, such as chafing, cuts or nicks.
- Check that the cable connectors are firmly attached.

Cleaning Instructions

Cleaning the Module

The DSM is a sealed unit and does not require regular cleaning. However, if you find it necessary to clean the unit, please follow these basic procedures:

- Ensure power is off.
- Wipe the module clean with a damp cloth.
- If necessary, use IPA (isopropyl alcohol) or a mild detergent solution to remove grease marks.

Cleaning the Transducer

Sea growth can collect quickly on the bottom of the transducer, this can reduce the performance in just a few weeks. To prevent the build-up of sea growth, coat the transducer with a thin layer of paint.

Use only a water-based antifouling paint, or a water-based paint specifically designed for transducers. Apply the paint with a brush.

If your transducer becomes fouled or stops working because of sand or sea growth, use a stiff brush to clean it. You may sand the surface with a fine-grit wet or dry sandpaper (#320 grade or finer), but this will affect the performance of the unit when the boat is moving at higher speeds.

The paddle wheel mechanism may become jammed by dirt, grit or barnacles. Work the contaminant out of the mechanism, then clean the unit with soap and water or alcohol.

Cleaning the Hull

Use caution when sanding or cleaning the outside of the hull near the transducer.

CAUTION:
Harsh cleaning solvents such as acetone may damage the transducer.

EMC Servicing and Safety Guidelines

- Raymarine equipment should be serviced only by authorized Raymarine service technicians. They will ensure that service procedures and replacement parts used will not affect performance. There are no user serviceable parts in any Raymarine product.
- Some products generate high voltages, so never handle the cables/connectors when power is being supplied to the equipment.
- When powered up, all electrical equipment produces electromagnetic fields. These can cause adjacent pieces of electrical equipment to interact with one another, with a consequent adverse effect on operation.
  To minimize these effects and enable you to get the best possible performance from your Raymarine equipment, guidelines are given in the installation instructions, to enable you to ensure minimum interaction between different items of equipment, i.e. ensure optimum Electromagnetic Compatibility (EMC).
- Always report any EMC-related problem to your nearest Raymarine dealer. We use such information to improve our quality standards.
- In some installations, it may not be possible to prevent the equipment from being affected by external influences. In general this will not damage the equipment but it can lead to spurious resetting action, or may result in momentary faulty operation.

2.2 Resetting the System

The Reset function returns the sounder module to its factory default values. How you perform the reset depends on the type of display the sounder module is connected to.

CAUTION: Factory Reset
The factory reset clears the sonar depth offset and speed and temperature calibrations.

For E Series and C Series Displays...

➤ To perform the factory reset:

1. Make sure that FISHFINDER is the active screen on the display.



2. Press **MENU**.
3. Scroll to and then select FISHFINDER SETUP.
4. Scroll to and select DSM Reset.
5. Scroll to Reset DSM?
6. To confirm the reset, select YES.
   i. The power on the DSM cycles OFF and ON.
   ii. The introductory logo is displayed.
   iii. After a few seconds an application page and a navigation warning is displayed.
7. To continue, read the warning and then press **OK**.
   The reset is complete.

For hsb^2 PLUS Series Displays...

➤ To perform the factory reset:

1. Make sure that SONAR is the active screen on the display.



2. Press **MENU**.
3. Press the SONAR SET UP soft key to display the Sonar Set Up page.
4. Press and hold **MENU** for 5 seconds.
   The RESET TO DEFAULTS soft key appears.
5. Press RESET TO DEFAULTS.
   New soft keys appear: ARE YOU SURE? YES. NO.
6. Press YES to confirm the reset.
   i. The power on the DSM cycles OFF and ON.
   ii. The message SONAR DATA UNAVAILABLE appears.

iii. An audible alarm is sounded.

iv. The normal sonar image resumes scrolling across the display. The reset is complete.

➤ To cancel the reset:

Before pressing YES as described in item 4 above, press any of the following keys: **DISPLAY**, **MULTI**, **VRM/EBL**, **MARKS**, **RANGE**, **GAIN**, or **ALARMS**.

This action opens up a new menu according to the key pressed.

—or—

Press either the **ENTER** or **CLEAR** key. This action returns the unit to the Sonar Set Up menu.

2.3 Problem Solving

All Raymarine products are, prior to packing and shipping, subjected to comprehensive test and quality assurance programs. However, if this unit should develop a fault, please refer to the following table to identify the most likely cause and the corrective action required to restore normal operation.

If you still have a problem after referring to the table below, contact your local dealer, national distributor or Raymarine Technical Services Department for further advice. Always quote the product serial numbers. The serial number is printed on the back of the unit.

Common Problems and Their Solutions

Table 2-1: Common Sounder Problems

Problem	Correction
Display "freezes"	1. Check that the scroll speed is not set to zero. 2. Check the transducer cable for damage. If damaged, the cable and transducer must be replaced as a unit.
Sounder does not display fish	1. Fish arches are not displayed if the boat is stopped - fish appear on the display as straight line. 2. Ensure the transducer is within 10° of vertical. 3. Check that the gain is not set too low.
Sounder does not see bottom or fish	1. If you have a transom-mount transducer, check that the transducer hasn't kicked-up on hitting an object. 2. Check that the gain is not set too low. 3. Check that the transducer is within 10° of vertical. 4. Check that the transducer face is not covered or fouled. If necessary, clean the transducer. 5. Check the voltage from the power source; if this is too low it can affect the transmitting power of the sounder.
Sounder displays a lot of background noise	1. Check that the gain is not set too high. 2. Check that the transducer is mounted correctly and is clean.
Sounder speed or log readings are wrong	1. Check that the transducer paddle wheel is clean. 2. If necessary add a speed offset. 3. If receiving SeaTalk speed, unplug the SeaTalk connector from the display.

Table 2-1: Common Sounder Problems

Problem	Correction
Sounder temperature readings are wrong	1. If necessary, adjust the TEMP CALIBRATE parameter. 2. If receiving SeaTalk temperature, unplug the SeaTalk connector from the display.
Sonar display is unreliable at high boat speeds	1. Turbulence around the transducer may be confusing the unit.

Status LED

The LED on the connector panel provides valuable information on the status of your sounder module. The LED blinks green while the module is operating normally. If the unit detects a problem, the LED blinks amber to indicate a warning or red for an error. The number of times the LED blinks is a code representing the nature of the problem. For multiple warnings/errors, the codes are given in sequence with a 1.5 second pause between strings.

The following table shows the various LED status codes and their meanings.

Table 2-2: Status LED Warning Indications

	Color	No of blinks	Meaning	Cleared every 10 min
W	Amber	1	Transducer Sense Failure	
A		2	Network not detected [1]	
R		3	High Temperature Warning	✓
N		4	Reserved	
I		5	Reserved	
N		6	Reserved	
G		7	Reserved	
S		8	Watchdog Timeout Reboot	✓

[1]After 30 seconds of no network activity, the sounder enters Standby mode: No sonar pings are emitted and no warnings are output on the LED. Instead, the LED blinks green once every 10 seconds.

For example, if the Transducer Sense fails and the network is not detected, the LED blinks amber once, pauses 1.5 secs, blinks amber twice 0.5 secs apart, pauses 1.5 secs, and then repeats the sequence until the problems are resolved or up to 10 minutes elapse.

Table 2-3: Status LED Error Indications

	Color	No of blinks	Meaning	Cleared every 10 min
	Red	1	Unknown Error	✓
E		2	Battery Voltage Error	✓
R		3	High Temperature Error	✓
R		4	Flash Memory Failure	
O		5	Reserved	
R		6	Reserved	
S		7	Reserved	
		8	Hardware Monitor Failure	

A solid red LED (not blinking) indicates a fatal error condition. If the event of a fatal error, the system will power cycle to attempt to self-correct the condition. If the condition persists, please contact Raymarine Customer Service.

2.4 How to Contact Raymarine

On the Internet

Visit the Raymarine World Wide Web site for the latest information on Raymarine electronic equipment and systems at:

www.raymarine.com

Customer Support

Navigate to the **Customer Support** page for links to:

- Finding Factory Service locations and Authorized Dealers near you
- Registering your Raymarine products
- Accessing handbooks in Adobe Acrobat format
- Downloading RayTech software updates
- Accessing the Raymarine solution database

Clicking the Find Answers link routes you to our solution database. Search questions and answers by product, category, keywords, or phrases. If the answer you are seeking is not available, click the Ask Raymarine tab to submit your own question to our technical support staff, who will reply to you by e-mail.

In the US

Accessories and Parts

Many Raymarine accessory items and parts can be obtained directly from your authorized Raymarine dealer.

However, if you are in need of an item not available from the retailer, please contact Raymarine Technical Services at:

1-800-539-5539 ext. 2333, or
1-603-881-5200 ext. 2333.

Technical Service is available Monday through Friday 4:00 AM to 6:00 PM Eastern Time.

Please have the Raymarine item or part number ready when calling if placing an order. If you are not sure which item is appropriate for your unit, you should first contact the Technical Support Department to verify your requirements.

Technical Support

For technical support, call:

1-800-539-5539 ext. 2444, or
1-603-881-5200 ext. 2444.

Our Technical Support Specialists are available to answer questions about installing, operating and trouble-shooting all Raymarine products.

Questions can be sent directly to our Technical Support Department via the Internet. Point your browser to www.raymarine.com and click on the Customer Support link. From there, select Find Answers and click the Ask Raymarine tab.

Product Repair and Service

In the unlikely event your Raymarine unit should develop a problem, please contact your authorized Raymarine dealer for assistance. The dealer is best equipped to handle your service requirements and can offer timesaving help in getting the equipment back into normal operation.

In the event that repairs can not be obtained conveniently, product service may also be obtained by returning the unit to:

Raymarine, Inc.
Product Repair Center
21 Manchester Street
Merrimack, NH 03054-4821

The Product Repair Center is open Monday through Friday 8:15 a.m. to 5:00 p.m. Eastern Time. All products returned to the Repair Center are registered upon receipt. Should you wish to inquire about the repair status of your unit, contact the Product Repair Center at:

1-800-539-5539 ext. 2118, or
1-603-881-5200 ext. 2118.

Please have the unit serial number, ready when you call. We will do everything possible to make the repair and return your unit as quickly as possible.

In Europe

In Europe, Raymarine support, service and accessories may be obtained from your authorized dealer, or contact:

Raymarine plc
Anchorage Park
Portsmouth, Hampshire
England PO3 5TD
Tel:+44 (0) 23 9269 3611
Fax:+44 (0) 23 9269 4642

Technical Support

The Technical Services Department handles inquiries concerning installation, operation, fault diagnosis and repair. For technical helpdesk contact:

Tel:+44 (0) 23 9271 4713
Fax:+44 (0) 23 9266 1228

Accessories and Parts

Raymarine accessory items and parts are available through your authorized Raymarine dealer. Please refer to the lists of component part numbers and optional accessories in the Installation chapter of this manual and have the Raymarine part number ready when speaking with your dealer.

If you are uncertain about what item to choose for your Raymarine unit, please contact our Customer Services Department prior to placing your order.

Worldwide Support

Please contact the authorized distributor in the country.

Appendix: Specifications

General

Approvals: CE - conform to	 2004/108/EC (EMC), EN60945:2002
Size:	10.76" x 7.37" x 2.43" (273.3 x 187.2 x 61.7 mm)
Weight:	2.2 lbs (1.0 kg)
Mounting:	Four keyholed mounting tabs, mounting screws
Power: Voltage: DSM300: DSM30: Current: Fuse:	 Reverse polarity protected External 10.7–32 VDC required External 10.7–18 VDC required 0.5 A (8.0 A peak) 8 A (recommended)
Environmental: Operating Range: Storage Range: Humidity:	Waterproof to IPX-7 –10°C to +50°C –20°C to +70°C up to 95% at 35°C non-condensing
Connectors:	7 pin transducer 4 pin hsb[2] input/output 3 pin power RJ-45 SeaTalk [hs]

Sounder Features

	DSM300	DSM30
Output Power:	Adjustable to 1000 watts RMS	Adjustable to 600 Watts RMS
Frequency:	Dual 50 kHz and 200 kHz	Dual 50 kHz and 200 kHz
Pulse Length:	100 µsec to 4 msec	100 µsec to 4 msec
Max. Transmit Rate:	1580 pulses / min. @ 50' range	1580 pulses / min. @ 50' range
Depth:	3 to 5000 ft (1700 m)	3 to 3000 ft (1000 m)
Transducer:	Transom-mount, in-hull, or thru-hull	Transom-mount, in-hull, or thru-hull

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