

INSTALLATION AND USER GUIDE

IRCAM1000

EXTERNAL USE VARIFOCAL DAY / NIGHT CAMERA



Safety Instructions

IMPORTANT: PLEASE READ THIS MANUAL CAREFULLY BEFORE INSTALLATION AND RETAIN FOR FUTURE REFERENCE.

Cautions For Use

- Do not open the camera body.
- Do not insert objects into the camera body.
- Do not touch with wet hands.
- Do not remove power cord whilst camera is in use
- If signs of smoke or fire are detected immediately remove mains power.

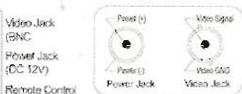
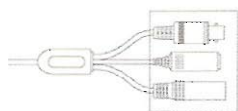
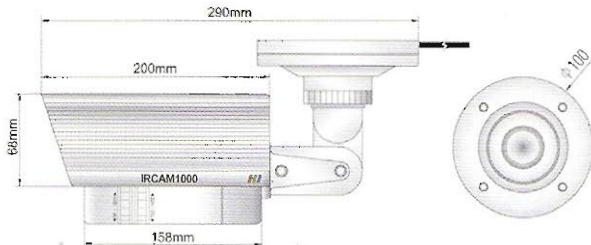
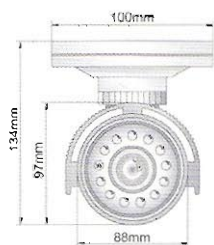
Cautions For Installation

- Camera requires 12v DC adaptor for power and therefore must never be connected directly to mains power.
- Apply mains power after full installation of camera.
- Do not install camera facing directly into strong light.
- Do not install in areas of high humidity / heat or low temperature.
- Do not install in areas of high dust or particle pollution.
- Do not expose the camera to rain or moisture.

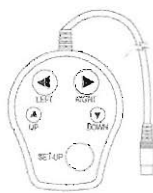
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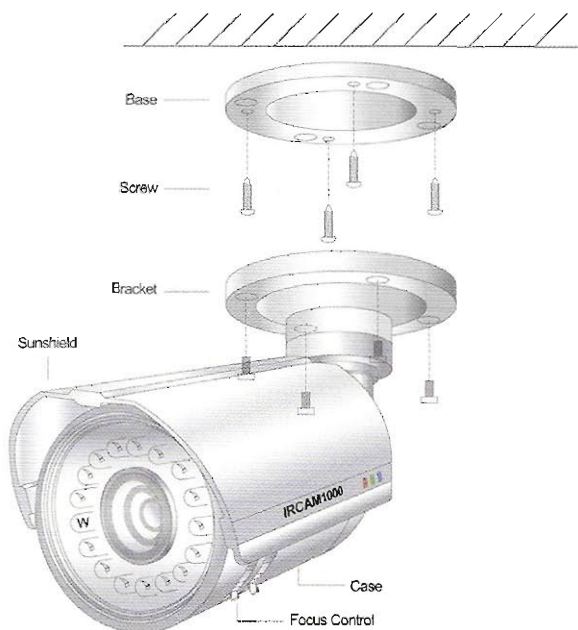
Installation



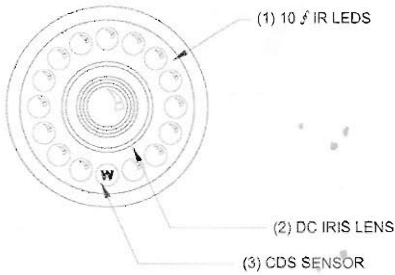
Cable Connection



Remote Control



Camera Parts



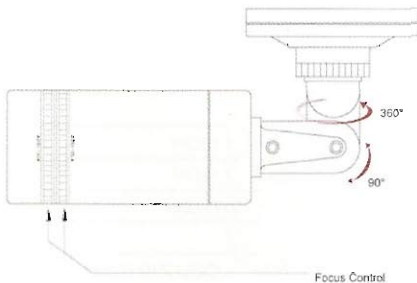
(1) 10 f IR LED
Infrared led's activate as needed.

(2) DC AUTOIRIS LENS
Adjust between T<---->W (Tele<---->Wide) to set the angle (focal length).
Set the focus by adjusting ∞<---->N

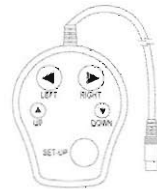
(3) CDS
Day to night sensor, automatic infrared illumination at night.

NOTE: BOTH OF THE ABOVE ADJUSTMENTS GET LOCKED INTO POSITION THROUGH THE USE OF "LOCKING HANDLES".

Function Selection Switch



OSD REMOTE CONTROL



* CAMERA OPERATION

{ SET-UP UP DOWN LEFT RIGHT }

LENS (Selection)	*MANUAL	*DC/VIDEO	
SHUTTER	*ESC	*MANUAL	*FLK
(Condition And Speed Control)			
WHITE BALANCE Control	*ATW	*AWC	*MANUAL
BACKLIGHT (Backlight Compensation)	*OFF	*LOW	*MIDDLE
AGC (Auto Gain Control)	*OFF	*LOW	*MIDDLE
	*HIGH		
DNR (Digital Noise Reducstion)	*OFF	*LOW	*MIDDLE
SENS-UP (Low Illuminance)	*OFF	*AUTO	
SPECIAL	*CAMERA ID	*COLOUR	
	*SYNC	*MOTION DETECTION	
	*PRIVACY	*MIRROR	
	*SHARPNESS	*RESET	
	*RETURN	*AUTO	
EXIT			

On Screen Display (OSD) Control



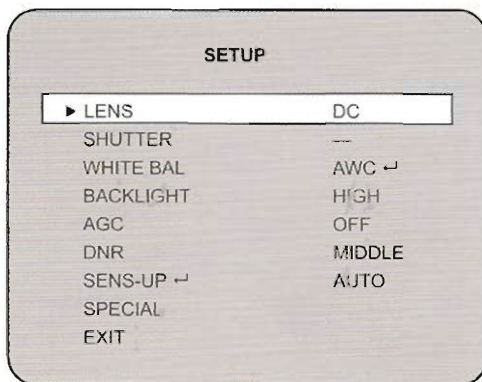
How To Operate The Camera Menu

• Setup Menu

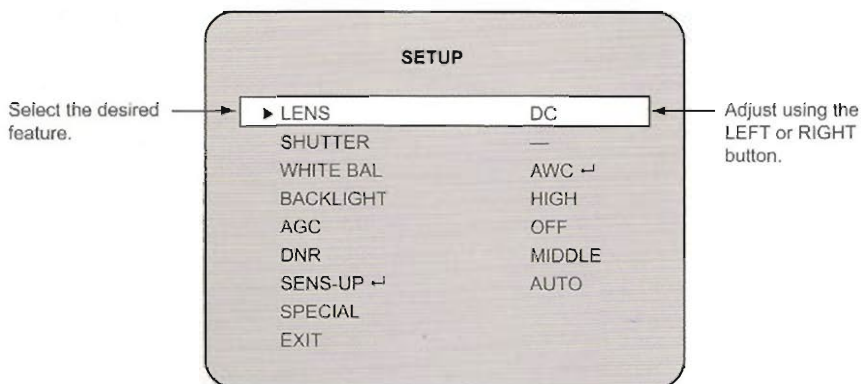
SETUP	
LENS (Option)	• MANUAL • DC/VIDEO
SHUTTER (Shutter Speed Control)	• ESC • MANUAL • FLK
WHITE BALANCE	• ATW • AWC • MANUAL
BACKLIGHT (BLC)	• OFF • LOW • MIDDLE • HIGH
AGC (Auto Gain Control)	• OFF • LOW • MIDDLE • HIGH
DNR (Digital Noise Reduction)	• OFF • LOW • MIDDLE • HIGH
SENS-UP	• OFF • AUTO
SPECIAL	• CAMERA ID • COLOUR • COLOUR GAIN • SYNC • MOTION DET • PRIVACY • MIRROR • SHARPNESS • RESET • RETURN
EXIT	

• Menu Set Up

1. Press the setup button.
2. Setup menu will be displayed on the monitor.



3. Move the arrow indicator UP or Down To highlight the desired feature.

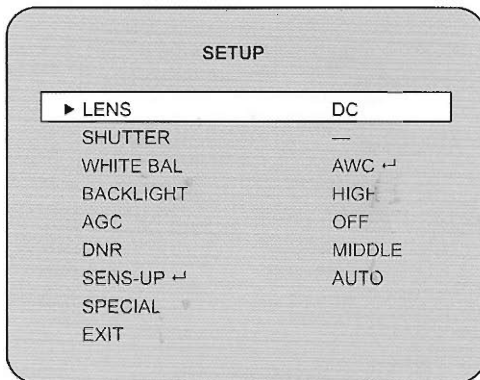


4. The LEFT or RIGHT button scrolls through the settings within the highlighted function.
5. When all desired settings are complete use the DOWN button to move to and highlight EXIT then press SET on the controller, this takes you out of the menu.

• LENS (Option)

Controls the picture brightness.

1. Move the arrow indicator to LENS by pressing the UP or DOWN buttons to scroll through the Set Up menu screen.
2. Select the desired LENS type by pressing the LEFT or RIGHT button.

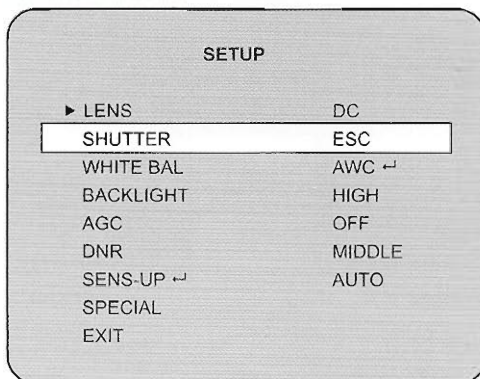


DC / VIDEO: DC Auto IRIS Lens

3. With DC selected the Brightness can be manually adjusted. Press the SETUP button then use the LEFT and RIGHT buttons to increase or decrease the level.
4. Press the SETUP button to return to the previous menu.

• SHUTTER SPEED CONTROL

1. FLK: For use where image is being affected and causing the image to flicker or show interference. Causes can be fluorescent lighting, radio waves etc.
2. ESC: For automatic shutter speed control.
Note: The setting in the LENS options must be set to MANUAL to enable this setting.
3. MANUAL: For manual shutter speed control. Note that SENS UP will not function if this mode is selected.
Note: The setting in the LENS options must be set to MANUAL to enable this setting.



CAUTION: Lens Shutter speed will be fixed to 1/60 sec when DC / VIDEO Lens is selected.

• WHITE BALANCE

SETUP	
▶ LENS	DC
SHUTTER	ESC
WHITE BAL	AWC ↵
BACKLIGHT	HIGH
AGC	OFF
DNR	MIDDLE
SENS-UP ↵	AUTO
SPECIAL	
EXIT	

1. ATW: For colour temperature range setting.
2. AWC: For setting the white balance. Press and hold the set button whilst the camera focuses onto white paper. NOTE: The balance should already be OK, this set up is only needed if the camera image is altered.
3. MANUAL: For manual adjustment of the colour gain. With MANUAL highlighted press the SETUP button, the RED & BLUE colour gain can be increased or decreased using the LEFT or RIGHT buttons.

• BACKLIGHT (BLC)

SETUP	
▶ LENS	DC
SHUTTER	ESC
WHITE BAL	AWC ↵
BACKLIGHT	HIGH
AGC	OFF
DNR	MIDDLE
SENS-UP ↵	AUTO
SPECIAL	
EXIT	

1. Select the desired setting using the LEFT & RIGHT buttons.

- HIGH: Gain is set to 6dB to 34db.
- MIDDLE: Gain is set to 6dB to 30db.
- LOW: Gain is set to 6dB to 18db.
- OFF: BACKLIGHT function disabled.



BACKLIGHT ON



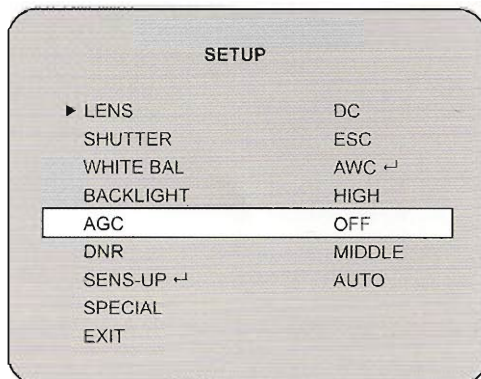
BACKLIGHT OFF

• **AGC (Auto Gain Control)**

AGC helps increase the image brightness. The desired option is selected using the LEFT and RIGHT buttons.

- HIGH: Gain is set to 6dB to 34db.
- MIDDLE: Gain is set to 6dB to 30db.
- LOW: Gain is set to 6dB to 18db.
- OFF: BACKLIGHT function disabled.

2. Each of the above settings can also be manually adjusted. After selection of the desired setting press the SETUP button, the LEFT and RIGHT buttons can then be used to increase or decrease the level.



• DNR (Digital Noise Reduction)

1. DNR function allows the reduction of image interference caused by digital noise.
- HIGH: High reduction of noise but some ghost effect will occur.
 - MIDDLE: Middle reduction of noise but most effective ghost effect reduction.
 - LOW: Low reduction of noise without ghost effect.
 - OFF: Deactivates the DNR function.

SETUP	
▶ LENS	DC
SHUTTER	ESC
WHITE BAL	AWC ←
BACKLIGHT	HIGH
AGC	OFF
DNR	MIDDLE
SENS-UP ←	AUTO
SPECIAL	
EXIT	

• SENS-UP

For automatic setting of image light level when light conditions are low.

1. Move the arrow indicator to SENS-UP by pressing the UP or Down Button.
 2. elect the desired mode by pressing the LEFT or Right button.
- AUTO: Auto mode status.
 - OFF: Deactivated.

CAUTION:

- When the AGC function is set to OFF the SENS-UP function is automatically disabled.
- When the SHUTTER function is set to MANUAL the SENS-UP function is automatically disabled.

3. If manual adjustment of the strength of the automatic low light compensation is required press the SETUP button while AUTO is highlighted, you can then increase or decrease the level using the LEFT & RIGHT buttons.

NOTE: Increasing the manual level may cause loss of picture quality eg. spots, white out etc.

SETUP	
▶ LENS	DC
SHUTTER	ESC
WHITE BAL	AWC ←
BACKLIGHT	HIGH
AGC	OFF
DNR	MIDDLE
SENS-UP ←	AUTO
SPECIAL	
EXIT	

• SPECIAL

SPECIAL	
CAMERA ID	OFF
COLOUR	ON
COLOUR GAIN	
SYNC	INT
MOTION DET	OFF
PRIVACY	OFF
MIRROR	OFF
SHARPNESS	ON
RESET	
RETURN	

• CAMERA ID

1. Select ON using the LEFT or RIGHT buttons.
2. Press the SETUP button to display the screen below.

Camera ID	
A B C D E F G H I J K L M N O P	
Q R S T V W X Y Z	
a b c d e f g h i j k l m n o p q r	
s t u v w x y z	
1 2 3 4 5 6 7 8 9	
← → CLR POS END	

3. Move the cursor to the required characters by using UP, DOWN, LEFT & RIGHT buttons.
4. To set the character selected press the SETUP button.
5. Repeat steps 3 & 4 to select and set your full desired Camera ID upto a maximum of 15 characters.
Note that moving the cursor to CLR allows deletion of characters.
6. To change the position in which the Camera ID appears on screen move the cursor to POS and press the SET button. The ID will now appear on screen and can be moved by using the four directional buttons.



7. Now press SET to store the position.
8. Move the cursor to END and press the SET button to complete.

• COLOUR

1. Use the LEFT and RIGHT buttons to change the desired setting.

- AUTO: Allows the automatic change from Color image during daylight to B/W image during the night in order to enable effective Infrared illumination.
- ON: Sets Color image permanently during Day and Night. Note that infrared illumination and color images do not operate effectively together. Also note that this mode is not available if AGC is set to OFF.

• SYNC

- Setting options for image synchronisation.
- INT: Internal Synchronisation (Automatically sets to this with 12V DC power applied).
- L/L: Manual Line Lock.

• MOTION DETECTION (MD)

- For set up of the image motion detection function.
- OFF: Sets all motion detection to DEACTIVATED status.
- ON: Sets motion detection to ACTIVATED status.
- AREA SEL: Four areas for detection are displayed & highlighted on the image. The size of these can be adjusted, first use the RIGHT or LEFT button to select the area (1, 2, 3 or 4) you wish to adjust then use the DOWN button to move to TOP on screen, the LEFT and RIGHT buttons can then be used to increase or decrease the top line of the selected area. Move the cursor to DOWN and the same adjustment can be made with the bottom line of the area. Follow the same procedure for the left & right sides of the area.
- AREA STATE: Allows each AREA to be individually activated or deactivated. Select OFF to deactivate or ON to activate the AREA currently selected above.

MOTION DETECTION	
▶ AREA SEL	AREA1
AREA STATE	OFF
TOP	1----1----131
DOWN	1----1----160
LEFT	1----1----147
RIGHT	1----1----131

* Press the SETUP button to save data selected *

• PRIVACY

For set up of the Privacy / Masking function. This function provides the ability to mask upto 4 seperate areas of the image that are required not to be displayed.

- OFF: Deactivated.
- ON: PRIVACY mode activated.
- AREA SEL: Four areas for masking are displayed & highlighted on the image. The size of these can be adjusted, first use the RIGHT or LEFT button to select the area (1, 2, 3 or 4) you wish to adjust then use the DOWN button to move to TOP on screen, the LEFT and RIGHT buttons can then be used to increase or decrease the top line of the selected area. Move the cursor to DOWN and the same adjustment can be made with the bottom line of the area. Follow the same procedure for the left & right sides of the area.
- AREA STATE: Allows each AREA to be individually activated or deactivated. Select OFF to deactivate or ON to activate the AREA currently selected above.
- AREA TONE: For adjustment of the tone of the masked AREAS. Required to ensure the area can be seen against any shade of image background (light or dark).

.ACTION DETECTION	
▶ AREA SEL	AREA1
AREA STATE	OFF
AREA TONE	1----1----99
TOP	1----1----131
DOWN	1----1----160
LEFT	1----1----147
RIGHT	1----1----131

• MIRROR

- ON: Activated reverse turning right to left.
- OFF: Deactivated.



MIRROR OFF

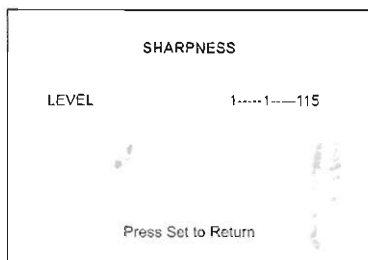


MIRROR ON

• SHARPNESS

Adjusts the sharpness of the image.

1. Press the SETUP button.
2. Adjust the level using the LEFT and RIGHT buttons.



• RESET

Returns all settings to the factory defaults.

• RETURN

Saves all settings changed within the SPECIAL menu and exits to the SETUP menu.

• EXIT

Saves all settings and exits the On Screen Display.

IRCAM1000 TECHNICAL SPECIFICATION AND DATA



560TV Lines
DC Auto Iris Varifocal
Lens(5mm-50mm)
850nm ϕ 10 IR LEDs * 15ea



Specification

MODEL	CAM1000
Image Pick-Up Device	1/3" SONY SUPER HAD CCD
TV System	NTSC, PAL
Total Pixels	NTSC=811(H) * 508(V) / PAL=795(H) * 596(V)
Effective Pixels	NTSC=768(H) * 494(V) / PAL=752(H) * 582(V)
Scanning Frequency	NTSC=15.734KHz(H) / 59.94Hz(V) / PAL=15.625KHz(H) / 50.00Hz(V)
Scanning System	2:1 Interlace
Synchronization	560 TV Lines
Resolution	Internal / Line Lock
Minimum Illumination	0.00006Lux (Sens-Up * 128X)
S/N Ratio	More than 50dB
WHITE BALANCE	ATW/AWC/MANUAL (1800°K ~ 10,500°K)
Gamma Characteristic	Internal / Line Lock Selectable
Video Output	CVBS:1.0Vp-p75ohm
Electronic Shutter Speed	NTSC=Auto/Manual (1/60sec~1/120,000sec)/PAL=Auto/Manual (1/50sec~1/120,000sec)
OSD	Built-In
BLC	Low Middle, High, Off Selectable
AGC	Low Middle, High, Off Selectable
DNR	Low Middle, High, Off Selectable
DAY&NIGHT (COLOUR)	On / Auto Selectable (Electrical)
SHARPNESS	On/Off (Level Adjustable)
PRIVACY	On/Off (4 Programmable Zone)
Power Supply	DC 12V (AC 24V Option)
Power Consumption	CDS ON:800mA Max
Lens	DC Auto Iris Varifocal Lens (5mm-50mm)
Operational Temp.	-10 ~ 50°C, RH 95% Max
Storage Temp.	-20 ~ 60°C, RH 95% Max
Dimensions	100mm(W) x 134mm(H) x 290mm(D)
Weight	Approx 2000(g)