BAXALL

**HYPER-D Series Cameras
Installation Instructions**

HYPER-D

Please read these instructions first!

IMPORTANT

The first few pages of these instructions contain important information on safety and product conformity. Please read, and ensure that you understand this information before continuing.

These instructions cover Baxall Hyper-D series cameras. Read all of these instructions. Use them to install your camera and have them available for its lifetime. If you have any problems, contact Baxall Limited.

Option	HYPER-D
Colour	●
Resolution (TVL)	480
Sensitivity (lux @ f1.2)	1.0
CCD Sensor size	1/3"
D1010 Image Sensor	●
D1020 Digital Image Processor	●
Automatic Gain Control (AGC)	●
Electronic Iris (EI)	●
Automatic Exposure mode	●
PAL/NTSC selector switch	●
Dynamic range	95dB
Auto Iris connection	●
Line lock with phase adjust (AC only)	●
Internal Synchronisation	●
Supply	
12 VDC ±15%; 24 VAC ± 15%	●

⚠**WARNING**

- **Installation and servicing is only to be carried out by suitably qualified and experienced personnel to local or national wiring standards.**
- **Good engineering practice must be carried out at all times and all servicing and repairs carried out indoors.**
- **Hyper-D series cameras are to be powered with a class 2 power supply.**
- **Under no circumstances must the power consumption of the Auto Iris connector exceed 50 mA or the Direct Drive connector exceed 25 mA.**
- **The Hyper-D range is designed for use in general purpose CCTV applications and has no other purpose.**
- **Only operate your camera between the temperatures of -10ºC and +50ºC.**

△**CAUTION**

In order to avoid damaging the camera note the following points.

1) **Before fitting the lens make sure that its back will not touch the sensor or associated components when screwed fully home.**
2) **Do not touch the image-surface of the sensor. If the sensor is accidentally touched, only clean it using ethyl alcohol.**
3) **Do not expose the sensor to direct sunlight as this may impair the performance of the camera.**
4) **For outdoor use, an appropriate protective housing conforming to IP65 or UL50 or better must be used.**

MANUFACTURER'S DECLARATION OF CONFORMANCE

The manufacturer declares that the equipment supplied with this manual is compliant with the essential protection requirements of the EMC directive 89/336/EEC and the CE Marking Directive 93/68 EEC. The equipment conforms to the requirements of standards BSEN61000-6-3:2001 for Emissions, BSEN50130-4:1996 (with amendments A1 and A2) for Immunity and BSEN60950:2002 for Electrical Equipment Safety.
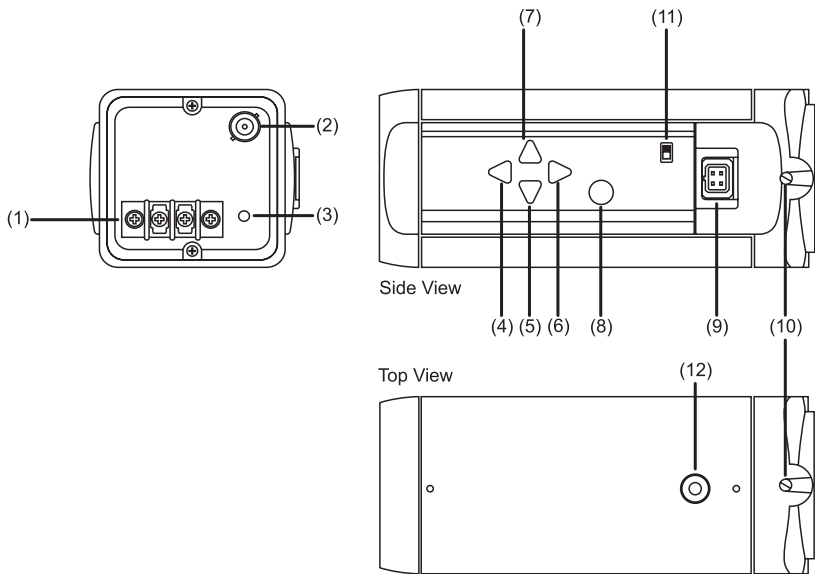
ELECTROMAGNETIC COMPATIBILITY (EMC)

△**CAUTION**

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

This product is intended solely for use in general CCTV applications.

The product must be installed and maintained in accordance with good installation practice to enable the product to function as intended and to prevent problems. Refer to your agent for installation guidance.

1. Low-voltage power supply terminals
2. Composite video output BNC
3. Power LED
4. Decrease parameter button
5. Menu down button
6. Increase parameter button
7. Menu up button
8. Enter button
9. DD/Video Lens conector
10. Back focus adjustment screws
11. Video format selector switch
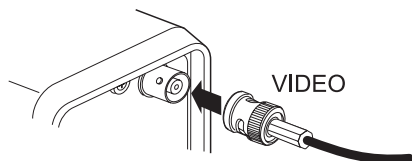12. 1/4-20 UNC mounting bush (top and bottom)

Figure 1 Connectors and Controls

POWER SUPPLY CONNECTION

The power supply must be a class 2 isolated type. The green POWER LED on the rear panel indicates when power is connected.

12VDC (+); 24 VAC
12VDC (-); 24 VAC
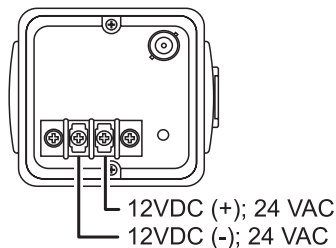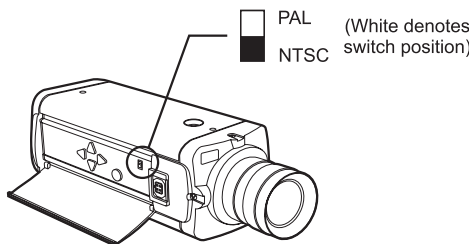
VIDEO CONNECTION

VIDEO

FOCUS ADJUSTMENT

Turn the back focus adjuster screw (10, figure 1) clockwise or anticlockwise to obtain focus. When the focus is sharp, turn the adjustment screw 2 or 3 turns anticlockwise. The picture will lose sharpness. Turn the screw clockwise until focus is once again obtained. If you pass the point of best focus, repeat the procedure. **The last turn of the back focus adjustment screw must always be in a clockwise direction**. Do not 'over turn' or force the back focus mechanism.
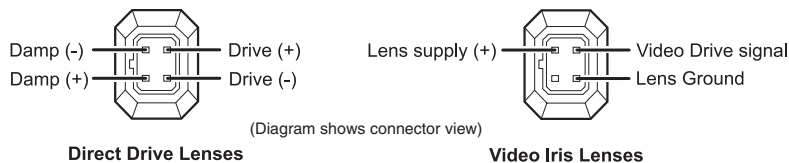
VIDEO FORMAT SELECTOR

The video format switch is used to select the video format required.

PAL

NTSC

(White denotes switch position)

LENS CONNECTIONS

Connect the auto iris lens to the 4-pin iris drive connector located on the side of the camera. Pin connections for the iris drive connector are as follows:
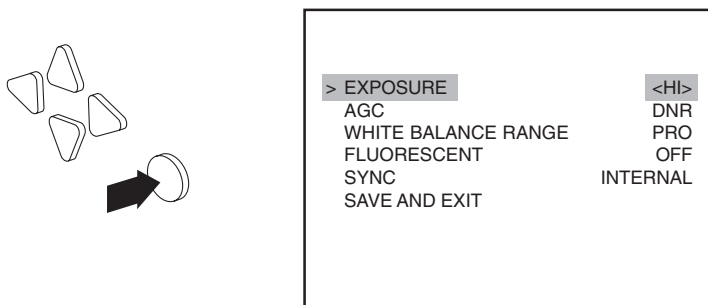

Damp (-) ——— Drive (+)
Damp (+) ——— Drive (-)

(Diagram shows connector view)

Direct Drive Lenses

Lens supply (+) ——— Video Drive signal
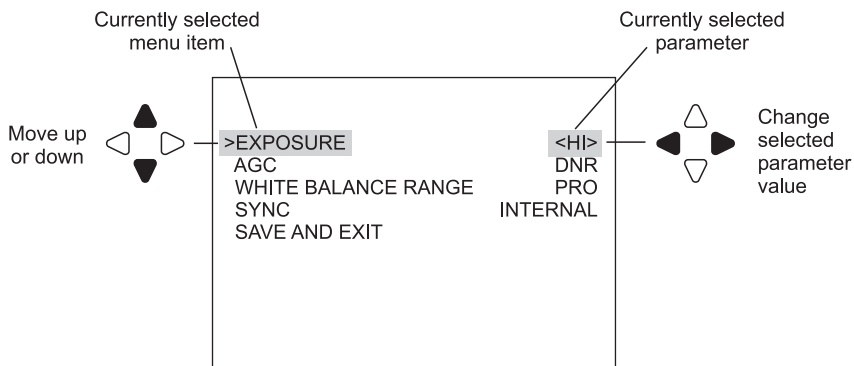——— Lens Ground

Video Iris Lenses

MENU SYSTEM

Hyper-D series cameras utilise a menu system to facilitate setup and adjustment. The buttons used to access and navigate the menu are located behind the flap on the side of the camera.

Entering the Menu System
To enter the menu system, press and hold the Enter button (8, figure 1) for approximately two seconds. A menu similar to the one shown below will be displayed on the monitor.


```
> EXPOSURE                        <HI>
  AGC                             DNR
  WHITE BALANCE RANGE             PRO
  FLUORESCENT                     OFF
  SYNC                       INTERNAL
  SAVE AND EXIT
```

Navigating the Menu System
Use the direction buttons to navigate the menu, and to select parameters.

Currently selected menu item

Currently selected parameter

Move up or down

Change selected parameter value

```
>EXPOSURE                         <HI>
 AGC                              DNR
 WHITE BALANCE RANGE              PRO
 SYNC                        INTERNAL
 SAVE AND EXIT
```
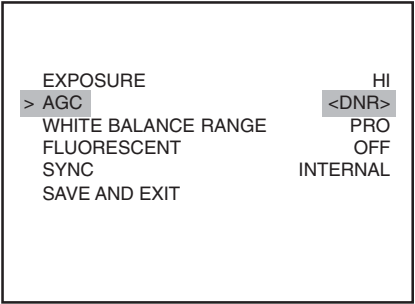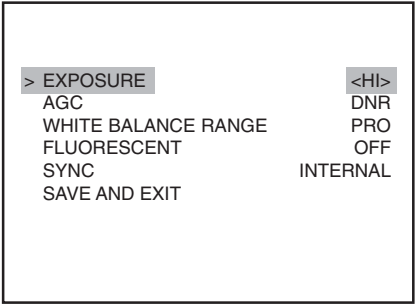
Exiting the Menu System
The menu system can be exited by selecting **SAVE AND EXIT** with the up/down menu buttons and then pressing the Enter button. Any changes made while within the menu system will be saved. The menu system will be automatically exited if a key is not pressed for 2 minutes. Any changes made will not be saved should the menu system time-out.

HI (default)

Maintains optimum contrast in the darker portions of a wide dynamic scene.

LOW

Maintains optimum contrast in the brighter portions of a wide dynamic scene.

```
> EXPOSURE                        <HI>
  AGC                             DNR
  WHITE BALANCE RANGE             PRO
  FLUORESCENT                     OFF
  SYNC                       INTERNAL
  SAVE AND EXIT
```

```
  EXPOSURE                         HI
> AGC                           <DNR>
  WHITE BALANCE RANGE             PRO
  FLUORESCENT                     OFF
  SYNC                       INTERNAL
  SAVE AND EXIT
```

DNR (default)

This setting has a maximum gain of 24dB. DNR is a Digital Noise Reduction system that reduce AGC noise by means of a field integration algorithm. A consequence of DNR is that moving objects can appear blurred at very low light levels.
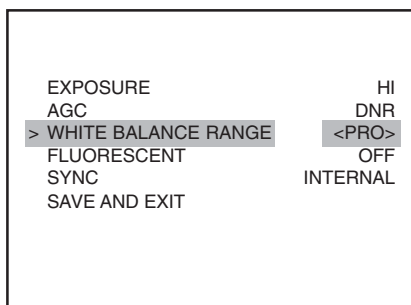
LOW

This setting limits the gain to 7dB. Setting the AGC to LOW reduces the camera's performance at low light, but improves image quality in bright conditions. This is the preferred setting for well-lit scenes.

MOTION

This setting has a maximum gain of 24dB. This setting does not use DNR at high gain. The images are sharper than DNR but the visible gain in the image is greater.

WHITE BALANCE RANGE

This menu is used to adjust the camera's white balance to compensate for different lighting types.
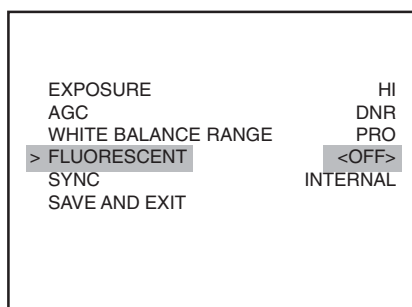
```
     EXPOSURE              HI
     AGC                   DNR
   > WHITE BALANCE RANGE   <PRO>
     FLUORESCENT           OFF
     SYNC                  INTERNAL
     SAVE AND EXIT
```

PRO (default)
This setting limits the white balance range to 2800 - 6500K. This provides a more accurate colour rendition.

WIDE
This setting extends the white balance range to 2500 - 9500K.

FLUORESCENT

```
     EXPOSURE              HI
     AGC                   DNR
     WHITE BALANCE RANGE   PRO
   > FLUORESCENT           <OFF>
     SYNC                  INTERNAL
     SAVE AND EXIT
```
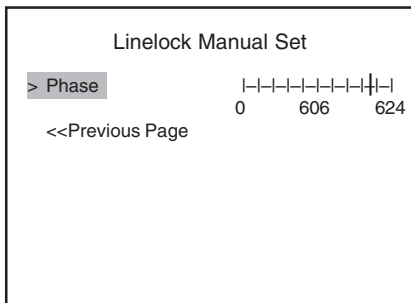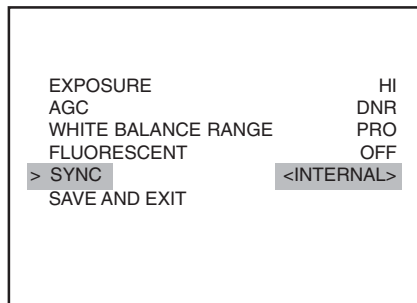
ON
Reduces colour rolling that may occur under some types of fluorescent lighting. For best results, line lock synchronisation is recommended. If line lock synchronisation is not possible, an auto-iris lens should be used.

OFF (default)
The default setting maximises dynamic range.

This menu item is used to select the way the camera maintains frame synchronisation.

```
EXPOSURE                    HI
AGC                        DNR
WHITE BALANCE RANGE        PRO
FLUORESCENT                OFF
> SYNC              <INTERNAL>
  SAVE AND EXIT
```

```
            Linelock Manual Set

> Phase            |–|–|–|–|–|–|–|–||–|–|
                   0      606    624

  <<Previous Page
```

Internal (default)
For internal synchronisation.

LL-Phase 1, LL-Phase 2, LL-Phase 3
Used when synchronising multiple cameras in a three-phase installation. Each setting has a 120° offset.

LL-Manual
Selecting **LL-Manual** will open the Linelock Manual Set menu. Use the left/right arrow keys to manually set the phase (0 to 624).

Note: Line-lock synchronisation may cause some issues with on screen displays. In these circumstances the camera should be set to internal synchronisation.

MOUNTING

Mounting points (12, figure 1) are provided on the top and bottom of the camera and are used to mount the camera on a bracket or tripod. Only use standard, photographic 1/4-20 UNC mounting bolts.

Mounting bush
Back focus adjustment
DD/Video lens connector
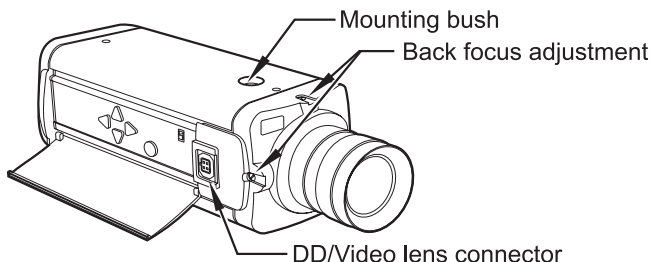
Horizontal resolution	>480 TVL
Vertical resolution	>400 TVL
Dynamic range	95 dB (14-bit) typical; 120 dB max.
Video Output	Composite 1V pk-pk 75 Ohm
Pixel type	DPS™ technology
Image size	6.3mm diagonal (type 1/3")
Sensor array size	5.04mm (H) x 3.78mm (V)
Pixel size	7μm x 7μm
Picture elements	total: 742 (H) x 554 (V) effective: 720 (H) x 540 (V)
Power supply	12VDC ± 15%; 24VAC ± 15%
Power consumption	<5 W
Weight	0.55 kg
Operating temperature	-10 to +50° C (14 to 122° F)
Operating humidity	20 to 80% RH (non-condensing)
Storage temperature	-10 to +70° C (14 to 158° F)
Storage humidity	20 to 90% RH (non-condensing)

DIMENSIONS
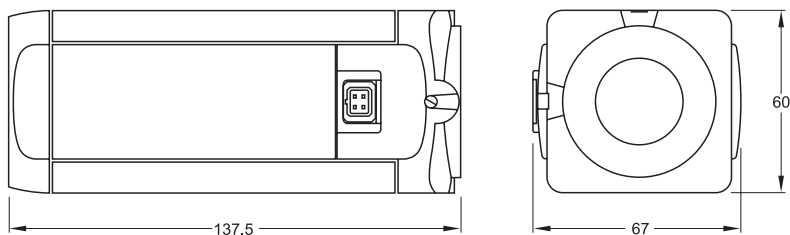
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