IRIS®

INNOVATIONS

IRIS066
Mini Marine Dome Camera

QUICK-START GUIDE

Regulatory Information

Disposal of Waste Equipment by Users in Private Household in the European Union.

This symbol on the product or its packaging indicates that it must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment
by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling please contact your local city office, your
household waste disposal service or the shop where you purchased the product.

This device 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 or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and 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 or more of the following measures: Reorientate or relocate the receiving antenna; Increase the separation between the equipment and the receiver, connect the equipment to an outlet on a different circuit from that to which the receiver is connected; consult the dealer or an experienced radio / TV technician for help.

We hereby declare that the product is in compliance with the essential requirements and other relevant provisions of European Directive 2004/108/EC, the RoHS Directive 2011/65/EU.

IRIS066 User Guide

(C) 2018 Iris Innovations Limited.

Warnings & Important Product Information

WARNING: Installation and Operation
This product must be installed and operated in accordance with these instructions. Failure to do so may result in poor product performance, damage to the product or vessel and or personal injury. Installation should only be carried out be qualified personnel or by persons competent in electrical systems.

WARNING: Power Supply and Grounding
Ensure the boats power supply is switched off during installation. Ensure suitably rated circuit breakers / fuses are used in the installation of the product in accordance with the electrical values shown in the technical specifications of the product. Never switch on power until the power connections are correctly terminated in accordance with the information provided in this document. Do not connect or disconnect the product with the power supply switched on. Never disconnect the DC ground with the power supply on.

WARNING: Wiring terminations
Where the products video, power and data terminations are extended, ensure that suitable connectors are used and that the point of termination for each cable is adequately protected against moisture ingress. Ensure correct polarity is strictly observed. Do not cut or remove cable connectors without prior permission from Iris Innovations Limited.

WARNING: Do Not Open the Unit
There are no user serviceable parts within the product so there s no need to open the device. The product has been certified to IP66 standards, however, submersion or the product or exposure to high pressure washing will invalidate the warranty.

WARNING: Disclaimer
This product is intended to be used only as an aid to navigation and must never be used as an alternative to correct navigational practices and judgements made on the basis of approved navigation methods. It is the users responsibility to observe correct and proper navigational skill when using this product. Only officially approved charts and notices to mariners contain the current information required for safe navigation.

Operating the camera or viewing the video input whilst the vessel is moving could cause a distraction and result in accidental collision resulting in property damage, injury or death. Iris Innovations cannot be held liable for any incidental, special, indirect or consequential damages whether resulting from the use, misuse or inability to use this product.

CAUTION: Switch Camera Off When Not in Use.
To prolong the operation life of the the cameras sensor we strongly advise that power to the camera is routed via a dedicated switch.

CAUTION: Service and Maintenance
This product contains no user serviceable parts. Please refer all maintenance and repair issues to your authorized Iris Innovations dealer. Any unauthorized work to the product may affect the warranty.

CAUTION: Care and Cleaning
This product is a sensitive piece of electronic, imaging equipment and must be handled and treated accordingly. Do not drop or shake the unit during installation. Avoid exposure of the imager to direct sunlight where possible as this may degrade the cameras performance over time.

When cleaning the device, ensure power is switched off. Clean the camera housing with a soft cloth. Moisten the cloth and use a mild detergent if required. The lens window has a protective coating which may suffer damage as a result of improper cleaning. To clean the lens window use a soft cotton cloth. Moisten with clean water if necessary. For further advise on cleaning the lens window, contact Iris Innovations.

INFORMATION: Product Disposal and Recycling
Dispose of this product in accordance with the WEEE Directive. The Waste Electrical and Electronic Equipment (WEEE) Directive requires the recycling of waste electronic and electrical equipment. Iris Innovations supports the WEEE policy and politely request you observe correct disposal methods. For further information on how to correctly dispose of this product please contact Iris Innovations.

Please recycle unwanted packaging and documentation. The cardboard carton, all paper manuals and documents and the protective plastic bag in which the camera is shipped are widely recyclable. Please check with your local recycling plant for confirmation.

Introduction

Thanks for buying the IRIS066 Miniature IP Dome Camera from Iris Innovations.

The IRIS066 is part of our best selling IRIS06x range of dome cameras, made successful due to its stylish, miniature design and quality reliable performance.

If you're looking for a great all round camera with superb resolution, day/night operation and neat, unobtrusive styling, all in a tiny, robust housing, the IRIS066 Compact Fixed Dome is the camera for you.

Based around Iris's best selling IRIS060 camera, the new IRIS066 measures only 6cm (2.36″) in diameter by 5.8cm (2.28″) high. It's stylish, rounded body is cast from aluminium which is then anodised and powder coated in a marine white finish for environmental protection.

The camera module itself is a new multi format low-light camera which uses the latest 1/2.8" ultra wide 1080P sensor and DSP Processor.

VIdeo format and the cameras built in On Screen menu feature are accessed and controlled via a NEW built in waterproof micro-thumb-stick on the cameras cable tail.

The IRIS066 is available in PAL or NTSC video systems and outputs multiple video formats for maximum compatibility and the highest resolution. Formats are: Composite Video (CVBS), AHD*, TVI* and CVI*

*These formats may require additional hardware to interface with marine MFD's.

Overview of Key Features

Here's a brief list of some of the IRIS065's key features:

- 1920(H) x 1080(V)
- Built in joystick to allow access to OSD Menu and video format selection.
- Multi-Formats (Composite Video, AHD, TVI, CVI)
- High Performance LED's - 10 Meter Range
- Mechanical IR Cutout filter for True Day / Night Operation
- Low Power 12VDC Operation <100mA
- IP66 Ingress Protection
- Small, Compact Housing
- Suitable for Multiple Applications, such as on-board security, sports fishing, engine room monitoring and vehicle monitoring.
- Wide Operating Temperature Range
- Compatible with Chart Plotters that have composite video inputs.
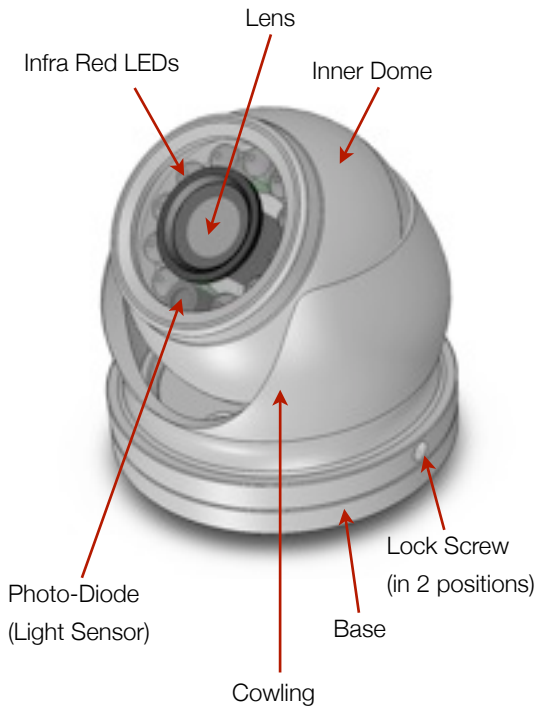
Contents of Package

Please unpack your IRIS066 and check to make sure the following items are included. If there are any items missing please contact your Iris dealer:

- 1 x IRIS066 Marine Mini Dome Camera
- 1 x Fixing Pack
- 1 x Instruction Manual
- 1 x Connector kit

Camera Overview

The diagram below details the various parts of your camera:

Lens

Infra Red LEDs

Inner Dome

Photo-Diode
(Light Sensor)
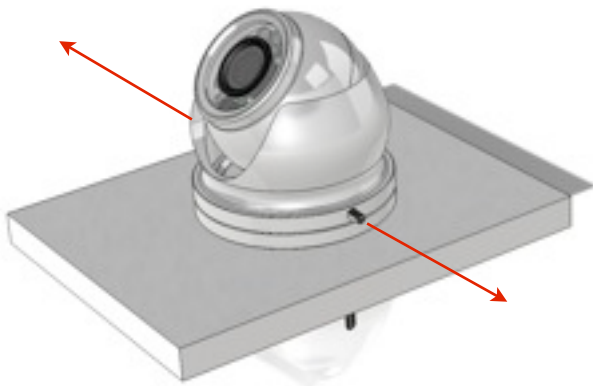
Lock Screw
(in 2 positions)

Base

Cowling

Warning!

TO AVOID DAMAGE TO THE CAMERAS PAINTWORK WHICH COULD RESULT IN EROSION TO THE HOUSING, ENSURE THE GRUB SCREWS ARE FULLY LOOSENED BEFORE MAKING ANY POSITIONAL ADJUSTMENTS TO THE INNER DOME.

FAILURE TO DO SO WILL INVALIDATE ANY WARRANTY CLAIM IF THE PAINTWORK IS SCRATCHED OR DAMAGED.

FULLY LOOSEN PRIOR TO ADJUSTING INNER DOME POSITION (BOTH SIDES OF CAMERA)

Camera Installation Sequence

The diagram below shows the sequence in which the camera parts are fit into place during installation...

Warning!

It is strongly advised that the camera is powered up and connected to a monitor / computer to check the desired field of view prior to fixing the camera in place.

Iris do not accept any liability if the camera is installed and does not cover desired field of view.

1. Fit Base

2. Slide camera cable through base

3. Set desired camera field of view

4. Slide Cowling over inner dome onto base

5. Tighten Grub Screws

Installation

WARNING!

Only trained electrical installers or competent persons should install this product. Incorrect installation could lead to personal injury or death and/or damage to property. Ensure the electrical regulations specific to your region are observed, and observed wiring colour conventions.

Ensure the cameras power supply is connected via a suitably rated fuse or circuit breaker.

Switch off the power supply you are working on whilst installing the camera, until the product is correctly installed.
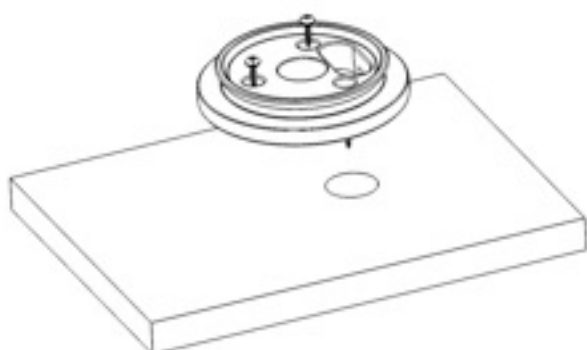
Step 1:

Offer base into desired mounting position and mark off screw hole positions and cable entry position through the mounting surface.

TIP!

Power up camera and check to ensure you have the desired field of view prior to drilling any holes and mounting the camera in place.

Step 2:

Fit the camera base into position. Drill pilot holes appropriate for the fixings you are using, and then screw base into place, observing caution not to splinter or damage the surface if fitting onto a GRP surface.

Present your cables to the camera through the cable entry hole you've just drilled. Connect up the video connector (BNC plug). Ensure your power cable is either switched off or disconnected from the supply then connect the power cable to the camera. It is recommended that a waterproof amalgamating tape or other suitable waterproof tape is used to protect the connections from moisture ingress.

Step 3:

Slide the 'slack' cable from the camera back through the hole in your panel, ensuring connectors are still in tact and sit the inner dome onto the protective foam / rubber ring on the base.

Step 4:

Place the cowling over the inner dome and move into position. The cowling will fit over the inner dome and push up to the base. Once in position, carefully tighten the grub screws until they lightly hold the inner dome in position. Now power up the camera and check you have achieved the desired field of view. If any adjustments are required, loosen the grub screws to make the necessary adjustments, lightly tighten and then check again. Repeat until you have the desired field of view. Once you are happy with the cameras position, tighten the grub screws.

Step 5:

Connector the video cable into the composite input of your chartplotter. Note - The type of connector may vary depending on your plotter. A BNC Through-Piece connector and a BNC-RCA adapter are included with your camera.
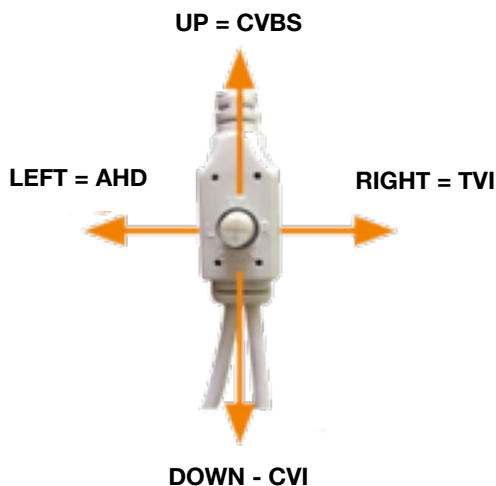
Step 6:

Finally connect to a suitably rated, protected 12VDC supply and test.

Camera Setup

The IRIS066 camera features an in-line micro thumb-stick controller to allow video format configuration and access to the cameras on screen menu system.

Setting Video Format

The camera is set to **CVBS (composite video) as default**. To change video format simply move the joystick according to the directions below:

UP = CVBS

LEFT = AHD

RIGHT = TVI

DOWN - CVI

HOLD JOYSTICK IN DESIRED POSITION FOR 6 SECONDS TO SET VIDEO FORMAT

On Screen Menu Setup

The cameras on screen menu system lets you set up many features including Auto Exposure, White Balance, Video Resolution, Day Night settings and Mirror Image.

To enter the SETUP mode press the joystick down whilst it is in the central position. You should see the main menu appear on the screen.

NOTE: If the joystick remains ideal for 10 seconds in any menu mode the camera will return to normal operation and you will have to re-enter menu mode.

Once in side the menu mode, navigate by moving the joystick up and down (in accordance with the orientation shown in the diagram above) and change values by moving Right to increase values and Left to decrease values.

MAIN MENU:

(Sub Menus in BOLD)

AE (Auto Exposure)

WB (White Balance)

DAY / NIGHT

VIDEO SETTINGS

LANGUAGE

RESET

SAVE - EXIT

EXIT

AE (Auto Exposure) Menu:

BRIGHTNESS

EXPOSURE MODE

GAIN

RETURN

WB (White Balance) Menu:

MODE (ATW or MWB)

DAY / NIGHT

MODE (Ext, Auto, Colour, B/W)

VIDEO SETTINGS:

CONTRAST

SHARPNESS

COLOUR GAIN

DNR

TRANSFER MODE (VIDEO FORMAT)

IMAGE SIZE

FORMAT

DWDR

MIRROR IMAGE

RETURN

Once you have made changes as necessary, navigate to SAVE-EXIT in the main menu for the changes to be stored into the cameras memory. The camera should now retain the new settings on boot-up.

NOTES

NOTES

Specifications:

IRIS066 Marine Fixed Dome Camera: Version 2.0 (Release Jan 31st 2018)

Video Signal System	PAL / NTSC	
Supported Video Formats	Composite (CVBS), AHD, HD-TVI, HD-CVI	
Pixels	1920(H) x 1080(V)	
Image Sensor	1/2.8" IMX323 CMOS	
Electronic Shutter	1/50s ~ 1/100,000s	1/60s ~ 1/100,000s
Video Frame Rate	1920x1080@25fps / 1920x1080@30fps	
Synchronization	Internal	
Infra Red Illumination Range	10m	
Minimum Illumination	0.1lux (LEDs OFF) / 0lux (LEDs ON)	
Colour Switching	Automatic (Colour / Mono in Low Light), Colour Only, Mono Only	
Signal to Noise Ration	≥45dB(Max 70 dB)	
Lens Focal Length	3.6mm (80˚ HFOV)	
Power Supply	12VDC ± 10%	
Power Consumption	<350mA Max (LEDs ON)	
Operating Temperature	-30℃ ~ +60℃	
Transmission Distance	300m + 75Ω Coaxial Cable	
Environmental Rating	IP66	
Certification	To EN60945 EMC / EMI	
Dimensions	59mmø x 56mm(H)	
Video Output Amplitude	1VP~P	
Illumination	6 x Infra Red LED 850nm	
Weight	0.172Kg	

IRIS
INNOVATIONS

Iris Innovations Limited

Unit 15 Fareham Innovations Center, Meteor Way

Lee on Solent. Hampshire PO13 9FU. United Kingdom

Tel: +44(0)2392 556509 / email: irisuk@boat-cameras.com

Iris Innovations USA Corporation

2821 SW23rd Terrance Unit 5

Fort Lauderdale, 33312. Florida. USA

Tel: +1 (954) 533 9381 / email: info@boat-cameras.com

www.boat-cameras.com