**SAMSUNG TECHWIN**  **SAMSUNG**

**SAMSUNG**

# Outstanding image
## 580TVL, 0.05Lux

## Ultra High Resolution Camera SDC-425 User's Manual

Thank you for purchasing a SAMSUNG CCD CAMERA.
Before attempting to connect or operate this product,
please read these instructions carefully and save this manual for future use.

**ENGLISH**

Before operating the camera, confirm the camera model and proper input power voltage. In order to that you can understand this manual thoroughly, we'll introduce our model description.

## ■ SDC-425 SERIES

| NTSC MODELS | PAL MODELS |
|---|---|
| SDC-425N<br>SDC-425ND | SDC-425P<br>SDC-425PD<br>SDC-425PH |

## ■ MODEL DESCRIPTION

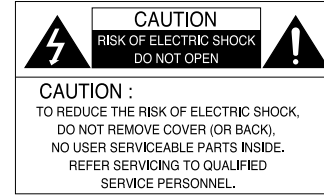• SDC-425 X X

  | POWER SOURCE

  SIGNAL SYSTEM

• SIGNAL SYSTEM

  N --> NTSC MODEL        P --> PAL MODEL

• POWER SOURCE

  --> DC12V/AC24V

  D --> DC12V

  H --> AC 230V~



**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.

The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION - This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the 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.

WARNING : Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

WARNING : To prevent electric shock and risk of fire hazards:

◆ Do NOT use power sources other than that specified.

◆ Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes.

# Contents ◯

# Features ◯

## High Resolution

By adopting a diagonal 6mm(1/3") 410,000 (NTSC) pixel, 470,000(PAL) pixel SONY CCD, the camera produces clear picture quality with a horizontal resolution of 580 TV lines for color.

## Excellent Sensitivity

The built-in high sensitivity COLOR CCD enable a clear image even in 0.05Lux(COLOR), 0.0002Lux(SENS-UP) or lower illumination.

## SSNR (Samsung Super Noise Reduction) Function

The high performance W-IV DSP chip dramatically reduces the gain noise in digital image processing, producing clear, sharp images in low lighting environments.

## Electrical Day&Night

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.

## Motion Detection

Since the camera detects motion without any additional external sensor, you can monitor activity more efficient.

## DIS (Digital Image Stabilizer)

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

## Video/DC Drive Lens Support

You can select Video or DC Drive Lens from the menu.

## Miscellaneous Functions

HLC(High Light Compensation), SYNC (INT/LL), SENS-UP, FREEZE, FLIP (H/V-REV), D-ZOOM, SHARPNESS, MOTION DETECTION and PRIVACY functions are provided.

## OSD

The camera control is convenient by using 7 different foreign language O.S.D.
- NTSC : English, Spanish, Japanese, Korean
- PAL : Korean, English, French, German, Spanish, Italian, Chinese

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.

**eco**
RoHS compliant

## Warnings & Cautions

This information is provided to ensure your safety and to prevent any losses, financial or otherwise. Please read it carefully and use the product accordingly.

* For product inquiries, please contact the retail shop where you bought the camera. The use of equipment such as an aerial ladder while providing after-sales service shall be at your expense.
* Separate the power plug when thunder crashes or lighting flashes.
* This product is support equipment for surveillance system. Therefore, we can't compensate for material loss and/or personal injuries by robbery, fire, natural disaster or something like this type.

### Warning/Attention/Special Mark Messages

| | | | |
|---|---|---|---|
| ⚡ | Ignoring this information may result in material loss and/or serious personal injuries including death. | ⚠ | Ignoring this information may result in material loss and/or a slight injuries. |
| 🚫 | Indicates "Never Allowed." | 🚫 | Indicates "No Disassembling." |

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

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

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it 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 this item for environmentally safe recycling.

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

## Precautions

**Do not install under extreme temperature conditions.**



Use only under temperature conditions between -10℃ and +50℃. Provide good ventilation when using in high temperature conditions.

**Do not install in high humidity environment.**



May lower image quality.

**Do not install under unstable lighting conditions.**



Severe lighting changes or flickering may hinder normal camera operation.

**Avoid touching the camera lens.**



The lens is the most important component of the camera. Be careful not to smear it with fingerprints.

**Do not drop the camera or subject it to physical shock.**



May cause a product malfunction.

**Never keep the camera face to strong light directly.**



May damage the CCD.

**Do not expose the camera to rain or other types of liquids.**

**Do not expose the camera to radioactivity.**

May cause a product malfunction. Wipe dry any liquids. Liquids may contain minerals that are corrosive to electronic components.
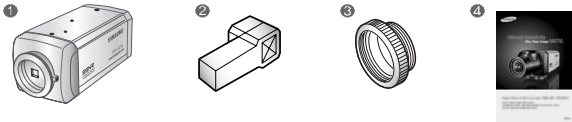
Radioactivity exposure may damage the CCD.

### Notes

• Exposure to a spotlight or an object emitting strong light may cause smear or blooming.
• Ensure that the power source complies with normal specifications before supplying it to the camera.
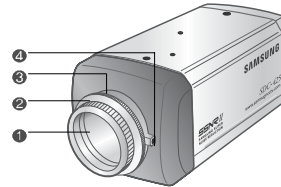
## Components and Accessories



❶ Ultra High Resolution Camera
❷ Auto iris lens connection plug
❸ C-Mount adaptor
❹ Instruction manual

### Front View



### Side View



❶ **CCD protection cap** : Please cover the CCD SENSOR when not using it.
❷ **C-Mount lens adaptor** : Please attach the C-Mount lens here.
❸ **CS-Mount lens adaptor** : Please remove the C-MOUNT lens adaptor and then attach it.
❹ **Back Focus clamp screw** : Please loosen the clamp screw with a screwdriver before adjusting the Back Focal length.
❺ **Auto Iris Lens Connector**
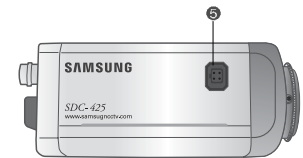
### Bottom View

❻ **Tripod Mounting Bracket Screw Hole**
Used to fix the camera on a bracket or tripod.
The screw sizes for this hole are as follows:



1/4"-20 UNC (20 THREAD)
L:4.5mm±0.2mm (ISO standard),
or 0.197" (ASA standard)
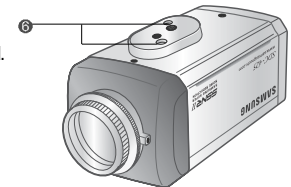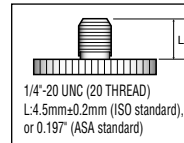
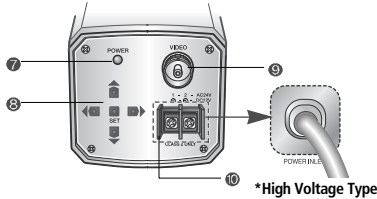You can separate the Tripod Mounting Bracket and install it on the top or bottom of the camera. Make sure to use the Tripod Mounting Bracket when fixing the camera to a bracket or tripod. Otherwise the camera may not be secure, or the internal circuitry of the camera may be damaged.
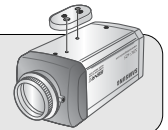
# Overview

## Rear View



*High Voltage Type

⑦ **Power lamp** : Lights up when the correct power is supplied to the camera.

⑧ Function Setup Button
- SETUP button : Displays the menu on the screen and uses enter sub menu.
- Up&Down button : Used to move the cursor up or down in the menu screen.
- Left&Right button : Used to move the cursor left or right in the menu screen

⑨ **Video output terminal** :
Sends video signal and connects to the video input terminal of the monitor.

⑩ **Power input terminal** : Connects to the power appropriate to each model.

# Installation Procedures

## 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

- It is recommended to use the DC type Auto Iris Lens to effectively enjoy the major functions of this camera.
- Keep the lens surface clean, since if it is contaminated with dirt or fingerprints the picture quality suffers.

# Installation Procedures

## When Using Auto Iris Lens

1. Strip the insulation of the auto iris lens cable 8mm from the end.



approx. 8mm

2. Strip the insulation of the core of the auto iris lens cable to expose a 2mm length.



approx. 2mm
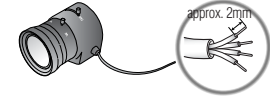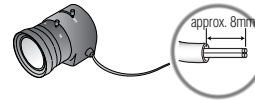
3. Remove the cover of the auto iris lens connector plug and solder the lens cable to the connector pin of the plug.

| | LENS | |
|---|---|---|
| Pin No. | DC | VIDEO |
| No.1 Pin | Damping - | Red (power) |
| No.2 Pin | Damping + | NC |
| No.3 Pin | Drive + | White (video signal) |
| No.4 Pin | Drive - | Black (GND) |



Lens cable
Connector
No.3 Pin
No.1 Pin
No.4 Pin
No.2 Pin
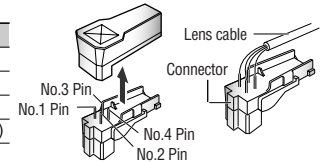
4. Please replace the auto iris lens connection plug cover and take off the CCD protection cap, and then attach the auto iris lens to the camera by screwing it in clockwise.

5. Please insert the connection plug that is connected to the auto iris lens cable into the auto lens connector, which is located on the side of the camera.
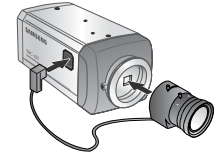


## When using a C-Mount lens

Please take off the CCD protection cap and attach the C-Mount lens to the camera by screwing it in clockwise.

C-mount adaptor
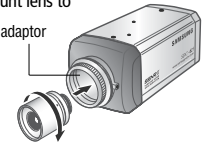
# Installation Procedures

## When using a CS-Mount lens

1. Please take off the CCD protection cap and C-mount adaptor.



C-mount adaptor

CCD protection cap

2. Please attach the CS-Mount lens to the camera by screwing it in clockwise.



CS-mount adaptor
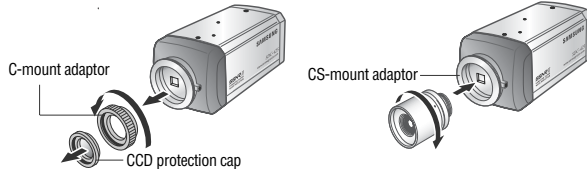
### Notes

- Please use the specified lens connection parts as shown in the picture below. The use of the wrong sized parts of the wrong size may cause damage to the inside of the camera or result in poor fitting.
- Use of a lens which is too heavy affects the balance of the camera and may cause a malfunction. Please use a lens that weighs less than 450g.
- Please select Av mode if possible when adjusting the automatic light control (ALC) of an auto lens. Use of PK mode may cause hunting.

C-mount lens : 10 mm or less
CS-mount lens : 5 mm or less
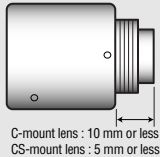
## Connecting a Monitor

Please connect the video output terminal located on the back of the camera to the monitor.



CCD Camera                 Monitor

---
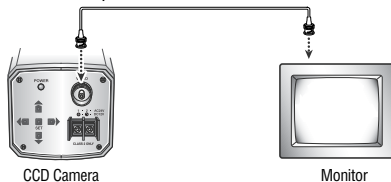
- The connection method varies depending on the type of monitor and accessories. Please refer to the user's manual for each instrument.
- Please turn off the power when connecting.
- Please select Hi-Z on the 75Ω/Hi-Z switch for the intermediate video TV set and select 75Ω for the Intermediate device as shown in the picture below.



CCD Camera          Intermediate        End monitor
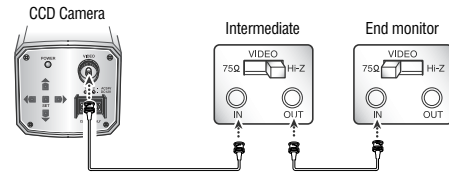
## Connecting Power

Each model has a different power input specification. Please check the model type and standard power requirement before connecting to power.

### AC/DC Power Type

- Use AC24V, 300mA adaptor or DC12V, 500mA for SDC-425N/P



### DC Power Type

- Use DC12V, 500mA for SDC-425ND/PD



### High Voltage Type (AC230V, 50Hz)

- Use AC230V, 50Hz power source for SDC-425PH.

# Installation Procedures

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

| Copper wire size(AWG) | #24(0.22mm²) | #22(0.33mm²) | #20(0.52mm²) | #18(0.83mm²) |
|---|---|---|---|---|
| Resistance value(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.

※ Standard voltage for camera operation : DC 12V±10%, AC 24V±10%
※ There may be some deviation in voltage drop depending on the type of wire and the manufacturer.

# How to Use the Camera

## Function Menu Structure

| Setup Menu | | | |
|---|---|---|---|
| LENS | • DC | • VIDEO | • MANUAL |
| EXPOSURE | • SHUTTER | • AGC | • SENS-UP |
| | • RETURN | | |
| WHITE BALANCE | • ATW | • MANUAL | • AWC→ SET |
| | • OUTDOOR | • INDOOR | |
| BACKLIGHT | • OFF | • BLC | • HLC |
| SSNR | • ON | • OFF | |
| DAY/NIGHT | • COLOR | • B/W | • AUTO |
| IMAGE ADJUSTMENT | • FREEZ | • V-REV | • H-REV |
| (IMAGE ADJ.) | • D-ZOOM | • SHARPNESS | • RETURN |
| SPECIAL | • CAMTITLE | • SYNC | • MOTION DET |
| | • PRIVACY | • DIS | • LANGUAGE |
| | • RESET | • RETURN | |
| EXIT | | | |

## How to Set up the Functions

You can set up functions using the 5 buttons on the rear of the camera.

UP button
SET button
LEFT button
DOWN button
RIGHT button
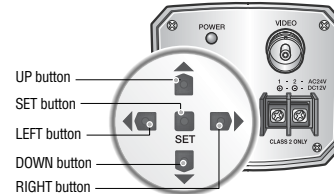
1. Press the SET button.
   • Main setup menu is displayed on the monitor screen.

Select the function using the UP or DOWN button.
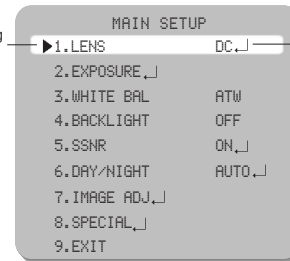
Change the status using the LEFT or RIGHT button.

```
         MAIN SETUP
 ▶1.LENS           DC.⌐
  2.EXPOSURE.⌐
  3.WHITE BAL      ATW
  4.BACKLIGHT      OFF
  5.SSNR           ON.⌐
  6.DAY/NIGHT      AUTO.⌐
  7.IMAGE ADJ.⌐
  8.SPECIAL.⌐
  9.EXIT
```

2. Select a desired function using the Up and Down buttons.
   • Place the cursor over a desired item.
3. Set up a selected item by using the Left and Right buttons.
4. To finish the setting, select 'EXIT' and press the SET button.

### Notes

• An item with the ⌐ icon also has sub menus. To select a sub menu, select an item with
  the icon and press the SET button.
• An item with the - - - icon is unavailable due to function settings.

# How to Use the Camera

## LENS

Using this function, you can control screen brightness.
1. When the SETUP menu screen is displayed, select 'LENS' by using the Up and Down buttons so that the arrow indicates 'LENS'.
2. Select the connected lens type by using the Left and Right buttons.

```
            MAIN SETUP
  ▶1.LENS              DC⏎
    2.EXPOSURE⏎
```
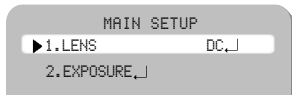
◉ DC/Video : Select Auto Iris Lens
  • When DC is selected, you can control screen brightness. The range of brightness control is between 1 and 70. Adjust the brightness appropriately for optimal screen brightness.

### Notes

• Some lenses may not work properly, depending on the setting of the BRIGHTNESS LEVEL.
• When Using a Video-Type Auto Iris Lens
  ❶ Adjust the ALC adjustment terminal on the lens appropriately. In general, set it to AV (Average).
  ❷ It may not work properly depending on the installed lens. Set the Level VR of the lens to the optimal value.
  ❸ Set AGC to OFF and adjust the Lens VR to an appropriate brightness.
  ❹ Adjust the Lens VR, adjust the BRIGHTNESS, and then check if the screen brightness changes properly. Otherwise, adjust the Lens VR again.

◉ Manual : Select Manual Lens

## EXPOSURE
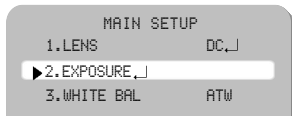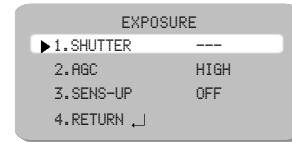
```
            MAIN SETUP
    1.LENS              DC⏎
  ▶2.EXPOSURE⏎
    3.WHITE BAL         ATW
```

1. When the SETUP menu screen is displayed, select 'EXPOSURE' by using the Up and Down buttons so that the arrow indicates 'EXPOSURE'.
2. Select a desired mode using the Up and Down buttons.

```
            EXPOSURE
  ▶1.SHUTTER           ---
    2.AGC              HIGH
    3.SENS-UP          OFF
    4.RETURN ⏎
```

◉ SHUTTER : You can select either auto or manual shutter.
  - A.FLK : Select this when you experience picture flicker, which can happen when there is a clash with the frequency of the installed lighting.
  - 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.

### Notes

• 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.
• ESC and MANUAL modes are only available together when the lens is set to MANUAL.
• When the SHUTTER is set to MANUAL or A.FLK mode, SENS-UP will be disabled.

◉ 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.

# How to Use the Camera

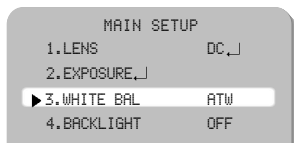◉ RETURN : Select this to save the changes in the EXPOSURE menu and return to the SETUP menu.

**Notes**

• If you press the SET button in 'AUTO' mode, You can adjust brightness by increasing or decreasing the shutter speed. (X2~X256)
• Note that the higher the zoom 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 zoom level is increased, this is normal.

## White Balance (White Bal.)

Use the White Balance function to adjust the screen color.
1. When the SETUP menu screen is displayed, select 'White Bal.' by using the Up and Down buttons so that the arrow indicates 'White Bal.' .
2. Select a desired mode using the Up and Down buttons.

```
            MAIN SETUP
     1.LENS           DC.⌐
     2.EXPOSURE.⌐
   ▶ 3.WHITE BAL      ATW
     4.BACKLIGHT      OFF
```

※ Select one of the following 5 modes, as appropriate for your purpose.
  ◉ ATW : Select this when the color temperature is between 1800˚K and 10500˚K
  ◉ INDOOR : Select this when the color temperature is between 4500˚K and 8500˚K.
  ◉ OUTDOOR : Select this when the color temperature is between 1800˚K and 10500˚K. (sodium light inclusion)
  ◉ AWC → SET : To find the optimal setting for the current luminance environment in this mode, set the point the camera towards a sheet of white paper and press the SET button. If the environment changes, readjust it.
  ◉ 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 SET button.

---

**Notes**

• White Balance may not work properly under the following conditions. In this case select the AWC mode.
  ❶ When the color temperature of environment surrounding the subject is out of the control range (e.g. clear sky, or sunset)
  ❷ When the ambient illumination of the subject is dim.
  ❸ 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 W-IV DSP chip.
1. When the SETUP menu screen is displayed, select 'BACKLIGHT' by using the Up and Down buttons so that the arrow indicates 'BACKLIGHT' .

```
            MAIN SETUP
     1.LENS           DC.⌐
     2.EXPOSURE.⌐
     3.WHITE BAL      ATW
   ▶ 4.BACKLIGHT      OFF
     5.SSNR           ON.⌐
```
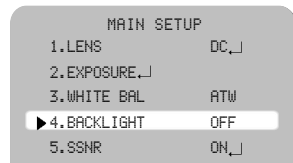
2. Select a desired mode using the Left and Right buttons depending on the camera purpose.
  ◉ BLC : Enables a user to directly select a desired area from a picture, and to view the area more clearly.



BLC ON                    BLC OFF
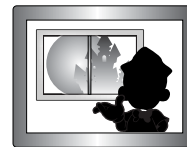
# How to Use the Camera

HLC (High Light Compensation) :
If there is a high light installed in a limited environment such as an apartment parking garage or gas station entrance, removing the high light makes it possible to view car license plates efficiently.
- DAY : In normal daylight conditions, the HLC is not activated.
- NIGHT : If a high  light that is larger than a certain size is present on the screen, remove the high light to see license plates clearly.

HLC MASKING AREA



HLC ON                    HLC OFF

OFF : Not being used

3. Select a desired mode using the Left and Right buttons and press the SET button.

Select 'BLC' to adjust the area to be enhanced and enhancement level.
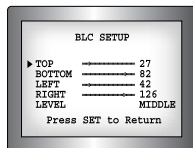
HLC : Enable a user to select a mask color of high light area from a picture.

```
        BLC SETUP

▶ TOP      ═══════ 27
  BOTTOM   ═══════ 82
  LEFT     ═══════ 42
  RIGHT    ═══════ 126
  LEVEL         MIDDLE
    Press SET to Return
```

```
        HLC SETUP

▶ MASK COLOR ═══════ 10




    Press SET to Return
```

**Notes**

• Because there can be a difference in the effectiveness of HLC according to the amount of light area in the screen, optimize the installation angle for the best HLC performance.
• In a dark environment, the HLC is only activated when a high light that is larger than a certain area is present.
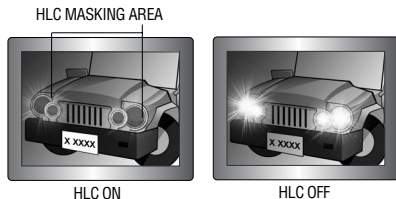• The HLC is not activated in light or overly dark conditions.

## SSNR

This function reduces the background noise in a low luminance environment.
1. When the SETUP menu screen is displayed, select 'SSNR' by using the Up and Down buttons so that the arrow indicates 'SSNR' .

```
        MAIN SETUP
  1.LENS          DC ↵
  2.EXPOSURE ↵
  3.WHITE BAL     ATW
  4.BACKLIGHT     OFF
▶ 5.SSNR          ON ↵
  6.DAY/NIGHT     AUTO ↵
```
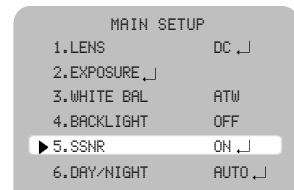
2. Select a desired mode using the Left and Right buttons.

OFF : Deactivates SSNR. Noise is not reduced.

ON : Activates SSNR so that noise is reduced.

3. Set the SSNR mode to 'ON' and press the SET button. Then you can adjust the noise reduction level.

**Notes**

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

# How to Use the Camera

## 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'.

```
        MAIN SETUP
  1.LENS           DC⏎
  2.EXPOSURE⏎
  3.WHITE BAL      ATW
  4.BACKLIGHT      OFF
  5.SSNR           ON ⏎
▶ 6.DAY/NIGHT      AUTO ⏎
  7.IMAGE ADJ⏎
```

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

   ⦿ COLOR : The picture is always displayed in color.

   ⦿ B/W : The picture is always displayed in black and white.

   ⦿ 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 or speed for AUTO mode, press the SET button.
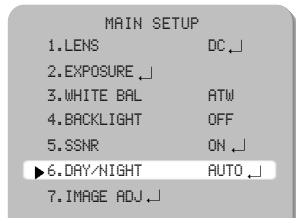
```
        AUTO SETUP

▶ DWELL TIME    10 SEC


    Press SET to Return
```

   - DWELL TIME : You can select the duration time about changing the day/night mode.
      → 5s, 7s, 10s, 15s, 20s, 30s, 40, 60s

## Notes

• When using a Video Auto Iris Lens, if you set the lens level to low, automatic switching between Color and Black & White may not occur.
• You cannot control the DAY/NIGHT menu when AGC in the EXPOSURE menu is 'OFF'. At this time, the exchange between DAY mode and NIGHT mode operates as like selecting 'COLOR' mode.
• The OSD key does not work for 3 seconds when switching to Color or B/W, to ensure stable camera operation.
• The camera may focus less well under infrared illumination than under normal illumination.
• Since the camera may not focus as well under infrared illumination at night as it does under normal illumination, install an Extra-low Dispersion Lens to obtain sharp pictures.

## IMAGE ADJ.

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

```
        MAIN SETUP
  1.LENS           DC⏎
  2.EXPOSURE⏎
  3.WHITE BAL      ATW
  4.BACKLIGHT      OFF
  5.SSNR           ON ⏎
  6.DAY/NIGHT      AUTO ⏎
▶ 7.IMAGE ADJ⏎
  8.SPECIAL⏎
```

2. Select a desired mode using the Up and Down buttons.

```
        IMAGE SETUP
▶ 1. FREEZE         OFF
  2. V-REV          OFF
  3. H-REV          OFF
  4. D-ZOOM         OFF
  5. SHARPNESS      ON ⏎
  6. RETURN⏎
```
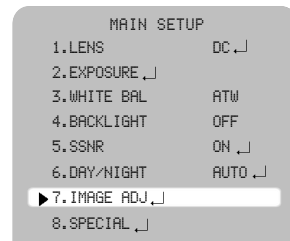
# How to Use the Camera

 FREEZE : You can view still or moving pictures.

 V-REV : You can flip the picture vertically on the screen.

 H-REV : You can flip the picture horizontally on the screen.

 D-ZOOM : You can use a digital zoom of x1~x10.

 SHARPNESS : As you increase this value, the picture outline becomes stronger and clearer.
Adjust this value appropriately depending on the sharpness of the picture.

 RETURN : Select this to save the settings for the IMAGE ADJ. menu and to return to the SETUP menu.

### Notes

• When H-REV or V-REV is selected, any text in the picture also will be flipped horizontally or vertically.
• If you increase the  SHARPNESS level too high, the picture may become distorted or noise may appear.

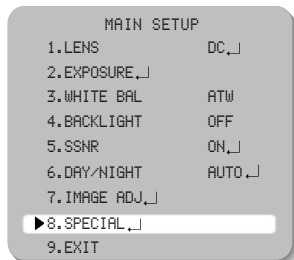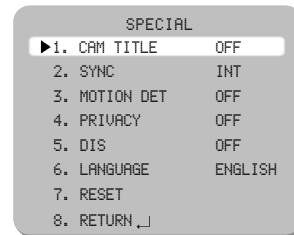## SPECIAL

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

```
            MAIN SETUP
     1.LENS           DC↵
     2.EXPOSURE↵
     3.WHITE BAL      ATW
     4.BACKLIGHT      OFF
     5.SSNR           ON↵
     6.DAY/NIGHT      AUTO↵
     7.IMAGE ADJ↵
    ▶8.SPECIAL↵
     9.EXIT
```

2. Select a desired mode using the Up and Down buttons.

```
            SPECIAL
    ▶1. CAM TITLE      OFF
     2. SYNC          INT
     3. MOTION DET    OFF
     4. PRIVACY       OFF
     5. DIS           OFF
     6. LANGUAGE      ENGLISH
     7. RESET
     8. RETURN↵
```

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

1) If the SPECIAL menu screen is displayed, use the Up and Down buttons so that the arrow indicates 'CAM TITLE'.

2) Set it to 'ON' by using the Left and Right buttons.

### Notes

• When the CAM TITLE menu is 'OFF', no title will be displayed on the monitor screen even if you enter one.

```
            SPECIAL
    ▶1. CAM TITLE      OFF
     2. SYNC          INT
```
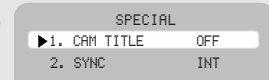
3) Press the SET button.

4) Use the 4 direction buttons to move to a desired letter and select the letter by pressing the SET button. Repeat this to enter multiple letters. You can enter up to 15 letters.

```
         Camera ID
    ABCDEFGHIJKLM
    NOPQRSTUVWXYZ
    abcdefghijklm
    nopqrstuvwxyz
    -.123456789
    ←→ CLR POS END
    ■ - - - - - - - - - - - - -
```
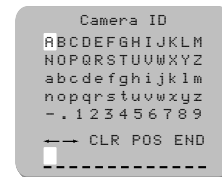
### Notes

• If you move the cursor to CLR and press the SET button, all the letters are deleted. To edit a letter, change the cursor to the bottom left arrow and press the SET button. Move the cursor over the letter to be edited, move the cursor to the letter to be inserted and then press the SET button.

# How to Use the Camera

5) Enter a title, move the cursor to 'POS' and press the SET button. The entered title appears on the screen. Select the position to display the title on the screen by using the 4 direction buttons and press the SET button. When the position is determined, select 'END' and press the SET button to return to the SPECIAL menu.

```
┌──────────────────────────┐
│ FRONT DOOR               │
│                          │
│                          │
│     to Locate  and SET   │
└──────────────────────────┘
```

🔵 SYNC : In areas where the supply is at 60Hz, 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
  - L/L : Power Synchronization Type, Line-lock
  • Press the SET button.
  • You can select a desired phase from 0 to 359 when select 'phase'.
  • You can decide the synchronization between luminance and color signal when select the 'mode'.

```
┌──────────────────────────┐
│       LINE LOCK          │
│                          │
│ ▶ PHASE ───◄────── 225   │
│   Mode           OFF     │
│                          │
│   Press SET to Return    │
└──────────────────────────┘
```

**Notes**

• When using AC power at 60Hz frequency, you can use the L/L type synchronization.
• When the power is DC 12V, the SYNC. menu is fixed to the 'INT' mode.

🔵 MOTION DET:
This product has a feature that allows you to observe movement of objects in 8 different areas on the screen, and the words 'MOTION DETECTED' appear on the screen when movement is detected. you can monitor activity more efficient.

```
┌──────────────────────────┐
│      MOTION DET          │
│ 1. SENSITIVITY    AREA1  │
│ 2. AREA MODE      ON     │
│ 3. SEL POS        L-TOP  │
│ 4. YPOS ──────── 2       │
│ 5. XPOS ──────── 3       │
│ 6. FILL → SET            │
│ 7. RETURN.               │
└──────────────────────────┘
```

1) When the SPECIAL menu screen is displayed, press the Up and Down buttons so that the arrow indicates 'MOTION DET'.
2) Set up the mode using the 4 direction buttons.
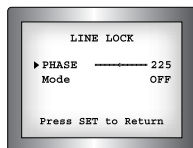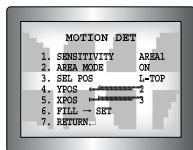
- SENSITIVITY : You can select up to 8 MD areas. When SENSITIVITY number is high, motion detection sensitivity is increased to recognize even small movement.
- AREA MODE : Determines whether to use the MD area selected in SENSITIVITY.
- SEL POS : Determines which of the 4 vertices of each MD area is to be used.
- YPOS : Determines the coordinate of the vertical axis for SEL POS.
- XPOS : Determines the coordinate of the horizontal axis for SEL POS.
- FILL → SET : Fills in a selected MD area. Fills in a selected MD area. The color of filling is sequentially selected as brown, orange, blue, cyan, yellowish green, yellow and red.
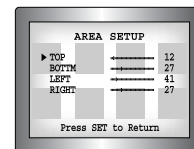- RETURN : Select this to save the MOTION DET menu settings and return to the SPECIAL menu.

**Notes**

• MD areas show only MOTION DET menu. Therefore, MD areas don't display on the monitor screen.

🔵 PRIVACY : Hide an area you want to hide on the screen.
  1) When the SPECIAL menu screen is displayed, press the Up and Down buttons so that the arrow indicates 'PRIVACY'.
  2) Set up the mode using the 4 direction buttons.
    - AREA SEL : You can select up to 8 MD areas.
    - AREA MODE : Determines whether to use the area selected in the AREA SEL, and the size and position of the area.
    - MASK COLOR : Determine area color. You can select Gray, Green, Red, Blue, Black, White.
    - TRANSP : Determine the transparency of selected area as controlling number from 0 to 3.
    - RETURN : Select this to save the PRIVACY menu settings and return to the SPECIAL menu.

```
┌──────────────────────────┐
│        PRIVACY           │
│ ▶ 1. AREA SEL     AREA1  │
│   2. AREA MODE    ON.    │
│   3. MASK COLOR   GRAY   │
│   4. TRANSP. ──────── 0  │
│   5. RETURN.             │
└──────────────────────────┘
```

```
┌──────────────────────────┐
│       AREA SETUP         │
│ ▶ TOP ────────── 12      │
│   BOTTM ────────── 27    │
│   LEFT ────────── 41     │
│   RIGHT ────────── 27    │
│                          │
│   Press SET to Return    │
└──────────────────────────┘
```
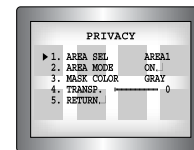
◐ DIS (Digital Image Stabilizer) :
   This function mitigates any picture movement due to external factors such as wind.

### Notes

• The chance of resolution decrease is existed because DIS function uses the digital zoom.
• 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.

◐ LANGUAGE : You can select the menu language according to your requirements.

◐ RESET : Resets the camera settings to the factory defaults.

◐ RETURN : Select this to save the SPECIAL menu settings and return to the SPECIAL menu.

## EXIT

Press the SET button in the EXIT menu to save the current settings and exit the SET menu.

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.

• **Nothing appears on the screen.**
   ▶ Check that the power cord and line connectionbetween the camera and monitor are fixed properly.
   ▶ Check that you have properly connected VIDEO cable to the camera VIDEO output jack.
   ▶ Check that the lens type is VIDEO lens or DC lens.

• **The image on the screen is dim.**
   ▶ 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.

• **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'.

• **The Motion Detection function does not work.**
   ▶ Check that MOTION DEF of SPECIAL SETUP menu is 'OFF'.

• **Color is not correct.**
   ▶ Check the setting of WHITE BAL SETUP menu .

• **The screen flickers continually.**
   ▶ Check that direction of camera turns toward the Sun.

# Specifications

| | | SDC-425ND | SDC-425N | SDC-425PD | SDC-425P | SDC-425PH |
|---|---|---|---|---|---|---|
| POWER | Input Voltage | DC12V(±10%) | AC24/DC12V(±10%) | DC12V(±10%) | AC24/DC12V(±10%) | AC 230V |
| | Power Consumption | Max 2.5W | Max 3.5W | Max 2.5W | Max 3.5W | Max 4.0W |
| CCD | Sensor | 1/3 inch, Diagonal 6mm Sony Interline CCD | | | | |
| | Total Pixels | 811(H) X 508(V) | | 795(H) x 596(V) | | |
| | Effective Pixels | 768(H) x 494(V) | | 752(H) x 582(V) | | |
| Sync | Scanning System | 2:1 Interlace | | | | |
| | Synchronization | Internal | Internal / Line Lock | Internal | Internal / Line Lock | |
| | Frequency | H : 15.734 KHz, / V : 59.94 Hz | | H : 15.625 KHz, V : 50.00 Hz | | |
| | OSD | Korean, English, Japanese, Spanish | | English, French, Germany, Spanish, Italy, Chinese | | |
| ELECTRICAL | Resolution | 580 TV Lines ↑ | | | | |
| | S/N (Y signal) | 52 dB (AGC Off, Weight ON) | | | | |
| | Min. Illumination | 0.05 Lux(Color), 0.0002(SENS-UPX256)/ @F1.2(50 IRE, AGC HIGH) | | | | |
| | Back Light Compensation | BLC/HLC/OFF | | | | |
| | Electrical DAY&NIGHT | COLOR / AUTO / B/W | | | | |
| | Gain Control | LOW/HIGH/OFF | | | | |
| | White Balance | ATW/AWC/MANUAL/Outdoor/Indoor (1,800K~10,500K) | | | | |
| | Electronic shutter speed | AUTO/MANUAL(X256 ~1/60sec ~ 1/120,000sec)/A.FLK | | AUTO/MANUAL(X256 ~1/50sec ~ 1/120,000sec)/A.FLK | | |
| | SENS-UP | AUTO/OFF(Selectable X2~X256) | | | | |
| | SSNR | ON/OFF (Level Adjustable) | | | | |
| | Motion Detection | ON/OFF (8 Zone) | | | | |
| | PRIVACY | ON/OFF (8 Zone) | | | | |
| | V-REV | ON/OFF | | | | |
| | H-REV | ON/OFF | | | | |
| | FREEZE | ON/OFF | | | | |
| | SHARPNESS | ON/OFF (Level Adjustable) | | | | |
| | IRIS Control | DC/VIDEO | | | | |
| | DIS | ON/OFF | | | | |
| | D-ZOOM | ON/OFF(X10) | | | | |
| | CAM TITLE | OFF/ON (Displayed 15 characters) | | | | |
| Lens Mount | | C/CS Mount(changeable) | | | | |
| Operating Temperature/Humidity | | -10℃ to +50℃ / 30% to 80% RH | | | | |
| Dimension | | 58(W) X 52(H) X 121(D)mm | | | | |
| Weight | | 290g | 310g | 290g | 310g | 510g |

## DECLARATION OF CONFORMITY

| | |
|---|---|
| Application of Council Directive(s) | 89 / 336 / EEC |
| Manufacturer's Name | SAMSUNG TECHWIN CO., LTD |
| Manufacturer's Address | SAMSUNG TECHWIN CO., LTD |
| | 42, SUNGJU-DONG CHANGWON-CITY, |
| | KYUNGNAM, KOREA, 641-716 |
| European Representative Name | |
| European Representative Address | |
| Equipment Type/Environment | CCTV Camera |
| Model Name | SDC-425P, SDC-425PH, SDC-425PD |
| Beginning Serial NO. | S8030001 |
| Year of Manufacture | 2008. 03. 01 |
| Conformance to | EN 50081-1 : 1992 |
| | EMC-Directive 89/336 EEC and 92/31/EEC |
| | EN 50130-4 : 1996 |

We, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

| | | |
|---|---|---|
| Manufacturer | SAMSUNG TECHWIN CO., LTD | Legal Representative in Europe |
| Signature | *Han Seug Kim* | Signature |
| Full Name | HAN SEUG KIM | Full Name |
| Position | QUALITY CONTROL MANAGER | Position |
| Place | CHANGWON, KOREA | Place |
| Date | 2008. 03. 01 | Date |