

This exciting *Architect's Range* of external 3.5mm – 9mm Day/Night varifocal I.R Ball camera is produced in dark finish to suit a variety of locations.

The CAM055 produces stunning pictures. The unique 3-d axis allows easy installation with easy front access for adjustment and precise positioning.



*This camera is fitted with 36 infrared illuminators and provides up to 20 metres of good directional low light surveillance through a special anti-reflection glass*

## Installation Instructions

### Connecting dome to 12v DC power

The camera is provided with a 2.1mm Mini Jack plug on a fly lead that allows you to connect the power supply to it. When powering these dome cameras with a 12V DC power supply, ensure that the supply is regulated. It is recommended to use a power supply that is rated higher than the current consumption of the camera i.e. allows 25% - 30% minimum headroom, so for these cameras a minimum requirement would be a continuous rating of 1.5A or higher per camera. This prevents the PSU from running at its maximum rating for long periods of time.

### Connecting the camera to video 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 a test monitor and 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!

- 1) Carefully unscrew the outer fixing ring (via allen key supplied) to dismantle dome releasing the ball collar, dome ball and dome base. Secure the dome base using the screws provided.
- 2) Connect video to BNC plug and 12v DC power to mini 2.1 power jack plug.
- 3) Reassemble dome.
- 4) Adjust Near/Far Zoom Controller and Tele/Wide viewing angle by turning adjusters on front of camera. Take particular care with this operation, as forcing the adjustment screws beyond limits can damage the zoom and focus mechanism
- 5) Lock the ball collar and outer fixing ring using the Allen grub screws supplied.
- 6) Ensure that you do not attempt to reposition the ball after fitting the Allen grub screws or you will damage the dome case.

## Special Note

When this unit is in use, avoid direct eye contact with the infrared lights. The unit's outer glass front can heat up to 50°C when in use and care should be taken to ensure that this dome is fitted where it cannot be easily touched. It must also not be fitted in close proximity of any flammable materials. The front glass on the dome is a special anti- Infra-red Reflection glass and must be carefully cleaned with a soft dry cloth to avoid scratching. Note that infrared light is polarised light and therefore acts rather like a torch beam with a narrow angle of illumination. If this dome is used with a wider angle setting then it may be necessary to purchase additional Infrared lighting.

**Email: [support@kovert.com](mailto:support@kovert.com)**

Image Sensor	1/3" Sony Super-Had CCD
Horizontal Resolution	420 TV Lines
Effective Pixels	PAL 500 x 582
Scanning system	PAL 625 lines – 2:1 interlaced
Video Output	1.0V p-p Composite. 75 ohms
S/N Ratio	More than 48dB
Lens	3.5 ~ 9mm vari-focal lens
Min. Illumination (IRs off)	0.1 Lux at F1.6
Backlight Compensation	Automatic
Shutter Speed	PAL: 1/50 ~ 1/100,000 sec
Sync System	Internal Synchronization
White Balance	ATW-Auto Tracing White Balance
Power Source	12 volt DC
Max Operating Current	300mA with LEDs ON
Infra Red LEDs	36 x 850nm I.R LEDs - 15 metre range
Housing	Vandalproof , weatherproof (IP67) and tamperproof with inner bracket built-in
Operating Temperature	-10°C ~ 50°C
Ball Type Bracket	Maximum 360° Angle rotation - 180° Pan rotation - 90° Tilt
Dimensions	12cm x 12cm x 10cm (ND) 12.4cm x 12cm x 9.5cm (G/D)

#### Troubleshooting

This camera is built to the highest standards and every unit is fully tested prior to packing. If you experience an installation problem you need to investigate your cabling, connections, power supply and monitor. If you fail to get a picture or there is picture interference 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 capable of supplying 1.5A per camera constantly. First check that the power supply is functioning correctly using a multimeter set on DC volts (above 12v) and connect the probes to the power supply's output. The meter should read between 12-13 volts. 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 the supply is more than 13 volts you may be using a non-regulated power supply and you must stop using it immediately as it may cause permanent damage to the camera.

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, do not forget the lead must have two wires connected, to complete the circuit, a video and a ground. If in any doubt, change the lead for a pre-wired commercial one, as faulty leads are invariably 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 an 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.

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#### Picture out of focus

The focus and zoom controls on this camera are situated on the front of the camera and both can be adjusted using a small screwdriver.

#### No Infra-red image at night even though IR LEDs are illuminated

This can be due to voltage drop over distance or a inadequate power supply being used. Consider moving the power supply nearer to the camera and check compatibility of power supply.

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