

### Obtain the complete documentation for your product

The supplied printed documentation is a subset of the full documentation available for your product.

**Important:** The latest versions of all English and translated handbooks are available on the Raymarine website. Please check the website to ensure you have the latest and complete documentation and safety information for your product.

[www.raymarine.com/manuals](http://www.raymarine.com/manuals)



#### 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.
- Raymarine recommends certified installation by a Raymarine approved installer. A certified installation qualifies for enhanced product warranty benefits. Contact your Raymarine dealer for further details, and refer to the separate warranty document packed with your product.



#### 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.



#### Warning: Power supply voltage

Connecting this product to a voltage supply greater than the specified maximum rating may cause permanent damage to the unit. Refer to the *Technical specification* section for voltage rating.

#### 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.**

## FCC



#### Warning: FCC Warning (Part 15.21)

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

### Compliance Statement (Part 15.19)

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.
2. This device must accept any interference received, including interference that may cause undesired operation.

### FCC Interference Statement (Part 15.105 (b))

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio / TV technician for help.

### Innovation, Science and Economic Development Canada (ISED)

This device complies with License-exempt RSS standard(s).

Operation is subject to the following two conditions:

1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

### Innovation, Sciences et Développement économique Canada (Français)

Cet appareil est conforme aux normes d'exemption de licence RSS.

Son fonctionnement est soumis aux deux conditions suivantes:

1. cet appareil ne doit pas causer d'interférence, et
2. cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

#### Radiation Exposure Statement:

This equipment complies with FCC/ISED RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

#### Cet appareil est

Conforme aux limites d'exposition de rayonnement RF FCC/ISED établies pour un environnement non contrôlé.

Cet émetteur ne doit pas être co-implanté ou fonctionner en conjonction avec toute autre antenne ou transmetteur.

Cet équipement doit être installé et utilisé avec une distance minimale de 20cm entre le radiateur & votre corps.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### Additional information - wireless hub

|              |                    |
|--------------|--------------------|
| IC:          | 4069B-RAYHUB       |
| FCC ID:      | PJ5-RAYHUB         |
| Output power | 13.32dBm           |
| Modulation   | DSSS/CCK           |
| Frequency    | 2412MHz to 2462MHz |

## Declaration of Conformity

FLIR Belgium BVBA declares that the radio equipment type Wireless hub, part number A80540, is in compliance with the Radio Equipment Directive 2014/53/EU.

The original Declaration of Conformity certificate may be viewed on the relevant product page at [www.raymarine.com/manuals](http://www.raymarine.com/manuals).

## 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 which contains materials, components and substances that may be hazardous and present a risk to human health and the environment when WEEE is not handled correctly.



Equipment marked with the crossed-out wheeled bin symbol indicates that the equipment should not be disposed of in unsorted household waste.

Local authorities in many regions have established collection schemes under which residents can dispose of waste electrical and electronic equipment at a recycling center or other collection point.

For more information about suitable collection points for waste electrical and electronic equipment in your region, refer to the following table:

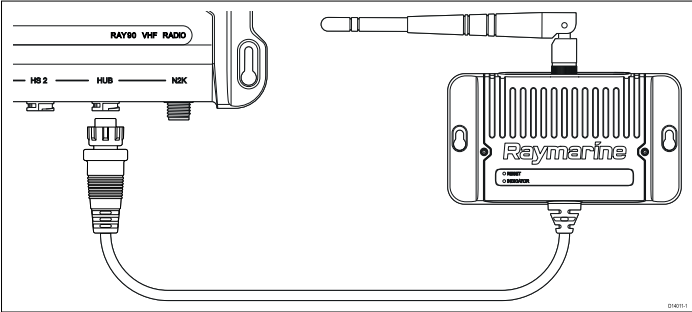
| Region | Website                                                                                                                                | Region | Website                                                                                                                                       |
|--------|----------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| AT     | <a href="http://www.ara-plus.at">www.ara-plus.at</a>                                                                                   | IT     | <a href="http://www.erp-recycling.org/it-it">www.erp-recycling.org/it-it</a>                                                                  |
| BE     | <a href="http://www.recupel.be">www.recupel.be</a>                                                                                     | LT     | <a href="http://www.eei.lt">www.eei.lt</a>                                                                                                    |
| BG     | <a href="http://www.greentech.bg">www.greentech.bg</a>                                                                                 | LU     | <a href="http://www.ecotrel.lu">www.ecotrel.lu</a> ,<br><a href="https://aev.gouvernement.lu/fr.html">https://aev.gouvernement.lu/fr.html</a> |
| CY     | <a href="http://www.electrocyclo-sis.com.cy">www.electrocyclo-sis.com.cy</a>                                                           | LV     | <a href="http://www.lze.lv">www.lze.lv</a>                                                                                                    |
| CZ     | <a href="http://www.retela.cz">www.retela.cz</a>                                                                                       | MT     | <a href="http://www.green-pak.com.mt">http://www.green-pak.com.mt</a>                                                                         |
| DE     | <a href="http://www.earn-service.com">www.earn-service.com</a>                                                                         | NL     | <a href="http://www.wecycle.nl">www.wecycle.nl</a>                                                                                            |
| DK     | <a href="http://www.elretur.dk">www.elretur.dk</a>                                                                                     | PL     | <a href="http://www.electro-system.pl">www.electro-system.pl</a>                                                                              |
| EE     | <a href="http://www.elektroonikaromu.ee">www.elektroonikaromu.ee</a>                                                                   | PT     | <a href="http://www.amb3e.pt">www.amb3e.pt</a>                                                                                                |
| ES     | <a href="http://www.raee-asimelec.es">www.raee-asimelec.es</a>                                                                         | RO     | <a href="http://www.ecotic.ro">www.ecotic.ro</a>                                                                                              |
| FI     | <a href="http://www.elker.fi">www.elker.fi</a>                                                                                         | SE     | <a href="http://www.el-kretsen.se">www.el-kretsen.se</a>                                                                                      |
| FR     | <a href="http://www.ecologic-france.com">www.ecologic-france.com</a> ,<br><a href="http://www.eco-systemes.fr">www.eco-systemes.fr</a> | SI     | <a href="http://www.zeos.si">www.zeos.si</a>                                                                                                  |
| GR     | <a href="http://www.electrocycle.gr">www.electrocycle.gr</a>                                                                           | SK     | <a href="http://www.erp-recycling.sk">www.erp-recycling.sk</a>                                                                                |
| IE     | <a href="http://www.weeeireland.ie">www.weeeireland.ie</a>                                                                             | UK     | <a href="http://www.waste-care.co.uk/compliance-services/weeecare">www.waste-care.co.uk/compliance-services/weeecare</a>                      |

## 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.

## Wireless hub connection

The Wireless hub connects directly to the Ray90 / Ray91's Hub connection.



The Wireless hub is required to allow connection of wireless handset stations to the Ray90 / Ray91 base station.

## Technical specification - Wireless hub

The following technical specification applies to the Wireless hub accessory.

|                         |                                                                                                                                                                              |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating temperature   | -25°C (-13°F) to +55°C (131°F)                                                                                                                                               |
| Storage temperature     | -25°C (-13°F) to +70°C (158°F)                                                                                                                                               |
| Relative humidity       | 95%                                                                                                                                                                          |
| Water proofing          | IPx6 & IPx7                                                                                                                                                                  |
| Wireless frequency      | 2.4 GHz                                                                                                                                                                      |
| Connections             | <ul style="list-style-type: none"><li>Connects to Base station via 12 pin connector.</li><li>Connects to up to 3 wireless handsets via 2.4GHz wireless connection.</li></ul> |
| VHF radio compatibility | <ul style="list-style-type: none"><li>Ray90 / Ray91</li></ul>                                                                                                                |

Notice: This device requires controlled installation location by professional installers.

The installer shall install the authorized antenna, and the unthorized antenna shall not be installed on this product.