

SAMSUNG TECHWIN

Super High Resolution Dome Camera

User Manual

SCD-2081



High Resolution Dome Camera

User Manual

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Warranty

If the product does not operate properly in normal conditions, please let us know. Samsung Techwin will resolve the problem for free of charge. The warranty period is 3 years. However, the followings are excluded:

- If the system behaves abnormally because you run a program irrelevant to the system operation.
- Deteriorated performance or natural worn-out in process of time

❖ **Design and specifications are subject to change without prior notice.**

Before operating the camera, confirm the camera model and correct input power voltage.
To help you understand this manual thoroughly, we'll introduce our model description.

■ SCD-2081 SERIES

- NTSC MODEL
SCD-2081N
- PAL MODEL
SCD-2081P

■ MODEL DESCRIPTION

- SCD-2081X



- SIGNAL SYSTEM
N → NTSC MODEL
P → PAL MODEL

safety information



CAUTION

RISK OF ELECTRIC SHOCK.
DO NOT OPEN



CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.



This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

- To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.
- To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.
3. Do not connect multiple cameras to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.
4. Securely plug the power cord into the power receptacle. insecure connection may cause fire.
5. When installing the camera, fasten it securely and firmly. The fall of camera may cause personal injury.

6. Do not place conductive objects (e.g. screwdrivers, coins, metal parts, etc.) or containers filled with water on top of the camera. doing so may cause personal injury due to fire, electric shock, or falling objects.
7. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock.
8. If any unusual smells or smoke come from the unit, stop using the product. in such case, immediately disconnect the power source and contact the service center. continued use in such a condition may cause fire or electric shock.
9. If this product fails to operate normally, contact the nearest service center. never disassemble or modify this product in any way. (samsung is not liable for problems caused by unauthorized modifications or attempted repair.)
10. When cleaning, do not spray water directly onto parts of the product. doing so may cause fire or electric shock.

CAUTION

1. Do not drop objects on the product or apply strong shock to it. Keep away from a location subject to excessive vibration or magnetic interference.
2. Do not install in a location subject to high temperature (over 50°C), low temperature (below -10°C), or high humidity. Doing so may cause fire or electric shock.
3. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.
4. Remove the power plug from the outlet when there is a lightning. Neglecting to do so may cause fire or damage to the product.
5. Keep out of direct sunlight and heat radiation sources. It may cause fire.
6. Install it in a place with good ventilation.
7. Avoid aiming the camera directly towards extremely bright objects such as sun, as this may damage the CCD image sensor.
8. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
9. The Mains plug is used as a disconnect device and shall stay readily operable at any time.
10. Do not expose the camera to radioactivity. Radioactivity exposure may damage the CCD.

safety information

FCC STATEMENT

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions :

- 1) This device may not cause harmful interference
- 2) This device must accept any interference received including interference that may cause undesired operation.

CAUTION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



IC Compliance Notice

This Class A digital apparatus meets all requirements of the Canadian Interference.-Causing Equipment Regulations of ICES-003.



Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.



Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

important safety instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
13. Unplug this apparatus when a card is used. Use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as powersupply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus

Samsung Techwin cares for the environment at all product manufacturing stages to preserve the environment, and is taking a number of steps to provide customers with more environment-friendly products. The Eco mark represents Samsung Techwin's will to create environment-friendly products, and indicates that the product satisfies the EU RoHS Directive.

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FEATURES

- **Ultra High Resolution**

By adopting a diagonal 6mm (1/3") 520K pixel (NTSC), 610K pixel (PAL) Color Double Density CCD, the camera produces clear picture quality with a horizontal resolution of 650 TV lines for color and 700 TV lines for BW.

- **Excellent Sensitivity**

The Built-in high sensitivity COLOR CCD produces a clear image.

- Color : 0.1 Lux (50IRE, @F1.2), 0.0002LUX (SENS-UP, x512)
- B/W : 0.01 Lux (50IRE, @F1.2), 0.00002 LUX (SENS-UP, x512)

- **Motion Detection**

Without assistance from an external sensor, this camera independently detects and traces objects while examining movement to activate the alarm.

- **SSNR3 (Samsung Super Noise Reduction) Function**

The high-performance SV-V DSP chip effectively removes low-light gain noise and afterimage to provide clear images even in dark environments.

- **Day & Night(ICR)**

The camera identifies whether it is day or night and automatically switches to the appropriate mode, depending on its environment. By day, the camera switches to color mode in order to maintain optimal color. At night, it switches to B/W mode so as to obtain better picture definition.

- **PIP**

Displays a full-size image along with the thumbnail.

- **SSDR(Samsung Super Dynamic Range)**

For images with high contrast between bright and dark areas from difficult lighting conditions such as backlighting, this camera selectively illuminates darker areas while retaining the same light level for brighter areas to even out the overall brightness.

- **DIS (Digital Image Stabilizer)**

The DIS function compensates for any camera movement, to produce more stable pictures.

- **Miscellaneous Functions**

HLC (High Light Compensation), SENS-UP, REVERSE, D-ZOOM, SHARPNESS and PRIVACY functions are provided.

- **Communication**

Coaxial communication methods are supported.

- Protocol: Pelco Coaxitron

introduction

- **OSD**

The camera's OSD is complimented by 18 languages.

- NTSC: English, Korean, Japanese, Spanish, French, Portuguese, Taiwanese
- PAL: English, Chinese, German, Italian, French, Spanish, Russian, Czech, Polish, Romanian, Serbian, Swedish, Danish, Turkish, Portuguese.

WHAT'S INCLUDED

Check if the following items are included in the product package.



SCD-2081



User Manual



Quick Set-up Guide



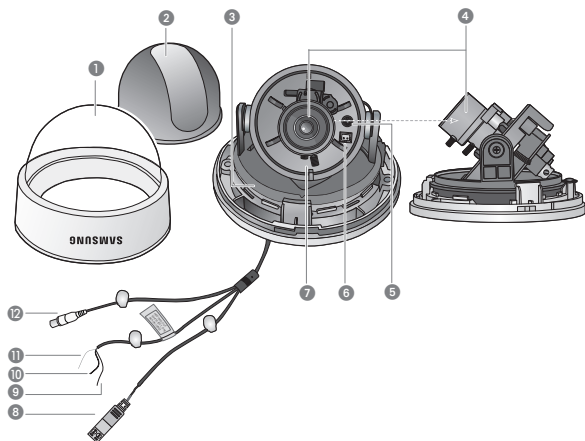
M4 Tapping Screw 3EA



Video Output Cable

COMPONENT NAMES AND FUNCTIONS

OVERVIEW



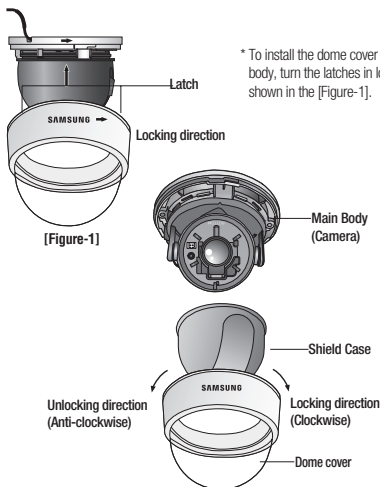
- ① Dome Cover
- ② Shield Case
- ③ Pan Base : control panning angle of camera
- ④ 3.9 Vari-focal Lens Module 2.8 ~ 11.0mm (F1.2)
- ⑤ Function Setup Switch : Display the OSD menu and move the cursor up, down, left, and right to amend or confirm changes.
- ⑥ Video Output Terminal to Monitor
- ⑦ Rotate Base : control rotating angle of camera.
- ⑧ Power Input Connector
- ⑨ Ground Terminal
- ⑩ D & N Input Terminal : You can switch to Day & Night Mode by connecting an external signal to this terminal.
- ⑪ MD Output Terminal: Motion detection signals are output through this terminal.
- ⑫ Video Output Jack



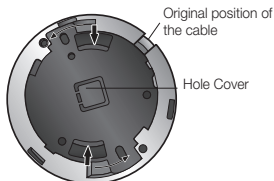
- Be sure to connect the Day & Night input terminal to GND when using an external input.

INSTALLATION

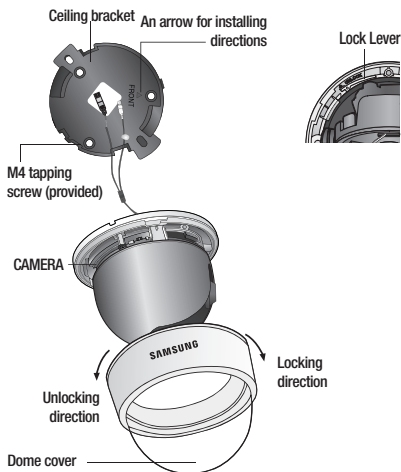
1. Separate the dome cover by turning anti-clockwise.
2. Separate the shield case by pulling from the camera body.



- The installation should be done by qualified service personnel or system installers.
- If the ceiling material is not strong enough to hold the installation screws, the camera may fall off. Reinforce the ceiling as needed.
- To change the position of the cable, take away the Hole Cover and pass the cable through.

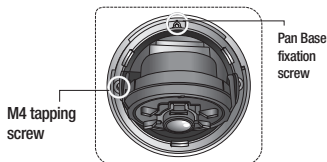


WHEN USING THE CEILING BRACKET



1. Hold down the lock lever on the bottom of the camera in the UNLOCK position and turn it counter clockwise with the other hand to remove the ceiling bracket from the main body.
2. Place the separated ceiling bracket so that the "Front" side faces the area to be monitored and install it with the M4 tapping screws.
3. To combine the main body with the ceiling bracket, make sure that the Pan Base fixing screw face the opposite side of the "Front" side of the ceiling bracket and rotate it clockwise.
4. Adjust the camera lens to face the area to be monitored and fix the main body and the dome cover by aligning the grooves and rotating the body clockwise.

IF DETACHING THE CAMERA FROM THE INSTALLATION POSITION

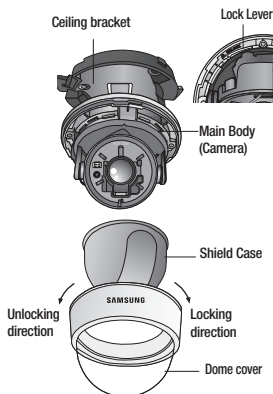


[Figure-2]



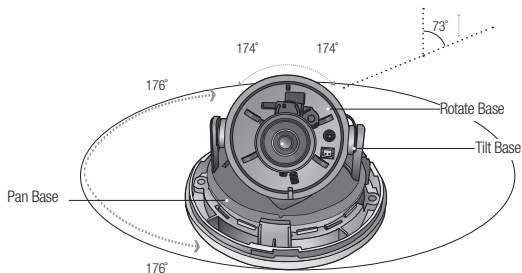
- If you want to install the camera with the ceiling bracket together, fix them using two M4 tapping screws at the side of the main body (refer to the [Figure-2] on page 14)

IF DETACHING THE CAMERA FROM THE INSTALLATION POSITION



1. Remove the dome cover as well as the shield case.
2. Hold down the lock lever on the bottom of the camera in the UNLOCK position and turn it counter clockwise with the other hand to remove the ceiling bracket from the main body.

ADJUST THE PANNING, TILTING & ROTATION WHILE WATCHING THE MONITOR



1. You can adjust camera to any direction by using Pan, Tilt, Rotate mechanism.

- Pan Base moves by 176° to each side direction and 352° on the whole.
- Tilt Base covers total 73° angle (0° ~ 73°).
- Rotate Base moves by 174° to each side direction and 348° on the whole.

2. Methods of adjustment

- The case of wall installation

- ➊ After mounting the camera on a wall, adjust the panning angle so that the correct viewing angle is attained and the titling is correctly orientated.
- ➋ And then adjust the tilting angle by rotating the tilt base.
- ➌ Loosen the rotate base hold screw and adjust rotate base for the best view
- ➍ Tighten rotate base securing screw.

- The case of ceiling installation

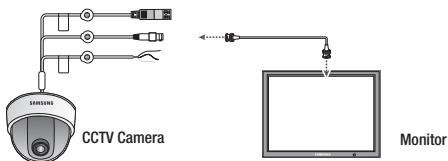
- ➊ After mounting the camera on a ceiling, adjusting the panning angle to the correct viewing position by rotating the pan base.
- ➋ And then adjust the tilting angle by rotating the tilt base.
- ➌ Loosen the rotate base hold screw and adjust rotate base for the best view
- ➍ Tighten pan and tilt securing screw.



- When you want to adjust the Pan/Tilt/Rotate Base, loosen, adjust and then tighten the Pan/Tilt/Rotate Base screws.

CONNECTING TO MONITOR

Connect the VIDEO-OUT jack to the VIDEO-IN jack of monitor.

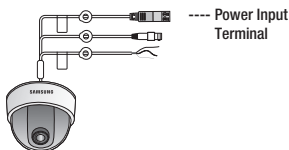


- As the connecting method varies with the instruments, refer to the manual supplied with the instrument.
- Only connect the cable when the power is turned off.
- If necessary, you can connect the monitor to the REMOTE jack on the back of your camera.

CONNECTING TO POWER

Connect the adaptor to the power input connector as shown in the figure below.

The recommended adaptor specification for SCD-2081N/2081P is DC 12V / 500mA or AC 24V / 300mA.



When the resistance value of copper wire is at [20°C(68°F)]

Copper wire size (AWG)	#24 (0.22mm ²)	#22 (0.33mm ²)	#20 (0.52mm ²)	#18 (0.83mm ²)
Resistance (Ω/m)	0.078	0.050	0.030	0.018
Voltage Drop (V/m)	0.028	0.018	0.011	0.006

- As shown in the table above, voltage decreases as the wire gets longer. Therefore use of an excessively long adaptor output line for connection to the camera may affect the performance of the camera.

connection

* Standard voltage for camera operation : DC 12V $\pm$ 10%, AC 24V $\pm$ 10%

* There may be some deviation in voltage drop depending on the type of wire and the manufacturer.

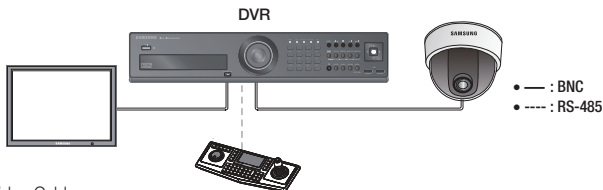


- Be sure to connect power only after all the installation is complete.
- Note that AC/DC adaptor is not supplied with camera.
- Ground should be connected to the GND terminal.

USING COAXIAL COMMUNICATIONS

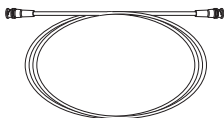
- Coaxial Communications System
- OSD Control method

CAMERA	DVR	CONTROLLER
SET	MENU/ENTER	OSD KEY
UP	UP KEY	JOYSTICK UP
DOWN	DOWN KEY	JOYSTICK DOWN
LEFT	LEFT KEY	JOYSTICK LEFT
RIGHT	RIGHT KEY	JOYSTICK RIGHT



- Video Cable

The camera's video output port is connected to the monitor with a BNC coaxial cable, shown below : If the distance between the camera and the monitor exceeds the recommended maximum, please use an auxiliary video amp.



Distance	Recommended Cable Specification
300m	3C2V(RG-59/U)
450m	5C2V(RG-6/U)
600m	7C2V(RG-11/U)



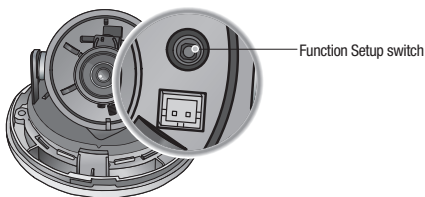
- It is recommended that pure copper coax cable is used and not copper coated steel, as this will cause issues with the communication over the coaxial cable.
- To ensure image quality, please connect only one-way video output from camera to other video display devices.

MENU CONFIGURATION

Setup Menu			
LENS	● DC		
EXPOSURE	● BRIGHTNESS ● SENS-UP	● SHUTTER ● RETURN	● AGC
SSDR	● ON	● OFF	
WHITE BAL	● ATW ● MANUAL	● OUTDOOR ● AWC→SET	● INDOOR
BACKLIGHT	● OFF	● USER BLC	● HLC
SSNR3	● ON	● OFF	
DAY/NIGHT	● AUTO ● B/W	● EXTERN	● COLOR
SPECIAL	● IMAGE ADJ ● MOTION DET ● PROFILE	● CAM TITLE ● PRIVACY ● RETURN	● SYNC ● DIS
EXIT	● SAVE	● NOT SAVE	● RESET

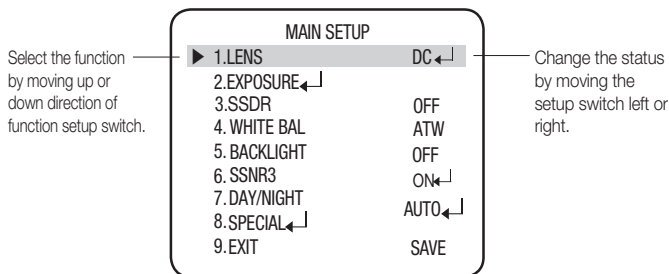
MENU SETUP

Use the Function Setup switch beside of the lens.



setup

1. Press the Function Setup switch.
 - Main setup menu is displayed on the monitor screen.



2. Select a desired function using the Function Setup switch.
 - Place the cursor over a desired item.
3. Set up a selected item by using the Function Setup switch.
4. To finish the setting, select 'EXIT' and press the Function Setup switch.

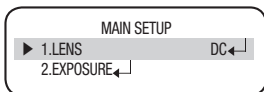


- An item with the  icon also has sub menus. To select a sub menu, select an item with the icon and press the Function Setup switch.
- An item with the - - - icon is unavailable due to function settings.

LENS

Using this function, you can control the screen brightness.

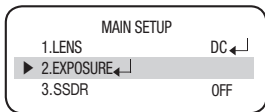
1. When the SETUP menu screen is displayed, select 'LENS' by using the Function Setup switch so that the arrow indicates 'LENS'.
2. The Lens mode has sub menu site as listed below.



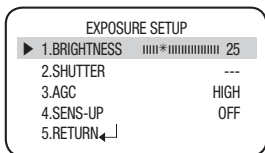
- BRIGHTNESS : Adjusts the video brightness.
- FOCUS ADJ : To adjust the lens focus correctly, you must activate the Focus Settings mode. To activate the Focus Settings mode, adjust the lens focus, and then deactivate the settings mode.
- You can adjust the shutter value of ESC shutter mode.

EXPOSURE

- When the SETUP menu screen is displayed, select EXPOSURE by using the Function Setup switch so that the arrow indicates 'EXPOSURE'.
- Select a desired mode using the Function Setup switch.



- **BRIGHTNESS** : Adjusts the video brightness.
- **SHUTTER** : You can select shutter mode.
 - **ESC** : Select this to control the shutter speed automatically. If ESC is selected, the shutter speed is automatically controlled depending on the ambient illumination of the subject.



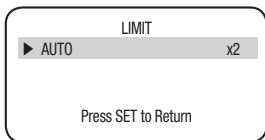
- **MANUAL** : You can control shutter speed manually.
(NTSC MODEL : 1/60~1/120,000, PAL MODEL : 1/50~1/120,000)
- **A.FLK** : Select this when you experience picture flicker, this happens when there is a clash with the installed lighting frequency.
- **---** : Shutter speed is fixed at 1/60sec(1/50sec).



- When the SHUTTER is set to ESC after selecting the Internal Synchronization Type, the picture may become unstable if the camera faces a bright fluorescent light. Therefore, take care when choosing the installation position.
- When the SHUTTER is set to MANUAL or A.FLK mode, SENS-UP will be disabled.
- Set the shutter mode to --- if color rolling occurs.

- **AGC (AUTO GAIN CONTROL)** : The higher the gain level, the brighter the screen but the higher the noise.
 - **OFF** : Deactivates the AGC function.
 - **LOW** : Allows automatic gain control from 5.3dB to 32dB.
 - **HIGH** : Allows automatic gain control from 5.3dB to 37dB.

- **SENS-UP** : When it is night or dark, the camera automatically detects the light level and maintains a clear picture if this mode is activated.
 - **OFF** : Deactivates the SENS-UP function.
 - **AUTO** : Activates the SENS-UP function.



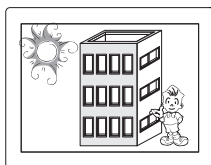
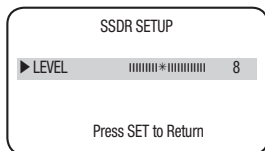
- **RETURN** : Select this to save the changes in the EXPOSURE menu and return to the SETUP menu.



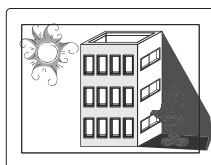
- If you set the Function Setup switch to 'AUTO' mode, You can adjust the brightness by increasing or decreasing the limit value. (x2~x512)
- Note that the higher the SENS-UP level, the brighter the screen, but the more likely it is that an after-image will appear.
- Although Noise, Spots, and Whitish symptoms may occur in SENS-UP operation when the sens-up level is increased, this is normal.

SSDR (SAMSUNG SUPER DYNAMIC RANGE)

SSDR illuminates darker areas of an image while retaining the same light level for brighter areas to even out the overall brightness of images with high contrast between bright and dark areas. Use the Function Setup switch to change the SSDR level in the sub menu according to the contrast between bright and dark areas.



SSDR ON



SSDR OFF

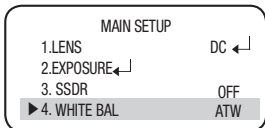
WHITE BAL (WHITE BALANCE)

Use the White Balance function to adjust the screen color.

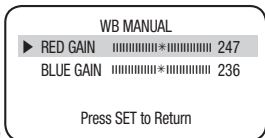
1. When the SETUP menu screen is displayed, select 'White Bal.' by using the Function Setup switch so that the arrow indicates 'White Bal.'.

2. Select a desired mode using the Function Setup switch.

※ Select one of the following 5 modes, as appropriate for your purpose.



- **ATW** : Select this when the color temperature is between 1,700°K and 11,000°K.
- **OUTDOOR** : Select this when the color temperature is between 1,700°K and 11,000°K.(sodium light inclusion)
Select this When the color temperature of environment surrounding the subject is out of the control range (e.g. clear sky, or sunset)
- **INDOOR** : Select this when the color temperature is between 4,500°K and 8,500°K.
- **MANUAL** : Select this to fine-tune White Balance manually. Set White Balance first by using the ATW or AWC mode. After that switch to MANUAL mode, fine-tune the White Balance and then press the Function Setup switch.



- **AWC→SET** : To find the optimal luminance level for the current environment, point the camera towards a sheet of white paper and press the Function Setup switch. If the environment changes, readjust it.



- White Balance may not work properly under the following conditions. In this case select the AWC mode.

- ① When the color temperature of the environment surrounding the subject is out of the control range (e.g. clear sky or sunset).
- ② When the ambient illumination of the subject is dim.
- ③ If the camera is directed towards a fluorescent light or is installed in a place where illumination changes dramatically, the White Balance operation may become unstable.

BACKLIGHT

This camera is designed so that it delivers a distinctive subject and background at the same time, even when the subject is in backlight, unlike conventional cameras, by adopting a proprietary SV-V DSP chip.

- When the SETUP menu screen is displayed, select 'BACKLIGHT' by using the Function Setup switch so that the arrow indicates BACKLIGHT.
- Select a desired mode using the Function Setup switch depending on the camera purpose.

- USER BLC** : Enables a user to directly select a desired area from a picture, and to view the area more clearly.
 - LEVEL : Adjust level of the BLC function.
 - TOP/BOTTOM/LEFT/RIGHT : Adjust the area to be enhanced.

MAIN SETUP	
1.LENS	DC ◀
2.EXPOSURE◀	
3.SSDR	OFF
4.WHITE BAL	ATW
▶ 5.BACKLIGHT	OFF

BLC SETUP	
▶ 1.LEVEL	MIDDLE
2.TOP	* 25
3.BOTTOM	* 90
4.LEFT	* 70
5.RIGHT	* 150
6.RETURN◀	

- HLC (High Light Compensation)** :
This function masks the strong light to minimize white out due to over exposure and preserve much of the on-screen details when the camera aims a strong light source.
 - LEVEL : Adjusts the brightness level of a monitoring area.
 - LIMIT : Enable to change the operating condition.

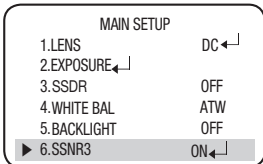
HLC SETUP	
▶ 1. LEVEL	MIDDLE
2. LIMIT	NIGHT ONLY
3. MASK COLOR	BLACK
4. MASK TONE *	5
5.TOP *	10
6.BOTTOM *	105
7.LEFT *	10
8.RIGHT *	210
9.RETURN◀	

- MASK COLOR/TONE :
Change the color / brightness of the masking area. (Black, Red, Blue, Cyan, Magenta)
- TOP/BOTTOM/LEFT/RIGHT :
Adjust the area to be enhanced.
- OFF** : Not being used

SSNR3

This function reduces the background noise in a low luminance environments.

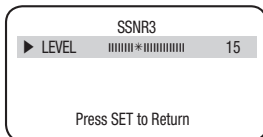
1. When the SETUP menu screen is displayed, select 'SSNR3' by using the Function Setup switch so that the arrow indicates 'SSNR3'.



2. Select a desired mode using the Function Setup switch.

- **OFF** : Deactivates SSNR3 so that noise is not reduced.
- **ON** : Activates SSNR3 so that noise is reduced.

3. Set the SSNR3 mode to 'ON' and press the Function Setup switch. Then you can adjust the noise reduction level.

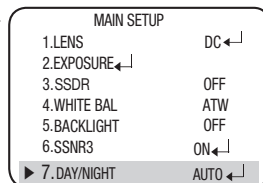


- You cannot set the SSNR3 to 'ON' or 'OFF' when the AGC mode of the EXPOSURE menu is 'OFF'.
- When adjusting the noise reduction level of the SSNR3 mode, remember that the higher the level set, the more the noise level will be reduced but that after image may also occur.

DAY/NIGHT

You can display pictures in color or black and white.

1. When the SETUP menu screen is displayed, select 'DAY/NIGHT' by using the Up and Down buttons so that the arrow indicates 'DAY/NIGHT'.



2. Select a desired mode using the Left and Right buttons according to the picture display you want.

- **AUTO** : The mode is switched to 'Color' in a normal environment, but switches to 'B/W' mode when ambient illumination is low. To set up the switching time for AUTO mode, press the Function Setup switch. You can turn on or off the burst signal on B/W mode.

AUTO SETUP	
▶ 1.BURST MODE	ON
2.COLOR→B/W	
DURATION	FAST
DWELL TIME	5 SEC
3.B/W→COLOR	
DURATION	FAST
DWELL TIME	10 SEC
4.RETURN ←	

- **BURST MODE** : You can turn on or off the burst signal on B/W mode.
- **DWELL TIME** : You can select the duration time about changing the day/night mode.
→3s, 5s, 7s, 10s, 15s, 20s, 30s, 40s, 60s
- **DURATION** : You can select the brightness level at which the camera switches from day to night mode.

	Color → B/W	B/W → Color
Fast	2 lux	5 lux
Slow	1 lux	7 lux

※ Light levels are often site dependant.



- When AGC in the EXPOSURE menu is 'OFF', '---' mode operates as selecting 'COLOR' mode and 'AUTO' mode cannot be selected.
- Be sure to connect the Day & Night input terminal to GND when using an external input.
- The OSD key does not work for 3 seconds when switching to Color or B/W, to ensure stable camera operation.

SPECIAL

- When the SETUP menu screen is displayed, select 'SPECIAL' by using the Function Setup switch so that the arrow indicates 'SPECIAL'.
- Select a desired mode using the Function Setup switch.

- **IMAGE ADJ :**

- When the SPECIAL menu screen is displayed, select 'IMAGE ADJ' by using the Function Setup switch so that the arrow indicates 'IMAGE ADJ'.
- Select a desired mode using the Function Setup switch.

- **Monitor :** Please change the settings value of video appropriate to your monitor.

- LCD : Please select this menu item when using an LCD monitor.
You can change the gamma, PED level and color gain in the sub menus.

- CRT : Please select this menu item when using a CRT monitor. You can change the PED level, color gain in the sub menus.

- USER : Please use this menu item when using a monitor other than standard ones. You can change the gamma, PED level and color gain in the sub menus.

MAIN SETUP	
1.LENS	DC←
2.EXPOSURE←	
3.SSDR	OFF
4.WHITE BAL	ATW
5.BACKLIGHT	OFF
6.SSNR3	ON←
7.DAY/NIGHT	AUTO←
▶ 8.SPECIAL←	
9.EXIT	SAVE

SPECIAL	
▶ 1.IMAGE ADJ←	
2.CAM TITLE	OFF
3.SYNC	INT
4.MOTION DET	OFF
5.PRIVACY	OFF
6.DIS	OFF
7.PROFILE	BASIC
8.RETURN←	

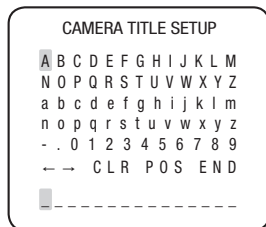
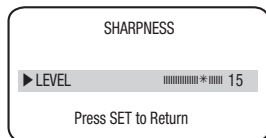
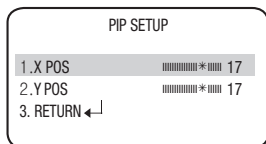
IMAGE SETUP	
▶ 1. MONITOR	LCD←
2.REVERSE	OFF
3.PIP	OFF
4.D-ZOOM	OFF
5.FONT COLOR	BLUE
6.SHARPNESS	ON←
7. LANGUAGE	ENGLISH
8. RETURN←	

LCD MONITOR	
▶ GAMMA	0.55
PED LEVEL	* 14
COLOR GAIN	* 5
RESET	
Press SET to Return	

- **REVERSE:** You can reverse the picture.
 - OFF : You don't reverse the picture.
 - H-REV : You can flip the picture horizontally on the screen.
 - V-REV : You can flip the picture vertically on the screen.
 - HV-REV : You can flip the picture horizontally and vertically on the screen.
- **PIP(Picture in Picture):** Displays a full-size image along with the thumbnail to provide more detailed information. The position of the thumbnail is adjustable.
- **D-ZOOM :** You can use a digital zoom of x1 ~ x16.
- **FONT COLOR** You can change the OSD font color. (White, Yellow, Green, Red, Blue)
- **SHARPNESS:** As you increase this value, the picture outline becomes stronger and clearer. Adjust this value appropriately depending on the sharpness of the picture.
- **LANGUAGE :** You can select the menu language according to your requirements.
 - NTSC : Korean, English, French, Spanish, Japanese, Portuguese, Taiwanese
 - PAL : English, Chinese, German, Italian, French, Spanish, Russian, Czech, Polish, Romanian, Serbian, Swedish, Danish, Turkish, Portuguese
- **RETURN:** Select this to save the settings for the IMAGE ADJ menu and to return to the SPECIAL menu.
 - When the V-REV or H-REV mode is enabled, the text on the screen does not flip.
 - If you increase the SHARPNESS level too high, the picture may become distorted or noise may appear.
- **CAM TITLE :**

If you enter a title, the title will appear on the monitor.

 - ① If the SPECIAL menu screen is displayed, use the Function Setup switch so that the arrow indicates 'CAM TITLE'.
 - ② Set it to 'ON' by using the Function Setup switch.
 - ③ Press the Function Setup switch.

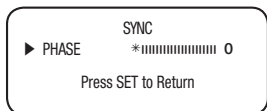


- 4 Use the Function Setup switch to move to a desired letter and select the letter by pressing the switch. Repeat this to enter multiple letters. You can enter up to 15 letters.
- 5 Enter a title, move the cursor to 'POS' and press the Function Setup switch. The entered title appears on the screen. Select the position to display the title on the screen by using the Function Setup switch and press. When the position is determined, select 'END' and press the Function Setup switch to return to the SPECIAL menu.
- 



- When the CAM TITLE menu is 'OFF', no title will be displayed on the monitor screen even if you enter one.
- Only English is available in the mode.
- If you move the cursor to CLR and press the Function Setup switch, all the letters are deleted. To edit a letter, change the cursor to the bottom left arrow and press the Function Setup switch. Move the cursor over the letter to be edited, move the cursor to the letter to be inserted and then press the Function Setup switch.

- **SYNC** : In areas where the supply is at 60Hz(NTSC), 50Hz(PAL), you can synchronize the output phase of multiple cameras using the power synchronization function (Line-Lock) without using a synchronization signal generator.



- INT : Internal Synchronization Type
- LL : Power Synchronization Type, Line-lock

- ① Press the Function Setup switch.
- ② You can select a desired phase from 0 to 359 when select 'phase'.



- When using AC power at 60Hz(NTSC), 50Hz(PAL) frequency, you can use the LL type synchronization.
- When the power is DC 12V, the SYNC menu is fixed to the 'INT' mode.

- **MOTION DET** : Commands the camera to motion-detect and trace an object.

- 1 If the **SPECIAL** menu screen is displayed, use the Function Setup switch so that the arrow indicates 'MOTION DET'.
- 2 Set it to 'ON' by using the Function Setup switch.

MOTION DET	
► 1.DETECT BOX	ON
2.ALARM OUT	OFF
3.DETECT AREA	←
4.MASK AREA	←
5.SENSITIVITY	* 3
6.DET.SIZE	* 3
7.RETURN	←

- **DETECT BOX** : Outlines an object on the screen in a box when its movement matches a custom Motion Type.
- **ALARM OUT** : Releases a signal from the MD Output Terminal of the camera when an object's movement matches a custom Motion Type.

- **DETECT AREA** : Defines the Motion Detection area.
- **MASK AREA** : Specify a detection exception area to mask. Select a mask area number and specify the size and position.

DETECT AREA	
1. TOP	* 1
2. BOTTOM	*50
3. LEFT	* 1
4. RIGHT	*50
5. RETURN	←

- **AREA** : You can select up to 4 areas.
- **MODE** : Determines whether to use the area selected in the AREA.
- **TOP / BOTTOM / LEFT / RIGHT** : Adjust the size and position of the selected area.

MASK AREA	
► 1. AREA	AREA1
2. MODE	OFF
3. TOP	* 30
4. BOTTOM	* 110
5. LEFT	* 25
6. RIGHT	* 110
7. RETURN	←

- **RETURN** : Select this to save the MASK AREA menu settings and return to the MOTION DET menu.
- **SENSITIVITY** : Set the sensitivity of the motion detection. When adjusting the sensitivity, note that the lower the level means the higher sensitivity.
- **DET. SIZE** : Selects an object size to detect on the screen. When adjusting the detection size, note that the higher the level means the bigger detection size.
- **RETURN** : Select this to save the MOTION DET menu settings and return to the SPECIAL menu.

- **PRIVACY** : Mask an area you want to hide on the screen.

① When the SPECIAL menu screen is displayed, press the Function Setup switch so that the arrow indicates 'PRIVACY'.

② Set up the mode using the Function Setup switch.

- **AREA**: You can select up to 12 PRIVACY areas.
- **MODE** : Determines whether to use the area selected in the AREA SEL.
- **MASK COLOR** : Determine area color. You can select GREEN, RED, BLUE, BLACK, WHITE and GRAY.
- **TRANSPARENCY** : Adds or removes transparency from the masking area.
- **SEL POS/XPOS/YPOS** : Adjust the size and position of the selected area.
- **RETURN** : Select this to save the PRIVACY menu settings and return to the SPECIAL menu.

PRIVACY AREA SETUP	
▶ 1.AREA	AREA1
2.MODE	OFF
3.MASK COLOR	GREEN
4.TRANSPARENCY	OFF
5.SEL POS	L_TOP
6.X POS	*■■■■■■■■ 10
7.Y POS	*■■■■■■■■ 10
8.RETURN	←

- **DIS (Digital Image Stabilizer)** :

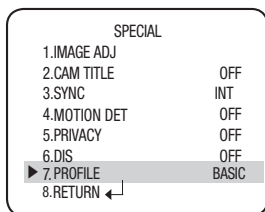
This function mitigates any picture movement due to external factors such as wind.



- As the DIS function uses the digital zoom the camera's resolution will decrease.
- DIS doesn't operate when background illumination is too low.
- DIS doesn't operate when object pattern is monotonic as like sky or white wall.

• PROFILE

1. When the SETUP menu screen is displayed, select 'PROFILE' by using the Function Setup button so that the arrow indicates 'PROFILE'.



2. Select a desired mode using the Function Setup button according to the picture display you want.
 - BASIC : The most common environment is set to meet.
 - DAYNIGHT : It will be set automatically so it optimizes to the day or night conditions, respectively.
 - BACKLIGHT : It will be set automatically so you can distinguish the object from the background in a severe backlighting scene.
 - ITS : It will be set automatically so you can easily check the traffic conditions.
 - INDOOR : It will be set automatically to help you take a picture in a regular indoor lighting condition.
 - USER : Automatically configures the camera to your custom settings.
 - ① Select Custom for Simple Setup mode.
 - ② Configure the menu options to your custom settings.
 - ③ The settings are automatically saved as Custom mode.
 - ④ Profile user mode don't initialize when menu resets.

3. In the PROFILE menu, you can configure the following camera settings at once.

	BASIC	DAY/NIGHT	BACKLIGHT	ITS	INDOOR	USER
SHUTTER	---	---	---	MANUAL(1/250)	A.FLK	-
GAIN	HIGH	HIGH	HIGH	HIGH	HIGH	-
WHITE BAL	ATW	ATW	ATW	OUTDOOR	INDOOR	-
BACKLIGHT	OFF	OFF	USER BLC	OFF	OFF	-
SSNR3	ON	ON	ON	ON	ON	-
DAY/NIGHT	AUTO	AUTO	AUTO	AUTO	AUTO	-

- **RETURN** : Select this to save the SPECIAL menu settings and return to the MAIN SETUP menu.

EXIT

Select a desired EXIT mode using the Function Setup switch depending on the camera purpose.

- **SAVE** : Save the current settings and exit the MAIN SETUP menu.
- **NOT SAVE** : Do not save the current settings and exit the MAIN SETUP menu.
- **RESET** : Resets the camera settings to the factory defaults.
Language and Monitor settings are not initialized.

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	SOLUTION
Nothing appears on the screen.	▶ Check that the power cord and line connection between the camera and monitor are fixed properly. ▶ Check that you have properly connected BNC cable to the camera.
The image on the screen is dim.	▶ Is the lens stained with dirt? Clean your lens with a soft, clean cloth. ▶ Check the monitor and DVR settings. ▶ If the camera is exposed to very strong light, change the camera position.
The image on the screen is dark.	▶ Adjust the contrast feature of the monitor . ▶ If you have an intermediate device, set the 75Ω / Hi-z properly.
The camera is not working properly, and the surface of the camera is hot.	▶ Check that you have properly connected the camera to an appropriate power source.
The DAY/NIGHT menu does not work.	▶ Check that AGC of EXPOSURE SETUP menu is 'OFF'.
The SENS-UP function does not work.	▶ Check that AGC of EXPOSURE SETUP menu is 'OFF'. ▶ Check that SHUTTER of EXPOSURE SETUP menu is 'A.FLK' or 'MANUAL'.
Color is not correct.	▶ Check the setting of WHITE BAL SETUP menu .
The screen flickers continually.	▶ Check that the camera is not pointing at the sun.
When coaxial communication is not available:	▶ Make sure that the camera and monitor are installed within the recommended distance. ▶ Use the video amplifier equivalent to coaxitron if the recommended installation distance is exceeded.
The camera is out of focus.	▶ Check that you have properly adjusted the zoom/focus adjustment lever of lens.

SPECIFICATIONS

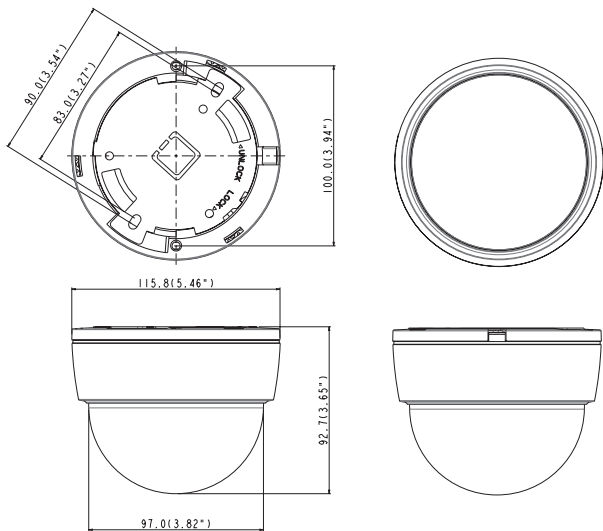
	SCD-2081N		SCD-2081P	
VIDEO				
Imaging Device	1/3"Super HAD CCD 1:1			
Total Pixels	1020(H) x 508(V)		1020(H) x 596(V)	
Effective Pixels	976(H) x 494(V)		976(H) x 582(V)	
Scanning System	2 : 1 Interlace			
Synchronization	Internal / Line Lock			
Frequency	H:15.734KHz / V:59.94Hz		H:15.625KHz / V:50Hz	
Horizontal Resolution	Color : 650 TV lines, B/W : 700 TV lines			
Min. Illumination	COLOR : 0.1 Lux (50IRE, @F1.2), 0.0002Lux (SENS-UP, x512) B/W : 0.01Lux (50IRE, @F1.2), 0.00002Lux (SENS-UP, x512)			
S / N Ratio	52dB (AGC off, Weight on)			
Video Output	CVBS : 1.0 Vp-p / 75Ω composite			
Lens Type				
Focal Length(Zoom Ratio)	2.8 ~ 11mm (3.9x)			
Max. Aperture Ratio	1:1.2(Wide) ~ 2.8(Tele)			
Angular Field of View	94.0°(Wide) ~ 26.0°(Tele) / V: 67.0°(Wide) ~ 20.0°(Tele)			
Lens Type	DC Auto Iris			
Mount Type	Board Type			
Pan / Tilt /Rotate				
Pan/Tilt/Rotate Range	0°~352° / 0°~73° / 0°~348°			
OPERATIONAL				
On Screen Display	Multi-language Support by Coaxial Cable English, Japanese, Spanish, French, Portuguese, Korean, Taiwanese		Multi-language Support by Coaxial Cable English, French, German, Spanish, Italian, Chinese, Russian, Polish, Czech, Romanian, Serbian, Swedish, Danish, Turkish, Portuguese	
Camera Title	Off / On (Displayed 15 characters)			

specifications

	SCD-2081N	SCD-2081P
Day & Night	Auto / EXT/ Color / B/W	
Backlight Compensation	Off/ USER BLC / HLC	
PIP	Off / On	
Dynamic Range (SSDR)	Off / On	
Digital Noise Reduction (SSNR III)	Off / On	
Digital Image Stabilization	Off / On	
Privacy Masking	Off / On (12 Programmable zones, Polygonal type)	
Sens-up(Frame Integration)	2x ~ 512x	
Alarm	YES	
Gain Control	Off/ Low / High	
White Balance	ATW / Outdoor / Indoor / Manual / AWC (1,700K° ~ 11,000K°)	
Electronic Shutter Speed	1/60 ~ 1/120,000 sec	1/50 ~ 1/120,000 sec
Digital Zoom	Off / On (1x ~ 16x)	
Reverse	Off / H-Rev / V-Rev / HV-Rev	
Profile	Basic, Day & Night, Backlight, ITS, Indoor, User	
Motion Detection	Built-in	
Communication	Coaxial Control (SPC-300 Compatible)	
Environmental		
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / Less than 90% RH	
Electrical		
Input Voltage	AC 24V ± 10% , DC 12V±10%	
Power Consumption	Max. 3.5W	
Mechanical		
Color/Material	Ivory/Plastic(Dome cover:Transparent)	
Dimension	Ø115.8 x 92.7mm	
Weight	365g	

※ This specification can be changed without notice for performance improvement of product.

DIMENSION



MEMO

MEMO



SALES NETWORK

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