SEE870(B/W) External HD Camera

The SEE870 has multi format HD modes for TVI, AHD and CVI plus a separate BNC for CVBS (analogue) use.

In addition the SEE870 comes in two colours, Black or Polar White with the following features:

2 MegaPixel 1080P/700TVL (CVBS)
2.8~12mm motorised lens
2x High Power IRs with up to 40m range
2 motors driving the zoom & focus and cut filter for True Day/Night
NiteDevil brand for low light conditions
Privacy masking & Motion Detection
Extra deep base for cabling
Dual front glass for reducing IR flare and all metal construction*.

Special Features

The SEE870 cameras produce exceptional quality images using the Sony 1.28" IMX291 Exmor CMOS CCD providing HD 1080P resolution.

The SEE870 is a multi-format HD camera with TVI, AHD, CVI and CVBS mode selection and in addition a separate analogue output (CVBS) on a separate BNC lead.

In HD-TVI mode the cameras have the Coaxitron Control facility for changing the OSD menu specifications via the DVR or remote network connection, or via the camera. The motorised lens facility allows zoom and focus control also to be altered remotely without the need for site access.

This camera has the NiteDevil menu feature for reducing shutter speed for improving light capture at night.

* If you have fitted cameras with IRs and have experienced condensation issues or IR flare, then this camera with the flat dual front glass, reduces these problems considerably.

Mounting the Camera

The camera is for indoor or outdoor mounting on a wall, ceiling or under a lintel. First disconnect base from camera by removing the allen screw holding the securing plate, using the supplied allen key. Secure the base with suitable screws using the four screw holes in the base. Adjust the eyeball camera and cover to ensure that the correct view is achieved and refit the securing plate using the allen screw. The camera is IP65 rated and suitable for outdoor use.

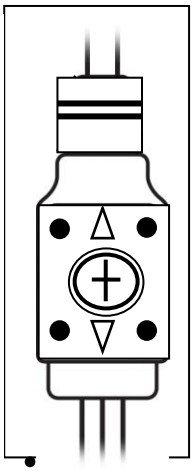
Powering the Camera

The SEE870 requires a 12V DC 500mA regulated power supply minimum when IRs are on, and power consumption is rated at 4.2 watts. It should be noted that 500mA provides extra headroom that is required when the camera is first powered up. The camera is provided with a fly lead with a mini power 2.1mm DC socket. The camera is polarity sensitive so connections must be correctly made.

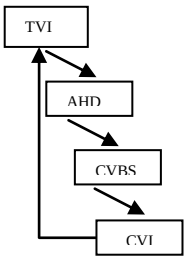
Connecting the camera to control equipment

The dome camera comes with a fly lead for power, TVI/AHD/CVI/CVBS selected BNC video output plus a second analogue (CVBS) video output on a separate BNC lead. Connect the HD camera to control equipment via a female BNC-BNC lead. 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. The separate analogue (CVBS) output is primarily available for setup purposes but can be used for viewing via an analogue monitor. Note that you can use both analogue outputs together but the menu can only be viewed on one channel.

These cameras can be viewed in TVI, AHD, CVI and CVBS. First power the camera up when it is connected to a monitor or DVR and monitor, and see if the required format displays a colour picture. If not or in black and white, press the joystick button in and not down, for 3 seconds. Repeat until picture displays in colour. (Note that picture may be in b/w in low light levels or the cellophane lens cover has not been removed). Alternatively if you use the menu, you can change the camera format in the menu:
Example - Change camera format to TVI:
<System> <Output> <MAIN OUTPUT ANALOG OUT0
<System> <Output> <ANALOG OUT0 TVI↵



switch cycle



When you are in correct format, press the joystick button in, momentarily, if you wish to access the menu.

Automatic Zoom and Focus

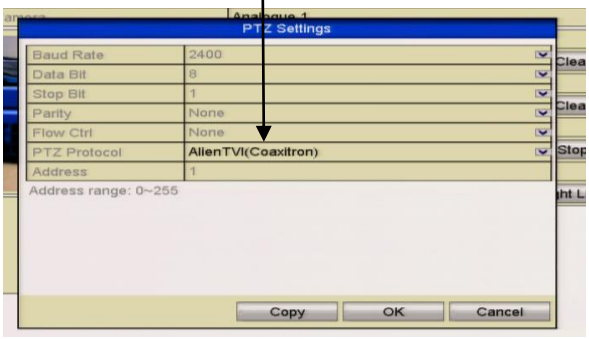
This camera has an automatic zoom and focus. If you want to manually set the zoom, select the PTZ Control option in the DVR menu and press the Zoom plus or minus buttons. If you want to manually set focus you will need to enter the camera menu by either using the menu buttons on the camera or pressing Iris +using the PTZ option in the DVR and select ONEPUSHAF then press the Iris+ button. Otherwise the camera will automatically focus when powered up.

See further details on menu access.

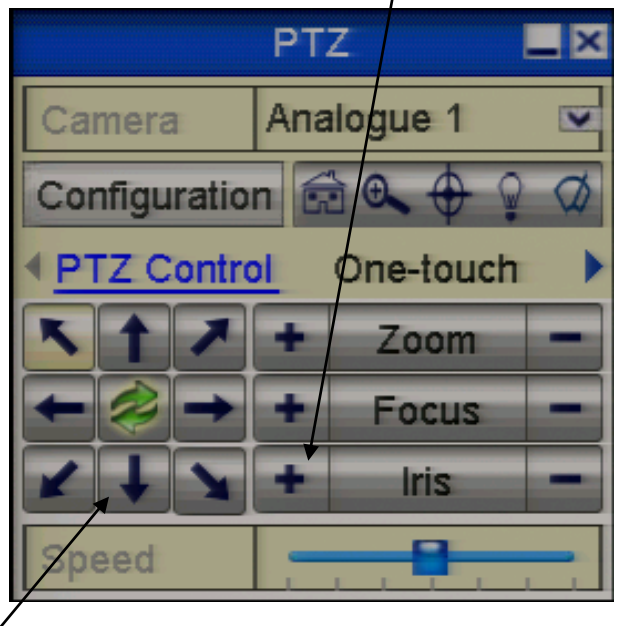
Menu Access via TVI DVR using Coaxitron

Access to the camera menu is via the menu buttons on the camera or via the Up the Co-ax connection. Access by the menu buttons is described below. To use the Up the Coax connection, this can be accessed using the PTZ menu in the MEGA TVI or MAX TVI DVRs using the AlienTVI(Coaxitron) protocol. This protocol is generally set in the PTZ Settings menu as default but if not, select using the following:

Enter the DVR **Menu**, click on **Video**, **PTZ** and **select the channel** number of the TVI camera connected to the DVR. Then click on **PTZ Settings** and select **AlienTVI(Coaxitron)** and click **OK.**



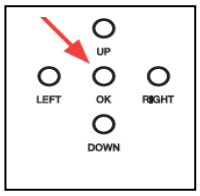
Now click on the **PTZ** button at the bottom of the screen and a full screen picture will be displayed with the PTZ control menu. Click on the **IRIS+** button to display menu



Use the directional arrows to move up and down or left or right to select options.

OSD Menu

The SEE870 has an on screen display menu. This can be accessed using the joystick on the camera.



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

Alternatively use the TVI DVR PTZ menu as detailed in "Menu Access via DVR" above.

The following menu display is shown:

LENS	ELC ALC	Electronic Light Control – overall brightness of picture Auto light compensation – measures peak light levels
2-MOTOR ↵	AF MODE SCANNING ONEPUSHAF SYNC TDN INITIAL RETURN	Auto/Manual Half/Full On On/Off On
EXPOSURE ↵	BRIGHTNESS SHUTTER SENS-UP AGC RETURN	1 ~ 20 Auto-Normal /Deblur Manual- 1/25,1/50,1/100,1/200,1/400,1/800,1/1600,1/3200, 1/6400,1/12800,1/25600. Flicker Off /x2/x4/x8/x16/x32 1 ~ 20
BACKLIGHT	OFF HLC ↵ BLC ↵ WDR ↵	Level 1 ~ 20 / Color – BLK/Customise/WHT/YEL/CYN/GRN/MAG/RED/BLU H-Pos – V-Pos – H-Size – V-Size - Return Weight – Low / Middle / High – Return

DAY&NIGHT	EXTERNAL ↵	IR LED Off / On Anti-Sat. 1 ~ 20 (Not used when IRs off) Extern S/W Low / High D->N Level 1 ~ 20 Default 13 N->D Level 1 ~ 20 Default 7 Delay – Low / Middle / High - Return
	AUTO ↵	IR LED Off / On Anti-Sat. 1 ~ 20 (Not used when IRs off) AGC Threshold 1 ~ 20 AGC Margin 1 ~ 20 Delay – Low / Middle / High - Return
	COLOUR	
	B&W ↵	IR LED Off / On Anti-Sat. 1 ~ 20 (Not used when IRs off)
COLOR ↵	AWB Color Gain 1 ~ 20 Return	Auto AUTOext PRESET (Push) MANUAL ↵ C-Temp 5000K / 8000K / 3000K R-Gain 1 ~ 20 B-Gain 1 ~ 20 Return
DIGITAL NOISE REDUCTION	DNR	Off / Low / Middle / High
IMAGE	SHARPNESS GAMMA MIRROR FLIP ACE DEFOG PRIVACY RETURN	CVBS / CVI / TVI / AHD - 1 ~ 10 TVI Default 4 0.55 / 0.65 /0.75 / 0.45 Off / On Off / On Off / Low / Middle / High (Adaptive Colour & Contrast Enhancement) Off / On ↵ Mode – Auto / Manual Level - Low / Middle / High Off / On ↵ Zone Num (0 ~ 15) / Zone Disp Off /On H-Pos / V-Pos / H-Size / V-Size / Y-Level (1 ~ 20) / CR Level (1 ~ 20) CB Level (1 ~ 20) / Return

MOTION	OFF / ON ↵	Det Window ↵ Window Zone 0 ~ 3 Window Use On/Off Det H-Pos <nn> <nn> value = position or size Det V-Pos <nn> <nn> value = position or size Det H-Size <nn> <nn> value = position or size Det V-Size <nn> <nn> value = position or size Return Det Tone 0 ~ 4 MDRect Fill On/Off Sensitivity 0 ~ 10 Motion OSD On/Off Text Alarm On/Off Signal Out Off/On Return
SYSTEM	OUTPUT ↵	Main Output Analog Out 0 /1 ↵ Analog Out 0 TVI / Analog Out1 CVBS Y Gain 0 ~ 32 Def 16 / Y Gain not used CB Gain 0 ~ 32 Def 12 / CB Gain not used CR Gain 0 ~ 32 Def 12 / CR Gain not used Position 0 ~ 256 Def 128 / Position not used Burst Freq 0 ~ 256 Def 128 / Burst Freq not used Burst Gain 0 ~ 128 Def 69 / Burst Gain not used UCC Select0 8 Byte (**Do not change this**) 720 EX Off/ On UCC Select1 not used Exit
	FRAME RATE	1080 25P
	FREQUENCY	50Hz / 60Hz
	COM. ↵	COM Cam ID 0 ~ 255 Default 0 Baudrate 2400 / 4800 / 9600 / 57600 / 115200 Set Done On (push) Return FULL / COMP / USER ↵ Offset 0 ~ 32 (Default 16) Return
	IMAGE RANGE FULL / COMP / USER ↵	IMAGE RANGE Offset 0 ~ 32 (Default 16) Return
	COLOR SPACE	HD-CbCr / YUV / SD-CbCr
	AUDIO MIC	(Not Used)
	COLOR BAR	Off / On
	LANGUAGE	ENG / CHN / CHN(S) / JPN / KOR
	CAM TITLE	Off / Right Up ↵ / Left Down ↵ (Use up or down to select character and left or right to select position)
	RESET ON(Push) Return	Hold down Iris+ button for 3 seconds
EXIT	Press IRIS + to exit	

Menu Description

The following menu description gives more in depth information about the menu options. In some instances recommendations are made to hopefully enhance the results. However every installation will be different and there will occasions when alternative solutions may be more suitable.

LENS	ELC	Electronic Light Control – measures overall brightness
	ALC	Auto light compensation – measures peak light levels

ELC Electronic Light Control – measures overall brightness of picture and applies to manual iris lens
ALC Auto light compensation – measures peak light levels and applies to auto iris lens which this camera has.
Recommend setting Lens to ALC mode.

2-MOTOR ↵	AF MODE	Auto/Manual
	SCANNING	Half/Full
	ONEPUSHAF	On(Push) Press IRIS+ or joystick centre button down
	SYNC TDN	On/Off
	INITIAL	On(Push) Press IRIS+ or joystick centre button down
	RETURN	

Two motors are fitted in this camera one driving the zoom & focus and the other operating the cut filter for True Day/Night operation. If you want to manually set zoom and focus you will need to enter the camera menu by either using the menu buttons on the side of the camera or pressing Iris+ using the PTZ option in the DVR and switch 2-MOTOR to manual.

AF Mode Auto / Manual
By default the camera is set to Auto. This allows the camera to auto focus. If you want to set the zoom distance manually, select manual mode and use the One Push AF button by pressing the OK button on the camera joystick or pressing the IRIS+ button in the PTZ menu of the TVI DVR.

SCANNING Half / Full
The scanning option can be set to Half for quick action auto scan or Full for full scan. You will see the camera movement on full scan takes twice the time of a half scan.

ONEPUSHAF On(Push)
Hold down IRIS + button or joystick centre button to initiate an auto focus scan.

SYNC TDN On / Off
True day night provides the best method for night time viewing. The cameras are fitted with a cut filter that syncs with the internal IR to provide the most effective way for picture quality, day and night. If a pulsing effect is caused then switch this option off.

INITIAL On(Push)
Hold down IRIS + button or joystick centre button to return to manufacturer's settings

RETURN
Return to Main Menu

EXPOSURE ↵	BRIGHTNESS SHUTTER SENS-UP AGC RETURN	1 ~ 20 Auto-Normal /Deblur Manual- 1/25,1/50,1/100,1/200,1/400,1/800,1/1600,1/3200, 1/6400,1/12800,1/25600. Flicker Off /x2/x4/x8/x16/x32 1 ~ 20

BRIGHTNESS **1 ~ 20** (Default = 10)
Use this setting to increase brightness by opening camera iris. Useful for improving night time viewing by using in conjunction with the Sens-Up option. However be aware to consider possible effects when there is strong sunlight in summer that if setting brightness to high it may cause the picture to white out.
Recommendation is to set brightness to 15.

SHUTTER **Auto / Manual**
1/25,1/50,1/100,1/200,1/400,1/800,1/1600,1/3200,1/6400,1/12800,1/25600,
Flicker
Shutter speed changes allow you to freeze moving objects without ghosting but reduce the amount of available light the faster the shutter operates. At night the slower the shutter speed the more light is available. The Flicker option sets the shutter speed at 1/250 that synchronises with fluorescent tubes so that the pulsing effect is minimised.
Recommendation is to leave this in Auto.

SENSUP **Off /x2/x4/x8/x16/x32**
The SensUp option allows the shutter speed to be reduced allowing additional light to be captured. Increasing brightness helps night time viewing (see BRIGHTNESS setting above). If set too high and Sensup is slowing shutter speed down to a lower speed than any movement speed, ghosting can occur.
Recommend that Sensup is switched on to x2.

AGC **1 ~ 20** (Default = 10)
For better performance in low light conditions the AGC (Automatic Gain Control) can be increased. This has the effect of making the picture brighter but it may also add more noise as it amplifies all aspects of the video signal.
Recommend AGC is decreased below 10 if Sensup is increased over x2.

RETURN
Return to main menu.

BACKLIGHT	OFF HLC ↵ BLC ↵ WDR ↵	Level 1 ~ 20 / Color – BLK/Customise/WHT/YEL/CYN/GRN/MAG/RED/BLU H-Pos – V-Pos – H-Size – V-Size - Return Weight – Low / Middle / High – Return

Backlight Compensation when set, can balance light levels during day and night so that light hitting objects viewed, is evenly spread across the picture. There are three options HLC, BLC and WDR that can be selected.

HLC ↵
(High Level Backlight Compensation)
Level 1 ~ 20 / Mode – All Day / Night Only
HLC is high level backlight compensation that will darken a bright area e.g car headlights. This can be set for all day or night only. The lower the level the more compensation is applied. Note that using the night option may be best as daytime pictures generally give a more even spread of light apart from sunlight issues.
Recommend only to use on Night Only if bright lights are causing complete video loss.

BLC ↵
(Backlight Compensation)
H-Pos – V-Pos – H-Size – V-Size
BLC is the standard setting for low level light differences. Select an area where BLC is required. Using the H-Pos (Horizontal Position) and V-Pos (Vertical Position) followed by H-Size (Horizontal Size) and V-Size (Vertical Size) create a box where light balancing is required.

WDR ↵
(Wide Dynamic Range)
Weight – Low / Middle / High
WDR is used for surveillance applications where there is a large difference in foreground and background light levels. This is typical in homes and office buildings that have large areas of glass with direct sunlight outside. Without the option switched on, views by cameras looking through windows may not give good reproduction outside. Also where there are areas of shadow and bright sunlight, the WDR option helps to balance light levels.
Recommend using WDR where balancing light levels in warehouses or large buildings is difficult.

Return
Return to main menu

DAY&NIGHT	EXTERNAL ↵	IR LED Off / On Anti-Sat. 1 ~ 20 (Not used when IRs off) Extern S/W Low / High D->N Level 1 ~ 20 Default 13 N->D Level 1 ~ 20 Default 7 Delay – Low / Middle / High - Return
	AUTO ↵	IR LED Off / On Anti-Sat. 1 ~ 20 (Not used when IRs off) AGC Threshold 1 ~ 20 AGC Margin 1 ~ 20 Delay – Low / Middle / High - Return
	COLOUR	
	B&W ↵	IR LED Off / On Anti-Sat. 1 ~ 20 (Not used when IRs off) Return

Day & Night menu controls light settings and predominantly provides options for using the cameras' Infra-Red facilities. There are four sub-options namely External, Auto, Colour and Black & White.

EXTERNAL ↵
This option does not use the internal CDS sensor to measure the available light. With cameras using their own IR light source, this option can give the best results. Note that this option has a manual adjustment for setting IR switch on according to lux level from day to night and from night to day, plus an option for applying a delay factor. This stops switching until a pre-determined lux level remains constant. There is also the option to switch off the IRs.
Recommend to try this option if Auto does not give required results.

AUTO ↵
The standard Auto function uses the internal CDS to measure available light. This uses AGC (Automatic Gain Control) and Anti Saturation to measure picture quality before switching which is used in conjunction with a pre-determined time interval when lux levels remain constant. There is also the option to switch off the camera IRs.

COLOUR
This option will remain in colour mode day and night. There are no sub menu settings. This will only be applicable when light levels at night allow the camera to continue working at 4 lux or higher.

B&W ↵
When this option is selected the camera will remain in black and white mode, day and night.
The only sub menus available are Anti Saturation and the option to switch off the camera IRs.

Return
Return to main menu.

COLOR ↵	AWB Auto Color Gain 1 ~ 20 (Default 13) Return	AUTOext / Preset (Push) Color Gain 1 ~ 20 Default 13 Return MANUAL ↵ C-Temp 5000K / 8000K / 3000K R-Gain 1 ~ 20 (Default 10) B-Gain 1 ~ 20 (Default 10) Return

This feature automatically adjusts the colour settings in the camera to match the type of light available, so that white and other colours appear as natural as possible.

AUTO
This option automatically sets white balance.

AUTOext
This option is generally used to set white balance when camera is used externally.

PRESET(Push) Press IRIS+ or joystick centre button down
This option allows you to set white balance using current light levels. Settings will only change when you press IRIS+ or joystick centre button down.

MANUAL ↵
Use this option to manually balance light levels. Note that the manual option is used for a static light environment and generally suitable for cameras installed indoors using constant artificial light.

C-Temp 5000K / 8000K / 3000K
R-Gain 1 ~ 20 (Default 10) Sets Red Gain
B-Gain 1 ~ 20 (Default 10) Sets Blue Gain
Return

RETURN
Return to main menu

DIGITAL NOISE REDUCTION	DNR	Off / Low / Middle / High

DNR **Off / Low / Middle / High**
Digital Noise Reduction is generally applied when the Sens-Up feature is used to improve night time views in low light conditions. Using the Sens-Up option slows the shutter speed but this increases noise and causes grainy picture effects. DNR helps to minimise this effect. The options low, medium and high, apply different levels of noise reduction and therefore have to be tested to gain the best result as light levels will be different at every site and location.
Recommend to leave off even when Sense-Up is on and if grainy picture is created then test starting at low, and leave camera on the best setting.

IMAGE	SHARPNESS ↵ GAMMA MIRROR FLIP ACE DEFOG PRIVACY RETURN ↵	CVBS / CVI / TVI / AHD - 1 ~ 10 TVI Default 4 0.55 / 0.65 /0.75 / 0.45 Off / On Off / On Off / Low / Middle / High (Adaptive Colour & Contrast Enhancement) Off / On ↵ Mode – Auto / Manual Level - Low / Middle / High Off / On ↵ Zone Num (0 ~ 15) / Zone Disp Off /On H-Pos / V-Pos / H-Size / V-Size / Y-Level (1 ~ 20) / CR Level (1 ~ 20) CB Level (1 ~ 20) / Return

IMAGE ↵
The Image menu covers a variety of options including sharpness, mirror, defog, shading and privacy masking facilities.

Sharpness 1~ 10
Depending on the camera format selected, the format/s will be in dark type for adjustment.
The sharpness control is done by digital correction and the best way to set this option is to set level to maximum of 10, then flick back to 1, to see the difference. Then adjust to display sharpest picture without displaying heavy black lines around subjects.

Gamma 0.55 / 0.65 / 0.75 / 0.45 (Default 0.55)
Gamma correction controls and adjusts the overall brightness of an image.
Recommend trying each option and select best quality picture

Mirror Off / On
This option changes a left handed view to a right handed view if switched on.

Flip Off / On
This option turns a view upside down. This option is generally used with the Mirror function.

ACE Off / Low / Middle / High
Adaptive Colour & Contrast Enhancement (ACE) is an automated option for adjusting colour and contrast as light levels changes through the day. Low, middle or high options are available.
Recommend setting option to Low

DEFOG Off / On↵
Mode – Auto - Level - Low / Middle / High
Manual - Level - Low / Middle / High
The defog option can be used to improve the captured image in poor weather conditions such as smog, fog or smoke. Three levels of optimisation can be applied, low, middle or high. This option is useful to stabilise rapid fluctuating light levels.
Recommend setting this option to On

PRIVACY **Off / On**

Zone Num (0 ~ 15) This function allows the creation of up to 16 coloured areas to be created to provide privacy masking.

Zone Disp Off /On The Zone Display allows you to switch on and off the zone number.

H-Pos / V-Pos / H-Size / V-Size

Each area can be positioned using the H-Pos (horizontal position), VPos (vertical position) and sized using the H-Size (horizontal size) and V-Size (vertical size) options. The Zone Display allows you to switch on and off the zone number.

Y-Level (1 ~ 20)
CR Level (1 ~ 20)
CB Level (1 ~ 20)

The Y-Level is the colour hue for privacy masking and the CR Level (Chrominance Red) and CB Level (Chrominance Blue) are used to create the required colour.

The pictures below show an area that has been masked, before and after.

RETURN
Return to main menu

MOTION	OFF / ON ↵	Det Window ↵ Window Zone 0 ~ 3 Window Use On/Off Det H-Pos <nn> <nn> value = position or size Det V-Pos <nn> <nn> value = position or size Det H-Size <nn> <nn> value = position or size Det V-Size <nn> <nn> value = position or size Return Det Tone 0 ~ 4 MDRect Fill On/Off Sensitivity 0 ~ 10 Motion OSD On/Off Text Alarm On/Off Signal Out Off/On Return

MOTION Off / On↵

The motion option when switched on allows you to create up to four areas in the picture and as motion is detected in these areas, the areas will be displayed with red moving boxes.

DET WINDOW ↵ Enter to select window number

Window Zone 0 ~3
Window Use On / Off
Det H-Pos **<nn>** Set horizontal position
Det V-Pos <**nn**> Set vertical position
Det H-Size <**nn**> Set horizontal size
Det V-Size <**nn**> Set vertical size

Each area can be positioned using the H-Pos (horizontal position), VPos (vertical position) and sized using the H-Size (horizontal size) and V-Size (vertical size) options.

Return

DET TONE 0 ~ 4 Sets the background tone to enable the motion detect area to be more or less prominent.

MDRECT FILL On / Off Allows the switching on or off of the selected zone

SENSITIVITY 0 ~ 10 Sets the sensitivity of the motion detection

MOTION OSD On / Off Switch Motion On Screen Display on or off

TEXT ALARM On / Off Switch Motion Text Alarm on or off.

Return

SYSTEM	OUTPUT ↵	Main Output Analog Out 0 ↵ / Out 1 ↵ Analog Out 0 TVI/AHD/CVI / Analog Out1 CVBS Y Gain 0 ~ 32 Def 16 / Y Gain not used CB Gain 0 ~ 32 Def 12 / CB Gain not used CR Gain 0 ~ 32 Def 12 / CR Gain not used Position 0 ~ 256 Def 128 / Position not used Burst Freq 0 ~ 256 Def 128 / Burst Freq not used Burst Gain 0 ~ 128 Def 69 / Burst Gain not used UCC Select0 8 Byte (**Do not change this**) 720 EX Off/ On UCC Select1 not used Exit
	FRAME RATE	1080 25P
	FREQUENCY	50Hz / 60Hz
	COM. ↵	COM Cam ID 0 ~ 255 Default 0 Baudrate 2400 / 4800 / 9600 / 57600 / 115200 Set Done On (push) Return
	IMAGE RANGE FULL / COMP / USER ↵	FULL / COMP / USER ↵ Offset 0 ~ 32 (Default 16) Return IMAGE RANGE Offset 0 ~ 32 (Default 16) Return
	COLOR SPACE	HD-CbCr / YUV / SD-CbCr
	AUDIO MIC	(Not Used)
	COLOR BAR	Off / On
	LANGUAGE	ENG / CHN / CHN(S) / JPN / KOR
	CAM TITLE	Off / Right Up ↵ / Left Down ↵ (Use up or down to select character and left or right to select position)
	RESET ON(Push) Return	Hold down Iris+ button for 3 seconds

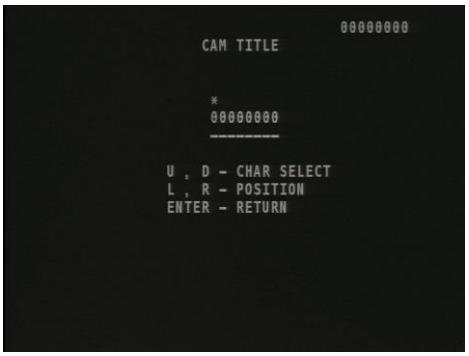
The SYSTEM menu provides a number of general facilities. These include selecting the correct camera format, setting a camera identification number and baud rate for RS485 connection, resolution mode, frame rate and colour standard, language, test colour bar, camera title and camera reset option.

OUTPUT ↵

Main Output Analog Out 0 /1 (Out 0 = HD Out 1 = CVBS)
Analog Out 0 TVI ↵ (Select TVI / AHD / CVI)
Y Gain 0 ~ 32 Default 16 Yellow Gain
CB Gain 0 ~ 32 Default 12 Blue Gain
CR Gain 0 ~ 32 Default 12 Red Gain
Position 0 ~ 256 Default 128 Position
Burst Freq 0 ~ 256 Default 128 Burst Frequency
Burst Gain 0 ~ 128 Default 69 Burst Gain
UCC Select0 8 Byte (**Do not change this**)
720 EX Off/ On
UCC Select1 not used
Exit

	Analog Out1	CVBS / TVI↵ / Off
	Analog Out1	CVBS
	Return	
FRAME RATE	1080 25P / 720 25P / 720 (Crop) 50P (Select camera frame rate) Sets the camera output mode. 1080P is default.	
FREQ	50Hz / 60Hz (Cycles per second)	
COM. ↵	Cam ID 1	(Set ID number in camera between 0 and 255)
	Baud Rate	2400 / 4800 / 9600 / 57600 /115200
	Set Done	(Press Iris+ button)
	Return	
IMAGE RANGE	Full / Comp / User ↵ Offset 1 ~ 32 (Default = 16)	
	Return	
COLOR SPACE	HD-CbCr (High Definition Chrominance Blue and Red) YUV **(**Allows grayscale adjustment (Y= luminance UV= colour) SD-CbCr (Standard Definition Chrominance Blue and Red)	
AUDIO MIC	Not used	
COLOR BAR	Off / On	(Useful for testing camera colour quality)
LANGUAGE	ENG / CHN / CHN(S) / JPN / KOR (Select language required)	
CAM TITLE	Off / Right Up↵ / Left Down ↵ (Enter camera title)	

(Use up or down to select character and left or right to select position) Hold down Iris+ button for 3 seconds



RESET ON(Push)↵ Press IRIS+ or joystick centre button down

Return

SEE870 Camera Specifications

Sensor	1/28" SONY 2 MP CMOS	**Video Outputs**	TVI, AHD, CVI & Analogue
Resolution	1080P	**Independent CVBS**	CVBS 700TVL separate output
Day/Night	Mechanical True Day/Night	**IR Power**	2 H/Powered IR LEDs up to 40 mtrs
Min.Illumination	.001 Lux (0 Lux IR LEDs on)	**Power/Current**	12vDC 500mA IRs on
Mounting	Ceiling and Wall mounting	**Lens 2MP**	2.8mm ~ 12mm Motorised
Menu	OSD direct and via coaxitron	**Backlight**	HLC, BLC, WDR, Off
WDR	Wide Dynamic Range option	**Dimensions**	110(h) x 133 (w) x 146 (d)mm
Viewing Angle	360^0 horizontal rotation/90^0 vertical	**Build**	Metal
Colour	SEE870W White / SEE870B Black	**IP Rating**	IP65
NiteDevil	Sens-Up option included	**Extra Deepbase**	Cable Managed
Privacy Masking	16 areas for Privacy Masking	**Noise Reduction**	2DNR and 3DNR
Dual Front Glass	Dual glass to reduce IR reflection	**AGC**	Automatic/Selectable

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.

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