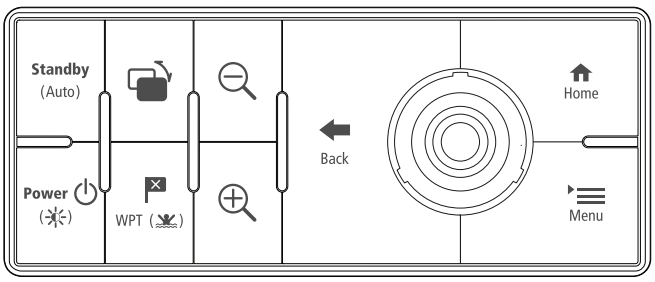
# RMK-9




## Installation and operation instructions

**English**
Date: 04-2013
Document number: 81351-1-EN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### Software updates

Check the website www.raymarine.com for the latest software releases for your product.

### Product handbooks

The latest versions of all English and translated handbooks are available to download in PDF format from the website www.raymarine.com.
Please check the website to ensure you have the latest handbooks.



**ENGLISH**
Document number: 81351-1
Date: 04-2013

# Contents

# Chapter 1: Important information

### Warning: Product installation and operation

This product must be installed and operated in accordance with the instructions provided. Failure to do so could result in personal injury, damage to your vessel and/or poor product performance.

### Warning: Potential ignition source

This product is NOT approved for use in hazardous/flammable atmospheres. Do NOT install in a hazardous/flammable atmosphere (such as in an engine room or near fuel tanks).

### Warning: Product grounding

Before applying power to this product, ensure it has been correctly grounded, in accordance with the instructions in this guide.

### Warning: Positive ground systems

Do not connect this unit to a system which has positive grounding.

### Warning: Switch off power supply

Ensure the vessel's power supply is switched OFF before starting to install this product. Do NOT connect or disconnect equipment with the power switched on, unless instructed in this document.

### Caution: Power supply protection

When installing this product ensure the power source is adequately protected by means of a suitably-rated fuse or automatic circuit breaker.

## Water ingress

Water ingress disclaimer

Although the waterproof rating capacity of this product meets the IPX6 standard, water intrusion and subsequent equipment failure may occur if the product is subjected to commercial high-pressure washing. Raymarine will not warrant products subjected to high-pressure washing.

## Disclaimer

Raymarine does not warrant that this product is error-free or that it is compatible with products manufactured by any person or entity other than Raymarine.

Raymarine is not responsible for damages or injuries caused by your use or inability to use the product, by the interaction of the product with products manufactured by others, or by errors in information utilized by the product supplied by third parties.

## EMC installation guidelines

Raymarine equipment and accessories conform to the appropriate Electromagnetic Compatibility (EMC) regulations, to minimize electromagnetic interference between equipment and minimize the effect such interference could have on the performance of your system

Correct installation is required to ensure that EMC performance is not compromised.

For **optimum** EMC performance we recommend that wherever possible:

- Raymarine equipment and cables connected to it are:
  - At least 1 m (3 ft) 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 2 m (7 ft) 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 product is supplied from a separate battery from that used for engine start. This is important to prevent erratic behavior and data loss which can occur if the engine start does not have a separate battery.
- Raymarine specified cables are used.
- Cables are not cut or extended, unless doing so is detailed in the installation manual.

**Note: Where constraints on the installation prevent any of the above recommendations**, always ensure the maximum possible separation between different items of electrical equipment, to provide the best conditions for EMC performance throughout the installation

## Declaration of conformity

Raymarine UK Ltd. declares that this product is compliant 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

Dispose of this product in accordance with the WEEE 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 Raymarine products, we support its policy and ask you to be aware of how to dispose of this product.

## Warranty registration

To register your Raymarine product ownership, please visit www.raymarine.com and register online.

It is important that you register your product to receive full warranty benefits. Your unit package includes a bar code label indicating the serial number of the unit. You will need this serial number when registering your product online. You should retain the label for future reference.

## IMO and SOLAS

The equipment described within this document is intended for use on leisure marine boats and workboats not covered by International Maritime Organization (IMO) and Safety of Life at Sea (SOLAS) Carriage Regulations.

## Technical accuracy

To the best of our knowledge, the information in this document was correct at the time it was produced. However, Raymarine cannot accept liability for any inaccuracies or omissions it may contain. In addition, our policy of continuous product improvement may change specifications without notice. As a result, Raymarine cannot accept liability for any differences between the product and this document. Please check the Raymarine website (www.raymarine.com) to ensure you have the most up-to-date version(s) of the documentation for your product.

# Chapter 2: Document and product information

## Chapter contents

# 2.1 Handbook information

This handbook contains important information regarding your product.

This handbook includes information to help you:

- plan your installation and ensure you have all the necessary equipment;
- install and connect your product as a part of your system of Raymarine electronics;
- obtain support if required.

This and other Raymarine product documentation is available to download in PDF format from www.raymarine.com.

## Handbooks

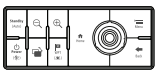
The RayNet keypad has the following handbooks available:

**Handbooks**

| Description | Part number |
|---|---|
| Installation and operation instructions | 81351 |
| RMK-9 Mounting template | 87187 |

# 2.2 Product information

The RMK-9 is a remote control keypad for Raymarine multifunction displays. The keypad is a class 1 PoE device and can be powered using a suitable network connection providing PoE or can be powered directly using the dedicated alternate power connector. The keypad can be mounted horizontally or vertically with a keypad mat for both orientations supplied.

| | | |
|---|---|---|
|  | A80217 | RMK–9 keypad (Using portrait keypad mat.) |
|  | A80217 | RMK–9 keypad (Using landscape keypad mat.) |

## Compatibility

The multifunction displays shown below are compatible with the RMK–9 keypad.

- New a Series
- New c Series
- New e Series
- gS Series

Multifunction displays require software version 7.xx or later.

**Note:** New a Series, New c Series and New e Series displays cannot be powered on using the keypad.

# Chapter 3: Planning the installation

## Chapter contents

# 3.1 Installation checklist

Installation includes the following activities:

| | Installation Task |
|---|---|
| 1 | Plan your system. |
| 2 | Obtain all required equipment and tools. |
| 3 | Site all equipment. |
| 4 | Route all cables. |
| 5 | Drill cable and mounting holes. |
| 6 | Make all connections into equipment. |
| 7 | Secure all equipment in place. |
| 8 | Power on and test the system. |

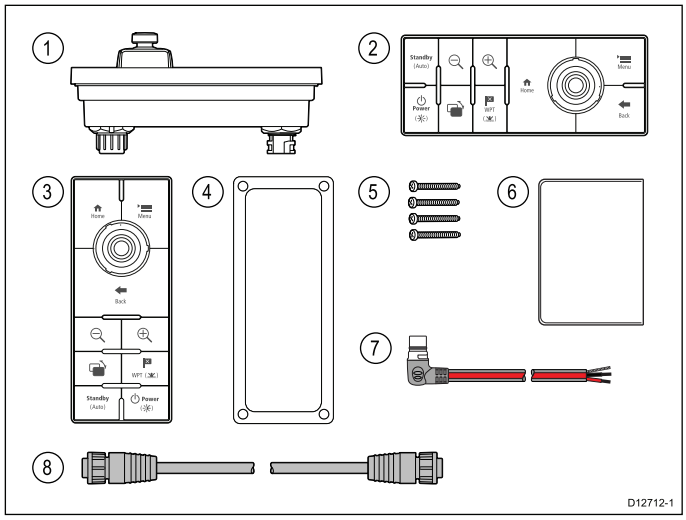
## Schematic diagram

A schematic diagram is an essential part of planning any installation. It is also useful for any future additions or maintenance of the system. The diagram should include:

- Location of all components.
- Connectors, cable types, routes and lengths.

# 3.2 Parts supplied

The parts supplied with the keypad are shown below.




1. Keypad.
2. Landscape keypad mat.
3. Portrait keypad mat.
4. Mounting gasket
5. 4 x mounting fixings.
6. Documentation pack.
7. Right angled power cable 2 m (6.6 ft.).
8. RayNet network cable 2 m (6.6 ft.).

## 3.3 Compatible multifunction displays

This product is compatible with the following Raymarine multifunction displays.

- New a Series, New c Series, New e Series.
- gS Series.

## 3.4 Software updates

The software running on the product can be updated.

- Raymarine periodically releases software updates to improve product performance and add new features.
- You can update the software for your product using a connected and compatible multifunction display.
- Refer to www.raymarine.com/software/ for the latest software updates and the software update procedure for your product.
- If in doubt as to the correct procedure for updating your product software, refer to your dealer or Raymarine technical support.

### Caution: Downloading software updates

The software update process is carried out at your own risk. Before initiating the update process ensure you have backed up any important files.

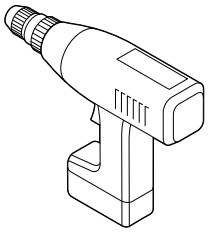
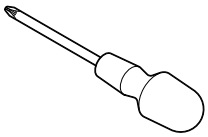
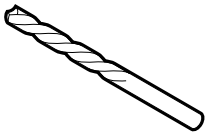
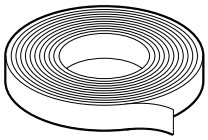
Ensure that the unit has a reliable power supply and that the update process is not interrupted.

Damage caused by incomplete updates are not covered by Raymarine warranty.

By downloading the software update package, you agree to these terms.

## 3.5 Tools required

Product installation requires the following tools:

| Item | Description | Quantity |
|---|---|---|
|  | Power drill | 1 |
|  | Pozidrive screwdriver | 1 |
|  | Drill bit of appropriate size* | 1 |
|  | Adhesive tape | 1 |

**Note:** * The appropriate drill bit size is dependent on the thickness and material of the mounting surface.

## 3.6 Warnings and cautions

**Important:** Before proceeding, ensure that you have read and understood the warnings and cautions provided in the Chapter 1 Important information section of this document.

## 3.7 General location requirements

Important considerations when choosing a suitable location for your product.

This product is suitable for mounting above or below decks.

The product should be mounted where it will be:

- protected from physical damage and excessive vibration.
- well ventilated and away from heat sources.
- away from any potential ignition source such as an engine room, near fuel tanks or a gas locker.

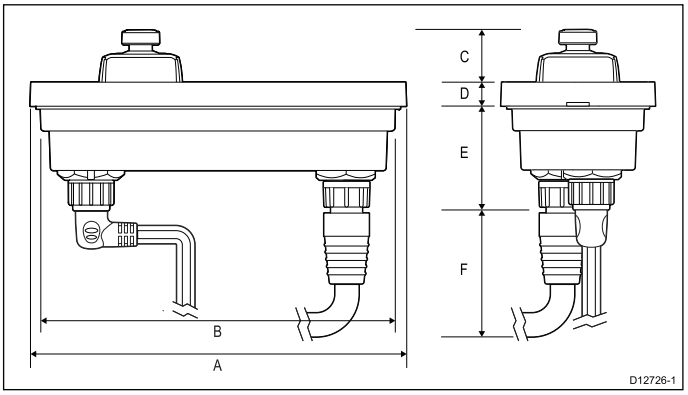
When choosing a location for the product, consider the following points to ensure reliable and trouble-free operation:

- **Access** — there must be sufficient space to enable cable connections to the product, avoiding tight bends in the cable.
- **Diagnostics** — the product must be mounted in a location where the diagnostics LED is easily visible.

> **Note:** Not all products include a diagnostics LED. Refer to the System checks and troubleshooting for more information.

- **Electrical interference** — the product should be mounted far enough away from any equipment that may cause interference such as motors, generators and radio transmitters / receivers.
- **Magnetic compass** — refer to the *Compass safe distance* section in this document for advice on maintaining a suitable distance between this product and any compasses on your vessel.
- **Power** — to keep cable runs to a minimum, the product must be located as close as possible to the vessel's dc power supply.
- **Mounting surface** — ensure the product is adequately supported on a secure surface. Refer to the weight information provided in the *Technical specification* for this product and ensure that the intended mounting surface is suitable for bearing the product weight. Do NOT mount units or cut holes in places which may damage the structure of the vessel.

## 3.8 Keypad dimensions




| | |
|---|---|
| A | 132.9 mm (5.23 in) |
| B | 119 mm (4.7 in) |
| C | 18.7 mm (0.74 in) |
| D | 8.5 mm (0.33 in) |
| E | 37 mm (1.5 in) |
| F | 90 mm (3.5 in.) |

# Chapter 4: Cables and connections

## Chapter contents

# 4.1 General cabling guidance

## Cable types and length

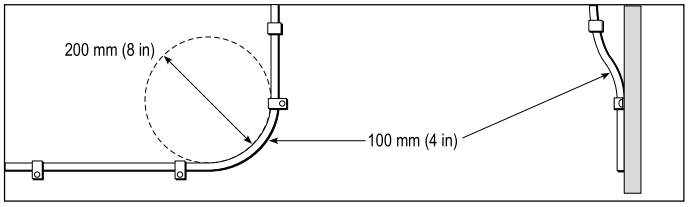
It is important to use cables of the appropriate type and length

- Unless otherwise stated use only standard cables of the correct type, supplied by Raymarine.
- Ensure that any non-Raymarine cables are of the correct quality and gauge. For example, longer power cable runs may require larger wire gauges to minimize voltage drop along the run.

## Routing cables

Cables must be routed correctly, to maximize performance and prolong cable life.

- Do NOT bend cables excessively. Wherever possible, ensure a minimum bend diameter of 200 mm (8 in) / minimum bend radius of 100 mm (4 in).




- Protect all cables from physical damage and exposure to heat. Use trunking or conduit where possible. Do NOT run cables through bilges or doorways, or close to moving or hot objects.
- Secure cables in place using tie-wraps or lacing twine. Coil any extra cable and tie it out of the way.
- Where a cable passes through an exposed bulkhead or deckhead, use a suitable watertight feed-through.
- Do NOT run cables near to engines or fluorescent lights.

Always route data cables as far away as possible from:

- other equipment and cables,
- high current carrying ac and dc power lines,
- antennae.

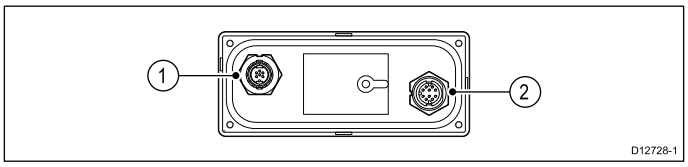
## Strain relief

Ensure adequate strain relief is provided. Protect connectors from strain and ensure they will not pull out under extreme sea conditions.

## Cable shielding

Ensure that all data cables are properly shielded that the cable shielding is intact (e.g. hasn't been scraped off by being squeezed through a tight area).

# 4.2 Connections overview




1. Alternate power connector.
2. Network / power connector.

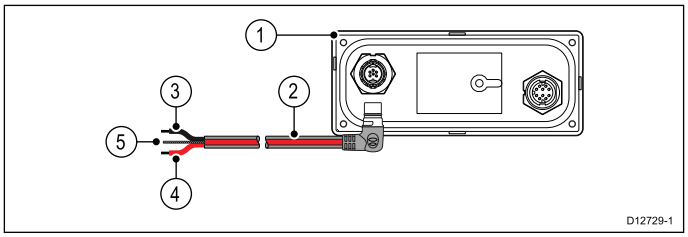
The alternate power connector is required when connecting to a network which does not support Power over Ethernet PoE. The alternate power connector must be connected directly to a power supply.

**Note:** Do not connect the alternate power connector to a SeaTalk$^{ng}$ network.

**Note:** Only use one power source. There is no need to connect the alternate power connector when the keypad is being supplied PoE.

## Alternate power connection

When the keypad is not supplied Power over Ethernet (PoE) then the alternate power connection should be connected directly to a 12 V dc or 24 V dc power supply.




1. Keypad.
2. Right angled power cable.
3. Black negative wire.
4. Ground / shield wire.
5. Red positive wire.

### Warning: Product grounding

Before applying power to this product, ensure it has been correctly grounded, in accordance with the instructions in this guide.

## Grounding — Dedicated drain wire

The power cable supplied with this product includes a dedicated shield (drain) wire for connection to a vessel's RF ground point.

It is important that an effective RF ground is connected to the system. A single ground point should be used for all equipment. The unit can be grounded by connecting the shield (drain) wire of the power cable to the vessel's RF ground point. On vessels without an RF ground system the shield (drain) wire should be connected directly to the negative battery terminal.

The dc power system should be either:

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

### Warning: Positive ground systems

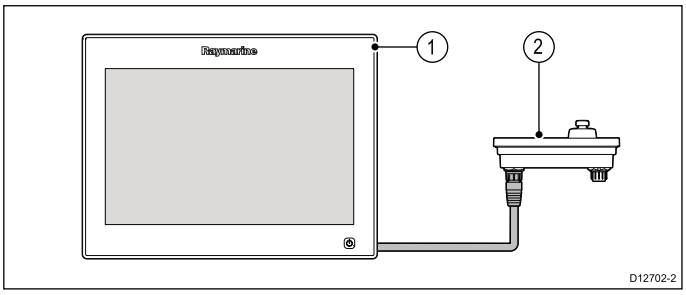
Do not connect this unit to a system which has positive grounding.

## Keypad connection

The keypad can be connected directly to a multifunction display's network connector or via a network switch. Multiple keypads can be connected to a system. Each keypad can be used to control

up to 4 multifunction displays. If the network does not provide Power over Ethernet (PoE) then the keypad must be powered separately.

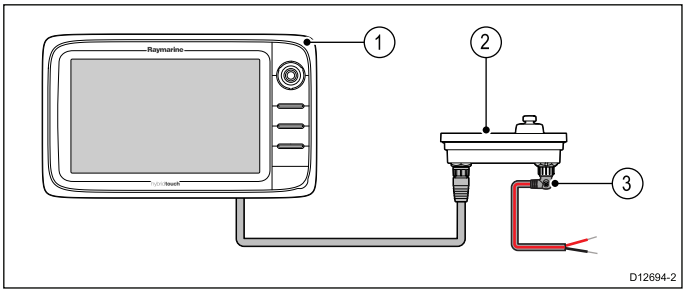
### Direct connection — gS Series multifunction display




1. gS Series multifunction display.
2. Keypad.

When connecting the keypad directly to a gS Series multifunction display the keypad is supplied with PoE, from the multifunction display.

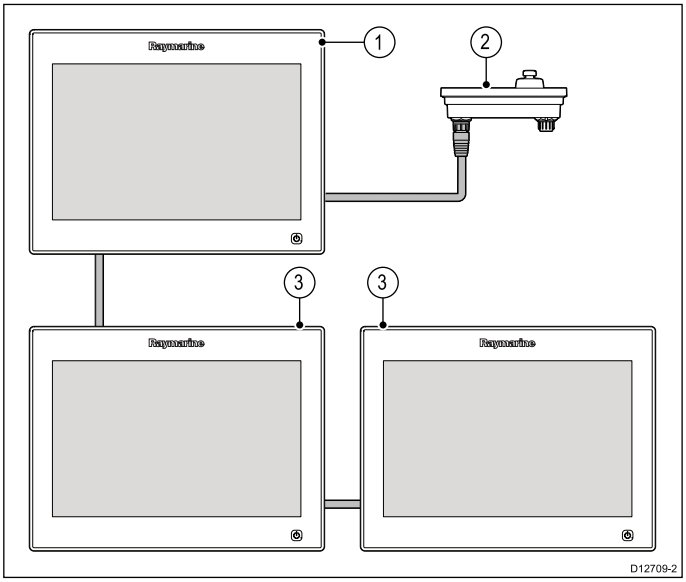
### Direct connection — Raymarine multifunction display




1. Multifunction display.
2. Keypad.
3. Right angled power cable.

When connecting the keypad directly to a New a Series, New c Series or New e Series multifunction display the keypad is not supplied with PoE, and so requires power using the alternate power connector.

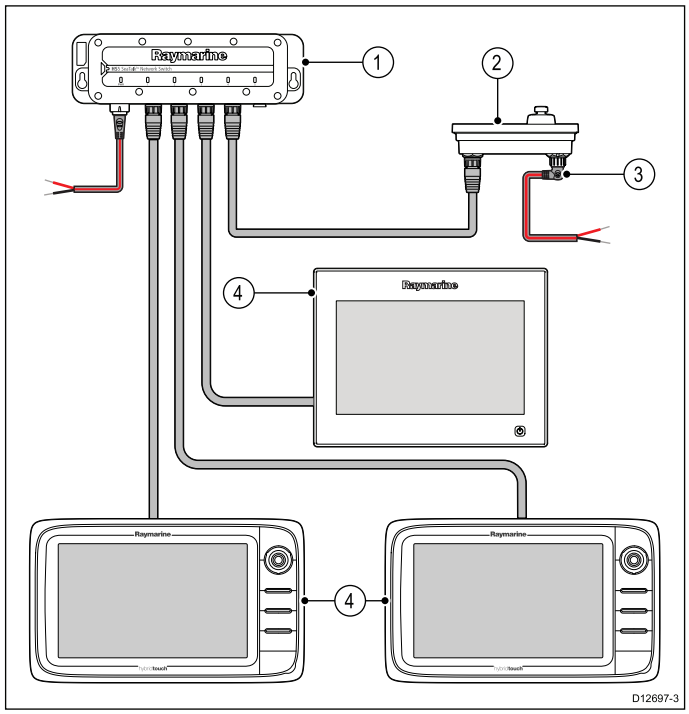
### Network connection — gS Series multifunction displays




1. gS Series multifunction display (supplying PoE to the keypad).
2. Keypad.
3. Networked gS Series multifunction displays.

When connecting the keypad to a gS Series multifunction display network the keypad is supplied with PoE.

### Network connection — Raymarine multifunction displays




1. Network switch.
2. Keypad.
3. Right angled power cable.
4. Networked multifunction displays.

When connecting the keypad to a network switch the keypad requires a separate power supply using the alternate power connector.

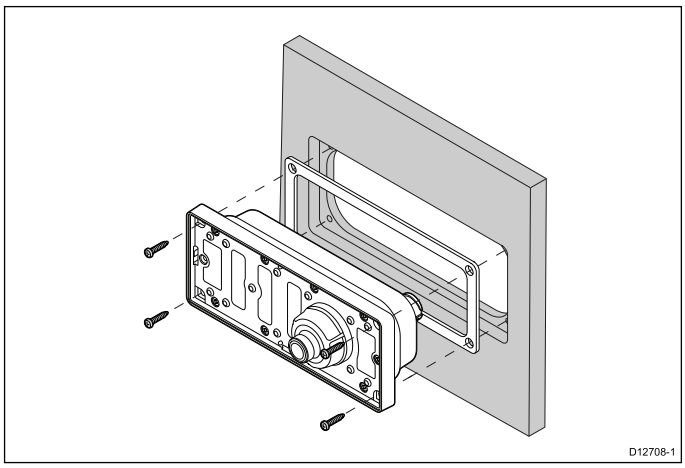
Once connected the keypad must be paired with the each multifunction display you want to control using the keypad.

# Chapter 5: Mounting

## Chapter contents

## 5.1 Flush mounting the keypad

For flush mounting you must rebate the mounting surface to accommodate keypad.

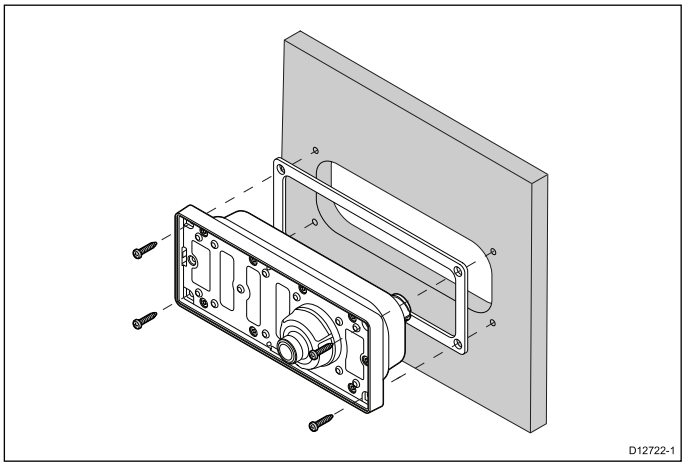



1. Check the selected location for the unit. A clear, flat area with suitable clearance behind the panel is required.
2. Before modifying the mounting surface, refer to the dimensions supplied in this document to ensure there is enough space for the unit and all cables.
3. Fix the supplied mounting template to the selected location, using masking or self-adhesive tape.
4. Drill 4 holes as indicated on the mounting template to accept the fixings.
5. Using a suitable hole saw (the size and position is indicated on the template), make a hole in each corner of the cut-out area.
6. Using a suitable saw, cut along the inside edge of the rear casing cut-out line indicated on the template.
7. Using a router follow the rebate cut-out line on the template to cut out a rebate with a depth of 8.5 mm (0.33 in), to accept the unit.
8. Ensure that the unit fits into the removed area and then remove rough edges.
9. Place the supplied gasket onto the rear of the keypad, ensuring the mounting holes are aligned.
10. Connect relevant cables.
11. Place the keypad into the rebate and secure using the fixings provided.

**Note:** The appropriate tightening torque and drill bit size to use depends on the thickness of the mounting surface and the type of material it is made from.

**Note:** The supplied gasket provides a seal between the unit and a suitably flat and stiff mounting surface or binnacle. The gasket should be used in all installations. It may also be necessary to use a marine-grade sealant if the mounting surface or binnacle is not entirely flat and stiff or has a rough surface finish.

## 5.2 Surface mounting the keypad




1. Check the selected location for the unit. A clear, flat area with suitable clearance behind the panel is required.
2. Before modifying the mounting surface, refer to the dimensions supplied in this document to ensure there is enough space for the unit and cables.
3. Fix the supplied mounting template to the selected location, using masking or self-adhesive tape.
4. Drill 4 holes as indicated on the mounting template to accept the fixings.
5. Using a suitable hole saw, make a hole in each corner of the cut-out area.
6. Using a suitable saw, cut along the inside edge of the rear casing cut-out line indicated on the template.
7. Ensure that the unit fits into the removed area and then remove rough edges.
8. Place the supplied gasket onto the rear of the keypad, ensuring the mounting holes are aligned.
9. Connect relevant cables.
10. Secure using the fixings provided.

**Note:** The appropriate tightening torque and drill bit size to use depends on the thickness of the mounting surface and the type of material it is made from.

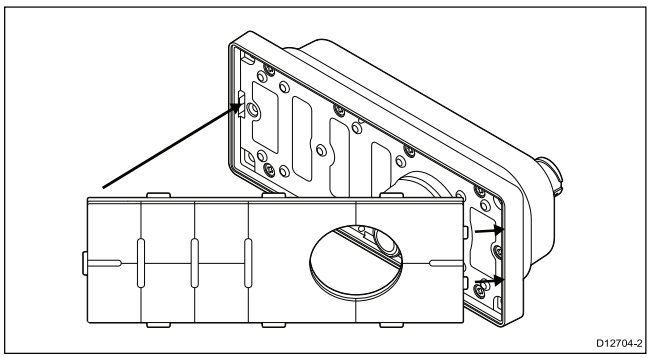
**Note:** The supplied gasket provides a seal between the unit and a suitably flat and stiff mounting surface or binnacle. The gasket should be used in all installations. It may also be necessary to use a marine-grade sealant if the mounting surface or binnacle is not entirely flat and stiff or has a rough surface finish.

## 5.3 Fitting the keypad mat

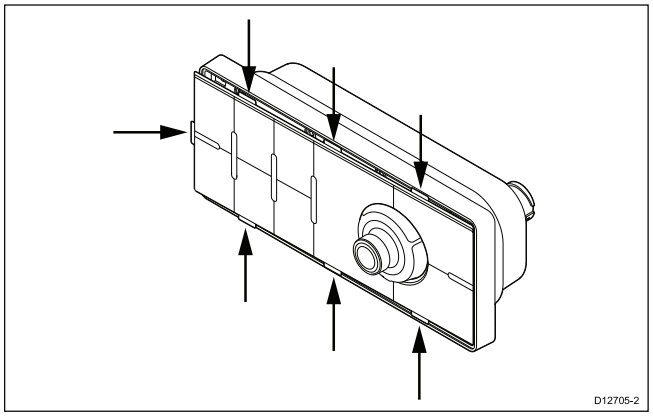
Your keypad is supplied with a portrait and a landscape keypad mat.

You should fit the keypad mat which matches your chosen mounting orientation.

1. Ensure the keypad mat is orientated correctly.
2. Fit the keypad mat into the keypad so that the keypad mat tabs slide into the holes in the keypad, as shown below.

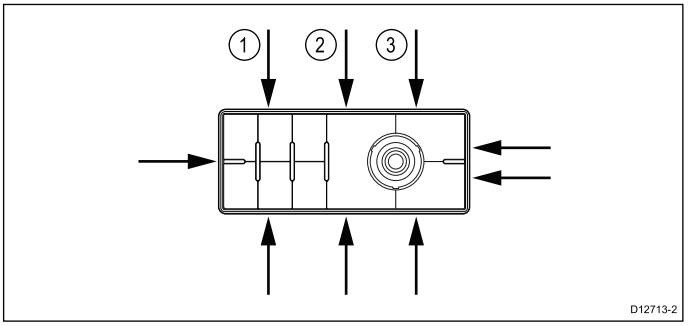



3. Close the opposite end of the keypad mat into the keypad ensuring that the end tab and all side tabs (shown below) click firmly into place.




## 5.4 Removing the keypad mat

The keypad mat can be removed from the keypad following the steps below.




Locking tabs are located at the positions shown above.

**Note:** Take care and ensure the keypad housing is not damaged

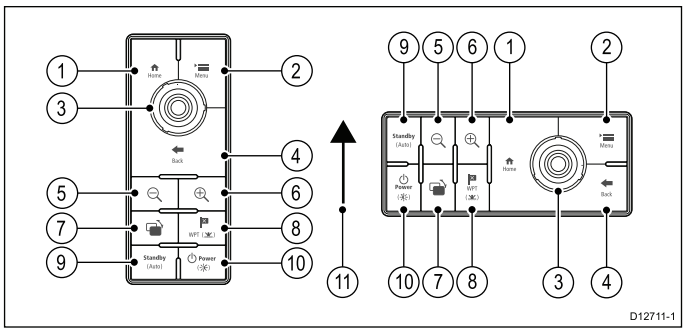
1. Using a thin bladed screwdriver insert the tip of the screwdriver into the recess between the edge of the keypad mat and the keypad housing at location (1) shown above.
2. Gently push the screwdriver away and down from the keypad mat to release the keypad mat tabs.
3. Repeat steps 1 and 2 for tabs at locations (2) and (3).
4. With all 3 tabs along one side of the keypad free the keypad mat should easily come away from the keypad.

# Chapter 6: Operation

## Chapter contents

# 6.1 Keypad controls

Connecting the keypad allows you to control your multifunction display remotely.




1. **Home** — press to return to the homescreen.
2. **Menu** — accesses menus. Press again to close menus.
3. **UniControl** — provides a rotary control and a joystick with an OK push button for using menus and applications.
4. **Back** — press to return to a previous menu or dialog level.
5. **Range Out** — press to range out.
6. **Range In** — press to range in.
7. **Switch Active** — press to switch the active pane, or to switch the active multifunction display (in multiple display systems).
8. **WPT / MOB** — press and release to access the waypoint options. Press again to place a waypoint. Press and hold to place a Man Overboard (MOB) marker at your current position.
9. **Standby (Auto)** — press to disengage integrated autopilot, press and hold to activate Auto mode on integrated autopilot.
10. **Power** — see table below:

| Configuration | Display State | Momentary press | Press and hold |
|---|---|---|---|
| 1 Multifunction display | Off | Power on* | — |
| | On | Open shortcuts page | Power down |
| Multiple multifunction displays | All displays Off | Power on all displays* | — |
| | All displays On | Open shortcuts page on active display | Power down all displays |
| | 1 Display On and 1 display Off | Open shortcuts page on active display | Power down active display |

**Note:** * Only applicable to gS Series displays. New a Series, New c Series and New e Series displays cannot be powered on using the keypad.

**Note:** In a multiple display configuration where displays are in different states the displays that are turned off can only be turned on using the power button on the display.

11. Joystick Up direction.

# 6.2 Pairing the keypad

The keypad can control 1 or more multifunction displays. Multiple keypads can be connected to a system. Each keypad can be paired with up to 4 multifunction displays.

With the keypad connected to the multifunction display:

1. Select **External Keypad** from the External Devices menu: **homescreen > Set-up > System Settings > External Devices > External Keypad**.
2. Select **Pair Keypad**.
3. Press any button on the external keypad.
4. From the pop-up message select the orientation of the keypad.

   Either landscape or portrait orientations are available.

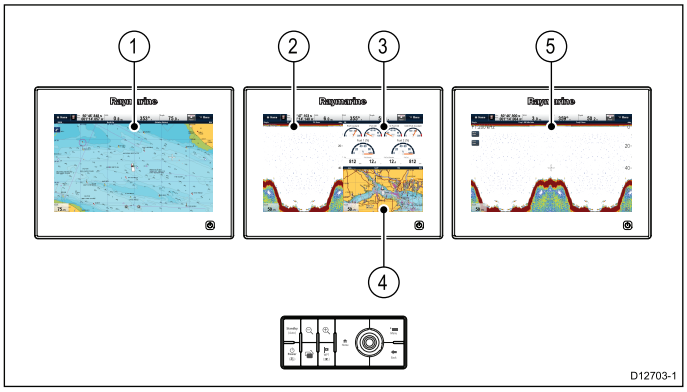
The keypad is now paired.

## Switching the active pane or display using the keypad

The Switch Active button is used to switch the active pane on a multi application page and / or to switch the active display.

With multiple displays connected and / or a multiple application page displayed:

### Cycle sequence




1. Press the **Switch Active** button to enter switch mode.
2. Use the **Rotary Control** to cycle through the available panes and / or displays.

   The keypad will cycle through displays in the order in which they were paired. On multi application pages the Range buttons can be used to switch the active application between full and splitscreen.
3. Press the **Back** button or the **Switch Active** button to exit switch mode.

## Unpairing the keypad

The keypad can be unpaired from an individual display.

1. Select **External Keypad** from the External Devices menu: **homescreen > Set-up > System Settings > External Devices > External Keypad**.
2. Select **Clear Pairings**.
3. Select **Yes** to unpair the keypad with the display.

## Determining the active display

You can determine which display is currently active.

1. Press the **Switch Active** button.

   The switcher pop-up is displayed on the screen or pane that is active.
2. Press the **Switch Active** button again to close the switcher pop-up.

   The active display remains the same.

# Chapter 7: Technical support

## Chapter contents

## 7.1 Raymarine customer support

Raymarine provides a comprehensive customer support service. You can contact customer support through the Raymarine website, telephone and e-mail. If you are unable to resolve a problem, please use any of these facilities to obtain additional help.

### Web support

Please visit the customer support area of our website at:

www.raymarine.com

This contains Frequently Asked Questions, servicing information, e-mail access to the Raymarine Technical Support Department and details of worldwide Raymarine agents.

### Telephone and e-mail support

**In the USA:**

- **Tel:** +1 603 324 7900
- **Toll Free:** +1 800 539 5539
- **E-mail:** support@raymarine.com

**In the UK, Europe, and the Middle East:**

- **Tel:** +44 (0)13 2924 6777
- **E-mail:** ukproduct.support@raymarine.com

**In Southeast Asia and Australia:**

- **Tel:** +61 (0)29479 4800
- **E-mail:** aus.support@raymarine.com

### Product information

If you need to request service, please have the following information to hand:

- Product name.
- Product identity.
- Serial number.
- Software application version.
- System diagrams.

You can obtain this product information using the menus within your product.

## 7.2 Viewing product information

You can view information about your unit from the **Diagnostics** menu on a compatible multifunction display. This option displays information such as product serial number and software version.

With the Homescreen displayed:

1. Select **Set-up.**
2. Select **Maintenance**.
3. Select **Diagnostics**.
4. Select the **Select Device** option.

   A list of connected devices is displayed.
5. Select the product for which you want to view information. Alternatively, select **Show All Data** to display information for all connected products.

# Chapter 8: Technical specification

## Chapter contents

# 8.1 Technical specification

### Power specification

| | |
|---|---|
| **PoE class** | Class 1 |
| **Nominal supply voltage** | 12 / 24 V dc |
| **Operating voltage range** | 10.8V dc to 31.2V dc |
| **Power consumption** | 3.84 W |

### Environmental specification

| | |
|---|---|
| **Operating temperature** | -25 ºC to +55 ºC (-13 ºF to 131 ºF) |
| **Storage temperature** | -30 ºC to +70 ºC (-22 ºF to 158 ºF) |
| **Relative humidity** | Maximum 75% |
| **Waterproof rating** | IPX6 |

### Wired connections

| | |
|---|---|
| **Network / power** | 1 x RayNet connector<br>• gS Series — 1000 Mb/s plus PoE.<br>• a, c, e Series — 100 Mb/s. |
| **Alternate power** | 1 x Power connector. |

# Chapter 9: Spares and accessories

## Chapter contents

# 9.1 Keypad spares

| Item | Part number |
|---|---|
| Keypad mat spare (includes landscape and portrait keypad mat.) | R70185 |
| Right angled power cable | A06070 |

## Network cables

### RayNet to RayNet cables

| Cable | Part number |
|---|---|
| 400 mm (1.3 ft) RayNet (F) to RayNet (F) cable | A80161 |
| 2 m (6.56 ft) RayNet (F) to RayNet (F) cable | A62361 |
| 5 m (16.4 ft) RayNet (F) to RayNet (F) cable | A80005 |
| 10 m (32.8 ft) RayNet (F) to RayNet (F) cable | A62362 |
| 20 m (65.6 ft) RayNet (F) to RayNet (F) cable | A80006 |
| 100 mm (3.9 in) RayNet (M) to RayNet (M) cable | A80162 |
| RayNet right-angled coupler | A80262 |
| RayNet cable puller 5-pack | R70014 |

### RayNet adapter cables

| Cable | Part number |
|---|---|
| 1 m (3.28 ft) RayNet (F) to RJ45 SeaTalk$^{hs}$ (M) cable | A62360 |
| 3 m (9.84 ft) RayNet (F) to RJ45 SeaTalk$^{hs}$ (M) cable | A80151 |
| 10 m (32.8 ft) RayNet (F) to RJ45 SeaTalk$^{hs}$ (M) cable | A80159 |
| 400 mm (1.3 ft) RayNet (F) to RJ45 SeaTalk$^{hs}$ (F) cable | A80160 |
| 100 mm (3.9 in) RayNet (F) to RJ45 (F) cable | A80247 |
| 350 mm (13.78 in) RayNet (M) to RJ45 SeaTalk$^{hs}$ (M) cable | A80272 |
| 3 m (9.84 ft) RayNet (F) to RJ45 SeaTalk$^{hs}$ (M) cable | A80276 |

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