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VAN 05. 09

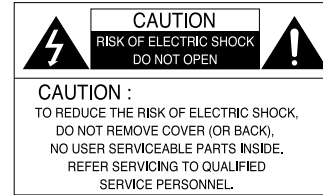
High Sensitivity, Day & Night
30X Zoom Color Camera

INSTRUCTION MANUAL

SDZ-330

About this manual

Before installing and using the camera, please read this manual carefully. Be sure to keep it 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 SDZ-330 built-in optical zoom lens is highly reliable. It features auto focus, auto Iris and zoom function.

SV-III DSP CHIP

SDZ-330 has powerful DSP that can remove image noise efficiently and it shows clear and obvious image under low illuminance.

Fine Picture in Ultra Lowillumination.

SV-III built-in DSP and 1/4 high density CCD allows bright and high quality images to be captured in ultra low light condition.
- 0.4 Lux in Normal Color Mode

Wide Dynamic Range(WDR)

SV-III DSP has Strong compensation performance in WDR.
So It always shows obvious, clear and perfect light contrast picture in any environment.

High Resolution

The horizontal resolution of 520TV lines at Color mode and 570TV lines at BW mode can be achieved by using a high density CCD having Double Speed 410,000 pixels SONY CCD, which provides clean, noiseless and reliable pictures.

Day & Night

The camera provides automatic mode change over by sensing day or night conditions. It can change color mode in the day condition for optimal color and BW mode in night condition for clear identification.

Motion Detection

The camera transmits an alert signal to the MD Output Terminal when it detects motion of an object. If you connect an optional alarm to the camera, you can get the effective surveillance.

Miscellaneous Function

The camera provides various miscellaneous functions which are privacy zone masking, digital zoom, line lock synchronization(INT/LL), freeze, horizontal reverse, vertical reverse, and user wanted preset.

Controlled by OSD menu and RS-485

You can control the camera using OSD menu and RS-485 pins at remote place. Also you can control lens directly with external control connection.

Warning

The camera needs periodic inspection.

Contact an authorized technician for inspection.

Stop using your camera when you find a malfunction.

If you use your camera around smoke or unusual heat for a long time, a fire may be caused.

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

Unless the surface is suitable, it could cause falling or other hazards.

Do not hold plug with wet hands.

It could cause an electric shock.

Do not disassemble the camera.

It may result in fire, electric shock or other hazards.

Do not use the camera close to a gas or oil leak.

It may result in fire 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.

Contents



Precautions 8

Composition 10

Name and Function of Each Part 11

- Top 11
- Bottom 12
- Back 13

Connection 14

- Connecting To Monitor 14
- Connecting To Power 15
- Connecting To Connection 16

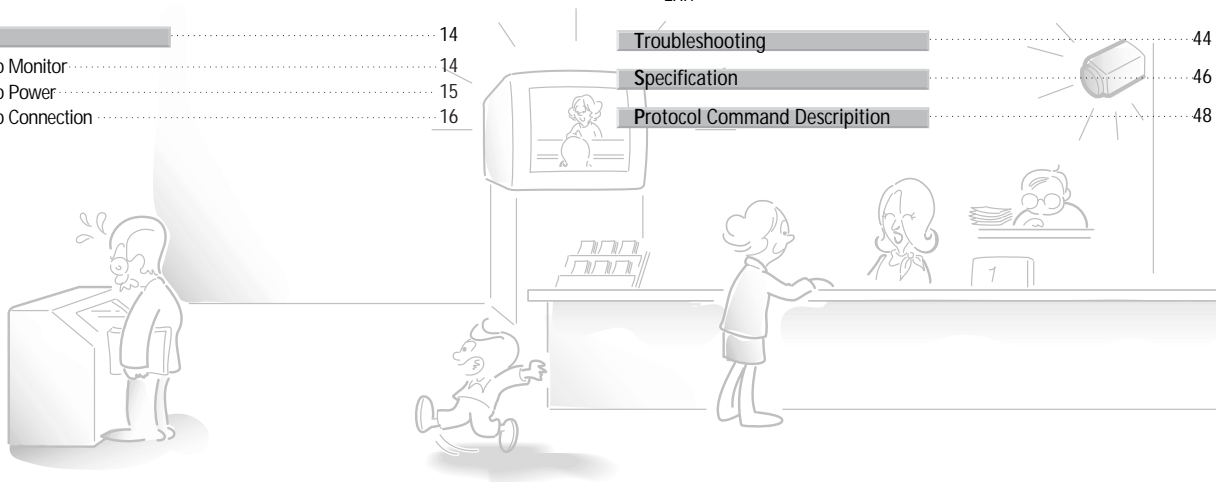
Operating Your Camera 18

- Configuration The Menu 18
- Setting Up The Menu 19
 - CAM TITLE 20
 - WHITE BALANCE 23
 - BACKLIGHT 24
 - MOTION DETECTION 25
 - FOCUS 27
 - EXPOSURE 31
 - SPECIAL 36
 - RESET 43
 - EXIT 43

Troubleshooting 44

Specification 46

Protocol Command Description 48



Precautions

Do not install the camera in extreme temperature conditions.



Only use the camera under conditions where temperatures are between -10°C and $+50^{\circ}\text{C}$. Be especially careful to provide ventilation when operating under high temperatures.

Do not install or use the camera in an environment where the humidity is high.



It can cause the image quality to be poor.

Do not drop the camera or subject them to physical shocks.



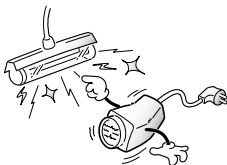
It can cause malfunctions to occur.

Never keep the camera face to strong light directly.



It can damage the CCD.

Do not install the camera under unstable lighting conditions.



Severe lighting change or flicker can cause the camera to work improperly.

Do not touch the front lens of the camera.



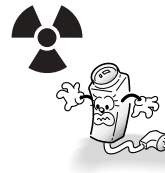
It is one of the most important parts of the camera. Be careful not to be stained by fingerprint.

Do not expose the camera to rain or spill beverage on it.



If it gets wet, wipe it dry immediately. Liquids can contain minerals that corrode the electronic components.

Do not expose the camera to radioactivity.



If it is exposed to radioactivity, for heated CCD, it will be out of order.

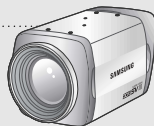


Notes

- If the camera is exposed to spotlight or object reflecting strong light, smear or blooming may occur.
- Please check that the power satisfies the normal specification before connecting the camera.

Composition

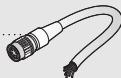
1. 30x Zoom Color Camera
SDZ-330



2. Instruction Manual



3. 6pin connection cable



4. Front Cover Ring

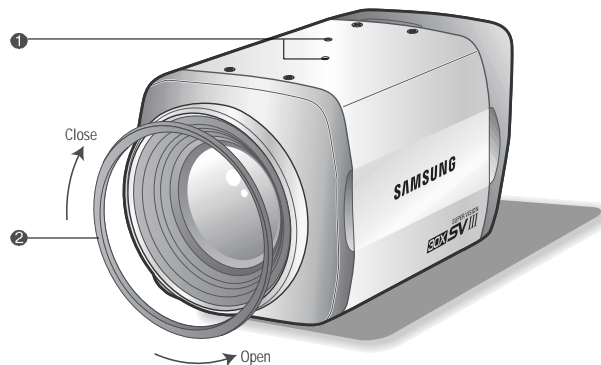


5. Remote controller (Option)



Name and Function of Each Part

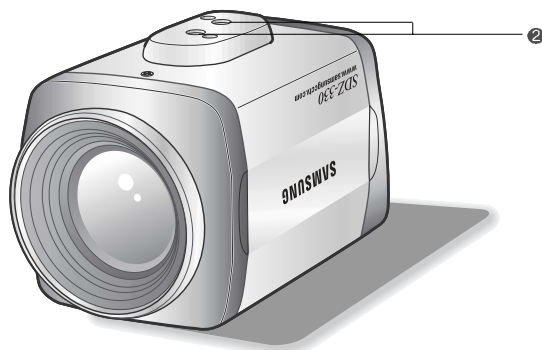
Top



- 1 Tripod Mounting Bracket Screw Hole**
Used to fix Tripod mounting bracket on the top of the camera.
- 2 Front Cover Ring**
You can remove front cover ring and fix filter if you want.

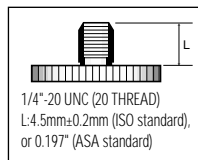
Name and Function of Each Part

Bottom



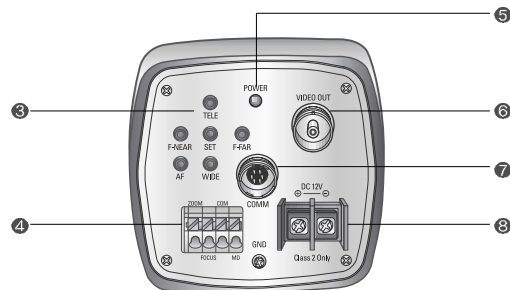
② Tripod Mounting Hole

Used to install the camera on an optional tripod. The tripod must be equipped with the screw specified as shown below.



You can remove and install this bracket on the top of the camera. You must use the supplied screw or the equivalent (within 6mm). If not, the bracket may not be fixed properly.

Back



③ Key button

Zoom, Focus and Auto focus controlled by these buttons.

- WIDE button : To see wide scene. (ZOOM OUT)
 - TELE button : To see closely the far object. (ZOOM IN)
 - F-NEAR button : To see distinctly the near object.
 - F-FAR button : To see distinctly the far object.
 - AF button : To activate auto focus just once.
- If you press 'SET' button, the zoom control function of these buttons are not operated and camera displays main setup menu.



Notes

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

- Main setup menu can be accessed by these buttons.

SET : To move 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.

Name and Function of Each Part

4 External Control Connector

- It involves motion detection output signal.
- Zoom and Focus can be controlled by external signal.

5 Power LED

The LED is turned on when power is supplied.

6 Video Output Jack

Used to connect an external video monitor in jack.

7 Communication Control Connector

- It is used to connect Remote Controller.(Option)
- It involves the external trigger 'SYNC' signal input pin for line lock function.
- It involves communication pin for RS-485.

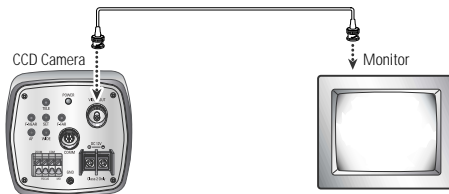
8 Power Input Terminal

- It involves power input. (DC12V±10%)

Connection

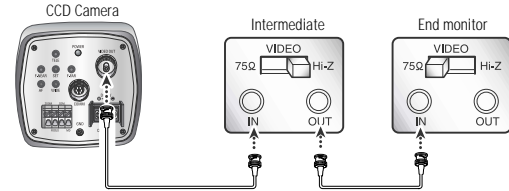
Connecting to Monitor

Connect the VIDEO out jack to the monitor video in jack.



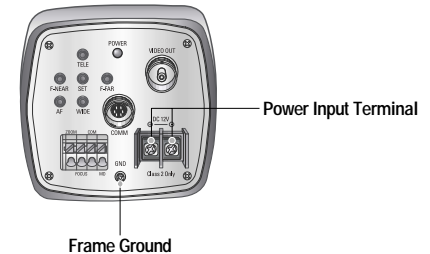
- As the connecting method varies with the instruments, refer to the manual supplied with the instrument.
- Connect the cable after power is turned off.

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



Connecting to Power

Using the lead wire to connect the power supply to the Power Input Terminal as shown in the figure below.



Notes

- Be sure to connect power after the installation is done.
- The wire is polarized. Be sure to connect wires to '+' and '-' terminal.
- Use DC 12V/500mA power source for SDZ-330.

Connection

Connecting to connection

External Control Connector

FOCUS (Input)
ZOOM (Input)
COM
MD (output)



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 There is motion 5x0.5sec There is no motion	O

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

Communication Control Connector

If you connect 6pin connection cable, Remote controller or other external controllers to the Communication Control Connector on the back of the camera, you can access the menu setup mode from a remote place.



* 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



* 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
Flow Control	0	1~255
RETURN PACKET	ENABLE	DISABLE



Notes

- Contact an authorized technician for inspection.

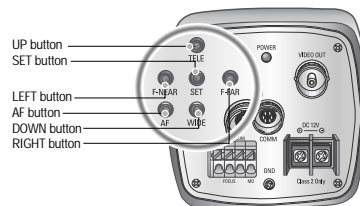
Operating Your Camera

Configuration of The Menu

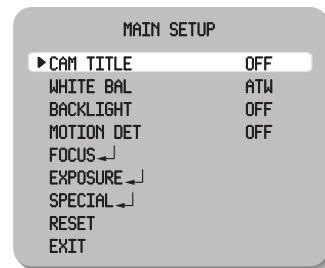
MAIN SETUP MENU	CAM TITLE		
	• OFF	• ON	
	WHITE BAL.		
	• ATW	• AWC	• MANUAL
	BACKLIGHT		
	• OFF	• WDR	
	MOTION DET.		
	• OFF	• ON	
	FOCUS		
	• MODE	• ZOOM TRK MODE	
• ZOOM TRK SPD	• D-ZOOM	• DISP ZOOM MAG	
• POS INIT	• LENS INIT	• END	
EXPOSURE			
• BRIGHTNESS	• IRIS	• SHUTTER	
• AGC	• SSSNR	• SENS-UP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

Setting Up The Menu

Use the Six buttons on back of the camera.

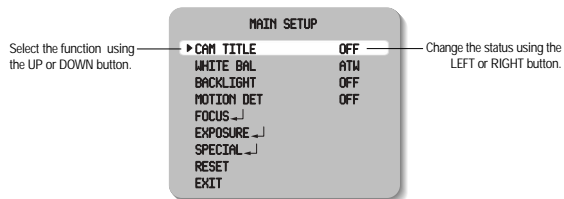


1. Press the SET button to access the main setup mode.
 - Main setup menu is displayed on the monitor screen.



2. Select the desired feature using the UP or DOWN button.
 - Each time you press the UP or DOWN button, the arrow indicator moves up or down.
 - 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

- For the mode with ↵ you can access submenu.
- You can access submenu using SET button.

CAM TITLE

If you enter a 'CAM TITLE', the camera title will be displayed in the screen monitor.

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 be displayed in the monitor.



3. Press SET button.



4. You can enter up to 20 characters.

- ➊ Move the cursor to character-enter location by using the LEFT or RIGHT button.
- ➋ Select the desired character by using LEFT, RIGHT, UP or DOWN button.



- ➌ Press the SET button to confirm the blinking character. The first character is saved and the cursor in the bottom of the screen moves to the next position.
- ➍ Repeats steps ➊ and ➋ until you create the full name you want.

Notes

- If you make a mistake while entering name

Move the cursor to 'CLR' and press 'SET' button, all characters will be removed. If you want to correct each character, locate the cursor on the position that you desire to erase using the arrow sign. And correct the character.

Operating Your Camera

5. Select the position at which the CAM TITLE will be located on the screen.

- 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.

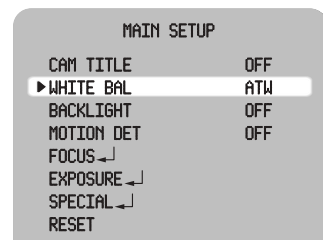


6. When completed, move the cursor to 'END' and press SET button.

White Balance Control

Your camera provides 3 'WHITE BAL.' control modes. You can select the most suitable one. You can adjust the white balance.

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



The three white balance control modes are as follows :

- ① **ATW (Auto Tracking White Balance):** When color temperature is 1800 ~ 10500K, select this mode.
- ② **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.
- ③ **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

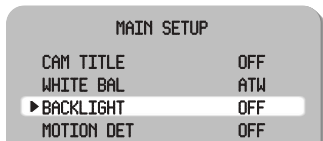
Notes

- 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 faces fluorescent lamp directly or is installed in the place of the changing illumination.

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.

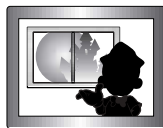


2. SET 'BACKLIGHT' to the desired mode using the LEFT or RIGHT button.

- ☉ **WDR:** In case that bright and dark parts exist on the screen at the same time, your camera allows you to see both parts clearly
- ☉ **OFF:** Deactivation



WDR



OFF

3. When 'WDR' is chosen, you can adjust the LIMIT.
 - Press the 'SET' button.



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

4. When completed, press the SET button.

Notes

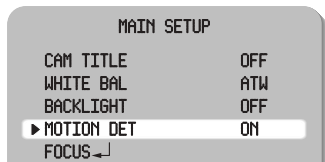
- If you select the 'SHUTTER' mode to 'MANUAL' in 'EXPOSURE' setup menu, you can't use WDR mode.
- If you select WDR mode, the following phenomenon may appear by lighting condition. In these cases do not select WDR mode.
 - ① Unnatural color change or unnatural phenomenon on the screen
 - ② Noise of bright part on the screen
- According to the area of bright part on the screen there may be the difference of WDR performance so be sure to adjust the degrees of the visual angle when installing your camera.
- If you change 'WDR LIMIT', unnatural phenomenon may appear.

Motion Detection

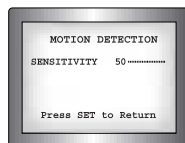
Your camera transmits an alert signal when it detects motion of an object on the screen. If you connect the camera to an external alarm, you can pay attention to the screen when the alarm sounds. This feature is useful when you have to monitor several screens simultaneously.

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

Operating Your Camera



1. Press SET button.



2. You can increase or decrease the detection sensitivity adjusting 'SENSITIVITY' value.
 - When completed, press SET button.



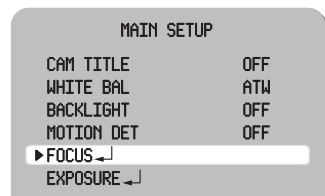
Notes

Tips on Using the Motion Detection Feature

- After selecting the sensitivity, perform a test operation to make sure it works properly.
- If the lighting flickers, the motion detection feature might not work properly.
- If the brightness of an object changes rapidly by sudden lighting change, the camera may detect it as a motion.
- When this feature is activated, another algorithm may take more time to be operated.
- This system does not guarantee prevention of fires or thefts. The manufacturer is not responsible for any accident or damage.
- You can use the MD output terminal jack on the back of the camera to connect an external alarm device.

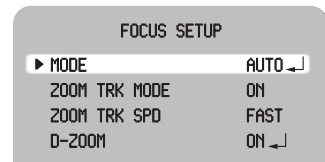


FOCUS



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

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



- **AUTO:** Set 'AUTO' mode and press the SET button. Increase or decrease the position for optical zoom(ZOOM) and digital zoom(D-ZOOM) using UP or DOWN button, watching the screen, and press the SET button when you obtain the best image. If 'D-ZOOM' set to 'ON' digital zoom activates after Optical zoom ends. Focus is automatically adjusted with moving zoom.



Operating Your Camera

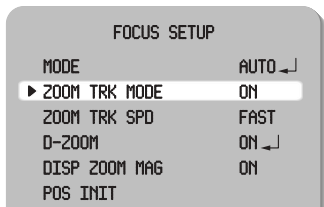
- **ONE PUSH** : Focus is automatically adjusted just once after moving operation. Set 'ONE PUSH' mode and press the SET button. Increase or decrease the position for optical zoom(ZOOM), digital zoom(D-ZOOM) using LEFT, RIGHT, UP or DOWN button watching the screen, and press the SET button when you obtain the best image.



- **MANUAL** : Focus can be manually adjusted independent of moving zoom. Set 'MANUAL' mode and press the SET button. Increase or decrease the position for optical zoom(ZOOM), digital zoom(D-ZOOM) using LEFT, RIGHT, UP or DOWN button watching the screen, and press the SET button when you obtain the best image.



- ☞ **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**: You can select zoom tracking speed fast or slowly. Move the arrow indicator to 'ZOOM TRK SPD' using UP or DOWN button. Set 'ZOOM TRK SPD' to the desired mode using LEFT or RIGHT button.



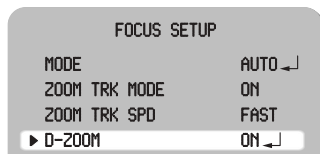
- **FAST**: To move zoom fast.
- **SLOW**: To move zoom slowly.



Notes

- If you select 'MODE' to 'MANUAL', you can't use 'ZOOM TRK MODE'.

- ☞ **D-ZOOM**: You can select zoom magnification limit to x1, x2, x4, and x8. Move the arrow indicator to 'D-ZOOM' using UP or DOWN button. You can set 'D-ZOOM' to ON and press SET button.



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



- ☞ **DISP ZOOM MAG**: You can display the zoom magnification on screen. Move the arrow indicator to 'DISP ZOOM MAG' using UP or DOWN button. Set 'DISP ZOOM MAG' to ON using LEFT or RIGHT button.

Operating Your Camera

FOCUS SETUP	
MODE	AUTO ↵
ZOOM TRK MODE	ON
ZOOM TRK SPD	FAST
D-ZOOM	ON ↵
▶ DISP ZOOM MAG	ON

⦿**POS INIT:** You can set to wide end and the focus to infinite by function. Move the arrow indicator to 'POS INIT' using UP or DOWN button. Press SET button.

FOCUS SETUP	
MODE	AUTO ↵
ZOOM TRK MODE	ON
ZOOM TRK SPD	FAST
D-ZOOM	ON ↵
DISP ZOOM MAG	ON
▶ POS INIT	

⦿**LENS INIT:** You can initialize the lens. Move the arrow indicator to 'LENS INIT' using UP or DOWN button. Press SET button.

FOCUS SETUP	
MODE	AUTO ↵
ZOOM TRK MODE	ON
ZOOM TRK SPD	FAST
D-ZOOM	ON ↵
DISP ZOOM MAG	ON
POS INIT	
▶ LENS INIT	

⦿**END:** To move main setup menu.

EXPOSURE

EXPOSURE SETUP	
BRIGHTNESS	50.....
IRIS	AUTO
SHUTTER	---
AGC	MIDDLE
SSNR	MIDDLE
SENS-UP	AUTO ↵
END	

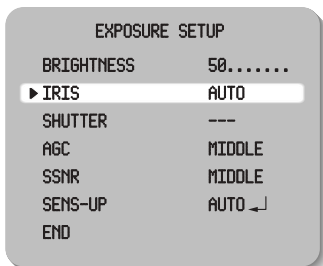
1. Press the SET button to display the main setup menu and move the arrow indicator to 'EXPOSURE' using the UP or DOWN button.
2. Press SET button.

⦿**BRIGHTNESS:** You can adjust the desired brightness on the image. Move the arrow indicator to 'BRIGHTNESS' using UP or DOWN button. Increase or decrease the value for brightness using LEFT or RIGHT button, watching the screen and Set 'END', when you obtain the best image.

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

Operating Your Camera

- **IRIS:** You can select the desired iris mode to 'AUTO' or 'MANUAL'. Move the arrow indicator to 'IRIS' using UP or DOWN button. Select the desired iris mode using LEFT or RIGHT button.



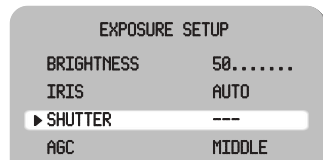
- **AUTO:** Iris activates automatically as following the illumination.
- **MANUAL:** You can adjust manually Iris value. Set 'IRIS' to 'MANUAL' using LEFT or RIGHT button. Press SET button and Increase or decrease the iris value using LEFT or RIGHT button, watching the screen.



- **Shutter Speed Control:** You can control the brightness of the image by the shutter speed.

1. Move the arrow indicator to 'SHUTTER' using UP or DOWN button. Select the desired shutter mode(A.FLK / ESC / MANUAL) using LEFT or RIGHT button.
 - **A.FLK(1/100 for NTSC Model,1/120 for PAL Model):** Flickerless mode
 - **ESC:** When setting the optimal shutter speed automatically

- **MANUAL:** When setting shutter speed manually.



2. If you choose 'MANUAL', select the optimal shutter speed.

-You can select speed from '1/60' to '1/120,000'sec (NTSC Models), '1/50' to '1/120,000'sec (PAL Models).

* It is possible to adjust manual Sens-Up(2x ~ 128x) mode manually.

-When the shutter speed is increased or decreased using the LEFT or RIGHT button, you can find the difference by monitoring the brightness of the image.



4. When completed, press the SET button.



Notes

- For effective A.FLK mode set WDR mode in 'BACKLIGHT' menu to OFF. A.FLK mode is not effective with WDR mode.
- If the camera directly faces strong fluorescent light with 'ESC' mode, the image may become unstable.
- If you choose Manual mode, you can't use WDR mode in 'BACKLIGHT' .
- If you select 'MANUAL' or A.FLK mode, Sens-up is not operated.

Operating Your Camera

AGC (Auto Gain Control): To get brighter picture.

1. Move the arrow indicator to 'AGC' using the UP or DOWN button.
2. Set 'AGC' to desired mode using the LEFT or RIGHT mode.
 - **HIGH** : You can use to adjust gain value at wide range.
 - **MIDDLE** : You can use to adjust gain value at middle range.
 - **LOW** : You can use to adjust gain value at narrow range.
 - **OFF** : Deactivation

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

SSNR(Samsung Super Noise Reduction): To reduce the noise on the screen.

1. Move the arrow indicator to 'SSNR' using the UP or DOWN button.
2. Set 'SSNR' to desired mode using the LEFT or RIGHT mode.
 - **LOW** : low reduction of the noise
 - **MIDDLE** : middle reduction of the noise
 - **HIGH** : high reduction of the noise
 - **OFF** : Deactivation

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



Notes

- If you change the 'AGC' menu from LOW to HIGH, sensitivity is increased as well as noise on the screen.
- If 'AGC' is OFF, you can't select LOW/MIDDLE/HIGH on SSNR menu.

SENS-UP : You can always get the clear image with this function under night or low-lighting level.

1. Move the arrow indicator to 'SENS-UP' using the UP or DOWN button.
2. Set 'SENS-UP' to the desired mode using the LEFT or RIGHT button.
 - **AUTO** : When your camera is under night or low-lighting level, select this mode.
 - **OFF** : Deactivation

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

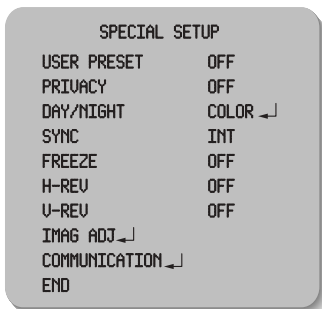


Notes

- If you press the SET button on 'AUTO' mode. You can select sens-up limit by increasing or decreasing the shutter limit. (EX. x2....., x32, x64,, x128)
- Under Sens-up activated noise, sports or a whitish phenomenon may appear in the picture as the sensitivity of the camera is increased. This is normal phenomenon.

Operating Your Camera

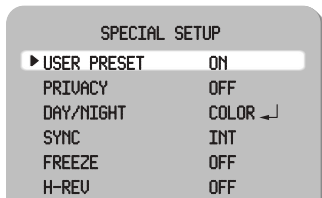
SPECIAL



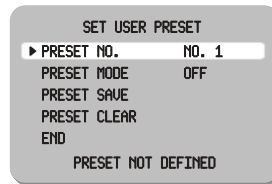
1. Press the SET button to display the main setup menu and move the arrow indicator to 'SPECIAL' using the UP or DOWN button.

2. Press the SET button.

- **USER PRESET:** You can select the desired type of setup menu. Move the arrow indicator to 'USER PRESET' using UP or DOWN button. Set 'USER PRESET' to 'ON' using LEFT or RIGHT button, press SET button.



- **PRESET NO:** You can make eight type of setup menu as you want.

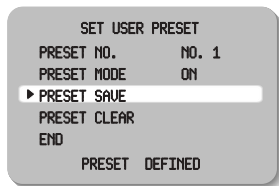


- **PRESET MODE:** You can change the desired type of initial setting menu at FOCUS, EXPOSURE, ETC.

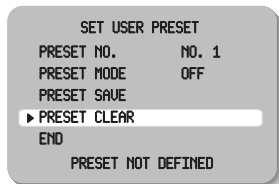


Operating Your Camera

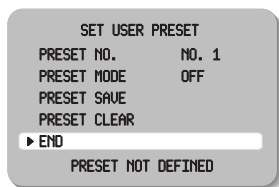
- **PRESET SAVE:** You can save the type of the setup menu which you made.



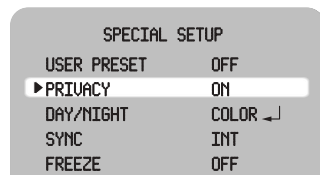
- **PRESET CLEAR:** You can clear the type of the setup menu which you made.



- **END:** To move SPECIAL SETUP menu



- **PRIVACY:** To make the mask area which you want to mask. The mask area is increased or decreased to position of zoom.



- **GROUP SEL:** You can choose 4 groups that each group has 8 mask area.
- **MASK COLOR:** You can choose the color(BLACK, RED, BLUE, GREEN, WHITE) of mask area as you want.
- **AREA SEL:** You can choose 8 mask area.
- **AREA MODE:** You can display mask area.
- **TOP:** To move the mask area to up.
- **BOTTOM:** To move the mask area to down.
- **LEFT:** To move the mask area to left.
- **RIGHT:** To move the mask area to right.



Operating Your Camera

- **DAY/NIGHT**: choose COLOR, BW or AUTO mode.

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

- **COLOR**: COLOR mode
- **B/W**: B/W mode
- **AUTO**: Under general condition, D/N filter is fixed at COLOR mode, but under low luminance condition, it change into B/W mode automatically. The case of the opposition is also same.
- **SYNC**: Two synchronization modes are available INTERNAL and EXTERNAL LINE-LOCK. In LINE-LOCK mode, it synchronizes the video signal between cameras without a synchronous generator.

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

- When the frequency of external 'SYNC' signal is 60Hz, you can use line-lock mode(NTSC Models).
- When the frequency of external 'SYNC' signal is 50Hz, you can use line-lock mode(PAL Models)

- **FREEZE**: You can freeze to the scene. Move the arrow indicator to 'FREEZE' using UP or DOWN button. Set 'FREEZE' mode to 'ON' using LEFT or RIGHT button. and press SET button.

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

- **H-REV**: You can make horizontal reverse to the scene. Move the arrow indicator to 'H-REV' using UP or DOWN button. Set 'H-REV' mode to ON using LEFT or RIGHT button. and press SET button.

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

Operating Your Camera

- **V-REV**: You can make vertical reverse to the scene. Move the arrow indicator to 'V-REV' using UP or DOWN button. Set 'V-REV' mode to ON using LEFT or RIGHT button, and press SET button.

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

- **IMAGE ADJ**: This includes the factors related to the image quality or special function.
 - **TONE**: As you increase the value using left or right button the whole level would be brighter.
 - **SHARPNESS**: As the value goes high, edge of image become strong and obvious. But if increasing the value too much, some noise may appears on image and image may looks unnatural.
 - **COLOR**: As you increase or decrease the value, image chroma level increases or decreases but the burst level doesn't.
- **COMMUNICATION**: You can set the desired communication. Detail protocol refer to page 48. Move the arrow indicator to 'COMMUNICATION' using 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.**: You can set the desired camera id (0-255). NO 0 is used to the Remote controller.
- **CAM ID DISP**: You can display the camera id on left-top of the screen.
- **BAUD RATE**: You can choose the baud rate to 9600/19200/38400bps.
- **UART MODE**: You can select parity bit to NON/EVEN/ODD. Data bit is set to 8bit and stop bit is set 1bit. If you use the remote controller, you set 'UART MODE' to '8-E-1'.
- **RETURN PACKET**: You can transfer a packet.

- **END**: To move MAIN setup menu

RESET

To reset your camera to factory default condition.

EXIT

To finish setup menu.

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"> • Check that the power cord and line connection between the camera and monitor are fixed properly. • Check that you have properly connected VIDEO cable to the camera VIDEO output jack.
The image on the screen is dim.	<ul style="list-style-type: none"> • Is lens stained with dirt? Clean your lens with soft, clean cloth. • Set the monitor to proper condition. • If the camera is exposed to too strong light, change the camera position.
The image on the screen is dark.	<ul style="list-style-type: none"> • Adjust the contrast feature of the monitor. • If you have an intermediate device, set the 75Ω / Hi-z properly. (refer to page 15)
The camera is not working properly, and the surface of the camera is hot.	<ul style="list-style-type: none"> • Check that you have properly connected the camera to an appropriate power source.
Motion Detection function is not active.	<ul style="list-style-type: none"> • Have you set 'Motion Det.' menu to OFF? • Have you set 'SENSITIVITY' to too low?
The color of the picture is not matched.	<ul style="list-style-type: none"> • Check that you have properly set the 'WHITE BAL.' menu.

Problem	Solution
The image on the screen flickers.	<ul style="list-style-type: none"> • Is the camera facing to direct sunlight or fluorescent lighting? Change the camera position.
L/L mode isn't able to be selected.	<ul style="list-style-type: none"> • Have you connected your camera to DC power source? Connect it to AC power source.
L/L is not operating properly.	<ul style="list-style-type: none"> • Check the frequency of external 'SYNC' signal. (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 (X1/28 - 1/60sec - 1/120,000sec) Sense-up Limit is selectable	AUTOMANUAL (X1/28 - 1/50sec - 1/120,000sec) Sense-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	
	Pre-set	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
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	<u>Young Taek, SON</u>	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 signatures.