

## **SEE110 MiniROK HD External Eyeball**

These dome cameras produce exceptional HD images using a 2.1 MegaPixel 1080P, 3.6mm fixed lens, 14 IR Leds, multi format for TVI, AHD, CVBS (Analogue) and CVI use and also has a menu. The cameras are housed in a tiny attractive, anti-vandal metal housing and are available in shiny black or shiny white.

### **Features**

HD multi format camera TVI/AHD/Analogue/CVI

12 x IR Leds 10~15m range

3.6mm fixed lens

Low power consumption 165mA IRs on / 70mA off

Small size

On board menu

Metal case Eyeball with anti-vandal security feature

IP66 weatherproof

Available in shiny white SEE110W or shiny black SEE110B

Economical cost



### **Mounting the Camera**

The camera is for outdoor or indoor mounting on a wall, ceiling or under a lintel. To mount the camera, loosen the securing grub screw on the side of the housing using the Allen key supplied. Remove the base and secure to wall or lintel using the three screws provided. Now reconnect camera base and position the camera using the internal 3 axis movement that can be adjusted to give a completely left or right angle view. Finally re-tighten grub screw to lock the base.

### **Powering the Camera**

The camera 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 165mA (with IRs on) so add approximately 33% and use a regulated power supply of 250mA or higher. Please ensure that power is connected correctly as this camera is polarity sensitive and reverse polarising the camera will cause damage.

### **Connecting the camera to control equipment**

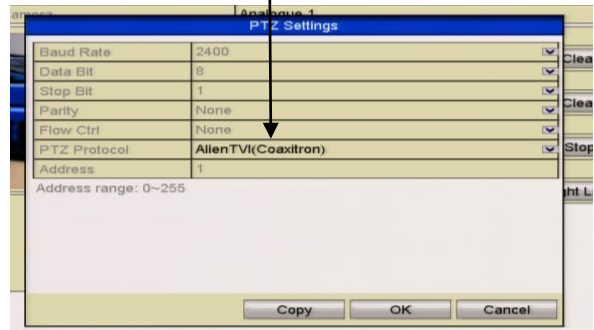
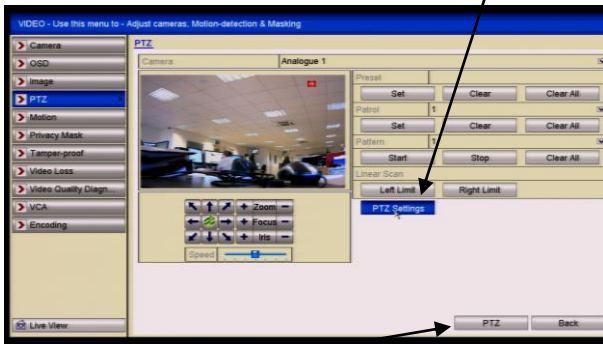
The camera comes with a fly lead for power and video out. To reduce installation time the video out lead is terminated into a male BNC connector. Connect the camera to control equipment via a female BNC-BNC lead. Remember that the Video requires two wires to complete the circuit and when using a co-ax cable, the outer braid of the co-ax provides the "0V GROUND" connection and the inner core provides the "Video" connection.

**SEE110 MiniROK HD TVI/AHD/CVBS/CVI IR Eyeball with fixed lens & Menu**

**Menu Access via DVR**

Access to the camera menu is via the menu buttons on the camera or via the Up the Co-ax connection in TVI mode. 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 right to select options.

**Menu Access using the camera joystick controller**

Press the centre button straight **in** to enter the menu and use Left, Right, Up and Down to move through and amend menu settings. These cameras can be viewed in TVI, AHD, CVBS and CVI formats and by default **have been set to display in TVI mode**. If you wish to use a different format other than TVI, it can only be changed **through the camera menu** and **to view the camera menu** you must be connected to equipment that will display in the format previously selected. Alternatively it is possible to change the format blind using the instructions in **Video Format using Blind Menu**.



### Video Format using Blind Menu

There may be a situation where you need to change the video format e.g from TVI to AHD, CVBS or CVI but you do not have a monitor or DVR that supports TVI format. If this is the case then you can use the following method by accessing the menu blind. So by pressing the joystick controller middle button in (not down) will trigger the menu display. As the camera is not in the correct video format you will not see a menu but it will be there, looking like the menu below. Note that the bent arrow ↵ refers to the pressing in of the menu button and not down.

**Special Note: The procedure discussed below assumes you are altering the video format when the camera is first received when it will be in TVI format. The Reset option will always default to TVI. Also the menu expires after 30 seconds of inactivity so changes made, must be made sequentially, within this time period for each step. If you make a mistake or the camera is not in TVI format, you may need to reset the camera first. Read the following completely as there are some quick methods that will save some time.**

### Changing TVI format to AHD, CVBS(Analogue) or CVI mode

#### Step 1

Press the joystick in (not down) to enter the Main Menu.

```

                                MAIN MENU
                                AE
                                WB
                                DAY-NIGHT
                                VIDEO SETTING
                                LANGUAGE
                                RESET
                                SAVE – EXIT
                                EXIT
                                ↵
                                ↵
                                ↵
                                ↵
                                < ENGLISH >
                                ↵
                                ↵
  
```

#### Step 2

So to change the video format you must continue by entering the Video Setting menu. So press the joystick down three times to get to Video Setting sub-menu and then press the joystick in once to enter this menu. You will now be in the Video Setting menu that looks like the following:

```

                                VIDEO SETTING
                                CONTRAST
                                SHARPNESS
                                COLOR GAIN
                                DNR
                                TRANSFER MODE
                                IMAGE SIZE
                                FORMAT
                                DWDR
                                RETURN
                                < 15 >
                                < 14 >
                                < 6 >
                                < 3 >
                                < TVI >
                                < 1080P >
                                < PAL >
                                < OFF >
                                ↵
  
```

**Step 3**

You will now need to move down to Transfer Mode. To do this press the joystick **down** four times. This mode has four options that are **TVI, AHD, CVBS(analogue) and CVI**. So you now need to press the menu button to the **right** once to move from TVI to AHD, twice to move to CVBS(analogue) or three times to move to CVI.

Finally move **down** four times to Return and press menu button **in** once so you exit Video Setting menu and return to Main Menu, then move down to Exit by pressing joystick **down** four times and **in** once to exit menu.

**Quick Options**

1. Setting camera to TVI Default mode

Joystick **IN 1, DOWN 5, IN 1, down 6, IN 1**

2. Setting camera to AHD mode

Joystick **IN 1, DOWN 3, IN 1, DOWN 4, RIGHT 1, DOWN 4, IN 1, DOWN 3, IN 1**


3. Setting camera to CVBS(Analogue) mode

Joystick **IN 1, DOWN 3, IN 1, DOWN 4, RIGHT 2, DOWN 4, IN 1, DOWN 3, IN 1**







4. Settings camera to CVI mode

Joystick **IN 1, DOWN 3, IN 1, DOWN 4, RIGHT 3, DOWN 4, IN 1, DOWN 3, IN 1**

**MAIN MENU**

To enter menu press the joystick in (not down) to display the main menu. Up and Down to move through menu and left and right to change settings. Press joystick in where  is shown to enter or close.

## MAIN MENU

AE	
WB	
DAY-NIGHT	
VIDEO SETTING	
LANGUAGE	< ENGLISH >
RESET	
SAVE – EXIT	
EXIT	

**AE** Auto Exposure - Brightness – Exposure Mode – Gain – Return

**WB** White Balance – ATW - MWB

**Day/Night** Mode – EXT – Auto – Color – B/W

**Video Setting** Contrast – Sharpness – Color Gain – DNR – Transfer Mode – Image Size – Format – DWDR – Return

**Language** English – includes Chinese – Spanish – Japanese – Italian – Portuguese

**Reset**

**Save – Exit**

**Exit**

<b>AE</b> ↵ Automatic Exposure	<b>EXPOSURE</b>	
	BRIGHTNESS	< 6 > Brightness level 1 ~ 20 Set to balance overall light level. Default = 6.
	EXPOSURE MODE	<b>GLOBE / CENTER / BLC / FLC</b> Globe – complete picture Center – centre of picture BLC – backlight compensation FLC - flickerless use when near fluorescents
	GAIN	< 16 > Overall Gain 1 ~ 16 Default = 16.
	LV (only applies to BLC)	< 7 > BLC Level 0 ~ 7. Default = 7.
	RETURN ↵	Return to Main Menu.
<b>WB</b> ↵ White Balance	<b>WB</b>	
	MODE	<b>ATW / MWB</b> ATW - Alternating White Balance (Use in external variable light conditions)  MWB – Manual White Balance (Use in internal static light conditions where red and blue gain can be manually adjusted) RGAIN < 1 ~ 16 > Red Gain Default = 1 BGAIN < 1 ~ 16 > Blue Gain Default = 1
	RETURN ↵	Return to Main Menu
<b>DAY - NIGHT</b> ↵	<b>DAY/NIGHT</b>	
	MODE	EXT - External not using camera light sensor (Default) AUTO - Auto uses camera light sensor COLOR – Stays in colour mode B/W - Stays in black & white mode
	RETURN ↵	Return to Main Menu

**VIDEO SETTING ↵****VIDEO SETTINGS**

CONTRAST	Contrast 1 ~ 50	Default = 15
SHARPNESS	Sharpness 1 ~ 20	Default = 14
COLOR GAIN	Colour Gain 1 ~ 31	Default = 6
DNR	Noise Reduction 1 ~ 15	Default = 3
TRANSFER MODE	Video Format TVI / AHD / CVBS / CVI	Default = TVI
IMAGE SIZE	1080P / 720P	Default = 1080P
FORMAT	PAL / NTSC	Default = PAL
DWDR	Digital Wide Dynamic Range OFF / ON	Default = Off
RETURN ↵	Return to Main Menu	

**LANGUAGE**

English – includes Chinese – Spanish – Japanese – Italian – Portuguese  
Default = English

**RESET ↵**

Resets cameras default settings

**SAVE – EXIT ↵**

Save changes made and exit menu

**EXIT ↵**

Exit menu without saving.

**SEE110 MiniROK HD TVI/AHD/CVBS/CVI IR Eyeball with fixed lens & Menu****CAM110 Camera Specifications**

Sensor	2.1MegaPixel 1080P/700 TVL (CVBS)	Housing	Coloured metal vandal proof
Resolution	1080P (HD) / 700TVL Analogue	Video Output	1v p ~ p, 75Ω
Video Format	TVI/CVI/AHD/CVBS(Analogue)*	Infra-Red LEDs	12 x IR LEDs 10~ 15mtrs
Illumination	0 Lux when IRs on	Power/Current	12vDC / 160mA IRs on
S/N Ratio	More than 52dB (AGC off)	Lens	3.6mm board lens
Scan System	2:1 interface	IP Rating	IP66
Sync. System	Internal, Negative sync	Dimensions	60mm (D) x 53.5mm (H)
Elect. Shutter	PAL: 1/50s ~ 1/10,000s	Storage Temp	-15°C ~ +60°C
Gama	0.45	Operating Temp	-10°C ~ +50°C

\* Please read section **Video Format using Blind Menu** if experiencing problems with displaying video format.



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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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