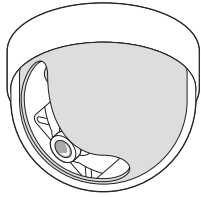


# Installation

## Introduction



Your Raymarine CAM 50 CCTV camera is a good quality color camera available in two models:

- E03016 - NTSC format.
- E03017 - PAL format.

It is waterproof to IP63 standard and suitable for use in indoor locations such as the wheel house, salon or engine room.



## Safety notices

### CAUTION: Power supply

The CAM 50 CCTV camera is suitable for use on a 12 V DC power supply only.

### CAUTION: Power supply

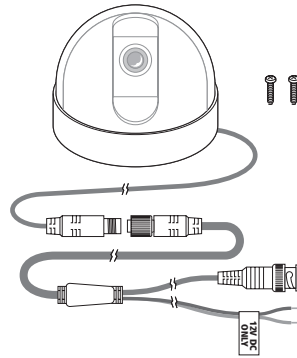
A 0.5 A quick-blow fuse should be fitted to the positive (red) lead of the camera.

### CAUTION: Installation

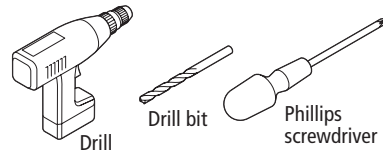
This product IS NOT suitable for installation underwater.

This product contains no user serviceable parts.

## What's in the box?



## What tools are required?



## What accessories are available?

To enable you to complete the cabling to install your camera the following are available:

- E06017 - 5 m extension cable.
- E06018 - 15 m extension cable

The cables can be joined in any combination to achieve the required cable length.

## Cable runs

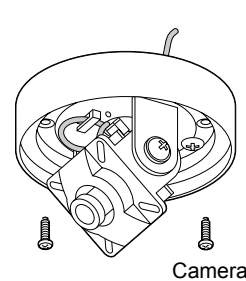
You need to consider the following points before installing your camera cables:

- You need to connect the camera to a display unit and power supply.
- All cables should be adequately clamped and protected from physical damage and exposure to heat - avoid running cables through bilges or doorways, or close to moving or hot objects.

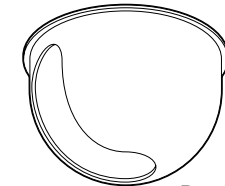
- Acute bends must be avoided.
- Where a cable passes through an exposed bulkhead or deckhead, a watertight gland or swan neck tube should be used.
- CCTV camera cables cannot be cut and rejoined.

## Installation

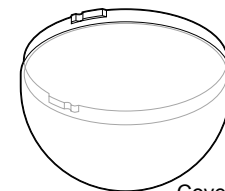
Having selected a suitable installation site:



Camera



Dome

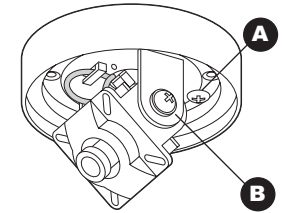


Cover

cable slot of the camera baseplate to ensure that it is not pinched when the baseplate is secured in position.

With the camera installed you can now adjust the field of vision .

- 1.Remove the camera dome by gently turning it counter-clockwise to release the bayonet fixing.
- 2.Remove the camera cover by gently pulling it away from the dome baseplate.
- 3.Hold the baseplate in the required position and using a pencil mark the fixing holes.
4. Using a suitable drill bit make pilot holes for the fixing screws.
- 5.Fix the camera and baseplate into position using the two screws provided.
- 6.Make sure that the cable is placed in the



You can adjust both the pan and the tilt of the camera.

### To adjust the pan of the camera:

1. Loosen screw A.
2. Gently turn the camera assembly until the lens is pointing in the required direction.
3. Gently pinch screw A to secure the camera in position.

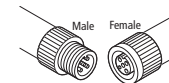
### To adjust the tilt of the camera:

1. Loosen screw B.
2. Holding the edges of the camera plate gently tilt the camera up or down into the required position.
3. Gently pinch screw B to secure the camera in position.

You should now connect the camera to your display and check that the required image is being shown.

Either adjust the image by changing the pan and tilt as detailed above, or, replace the camera dome and cover to complete the installation.

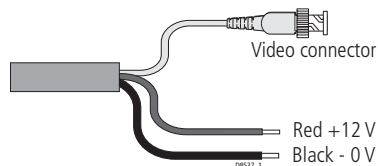
## Cable connections



The extension cables from the camera to the display unit are joined using the male/female twist connectors.

The adapter cable should be used to connect the display and the power supply to the camera. The adapter cable connections are shown below.

## Maintenance



If you do not have a breaker in the power circuit, an in-line 0.5 A quick blow fuse should be fitted to the positive (red) lead of the cable.

### Maintenance and Troubleshooting

Your Raymarine CAM 100 does not contain user-serviceable parts. They should be serviced only by authorized Raymarine service technicians at a Raymarine factory facility.

#### Routine Maintenance

Routine maintenance should be carried out on a regular basis:

- Examine all cables for signs of damage such as chafing, cuts or nicks.
- Check that all cables are securely connected.
- Spray the camera and lens with fresh water and wipe with a soft lint-free cloth to remove debris or salt deposits.

### Troubleshooting

| Problem                  | Solution   |
|--------------------------|--|
| Camera does not function | <ol style="list-style-type: none"> <li>1. Make sure that the cable is sound and that all connections are tight and free from corrosion.</li> <li>2. Check system fuses.</li> <li>3. Check that the display is set up correctly to receive the images.</li> </ol> <p>Refer to the relevant display handbook for full details.</p> |

## Technical Specification

|                        |   |
|------------------------|---|
| Format                 | NTSC 512 x 492 pixels<br>PAL 500x 582 pixels              |
| Imager                 | 1/3 Sony DSP Color CCD                                    |
| Horizontal resolution  | 380TVL  |
| Scanning system        | NTSC 525 lines 2:1 interlaced<br>PAL 625 lines            |
| Video output           | Composite 75 Ohms   |
| Shutter speed          | NTSC 1/60 - 1/100.000sec<br>PAL - 1/50 - 1/100.000 sec    |
| Minimum illumination   | 0.3 Lux at F2   |
| Waterproof             | IP63  |
| Power connection       | 12 V tinned leads   |
| Video connections      | Female BNC  |
| Operating temperatures | -10°C to +50°C (-14°F to 122°F)                           |
| Power consumption      | 80 mA with regulated power input.                         |
| Lens                   | 3.6 mm<br>Best focus - 1.5 m<br>Viewable distance - 3.5 m |

### Waste Electrical and Electronic Equipment (WEEE) Directive



Raymarine fully complies with the WEEE directive and as part of its environmental policy asks you to be aware of how you should dispose of this product properly. The crossed out wheeled bin, illustrated on the left, 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.

## Technical Support

### Restriction of the use of certain Hazardous Substances



This product uses components that comply with the requirements of the Restriction of the use of certain Hazardous Substances (RoHS) Directive 2002/95/EC.

### Warranty

To register your new Raymarine product, please take a few minutes to visit our website [www.raymarine.com](http://www.raymarine.com). It is important that you register to receive full warranty benefits.

### Technical support

Complete product information and interactive help is available at:

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

#### North and South America

##### Raymarine Technical Support

+1-800-539-5539 or, +1-603-881-5200

##### Product Repair and Service

Raymarine Product Repair Center  
21 Manchester Street, Merrimack, NH 0354-4801

#### Europe, Middle East, Africa and Australasia

##### Raymarine Technical Support

+44 (0) 23 9271 4713

##### Product Repair and Service

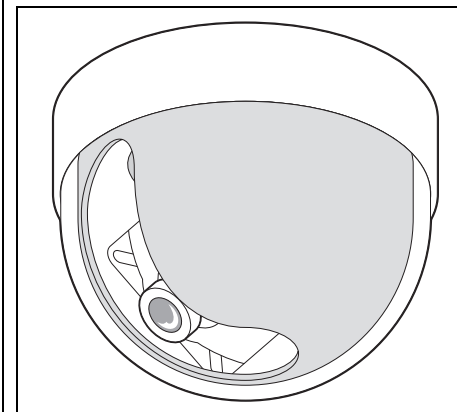
Raymarine plc, Anchorage Park, Portsmouth, PO3 5TD, England.

**Raymarine**

Document No:81294\_1 Date: December 2006

# Raymarine

## CAM 50



# User Guide

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