

## Fixed Focus Auto Iris CCD Dome Camera

### Introduction

Each of these domes has been engineered from a solid piece of aluminium to produce a truly exceptional product.

With the domes stunning looks and great functionality you shouldn't lose many jobs

The beauty of this product is not just on the outside, the dome comes equipped with an auto iris lens, so when looking at a doorway the camera will compensate for any bright sunlight.

The domes' stunning looks means that they look the part in any environment. Installed in a shop, office, bank, school or an industrial unit the domes look and perform great.

As the lens is auto-iris it can accommodate a wide range of lighting conditions improving the cameras performance in low light whilst also coping with bright sunlight or shop lights effortlessly.



The cameras electronics have been designed around the latest semiconductor technology and circuit design to ensure that all three variants of the camera produce an excellent picture quality to match the cameras stunning looks.

### Models Covered in these instructions

CCT452	Hi-Res B&W Dome with Fixed 3.6mm Lens
CCT453	Med-Res Colour Dome with Fixed 3.6mm Lens
CCT454	Hi-Res Colour Dome with Fixed 3.6mm Lens

### Camera Specifications

Camera Spec	Hi-Res B&W	Med-Res Colour	Hi-Res Colour
Image Sensor	1/3" B&W	1/3" Col. Sharp	1/3" Col. SONY Ex View
Image Output	1V <sub>pk-pk</sub> 75Ω	1V <sub>pk-pk</sub> 75Ω	1V <sub>pk-pk</sub> 75Ω
Resolution	600TVL min	380TVL min	480TVL min
Min Illumination	0.03 Lux	0.5 Lux	0.25 Lux
Input Voltage Range	12V DC / 24V AC	12V DC / 24V AC	12V DC / 24V AC
Power Consumption	90/50 mA	90/50 mA	90/50 mA
Lens	3.6mm Fixed Focus	3.6mm Fixed Focus	3.6mm Fixed Focus
AGC	Automatic	Automatic	Automatic
Iris Control	Auto Iris	Auto Iris	Auto Iris
Size, Dia x H	110mm dia x 80mm H	110mm dia x 80mm H	110mm dia x 80mm H

### Mounting the Camera

The dome cameras are supplied with a fixing plate and drilling template that allow to fix your dome camera (using the screws supplied) to wood or brick with wall plugs (not supplied) or to plasterboard / suspended ceilings with bolts and fixing plate (supplied).

### Powering the Camera

The dome cameras are dual voltage i.e. you can use them on a 12V DC system or a 24V AC system. The camera has built in power supply control circuit for ease of connection; this means that you can connect to any 12VDC or 24VAC system without worrying about polarity or voltage regulation.

The camera is provided with a screw terminal on a fly lead that allows you to connect the power supply to it.

When powering the camera with a 12V DC power supply, ensure that the supply is regulated and has a continuous rating of 100mA or higher per camera. It is recommended to use a power supply that is rated higher than the current consumption of the camera i.e. POW100 would be adequate for powering a single camera but when powering two or more you should look at the bigger power supplies that are available from System Q; this prevents the PSU from running at its maximum rating for long periods of time.

If you are using the System Q Easy Connection Kit (CCT806/7) to power and connect your camera (12V models only) please proceed as per the instructions supplied with The Easy Connection Kit. You will need to cut off the DC Plug ONLY and use the bare wires to connect to the terminal strip. The 12V positive is the RED wire the 0V is the BLACK wire.

**Using 24V AC power**

Using a suitable cable between the 24V AC power supply (POW600) and the camera you can connect the power to the cameras terminal strip either way around. As the power is 24V AC, (alternating current), the polarity is not important. You must use a separate cable for power and video. It is recommended you use a 2/4-core cable to carry the AC power to the camera and use an RG59 or twisted pair cable to bring the video signal back from the camera to the monitor / control equipment.

**Connecting the camera to control equipment.**

The dome camera comes with a fly lead for power and video out. To reduce installation time the video out lead is terminated into a male BNC connector. This allows the installer to effortlessly connect the camera to control equipment via a female BNC-BNC lead.

Remember that the Video out from the camera is like any other electrical circuit and requires two wires to complete the circuit. When using a co-ax type cable such as RG59 or similar, the outer braid of the co-ax provides the "0V GROUND" connection and the inner core provides the "Video" connection.

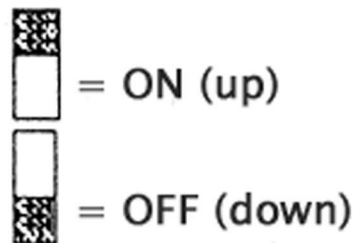
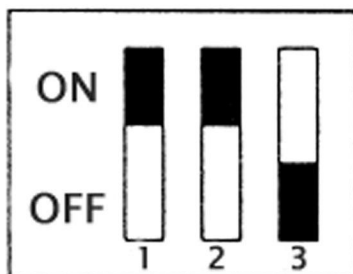


It is recommended that when you are first setting up the cameras that you use a short BNC-BNC cable to link the camera directly to the monitor and to set it up at the same time. This allows you to both understand the camera and get the very best out of this great product as you will be able to adjust the camera whilst looking at the monitor screen. Obviously whilst you are setting up the camera, it does need to be powered!

**Dipswitches**

The CCT453 (Mid Res Colour) has three dipswitches:

**Auto DC Iris Lens**



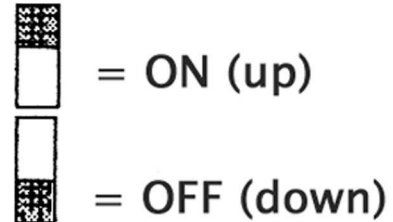
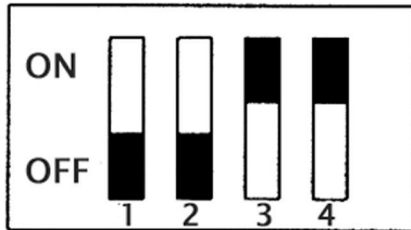
Switch 1	Electronic Iris	(Default Off)
Switch 2	Auto Iris	(Default On)
Switch 3	Back Light Compensation	(As Required)

**NOTE:**

Settings other than the Defaults may be required in a particular camera location. These switches enable you to optimise your installation.

The CCT452 and 454 (Colour) has four dipswitches.

### Auto DC Iris Lens



- |          |                                 |
|----------|---------------------------------|
| Switch 1 | Iris Control (Auto Iris ON/OFF) |
| Switch 2 | Back Light Compensation         |
| Switch 3 | Automatic Gain Control          |
| Switch 4 | Flickerless (ON/OFF)            |

1. Automatic Level Control / Electronic Shutter Control (ALC / ESC)  
This must be set to ALC when using these cameras. If switched to ESC, the camera will still function but the picture quality will be erratic being too bright or too dark with poor colour reproduction as both the camera and the lens would be fighting to compensate for varying light levels.
2. Back Light Compensation (BLC).  
BLC helps the camera when it is looking at a bright object such as an external window. The BLC tries to compensate for the bright part of the image so that some of the surrounding area is not too dark. It is recommended to always be set to on.
3. Automatic Gain Control (AGC)  
When the light falling on to an imaging device reduces to a certain level, there is insufficient to create a full level video signal. AGC acts to increase the amount of amplification in these conditions to bring the signal up to the required level. As well as amplifying the video signal, additional noise can be introduced, and the signal to noise ratio reduced. The result is frequently a very much-degraded signal and poor picture on the monitor.
4. Flicker - less Function (FL)  
Set the dipswitch OFF/FLON to FLON to enable the flicker - less function, when in this mode, the AES/OFF switch is automatically disabled.

### **Trouble shooting.**

The camera is built to the highest standards and every unit is fully tested prior to packing so if you experience an installation problem you need to investigate your cabling, connections, power supply and monitor. If you do fail to get a picture on a monitor you need to check the following things.

#### **No Picture**

The camera cannot function without the correct working power supply. The power supply must be regulated and be capable of supplying 100mA per camera CONSTANTLY.

For the 12V DC camera range. To check that the power supply is functioning correctly use a multimeter set on DC volts (above 12V) and connect the probes to the power supply's output. The meter should read between 12-13V. If the meter shows a negative voltage the PSU could be wired incorrectly or you may have the meter leads reversed. To ensure the multimeter is working correctly, connect it to a known voltage and polarity such as a battery. If you find that supply is giving out more than 13V you may be using a non-regulated power supply and must stop using it with the camera immediately or it may cause permanent damage to it.

Ensure that the BNC-BNC lead that you connect between the camera and monitor has no shorts or open circuits. If you are making your own BNC-BNC lead, don't forget the lead must have two wires connected to complete the circuit, Video and Ground. If in doubt swap your lead for a pre-wired commercial one, as faulty leads are the main cause of problems.

#### **Interference on the camera picture**

This is usually caused by poor or inadequate cabling, not observing the correct wiring techniques and for 12V DC cameras the use of unregulated or poorly regulated power supply. If you want a good picture quality and require the camera to work to its full potential, do not use an intruder alarm PSU with 12V DC cameras. If you suspect you have a PSU problem with a 12V DC camera, the best way to check this is to power your system using a fully charged 12V lead acid battery to give 12V totally regulated supply. If this solves the problem then you need to change the PSU for a better quality one.

#### **Picture is out of focus**

Remove the top of the camera, loosen the locking screws and vary the focal adjustment until the picture is in focus.

*All specifications are approximate. System Q reserves the right to change any product specification or features without notice. Whilst every effort is made to ensure that these instructions are complete and accurate, System Q cannot be held responsible in any way for any losses, no matter how they arise, from errors or omissions in these instructions, or the performance or non-performance of the camera or other equipment that these instructions refer to.*