

SDNR Camera Series

DSS
Digital Slow Shutter
High Resolution

DIGITAL CAMERA SERIES
COLOR VIDEO CAMERA

OWNER'S MANUAL

SDNR
Super Digital Noise Reduction

P/N : 3810-0086C (Ver.0610E) Color Video Camera Series

Design and specifications are subject to change without notice.

550 TVL

Digital Slow Shutter Super Digital Noise Reduction

8 COLOR VIDEO CAMERA 9

4. Features

1. High Resolution
The horizontal resolution of 550 TV lines can be achieved by using a high density CCD having effective 410K pixels, which provides clean, noiseless and reliable pictures.

2. SDNR (Super Digital Noise Reduction)
By SDNR, this camera can reduce video noise, and improve the S/N ratio. By this technology, this camera can show the clear and exact image even in a gloomy place.

3. High Sensitivity (Digital Slow Shutter)
This camera can detect automatically darkness or night and support it to take a clear and bright image. As the grade of darkness, this camera can accumulate up to 32 fields.

4. Day & Night Function
This camera can switch to the COLOR mode to support the best color image in the day time and switch to the B/W mode for the clear image in the night time.

5. DC/ MANUAL Lens Selectable
The camera accepts 2 types of lenses (DC/MANUAL) and is set with the ELC/DC selection switch.

6. Electronic Iris
Electronic iris is automatically controlled at the speed of 1/60 ~ 120.000sec (NTSC model), 1/50 ~ 120.000sec (PAL model).

5. Name and Function

CS-Mount Lens Adapter
Used to attach C-mount lens.

CS-Mount Lens Adapter
Used to attach CS-mount lens.

Auto Iris Lens Connector
Used to connect Auto Iris lens plug.

Tripod Mounting Hole
Used to install the camera on an optional tripod. The tripod must be equipped with the screw specified as shown below.

1/4" - 20 UNC (20 THREAD)
4.5mm ± 0.2mm (ISO standard), or 0.197" (ASA standard)

8 COLOR VIDEO CAMERA 9

■ Connecting to Power
Each model has different power specification, please check the name of the model and power specification before connecting to power source. Please refer to the sticker identifying the model, which is attached on the product, for power specification.

For DC12V Power Type Only

The wire is polarized. Be careful of polarity.
Use DC 12V ±10% power source.

Resistance of copper wire [at 20°C (68°F)]

Copper wire size (AWG)	#24 (0.22mm ²)	#22 (0.33mm ²)	#20 (0.50mm ²)	#18 (0.83mm ²)
Resistance (Ω/m)	0.078	0.078	0.039	0.018
Voltage Drop (mV)	0.028	0.018	0.011	0.006

Voltage drop may be experienced by the camera as per length of the power cable according to the table above. The camera may malfunction if the length of the output line between the camera and the adaptor is too long.

* Voltage for camera operation: DC 12V ± 10%
* Voltage drops on above table are variable according to types of electric cord and makers.

For AC24V / DC12V Power Type

The wire is non-polarized.
Use AC 24V~ power source or DC 12V ±10% power source.

Notes

- Be sure to connect power after all the installation is done.
- Note that AC adaptor is not supplied with camera.
- Use only AC 24V/DC12V UL listed class 2 power supply.
- Do not use power sources other than that specified.

For AC100V~AC240V Power Type

Cable

- Brown → AC Power Input
- Blue → Frame Ground
- Green → Frame Ground

16 COLOR VIDEO CAMERA 17 COLOR VIDEO CAMERA

■ Connecting to Monitor
For BNC Video Output Model

Connect the VIDEO OUT jack to the monitor video in jack.

* As the connecting method varies with the instruments, refer to the manual supplied with the instrument.

* Connect the cable after power is turned off.

* Set the 75Ω/Hi-Z selection switch as shown below if you have an intermediate device.

7. Specifications -DC 12V Input Model

Model	High Resolution
Signal System	NTSC PAL
CCD Pick-up Element	2/1 Infrared Transfer 1/3 Inch Super HAD CCD
Effective Pixels	768(H) x 494(V) 752(H) x 582(V)
Video Output	Composite: 1.0V (p-p), 75Ω
Sync. System	Internal Sync
Luminance S/N Ratio	50dB Min. (AGC OFF)
Resolution	550 TV lines
Sensitivity (F1.2)	0.3 Lux (Color) / 0.1 Lux (B/W) / 0.008 Lux (DSS On, x32)
Lens Mount	C / CS Mount
Electronic Shutter	1/60 ~ 120,000 Sec. 1/50 ~ 120,000 Sec.
White Balance	AWB
Auto Gain Control	On / Off Selectable
Back Light Compensation	On / Off Selectable
Day & Night	On / Off Selectable
Flickerless	On / Off Selectable
Digital Slow Shutter	Max 32 Times
D-ZOOM	2 x
Digital Noise Reduction	Auto
Operating Temperature	-10°C ~ +45°C
Storage Temperature	-20°C ~ +65°C
Supply Voltage	DC 12V (DC 9.6V ~ 13.2V)
Power Consumption	150mA (Max)
Dimensions (WxHxD)	65 x 59.6 x 122.5mm
Weight	Approx. 430g

18 COLOR VIDEO CAMERA 19 COLOR VIDEO CAMERA

6. Connection

LENS
The lens is not supplied with this camera. Purchase a lens suitable for your environment. This camera accepts the auto iris lens and both C-and CS-mount lens.

Notes

- If the lens is marked with fingerprints or other marks, the image quality might be poor.
- It is recommended to use a high quality lens to improve the image quality under low illumination.
- Use auto iris lens with DC type only.

■ Installing Auto Iris Lens

- Peel approximately 8mm from the end of the lens cable outer cover.
- Peel approximately 2mm from the end of the cable inner cover.
- Set the DC/ELC selection switch to DC or ELC according to the type of the lens.

7. Specifications -AC 24V/DC 12V Input Model

Model	High Resolution
Signal System	NTSC PAL
CCD Pick-up Element	2/1 Infrared Transfer 1/3 Inch Super HAD CCD
Effective Pixels	768(H) x 494(V) 752(H) x 582(V)
Video Output	Composite: 1.0V (p-p), 75Ω
Sync. System	Internal Sync
Luminance S/N Ratio	50dB Min. (AGC OFF)
Resolution	550 TV lines
Sensitivity (F1.2)	0.3 Lux (Color) / 0.1 Lux (B/W) / 0.008 Lux (DSS On, x32)
Lens Mount	C / CS Mount
Electronic Shutter	1/60 ~ 120,000 Sec. 1/50 ~ 120,000 Sec.
White Balance	AWB
Auto Gain Control	On / Off Selectable
Back Light Compensation	On / Off Selectable
Day & Night	On / Off Selectable
Flickerless	On / Off Selectable
Digital Slow Shutter	Max 32 Times
D-ZOOM	2 x
Digital Noise Reduction	Auto
Operating Temperature	-10°C ~ +45°C
Storage Temperature	-20°C ~ +65°C
Supply Voltage	AC 24V (20V ~ 28V) or DC 12V (10V ~ 15V)
Power Consumption	3W (Max)
Dimensions (WxHxD)	65 x 59.6 x 122.5mm
Weight	Approx. 430g

20 COLOR VIDEO CAMERA 21 COLOR VIDEO CAMERA

8. Troubleshooting

If you have trouble operating your camera, refer to the following table. If the guidelines do not enable you to solve the problem, contact an authorized technician.

Problem	Solutions
Nothing appears on the screen.	<ul style="list-style-type: none"> Check that the power cord and line connection between the camera and monitor are fixed properly. Check that you have properly connected VIDEO cable to the camera VIDEO output jack.
The image on the screen is dim.	<ul style="list-style-type: none"> Is lens stained with dirt? Clean your lens with soft, clean cloth. Set the monitor to proper condition. If the camera is exposed to too strong light, change the camera position. Adjust the lens' focus properly.
The image on the screen is dark.	<ul style="list-style-type: none"> Adjust the contrast feature of the monitor. If you have an intermediate device, set the 75Ω/Hi-Z properly. (refer to page 18) Adjust DC Level, VR Level property. (refer to page 10, 11)
The camera is not working properly, and the surface of the camera is hot.	<ul style="list-style-type: none"> Check that you have properly connected the camera to an appropriate power source. (refer to page 16~17)
The image on the screen flickers.	<ul style="list-style-type: none"> Is the camera facing to direct sunlight or fluorescent lighting? Change the camera position.

9. Memo

Color Video Camera Series

22 COLOR VIDEO CAMERA 23 COLOR VIDEO CAMERA