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VAN 05. 09

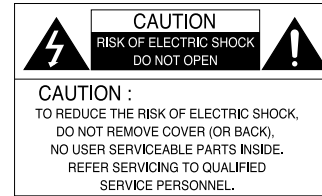
High Sensitivity, Day & Night
30X Zoom Color Camera

INSTRUCTION MANUAL

SDZ-330

About this manual

Please read this manual carefully before installing and using the camera. Be sure to keep the manual handy for later reference.



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.

CAUTION : 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.

Features



30x Optical Zoom

The built-in SDZ-330 optical zoom lens is a highly durable component. It features auto focus, auto iris, and zoom functions.



SV-III DSP Chip

SDZ-330 features a powerful DSP that can efficiently remove image noise, producing crisp and clear images even under low lighting conditions.



Fine Picture Quality under Ultra Low Lighting

The integrated SV-III DSP Chip and 1/4" high density CCD allows the user to capture bright, high-quality images under ultra low lighting conditions.

- 0.4 Lux in normal color mode.



Wide Dynamic Range (WDR)

The WDR feature offers powerful compensation performance and thus allows for crisp, clear, and perfect light contrast under any environment.



High Resolution

Featuring 520TV line horizontal resolution in color mode and 570TV line horizontal resolution in BW mode, the camera features Sony's Double Speed 410,000 pixel CCD and captures clear, noiseless, high-quality images.



Day & Night

The camera automatically determines whether it is night time or day time, selecting operating mode automatically. The camera operates in color mode during day light conditions and BW mode in night conditions for clearer identification.



Motion Detection

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.



Miscellaneous Functions

Other miscellaneous functions of the camera include privacy zone masking, digital zoom, line lock synchronization (INT/LL), freeze, horizontal inversion, and user-configured presets.



Control via OSD Menu and RS-485

The OSD menu and RS-485 pins allow for remote control of the camera.

The user can also directly control the lens using external control connection.



Warning

The camera requires regular maintenance.

Contact an authorized technician for maintenance and/or servicing.

Do not continue to use if malfunctioning.

Prolonged use of the camera in abnormal operating conditions (produces smoke, overheats, etc.) may result in a fire.

Do not install the camera on a surface that can not support it.

Installation on an unsuitable surface may cause the camera to fall and/or other hazards.

Do not handle the power cable with wet hands.

May result in an electric shock.

Do not disassemble the camera.

May result in a fire, electric shock, and/or other hazards.

Do not place the camera in the vicinity of inflammables.

May result in a fire and/or other hazards.

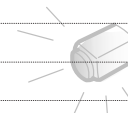
Correct Disposal of This Product (Waste Electrical & Electronic Equipment)



(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.

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Precautions

Do not install under extreme temperature conditions.



Use only under temperature conditions between -10°C and $+50^{\circ}\text{C}$. Provide good ventilation when using in high temperature conditions.

Do not install in high humidity environment.



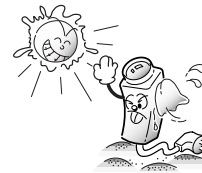
May lower image quality.

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



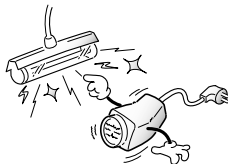
May cause a product malfunction.

Never keep the camera face to strong light directly.



May damage the CCD.

Do not install under unstable lighting conditions.



Severe lighting changes or flickering may hinder normal camera operation.

Avoid touching the camera lens.



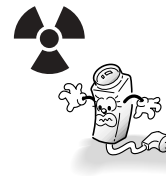
The lens is the most important component of the camera. Be careful not to smear it with fingerprints.

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



Wipe dry any liquids. Liquids may contain minerals that are corrosive to electronic components.

Do not expose the camera to radioactivity.



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.

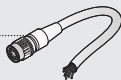
1. 30x Zoom Color Camera
SDZ-330



2. Instruction Manual



3. 6-Pin Connection Cable



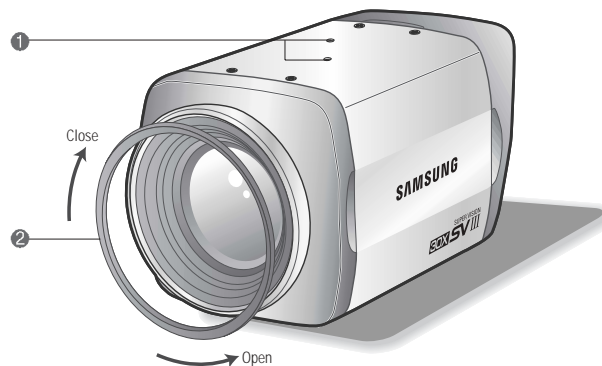
4. Front Cover Ring



5. Remote Controller (Optional)



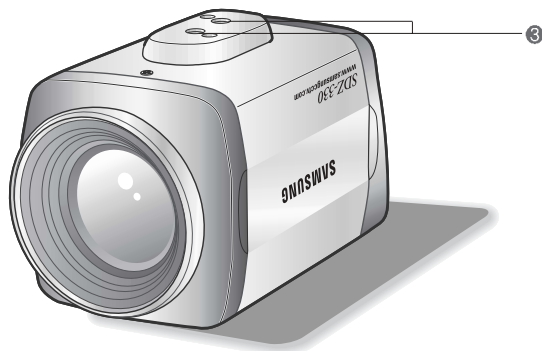
Top



- ① **Tripod Mounting Bracket Screw Hole**
Used to fix tripod mounting bracket on top of the camera.
- ② **Front Cover Ring**
Removable for replacement with a filter.

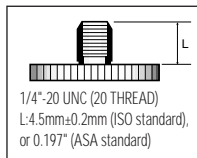
Overview

Bottom



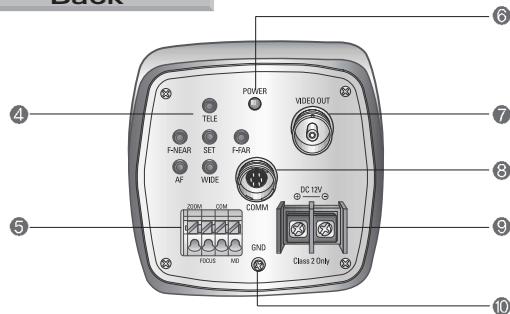
3 Tripod Mounting Hole

Used to install the camera on an optional tripod. The tripod must be equipped with screws with specifications shown on the right.



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.

Back



4 Key Buttons

- Wide buttons control zoom, focus, and auto focus functions.
 - WIDE button : To widen the view. (ZOOM OUT)
 - TELE button : To close in on a far object. (ZOOM IN)
 - F-NEAR button : To see a near object clearly.
 - F-FAR button : To see a far object clearly.
 - AF button : To activate auto focus just once.
- Pressing the 'SET' button locks the zoom control function of these buttons and prompts the main setup menu.



Notes

- The zoom position is saved after 5 seconds when you set zoom function.
- Main setup menu can be navigated using these buttons.
 - SET : To access the main setup menu.
 - UP (WIDE button) : To move the arrow indicator to up.
 - DOWN (TELE button) : To move the arrow indicator to down.
 - LEFT (F-NEAR button) : To move the arrow indicator to left.
 - RIGHT (F-FAR button) : To move the arrow indicator to right.

Overview

5 External Control Connector

Relates to the motion detection output signal.
Zoom and focus functions can be controlled using external signals.

6 Power LED

Illuminates when power is supplied.

7 Video Output Jack

Used to connect an external video monitor in jack.

8 Communication Control Connector

Used to connect the Remote Controller (Optional). Includes external 'SYNC' signal input pin, which is used for the line lock function.
Includes the RS-485 communication pin.

9 Power Input Terminal

Power supply terminal (DC12V \pm 10%).

10 Frame Ground Terminal

It is the GND terminal of the motion detection signal.

Connection

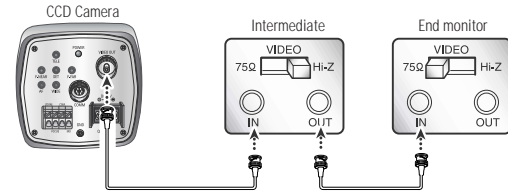
Connecting to Monitor

Connect Video Out Jack to the monitor's Video In jack as shown below.



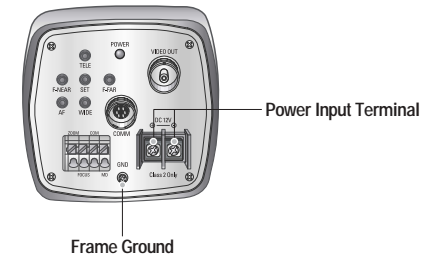
- Connection methods may vary depending on the video equipment. Please refer to the model specific instruction manual.
- Connect cables with the unit powered down.

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



Connecting to Power

Connect the power cable to the camera's Power In as shown in the figure below.



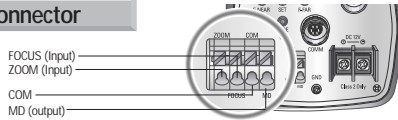
Notes

- Connect the power once the installation is complete.
- The wire is polarized. Match '+' and '-' terminals properly.
- Use a DC12V/500mA power source for SDZ-330.

Connection

Connecting to connection

External Control Connector



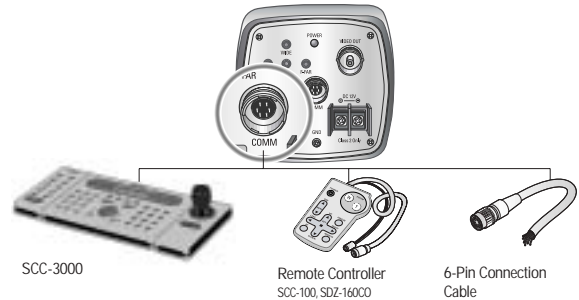
| Connector | Function | Signal Level | I/O |
|-----------|----------|-------------------------------------------------------------------------|-----|
| ZOOM | Tele | +6V--+12V COM | I |
| | Wide | COM -6V--12V | |
| FOCUS | Far | +6V--+12V COM | I |
| | Near | COM -6V--12V | |
| COM | | COM | - |
| MD | | +4.0V--+5.0V 0V 5+0.5sec There is no motion There is motion | O |

* MD (Motion Detection) Output Signal Level (less than 10mA)

* When using the MD function, the 'GND' should be connected to the frame ground.

Communication Control Connector

The camera can be controlled by using external controllers like a Remote controller. (RS485 Communication)

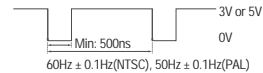


* Communication Control Connector Pin Description .

| Number | Name | Description | Number | Name | Description |
|--------|----------|------------------------|--------|--------------|------------------------|
| 1 | GND | - | 4 | TRX + | RS-485 Communication |
| 2 | EXT.SYNC | External 'SYNC' Signal | 5 | TRX - | RS-485 Communication |
| 3 | GND | - | 6 | Output Power | Remote Controller only |



* EXT. SYNC



* Communication Setting can set the communication setting as shown in the table below. When you use to connect SCC-100 or SCC-3000, the default sets for SCC-100.

| ITEM | SCC-100 | SCC-3000 |
|---------------|---------|---------------------------|
| MODE | Serial | Serial |
| Data Bit | 8 bit | 8 bit |
| Bit/Sec | 9600bps | 9600bps |
| Parity | EVEN | NON |
| CAM ID NO. | 0 | 1-255 |
| RETURN PACKET | ENABLE | See the SCC-3000 settings |



Notes

- Contact an authorized technician for inspection.

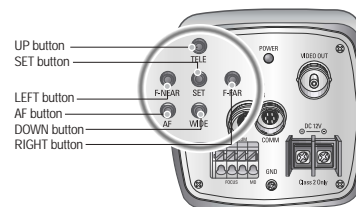
Operating Your Camera

Menu Configuration

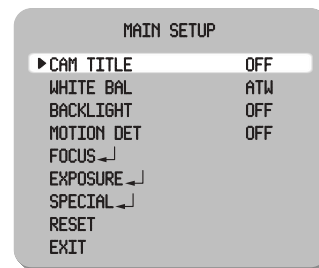
| | | | | |
|-----------------|-------------|-----------------|-----------------|-----------------|
| MAIN SETUP MENU | CAM TITLE | • OFF | • ON | |
| | WHITE BAL. | • ATW | • AWC | • MANUAL |
| | BACKLIGHT | • OFF | • WDR | |
| | MOTION DET. | • OFF | • ON | |
| | FOCUS | • MODE | • ZOOM TRK MODE | |
| | | • ZOOM TRK SPD | • D-ZOOM | • DISP ZOOM MAG |
| | | • ZOOM INIT POS | • LENS INIT | • END |
| | EXPOSURE | • BRIGHTNESS | • IRIS | • SHUTTER |
| | | • AGC | • SSNR | • SENS-UP |
| | | • END | | |
| | SPECIAL | • USER PRESET | • PRIVACY | • DAY/NIGHT |
| | • SYNC | • FREEZE | • H-REV | |
| | • V-REV | • IMAGE ADJ | • COMMUNICATION | |
| | • END | | | |
| RESET | | | | |
| EXIT | | | | |

Menu Setup

Use the six buttons on back of the camera.

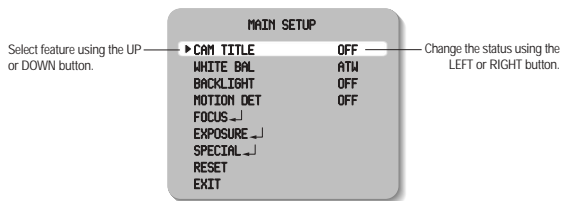


1. Press the SET button to access the main setup mode.
 - Main setup menu is displayed on the monitor screen.



2. Select the desired feature using the UP or DOWN button.
 - Each pressing of the UP or DOWN button moves the indicator to the next or previous feature.
 - Move the arrow indicator to the desired feature item.

Operating Your Camera



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.



Notes

- Features marked with a ↵ have an accessible submenu.
- Access the submenu by pressing the SET button.

Cam Title

Use this feature to designate a name for the camera, which will display on the monitor screen.

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 LEFT or RIGHT button.



Notes

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



3. Press SET button.



4. You can enter up to 20 characters.

- ① Move the cursor to the character entry field using the LEFT or RIGHT button.
- ② Use UP, DOWN, LEFT, and RIGHT buttons to select a desired character.



- ③ Press the SET button to confirm selection of the blinking character. The character is then saved, and the cursor in the entry field moves to the next position.
- ④ Repeat steps ① through ③ until the desired name has been entered.



Notes

• Correcting Mistakes

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

Operating Your Camera

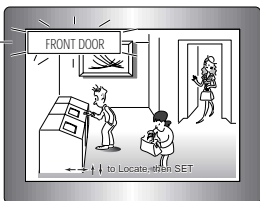


5. Select on screen position of the CAM TITLE.

- 1 Move the cursor to 'POS' and press SET button.



- 2 The CAM TITLE is displayed on the top-left of the monitor screen.
(Default position)



- 3 Select the position by using the 4-directional buttons, then press the SET button to confirm the position.

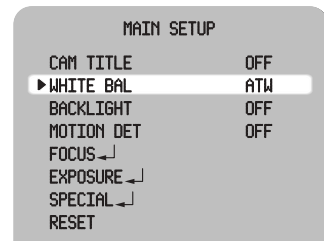


6. When completed, move the cursor to 'END' and press SET button.

White Balance Control

Your camera provides three 'WHITE BAL' control modes for your choosing in adjusting the white balance.

1. Press the SET button to access the main setup menu and move the indicator to 'WHITE BAL' using the UP or DOWN button.
2. Set 'WHITE BAL' using the LEFT or RIGHT button.



The three white balance control modes are as follows :

- ▶ **ATW (Auto Tracking White Balance):** When color temperature is 1800 ~ 10500K, select this mode.
- ▶ **AWC (Auto White balance Control):** The white balance is automatically adjusted in a specific environment. In order to obtain the best result, press the SET button while the camera focuses on white paper. If the environment including the light source is changed, you have to adjust the white balance again.
- ▶ **Manual:** To fine adjust, select the Manual mode. You can increase or decrease the red or blue factor while monitoring the difference on the screen. Set to 'MANUAL' mode and press the SET button. Increase or decrease the value for red(R-Gain) and blue(B-Gain), watching the color of the picture, and press the SET button when you obtain the best color.

Operating Your Camera



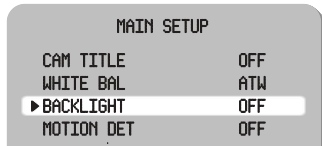
Notes

- Proper White Balance may not be obtained under the following conditions.
 - ① When the scene contains mostly high color temperature object, such as a blue sky or sunset.
 - ② When the scene is dim.
 - ③ If your camera directly faces a fluorescent lamp or is used in an environment of varying lighting conditions.

Backlight

The built-in SVIII DSP chip provides intelligent light level control to overcome the severe 'BACKLIGHT' conditions.

1. Press the SET button to display the main setup menu and move the arrow indicator to 'BACKLIGHT' using the UP or DOWN button.



2. SET 'BACKLIGHT' to the desired mode using the LEFT or RIGHT button.

- ☉ **WDR**: Compensates for scenes simultaneously containing bright and dark elements.
- ☉ **OFF**: Deactivation



WDR



OFF

3. Select the 'WDR' mode and Press the SET button
 - You can adjust the LIMIT for WDR



You can select the level(LOW,MIDDLE,HIGH). WDR sensitivity is increased or decreased.

4. When completed, press the SET button.



Notes

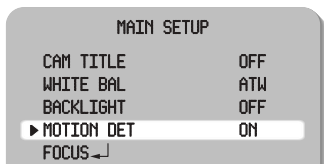
- The WDR mode cannot be used if 'Shutter of Exposure Menu' is set to 'MANUAL'.
- The following phenomenon may occur when operating under the WDR mode. In such event, do not continue use under the WDR mode.
 - ① Unnatural color change or screen phenomenon.
 - ② Screen noise on bright elements.
- WDR performance vary on bright on screen elements. Adjust the camera angle accordingly when installing the camera to compensate.
- Making changes to the WDR LIMIT may result in unnatural screen phenomenon.

Motion Detection

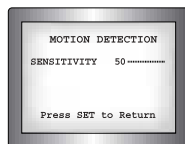
alert signal upon detecting motion. When used in conjunction with an external alarm, the user can receive MD alerts. This feature is useful when monitoring several screens simultaneously.

1. Press the SET button to access the main setup menu and move the indicator to 'MOTION DET' using the UP or DOWN button.
2. Set 'MOTION DET' to ON using the LEFT or RIGHT button.

Operating Your Camera



1 Press the SET button.



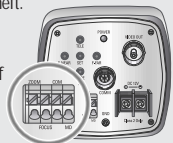
2 Increase or decrease detection sensitivity by setting the 'SENSITIVITY' value.
· When completed, press SET button.



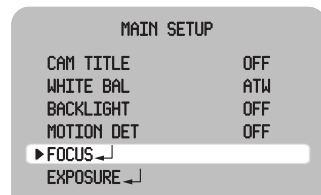
Notes

Tips on Using the Motion Detection Feature

- Once the sensitivity level has been set, perform a test to verify proper operation of the feature.
- The feature may not function properly under flickering light conditions.
- The camera interprets sudden changes in lighting and subsequent change in brightness of an object as motion.
- With the feature enabled, other algorithms may require additional time to operate than usual.
- This system does not guarantee prevention of fire or theft. The manufacturer shall not be held responsible for any accident or damage incurred.
- Connect an external alarm device to MD Out on back of the camera.



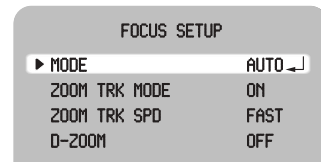
FOCUS



1. Press the SET button to access the main setup menu and then position the indicator over FOCUS using the UP or DOWN button.

2. Press the SET button.

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



• **AUTO**: Select AUTO and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the UP or DOWN button while verifying the changes on screen. Enabling D-ZOOM (ON) means that digital zoom will activate once optical zoom ends. Focus is automatically adjusted with moving zoom.



Operating Your Camera

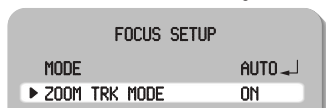
- **ONE PUSH** : Focus is automatically adjusted just once, after zoom position is changed. Select 'ONE PUSH' and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the directional buttons while verifying the changes on screen. Press the SET button once desired image quality is obtained.



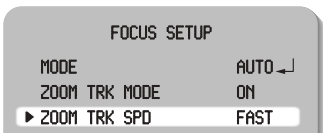
- **MANUAL** : Select 'MANUAL' and press the SET button to confirm. Increase or decrease optical zoom (ZOOM) or digital zoom (D-ZOOM) positions using the directional buttons while verifying the changes on screen. Press the SET button once desired image quality is obtained. Focus can be manually adjusted, independent of moving zoom.



- **ZOOM TRK MODE**: You can select to use 'ZOOM TRK MODE'. Move the arrow indicator to 'ZOOM TRK MODE' using UP or DOWN button. Set 'ZOOM TRK MODE' to on using LEFT or RIGHT button.



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



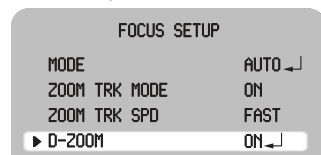
- **FAST**: To move zoom fast.
- **SLOW**: To move zoom slowly.



Notes

- The 'ZOOM TRK SPEED' mode cannot be used if 'MODE' is set to 'AUTO' and 'ZOOM TRK MODE' is 'ON'.

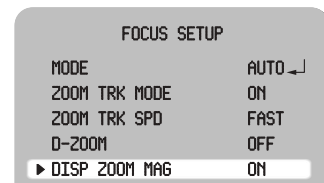
- **D-ZOOM**: Configure magnification limit from x1, x2, x4, or x8 using this feature. Position the indicator over 'D-ZOOM' using the UP or DOWN button. Set 'D-ZOOM' to 'ON' and press the SET button to confirm.



- Set 'ZOOM LIMIT' to the desired level using the LEFT or RIGHT button.

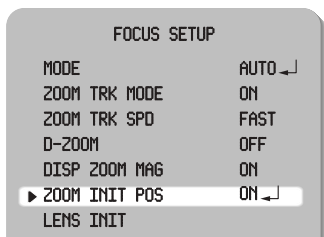


- **DISP ZOOM MAG**: Use this feature to display the current zoom magnification level on screen. Position the indicator over 'DISP ZOOM MAG' using the UP or DOWN button. Then set to ON using the LEFT or RIGHT button.

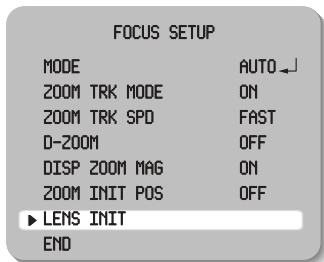


Operating Your Camera

- ➊ **ZOOM INIT POS:** Moves to the controlled ZOOM position when the power is turned on and is a function of the initial ZOOM position control.

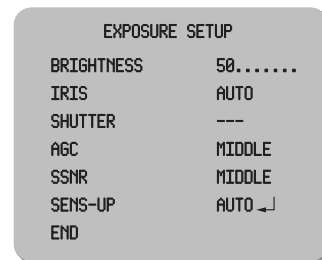


- ➋ **LENS INIT:** Use this feature to initialize the lens. Position the indicator over LENS INIT, using the UP or DOWN button. Press the SET button to confirm.



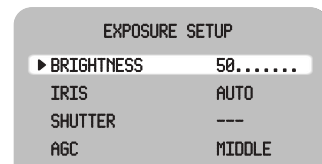
- ➌ **END:** To revert to the main setup menu.

EXPOSURE



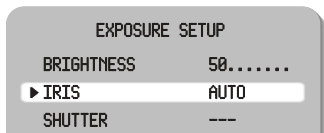
1. Press the SET button to access the main setup menu and then position the indicator over 'EXPOSURE' using the UP or DOWN button.
2. Press the SET button to confirm.

- ➍ **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.



Operating Your Camera

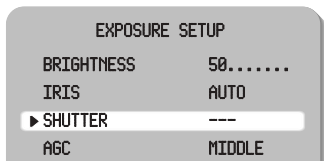
- **IRIS:** Set 'IRIS' to 'AUTO' or 'MANUAL'. Position the indicator over 'IRIS' using the UP or DOWN button and then select the desired iris mode using the LEFT or RIGHT button.



- **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.
 1. 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.



- **A.FLK (NTSC: 1/100, PAL: 1/120):** Flicker-free mode
- **ESC:** Automatic shutter speed setting (optimal)
- **MANUAL:** Manual shutter speed setting

2. If you choose 'MANUAL', select the optimal shutter speed.
 - 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 128x).
 - Verify changes made to the shutter speed by referencing to changes in on screen brightness.



3. Press the SET button to complete.



Notes

- Set the 'WDR' mode under the Backlight menu to OFF for maximum A.FLK performance. 'A.FLK' will not function properly otherwise.
- Image may become unstable if the camera is set to 'ESC' mode and faces a strong fluorescent light.
- Under 'ESC' mode, the brightness can be adjusted using the LEFT or RIGHT button.
- The WDR feature is not available under MANUAL mode.
- Sens-up is disabled under 'MANUAL' or 'A.FLK' mode.

Operating Your Camera

AGC (Auto Gain Control): For brighter images.

1. Position the indicator over 'AGC' using the UP or DOWN button.
2. Set 'AGC' to the desired mode using the LEFT or RIGHT button.

- **HIGH** : Wide range gain value adjustment
- **MIDDLE** : Middle range gain value adjustment
- **LOW** : Narrow range gain value adjustment
- **OFF** : Disabled

| EXPOSURE SETUP | |
|----------------|---------|
| BRIGHTNESS | 50..... |
| IRIS | AUTO |
| SHUTTER | --- |
| ▶ AGC | MIDDLE |

SSNR(Samsung Super Noise Reduction): On screen noise reduction.

1. Position the indicator over 'SSNR' using the UP or DOWN button.
2. Set 'SSNR' to the desired mode using the LEFT or RIGHT button.

- **LOW** : Low noise reduction
- **MIDDLE** : Medium noise reduction
- **HIGH** : High noise reduction
- **OFF** : Disabled

| EXPOSURE SETUP | |
|----------------|---------|
| BRIGHTNESS | 50..... |
| IRIS | AUTO |
| SHUTTER | --- |
| AGC | MIDDLE |
| ▶ SSNR | MIDDLE |



Notes

- Changing 'AGC' setting from LOW to HIGH results in greater sensitivity, as well as on screen noise.
- Setting 'AGC' to OFF locks 'SSNR' configuration.

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

| EXPOSURE SETUP | |
|----------------|---------|
| BRIGHTNESS | 50..... |
| IRIS | AUTO |
| SHUTTER | --- |
| AGC | MIDDLE |
| SSNR | MIDDLE |
| ▶ SENS-UP | AUTO ← |
| END | |



Notes

- Once 'AUTO' mode is set, the user can configure Sens-Up limit by increasing /decreasing the shutter speed (e.g.: x2,...,x32, x64,..., x128).
- Enabling Sens-Up increases camera sensitivity and may result in additional noise and/or other phenomena. This is normal.

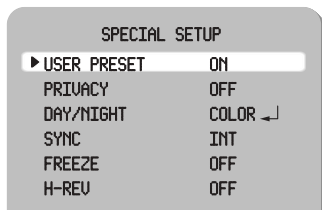
Operating Your Camera

SPECIAL

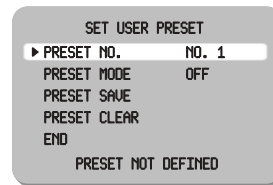


1. Press the SET button to access the main setup menu and then position the indicator over 'SPECIAL' using the UP or DOWN button.
2. Press the SET button to confirm.

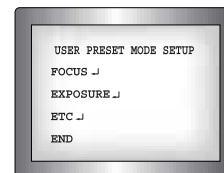
- **USER PRESET:** Preset user-designated configurations using this feature. Position the indicator over 'USER PRESET' using the UP or DOWN button and then set to 'ON' using the LEFT or RIGHT button. Press the SET button to confirm.



- **PRESET NO:** Up to eight different preset configurations are supported.

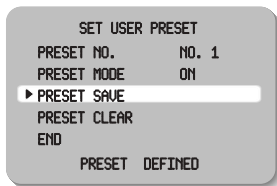


- **PRESET MODE:** Configure initial settings under FOCUS, EXPOSURE, etc.

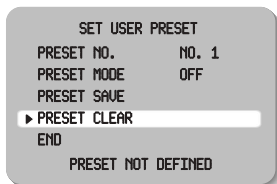


Operating Your Camera

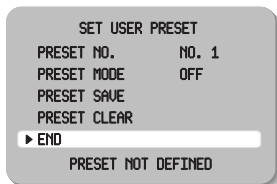
- **PRESET SAVE:** Save configured preset.



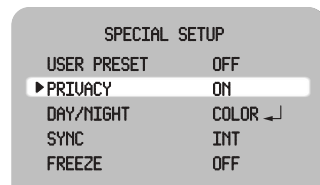
- **PRESET CLEAR:** Clear configured preset.



- **END:** Revert to the SPECIAL SETUP menu.



- **PRIVACY:** Mask privacy area using this feature. The mask area expand/contract upon the zoom position.



- **GROUP SEL** : Choose up to four groups. Each group can consist of eight mask areas.
- **MASK COLOR** : Select desired mask color(BLACK, BLUE, GREEN, WHITE).
- **AREA SEL** : Configure eight mask areas.
- **AREA MODE** : Mask area display.
- **TOP** : To move the mask area up.
- **BOTTOM** : To move the mask area down.
- **LEFT** : To move the mask area left.
- **RIGHT** : To move the mask area right.



Operating Your Camera

☉ **DAY/NIGHT**: Select from COLOR, BW or AUTO modes.

| SPECIAL SETUP | |
|---------------|---------|
| USER PRESET | OFF |
| PRIVACY | OFF |
| ▶ DAY/NIGHT | COLOR ↵ |
| SYNC | INT |

- **COLOR** : Color mode.
- **BW** : BW mode.
- **AUTO** : The camera automatically detects lighting conditions and selects the mode accordingly.

☉ **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.

| SPECIAL SETUP | |
|---------------|---------|
| USER PRESET | OFF |
| PRIVACY | OFF |
| DAY/NIGHT | COLOR ↵ |
| ▶ SYNC | INT |
| FREEZE | OFF |
| H-REU | OFF |

- **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.



Notes

- For NTSC models, the line-lock mode can be used if the external SYNC signal frequency is at 60Hz.
 - For PAL models, the line-lock mode can be used if the external SYNC signal frequency is at 50Hz.
- ☉ **FREEZE**: Use this feature to freeze capture an image. Position the indicator over 'FREEZE' using the UP or DOWN button and then set to 'ON' using the LEFT or RIGHT button. Press the SET button to confirm.

| SPECIAL SETUP | |
|---------------|---------|
| USER PRESET | OFF |
| PRIVACY | OFF |
| DAY/NIGHT | COLOR ↵ |
| SYNC | INT |
| ▶ FREEZE | ON |
| H-REU | OFF |

☉ **H-REV**: Use this feature to horizontally inverse the screen. Position the indicator over 'H-REV' using the UP or DOWN button and then set to ON using the LEFT or RIGHT button. Press the SET button to confirm.

| SPECIAL SETUP | |
|---------------|---------|
| USER PRESET | OFF |
| PRIVACY | OFF |
| DAY/NIGHT | COLOR ↵ |
| SYNC | INT |
| FREEZE | OFF |
| ▶ H-REV | ON |
| U-REU | OFF |

Operating Your Camera

V-REV: Use this feature to vertically inverse the screen. Position the indicator over 'V-REV' using the UP or DOWN button and then set to 'ON' using the LEFT or RIGHT button. Press the SET button to confirm.

| SPECIAL SETUP | |
|---------------|---------|
| USER PRESET | OFF |
| PRIVACY | OFF |
| DAY/NIGHT | COLOR ↙ |
| SYNC | INT |
| FREEZE | OFF |
| H-REV | OFF |
| ▶ U-REV | ON |
| IMAG ADJ ↙ | |

IMAGE ADJ: Includes image quality or special function factors.

- **TONE** : Increasing this value increases the overall brightness.
- **SHARPNESS** : Increasing this value sharpens object edges. Too high of a setting, however, produces noise and may obscure the image.
- **COLOR** : Adjusting this value affects the chroma level only; the burst level is unaffected.

COMMUNICATION: Use this feature to select communication protocol (refer to p.48–p.53 for details). Position the indicator over 'COMMUNICATION' using the UP or DOWN button.

| SET COMMUNICATION | |
|-------------------|--------|
| CAM ID NO. | 0..... |
| CAM ID DISP | ON |
| BAUD RATE | 9600 |
| UART MODE | 8-E-1 |
| RETURN PACKET | ENABLE |

- **CAM ID NO.** : Assign an ID number to the camera (1 to 255). Identification number zero is used for Remote controller setup.
- **CAM ID DISP** : Displays camera ID on top left corner of the screen.
- **BAUD RATE** : Configure baud rate from 9600, 19200, or 38400bps.
- **UART MODE** : Configure parity bit to NON, EVEN, or ODD. Data bit is set to 8bit, and stop bit to 1bit. Set the UART MODE to EVEN if using the Remote Controller.
- **RETURN PACKET** : Used to transfer a packet.

END: evert back to the USER PRESET menu.

RESET

To reset your camera to factory default condition.

EXIT

To finish setup menu.

Troubleshooting

Refer to the following table if you are experiencing trouble with your camera. Contact an authorized technician if the table does not provide you with a solution to the trouble.

| Problem | Solution |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No display | <ul style="list-style-type: none"> • Check the power cable and the wiring between the camera and the monitor. • Ensure proper video cable connection (Video Out Jack). |
| Dim display | <ul style="list-style-type: none"> • The lens could be dirty. Clean with a soft, clean piece of cloth. • Adjust monitor settings. • Adjust camera position if exposed to a strong light source. |
| Dark display | <ul style="list-style-type: none"> • Adjust the monitor's contrast level. • Set the intermediate device, if in use, to 75Ω/ Hi-z (refer to p.15). |
| The camera is not functioning properly and its surface is hot | <ul style="list-style-type: none"> • Check the power source for compliance with specifications. |
| Motion Detection feature is not active. | <ul style="list-style-type: none"> • Ensure that the feature is set to ON. • Check the SENSITIVITY level. |
| Uneven colors | <ul style="list-style-type: none"> • Adjust and configure WHITE BAL. |

| Problem | Solution |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Flickering | <ul style="list-style-type: none"> • The camera may be facing the sun or a fluorescent light. Adjust the position of the camera. |
| Can't select LL mode | <ul style="list-style-type: none"> • The camera may be connected to a DC power source. Connect to an AC power source. |
| LL is not function properly. | <ul style="list-style-type: none"> • Check external SYNC signal frequency (should be 60Hz for NTSC, 50Hz for PAL). |

Specifications



| | | NTSC (SDZ-330N) | PAL (SDZ-330P) |
|------------------------------------------------|--------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|
| P O W E R | Input Voltage | DC12V (±10%) | |
| | Input Current | 300 mA : Steady-state | |
| | | 450 mA : Max. (Zoom, Focus, Day&night motor operating) | |
| | Power Consumption | 3.6 W : Steady-state | |
| C C D | Size | 1/4 inch, Vertical double density 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) |
| O P T I C S | Optics | 30X, f=3.3 to 99.0mm (F 1.6 to 3.2) | |
| | Min. Focus Distance | 1000mm | |
| | D. ZOOM | X2, X4, X8 | |
| | Angle Field of view | H : Appr. 58.0°(Wide) to 2.22°(Tele) V : Appr. 44.8°(Wide) to 1.68°(Tele) | |
| S Y N C. | Scanning System | 2:1 Interlace | |
| | Synchronization | Internal / Line Lock | |
| | Frequency | Horizontal: 15.734 KHz/Vertical : 59.94 Hz | Horizontal: 15.625 KHz/Vertical : 50.00 Hz |
| E L E C T R I C A L | Camera Title | ON/OFF (Displayed 20 characters) | |
| | Camera ID | 255 ID Selectable | |
| | Resolution | 520 TV Lines(Min.) : Color 570 TV Lines(Min.) : B/W | |
| | Video Output | CVBS : 1.0Vp-p/75Ω | |
| | S/N (Y signal) | 50 dB (AGC Off, Weight ON) | |
| | Min. Illumination | 0.4Lux : Color 0.08Lux : B/W | |
| | WDR | 52dB | |
| | Day & Night | AUTO/MANUAL(COLOR, B/W) (ICR type) | |
| | Gain Control | Low, Middle, High, OFF Selectable | |
| | White Balance | ATW/AWC/Manual (1800°K ~ 10,500°K) | |
| | Electronic shutter speed | AUTOMANUAL (X128 ~ 1/60sec ~ 1/120,000sec) Sens-up Limit is selectable | AUTOMANUAL (X128 ~ 1/60sec ~ 1/120,000sec) Sens-up Limit is selectable |
| | O.S.D | Built-In | |
| | Motion Detection | ON/OFF (output via Terminal) | |
| | SSNR | Low, Middle, High, Off | |
| | Focus | Auto / Manual / One Push | |
| | Zoom Movement Speed | 5.2 Sec : Wide to Tele | 5.4 Sec : Wide to Tele |
| | Lens Initialize | Built-In | |
| | Preset | 8-Positions | |
| | Privacy Function | ON/OFF(32 Programmable Zone/ 8 Programmable Zone per Screen) | |

| | | NTSC (SDZ-330N) | PAL (SDZ-330P) |
|------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------|----------------|
| E L E C T R I C A L | FLIP | LEFT/RIGHT, UP/DOWN | |
| | FREEZE | On/Off | |
| | IRIS Control | Auto/Manual | |
| | Control Output | RS-485(9,600bps, 19,200bps, 384,000bps Selectable) / External Control by Voltage(ZOOM, FOCUS) | |
| | Operating Temperature/Humidity | -10°C to +50°C / 20% to 80% RH | |
| | Storage Temperature/Humidity | -20°C to +60°C / 20% to 95% RH | |
| | Dimension | 67.4(W) x 67.6(H) x 120(D)mm (Without Tripod Base) | |
| | Weight | 450g | |
| | Option | Remote Controller(RS-485 type) | |

Protocol Command Description

| Command Name | Byte1 | Byte2 | Byte3 | Byte4 Byte5 | Byte6 | Byte7 | Byte8 | Byte9 | Byte10 | Byte11 | |
|------------------|----------------|-------------------------------------------------------------------------------|--------|----------------|----------|-------|-------|-------|--------|--------|-----------|
| | Function | Execution Description. | | | | | | | | | |
| | Command Packet | STX | CAM ID | HOST ADDR | Command | Data3 | Data4 | Data5 | Data6 | ETX | CHECK SUM |
| | Return Packet | STX | CAM ID | HOST ADDR | Response | Data3 | Data4 | Data5 | Data6 | ETX | CHECK SUM |
| Reset | Function | Reset all data to factory default value. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 000Fh | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 000Fh | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| Focus Far | Function | Move focus lens to far direction. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0100h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0100h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| Focus Near | Function | Move focus lens to near direction. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0200h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0200h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| Zoom Wide | Function | Move zoom lens to wide direction. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0040h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0040h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| Zoom Tele | Function | Move wide lens to tele direction. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0020h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0020h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| AF Stop | Function | Stop zoom & focus lens moving. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0000h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0000h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| One push AF | Function | Unconditionally execute auto focus. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0045h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0045h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| ZOOM Direct | Function | Move to ZOOM position that is set up by users | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 00FFh | P1 | P2 | P3 | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 00FFh | P1 | P2 | P3 | 00h | AFh | CHECK SUM |
| | Parameter | P1, P2 : ZOOM position set (0000h~06EAh) P3 : D-ZOOM position set(00h~03h) | | | | | | | | | |
| USER PRESET Save | Function | Save current user preset configuration information. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0003h | P1 | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0003h | P1 | 00h | 00h | 00h | AFh | CHECK SUM |

Protocol Command Description

| | | | | | | | | | | | |
|-------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------|-------|-----|-----|-----|-----|-----|-----------|
| | Parameter | P1: 00h = USER PRESET 1 01h = USER PRESET 2 02h = USER PRESET 3 03h = USER PRESET 4 04h = USER PRESET 5 05h = USER PRESET 6 06h = USER PRESET 7 07h = USER PRESET 8 | | | | | | | | | |
| USER PRESET EXEC. | Function | Execute selected user preset. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0007h | P1 | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0007h | P1 | 00h | 00h | 00h | AFh | CHECK SUM |
| | Parameter | P1: 00h = USER PRESET 1 01h = USER PRESET 2 02h = USER PRESET 3 03h = USER PRESET 4 04h = USER PRESET 5 05h = USER PRESET 6 06h = USER PRESET 7 07h = USER PRESET 8 | | | | | | | | | |
| 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 | 00B1h | P1 | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 00B1h | P1 | 00h | 00h | 00h | AFh | CHECK SUM |
| | Parameter | P1: 00h = ON 01h = OFF | | | | | | | | | |
| OSD Menu Up | Function | Move OSD arrow to up. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0008h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0008h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |

Protocol Command Description

| | | | | | | | | | | | |
|----------------|----------------|--------------------------|--------|-----------|-------|-----|-----|-----|-----|-----|-----------|
| OSD Menu Down | Function | Move OSD arrow to down. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0010h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0010h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| OSD Menu Left | Function | Move OSD arrow to left. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0004h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0004h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| OSD Menu Right | Function | Move OSD arrow to right. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0002h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0002h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| OSD Menu Set | Function | Move to inside menu | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0100h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0100h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| OSD Menu ESC | Function | Move to upper menu. | | | | | | | | | |
| | Command Packet | A0h | CAM ID | HOST ADDR | 0200h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |
| | Return Packet | A0h | CAM ID | HOST ADDR | 0200h | 00h | 00h | 00h | 00h | AFh | CHECK SUM |

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, 641-120

European Representative Name _____

European Representative Address _____

Equipment Type/Environment CCTV Camera

Model Name SDZ-330

Beginning Serial NO. S5900001

Year of Manufacture 2005. 9. 1

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 | <i>Young Taek, SON</i> | Signature |
| Full Name | YOUNG TAEK SON | Full Name |
| Position | QUALITY CONTROL MANAGER | Position |
| Place | CHANGWON, KOREA | Place |
| Date | 2005. 9. 1 | Date |

MEMO

Large empty rectangular box for additional notes or comments.