



IRIS075 Day/Night Fixed Camera

USER GUIDE & INSTALLATION MANUAL

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Warnings & Regulatory Information

Do not use harsh chemicals or cleaning solvents to clean the device.

Do not attempt to dismantle the device.

Unauthorized modifications or attachments could damage the device and may violate regulations governing radio devices.

Any modification to the products cable tail may invalidate the product warranty.

Please contact Iris Innovations before attempting any modification to the cable.

Avoid dropping, knocking or excessively shaking the device. Rough handling can break internal circuit boards and fine mechanics.

Observe correct polarity when connecting the power and data. Failure to do so could result in damage to the unit.



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.



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 designated 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.



We hereby declare that the product is in compliance with the essential requirements and other relevant provisions of European Directive 1995/5/EC (Radio and Telecommunications terminal equipment directive).

Introduction

The IRIS075 is a general purpose, fixed day / night camera with integrated infra red illumination designed into a streamlined low-profile waterproof housing.

It's unique and stylish housing, coupled with a high resolution day / night camera module that switches automatically from colour to monochrome at night or in low light conditions make it a perfect choice as a docking or backup camera, engine room camera, forward facing or walkway camera. The 075 will also sit perfectly into any on board security system and will interface seamlessly with most chart-plotters, TV's, dedicated marine screens or network adapters.

Key features include:

- Sony High Resolution Camera Module - 550TVL
- Water Proof - IP66
- Unique Low Profile Design
- Day / Night (Colour / Mono) Automatic Operation
- Infra Red Illumination - Up to 30 feet
- Compact and Rugged Housing
- Easy Install
- Compatible with all leading MFD's with Composite Input, TV's with AV input (or via an RF modulator otherwise) and IP encoders.

Installation

To install the IRIS106 you will need the following tools:

- Drill Bit for Pilot Holes (2mm)
- 3mm Hex Key (Supplied)
- Drilling Template (Supplied)
- Hand tools for connecting cables (unless pre-made cables are being used), including wire cutters, wire stripper, and cross headed screw driver.
- Appropriate tool for terminating BNC connector (unless pre-made cables are being used), such as knife to remove coax cable outer sheath and dielectric, BNC Crimp Tool, Cable Insulation Stripper.
- Marine Sealant

Before you begin the installation, please take time to consider the following important points:

- Always wear safety goggles, dust mask and ear protection when drilling, cutting or sanding. Where suitable gloves when handling fibre glass and GRP.
- Before drilling or cutting always ensure there are no obstructions, cables or equipment on the opposite side of the surface you're working on. Also ensure there is sufficient space behind the surface to accommodate the body of the camera, and cabling and ensure you can get the necessary cables to the camera position.
- Observe safe working procedures when working with electricity. Do not connect the equipment to live power sources until correct, safe termination through an appropriately rated fuse or breaker is made. Do not attempt to install this product unless you are a certified electrical installer. Failure to do so could result in injury or death.
- It is advised that before the equipment is fixed down, check that desired viewing angles can be achieved in the intended installation position, and that the equipment will not obstruct other equipment or

fixtures in it's intended position (such as doors or walkways for example). If possible, power the item up and offer the camera up in the vicinity of the desired installation position to double check suitability.

Cabling:

The camera has a 45cm cable tail which has a 2.5mm DC Barrel Jack (female) to connect power and a 75Ω BNC (female) connector for the video signal, therefore it will be almost inevitable that the power, data and video cables will need to be extended. In a typical installation, the video cable will need to be routed back to the monitor (or chart plotter), the data pair will need to be routed back to the controller or RS485 Data Distributor in larger installations and the power pair will need to be routed back to the boats distribution panel. See the illustration below:

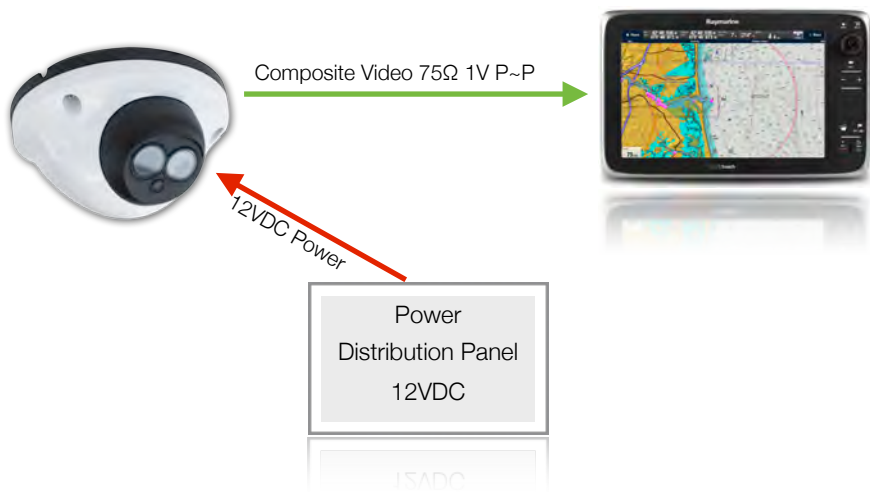


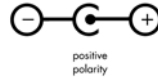
Fig:1.0. Very Basic Installation. Single camera with video output into MFD.

Cabling (continued...)

The following cable specifications apply:

Video: 75Ω Coaxial Cable such as RG59, URM70, RG174 Mini-Coax.

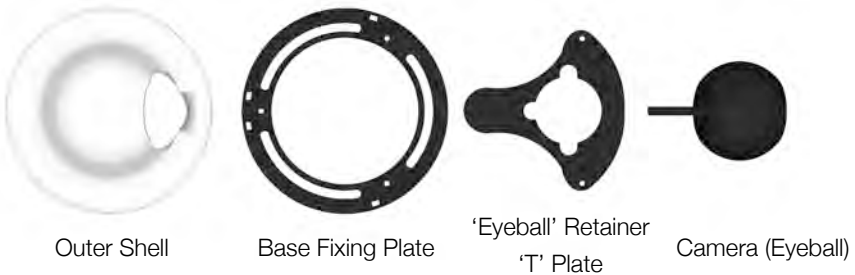
Power: 2 core. Rated 12VDC - max Current 1A



Individual cables can be run for each of the above, or 'Combination' (Combi) cables can be used. Iris Innovations supply pre-made cables to length. Please contact Iris for more details.

The Camera:

The IRIS075 consists of the following:



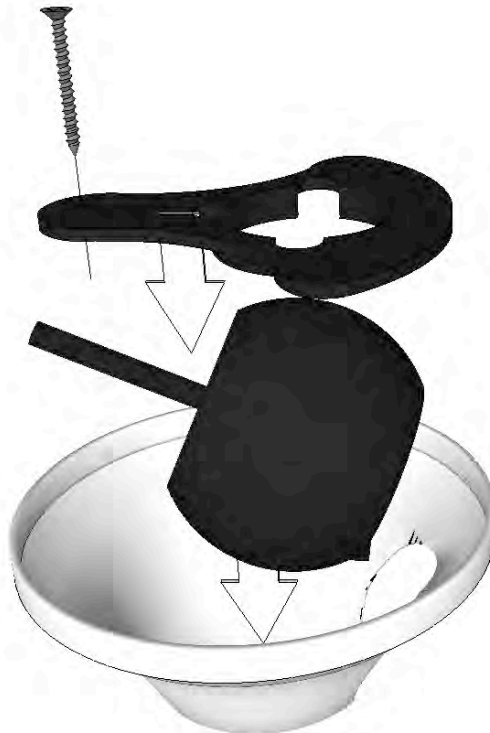
Camera Setup:

Setting The Viewing Angle:

The IRIS075 is designed to be installed in any way, on it's base, upside down or on a bulkhead. Therefore it will be necessary to adjust the camera's 'eyeball' accordingly within the cowling to achieve the correct orientation. This is done in the following way:

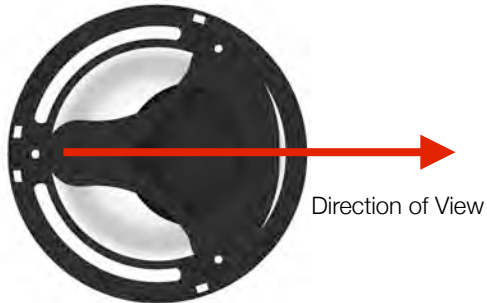
1. On the underside of the camera there is a single cross headed screw that holds a 'T' shaped 'eyeball' retainer plate in position. This is how the camera is held into place against the outer shell. Carefully remove this screw and keep safe.

2. Use the 3mm Hex key supplied to remove the 3 fixings that fasten the shell into the base plate. The shell, eyeball and T plate should now be free of the base plate.
3. You will notice that the eyeball features a slight lip on one edge. This is the sun-visor and should always be on the top of the eyeball perpendicular to the ground. Adjust the eyeball so it is in the desired orientation within the shell and hold in place.
4. Replace the T shaped retainer plate by re-fastening the cross headed screw removed in step 1. To do this, carefully flip the shell upside down, taking care to keep the eyeball in position. Fit the T bar in position so that the holes line up correctly with the holes of the shell. The cross headed retainer screw fastens the hole at the bottom of the T bar into the threaded boss on the shell. The two holes at each end of the T's cross bar fit over the bosses through which the shells outer hex fastening are positioned. Ensure the T bar is screwed tightly into the shell to prevent movement of the eyeball prior to finally locking into place on the base plate.



Fitting the Camera:

Step 1: After you have established the desired mounting position and are happy there are no obstacles behind the surface into which you are drilling, over the stick on drilling template into position, ensure you observe the desired camera orientation before you stick the template down. **The direction of view is indicated on the drilling template - Be Sure to Set the Correct Direction of View Before Drilling!**



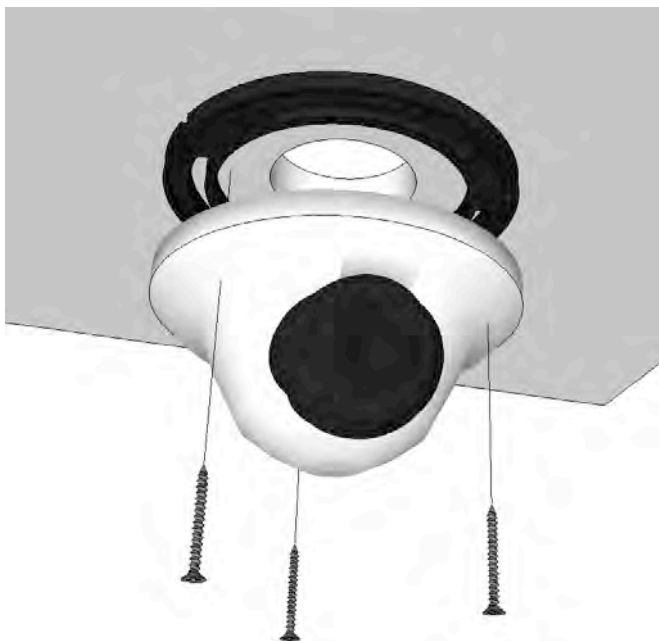
Camera Fixing Base Plate

Step 2: Use a drill bit suitable for the fixings you are using to open up 3 pilot holes in the positions shown on the template, then drill a suitably sized hole inside the pilot holes to allow cable access.



Step 3: Offer the base fixing plate into position as shown above and screw into place using self tapping screws appropriate for your install.

Step 4: Now connect the cameras power and video cables to your extension cables and screw the 'shell' of the camera (containing eyeball) onto the base fixing plate using the 3mm Hex bolts supplied.



Camera Set-Up:

After the viewing angle has been set the camera is designed to be a 'plug and play' device and therefore requires no special setup, other than powering up the camera before it is installed and checking that the position in which it will be fixed delivers the desired field of view.

It is also advised that the cameras Infra Red (IR) LED operation is checked prior to final install to ensure there are no objects within close proximity to the camera that could falsely operate the IR LED's resulting in the imaging changing from day (Colour) to night (Mono) operation inadvertently.

To do this, whilst the camera is powered up, tightly cup your hands around, or cover around the IR sensor on the front of the camera, making sure no light can get onto the face of the sensor. After a few seconds the LED should operate and you should see a faint red glow around the IR illuminator. The image on your screen should have also switched from Colour to Monochrome.

Operation

Now the camera is installed, powered up from a suitably rated and protected 12VDC power source and the video is hooked up to the monitoring (or switching / recording / routing) equipment, the camera is ready for use.

During the daytime or in areas where there is sufficient light, the camera will produce a crisp colour image. As light levels drop the image may appear slightly grainy as the video gain is increased automatically until the day/night filter kicks in when the light levels are sufficiently low. At this point the camera image will switch to monochrome producing a sharp image up to around 30 feet. When the light levels rise sufficiently the camera will automatically switch back to colour.

Limited Warranty

This Iris Innovations product is warranted to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, Iris will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labour, provided that the customer shall be responsible for any transportation cost. This warranty does not apply to: (i) cosmetic damage, such as scratches, nicks and dents; (ii) consumable parts, such as batteries, unless product damage has occurred due to a defect in materials or workmanship; (iii) damage caused by accident, abuse, misuse, water, flood, fire, or other acts of nature or external causes; (iv) damage caused by service performed by anyone who is not an authorized service provider of Iris; or (v) damage to a product that has been modified or altered without the written permission of Iris. In addition, Iris reserves the right to refuse warranty claims against products or services that are obtained and/or used in contravention of the laws of any country. This product is intended to be used only as an aid and must not be used for any purpose requiring precise measurement of direction, distance, location or topography. THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE. IN NO EVENT SHALL GARMIN BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, DAMAGES FOR ANY TRAFFIC FINES OR CITATIONS, WHETHER RESULTING FROM THE USE, MISUSE OR INABILITY TO USE THE PRODUCT OR FROM DEFECTS IN THE PRODUCT. SOME STATES DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. Iris retains the exclusive right to repair or replace (with a new or newly-overhauled replacement product) the device or software or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY. To obtain warranty service, contact your local Iris authorized dealer or call Iris Innovations Product Support for shipping instructions and an RMA tracking number. Securely pack the device and a copy of the original sales receipt, which is required as the proof of purchase for warranty repairs. Write the tracking number clearly on the outside of the package. Send the device, freight charges prepaid, to any Iris Innovations warranty service agent. An additional 12 month warranty restricted to the limitations listed above is available free of charge by registering the product upon purchase via the Iris Innovations website www.boat-cameras.com



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