Introduction
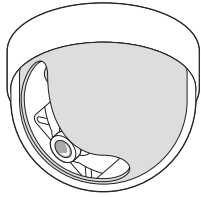

Your Raymarine CAM 50 CCTV camera is a good quality color camera available in two models:
- E03016 - NTSC format.
- E03017 - PAL format.

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.
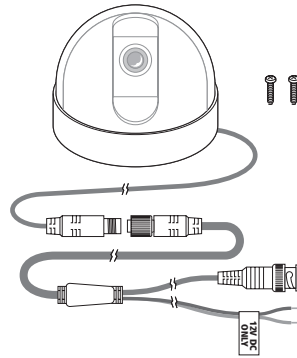
CAUTION: Power supply

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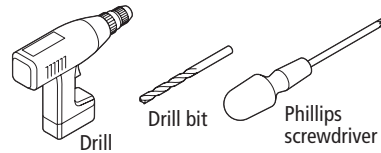
CAUTION: Installation

This product IS NOT suitable for installation underwater.

This product contains no user serviceable parts.

What's in the box?

What tools are required?

Drill   Drill bit   Phillips screwdriver

What accessories are available?

To enable you to complete the cabling to instal 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.
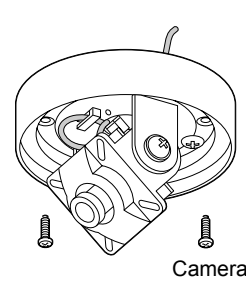
Cable runs

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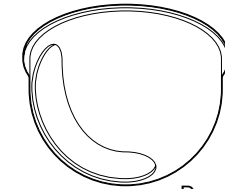- Acute bends must be avoided.
- Where a cable passes through an exposed bulkhead or deckhead, a watertight gland or swan neck tube should be used.
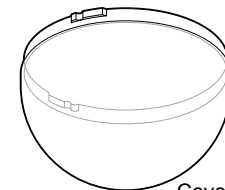- CCTV camera cables cannot be cut and rejoined.

Installation

Having selected a suitable installation site:

Camera

Dome

Cover

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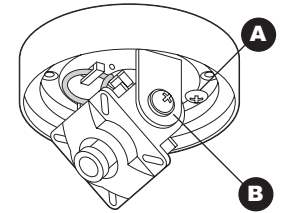6. Make sure that the cable is placed in the cable slot of the camera baseplate to ensure that it is not pinched when the baseplate is secured in position.

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

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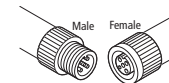
To adjust the tilt of the camera:
1. Loosen screw B.
2. Holding the edges of the camera plate gently tilt the camera up or down into the required position.
3. Gently pinch screw B to secure the camera in position.

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

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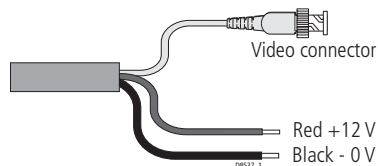
The extension cables from the camera to the display unit are joined using the male/female twist connectors.

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

Video connector

Red +12 V
Black - 0 V

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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	1. Make sure that the cable is sound and that all connections are tight and free from corrosion. 2. Check system fuses. 3. Check that the display is set up correctly to receive the images. Refer to the relevant display handbook for full details.

Format	NTSC 512 x 492 pixels PAL 500x 582 pixels
Imager	1/3 Sony DSP Color CCD
Horizontal resolution	380TVL
Scanning system	NTSC 525 lines 2:1 interlaced PAL 625 lines
Video output	Composite 75 Ohms
Shutter speed	NTSC 1/60 - 1/100.000sec 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^oC to $+50^o$C (-14^oF to 122^oF)
Power consumption	80 mA with regulated power input.
Lens	3.6 mm Best focus - 1.5 m 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 wheelie 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.

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.** 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

North and South America

Raymarine Technical Support
+1-800-539-5539 or, +1-603-881-5200

Product Repair and Service
Raymarine Product Repair Center
21Manchester Street, Merrimack,NH0354-4801

Europe, Middle East, Africa and Australasia

Raymarine Technical Support
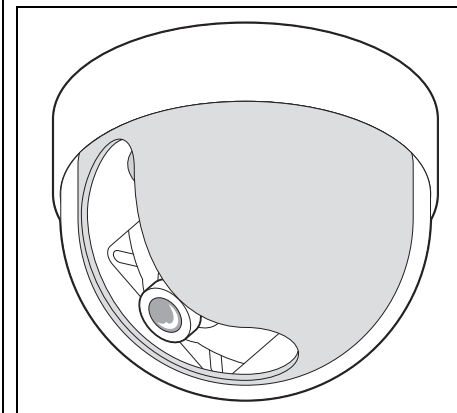+44 (0) 23 9271 4713

Product Repair and Service
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Raymarine

CAM 50

User Guide

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