CAM690 External IR Dome Camera

These IR dome cameras produce exceptional quality images using the Sony 1/3" Super HAD CCDII providing 650 TVL resolution. The cameras are fitted with a 2.8 ~ 12mm 2 Mega Pixel varifocal lens and have an RS485 control for changing the OSD menu specifications remotely. NiteDevil and Wide Dynamic features are included plus 30 IR LEDs providing illumination up to 25 metres.
Note: This is not a PTZ camera.

Features

1/3" SONY Super HAD CCDII 650TVL
30 x IR LEDs with up to 25 metre range
2.8mm ~ 12mm varifocal 2 Mega Pixel lens
NiteDevil functionality using Sense-Up
OSD menu with RS485 remote updating

Available in three colours
OFF-WHITE CAM690W
IRIDIUM SILVER CAM690S
GRAPHITE GREY CAM690G

Powering the Camera

The dome requires a 12V DC regulated power supply. The camera is provided with a fly lead with a mini power jack plug. It is recommended to use a power supply that is rated higher than the current consumption of the camera i.e. the current consumption is 400mA add approximately 50% so use a power supply of 600mA or above. Note that this camera is polarity sensitive.

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.

RS485 connectivity

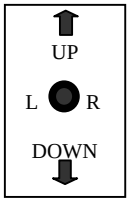
An RS485 facility is provided to allow menu updates from a local or remote location so that there is no need to access the camera joystick to change camera settings. RS485 control can be initiated using an RS485 keypad or using the Alien DVR which can be accessed over the Internet using CCTVWindow. This means you can change the settings in this camera from anywhere in the world. The RS485 bare cable has two cores. The blue core is the RS485 plus (T+) and the brown core is the RS485 minus (T-). These connections must be made to the keyboard or DVR, T+ and T- observing matching polarity. Do not connect power to this cable.

Mounting the Camera

The camera is for outdoor mounting on a wall. Connect the power, video and optional RS485 connections and place camera on wall to mark the four securing points through the base of the bracket. Drill holes in wall and fit the wall plugs. Now remove the dome cover with the special L shaped tool provided. Screw the camera bracket base to the wall and adjust the horizontal and vertical position of the camera. Adjust zoom control and then focus. Refit dome cover, ensuring that the rubber seal is correctly fitted to avoid water or condensation problems. Refit dome cover with screws using special tool. Note that if you are fitting the RS485 control into the camera base it is recommended that the RS485 cable is used for changing menu settings. If not using the RS485 cable then insulate the bare connections.

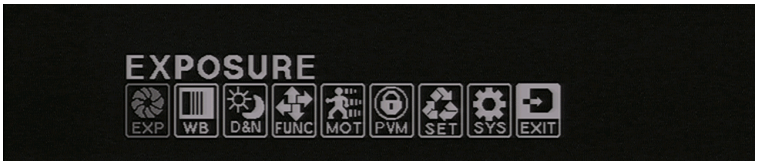
OSD Menu

The CAM525 has an on screen display menu. This can be accessed using the small joystick controller on the camera flylead.



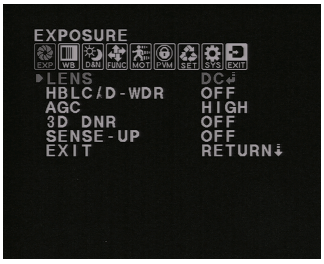
Press the centre button straight down to enter the menu and use Left, Right, Up and Down to move through and amend menu settings.

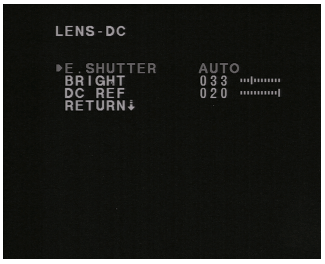
The following menu display is shown:



EXP Exposure	Lens	DC / ELC
	HBLC / D-WDR	BLC / HLI / D-WDR
	AGC	Off / Low / Middle / High
	3D DNR	Off / Low / Middle / High
	Sense Up	Auto /Off / x2 / x4 / x8 / x16 / x32 / x64 / x32 / x64 / x128 / x256 / x512
	Exit	
WB Colour	W B Mode	ATW / Manual / AWC > Push / AWC
	R - Y Gain	0 ~ 256
	B - Y Gain	0 ~ 256
	Exit	
D&N Day & Night	D&N Mode	Auto / Colour / B&W / EXT
FUNC Function	Mirror	Off / On
	Sharpness	0 ~ 30
	Monitor	Mode 1 / Mode 2
	Gamma	0.45 ~ 1.0
	LSC	On (0 ~ 30) / Off
MOT Motion	Motion	On / Off
	Area Sel	Top / Bottom / Left / Right
	Sensitivity	0 ~ 30
	Display	Off / Icon / Trace
	Hold Time	0 ~ 15 secs
	Alarm	On / Off
	Exit	
PVM Privacy Masking	Mask 1 ~ Mask 8	On / Off
SET Setup	Title	Off / On : 64 characters
	Manual DPC	Off / Manual: White or Black 0 ~ 255 / DPC Level 0 ~ 255
	Auto DPC	DPC Level 0 ~ 255
	OLPF	650 / 850
	OSD Colour	CRT / LCD
	Exit	
SYS System	Camera ID	0 ~ 255
	Communi.	Protocol : PELCO-D Baud Rate : 2400 / 4800 / 9600
	Language	
	Exit	
EXIT	Factory Set	
	Save & Exit	
	Exit	

EXPOSURE





E. SHUTTER
AUTO <move joystick Right>
1/50, 1/100, 1/120FLK, 1/250, 1/500, 1/1000, 1/2000, 1/4000,1/10000, 1/100000
AUTO <move joystick Left>
X2, X4, X8, X16, X32, X64, X128, X256, X512, X1024.

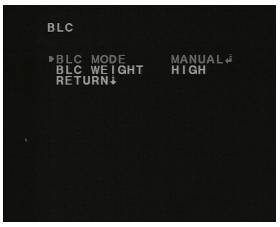
LENS DC / ELC
DC ⏎ Direct Drive Lens or ELC ⏎ Electronic Lens

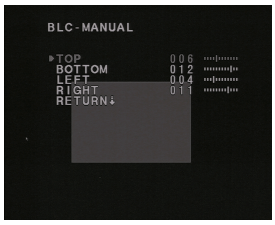
BRIGHT
Set brightness 001 ~ 100

DC REF
An Auto Iris requires a DC Reference 000 ~ 020

HBLC / D-WDR OFF / BLC ⏎ / HLI / D-WDR ⏎

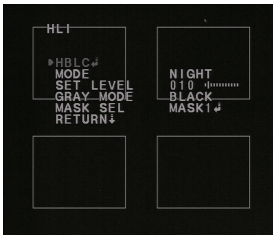
BLC

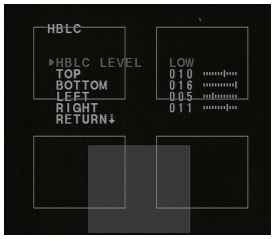




BLC
Backlight compensation allows you to draw a box in area where there is bright light.

HLI



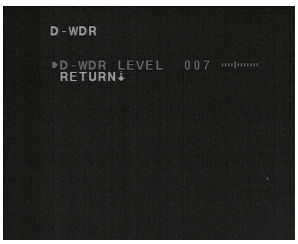


HLI
High Level Backlight Compensation can be set to LOW, MIDDLE or HIGH and is used to reduce strong bright light by drawing up to four mask areas. Particularly helpful for reducing car headlights for number plate recognition.

MODE NIGHT / ALL DAY
SET LEVEL 001 ~ 100
GRAY MODE GRAY / D GRAY / BLACK
MASK SELECT MASK1 /MASK2 / MASK3 / MASK4

HBLC LEVEL LOW / MIDDLE / HIGH

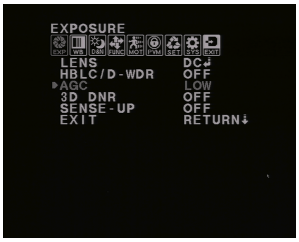
D-WDR



D-WDR
Digital Wide Dynamic Range is used to merge light and dark areas using the twin elements in the CCD. This is useful when there is bright light and dark shadows in the picture.

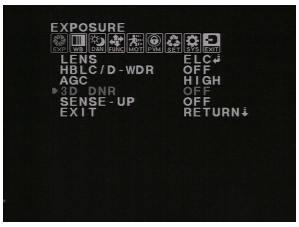
D - WDR LEVEL 000 ~ 020

AGC



Automatic Gain Control
OFF / LOW / MID / HIGH

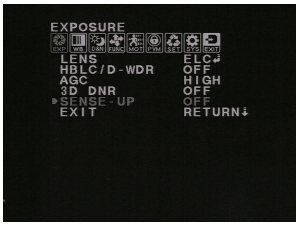
3D DNR



3D Digital Noise Reduction
OFF / LOW /MID / HIGH / AUTO

When using SENSE - UP noise can be created and this option will reduce its effect.

SENSE - UP



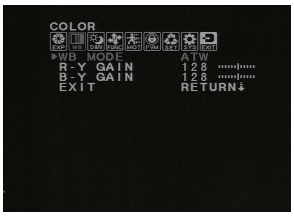
SENSE - UP
OFF <move joystick left> AUTO
OFF <move joystick right> X2 / X4 / X8 / X16 / X32 / X64 X128 / X256 / X512 /

This feature is the NiteDevil functionality and holds the shutter open slightly longer in order to capture more light.

EXIT

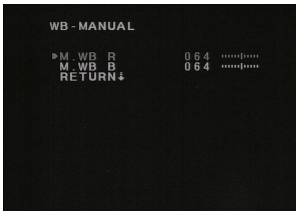
EXIT
Press down to exit menu.

COLOR



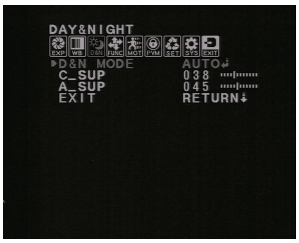
COLOR
WB MODE / R-Y GAIN / B - Y GAIN / EXIT

WB MODE	ATW (Auto Tracking White Balance) <move joystick to right> MANUAL / AWC-PUSH / AWC
R - Y GAIN	Adjust Red Yellow gain 1 ~ 255 (Default 128)
B – Y GAIN	Adjust Blue Yellow gain 1 ~ 255 (Default 128)



M. WB R	Manual Red gain
M. WB B	Manual Blue gain

DAY&NIGHT

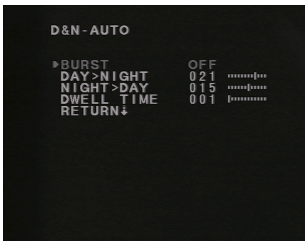


DAY&NIGHT
AUTO / COLOR / B&W / EX-CDS

C_SUP 000 ~ 100 Default 38
Set to suppress colour noise in night mode

A_SUP 000 ~ 100 Default 45
Set aperture level suppression in night mode

D&N AUTO

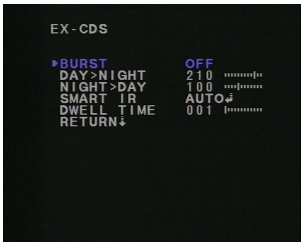


D&N AUTO

BURST OFF / ON
DAY>NIGHT 000 ~ 030
NIGHT>DAY 000 ~ 029
DWELL TIME 000 ~ 015

Switch on BURST if night time pictures have poor definition. The DAY>NIGHT and NIGHT>DAY settings are for setting the amount of light needed before switching.
Note that these two settings cannot overlap each other and are max/min settings are dependent on each other.
Dwell time is the time in minutes where light levels have to be constant before switching commenced.

EX-CDS

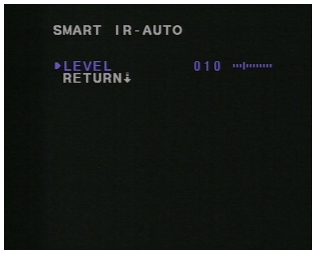


EX-CDS

BURST OFF / ON
DAY>NIGHT 000 ~ 255 Default 210
NIGHT>DAY 000 ~ 255 Default 100
SMART IR AUTO
DWELL TIME 000 ~ 015 Default 001

Use this option only if using an external CDS sensor for IR light control.
Switch on BURST if night time pictures have poor definition.

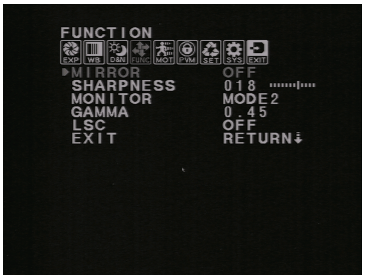
SMART IR AUTO



The DAY>NIGHT and NIGHT>DAY settings are for setting the amount of light needed before switching. Note that there is a wider range of settings for this option.
Dwell time is the time in minutes where light levels have to be constant before Switching commenced.

SMART IR 001 ~ 040 Default 010
Adjusts the IR level.

FUNCTION



FUNCTION

MIRROR OFF / ON
Reverse video picture

SHARPNESS 000~030 Default 018
Set sharpness level

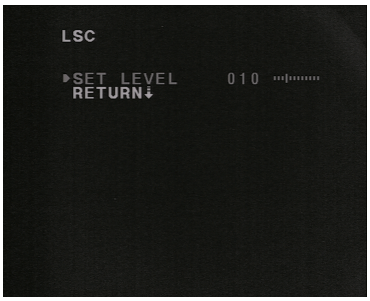
MONITOR MODE 1 / MODE 2
Use Mode 2 for LCD monitor or Mode 1 for CRT monitor

GAMMA 0.45 ~ 1.00 Default 0.45

LSC OFF / ON
Lens Shading Compensation

EXIT

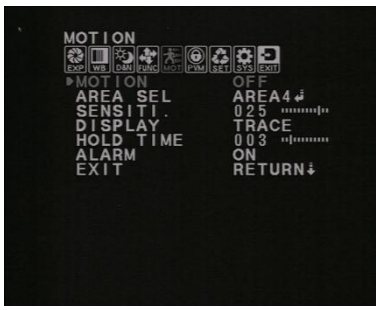
LSC



LSC

SET LEVEL 0 ~ 30 Default 010
Lens Shading Compensation compliments the quality of the lens by increasing the gain of the screen angle. Increasing the LSC level will increase the brightness around an object.

MOTION



MOTION

This option displays an alarm warning on the monitor to advise that motion has been detected. Up to 4 areas can be set.
Can select ICON or TRACE mode and set the time for the warning.

MOTION OFF / ON
Switch motion option on or off

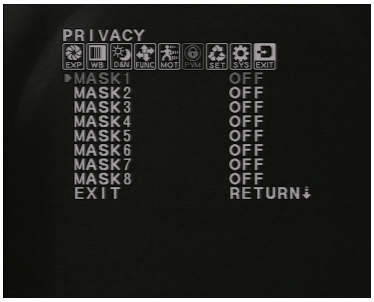
AREA SEL AREA 1 ~ 4
Select up to 4 different areas for motion

SENSITIVITY 0 ~ 30 Default 25
Set motion sensitivity

DISPLAY OFF / TRACE / ICON
Trace displays selected window in area and ICON displays when motion detected.

HOLD TIME 0 ~ 15 Default 3 secs
Displays warning for time set

PRIVACY

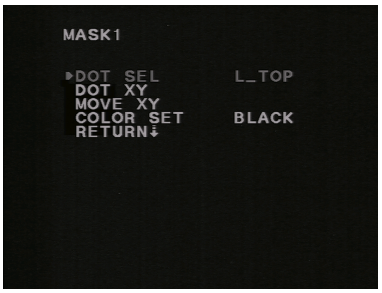


PRIVACY

This option allows the setting of up to 8 privacy masking areas that can be opened in up to 8 different colours to mask off areas that are not to be viewed.

MASK 1 ~ 8 ON / OFF

MASK x



MASKx

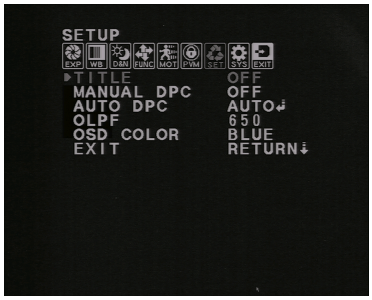
DOT SEL L_TOP / L_BOT / R_BOT / R_TOP
Sets position of privacy masking area.

DOT XY
Draw box size.

MOVE XY
Move box to position.

COLOR SET BLACK / GRAY / WHITE / RED / GREEN / BLUE / MAGENTA / CYAN
Set box colour.

SETUP



SETUP

TITLE OFF / ON
Switch on to add a title display up to 64 characters.

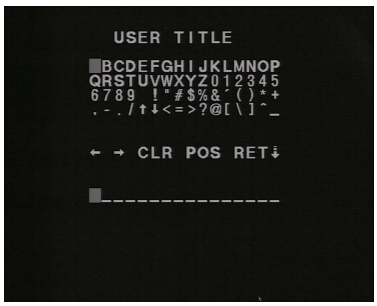
← → When in Modify mode can move text

CLR Removes all text

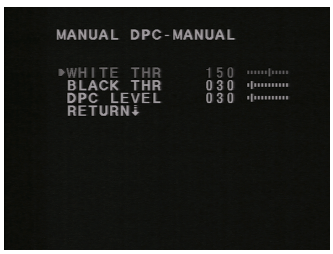
POS Move text to a position

RET Return to previous menu

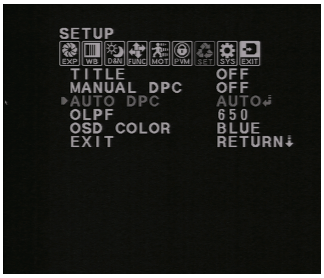
TITLE



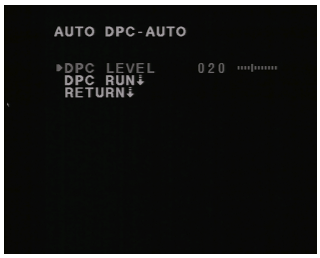
MANUAL DPC (Dead Pixel Compensation)
OFF / MANUAL
This option compensates for dead pixels and can be run periodically.



MANUAL DPC
WHITE THR White threshold 0 ~ 255 Def 150
BLACK THR Black threshold 0 ~ 255 Def 030
DPC LEVEL Sets DPC Level 0 ~ 255 Def 030



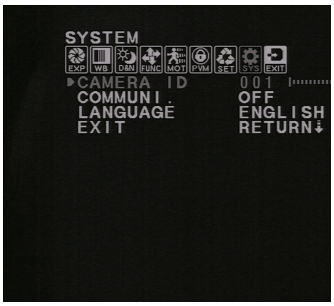
AUTO DPC
Automatically runs dead pixel compensation



OLPF 650 / 850
Optical Low Pass Filter is used to blur straight lines by 1 pixel
Set 650 for IR cut filter or 850 for IR-PASS

OSD COLOR BLUE / GREEN / RED / WHITE / BLACK / GRAY / MAGNETA / CYAN

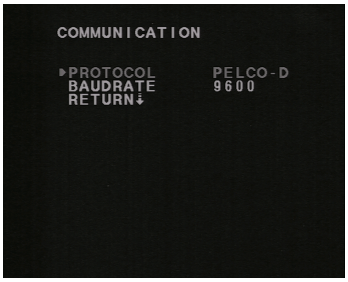
SYSTEM



SYSTEM
This menu allows the use of the RS485 connections on the camera to change the menu settings. There is also an option to change the language for the menu.

CAMERA ID 000 ~ 255 Default 001
Ensure each camera accessed by RS485 has a unique ID number set.

COMMUNI OFF / ON
Set to allow RS485 connection and change baud rate.



LANGUAGE ENGLISH / CHINESE / JAPANESE / ITALIAN / RUSSIAN / PORTUGUESE / SPANISH / GERMAN / FRENCH

PROTOCOL PELCO-D

BAUD RATE 2400 / 4800 / 9600 / 19200

RS485 Menu Control

Using the RS485 to change menu settings can be a good option. Note the zoom and focus are manually set but all the menu settings can be changed using the RS485. The Alien DVR can be used to control access by using the PTZ option. This means if you run a CAT5 single matched pair from the camera to the DVR you can update the menu, from the DVR rather than having to use ladders to access the camera. A further benefit is if the DVR is remotely networked, you can update the menu from a remote location using the Alien client software. This is especially useful when installations are a long distance away, saving you transport and of course changes can easily be made when dark.

To enable control of the RS485 connection using a PTZ keyboard or Alien DVR, you need to do the following:

a) Connect a CAT5 match twisted pair to the Blue (positive) and Brown (negative) RS485 camera terminal connector ensuring the + and – connections are correctly connected on the keypad or DVR. On the Alien DVR the T+ refers to the + and the T- refers to the – connections. The control works only on the PELCO-D setting and this must be set in the DVR PTZ menu for the correct channel. Also the baud rate must be set (recommend 2400) in the DVR and in the COMMUNI option in the camera SYSTEM menu. Also ensure the Camera ID set in the camera menu is the same as the ID in the PTZ menu.

b) Enter a CALL 95 via the DVR or keypad to display the menu. The arrow keys move up, down, left and right in the menu. The right arrow changes values and IRIS + will enter submenus and save settings.

Note that various keypads may have different keys allocated and the above is only a guide.

CAM690 Camera Specifications

Sensor	1/3” SONY Super HAD CCDII	RS485 control	Menu control
Resolution	PAL: 752 (H) x 582 (V)	Video Output	1v p ~ p, 75Ω
TV Lines	650 TVL	AGC	Automatic
Min.Illumination	0.001 Lux	Power/Current	12vDC / 400mA
S/N Ratio	More than 50dB	Lens	2.8 ~ 12mm varifocal lens
Scan System	2:1 interface	Dimensions	Dia 135mm x H 110mm
Sync. System	Internal, Negative sync	Weight	2000gms
Elect. Shutter	PAL: 1/50s ~ 1/100,000s	Storage Temp	-30□C ~ +60□C
Gama	0.45	Operating Temp	-10□C ~ +50□C
Colour	White, Silver or Grey	Construction	Cast Metal

WEE/CG0783SS

This symbol on the products and/or accompanying documents means that used electronic equipment must not be mixed with general household waste. For treatment, recovery and recycling please return this unit to your trade supplier or local designated collection point as defined by your local council.