

Raymarine®

G-Series control keyboard Wireless base station

Installation instructions

	Product installation This equipment must be installed and operated in accordance with the Raymarine instructions provided. Failure to do so could result in poor product performance, personal injury, and/or damage to your boat.
	Service and maintenance This product contains no user serviceable components. Please refer all maintenance and repair to authorized Raymarine dealers. Unauthorized repair may affect your warranty.
	Cleaning DO NOT use acid, ammonia based or abrasive products. DO NOT use commercial high pressure washing (jet wash) equipment.

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Date: October 2007

Waste Electrical and Electronic Equipment Directive



The Waste Electrical and Electronic Equipment (WEEE) Directive requires the recycling of waste electrical and electronic equipment. Whilst the WEEE Directive does not apply to some of Raymarine's products, we support its policy and ask you to be aware of how to dispose of this product.

The crossed out wheeled bin symbol, illustrated above, and found on our products signifies that this product 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.

Disclaimer

The technical and graphical information contained in this document, to the best of our knowledge, was correct as it went to press. However, our policy of continuous improvement and updating may change product specifications without prior notice. As a result, unavoidable differences between the product and handbook may occur from time to time. Raymarine cannot accept responsibility for any inaccuracies or omissions it may contain. For the latest product information visit our website - www.raymarine.com

EMC installation guidelines

Raymarine equipment and accessories conform to the appropriate Electromagnetic Compatibility (EMC) regulations. This minimizes electromagnetic interference between equipment, which could otherwise affect the performance of your system. Correct installation is required to ensure that EMC performance is not compromised.

FCC and Industry Canada Information

The G-Series control keyboard and wireless base station comply with US CFR47 part 15 Rules and with IC Standard RSS210. Operation is subject to the following two conditions: (1) these devices may not cause harmful interference and (2) these devices must accept interference received, including interference that may cause undesired operation.

Changes or modifications to these devices not expressly approved in writing by Raymarine could violate compliance with FCC or IC rules, and void the user's authority to operate the equipment.

Declaration of Conformity

Raymarine UK Ltd. hereby declares that the G-Series Control Keyboard and Wireless base station are in compliance with the essential requirements and other relevant provisions of the R&TTE Directive '1999/5/EC'.

The original Declarations of Conformity may be viewed on the relevant product pages at www.raymarine.com.

Handbook information

This installation guide contains information required to successfully install and set up your wireless base station.

It is part of a series of documents associated with the G-Series system. All documents can be downloaded from:

www.raymarine.com/handbooks.

G-Series system documentation

Title	Part number
G-Series system installation & commissioning instructions	87070
G-Series command center keyboard installation instructions	87084
G-Series command center keyboard wireless upgrade kit installation instructions	87085
G-Series system operating guide	86126
G-Series system user reference guide	81276

Additional documents

You may also refer to separate instructions provided with the associated ancillary equipment.

Errata

The documents supplied with the G-Series system contain a small number of known errors:

87070-1 G-Series system installation guide

Page 20. System shown has one keyboard base station serving 2 keyboards, where 2 base stations are actually required. Each keyboard requires a dedicated base station.

Page 41 & 42. Connection shows keyboard connected via ST70 instrument. Keyboards must be connected to a dedicated T-piece.

Page 65. Repeat base stations. These are not available for the wireless keyboard.

Installation sequence

Installation of the wireless keyboard system requires a structured and planned approach. Use the following sequence of tasks:

PLANNING

- 1 Check pack contents
- 2 Plan system layout
- 3 Charge keyboard
- 4 Site Survey

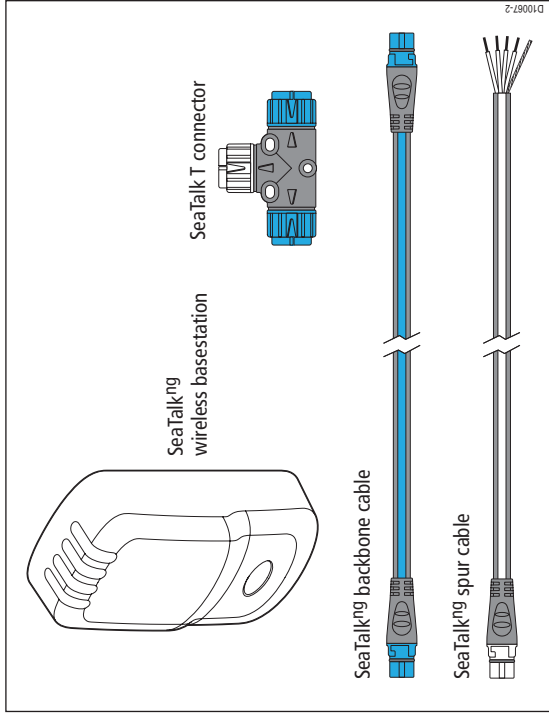
We strongly recommend that you produce a complete schematic diagram for your G-Series installation. Refer to the G-Series system installation and commissioning instructions for templates and further information.

MOUNTING & CONNECTION

- 5 Mount base station in selected location.
- 6 Make all connections into equipment.

Check pack items

Wireless base station

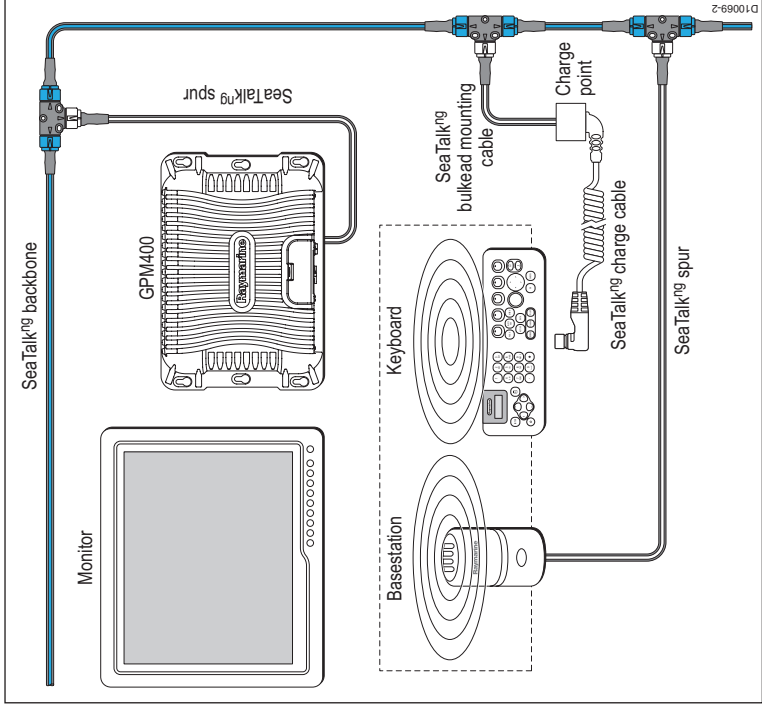


Description	Part No.
Wireless base station	E02045
1 m (3.3 ft) SeaTalk NG spur cable - stripped ends	A06043
400 mm (15.75 in) SeaTalk® backbone cable	A06033
SeaTalk NG T-connector	A06028

Plan wireless keyboard system

Typical system layout

The base station and wireless keyboard are installed as a part of the Raymarine G-Series system.



Notes:

1. Each keyboard and base station communicate as a dedicated pair.
2. You should have at least one permanently wired keyboard. In the event that any wireless keyboards are lost, the wired keyboard can be used to control the system.
3. When connecting a keyboard to the system, record its details on your system diagram. You will need this information during commissioning. (Refer to the separate G-Series system installation instructions for sample diagrams.)

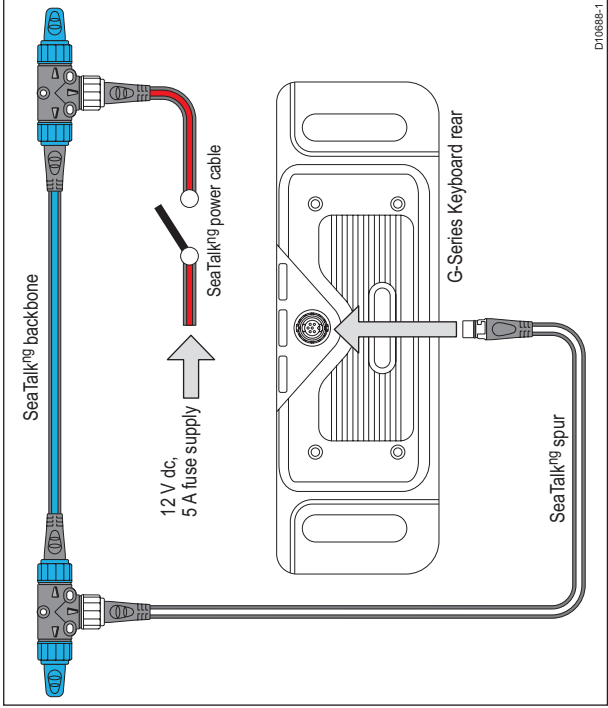
Wireless keyboard & base station cables

Cable	Part No	Notes
Wireless base station to SeaTalk ^{ng}		
1 m (3.3 ft) SeaTalk ^{ng} spur cable (bare ends)	A06043	Included with wireless base station.
3 m (9.8 ft) SeaTalk ^{ng} spur cable (bare ends)	A06044	
Keyboard charging		
2.5 m (8.2 ft) charging cable	R08311	Included with the wireless upgrade kit.
3 m (9.8 ft) SeaTalk ^{ng} bulkhead mounting cable	R08310	
SeaTalk ^{ng} power		
12 Vdc to SeaTalk ^{ng}	A06049	

Charge keyboard

Charge for 6 hours

Before proceeding with the installation you must charge the keyboard. If the SeaTalk^{ng} wiring is not installed, you will need to create a temporary keyboard connection with power as shown.



See also

- For information on the keyboard battery and charge point. Refer to separate instructions supplied with the wireless upgrade kit.

Site survey

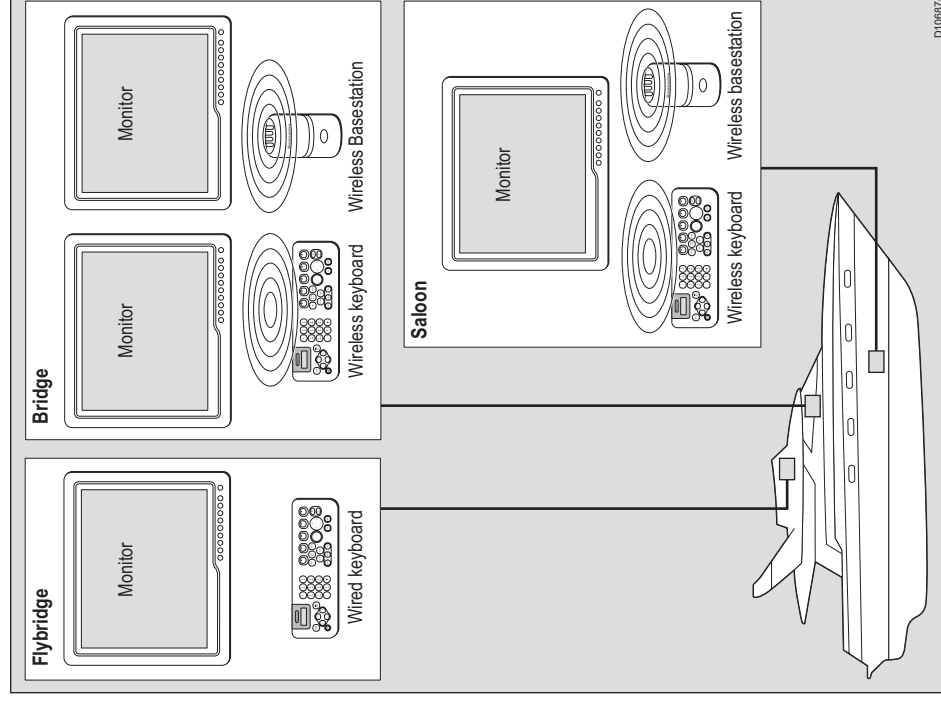
A site survey is required to select the appropriate location for your wireless base station. You must repeat the site survey for each keyboard / base station pair.

Mounting and environment

- Do NOT install near sources of heat or vibration. (e.g. engine).
- Install in a dry area below decks.
- Mount on a vertical surface.
- Install the unit well away from potential sources of ignition.
- Mount at least 1 m (3 ft) away from devices which may be affected by radio transmission (e.g. compass).

Location

Select a location likely to provide the required wireless coverage. E.g. In the immediate vicinity of single / co-located nav stations or mid-way between remotely located nav stations.

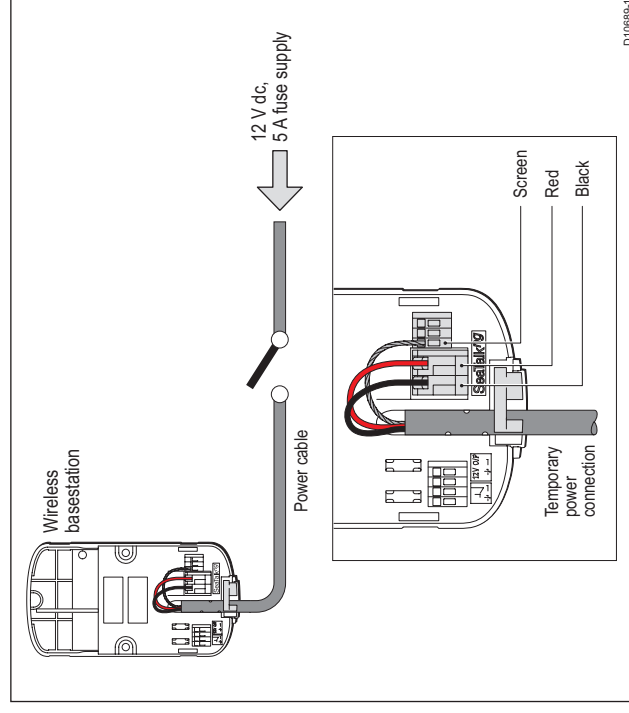


Check wireless coverage

You must survey the wireless coverage to ensure that each wireless keyboard can operate in the intended area.

Connect power to base station

Site the base station at the required location and make a temporary switched connection to the power supply.



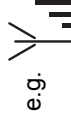
Register Keyboard to base station

Register an unregistered keyboard to the required base station.

1. **Turn off** all base stations and keyboards within range.
2. **Turn on** the appropriate base station.
3. Within one minute **turn on** the unregistered keyboard. (This must be within range of the base station.)
4. The keyboard attempts to register.



5. Once the base station is detected, the keyboard display shows the signal strength.



The keyboard is now registered.

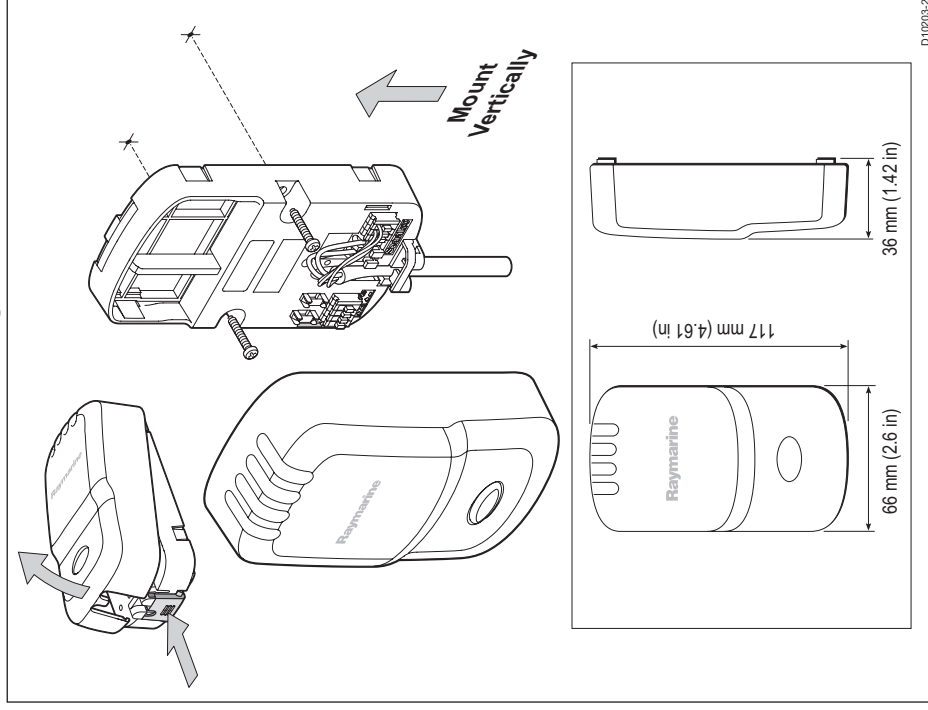
Note: It is important that NO additional wireless keyboards or base stations are turned on during registration. This will prevent accidental registration of the wrong device or base station.

Check signal strength

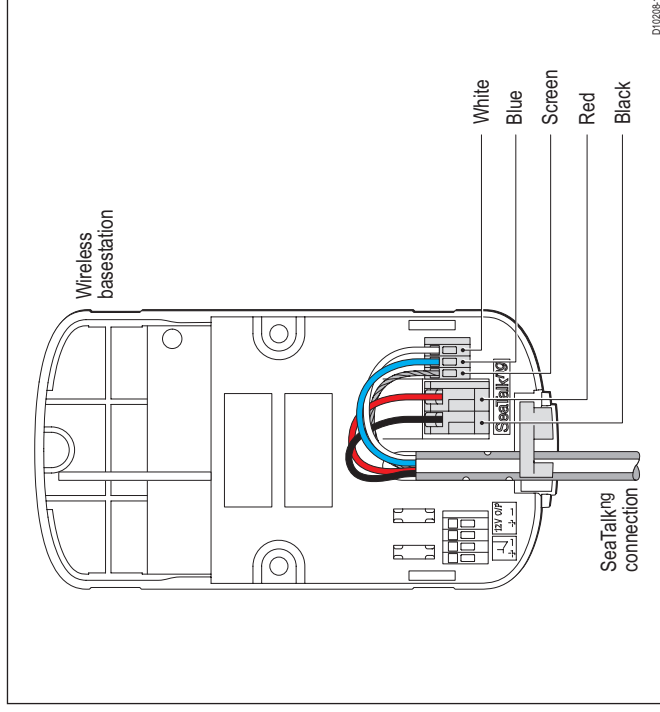
1. Press the button (located under the outer cover of the base station) to initiate site survey mode.
2. Slowly move the keyboard around the required area of the vessel, confirming that the signal strength indicator maintains a strong signal (i.e 3 bars).
3. If the signal strength is not maintained, re-position the base station and repeat the survey.
4. Turn off the base station once the survey is complete.

Mounting and connection

Wireless base station mounting



Wireless base station connections



Repeat base station

There are no repeat base stations for the wireless keyboard.

Keyboard and charge cable installation

For information on the wireless keyboard and charge cables, refer to the separate instructions supplied with the wireless upgrade kit.

Wireless base station technical specification

Size	66 mm x 118 mm x 36mm (2.6 in x 4.7 in x 1.4 in)
Mounting	Surface mount
Supply voltage	9 V to 16 V
Power consumption	0.96 W
Transmitted power	1 mW
Environmental conditions:	operating temperature: -15°C to 55°C (5°F to 131°F) non-operating temperature: -25°C to 70°C (-13°F to 158°F) relative humidity limit: 95%
Storage conditions when packed:	Temperature: -20°C to 55°C (-4°F to 131°F) relative humidity: 75%
Base station to keyboard range	Typically 9 m (30 ft)
Approvals:	Europe: R&TTE 1999/5/EC USA: CFR47 Part 15 Canada: RSS-210
LEN	2

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