



**Professional  
Embedded Type Dome Camera  
Smartec STC-3580 ULTIMATE**



**USER'S MANUAL**

# Strong points

1. **Best sensitivity in the world (0.00004 lux F#1.4 50IRE)**
2. **700 TV line in B/W and 580TV line in color.**
3. **ICR type day & night is suitable for 24 hours surveillance.**
4. **IP66 certified.**
5. **Vandal-proof**
6. **All the functions are controlled through OSD.**
7. **Full 3 axis bracket built-in**

## Information

# Caution

Please follow below instructions for safe use.

Read this user guide carefully before any installation for safe operation of product.



### **WARNING**

Indicating the possibility of serious injury or death.



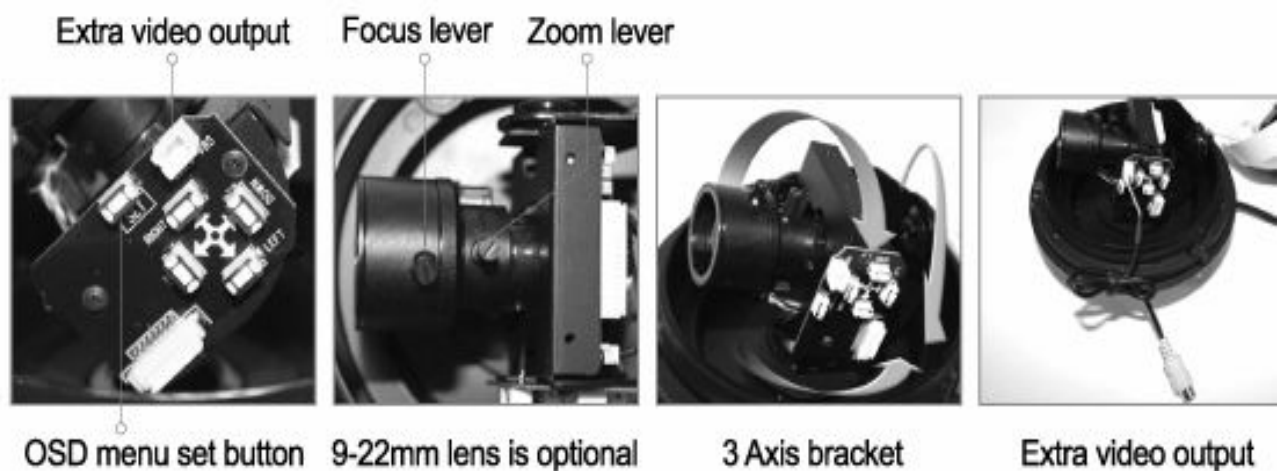
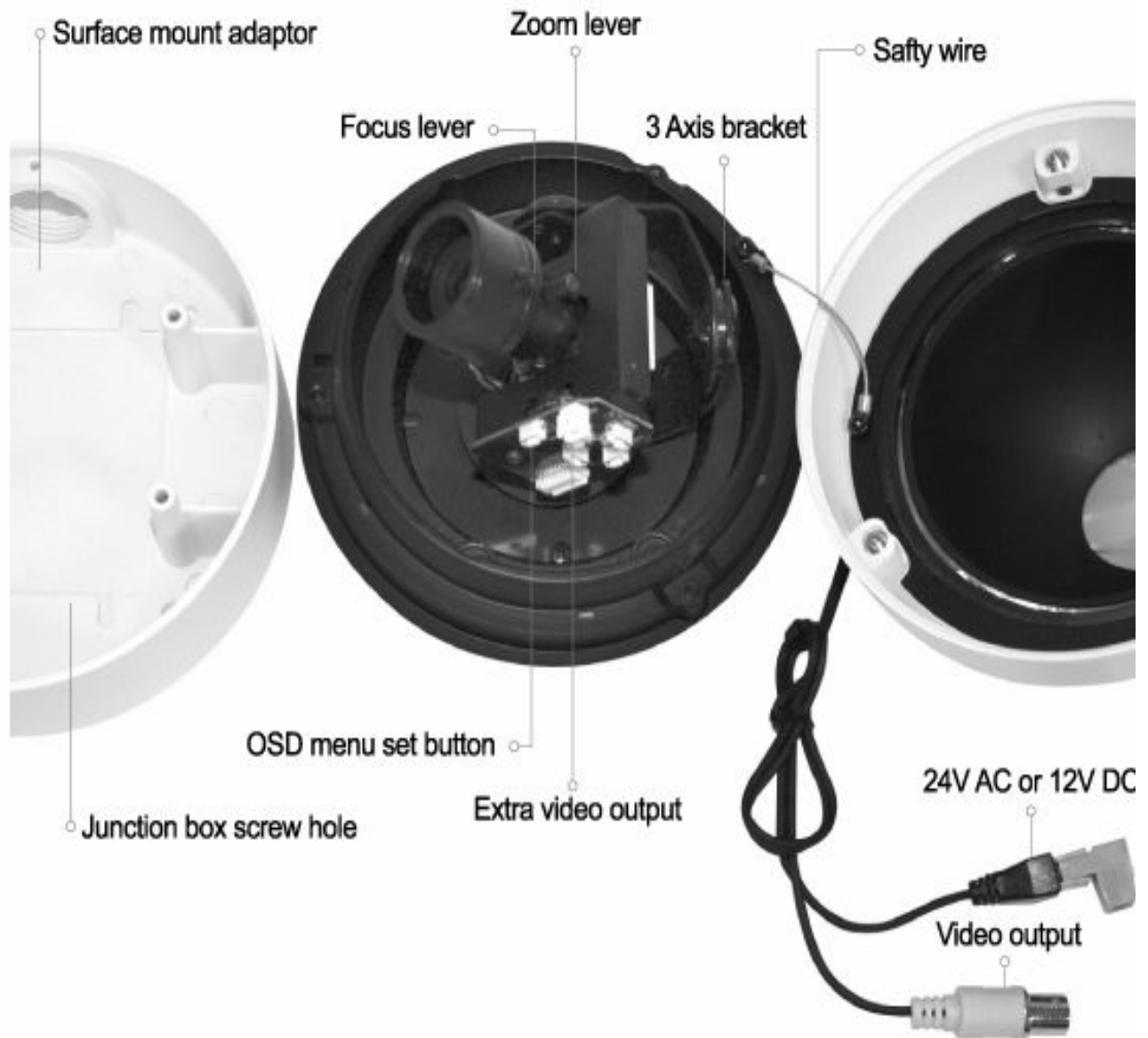
### **WARNING**

1. Do not disassemble the unit yourself. When there is a problem with the unit please contact the security service provider or place of purchase.
2. Use only regulated power source.
3. Do not disassemble or re-model the camera, it could cause fire, electric shock or other hazards.

If this product is to be put out of operation indefinitely, take it to a local recycling plant for disposal of which is not harmful to the environment.



# Configuration



# Contents

<b>Strong Points, Caution</b>	<b>page 1</b>
<b>Configuration, Lens pin connection, Lens</b>	<b>page 3</b>
<b>Contents in box</b>	<b>page 4</b>
<b>Installation</b>	<b>page 5</b>
<b>Connection</b>	<b>page 6</b>
<b>Menu Setting, Menu Directory</b>	<b>page 7</b>
<b>Menu details</b>	<b>page 8-19</b>
<b>Dimension</b>	<b>page 20</b>
<b>Specification</b>	<b>page 21</b>
<b>Warranty Service</b>	<b>page 22</b>

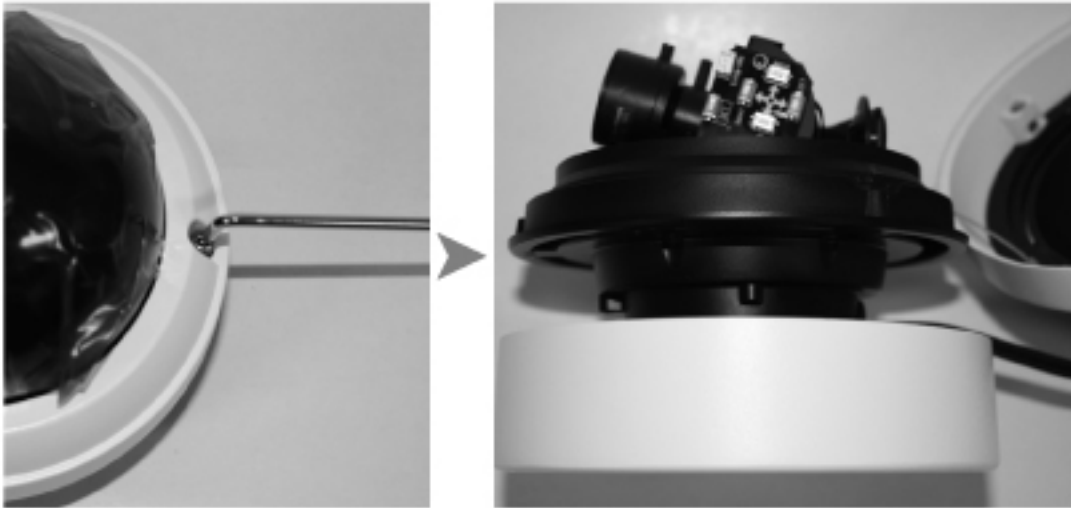
# Contents in box

Open the box and check the contents



1. Dome camera
2. Surface mount adaptor
3. Manual
4. Extra video cable
5. Screws to fix camera to surface mount adaptor
6. Screws to fix surface mount adaptor
7. Hold cover of surface mount adaptor
8. Opening tool
9. L wrench

# Installation



1) Embedded mount type installation available

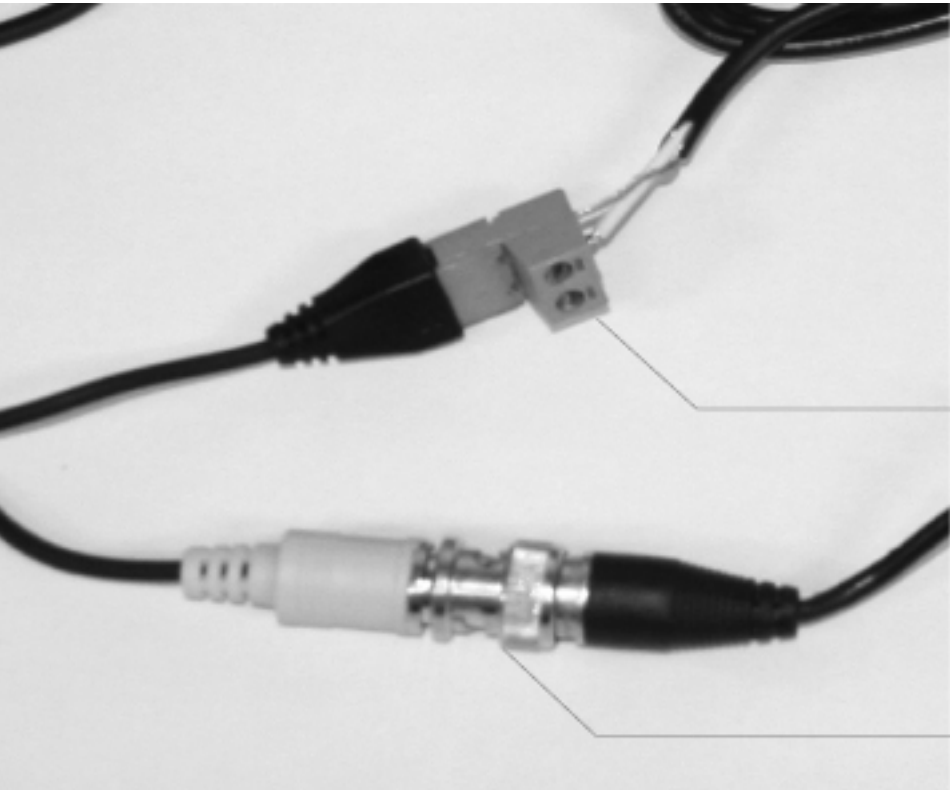


2) Surface mount type



\* Fix the surface mount adaptor on the ceiling first.

# Connecting the power and video




○ 12V DC or 24V AC over 1A

○ Video connection

# Setting menu



- \* Push the SET button > menu open
- \* Icon  has sub menus. Press the set button to enter sub menus.
- \* Icon — means it is not available due to setting options.

1. Up and Down : Move Cursor
2. Left and Right : Value
3. Left and Right > Push > Menu > Value
4. END : Push > Previous

## Main Menu

1. LENS : DC(PUSH), MANUAL
2. EXPOSURE : PUSH : SHUTTER :A.FLK  
: AGC : OFF, LOW, HIGH  
: SENS-UP : OFF, AUTO  
(Only when SHUTTER is —)
3. WHITE BAL : ATW, MANUAL (PUSH), AWC-> SET  
OUTDOOR, INDOOR
4. BACKLIGHT : —, OFF, BLC (PUSH),  
HLC (High Light Compensation)  
It works only at night.  
ex) Car license plates recognition.  
High light area should be over half size of screen.
5. SDNR : ON (PUSH), OFF  
(Digital Noise Reduction)  
(Available only when AGC is on)
6. DAY/NIGHT : AUTO, EXTERN, COLOR, B/W  
(Available only when AGC is on)
7. IMAGE ADJ : FREEZE : OFF,ON  
V-REV : OFF,ON  
H-REV : OFF,ON  
D-ZOOM : OFF, ON  
SHARPNESS : OFF, ON
8. SPECIAL (PUSH) : 1. CAM TITLE : OFF, ON(PUSH)  
2. SYNC : INT  
3. MOTION DET : OFF,ON(PUSH)  
4. PRIVACY : OFF, ON (PUSH)  
5. DIS : OFF, ON  
(Digital Image Stabilizer)  
ex) When an object is shaking  
6. COMM ADJ : 1. CAM ID  
: 2. BAUD RATE  
: 3. UART MODE  
: 4. RET PKT  
: 5. DISP ID  
7. LANGUAGE :  
ENGLISH, CHINESS, DEUTSCH,  
ITALIANO, FRANCAIS, ESPANOL  
8. RESET
9. EXIT



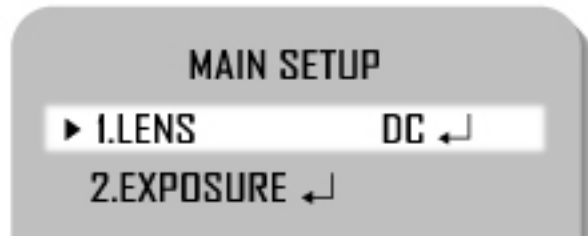


# Menu details

## 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.



### ⊙ DC / Video : Select Auto Iris Lens

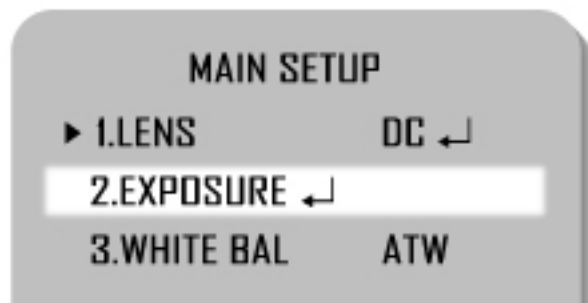
- When DC is selected, you can control screen brightness. The range of brightness control is between 1 and 70. Adjust the brightness appropriately for optimal screen brightness.

### Notes

- Some lenses may not work properly, depending on the setting of the BRIGHTNESS LEVEL.

### ⊙ Manual : Select Manual Lens

## EXPOSURE



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.

# Menu details

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.

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

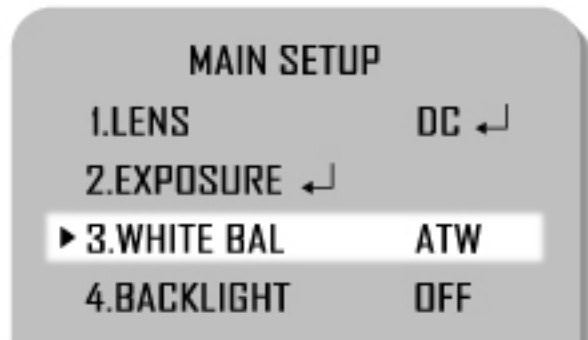
### Notes

- 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.



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, finetune the White Balance and then press the SET button.

# Menu details

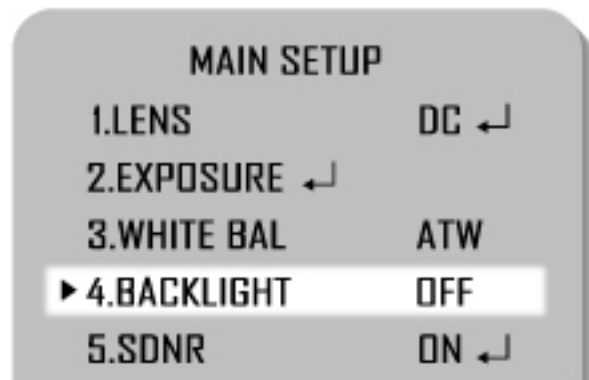
## Notes

- White Balance may not work properly under the following conditions. In this case select the AWC mode.
  - ① When the color temperature of 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 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 .



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

⦿ 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



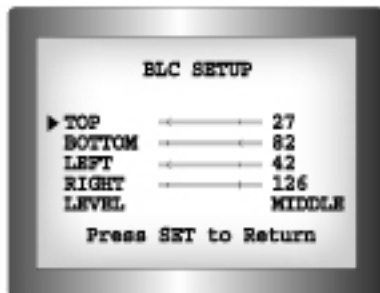
HLC ON



HLC OFF

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.



## Notes

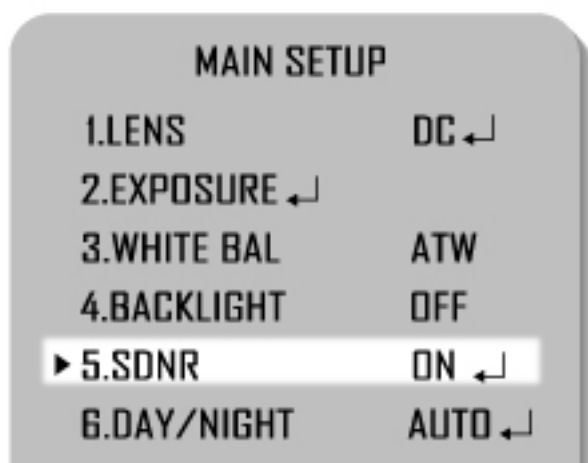
- Because there can be a difference in the effectiveness of HLC according to the amount of light area in the screen, optimize the installation angle for the best HLC performance.
- In a dark environment, the HLC is only activated when a high light that is larger than a certain area is present.
- The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

# Menu details

## SDNR

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

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



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

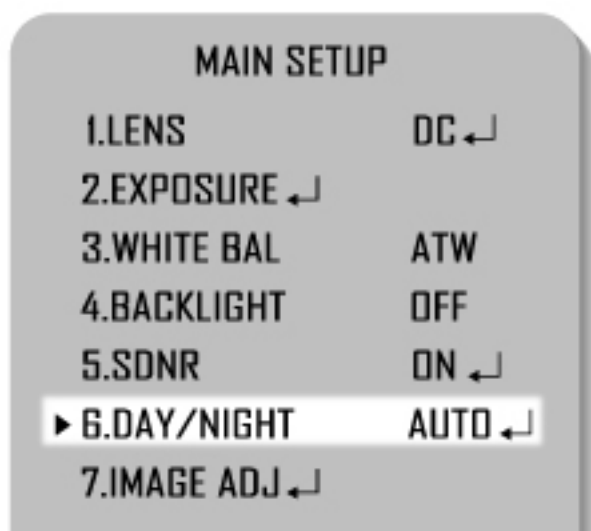
### Notes

- You cannot set the SDNR to 'ON' or 'OFF' when the AGC mode of the EXPOSURE menu is 'OFF'.
- When adjusting the noise reduction level of the SDNR 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.

- 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.



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

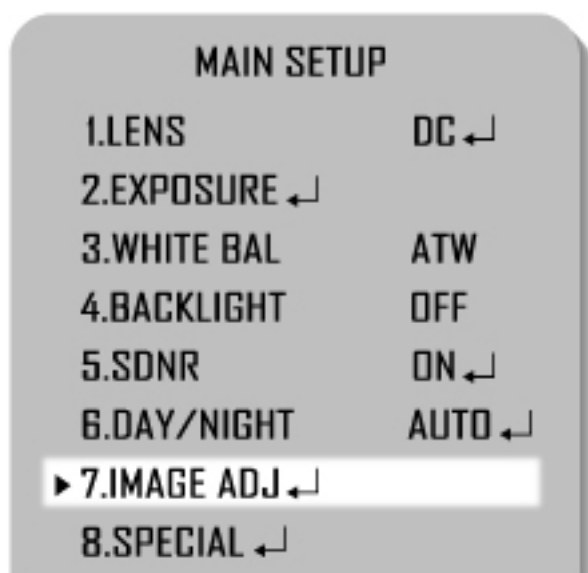
# Menu details

## Notes

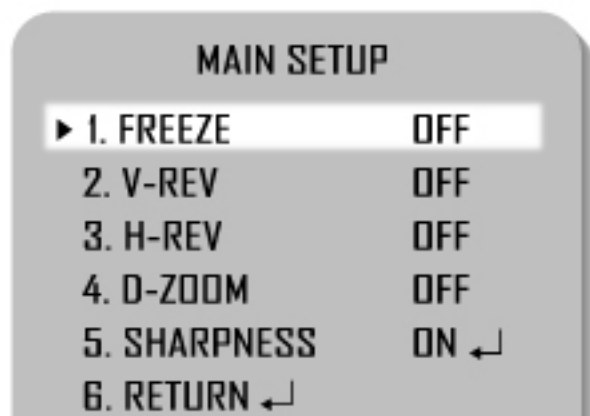
- You cannot control the DAY/NIGHT menu when AGC in the EXPOSURE menu is 'OFF'. At this time, the exchange between DAY mode and NIGHT mode operates as like selecting 'COLOR' mode.
- The camera may focus less well under infrared illumination than under normal illumination.
- Since the camera may not focus 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.



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





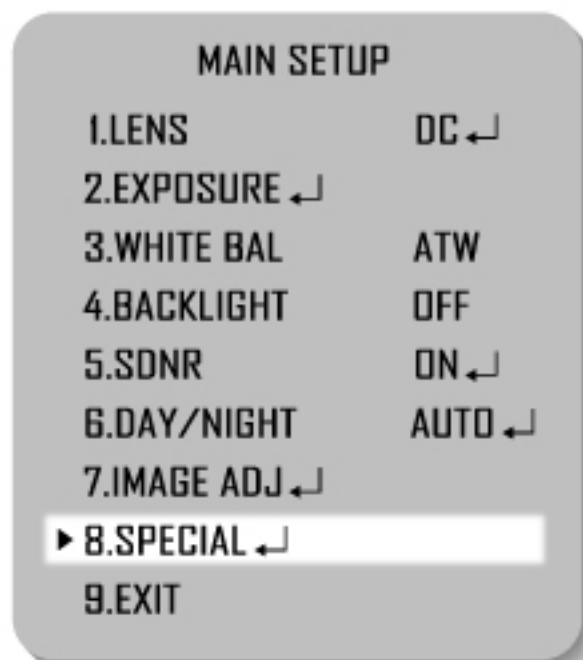
- ⦿ FREEZE : You can view still or moving pictures.
- ⦿ V-REV : You can flip the picture vertically on the screen.
- ⦿ H-REV : You can flip the picture horizontally on the screen.
- ⦿ D-ZOOM : You can use a digital zoom of x1~x10.
- ⦿ SHARPNESS : As you increase this value, the picture outline becomes 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'.



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

# Menu details

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

## Notes

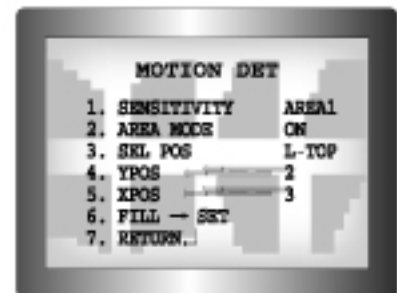
- If you move the cursor to CLR and press the SET button, all the letters are deleted. To edit a letter, change the cursor to the bottom left arrow and press the SET button. Move the cursor over the letter to be edited, move the cursor to the letter to be inserted and then press the SET button.

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.



⊙ 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.



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.

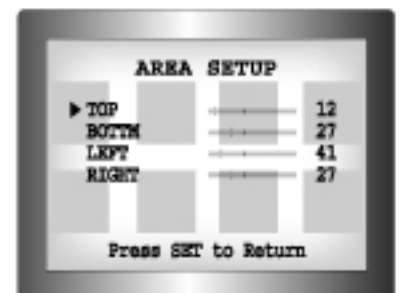
- SENSITIVITY : You can select up to 8 MD areas. When SENSITIVITY number is high, motion detection sensitivity is increased to recognize even small movement.
- AREA MODE : Determines whether to use the MD area selected in SENSITIVITY.
- SEL POS : Determines which of the 4 vertices of each MD area is 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.

# Menu details

- ⦿ **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.



- ⦿ **DIS (Digital Image Stabilizer)** :  
This function mitigates any picture movement due to external factors such as wind.

## Notes

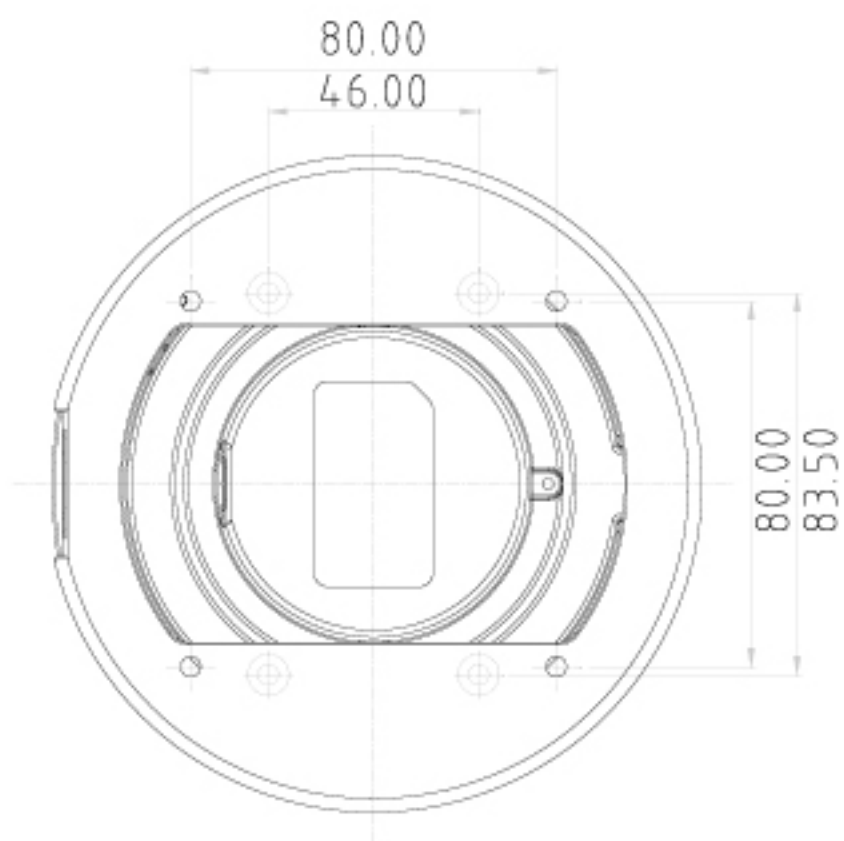
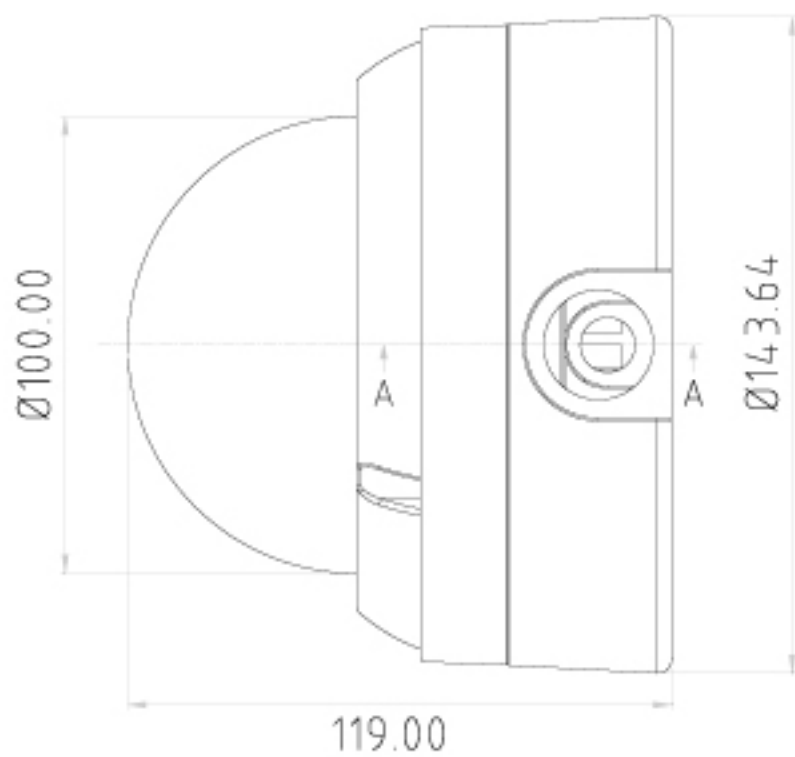
- The chance of resolution decrease is existed because DIS function uses the digital zoom.
- DIS doesn't operate when background illumination is too low.
- DIS doesn't operate when object pattern is monotonic as like sky or white wall.

- ⦿ **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.

# Dimension



<b>Model</b>	<b>STC-3580/3 ULTIMATE</b>
<b>Main Chip Set</b>	<b>WINNER-4</b>
<b>Image Sensor</b>	<b>1/3 Inch, Sony CCO(ICX639)</b>
<b>Effective Pixels</b>	<b>752(H) X 582 (V)</b>
<b>Video System</b>	<b>PAL TV System</b>
<b>Scanning System</b>	<b>625 Lines 2:1 Interlace</b>
<b>Scanning Frequency</b>	<b>15.625 [Khz] / 50 [Hz]</b>
<b>Shutter Speed</b>	<b>1/50 – 1/120.000 sec</b>
<b>Sync System</b>	<b>Intemal Sync</b>
<b>H - Resolution</b>	<b>More than 580 TV Lines , B/W 700 TV Lines</b>
<b>S/N Ratio</b>	<b>52 [dB] / AGC Off</b>
<b>Mil. illumination</b>	<b>0.00004 Lux (F1.4 / 50 IRE ) – B/W sense-up</b>
<b>Gamma</b>	<b>0.45 Approx</b>
<b>CCD Level Control</b>	<b>ALC (auto iris lens control)</b>
<b>Gain Control</b>	<b>Low/HI/Off (Selectable)</b>
<b>Sense - up</b>	<b>Auto / Fixed / Off ( Selectable limit x2~x256)</b>
<b>DNR</b>	<b>Off / On (1 - 32 Level Adjustable )</b>
<b>Privacy</b>	<b>Off / On (8 Zone)</b>
<b>Mirror</b>	<b>Off / On (H-Rev / V-Rev)</b>
<b>Sharpness</b>	<b>Off/ On ( Level Adjustable)</b>
<b>White Balance</b>	<b>ATW / AWC / Manual / Outdoor (1 BOO 'K - 10,500 'K )</b>
	<b>Indoor ( 4500 'K - 8,500 'K )</b>
<b>C Video Output</b>	<b>VBS1.0Vp-p / 75ohm</b>
	<b>Video 0.7Vp-p / Sync : 0.3Vp-p / Burst: 0.3Vp-p</b>
<b>Input Voltage</b>	<b>DC12[V] +/-10% / 24 VAC</b>
<b>Current</b>	<b>Camera only : max 150[mA] (at 12VDC)</b>
<b>Operating Temp</b>	<b>-40°C ~ +50° C</b>
<b>LENS</b>	<b>IR Filter Chang DC Auto Iris Lens (2.8mm - 11mm)</b>
<b>Weight</b>	<b>Net : 1.3 Kg</b>
<b>Outside Control</b>	<b>Far-Near control lever</b>
	<b>Tele -Wide control lever</b>
	<b>OSD Control Tact Switch</b>
	<b>Extra video wafer</b>
<b>Heafer</b>	<b>Builtin</b>
<b>Recommendation</b>	<b>Regulated DC12V – 1 A Power Supply</b>

# **WARRANTY SERVICE**

**( Write down belows and return the unit to vendor together)**

**CUSTOMER NAME :**

**MODEL NO :**

**DATE OF PURCHASE :**

**SERIAL NO :**

**DETAILS OF SYMPTOM :**

**INSTALLING CIRCUMSTANCE**

**1. PLACE :**

**2. POWER SUPPLY :**

**\* Please mention the length of power cable.**

**3. TEMPERA TURE / HUMIDITY**