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**SAMSUNG TECHWIN**

# **High Resolution 37X Zoom Color Camera**

User Manual

SCZ-3370

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CE



# High Resolution 37X Zoom Color 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

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.

■ SCZ-3370 SERIES

- |              |             |
|--------------|-------------|
| • NTSC MODEL | • PAL MODEL |
| SCZ-3370N    | SCZ-3370P   |
| SCZ-3370ND   | SCZ-3370PD  |

■ MODEL DESCRIPTION

- SCZ-3370X X



- SIGNAL SYSTEM  
N → NTSC MODEL  
P → PAL MODEL

# safety information

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK. DO NOT OPEN	
<b>CAUTION:</b> 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.

## 4\_ safety information

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 -50°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, and
- 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.

## 6\_ safety information

# 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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# introduction

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## FEATURES

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- **37x Optical Zoom**  
The built-in SCZ-3370 optical zoom lens is a highly durable component. It features auto focus, auto iris, and zoom functions.
- **High Resolution**  
Adopting high-resolution CCD of 410k (NTSC) / 470k (PAL) pixels provides clear and sharp image.
- **DIS (Digital Image Stabilizer)**  
Digital image stabilization compensates camera shakings for enhanced image capture.
- **SSNR 3 (Samsung Super Noise Reduction)**  
The high-performance SV-V DSP chip effectively removes low-light gain noise and ghosting to provide clear images even in dark environments.
- **Miscellaneous Functions**  
SYNC, SENS-UP, FLIP(H/V-REV), D-ZOOM and PRIVACY functions are provided.
- **DAY&NIGHT(ICR)**  
This camera has a function that automatically selects the mode that is appropriate for daytime or night-time conditions. The COLOR mode operates in daytime conditions to provide optimum colors, and BW mode operates in night-time conditions to enhance the definition of the image.
- **INTELLIGENCE**  
Once motion is detected, the camera sends an alert signal to the processing unit, which, if used in conjunction with an optional alarm, can provide effective surveillance of your property.
- **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.
- **Wide Dynamic Range (WDR)**  
By adopting SV-V DSP chip, the camera delivers clear, high quality pictures even in backlight, by increasing exposure in dark areas while decreasing it in bright areas.
- **VPS (Virtual Progressive Scan)**  
Virtual Progressive Scan provides a clearer view of objects, which is used for high-quality video. It is suitable for high-quality recording and Internet transfer.
- **PIP (Picture In Picture)**  
PIP enables you to display the main image along with a collapsed version of the main image.

# introduction

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## WHAT'S INCLUDED

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Main Body	Instruction Manual	Quick Set-up Guide
		
8-PIN CABLE ASSY	FRONT COVERING	

※ Install the Front Cover Ring onto the camera before using it with the camera housing.

## COMPONENT NAMES AND FUNCTIONS

### TOP



### BOTTOM

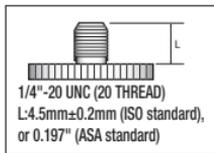


#### 1 Holder Hole :

If you want to mount the holder in the top of the camera, loosen the factory-default screw on the bottom of the holder before proceeding.

#### 2 Bracket Hole :

Use this if you want to attach the camera to the bracket. Screws available for this hole should meet the following specifications.

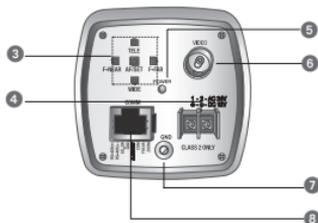


- Attach the bracket to the top of the camera. Use screws included in the package or their equivalent (less than 6mm). Otherwise, the bracket may not assemble to the camera properly.



# introduction

## BOTTOM VIEW



### 3 Key Buttons

Following buttons control zoom, focus, and auto focus functions.

- SET (AF): Press and hold this for two seconds to display the menu. Use this if you change the value of a selected item or change the mode and want to confirm your change. Press and release this to perform the auto focus.
- Up (TELE) / Down (WIDE): Use this if you want to move a menu item to a desired position or adjust the zoom factor.
- Left (F-NEAR) / Right (F-FAR): Use this if you want to change the value of a selected item or adjust the focus.

### 4 Power Input Terminal

Power supply terminal (DC Type : DC12V±10% DUAL Type : DC12±10%/AC24V±10%)

### 5 Power LED

Illuminates when power is supplied.

### 6 Video Output Jack

Used to connect an external video monitor in jack.

### 7 GND

Earth-grounding terminal for external devices.

### 8 RJ-45 JACK

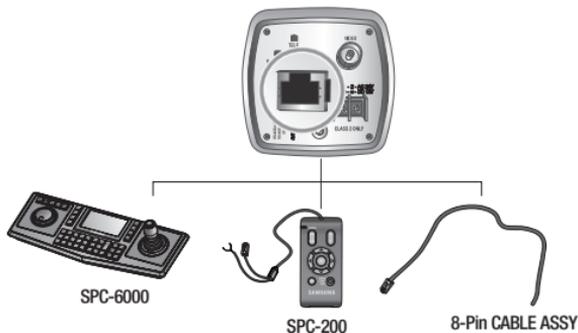
Terminals, such as RS-485 communications, MD OUT, ZOOM, and FOCUS, EX\_DN are included.



# connection

## CONNECTING TO 8P CONTROL TERMINAL

The camera can be controlled by using external controllers like a Remote controller. (RS-485 Communication)



Name	Cable color	Description	Name	Cable color	Description
ZOOM	ORANGE	-	GND	BLUE	-
FOCUS	WHITE/ORANGE		EX DN	WHITE/BLUE	External D/N
COM	GREEN		485+	BROWN	RS-485 communication
ALARM OUT	WHITE/GREEN		485-	WHITE/BROWN	RS-485 communication

Connector	Function	Signal Level	I/O
ZOOM	Tele	 +6V ~ +12V COM	I
	Wide	 COM -6V ~ -12V	
FOCUS	Far	 +6V ~ +12V COM	I
	Near	 COM -6V ~ -12V	
COM		 COM	-
ALARM OUT		 0V USER Vcc (3V~5V)	O
EX DN		DAY mode : D&N terminals must be OPEN to external signals. (Do not input voltage) NIGHT mode : D&N terminal must be connected to the ground	I



- Do not simultaneously connect the RS-485 (+) (-) communication line when you use voltage control ZOOM and FOCUS, using the RECEIVER BOX (SRX-100B).
- ALARM Output format is open collector.

\* Match the communication setup between devices when you use the wired controller (SPC-200) or SPC-6000.

ITEM	SPC-200	SPC-6000(Factory Default)
MODE	Serial	Serial
Data Bit	8 bit	8 bit
Bit/Sec	9600bps	9600bps
Parity	EVEN	NONE
CAM ID NO.	0	1~255
RETURN PACKET	ENABLE	See the SPC-6000 manual

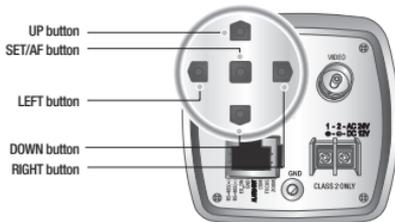
# camera operation

## MENU CONFIGURATION

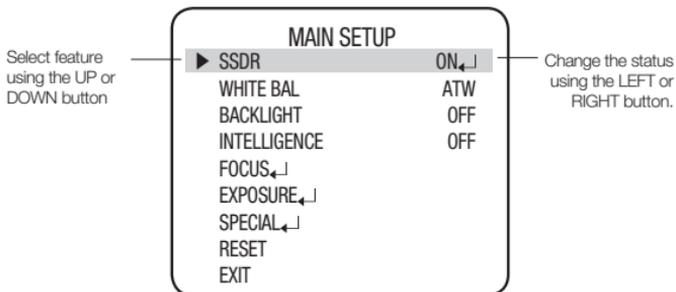
MAIN SETUP MENU			
SSDR	<input type="radio"/> ON	<input type="radio"/> OFF	
WHITE BAL	<input type="radio"/> ATW <input type="radio"/> OUTDOOR	<input type="radio"/> MANUAL <input type="radio"/> INDOOR	<input type="radio"/> AWC→SET
BACKLIGHT	<input type="radio"/> OFF <input type="radio"/> WDR	<input type="radio"/> BLC	<input type="radio"/> HLC
INTELLIGENCE	<input type="radio"/> OFF	<input type="radio"/> ON	
FOCUS <sub>←↓</sub>	<input type="radio"/> MODE <input type="radio"/> D-ZOOM <input type="radio"/> LENS INIT	<input type="radio"/> ZOOM TRACK <input type="radio"/> ZOOM POS INIT <input type="radio"/> RETURN	<input type="radio"/> ZOOM SPEED <input type="radio"/> USER PRESET
EXPOSURE <sub>←↓</sub>	<input type="radio"/> BRIGHTNESS <input type="radio"/> AGC <input type="radio"/> RETURN	<input type="radio"/> IRIS <input type="radio"/> SSNR3	<input type="radio"/> SHUTTER <input type="radio"/> SENS-UP
SPECIAL <sub>←↓</sub>	<input type="radio"/> VPS <input type="radio"/> DIS <input type="radio"/> IMAGE ADJ	<input type="radio"/> PRIVACY <input type="radio"/> SYNC <input type="radio"/> DISPLAY	<input type="radio"/> DAY/NIGHT <input type="radio"/> COMM ADJ <input type="radio"/> RETURN
RESET			
EXIT			

## MENU SETUP

Use the five buttons on back of the camera.



1. Press the SET button for 2 seconds. (Short-pressing the button activates the AUTO FOCUS).
  - Main setup menu is displayed on the monitor screen.



2. Select the desired feature using the UP or DOWN button.
3. Change the status of the selected feature using the LEFT or RIGHT button.
4. When completed, move the arrow indicator to 'EXIT' and press the SET button.

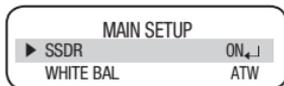


- Features marked with a ◀ have an accessible submenu.
- An item with the - - - icon is unavailable due to function settings.

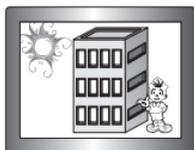
# camera operation

## SSDR (SAMSUNG SUPER DYNAMIC RANGE)

SSDR illuminates darker spots of an image while retaining the same light level for brighter spots to even out the overall brightness of images with high contrast between bright and dark spots



1. When the SETUP menu screen is displayed, select 'SSDR' by using the button so that the arrow indicates 'SSDR'.
2. Use the button to change the SSDR level according to the contrast between bright and dark areas.



SSDR ON

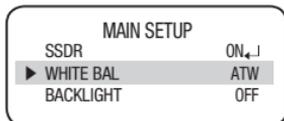


SSDR OFF

## 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 Up and Down buttons so that the arrow indicates 'White Bal'.
2. Select a desired mode using the Up and Down buttons.





# camera operation

2. Select a desired mode using the left or right button according to your needs.

• **WDR (Wide Dynamic Range) :**

It displays a sharp image of the objects in a scene where both bright and dark areas exist.



WDR



OFF

- **LIMIT :** Select a sensitivity level of WDR. (LOW/MEDIUM/HIGH)
- **LEVEL :** Select a brightness level of WDR. (1~10)
- **MODE :** Select a mode that is suitable to the indoor or outdoor backlight condition.

- **ANTI ROLLING :**

Reduces the difference of ambient colors to lessen the rolling that occurs under the fluorescent lighting.

• **BLC :**

You can specify a desired area on the video manually and set the area to be displayed more clearly.

- **LEVEL :** You can adjust the brightness of the monitoring area.

- **UP/DOWN/LEFT/RIGHT :**

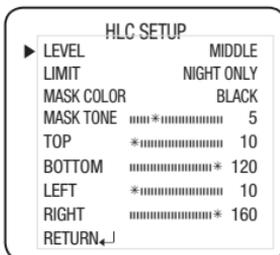
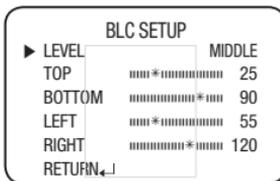
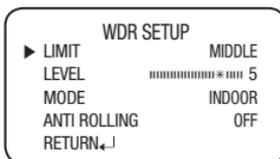
You can adjust the position of the monitoring area.

• **HLC (HIGH LIGHT COMPENSATION) :**

When a strong light such as streetlamp or headlight faces forward to the camera, you can mask that exposed area in order to protect it from being saturated.

- **LEVEL :** You can adjust the brightness of the monitoring area.

- **LIMIT :** You can specify the operating conditions for enabling HLC.

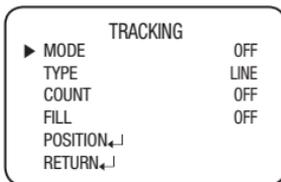




# camera operation

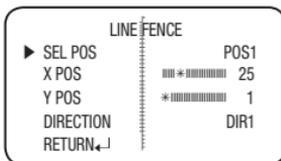
- TRACKING : Detect and trace a moving object.

- MODE : Specify the use of the fences that you have selected in the FENCE SEL menu.
- TYPE : You can select one of two types for the fence LINE and AREA
- COUNT : Display the number of times that an object enters or exits from the fence.
- FILL: Specify the use of color filling on the selected fence.
- POSITION: Specify the position and detectable direction of the line fence or area fence, depending on the fence type.



## 1) LINE FENCE

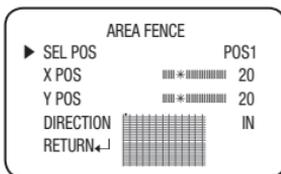
- ▶ SEL POS: Select a changing point from position 1 and position 2.
- ▶ X POS/Y POS: Specify the position of the changing point that you have selected in the SEL POS menu.
- ▶ DIRECTION



- DIR 1: Detect an object that moves from left to right based on the specified fence line.
- DIR 2: Detect an object that moves from right to left based on the specified fence line.
- DIR 1/2: Detect an object that moves in any direction of right to left or left to right based on the specified fence line.
- ▶ RETURN: Save the fence position settings and return to the INTELLIGENCE menu.

## 2) AREA FENCE

- ▶ SEL POS: Select a changing point from position 1 through position 4.
- ▶ X POS/Y POS: Specify the position of the changing point that you have selected in the SEL POS menu.



▶ DIRECTION

- IN: Detect any object that enters the specified fence area.
  - OUT: Detect any object that exits from the specified fence area.
  - IN/OUT: Detect any object that enters or exits from the specified fence area.
- ▶ RETURN: Save the fence position settings and return to the INTELLIGENCE menu.

- FIXED/MOVED: Detect if an existing object (on the screen) disappears or if an object appears from nowhere and stays for a certain time.



- In following situations, FIXED/MOVED detection may not work properly.
  - If multiple motions continue at random.
  - If a fixed object continues to move in the same position.
  - If a newly appearing object conceals another object that is moving.

- DETECT BOX: Display an object in a box that is detected to move in your specified type.
- ALARM OUT: Output the detection signal through the rear port of the camera if an object is detected to move in your specified type.
- SMART ZOOM :

Smart zoom is operated in connection with MOTION DETECTION. When the SMART ZOOM function is 'ON' while the MOTION DETECTION mode is 'ON', the zoom goes to the TARGET ZOOM position once motion is detected. Once the zoom action is finished and 'DWELL TIME' has passed, the zoom returns to the 'START ZOOM' position.

SMART ZOOM SETUP	
▶ START ZOOM	X1
TARGET ZOOM	X5
DWELL TIME	5 SEC
RETURN	↵

- START ZOOM : By moving the left or right button in the 'START ZOOM' item to select the zoom position from 1x to 37x to be returned after the 'SMART ZOOM' action is over.
- TARGET ZOOM : Use the left or right button in the 'TARGET ZOOM' item to select the zoom position from 1x to 37x to be used during MOTION DETECTION.
- DWELL TIME : Use the left or right button in the 'DWELL TIME' item to select a time between 5 and 60 seconds for the dwell time before the zoom is returned to the 'START ZOOM' position. (5,7,10,15,20,30,40,60 sec)

# camera operation

- **DETECT AREA** : You can specify a motion detection area.

DETECT AREA		
▶ TOP	*■■■■■■■■	1
BOTTOM	■■■■■■■■*	50
LEFT	*■■■■■■■■	1
RIGHT	■■■■■■■■*	50
RETURN	↵	

- **MASK AREA** :

You can specify an exceptional area to motion detection by masking the area.

- AREA SEL: Select a desired one from 4 areas.

- AREA: Specify the use of the selected area.

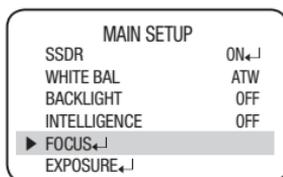
- Up/Down/Left/Right:  
You can adjust the position of the exceptional area to motion detection.

MASK AREA		
▶ AREA		AREA1
MODE		OFF
TOP	■■*■■■■■■	30
BOTTOM	■■■■■■■■	110
LEFT	*■■■■■■■■	25
RIGHT	■■■■■■■■	110
RETURN	↵	

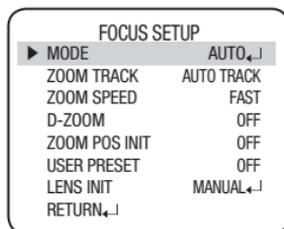
- **SENSITIVITY** : Specify the sensitivity level of the motion detection.  
The lower the level is, the stronger the sensitivity becomes.
- **DETECT SIZE** : Specify the size of an object to detect on the screen.  
The higher the level is, the greater the size becomes.
- **RETURN** : Save the INTELLIGENCE settings and return to the SPECIAL SETUP menu.

## FOCUS

From the Main Setup menu, select FOCUS and press SET. You can now change the focus.



- **MODE** : You can select the most suitable zoom mode. Move the arrow indicator to 'MODE' using UP or DOWN button.



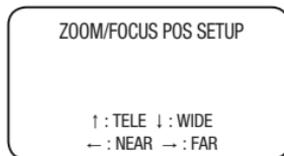
- **AUTO** :

- The focus will be adjusted automatically according to the zoom factor.
- Select the AF (AUTO FOCUS) mode and press SET. Use the Up/Down button to perform the zooming.



- **ONE-PUSH** :

- After the zooming, the focus will be automatically adjusted once.
- Select the ONE PUSH mode and use the Up/Down button to perform the zooming. Use the Left/Right button to adjust the focus.



# camera operation

## - MANUAL :

- The focus should be adjusted manually, depending on the zoom factor.
- Select the MF (MANUAL FOCUS) mode and use the Up/Down button to perform the zooming. Use the Left/Right button to adjust the focus.

### ZOOM/FOCUS POS SETUP

↑ : TELE ↓ : WIDE  
← : NEAR → : FAR

## • ZOOM TRACK :

Select 'ON' for the 'SMART ZOOM' item in the MOTION DETECTION menu and press SET button to change the settings for the 'SMART ZOOM' function.

Use the left or right button in the 'ZOOM' item to select 'AUTOTRACK' or 'TRACK' and press SET button to activate the zoom action focus function.

- AUTO TRACK : Zooming in while deciding or adjusting the status of the focus.

- TRACK : The camera moves the focus track which is established.

- OFF : Only the zoom lens moves.

### FOCUS SETUP

MODE	AUTO <sub>+</sub> J
▶ ZOOM TRACK	AUTO TRACK
ZOOM SPEED	FAST

## • ZOOM SPEED :

Configure zoom tracing speed using this feature. Position the indicator over 'ZOOM SPEED' using the UP or DOWN button and then set to desired mode using the LEFT or RIGHT button.

### FOCUS SETUP

MODE	AUTO <sub>+</sub> J
ZOOM TRACK	AUTO TRACK
▶ ZOOM SPEED	FAST
D-ZOOM	OFF

## • D-ZOOM :

Configure magnification limit from x2~x16 using this feature. Position the indicator over 'D-ZOOM' using the UP or DOWN button Set 'D-ZOOM' to 'ON' and press the SET button to confirm.

### FOCUS SETUP

MODE	AUTO <sub>+</sub> J
ZOOM TRACK	AUTO TRACK
ZOOM SPEED	FAST
▶ D-ZOOM	OFF
ZOOM POS INIT	OFF

### D-ZOOM LIMIT SETUP

▶ LIMIT	X2
RETURN <sub>+</sub> J	



- When the DIS is enabled, you cannot use the D-ZOOM.

- **ZOOM POS INIT :**

Moves to the controlled ZOOM position when the power is turned on and the initial ZOOM position has been set.

FOCUS SETUP	
MODE	AUTO <sub>↕</sub>
ZOOM TRACK	AUTO TRACK
ZOOM SPEED	FAST
D-ZOOM	OFF
▶ ZOOM POS INIT	OFF
USER PRESET	OFF

- AUTO : If you turn the power off and on, the zoom magnification level is set to the previous level that was set before the power went off.
- MANUAL : The zoom magnification level can be set from 1x to 37X.



- The zoom position is saved after 5 seconds when you set zoom function.

- **USER PRESET :**

Preset user-designated configurations using this feature. Position the indicator over 'USER PRESET' using the UP or DOWN button and then set to 'ON' using the LEFT or RIGHT button. Press the SET button to confirm.

- PRESET NO :

Up to 128 preset configurations are supported.

- SAVE : Save configured preset.

- CLEAR : Clear configured preset.

- RETURN : Revert to the FOCUS SETUP menu.

FOCUS SETUP	
MODE	AUTO <sub>↕</sub>
ZOOM TRACK	AUTO TRACK
ZOOM SPEED	FAST
D-ZOOM	OFF
ZOOM POS INIT	OFF
▶ USER PRESET	OFF
LENS INIT	MANUAL <sub>↕</sub>

- **LENS INIT :**

Use the left or right button in the 'Lens initialization' item select 'Automatic' or 'Manual' and then press the SET button.

- AUTO : The lens can automatically be set by a pre-selected day, from 1-day to 7-days. This will start from when the time is set.

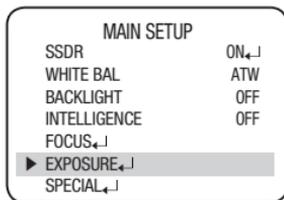
- Manual : The Lens will reset when you press the SET button.

FOCUS SETUP	
MODE	AUTO <sub>↕</sub>
ZOOM TRACK	AUTO TRACK
ZOOM SPEED	FAST
D-ZOOM	OFF
ZOOM POS INIT	OFF
USER PRESET	OFF
▶ LENS INIT	MANUAL <sub>↕</sub>
RETURN <sub>↕</sub>	

- RETURN : Save the current settings and return to the parent menu (MAIN SETUP).

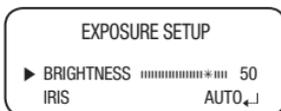
## EXPOSURE

From the Main Setup menu, select EXPOSURE and press SET. You can now change the exposure setting.



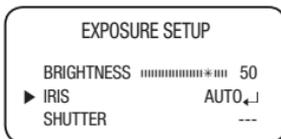
- **BRIGHTNESS :**

Use this feature to adjust image brightness. Position the indicator over 'BRIGHTNESS' using the UP or DOWN button. Then increase or decrease brightness level using the LEFT or RIGHT button while verifying the changes on screen. Set END once desired level is obtained.



- **IRIS :** Set 'IRIS' to 'AUTO' or 'MANUAL'.

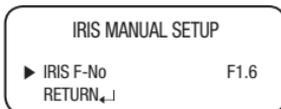
Position the indicator over 'IRIS' using the UP or DOWN button and then select the desired iris mode using the LEFT or RIGHT button.



- **AUTO:** The iris is automatically activated upon illumination.

- **MANUAL :** Manual iris configuration.

Set 'IRIS' to 'MANUAL' using the LEFT or RIGHT button and then press the SET button. Increase or decrease iris level using the LEFT or RIGHT button while verifying the changes on screen.



- **SHUTTER** : Control image brightness by adjusting shutter speed.  
Position the indicator over 'SHUTTER' using the UP or DOWN button. Then select the desired shutter mode (A.FLK, ESC, MANUAL) using the LEFT or RIGHT button.

EXPOSURE SETUP	
BRIGHTNESS	■■■■■■■■■■*■■■ 50
IRIS	AUTO <sub>↕</sub>
▶ SHUTTER	---
AGC	HIGH

- A.FLK (NTSC: 1/100, PAL: 1/120) : Flicker-free mode.
- ESC : Automatic shutter speed setting (optimal).  
Auto operation is possible only when the IRIS is set to MANUAL.
- MANUAL : Manual shutter speed setting.

- In MANUAL mode, the optimal shutter speed needs to be designated. Select from 1/60 to 1/120,000 (NTSC) or from 1/50 to 1/120,000 (PAL). \* 'Sens-Up' mode can be configured manually (2x to 512x).

SHUTTER MANUAL SETUP	
▶ SHUTTER VAL	1/50
RETURN <sub>↕</sub>	

- !** ■ If facing the camera directly to fluorescent lighting with the shutter mode set to ESC, you may encounter corrupt pixels. To prevent this, switch the iris mode to Auto or fix the shutter speed to 1/60, or adjust the recording position as appropriate.

- **AGC (Auto Gain Control)** :  
Select GAIN and use the Left/Right button to switch the mode to: OFF, LOW, MEDIUM, HIGH OR MANUAL.

EXPOSURE SETUP	
BRIGHTNESS	■■■■■■■■■■*■■■ 50
IRIS	AUTO <sub>↕</sub>
SHUTTER	---
▶ AGC	HIGH
SSNR3	MEDIUM

GAIN MANUAL SETUP	
▶ AGC VAL	5dB
RETURN <sub>↕</sub>	

- **SSNR(Samsung Super Noise Reduction)** : The background noise in a low-contrast scene will be reduced variably depending on the mode. The noise will be reduced in the sequence: OFF, LOW, MEDIUM, HIGH. Select DNR and use the Left/Right button to switch the mode to: OFF, LOW, MEDIUM or HIGH.

- LOW : Low noise reduction
- MEDIUM : Medium noise reduction
- HIGH: High noise reduction
- OFF : Disabled



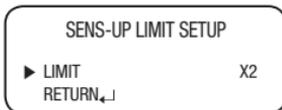
- Setting 'AGC' to OFF locks 'SSNR3' configuration.

- **SENS-UP** : This feature ensures clear images at night or under low light conditions.

① Position the indicator over 'SENS-UP' using the UP or DOWN button.

② Set 'SENS-UP' to the desired mode using the LEFT or RIGHT button.

- AUTO : Select this mode for use in night time or under low light conditions.
- OFF : Disabled



- If GAIN of EXPOSURE is not in use, the SENS-UP (Sensitivity-Up) is set to "---".
- Once 'AUTO' mode is set, the user can configure the SENS-UP limit by increasing/decreasing the shutter speed (e.g.: X2, X4..... X32, X64, X128, X256, X512).
- Enabling Sens-Up increases camera sensitivity and may result in additional noise and/or other phenomenons. This is normal.

- **RETURN** : To revert to the main setup menu.

## SPECIAL

MAIN SETUP	
SSDR	ON <sub>↵</sub>
WHITE BAL	ATW
BACKLIGHT	OFF
INTELLIGENCE	OFF
FOCUS <sub>↵</sub>	
EXPOSURE <sub>↵</sub>	
▶ SPECIAL <sub>↵</sub>	
RESET	

- **VPS (Virtual Progressive Scan)**

Virtual Progressive Scan provides a clearer view of objects, which is used for high-quality video. It is suitable for high-quality recording and Internet transfer.

- OFF : Switch the video recording system to 2:1 Interlace Scan.
- ON : Switch the video recording system to Virtual Progressive Scan.

SPECIAL SETUP	
▶ VPS	OFF
PRIVACY	OFF
DAY/NIGHT	AUTO <sub>↵</sub>

- **PRIVACY** : Hide the area that you want not to be displayed on the screen.

① When the SPECIAL menu screen is displayed, using the UP or DOWN button so that the arrow indicates 'PRIVACY'.

② Set up the mode using the 4 direction buttons.

- AREA : You can specify up to 12 areas to your preference.
- MODE : Determines whether to use the area selected in the AREA SEL.
- MASK COLOR : You can select one from 6 colors (green, red, blue, black, white and gray) that is used to fill the selected area.
- TRANSPARENCY : Specify the use of transparency on the selected area.
- SEL POS/X POS/Y POS : Changes the position of the selected area.
- RETURN : Saves the PRIVACY settings and return to the SPECIAL SETUP menu.

PRIVACY AREA SETUP	
▶ AREA	AREA 1
MODE	ON
MASK COLOR	GREEN
TRANSPARENCY	OFF
SEL POS	L_TOP
XPOS	*■■■■■■■■■■ 10
YPOS	*■■■■■■■■■■ 10
RETURN <sub>↵</sub>	

- **DAY/NIGHT** : You can display pictures in color or black and white.

- ① When the SETUP menu screen is displayed, select 'DAY/NIGHT' using the UP or DOWN button so that the arrow indicates 'DAY/NIGHT'.
- ② Select a desired mode using the LEFT or RIGHT button according to the picture display you want.

SPECIAL SETUP	
VPS	OFF
PRIVACY	OFF
▶ DAY/NIGHT	AUTO ◀
DIS	OFF
SYNC	INT

- **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.
- **COLOR**: The picture is always displayed in color.
- **B/W** : The picture is always displayed in black and white.
- **DWELL TIME** : You can select day/night switching delay time from.  
→ 5,7,10,15,20,30,40, 60(sec)
- **DURATION** : You can select the day/night switching point(lux).

	Color → B/W	B/W → Color
<b>Fast</b>	2.5Lux	4Lux
<b>Slow</b>	1Lux	6Lux

※ Illumination table if the gain is set to HIGH

- **EXT** : This mode allows you to apply a desired filter to external signals.



- The brightness of illumination is changeable by installed environment.

- **DIS** : The DIS mode can compensate for vibration of the camera

SPECIAL SETUP	
VPS	OFF
PRIVACY	OFF
DAY/NIGHT	AUTO <sub>4</sub> J
▶ DIS	OFF
SYNC	INT

- !** ■ When DIS is operating, D-ZOOM does not operate.

- **SYNC** : Two synchronization modes are available INTERNAL and EXTERNAL LINE-LOCK. In LINE-LOCK mode, it synchronizes the camera's video out signal to the external SYNC signal.

- INT : Internal synchronization
- LL : External line-lock synchronization
  - If you choose 'LL', you can adjust the desired phase.  
Press the SET button.
  - You can adjust the desired phase from 0 to 359.

- **COMM ADJ (Communication Adjustment)** :  
This function sets up the camera communication status when controlling the camera through an external controlled device.

COMMUNICATION SETUP	
▶ PROTOCOL	SAMSUNG-T
CAM ID	■■■■■■■■■■*■■ 1
BAUD RATE	9600
UART MODE	8-N-1
RET PKT	DISABLE
RETURN <sub>4</sub> J	

- 1 When the SPECIAL menu screen is displayed, using the UP or DOWN button so that the arrow indicates 'COMM ADJ'.
- 2 Set up the mode moving the 4 direction of the SET button.
  - Protocol : Select the communication PROTOCOL. (SAMSUNG-T/PELCO-D/PELCO-P/ BOSCH/HONEYWELL/VICON/AD/SAMSUNG-E/PANASONIC)
  - CAM ID : Determines the camera's identification number (between 0 and 255).
  - BAUD RATE : You can select 2400/4800/9600/19200/38400/57600/1152000 bps.

- UART MODE : You can select NONE, EVEN or ODD for the parity bits.
- RET PKT : You can choose whether to send an ACK signal when the communication control command is issued to the camera.

- **IMAGE ADJ** : Includes image quality or special function factors.

① When the SETUP menu screen is displayed, select 'IMAGE ADJ.' using the UP or DOWN button so that the arrow indicates 'IMAGE ADJ.'

② Select a desired mode using the LEFT or RIGHT button.

SPECIAL SETUP	
VPS	OFF
PRIVACY	OFF
DAY/NIGHT	AUTO ◀▶
DIS	OFF
SYNC	INT
▶ IMAGE ADJ ◀▶	
DISPLAY ◀▶	
RETURN ◀▶	

- **PIP (Picture In Picture)**:  
PIP enables you to display the main image along with a collapsed version of the main image. The position of the collapsed image can be adjusted to your preference.

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

- **V-REV** : You can flip the picture vertically on IMAGE ADJen.

- **SHARPNESS** :  
As you increase this value, the picture outline becomes stronger and clearer.

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

- **LCD**: Please select this menu item when using an LCD monitor.

IMAGE SETUP	
▶ PIP	OFF
H-REV	OFF
V-REV	OFF
SHARPNESS	ON ◀▶
MONITOR	LCD ◀▶
RETURN ◀▶	

LCD MONITOR SETUP	
▶ GAMMA	0.55
PED LEVEL	■■■■■*■■■■■ 25
COLOR LEVEL	■■■■■■■■■■*■■ 5
RESET	
RETURN ◀▶	

- CRT : Please select this menu item when using a CRT monitor.

```

  CRT MONITOR SETUP
  ▶ PED LEVEL ██████████ 25
  COLOR LEVEL ██████████ 5
  RESET
  RETURN⏴⏵
  
```

- 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.

```

  USER MONITOR SETUP
  ▶ GAMMA 0.55
  PED LEVEL ██████████ 25
  COLOR LEVEL ██████████ 5
  RESET
  RETURN⏴⏵
  
```

• RETURN : Return to the SPECIAL menu.

## • DISPLAY

### • CAM TITLE

The camera title will be displayed on the monitor if you have provided one.

- 1 Press the SET button to display the main setup menu and move the arrow indicator to 'CAM TITLE' using the UP or DOWN button.
- 2 Set 'CAM TITLE' to 'ON' using the UP or DOWN button.



- If the CAM TITLE feature is set to 'OFF', the name will not be displayed in the monitor

### SPECIAL SETUP

```

  VPS OFF
  PRIVACY OFF
  DAY/NIGHT AUTO⏴⏵
  DIS OFF
  SYNC INT
  IMAGE ADJ⏴⏵
  ▶ DISPLAY⏴⏵
  RETURN⏴⏵
  
```

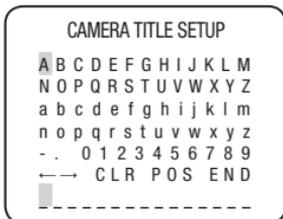
### DISPLAY SETUP

```

  ▶ CAM TITLE OFF
  CAM ID OFF
  CAM INFO OFF
  ZOOM MAG OFF
  FONT COLOR WHITE
  LANGUAGE ENGLISH
  RETURN⏴⏵
  
```

- 3 Press the SET button.

- 4 Use the direction buttons to move to a desired character and press SET. Repeat this process to enter up to 15 characters.



■ Correcting Mistakes

Move the cursor th 'CLR' and press the SET button to clear the entire entry. To modify one character, use LEFT or RIGHT to position the cursor above the character to be modified and click the SET button after selecting the character to enter.



- 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 moving the 4 direction buttons and press the SET button. When the position is determined, select.
- CAM ID : Displays camera ID on top left corner of the screen.
  - CAM INFO : Displays camera information on screen.
  - ZOOM MAG : Use this feature to display the current zoom magnification level on screen. Position the indicator over 'ZOOM MAG' using the UP or DOWN button. Then set to ON using the LEFT or RIGHT button.
  - FONT COLOR : You can select the font color(white,yellow,green,red,blue)
  - LANGUAGE : You can select the menu language according to your requirements (English, Japanese, Spanish, French, Portuguese, Taiwanese, Korean, German, Italian, Russian, Polish, Czech, Romanian, Serbian, Turkish)
  - RETURN : Select this to save the SPECIAL menu settings and return to the SPECIAL menu.

## **RESET**

---

To reset your camera to factory default condition.  
Communication, Language and Monitor settings are not initialized.

## **EXIT**

---

To finish setup menu.

# troubleshooting

## 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.	<ul style="list-style-type: none"><li>▶ Ensure that your camera is supplied with rated power as appropriate.</li><li>▶ Check that you have properly connected VIDEO cable to the camera VIDEO output jack.</li></ul>
The image on the screen is dim.	<ul style="list-style-type: none"><li>▶ If the lens is dusty, wipe it out with a clean cloth or brush.</li><li>▶ Set the monitor to proper condition.</li><li>▶ If the camera is exposed to too strong light, change the camera position.</li></ul>
The image on the screen is dark.	<ul style="list-style-type: none"><li>▶ Adjust the contrast feature of the monitor.</li><li>▶ If you have an intermediate device, set the 75Ω / Hi-z properly.</li></ul>
The camera is not working properly, and the surface of the camera is hot.	<ul style="list-style-type: none"><li>▶ Check that you have properly connected the camera to an appropriate power source.</li></ul>
The SENS-UP function does not work.	<ul style="list-style-type: none"><li>▶ Check that AGC of EXPOSURE SETUP menu is 'OFF'.</li><li>▶ Check that SHUTTER of EXPOSURE SETUP menu is 'A.FLK' or 'MANUAL'.</li></ul>
The Motion Detection function does not work.	<ul style="list-style-type: none"><li>▶ Check if you have set the Intelligence Video Analysis mode to ON from the SPECIAL menu.</li></ul>
Color is not correct.	<ul style="list-style-type: none"><li>▶ Check the setting of WHITE BAL SETUP menu .</li></ul>
The screen flickers continually.	<ul style="list-style-type: none"><li>▶ Check that direction of camera turns toward the Sun.</li></ul>
When coaxial communication is not available:	<ul style="list-style-type: none"><li>▶ Make sure that the camera and monitor are installed within the recommended distance.</li><li>▶ Use the video amplifier equivalent to coaxitron if the recommended installation distance is exceeded.</li></ul>
If the lens is out of focus	<ul style="list-style-type: none"><li>▶ Check if the Zoom/Focus lever of the lens is adjusted properly to the focus.</li></ul>

# specifications

## SPECIFICATIONS

	SCZ-3370N	SCZ-3370ND	SCZ-3370P	SCZ-3370PD
<b>VIDEO</b>				
Imaging Device	1/4" Exview Double Scan CCD			
Total Pixels	811(H) x 508(V)	811(H) x 508(V)	795(H) x 596(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	768(H) x 494(V)	752(H) x 582(V)	752(H) x 582(V)
Scanning System	2 : 1 Interlace, Progressive			
Synchronization	Internal / Line Lock	Internal	Internal / Line Lock	Internal
Frequency	H : 15.734KHz V : 59.94Hz	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 600 TV lines, B/W : 700TV lines			
Min. Illumination	Color : 0.7Lux @ F1.6 (50IRE), 0.001 Lux (Sens-up, 512x) B/W : 0.07 Lux @ F1.6 (50IRE), 0.0001 Lux (Sens-up, 512x)			
S/N (Y Signal)	52dB (AGC off, Weight on)			
Video Output	CVBS : 1.0 Vp-p / 75Ω composite			
<b>Lens Type</b>				
Focal Length (Zoom Ratio)	3.5~129.5mm (Optical 37x)			
Max. Aperture Ratio	1:1.72 (Wide) ~ 3.94 (Tele)			
Angular Field of View	H : 55.5°(Wide) ~ 1.59°(Tele) / V : 42.5°(Wide) ~ 1.19°(Tele)			
Min. Object Distance	1.5m			
Focus Control	Auto / Manual / One Push			
Zoom Movement Speed	2.8 sec ( Wide to Tele )			
<b>OPERATIONAL</b>				
On Screen Display	NTSC : Multi-language Support English, Japanese, Spanish, French, Portuguese, Taiwanese, Korean PAL : Multi-language Support English, French, German, Spanish, Italian, Russian, Polish, Czech, Romanian, Serbian, Turkish, Portuguese			
Camera Title	Off / On (Displayed 15 characters)			
Day & Night	Auto (ICR) / External / Color / B/W			
Backlight Compensation	Off / HLC / BLC / WDR			
Wide Dynamic Range	128x	128x	160x	160x
Contrast Enhancement	SSDR ( Off/On )			
Digital Noise Reduction	SSNRIII ( Off/ Low / Medium / High )			

# specifications

	SCZ-3370N	SCZ-3370ND	SCZ-3370P	SCZ-3370PD
Digital Image Stabilization	Off / On			
Privacy Masking	Off / On (12 programmable zones)			
Sens-up (Frame Integration)	2x ~ 512x			
Gain Control	Off / Low / Medium / High / Manual			
White Balance	ATW / Outdoor / Indoor / Manual / AWC (1,700K° ~ 11,000K°)			
Electronic Shutter Speed	1/60~1/120,000sec		1/50~1/120,000sec	
Digital Zoom	Off / On (1x ~ 16x)			
Flip / Mirror ( Reverse )	Off / H-Rev / V-Rev / HV-Rev			
VPS	Off / On			
Intelligent Video Detection	Fixed_Moved, Motion Detection, Tracking, Fence, Counting			
Alarm	1 Out			
Communication	Coaxial Control ( SPC-300 Compatible ), RS-485			
Protocol	Coax : Pelco-C ( Coaxitron ) RS-485: Samsung-T, Samsung-E, Pelco-D, Pelco-P, Panasonic, Bosch, Honeywell, Vicon, AD			
<b>Environmental</b>				
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / Less than 90% RH			
<b>Electrical</b>				
Input Voltage/Current	Dual ( 24VAC±10% & 12VDC±10% )	12VDC±10%	Dual ( 24VAC±10% & 12VDC±10% )	12VDC±10%
Power Consumption	Max. 6.1W	Max. 4.7W	Max. 6.1W	Max. 4.7W
<b>Mechanical</b>				
Color / Material	Black, Silver / Aluminium			
Dimension (WxHxD)	67.6 x 67.6 x 142.5mm (2.66"x2.66"x5.61") excluding projections	67.6 x 67.6 x 118.5mm (2.66"x2.66"x4.67") excluding projections	67.6 x 67.6 x 142.5mm (2.66"x2.66"x5.61") excluding projections	67.6 x 67.6 x 118.5mm (2.66"x2.66"x4.67") excluding projections
Weight	500g (1.10lb)	410g (0.90lb)	500g (1.10lb)	410g (0.90lb)

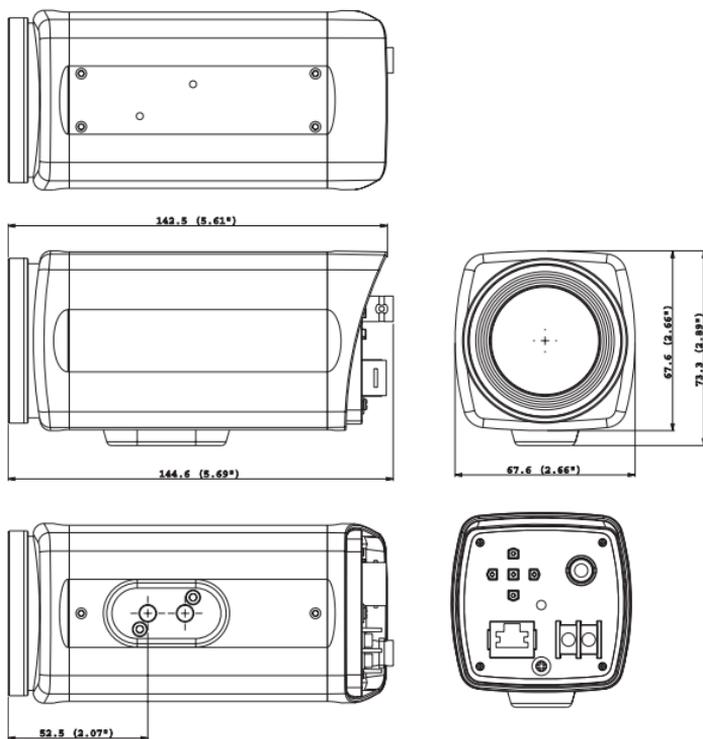
※ The specification for this product may change without prior notice for product improvement.

## DIMENSIONS

<SCZ-3370>

Unit : mm (Inches)

● SPECIFICATIONS



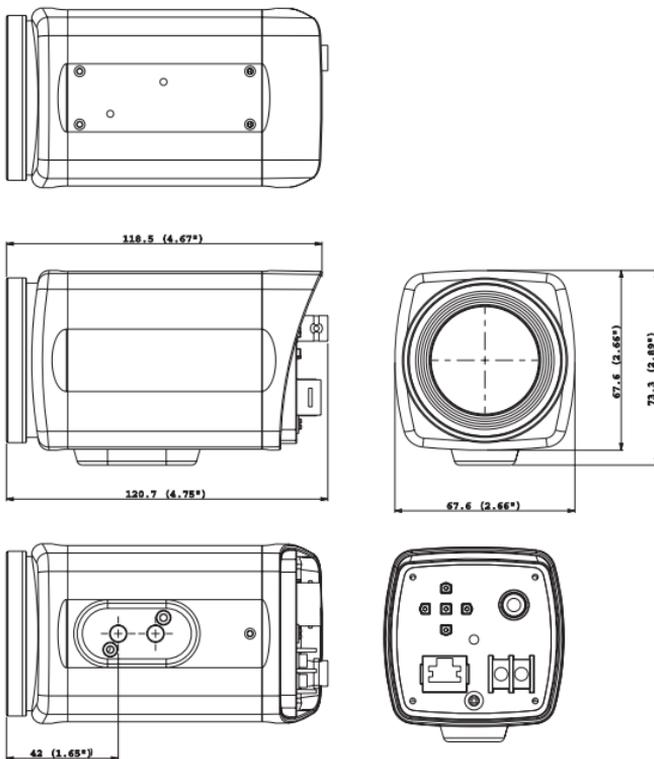
English\_41

# specifications

## DIMENSIONS

<SCZ-3370D>

Unit : mm (Inches)



**MEMO**

# SAMSUNG-T Protocol Command Description

## SAMSUNG-T PROTOCOL COMMAND DESCRIPTION

Command Name		Byte1	Byte2	Byte3	Byte4
Command Name	Command Packet	STX	CAM ID	HOST ADDR	CAM ID
	Return Packet	STX	CAM ID	HOST ADDR	RESERVED
	Checksum	CHECKSUM CALCULATION : UNARY OPERATION OF SUMMATION FROM BYTE2 TO BYTE9. EX) CHECKSUM = ~ (BYTE2+BYTE3+...+BYTE8+BYTE9);			
Reset	Function	Reset all data to factory default value.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
Focus Far	Function	Move focus lens to far direction.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
Focus Near	Function	Move focus lens to near direction.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
Zoom Wide	Function	Move zoom lens to wide direction.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
Zoom Tele	Function				
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
ZOOM Direct	Function				
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
	Parameter	P1, P2 : OPTICAL ZOOM = 0000h~064Dh P3 : DIGITAL ZOOM = ((256*10)/Ratio)-1 EX) D-ZOOM 1.1x : P3=E7h = ((256*10)/11)-1, Ratio 11 means 1.1x. D-ZOOM 2.0x : P3=7Fh = ((256*10)/20)-1, Ratio 20 means 2.0x.			

	Byte4   Byte5	Byte 6	Byte7	Byte8	Byte9	Byte10	Byte11
DDR	CAMMAND	DATA3	DATA4	DATA5	DATA6	ETX	CHECKSUM
DDR	RESPONSE	DATA3	DATA4	DATA5	DATA6	ETX	CHECKSUM

DDR	00Fh	00h	00h	00h	00h	AFh	CHECK SUM
DDR	00Fh	00h	00h	00h	00h	AFh	CHECK SUM

DDR	0100h	00h	00h	00h	00h	AFh	CHECK SUM
DDR	0100h	00h	00h	00h	00h	AFh	CHECK SUM

DDR	0200h	00h	00h	00h	00h	AFh	CHECK SUM
DDR	0200h	00h	00h	00h	00h	AFh	CHECK SUM

DDR	0040h	00h	00h	00h	00h	AFh	CHECK SUM
DDR	0040h	00h	00h	00h	00h	AFh	CHECK SUM

DDR	0020h	00h	00h	00h	00h	AFh	CHECK SUM
DDR	0020h	00h	00h	00h	00h	AFh	CHECK SUM

DDR	00FFh	P1	P2	P3	00h	AFh	CHECK SUM
DDR	00FFh	P1	P2	P3	00h	AFh	CHECK SUM

# SAMSUNG-T Protocol Command Description

AF Stop	Function	Stop zoom & focus lens moving.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
One push AF	Function	Unconditionally execute auto focus.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
User Preset Save	Function	Save current user preset configuration information.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
	Parameter	P1 : 00h(USER PRESET 1) ~ 80h(USER PRESET 128)			
User Preset Exec.	Function	Execute selected user preset.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
	Parameter	P1 : 00h(USER PRESET 1) ~ 80h(USER PRESET 128)			
User Preset Clear	Function	Clear selected user preset.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
	Parameter	P1 : 00h(USER PRESET 1) ~ 80h(USER PRESET 128)			
OSD Menu On/Off	Function	Display OSD menu on the screen. Clear OSD menu and save current menu setup.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
	Parameter	P1 : 00h = ON 01h = OFF			
OSD Menu Up	Function	Move OSD arrow to down.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0

DR	0000h	00h	00h	00h	00h	AFh	CHECK SUM
DR	0000h	00h	00h	00h	00h	AFh	CHECK SUM

DR	0045h	00h	00h	00h	00h	AFh	CHECK SUM
DR	0045h	00h	00h	00h	00h	AFh	CHECK SUM

DR	0003h	P1	00h	00h	00h	Afh	CHECK SUM
DR	0003h	P1	00h	00h	00h	Afh	CHECK SUM

DR	0007h	P1	00h	00h	00h	Afh	CHECK SUM
DR	0007h	P1	00h	00h	00h	Afh	CHECK SUM

DR	0005h	P1	00h	00h	00h	Afh	CHECK SUM
DR	0005h	P1	00h	00h	00h	Afh	CHECK SUM

DR	00B1h	P1	00h	00h	00h	Afh	CHECK SUM
DR	00B1h	P1	00h	00h	00h	Afh	CHECK SUM

DR	0008h	00h	00h	00h	00h	AFh	CHECK SUM
DR	0008h	00h	00h	00h	00h	AFh	CHECK SUM

# SAMSUNG-T Protocol Command Description

OSD Menu Down	Function	Move OSD arrow to down.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
OSD Menu Left	Function	Move OSD arrow to left.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
OSD Menu Right	Function	Move OSD arrow to right.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
OSD Menu Set	Function	Move to inside menu			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0
OSD Menu ESC	Function	Move to upper menu.			
	Command Packet	A0h	CAM ID	HOST ADDR	0
	Return Packet	A0h	CAM ID	HOST ADDR	0

DR	0010h	00h	00h	00h	00h	AFh	CHECK SUM
DR	0010h	00h	00h	00h	00h	AFh	CHECK SUM

DR	0004h	00h	00h	00h	00h	AFh	CHECK SUM
DR	0004h	00h	00h	00h	00h	AFh	CHECK SUM

DR	0002h	00h	00h	00h	00h	AFh	CHECK SUM
DR	0002h	00h	00h	00h	00h	AFh	CHECK SUM

DR	0100h	00h	00h	00h	00h	AFh	CHECK SUM
DR	0100h	00h	00h	00h	00h	AFh	CHECK SUM

DR	0200h	00h	00h	00h	00h	AFh	CHECK SUM
DR	0200h	00h	00h	00h	00h	AFh	CHECK SUM

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