

Dome type camera

English

GB

Caméra de type dôme

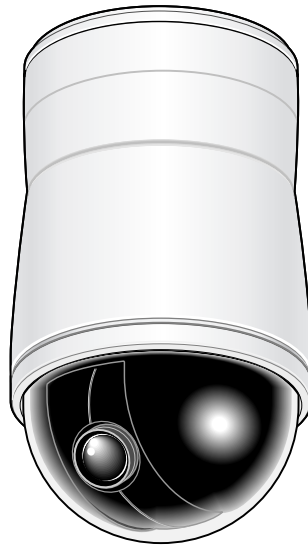
Français

F

Cámara tipo domo

Español

E



About this manual

Before installing and using this unit, please read this manual carefully. Be sure to keep it handy for later reference.

À propos de ce manuel

Avant d'installer et d'utiliser cet appareil, veuillez lire ce manuel attentivement. Assurez-vous de le garder à portée de la main pour référence ultérieure.

Acerca de este manual

Antes de instalar y usar este aparato, lea detenidamente este manual. Asegúrese de guardarlo a mano para futuras referencias.

PRECAUTIONS

■ In case of problem

Do not use the camera if smoke or a strange odour comes from the unit, or if it seems not to function correctly. Disconnect the power cord immediately, and consult your dealer (or a Sanyo Authorized Service Centre).

■ Do not open or modify

Do not open the cabinet, as it may be dangerous and cause damage to the unit. For internal settings and repairs, consult your dealer (or a Sanyo Authorized Service Centre).

■ Do not put objects inside the unit

Make sure that no metal objects or flammable substance get inside the camera. If used with a foreign object inside, it could cause a fire, short-circuits or damages.

If water or a liquid gets inside the camera, disconnect the power cord immediately, and consult your dealer (or a Sanyo Authorized Service Centre). Be careful to protect the camera from rain, sea water, etc.

■ Be careful when handling the unit

To prevent damages, do not drop the camera or subject it to strong shock or vibration.

■ Install away from electric or magnetic fields

If installed close to a TV, radio transmitter, magnet, electric motor, transformer, audio speakers the magnetic field they generate will distort the image.

■ Protect from humidity and dust

To prevent damages to the camera, do not install it where there is greasy smoke or steam, where the dampness may get too high, or where there is a lot of dust.

■ Protect from high temperatures

Do not install close to stoves, or other heat generating devices, such as spotlights, etc., or where it could be subject to direct sunlight, as that could cause deformation, discoloration or other damages.

Be careful when installing close to the ceiling, in a kitchen or boiler room, as the temperature may raise to high levels.

Install where the temperature range will stay between -10°C and 50°C . (no condensation)

■ Cleaning

- Dirt can be removed from the cabinet by wiping it with a soft cloth. To remove stains, wipe with a soft cloth moistened with a soft detergent solution and wrung dry, then wipe dry with dry soft cloth.
- Do not use benzine, thinner or other chemical product on the cabinet, as that may cause deformation and paint peeling. Before using a chemical cloth, make sure to read all accompanying instructions. Make sure that no plastic or rubber material comes in contact with the cabinet for a long period of time, as that may cause damage or paint peeling.

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INFORMATION TO USER

Safety Guard



THIS SYMBOL INDICATES THAT THERE ARE IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THIS UNIT.

WARNING:

TO PREVENT THE RISK OF FIRE OR ELECTRIC SHOCK , DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

For the customers in Canada

This Class B digital apparatus complies with Canadian ICES-003.

Pour la clientèle canadienne

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

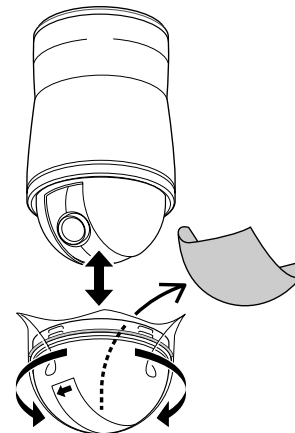
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by **Sanyo** may void the user's authority to operate this camera.

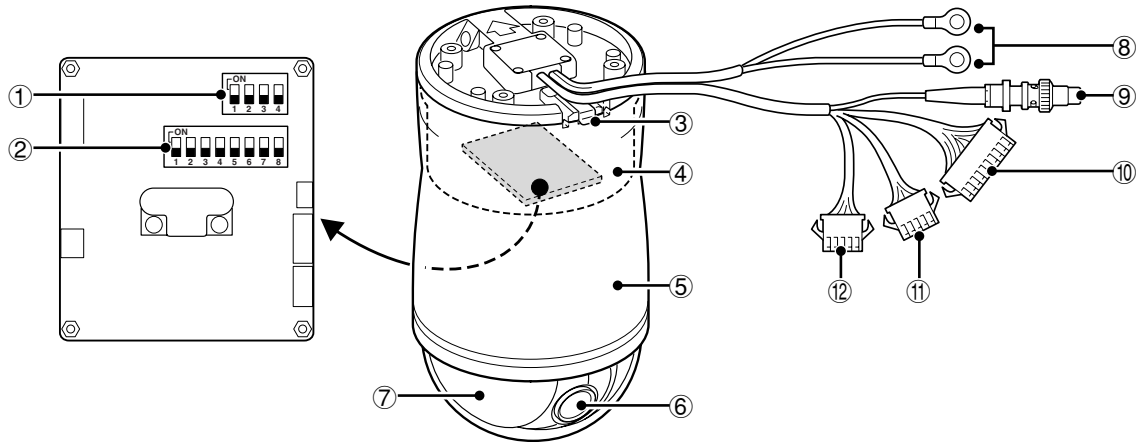
Before installation

A protective wrapper has been placed on the outside of the dome cover and a protective sheet on the inside of the cover. Before installing the unit, be sure to remove the wrapper and sheet as described in the steps below.

- 1 With the exterior cover wrapper still in place, turn the cover to the left from its fastened position (cover lock position) and remove it from the unit.
- 2 Take the protective sheet out of the interior of the dome cover.
- 3 Confirm that the gasket on the dome cover has the proper gap, then line up the 4 tabs on the dome cover with the 4 slots on the inside of the dome camera unit and push the dome cover in completely.
- 4 Lock the dome cover in place by turning it to the right (cover lock position).



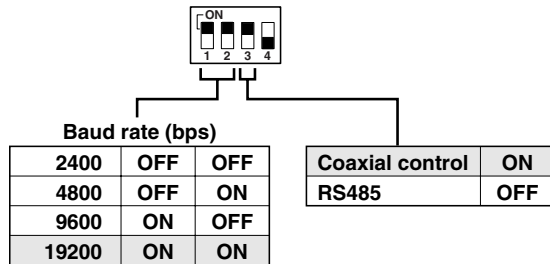
PART NAMES



① System control setting switches (See p4)

Sets baud rate and sets RS485 or coaxial control.

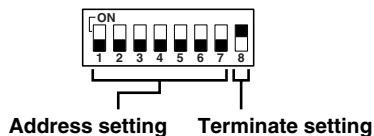
- Baud rate setting
Initial setting is 19200bps.
- RS485 or coaxial control setting
Initial setting is coaxial control.



② Address setting switches (See p4)

The address of the camera set here is needed for operating the camera through a system controller. In addition, when the camera is connected to the system, be sure to set the terminate setting to ON when the camera is in the last connected position.

- Address setting (See p50)
Address values can be between 0 and 127.
Initial setting is for all switches OFF.
- Terminate setting
Initial setting is ON.



③ Power supply unit removal lever

This lever is used to remove the power supply from the camera unit when switch settings need to be made. (See p4)

④ Power supply unit

⑤ Camera unit

⑥ Lens

⑦ Dome cover

⑧ Power supply cable (AC 24 V, 60 Hz)

⑨ Video output connector (BNC)

⑩ Alarm input connector (10 pin)

Use for functions such as intruder detection. Connect the supplied alarm input expansion connector to this connector and install the alarm detection switch on the cable side.

		Color	Color (accessory)
1	Alarm input 1	Orange/Black	Brown
2	Alarm input 2	Yellow/Black	Red
3	Alarm input 3	Green/Black	Orange
4	Alarm input 4	Gray/Black	Yellow
5	GND	White/Gray	Green
6	Alarm input 5	Black	Blue
7	Alarm input 6	Blue	Lilac
8	Alarm input 7	Lilac	Gray
9	Alarm input 8	Brown	White
10	GND	Red	Black

⑪ Alarm output connector (5 pin, white)

Use for controlling peripheral equipment or supplying power to sensors and other devices. Connect the supplied alarm output expansion connector to this connector and use to establish output to the cable side of the connection.

		Color	Color (accessory)
1	Alarm output 1	Lime	Brown
2	Alarm output 2	Pink	Red
3	GND	Sky-Blue	Orange
4	N. C	Brown/Black	Yellow
5	GND	Red/Black	Green

* Open collector output, drive capacity up to 18 V, 50 mA.

⑫ Camera control connector (5 pin, black)

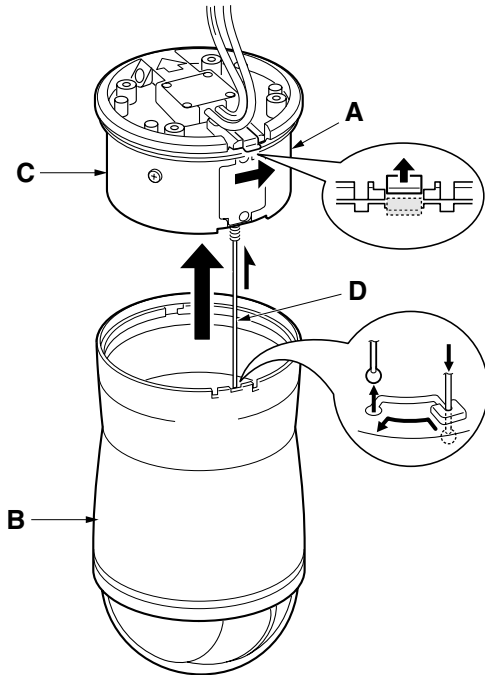
Connect this line when controlling the camera by RS485. Connect the supplied camera control expansion connector to this connector and connect peripheral equipment such as a system controller to the cable.

		Color	Color (accessory)
1	A (+)	Orange	Brown
2	B (-)	Yellow	Red
3	A (+)	Green	Orange
4	B (-)	Gray	Yellow
5	GND	White	Green

INSTALLATION METHOD

1 Power supply unit removal

- ① Press in the power supply unit removal lever (A) until it clicks, then turn the power supply unit (C) in the direction of the arrow and pull it away from the camera unit (B).
- ② Gently push the safety wire (D) into its holding slot and move it in the direction of the arrow until it can be removed. This is done to help the installation go smoothly.



2 If the safety wire has been removed, take the safety wire stowed in the power supply unit and attach it to the camera unit.

Reversing the safety wire removal procedure, reliably reattach the safety wire. (E)

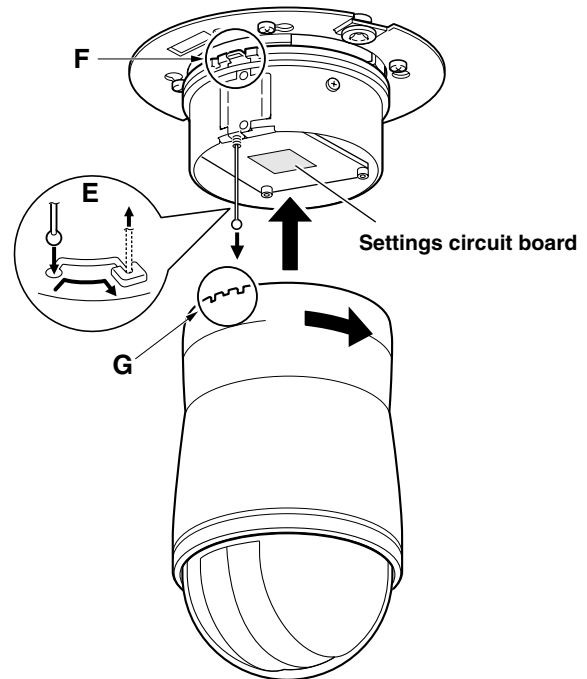
3 Attach the camera unit to the power supply unit

Match the camera unit alignment notches (F) with the power supply unit lever slot (G), then turn the camera unit in the direction of the arrow.

A clicking sound will be heard when the power supply unit removal lever drops into place, indicating that the camera unit is properly set.

Note:

- The camera unit is not properly set if a clicking sound is not heard. Check that the unit is firmly set.
- Do not continue to turn the camera unit after it has been properly set. Doing so could damage the camera.



Consumable items:

The following parts are consumable items, so please replace them after their worklife has expired. Moreover, component performance cannot be guaranteed when parts are used to the very end of their projected worklife. Durability will differ according to environmental conditions and usage.

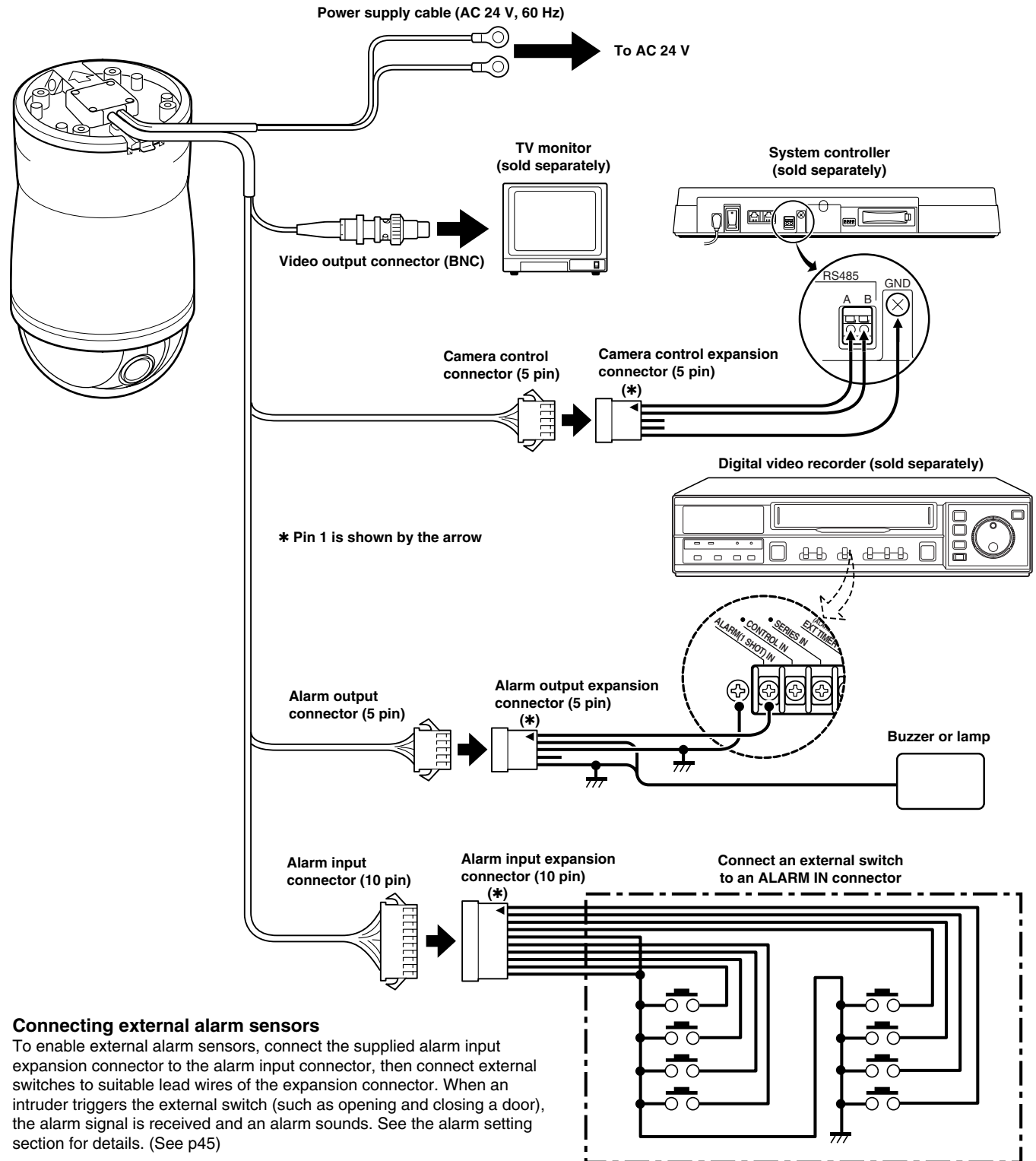
- Lens: about 20,000 hours (1,200,000 operations)
- Slip Ring: about 20,000 hours (1,200,000 rotations)
- Motor: about 33,000 hours (12,000,000 revolutions)
- Fan: 30,000 hours

CONNECTIONS

Turn off the power for all components before connecting them.

Be sure to carefully read the Instruction Manual for all equipment being connected to the camera. If the connections are incorrect, smoke or operating malfunctions may result.

Basic connections (RS485)



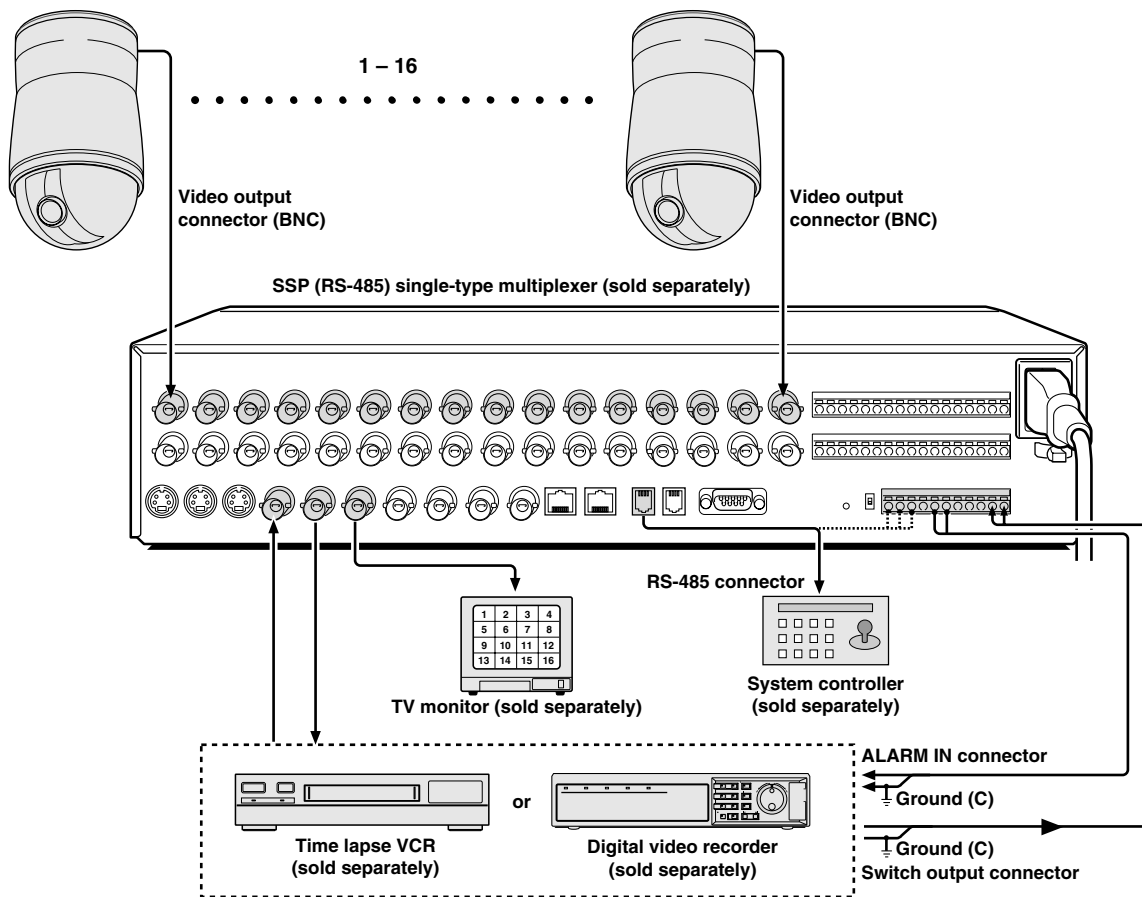
Connecting external alarm sensors

To enable external alarm sensors, connect the supplied alarm input expansion connector to the alarm input connector, then connect external switches to suitable lead wires of the expansion connector. When an intruder triggers the external switch (such as opening and closing a door), the alarm signal is received and an alarm sounds. See the alarm setting section for details. (See p45)

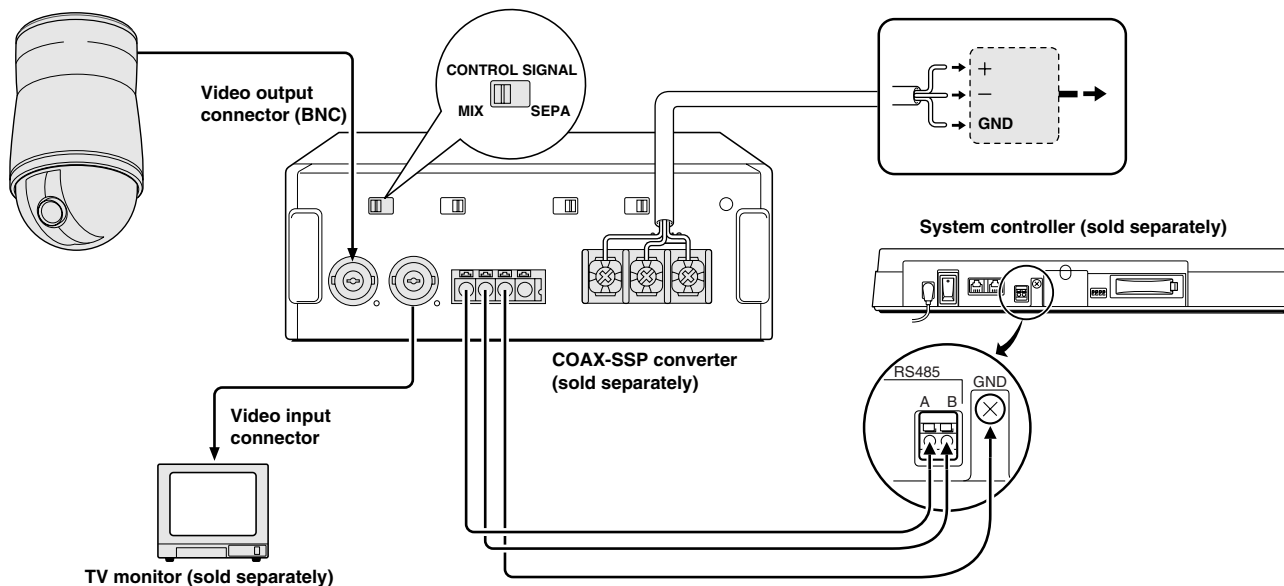
CONNECTIONS

■ System control connections

Example 1: Coaxial control system connection (1)



Example 2: Coaxial control system connection (2)



BASIC OPERATIONS

Use the following settings and connections to operate this camera with a system controller (sold separately) .

1 Make connections with all equipment turned off.

2 After referring to “INSTALLATION METHOD” Step 3, remove the power supply unit and set the dip switches on the camera’s circuit board. (See p4)

■ **Terminate setting (System control setting switches):**

Initial setting is **ON**. When several cameras are connected together, the last camera in the series should be set to **ON** and the other cameras set to **OFF**.

(System controller settings):

Set the **TERMINATE** position (ON/OFF) of the “**ADDRESS/TERMINATE**” DIP switches on the back panel.

■ **Baud rate (System control setting switches):**

Initial setting is 19200bps. To set a different baud rate, change the switches to the appropriate settings.

(System controller settings):

Set the baud rate at the “**BAUD RATE SET**” item on the menu screen.

Note: Be sure the controller and the camera are set to the same baud rate.

■ **Address setting (Address setting switches):**

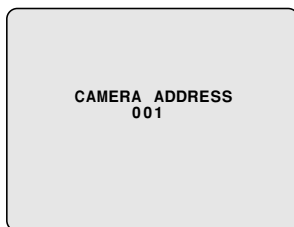
Initial setting is all switches to “**0**”. The address can be set from 0 to 127. To set an address, refer to “**ADDRESS SETTING TABLE**” and then move the switches. (See p50)

(System controller settings):

Set the **ADDRESS** position (1 – 3) of the “**ADDRESS/TERMINATE**” dip switches on the back panel.

3 Install the power supply unit and turn on power to all equipment.

When the power is turned on, the camera will perform its startup movements. The camera’s address will flash on the monitor screen.



(Example)

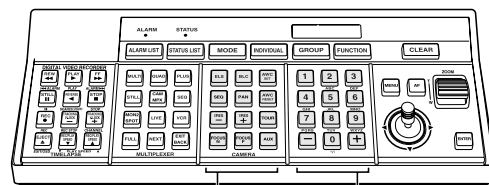
4 Operation of the camera with the system controller

Operation methods are described below. For detailed information about operation, see the instruction manual of the system controller.

■ **Type of camera operation with the system controller**

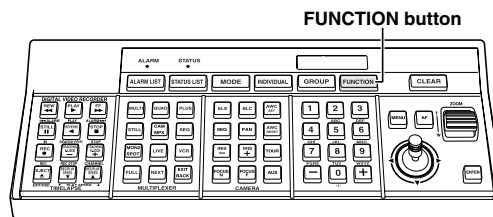
Direct input from “**CAMERA**” keypad buttons.

This operation makes needed adjustments to the camera’s basic settings according to photographic factors such as light compensation and shutter speed.



“CAMERA” keypad camera commands Numeric keypad

■ **The FUNCTION button on the system controller enables selection a command from 5 types of call-up commands.**



FUNCTION button

(Call-up commands)

- ALARM OUT
- ZOOM PRESET
- PRESET MEMORY
- L-L PHASE
- RESET

Note:

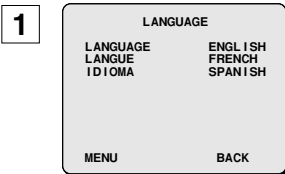
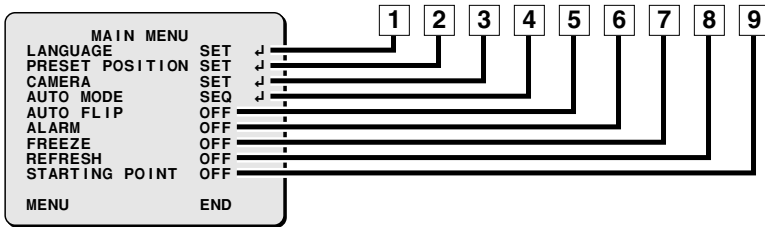
- Group operation enables setting and operation of groups 1 – 15. Do not use group 0 (ALL) or category “**ALL**”.
- When a magnification power is set for the electronic sensitivity, it can also be adjusted with the “**ELS**” button on the system controller.
- If SENSE UP and the electronic shutter are both OFF, pressing the “**ELS**” button on the system controller will automatically set electronic sensitivity boosting to “**x8**”.

MENU ITEM FLOW AND MENU OPERATION

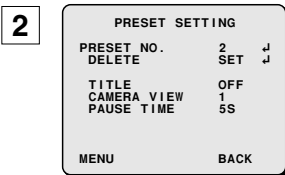
These menu items allow setting of autopan and sequential pan and other camera functions.

If these settings are not made, autopan and sequential pan cannot be utilized, so be sure to make settings appropriate to desired operations.

Menu item flow

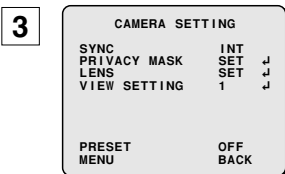


1 LANGUAGE setting (See p9)
Choose from among English, French and German.



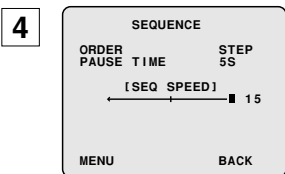
2 PRESET POSITION settings (See p10)

- Enables sequential automatic display of screen views by storing 64 surveillance locations.
- Enables display of a TITLE for screens.
- Sets 9 "VIEW SETTING" items for the camera.
- Sets the "PAUSE TIME" for surveillance positions when on sequential pan.



3 CAMERA settings (See p14)

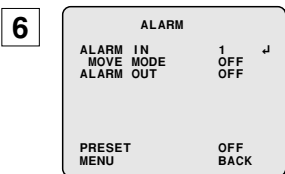
- Sets SYNC preference (power supply synchronization).
- Sets PRIVACY MASK for masking protection.
- Sets items related to the lens, such as zoom, focus and day/night settings.
- Sets 1 of 9 possible "VIEW SETTING" patterns for the camera.



4 AUTO MODE settings (See p40)

- Sets ordering method for sequential automatic display by numeric order or random selection. (Sequential pan)
- Selects image tracking memory (30 seconds or 60 seconds). (Tour mode)
- Sets Auto pan movements between start point and end point. (Auto pan mode)

5 AUTO FLIP setting (See p44)
Enables automatic top/bottom or left/right inversion of the image for camera tilts beyond the straight down position, which allows upright viewing of the image throughout 180 degrees of camera tilt. (DIGITAL AUTOFLIP)



6 ALARM settings (See p45)
(Alarm input: 8 related items)

- Sets alarm input.
- Sets polarity at time of alarm input.
- Sets move to preset position at time of alarm input.
- Sets alarm to work with motion sensors and external alarms.
- Sets alarm output to the communications line.
- Sets alarm duration time.
- Sets alarm output.

(Alarm output: 2 related items)

- Sets polarity for alarm external output.
- Sets duration time of external alarm output.

7 FREEZE setting (See p48)
When using sequential pan this setting pauses the last image of a surveillance position before the camera shifts to a new position.

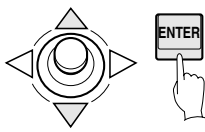
8 REFRESH setting (See p48)
Sets the cleaning of the camera's horizontal rotation contact points.

9 STARTING POINT (0 degrees) angle setting (See p49)
Sets the position to 0 degrees angle. Angle information can be received by RS-232C.

LANGUAGE SETTING

Select one of the languages shown on the menu screen (English, French, Spanish).

- 1** In the **MAIN MENU**, use the joystick lever (▲ or ▼) to select **SET** for **LANGUAGE**, then press the **ENTER** button. The **LANGUAGE** screen will appear.



MAIN MENU	
LANGUAGE	SET ↕
PRESET POSITION	SET ↕
CAMERA	SET ↕
AUTO MODE	PAN ↕
AUTO FLIP	OFF
ALARM	OFF
FREEZE	OFF
REFRESH	OFF
STARTING POINT	OFF
MENU	END

- 2** Use the joystick lever (▲ or ▼) to move the cursor to language (example: "FRENCH") then press the **ENTER** button.

The interface language becomes French.



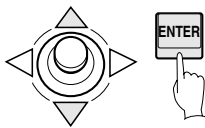
LANGUAGE	
LANGUAGE	ENGLISH ↕
LANGUE	FRENCH
IDIOMA	SPANISH

LANGUE	
LANGUAGE	ANGLAIS
LANGUE	FRANCAIS
IDIOMA	ESPAGNOL
MENU	RETOUR

- 3** Use the joystick lever (▲ or ▼) to select **RETOUR** for **MENU**, then press the **ENTER** button.

The **MAIN MENU** screen will reappear.

Information in the **MAIN MENU** screen will appear in the selected language.



MENU PRINCIPAL	
LANGUE	REG ↕
PREREGLAGE	REG ↕
CAMERA	REG ↕
MODE AUTO	SEQ ↕
INV AUTO	ARR
ALARME	ARR
GEL	ARR
REAFFICHAGE	ARR
POINT DE DEPART	ARR
MENU	FIN

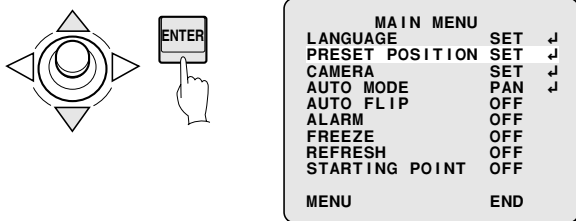
- 4** **Canceling a settings screen**
Use the joystick lever (▼) to select **FIN** for **MENU**, then press the **ENTER** button. The normal screen will reappear.

PRESET POSITION SETTINGS

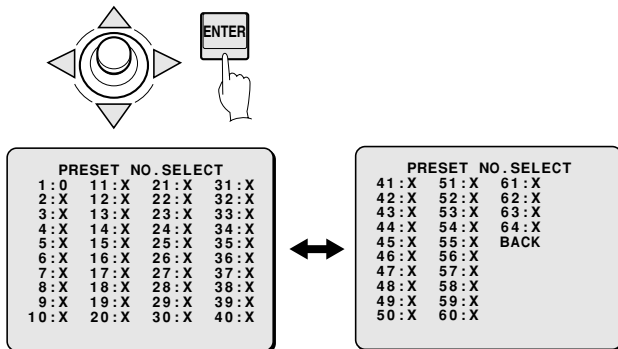
The PRESET POSITION function stores surveillance locations in memory. Up to 64 positions can be stored, and these surveillance locations can be viewed in order by sequential automatic display. In addition, a title can be set for each of the stored surveillance locations and each location can have a camera settings pattern assigned to it (from among 9 different patterns in the "VIEW SETTING (Camera settings)" menu item).

PRESET POSITION item flow

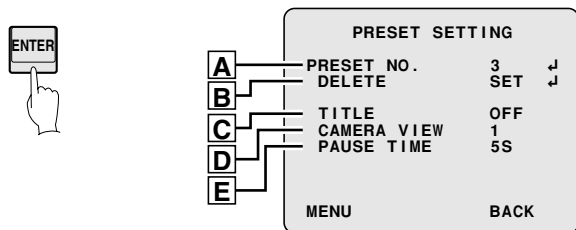
1 Select PRESET POSITION



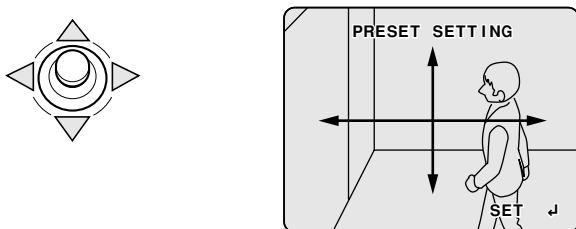
2 Select a preset number (Example: 3)



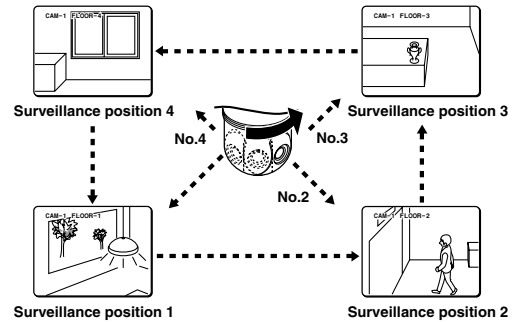
3 Set parameters for the preset number (3)



4 Decide on a surveillance position for the preset number (3)



(Example of camera movement after setting)



(Selecting preset numbers)

In this screen you can select which preset number you want to use for a particular surveillance location. Factory settings are shown below.

- **Number 1:** "0" (This is reserved for the home position and always shows 0. It cannot be changed.)
- **Numbers 2 – 64:** "X" shows the initial setting. When a preset number is utilized, the signal letter changes to "0".

Two screens are used to present all the preset numbers. Use the joystick lever to switch to the other screen.

To cancel a preset setting operation, move the cursor to BACK and then press the ENTER button.

(Preset number item settings)

A PRESET NO.:

The preset number (3) selected is shown.

B DELETE:

Select this item to delete stored information for this preset number.

PRESET NO. 1 represents the home position and cannot be deleted, so the DELETE command is not shown for number 1.

C TITLE:

This item sets the camera ID and title for the preset number.

When a title is set, it will be superimposed on the screen for that position.

D CAMERA VIEW:

This enables adding of camera setting patterns made in the VIEW SETTING menu item. Only the number for the detailed settings file (0 – 8) can be entered here. (See p27)

E PAUSE TIME:

This item sets the duration of pauses at surveillance locations (Preset positions) when using sequential automatic display (Sequential pan).

PRESET POSITION SETTINGS

A Preset position settings (PRESET NO.)

Example: Establishing a surveillance location for PRESET NO. 3.

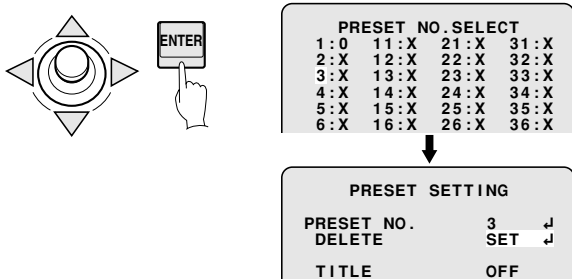
1 In the MAIN MENU, select SET for PRESET POSITION and press the ENTER button.

The PRESET NO. SELECT screen will appear.



2 Use the joystick lever (▲ or ▼) to select number 3 and press the ENTER button.

The PRESET SETTING screen will appear, and the number 3 will be blinking in the PRESET NO. field.

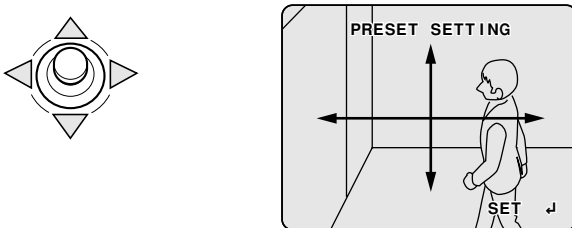


3 Press the ENTER button.

The menu setting screen will be replaced by an image of the surveillance location.

4 Use the joystick lever (▲▼◀▶) to determine the position to be stored for preset position 3.

Moving the joystick lever will move the camera so that the desired surveillance location can be found.



Note:

- Storage of preset positions can be completed on either the camera's menu or from the system controller.
- When auto flip is set to ON for a preset position, the preset location may slip a little. In this case, reset the setting to correct the problem.

5 Press the ENTER button again.

The menu setting screen will reappear. Repeat steps 2 – 4 to store other preset positions.

Set the corresponding TITLE, CAMERA VIEW and PAUSE TIME for each of the new PRESET NO.

Note: When several cameras are used together, the CAMERA ID menu item can be used to display information distinguishing which camera is in use. Refer to "Camera ID setting" for further information. (See p12)

B Deleting preset positions (DELETE)

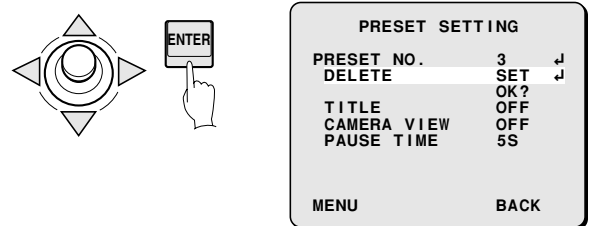
Example: Deleting preset position 3

1 In the PRESET NO. SELECT screen, select preset number 3 and press the ENTER button.

The PRESET SETTING screen will appear.

2 Use the joystick lever (▲ or ▼) to move the cursor to SET for DELETE and press the ENTER button.

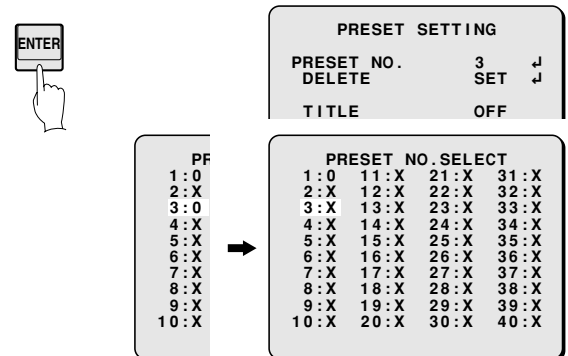
The confirmation message "OK?" will appear under SET.



3 Press the ENTER button again.

Information stored for the surveillance location will be deleted.

The signal letter for the corresponding preset number will change from "0" to "X" in the PRESET NO. SELECT screen.



PRESET POSITION SETTINGS

C The Camera ID and TITLE setting screen

■ Camera ID setting

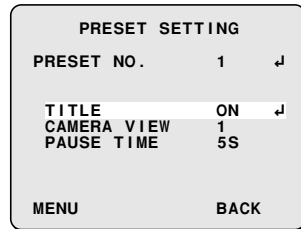
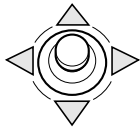
Example: Setting the Camera ID to “CAM 1”

1 In the PRESET NO. SELECT screen, select preset number 1 and press the ENTER button.

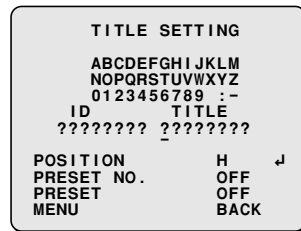
The PRESET SETTING screen will appear.

2 Use the joystick lever (▲ or ▼) to move the cursor to TITLE, and then use the joystick lever (◀ or ▶) to change the setting to ON. Then press the ENTER button.

The TITLE SETTING screen will appear.



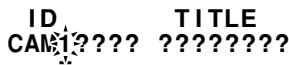
3 Use the joystick lever (▲ ▼ ◀ ▶) to move the cursor to the first space of TITLE entry field, and then use the joystick lever (◀ or ▶) to move the cursor to the first space of ID field.



4 Use the joystick lever (▲ ▼ ◀ ▶) to move the cursor to the letter “C” in the letter selection palette, then press the ENTER button.

5 Use the same steps to select “A”, “M” and “1” from the palette.

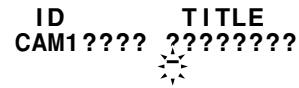
The characters “CAM1” appear in the ID field.



■ TITLE setting

Example: Setting the TITLE to “FLOOR-1”

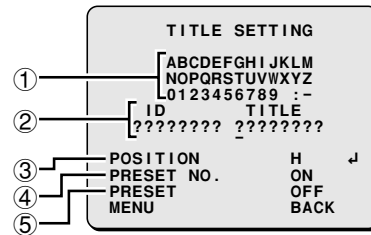
1 Use the joystick lever (▲ or ▼) to move the cursor to the first position “?” of the TITLE field.



2 Enter a title using the same method given for camera ID setting.



Camera ID and TITLE screen



① The letter selection palette:

By moving the cursor to letters or numbers in this palette, you can select characters. Selected characters will appear in the corresponding field under ID or TITLE.

② ID/TITLE:

- **ID:** The ID for this camera is set by preset position 1. It cannot be set by other preset position numbers.
 - The ID entry field shows 8 question marks (?). The ID will not be displayed on the screen.
 - The cursor first appears in the first space of the TITLE field. To set the ID, use the joystick lever (◀ or ▶) to move the cursor to the first space of the ID field.
 - If TITLE is OFF for PRESET NO. 1, the ID will not be displayed.
- **TITLE:** A title can be set for each preset position.
 - The TITLE entry field shows 8 question marks (?). When a letter is set, the next question mark will disappear so the next letter can be set.
 - The TITLE will appear on the screen, as input in the TITLE entry field.

③ POSITION:

Select the style in which the ID and/or title will appear, either horizontally (H) or vertically (V).

④ PRESET NO.:

When ON is selected for this setting, the preset number is displayed in front of the camera ID on the surveillance screen.

⑤ PRESET:

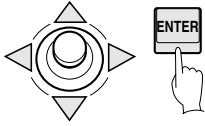
When this item is turned to ON, the ID and TITLE fields are cleared (question marks appear). Use this function when you want to change the ID or TITLE.

PRESET POSITION SETTINGS

■ On-screen title POSITION setting

- 1 Use the joystick lever (▲ or ▼) to move the cursor to **POSITION**, and then use the joystick lever (◀ or ▶) to select the display method (H or V). Then press the **ENTER** button.

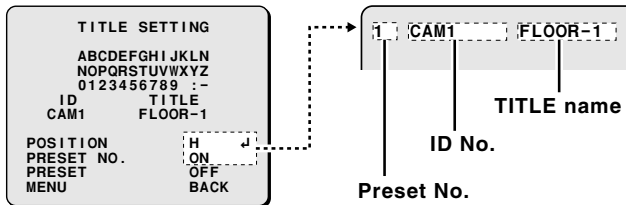
The following screen will appear.



Note: Set preset positions can be checked by pressing the numerical buttons and then the **ENTER** button on the system controller while in normal viewing. The camera will move to the preset position number that was pressed.

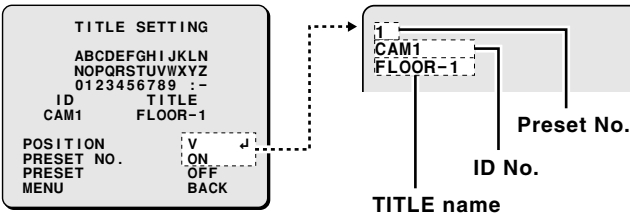
● Horizontally (H) position display

Change the POSITION setting to "H".



● Vertically (V) position display

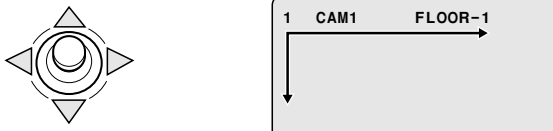
Change the POSITION setting to "V".



Note: To have the preset number displayed on normal viewing screen, set PRESET NO. to "ON". If this field is set to "OFF", the preset number will not be displayed on the screen.

☞ Moving the on-screen title display position

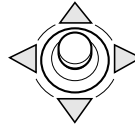
- 2 Use the joystick lever (▲ ▼ ◀ ▶) to move the title display to the preferred position on the screen.



☐ CAMERA VIEW setting

Before making any setting change in this item, go to the **VIEW SETTING** item of the **CAMERA SETTINGS** menu and establish up to 9 patterns of camera settings. From among those 9 viewing patterns, select the number of the most suitable pattern for each of the preset surveillance locations.

- ☞ Use the joystick lever (▲ or ▼) to move the cursor to **CAMERA VIEW**, then use the joystick lever (◀ or ▶) to select the value to a pattern number.



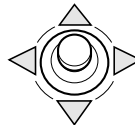
PRESET SETTING			
PRESET NO.	3		↕
DELETE	SET		↕
TITLE	OFF		
CAMERA VIEW	1		
PAUSE TIME	5S		

Available settings: 0 – 8

☐ PAUSE TIME settings

Sets the duration time of image pausing when using sequential automatic display (Sequential pan).

- ☞ Use the joystick lever (▲ or ▼) to move the cursor to **PAUSE TIME**, then use the joystick lever (◀ or ▶) to select the value to a pattern number.



PRESET SETTING			
PRESET NO.	3		↕
DELETE	SET		↕
TITLE	OFF		
CAMERA VIEW	1		
PAUSE TIME	5S		

Available settings: 3S, 5S, 10S, 15S, 20S, 30S, 45S, 60S, SKIP

SKIP: Ignores the designated preset position and continues sequential pan operation.

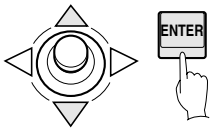
Canceling a settings screen

To return to the normal screen, use the joystick lever (▼ ▶) to select **END** for **MENU**, then press the **ENTER** button.

CAMERA SETTINGS

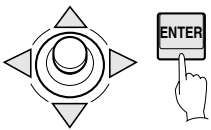
■ CAMERA SETTING item flow

1 Select CAMERA



MAIN MENU			
LANGUAGE	SET	↵	
PRESET POSITION	SET	↵	
CAMERA	SET	↵	
AUTO MODE	PAN	↵	
AUTO FLIP	OFF		
ALARM	OFF		
FREEZE	OFF		
REFRESH	OFF		
STARTING POINT	OFF		
MENU	END		

2 Select CAMERA SETTING



CAMERA SETTING			
SYNC	INT	↵	A
PRIVACY MASK	SET	↵	B
LENS	SET	↵	C
VIEW SETTING	1	↵	D
PRESET	OFF		
MENU	BACK		

(About creating image setting files in VIEW SETTING)

You can set 9 different patterns with view files. Use the joystick lever (◀ or ▶) to change the file number (1) for VIEW SETTING and press the **ENTER** button. The selected image setting file will appear. Neither the mask function nor the motion detector function can be used with image setting file "0", so they will not appear as options in the screen for pattern 0.

Note: If images are at a position other than the preset position because of manual operations, VIEW SETTING will automatically switch the image setting to file "0".

CAMERA SETTING			
SYNC	INT	↵	
PRIVACY MASK	SET	↵	
LENS	SET	↵	
VIEW SETTING	3	↵	
PRESET	OFF		
MENU	BACK		

VIEW SETTING 3			
IRIS	AUTO	↵	
WHITE BALANCE	ATW	↵	
SHUTTER	OFF		
MOTION	OFF		
APERTURE	ON	↵	
GAMMA	ON		
PRESET	OFF		
MENU	BACK		

(Screen for image setting 1 – 8)

VIEW SETTING 0			
IRIS	AUTO	↵	
WHITE BALANCE	ATW	↵	
SHUTTER	OFF		
MOTION	---		
APERTURE	ON	↵	
GAMMA	ON		
PRESET	OFF		
MENU	BACK		

(Screen for image setting 0)

Note:

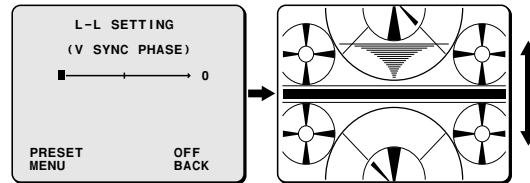
- Making any setting while electronic zoom is active will cancel the electronic zoom condition.
- If VIEW SETTING has been set to a value from 1 to 8 for the various preset positions during automatic preset operation, operation will change automatically to manual operation if you operate the joystick lever (◀▶▲▼), and VIEW SETTING will also be set to "0".
As a result, be sure to set VIEW SETTING to "0" during manual operation.

Select CAMERA SETTING

A SYNC: (See p15)

Sets camera to internal synchronization (INT) or power source synchronization (L-L).

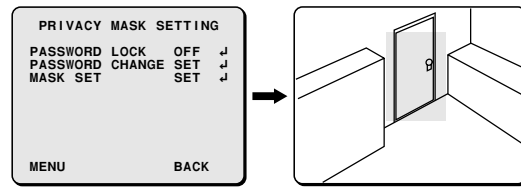
Power source synchronization adjusts the vertical synchronization phase.



B PRIVACY MASK: (See p15)

This covers an area of the screen with a gray pattern for areas that may infringe on privacy.

Gray patterns can be placed on up to 8 areas. However, any single surveillance screen cannot have more than 4 of the masked areas that have been set. Masked areas cannot be set beyond these limits.



C LENS: (See p18)

This lets you make settings such as automatic and manual focus settings, zoom speed and zoom ratio. In addition, it can also be used for automatic switching to color images during daytime, or to black and white images at times of low luminance such as nighttime.

LENS			
FOCUS	MANU	↵	
ZOOM	SET	↵	
DAY/NIGHT	AUTO	↵	
VIEW ANGLE	OFF		
PRESET	OFF		
MENU	BACK		

D VIEW SETTING: (See p27)

Different detailed settings can be made for each camera (9 screens). After they are set, these are linked to "CAMERA SETTING (0 – 8)" settings for preset positions.

VIEW SETTING 1			
IRIS	AUTO	↵	
WHITE BALANCE	ATW	↵	
SHUTTER	OFF		
MOTION	OFF		
APERTURE	ON	↵	
GAMMA	ON		
PRESET	OFF		
MENU	BACK		

VIEW SETTING 0			
IRIS	AUTO	↵	
WHITE BALANCE	ATW	↵	
SHUTTER	OFF		
MOTION	---		
APERTURE	ON	↵	
GAMMA	ON		
PRESET	OFF		
MENU	BACK		

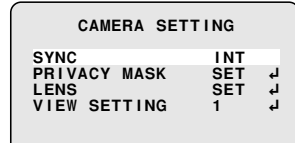
CAMERA SETTINGS

A SYNC setting

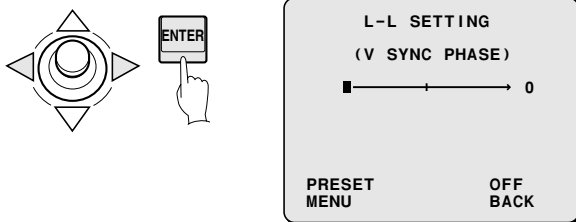
Initial setting is internal synchronization (INT), so it does not need to be set again. Follow the steps below to change the setting to power source synchronization (L-L).

■ Power source synchronization (L-L) setting

- 1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.
The CAMERA SETTING screen will appear.



- 2 Use the joystick lever (▲ or ▼) to select L-L for SYNC, then press the ENTER button.
The L-L SETTING screen will appear.



Available settings: 0 – 524

- 3 Use the joystick lever (◀ or ▶) to adjust the position of the vertical synchronization indicator shown on the screen.
The numerical value will change, allowing adjustment of vertical synchronization.

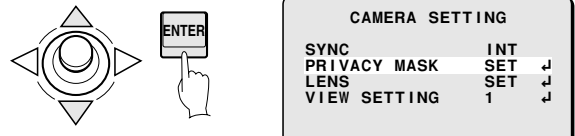
4 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The CAMERA SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

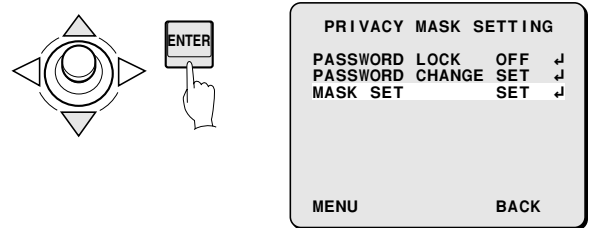
B PRIVACY MASK setting

■ Mask setting

- 1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.
The CAMERA SETTING screen will appear.
- 2 Use the joystick lever (▲ or ▼) to select SET for PRIVACY MASK, then press the ENTER button.
The PRIVACY MASK SETTING screen will appear.

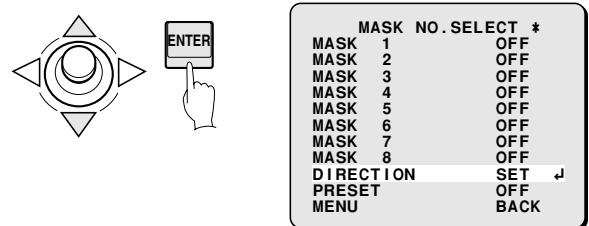


- 3 Use the joystick lever (▲ or ▼) to move the cursor to SET for MASK SET and press the ENTER button.
The MASK NO. SELECT screen will appear.



Note: When PASSWORD LOCK is ON, moving the cursor to MASK SET and press the ENTER button to bring up a password access screen. The password must be entered in this screen.

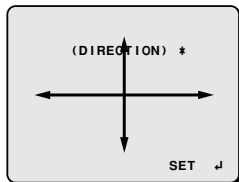
- 4 Use the joystick lever (▲ or ▼) to move the cursor to SET for DIRECTION and press the ENTER button.
The DIRECTION screen will appear.



Note: If no “*” mark appears next to the screen title “MASK NO. SELECT”, privacy masks cannot be set. Changing the joystick lever angle so that the “*” mark appears will allow setting of masks.

CAMERA SETTINGS

- 5** Use the joystick lever (▲▼◀▶) to decide in which direction the mask will be made.

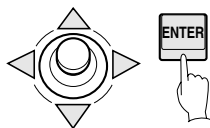


- 6** Press the ENTER button.

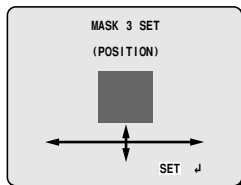
The MASK NO. SELECT screen will reappear.

- 7** Use the joystick lever (▲ or ▼) to move the cursor to a mask number (Ex: MASK 3), and then use the joystick lever (◀) to change the setting to SET. Then press the ENTER button.

The MASK 3 SET (POSITION) screen will appear, and SET will be blinking. The gray mask will appear in the center of the screen.



MASK NO.	SELECT	*
MASK 1	OFF	
MASK 2	OFF	
MASK 3	SET	↵
MASK 4	OFF	
MASK 5	OFF	
MASK 6	OFF	



Joystick lever operation

OFF: to ▶ side (ON appears), to ▶ side again (SET appears)

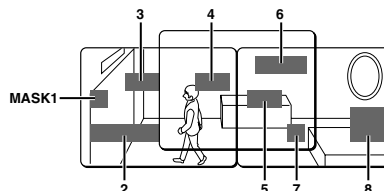
- **SET:** Mask POSITION and SIZE can be set
- **ON:** Masks can be displayed
- **OFF:** Masks can be deleted

(About the POSITION screen)

It is possible to set as many as 4 masks on the same POSITION screen. Even if a fifth mask is placed, SET will not appear.

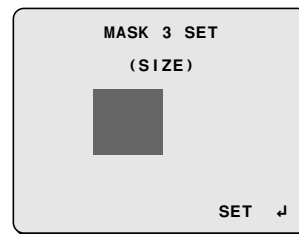
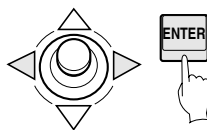
Note:

- By stacking single screens with 4 masks on them it is possible to set as many as 8 masks. See the example below for an illustration of the use of 8 gray masks.
- The area under a mask can be seen when the camera is changing preset positions. To compensate for this, make the masks a little larger when necessary.



- 8** Use the joystick lever (◀ or ▶) to move the gray mask, then press the ENTER button.

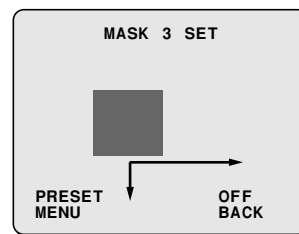
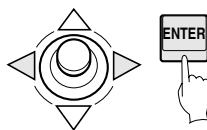
The SIZE screen will appear, and the mask that was positioned in the POSITION screen will be displayed.



- 9** Use the joystick lever (◀ or ▶) to adjust the size of the gray mask, then press the ENTER button.

PRESET and MENU will appear at the bottom of the screen. Move the cursor to BACK for MENU and press the ENTER button. The screen will return to MASK NO. SELECT and the MASK 3 setting will be ON.

To return to the normal screen, use the joystick lever (▼▶) to select END for MENU, then press the ENTER button.



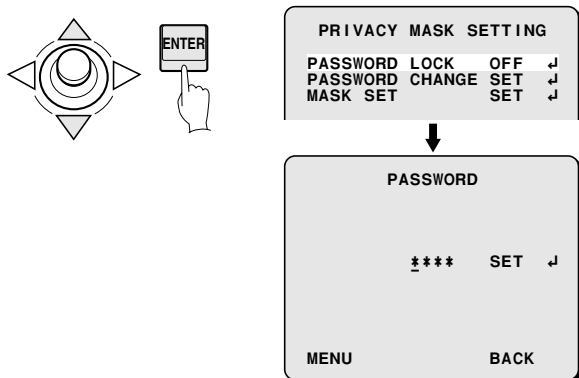
CAMERA SETTINGS

■ PASSWORD setting

You can lock the privacy masks in place after they have been set. The password requirement is initially set to OFF, but to begin using it, you must enter the factory set password "1234".

- 1 Use the joystick lever (▲ or ▼) to move the cursor to OFF for PASSWORD LOCK in the PRIVACY MASK SETTING screen. Then press the ENTER button.

The PASSWORD screen will appear.



- 2 Enter the factory set password "1234".

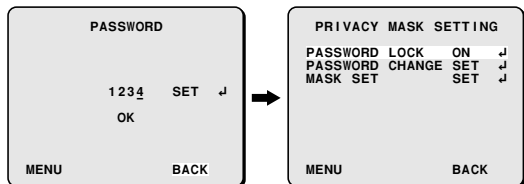
- 2 Use the joystick lever (▲ or ▼) to select "1", then use the joystick lever (▶).

To move the cursor to the next "*" digit.



- 3 Use the same steps to enter "2," "3," and "4," then press the ENTER button.

"OK" will appear and BACK for MENU will be blinking. Press the ENTER button again. The PRIVACY MASK SETTING screen will reappear and "ON" will be blinking for PASSWORD LOCK.



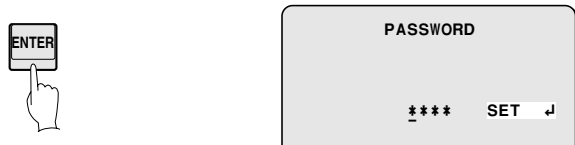
Note: If a different password is required, "NG" will appear. Please carefully maintain the password so that it will not be forgotten.

■ PASSWORD cancellation

For use when PASSWORD LOCK is ON

- 1 Press the ENTER button.

The PASSWORD screen will appear.



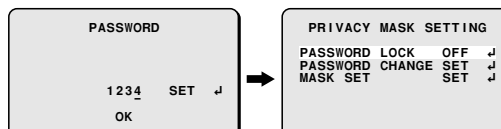
- 2 Enter the factory set password "1234".

- 2 Use the joystick lever (▲ or ▼) to select "1", then use the joystick lever (▶).

To move the cursor to the next "*" digit.

- 3 Use the same steps to enter "2," "3," and "4," then press the ENTER button.

"OK" will appear and BACK for MENU will be blinking. Press the ENTER button again. The PRIVACY MASK SETTING screen will reappear and "ON" will be blinking for PASSWORD LOCK.

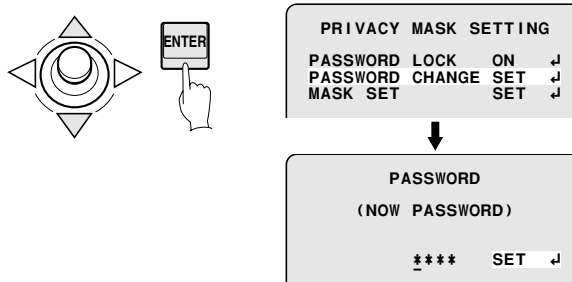


■ PASSWORD changes

You can change the password with PASSWORD LOCK in either the ON or OFF setting.

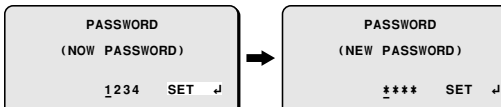
- 1 Use the joystick lever (▲ or ▼) to move the cursor to SET for PASSWORD CHANGE and press the ENTER button.

The PASSWORD (NOW PASSWORD) screen will appear.



- 2 Use the joystick lever (◀ or ▶, ▲) to enter the current password (Ex: 1234), then press the ENTER button.

The PASSWORD (NEW PASSWORD) screen will appear.



- 3 Use the joystick lever (◀ or ▶, ▲) to enter a new password (Ex: 4321), then press the ENTER button.

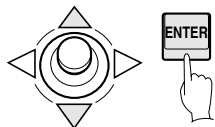
"OK" will appear and BACK for MENU will be blinking. Press the ENTER button again.

The PRIVACY MASK SETTING screen will reappear.

CAMERA SETTINGS

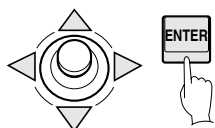
C LENS setting and item flow

1 Select CAMERA



MAIN MENU		
LANGUAGE	SET	↓
PRESET POSITION	SET	↓
CAMERA	SET	↓
AUTO MODE	SEQ	↓
AUTO FLIP	OFF	
ALARM	OFF	
FREEZE	OFF	
REFRESH	OFF	
STARTING POINT	OFF	
MENU	END	

2 Select LENS



CAMERA SETTING		
SYNC	INT	
PRIVACY MASK	SET	↓
LENS	SET	↓
VIEW SETTING	1	↓
PRESET MENU	OFF	BACK

LENS		
FOCUS	MANU	↓
ZOOM	SET	↓
DAY/NIGHT	AUTO	↓
VIEW ANGLE	OFF	
PRESET MENU	OFF	BACK

A FOCUS: (See page 19)

FOCUS SETTING	
LIMIT NEAR	1M
SPEED	2
PRESET MENU	OFF BACK

These settings let you select automatic focus (AUTO) or manual focus. Change the focus settings in accordance with the monitoring conditions.

B ZOOM: (See page 21)

ZOOM SETTING	
SPEED	3
EL_ZOOM	OFF
V-RESO.UP	OFF
PRESET MENU	OFF BACK

These settings let you adjust the speed and zoom ratio when using electronic zoom.

C DAY/NIGHT: (See page 22)

D/N SETTING - AUTO	
AGC MAX GAIN	+3dB
DNR	OFF
BURST	OFF
FOCUS LEVEL	1 MID
PRESET MENU	OFF BACK

(AUTO mode)

These settings can be used for automatic switching to color images during daytime, or to black and white images at times of low luminance such as nighttime. Three modes (AUTO, COLOR and B/W) can be selected. Change the settings in accordance with the monitoring conditions.

D/N SETTING - COLOR	
AGC MAX GAIN	OFF ↓
DNR	OFF
PRESET MENU	OFF BACK

(COLOR mode)

D/N SETTING - B/W	
AGC MAX GAIN	OFF ↓
DNR	OFF
BURST	OFF
FOCUS	1
PRESET MENU	OFF BACK

(B/W mode)

D VIEW ANGLE: (See page 26)

LENS		
FOCUS	MANU	↓
ZOOM	SET	↓
DAY/NIGHT	AUTO	↓
VIEW ANGLE	OFF	
PRESET MENU	OFF	BACK

These settings are for setting the image angle.

If "OVER" is set, the image angle is set to approximately 1.05.

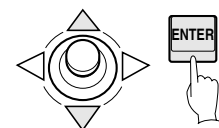
CAMERA SETTINGS

A FOCUS setting

• Setting the manual focus (MANU)

Sets a limit for near distance focusing and sets focus speed for manual focus.

1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.
The CAMERA SETTING screen will appear.



CAMERA SETTING		
SYNC	INT	↓
PRIVACY MASK	SET	↓
LENS	SET	↓
VIEW SETTING	1	↓

LENS	
FOCUS	MANU ↓
ZOOM	SET ↓
DAY/NIGHT	AUTO ↓
VIEW ANGLE	OFF
PRESET MENU	OFF BACK

2 Use the joystick lever (▲ or ▼) to select SET for LENS, then press the ENTER button.
The LENS screen will appear.

3 Use the joystick lever (◀ or ▶) to select MANU, then press the ENTER button.
The FOCUS SETTING screen will appear.

FOCUS SETTING		
LIMIT NEAR	1M	
SPEED	2	

LIMIT NEAR focus distance setting

4 Use the joystick lever (▲ or ▼) to move the cursor to LIMIT NEAR, then use the joystick lever (◀ or ▶) to change the distance value. (Ex: 3M)



FOCUS SETTING		
LIMIT NEAR	3M	
SPEED	2	

Available settings: 1M (meter), 3M, 5M, 10C (centimeters), 30C, 50C

Note: Focusing becomes difficult when near distance limit is set to less than "1M".

SPEED of focus setting

5 Use the joystick lever (▲ or ▼) to move the cursor to SPEED, then use the joystick lever (◀ or ▶) to select the focus adjustment speed value. (Ex: 3)



FOCUS SETTING		
LIMIT NEAR	3M	
SPEED	3	
PRESET MENU	OFF	BACK

Available settings: 1, 2, 3, 4 (Quickest speed)

6 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The LENS screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

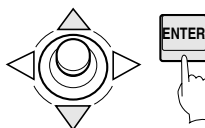
• Setting the autofocus (AUTO)

Sets a limit for near distance focusing and sets focusing sensitivity and focus iris.

Note: As a normal practice, use manual focus when keeping the camera focused on the same target object for a long period of time (over 24 hours). This can be used with the one-push autofocus function when needed (operated from the system controller). Long periods of surveillance with the autofocus in operation will shorten the work life of the lens.

1 Use the joystick lever (▲ or ▼) to select SET for LENS, then press the ENTER button.

The LENS screen will appear.

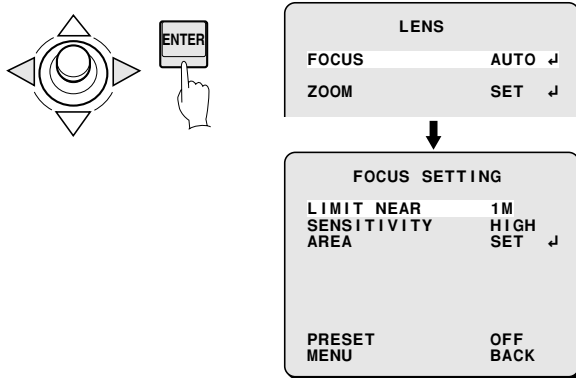


CAMERA SETTING		
SYNC	INT	↓
PRIVACY MASK	SET	↓
LENS	SET	↓
VIEW SETTING	1	↓

LENS		
FOCUS	AUTO ↓	
ZOOM	SET ↓	
DAY/NIGHT	AUTO ↓	
VIEW ANGLE	OFF	
PRESET MENU	OFF	BACK

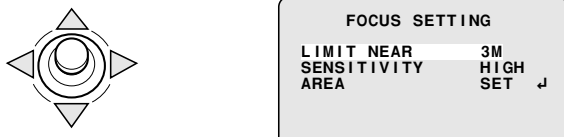
CAMERA SETTINGS

- 2** Use the joystick lever (◀ or ▶) to select AUTO, then press the ENTER button.
The FOCUS SETTING screen will appear.



LIMIT NEAR focus distance setting

- 3** Use the joystick lever (▲ or ▼) to move the cursor to LIMIT NEAR, then use the joystick lever (◀ or ▶) to change the distance value. (Ex: 3M)



Available settings: 1M (meter), 3M, 5M, 10C (centimeters), 30C, 50C

Note: Focusing becomes difficult when near distance limit is set to less than "1M".

Setting focus SENSITIVITY

- 4** Use the joystick lever (▲ or ▼) to move the cursor to SENSITIVITY, then use the joystick lever (◀ or ▶) to change the setting. (Ex: LOW)

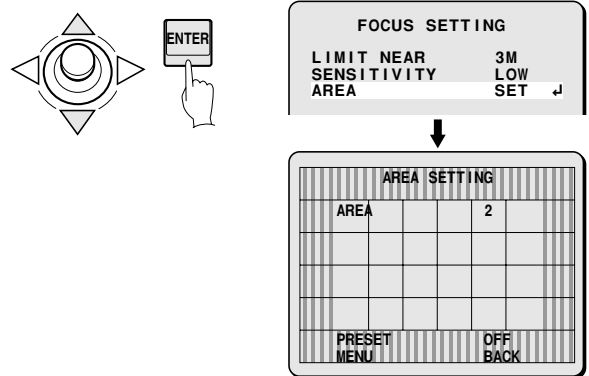


Available settings:

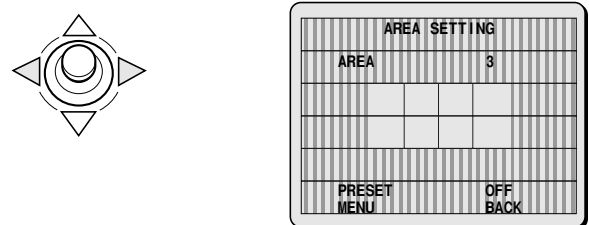
- **HIGH:** High sensitivity focusing
- **LOW:** Low sensitivity focusing

Note: When focus SENSITIVITY is set to **HIGH**, it may react to even slight movements of the target object. In this case, change the setting to **LOW**.

- 5** Use the joystick lever (▲ or ▼) to move the cursor to SET for AREA, and press the ENTER button.
The AREA SETTING screen for AREA 2 (initial setting) will appear to allow setting of focus target area.



- 6** Use the joystick lever (◀ or ▶) to select the focus target area. (Ex: 3)
The focus target area will become narrow.



Available settings: 1/full screen, 2/center of screen, 3/smaller center

4 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The FOCUS SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

CAMERA SETTINGS

B ZOOM setting

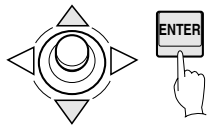
Sets zooming speed and magnification power of the electronic zoom. This item also has a setting for improvement of vertical resolution of still pictures.

- 1** In the MAIN MENU, select SET for CAMERA and press the ENTER button.

The CAMERA SETTING screen will appear.

- 2** Use the joystick lever (▲ or ▼) to select SET for LENS, then press the ENTER button.

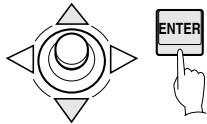
The LENS screen will appear.



CAMERA SETTING	
SYNC	INT
PRIVACY MASK	SET ↓
LENS	SET ↓
VIEW SETTING	1 ↓

- 3** Use the joystick lever (▲ or ▼) to select SET for ZOOM, then press the ENTER button.

The ZOOM SETTING screen will appear.



LENS	
FOCUS	MANU ↓
ZOOM	SET ↓
DAY/NIGHT	AUTO ↓

Zoom speed setting

- 4** Use the joystick lever (◀ or ▶) to select the zooming speed. (Ex: 4)



ZOOM SETTING	
SPEED	4
EL ZOOM	OFF
V-RESO.UP	OFF

Available settings: 1, 2, 3, 4 (Quickest speed)

EL ZOOM (Electronic zoom) magnification setting

- 5** Use the joystick lever (▲ or ▼) to move the cursor to EL ZOOM, then use the joystick lever (◀ or ▶) to select the electronic zoom magnification power. (Ex: x4)

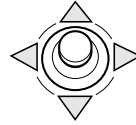


ZOOM SETTING	
SPEED	4
EL ZOOM	x4
V-RESO.UP	OFF

Available settings: OFF, x2, x4, x8, x16 (16 power)

V-RESO.UP (Vertical resolution) setting

- 6** Use the joystick lever (▲ or ▼) to move the cursor to V-RESO.UP, then use the joystick lever (◀ or ▶) to select the vertical resolution. (Ex: ON)



ZOOM SETTING	
SPEED	4
EL ZOOM	x4
V-RESO.UP	ON

Note:

- When V-RESO.UP is set to "ON", vertical resolution sensitivity for still pictures in the electronic zoom field will be improved but afterimages of moving objects will be more conspicuous.

7 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The LENS screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

Note:

V-RESO.UP will be automatically set to OFF when any of the following settings is made.

- IRIS: AUTO item SENSE UP (ON)
- SHUTTER: LONG
- AGC: DNR (ON)

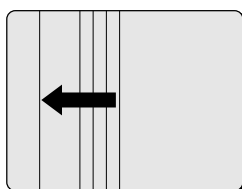
CAMERA SETTINGS

C DAY/NIGHT setting

This lets you set the filming mode to color mode during times of normal brightness, or to black & white mode which removes the infrared filter to increase sensitivity when there is less light. The three available DAY/NIGHT settings are AUTO, COLOR and B/W.

LENS	
FOCUS	MANU ↓
ZOOM	SET ↓
DAY/NIGHT	AUTO ↓
VIEW ANGLE	OFF
PRESET MENU	OFF BACK

- **AUTO:** Automatic mode; The mode switches automatically between color mode and black & white mode depending on the luminance of the objects being monitored.
- **COLOR:** Color mode; Images are filmed in color regardless of the luminance of the objects being monitored.
- **B/W:** Black & white mode; Images are filmed in black & white regardless of the luminance of the objects being monitored.



(Fig. 1)

Note:

- A sound may be heard when the colour image or black and white image is switched. Also, the image will be distorted as shown in Fig. 1. This is normal and does not indicate a problem.
- When using infrared lighting, if there is a strong reflection on the subject, the optical filter may switch from black and white to colour mode. Use only enough infrared lighting so that the mode is not switched.

● AUTO mode setting

Note:

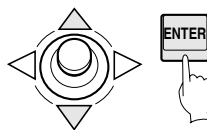
- If the backlight compensation has been set to "MULTI", the backlight compensation will be canceled when the mode is switched to B/W.
- If "SENSE UP" has been set to "ON", SENSE UP mode will be activated after the mode switches to B/W mode.

1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.

The CAMERA SETTING screen will appear.

2 Use the joystick lever (▲ or ▼) to select SET for LENS, then press the ENTER button.

The LENS screen will appear.

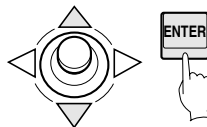


CAMERA SETTING	
SYNC	INT SET ↓
PRIVACY MASK	SET ↓
LENS	SET ↓
VIEW SETTING	1 ↓

LENS	
FOCUS	MANU ↓
ZOOM	SET ↓
DAY/NIGHT	AUTO ↓
VIEW ANGLE	OFF
PRESET MENU	OFF BACK

3 Use the joystick lever (▲ or ▼) to move the cursor to DAY/NIGHT, use the joystick lever (◀ or ▶) to select the mode (example: AUTO), and then press the ENTER button.

The D/N SETTING - AUTO screen will appear, and the "+9dB" setting for "AGC MAX GAIN" will be blinking.

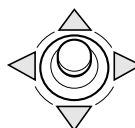


D/N SETTING - AUTO	
AGC MAX GAIN	+9dB ①
DNR	OFF ②
BURST	OFF ③
FOCUS	1 ④
LEVEL	MID ⑤
PRESET MENU	OFF BACK

- ① Sets the maximum AGC gain.
- ② Sets the digital noise reduction.
- ③ Sets burst suppression. If other peripheral devices (such as a multiplexer) are connected to the system, bursts (distortion of image color) can occur when switching between color and black & white. If this happens, change the BURST setting to "ON".
- ④ Sets the focus when switching to black & white mode.
- ⑤ Sets the switching level for color mode and black & white mode. The three available settings are LOW, MID or HIGH. In addition, the switching level can be set manually (ADJ).

AGC MAX GAIN setting

4 Use the joystick lever (▲ or ▼) to move the cursor to AGC MAX GAIN, and then use the joystick lever (◀ or ▶) to select the gain.



D/N SETTING - AUTO	
AGC MAX GAIN	+9dB
DNR	OFF
BURST	OFF
FOCUS	1
LEVEL	MID
PRESET MENU	OFF BACK

Available settings: Select the maximum AGC gain from +9dB, +12dB or +15dB.

CAMERA SETTINGS

DNR setting

- 5** Use the joystick lever (▲ or ▼) to move the cursor to DNR, and then use the joystick lever (◀ or ▶) to select the digital noise reduction setting (example: ON).



D/N SETTING - AUTO	
AGC MAX GAIN	+9dB
DNR	ON
BURST	OFF
FOCUS	1
LEVEL	MID

Available settings:

- **ON:** DNR (digital noise reduction) is applied. This reduces interference at low luminance levels.
- **OFF:** DNR is not applied.

Note: Digital noise reduction operates when the gain control increases. In addition, blurring and ghosting of images can occur when moving images are being monitored, and so the resolution is also reduced slightly.

BURST setting

- 6** Use the joystick lever (▲ or ▼) to move the cursor to BURST, and then use the joystick lever (◀ or ▶) to select the burst setting (example: ON).



D/N SETTING - AUTO	
AGC MAX GAIN	+9dB
DNR	ON
BURST	ON
FOCUS	1
LEVEL	MID

Available settings:

- **ON:** The color burst signal is turned on.
- **OFF:** This should normally be set to "OFF".

FOCUS setting

- 7** Use the joystick lever (▲ or ▼) to move the cursor to FOCUS, and then use the joystick lever (◀ or ▶) to select the focus setting (example: 1).



D/N SETTING - AUTO	
AGC MAX GAIN	+9dB
DNR	ON
BURST	ON
FOCUS	1
LEVEL	MID

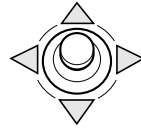
Available settings:

- **1:** Near-infrared wavelength correction is set. (around 900 nm)
- **2:** Visible light spectrum is set.

Note: This should normally be set to "1". If images are out of focus in black & white mode, select a mode that gives better focus.

LEVEL setting

- 8** Use the joystick lever (▲ or ▼) to move the cursor to LEVEL, use the joystick lever (◀ or ▶) to select the level setting (example: ADJ) and then press the ENTER button. The LEVEL SETTING screen will appear.



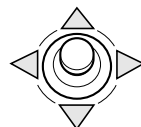
D/N SETTING - AUTO	
AGC MAX GAIN	+9dB
DNR	ON
BURST	ON
FOCUS	1
LEVEL	ADJ

LEVEL SETTING	
(COLOR→B/W)	4
(B/W→COLOR)	4
PRESET MENU	OFF BACK

Available settings:

- **LOW:** The mode switches when the luminance of the objects being monitored is comparatively dark.
- **MID:** The mode switches when the luminance of the objects being monitored is between the LOW and HIGH levels.
- **HIGH:** The mode switches when the luminance of the objects being monitored is comparatively bright.
- **ADJ:** The switching level for color mode to black & white mode and for black & white mode to color mode respectively can be set manually.

- 9** Use the joystick lever (▲ or ▼) to move the cursor to COLOR→B/W, and then use the joystick lever (◀ or ▶) to select the value.



LEVEL SETTING	
(COLOR→B/W)	4
(B/W→COLOR)	4
PRESET MENU	OFF BACK

Available settings: 1 – 7

Note:

- The larger the value, the darker the switching level.
- Changing the setting for one of the switching level settings (from color mode to black & white mode or from black & white mode to color mode) causes the other setting to change also.
- Set the switching level from black & white mode to color mode in the same way.

CAMERA SETTINGS

10 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the **ENTER** button. The LENS screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ►) to select END for MENU, then press the **ENTER** button.

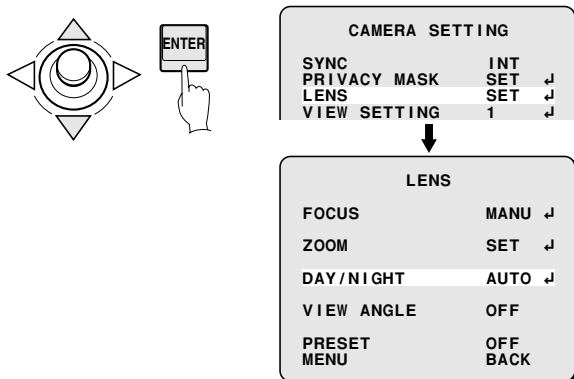
• COLOR mode setting

1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.

The CAMERA SETTING screen will appear.

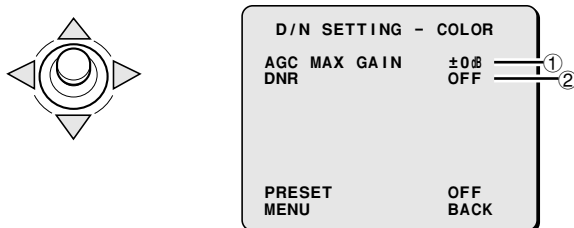
2 Use the joystick lever (▲ or ▼) to select SET for LENS, then press the ENTER button.

The LENS screen will appear.



3 Use the joystick lever (▲ or ▼) to move the cursor to DAY/NIGHT, use the joystick lever (◀ or ▶) to select the level setting (example: COLOR) and then press the ENTER button.

The D/N SETTING - COLOR screen will appear, and the “±0dB” setting for “AGC MAX GAIN” will be blinking.

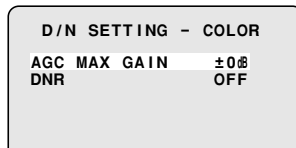


① Sets the maximum AGC gain.

② Sets the digital noise reduction.

AGC MAX GAIN setting

4 Use the joystick lever (▲ or ▼) to move the cursor to AGC MAX GAIN, and then use the joystick lever (◀ or ▶) to select the gain.



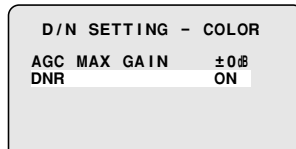
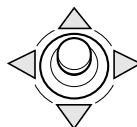
Available settings: Select the maximum AGC gain from OFF, -6dB, ±0dB, +6dB or +9dB.

Note:

- If “OFF” is selected, no maximum gain will be set.
- If “OFF” is selected, the SENSE UP function will be forcibly set to “OFF”. However, the setting display will not change.

DNR setting

5 Use the joystick lever (▲ or ▼) to move the cursor to DNR, and then use the joystick lever (◀ or ▶) to select the digital noise reduction setting (example: ON).



Available settings:

- **ON:** DNR (digital noise reduction) is applied. This reduces interference at low luminance levels.
- **OFF:** DNR is not applied.

Note:

- Digital noise reduction operates when the gain control increases. In addition, blurring and ghosting of images can occur when moving images are being monitored, and so the resolution is also reduced slightly.
- If AGC MAX GAIN is set to “OFF”, DNR will be forcibly set to “OFF”.

6 Canceling a settings screen

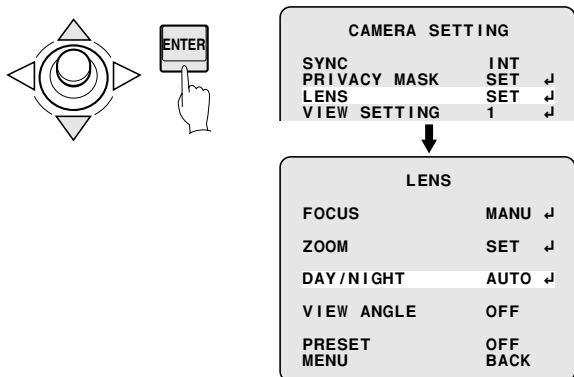
- Use the joystick lever (▼) to select BACK for MENU, then press the **ENTER** button. The LENS screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ►) to select END for MENU, then press the **ENTER** button.

CAMERA SETTINGS

• B/W mode setting

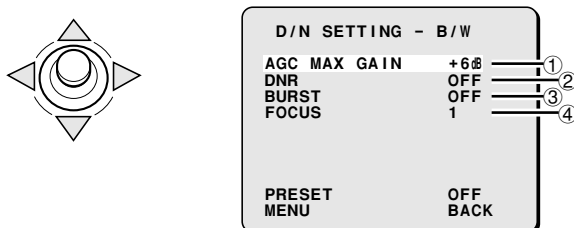
1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.
The CAMERA SETTING screen will appear.

2 Use the joystick lever (▲ or ▼) to select SET for LENS, then press the ENTER button.
The LENS screen will appear.



3 Use the joystick lever (▲ or ▼) to move the cursor to DAY/NIGHT, use the joystick lever (◀ or ▶) to select the level setting (example: B/W) and then press the ENTER button.

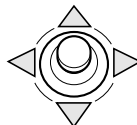
The D/N SETTING – B/W screen will appear, and the “+6dB” setting for “AGC MAX GAIN” will be blinking.



- ① Sets the maximum AGC gain.
- ② Sets the digital noise reduction.
- ③ Sets burst suppression. If other peripheral devices (such as a multiplexer) are connected to the system, bursts (distortion of image color) can occur when switching between color and black & white. If this happens, change the BURST setting to “ON”.
- ④ Sets the focus when switching to black & white mode.

AGC MAX GAIN setting

4 Use the joystick lever (▲ or ▼) to move the cursor to AGC MAX GAIN, and then use the joystick lever (◀ or ▶) to select the gain.



D/N SETTING – B/W	
AGC MAX GAIN	+6dB
DNR	OFF
BURST	OFF
FOCUS	1

Available settings: Select the maximum AGC gain from OFF, -6dB, ±0dB, +6dB, +9dB, +12dB or +15dB.

Note:

- If “OFF” is selected, no maximum gain will be set.
- If “OFF” is selected, the SENSE UP function will be forcibly set to “OFF”. However, the setting display will not change.

DNR setting

5 Use the joystick lever (▲ or ▼) to move the cursor to DNR, and then use the joystick lever (◀ or ▶) to select the digital noise reduction setting (example: ON).



D/N SETTING – B/W	
AGC MAX GAIN	+6dB
DNR	ON
BURST	OFF
FOCUS	1

Available settings:

- **ON:** DNR (digital noise reduction) is applied. This reduces interference at low luminance levels.
- **OFF:** DNR is not applied.

Note:

- Digital noise reduction operates when the gain control increases. In addition, blurring and ghosting of images can occur when moving images are being monitored, and so the resolution is also reduced slightly.
- If AGC MAX GAIN is set to “OFF”, DNR will be forcibly set to “OFF”.

BURST setting

6 Use the joystick lever (▲ or ▼) to move the cursor to BURST, and then use the joystick lever (◀ or ▶) to select the burst setting (example: ON).



D/N SETTING – B/W	
AGC MAX GAIN	+6dB
DNR	ON
BURST	ON
FOCUS	1

Available settings:

- **ON:** The color burst signal is turned on.
- **OFF:** This should normally be set to “OFF”.

CAMERA SETTINGS

FOCUS setting

- 7** Use the joystick lever (▲ or ▼) to move the cursor to **FOCUS**, and then use the joystick lever (◀ or ▶) to select the focus setting (example: 1).



D/N SETTING - B/W	
AGC MAX GAIN	+6dB
DNR	ON
BURST	ON
FOCUS	1

Available settings:

- **1:** Near-infrared wavelength correction is set. (around 900 nm)
- **2:** Visible light spectrum is set.

Note: This should normally be set to “1”. If images are out of focus when black & white mode is used at nighttime, select “2”.

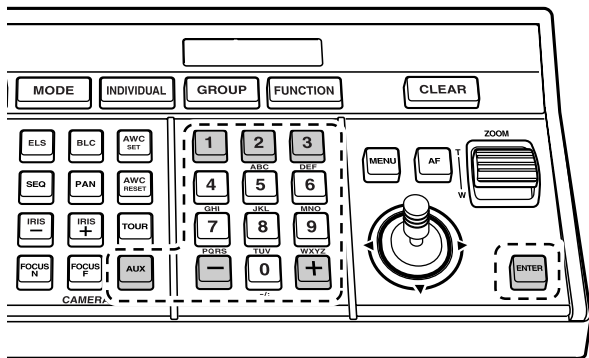
8 Canceling a settings screen

- Use the joystick lever (▼) to select **BACK** for MENU, then press the **ENTER** button. The LENS screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select **END** for MENU, then press the **ENTER** button.

Day/Night mode operation from the system controller

The Day/Night setting (AUTO, COLOR and B/W) can be switched using “CAMERA” operating range of the system controller. Press the following buttons in the order given to change the mode setting.

- **COLOR mode:**
“AUX” + “AUX” + “1” + “Enter” + “+” button
- **B/W mode:**
“AUX” + “AUX” + “2” + “Enter” + “+” button
- **AUTO mode:**
“AUX” + “AUX” + “3” + “Enter” + “+” button



D VIEW ANGLE setting

The VIEW ANGLE setting should normally be left at “OFF”.

- 1** In the **MAIN MENU**, select **SET** for **CAMERA** and press the **ENTER** button.

The **CAMERA SETTING** screen will appear.

- 2** Use the joystick lever (▲ or ▼) to select **SET** for **LENS**, then press the **ENTER** button.

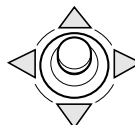
The **LENS** screen will appear.



CAMERA SETTING	
SYNC	INT ↕
PRIVACY MASK	SET ↕
LENS	SET ↕
VIEW SETTING	1 ↕

LENS	
FOCUS	MANU ↕
ZOOM	SET ↕
DAY/NIGHT	AUTO ↕
VIEW ANGLE	OFF
PRESET MENU	OFF BACK

- 3** Use the joystick lever (▲ or ▼) to move the cursor to **VIEW ANGLE**, and then use the joystick lever (◀ or ▶) to select the setting (example: OFF).



LENS	
FOCUS	MANU ↕
ZOOM	SET ↕
DAY/NIGHT	AUTO ↕
VIEW ANGLE	OFF
PRESET MENU	OFF BACK

Available settings:

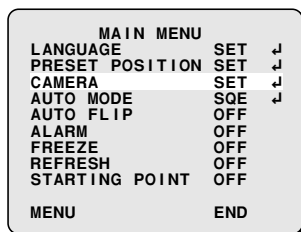
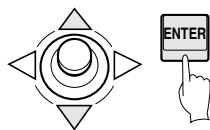
- **OVER:** The image angle for images being monitored is set to 1.05.
- **OFF:** This setting should normally be “OFF”.

Note: This setting should normally be “OFF”. However, vignetting may occur in the corners of the images because of the zoom position. This is not normally a problem, but if you are concerned about it, change the setting to “OVER”. The vignetting will then be less apparent.

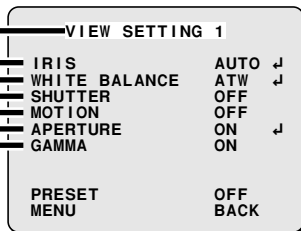
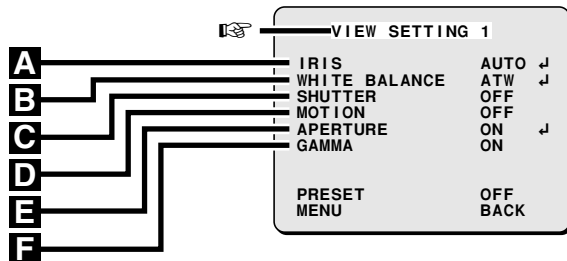
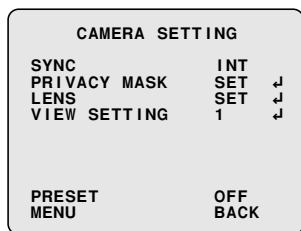
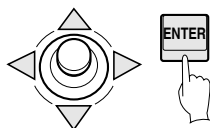
CAMERA SETTINGS

D VIEW SETTING item flow

1 Select CAMERA



2 Select VIEW SETTING



☞ Signifies that CAMERA SETTING 1 is set.

In the CAMERA SETTING screen, the joystick lever can be used (◀ or ▶) to select from VIEW SETTING 1 to another of the nine VIEW SETTING patterns.

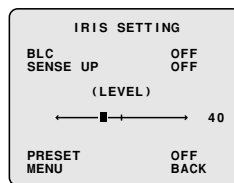
Note:

- In any of these screens, moving the cursor to PRESET and changing to ON will reset the values back to initial settings.
- When each of the following functions is ON (shown by single circle), it may be possible to use other functions in conjunction with it (shown by double circle). View columns vertically to determine which functions can be used together.

IRIS	AUTO: SENSE UP (ON)	○	×	×	×	×
	MANU: EI (ON)	×	○	×	×	◎
SHUTTER	LONG	×	×	○	×	×
	SHORT	×	×	×	○	◎
MOTION		×	◎	×	◎	○

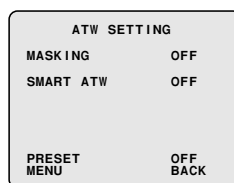
○: Function is set ×: Not allowable ◎: Allowable

A IRIS setting (See p28)



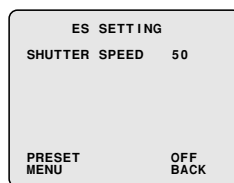
This setting allows selection of IRIS to either autoiris (AUTO) or manual iris (MANU). Initial setting is autoiris.

B WHITE BALANCE adjustment (See p32)



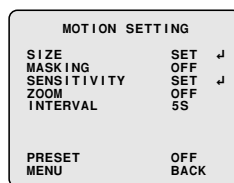
This selects the white balance method to be used. Three white balance methods are available: auto trace white balance (ATW), one-push automatic white balance (AWC), and manual white balance (MWB). Default setting is full-time automatic white balance.

C Electronic SHUTTER setting (See p35)



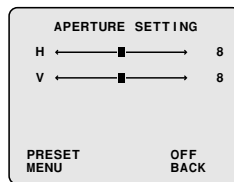
This setting chooses either a fast shutter speed (SHORT) for target objects that may be moving quickly or a slower shutter speed (LONG) for darker target objects.

D MOTION detector setting (See p36)



This function generates an alarm when a suspicious figure is detected. Each of the settings will enable certain kinds of detection based on the natural image (swaying trees, flickers of light, etc.). It is also possible to enable zooming in on target objects and intruders that have unusual brightness levels (moving, bright) or are fast-moving.

E Profile compensation setting (APERTURE) (See p39)



This setting emphasizes the target object profile (horizontally or vertically).

F GAMMA correction setting (See p39)

This setting enables contrast sensitivity to be boosted by controlling the gamma characteristics. Three gamma controls are available: gamma correction (ON), smart gamma correction 1 (SMART 1), and smart gamma correction 2 (SMART 2). Initial setting is ON.

CAMERA SETTINGS

A IRIS setting

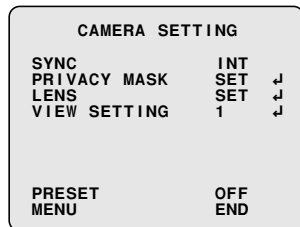
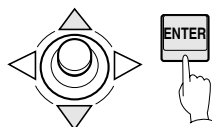
There are 2 possible settings for IRIS, autoiris (AUTO) and manual iris (MANU).

■ Autoiris setting (AUTO)

Sets backlight compensation, magnification of electronic sensitivity and iris level.

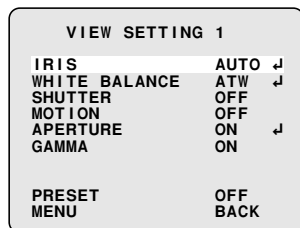
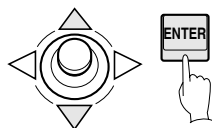
- 1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.

The CAMERA SETTING screen will appear.



- 2 Use the joystick lever (▲ or ▼) to move the cursor to VIEW SETTING, then press the ENTER button. (Ex: 1)

The VIEW SETTING 1 screen will appear and AUTO for IRIS will be blinking.



Available settings:

- **AUTO:** Sets automatic adjustment of iris.
- **MANU:** Sets manual adjustment of iris.

Note: When AUTO is selected, the following 3 types of detailed backlight compensation settings will be available.

- Multi-spot evaluative metering (MULT)
- 5 spot centerweighted average metering (CENT)
- 48 multi-spot metering (MASK)

- 3 Press the ENTER button.

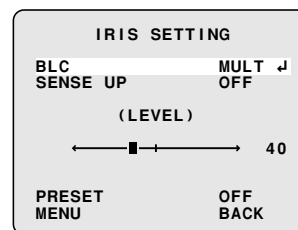
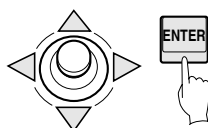
The IRIS SETTING screen will appear.

Backlight compensation additional settings 1

☞ Multi-spot evaluative metering (MULT)

- 1 Use the joystick lever (▲ or ▼) to move the cursor to BLC, then use the joystick lever (◀ or ▶) to select a backlight compensation method. (Ex: MULT) Then press the ENTER button.

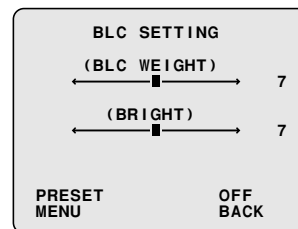
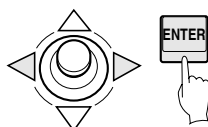
The BLC SETTING screen will appear.



Available settings:

- **MULT** (Multi-spot evaluative metering): Evaluates the entire screen and corrects according to the best image obtained.
- **CENT** (5 spot centerweighted average metering): Measures light mainly at the center and corrects according to the best image obtained. (See p29)
- **MASK** (48 multi-spot metering): Covers bright areas such as persons with mask patterns and treats light measurement output as irrelevant. (See p30)

- 2 Use the joystick lever (◀ or ▶) to select the value of BLC WEIGHT. (Sets backlight and brightness level.)



Available settings: 0 – 15

Note: The larger the number, the more backlighting works.

- 3 Use the joystick lever (▲ or ▼) to move the cursor to BRIGHT, and then use the joystick lever (◀ or ▶) to select the compensation level.

Available settings: 0 – 15

Note: When the number becomes larger, it brightens, and the compensation level can be set for the brightness of the backlighting.

- 4 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The VIEW SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

Note: When using multi-spot evaluative metering, the background behind the target object will become very dark. If a target image in the center of the image is too bright while using the multi-spot evaluative metering mode, switch to the **5 spot centerweighted average metering** mode.

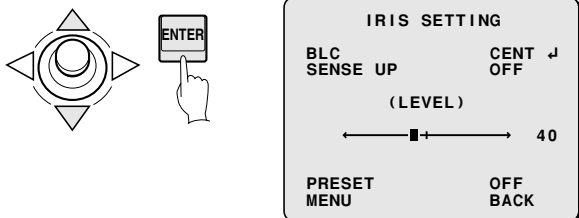
CAMERA SETTINGS

Backlight compensation additional settings 2

- 5 spot centerweighted average metering (CENT)

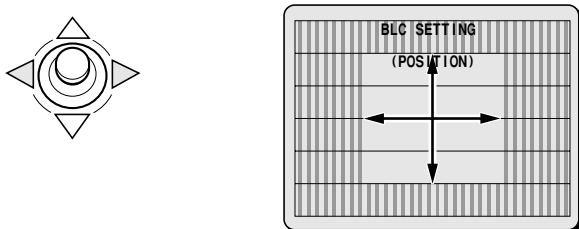
1 Use the joystick lever (◀ or ▶) to select CENT, then press the ENTER button.

The BLC SETTING (POSITION) screen will appear.



2 Use the joystick lever (◀ or ▶) to shift the position of the central light sensing zone.

The zone can be moved up or down and left or right.



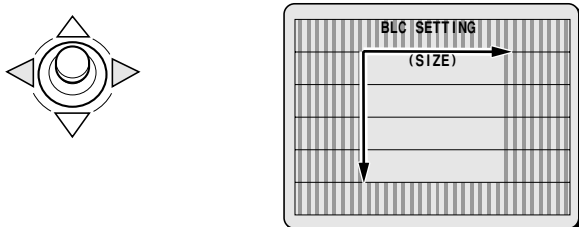
Note:

- If the zone fills the right side it will become smaller.
- If the zone fills the bottom side it will become smaller.

3 Press the ENTER button.

The BLC SETTING (SIZE) screen will appear.

4 Use the joystick lever (◀ or ▶) to adjust the size of the central light sensing zone.



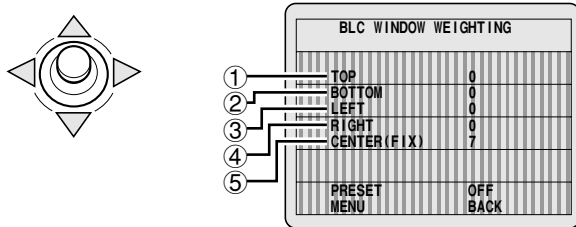
5 Press the ENTER button.

The BLC WINDOW WEIGHTING screen will appear.

6 Use the joystick lever (▲ or ▼) to select a zone, then use the joystick lever (◀ or ▶) to adjust weighting.

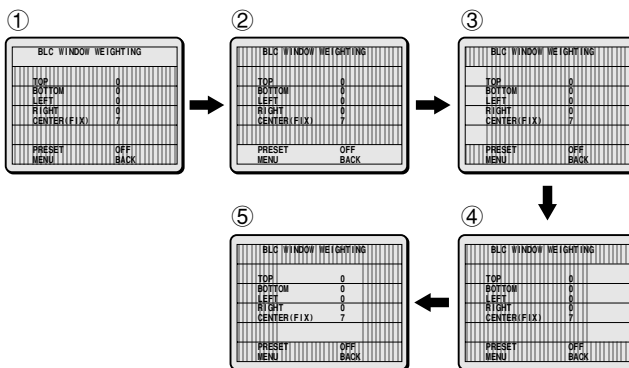
Each setting will change as shown in the illustration.

The area from each of the zones 0 – 7, except CENTER, can be adjusted.



- ① **TOP:**
Weighting is at top.
- ② **BOTTOM:**
Weighting is at bottom.
- ③ **LEFT:**
Weighting is at left.
- ④ **RIGHT:**
Weighting is at right.
- ⑤ **CENT (FIX):**
Center weighting is fixed by the number 7.

Example of setting the mask in the center weighting position.



7 Canceling a settings screen

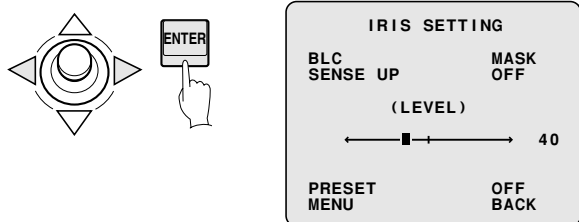
- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The IRIS SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

CAMERA SETTINGS

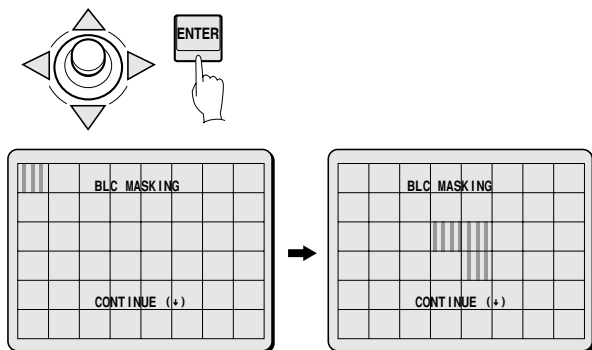
Backlight compensation additional settings 3

• 48 multi-spot metering (MASK)

- 1 Use the joystick lever (◀ or ▶) to select MASK, then press the ENTER button.
The BLC MASKING screen will appear and the mask pattern will be blinking.



- 2 Use the joystick lever (▲ ▼ ◀ ▶) to move the mask pattern over the area not to be sensed, then press the ENTER button.
The mask pattern will be set. You can use the same steps to set additional mask patterns.



Note: The initial mask pattern is at the upper left of the screen, and it is not set. To clear a mask pattern after it is set, press the ENTER button again.

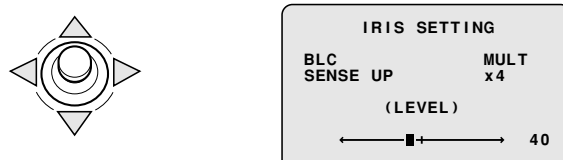
3 Finishing mask pattern setting

Use the joystick lever (▲ or ▼) to move a mask pattern to the bottom area of the screen and continue holding it for 3 seconds. The PRESET and MENU items will appear on the screen.

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The IRIS SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

SENSE UP setting

- 1 Use the joystick lever (▲ or ▼) to move the cursor to SENSE UP, then use the joystick lever (◀ or ▶) to select the power of the electronic sensitivity. (Ex: x4)



Available settings: OFF, x2, x4, x8, x16, x32

Note:

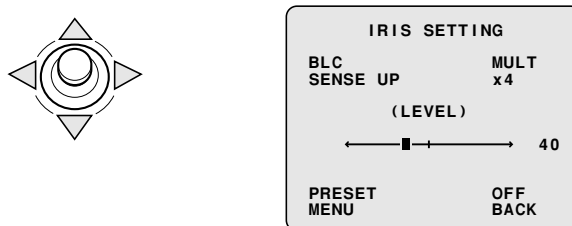
- Electronic sensitivity boosting (SENSE UP) automatically lengthens the CCD exposure time in dark situations. Accordingly, do not use for light target objects. Because exposure time is lengthened while in operation, moving target objects may cause conspicuous afterimages and blurs.
- It is not possible to set SENSE UP (ON) or SHUTTER (LONG) when MOTION is set to "ON".
- When SENSE UP is set to "ON", SHUTTER will automatically be set to "OFF".
- When AGC is set to "OFF", SENSE UP mode cannot be set to "ON".

2 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The VIEW SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

LEVEL setting

- 1 Use the joystick lever (▲ or ▼) to move the cursor to LEVEL, then use the joystick lever (◀ or ▶) to adjust the iris level.



Available settings: 0 – 100

Note: The larger the number, the more it brightens.

2 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The VIEW SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

CAMERA SETTINGS

Manual iris setting

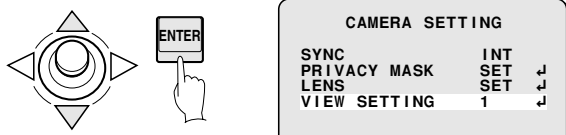
Sets electronic iris ON/OFF, lens aperture and iris level.

- 1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.

The CAMERA SETTING screen will appear.

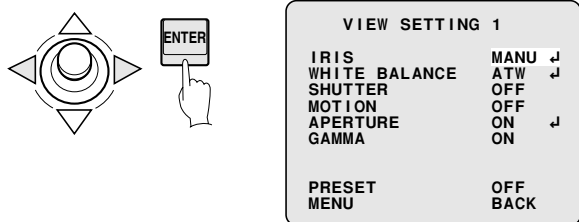
- 2 Use the joystick lever (▲ or ▼) to move the cursor to VIEW SETTING, then press the ENTER button. (Ex: 1)

The VIEW SETTING 1 screen will appear.



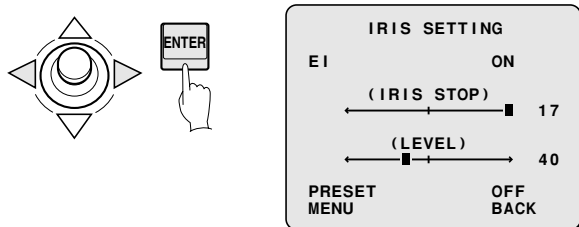
- 3 Use the joystick lever (◀ or ▶) to select MANU, then press the ENTER button.

The IRIS SETTING screen will appear.



Electronic IRIS setting

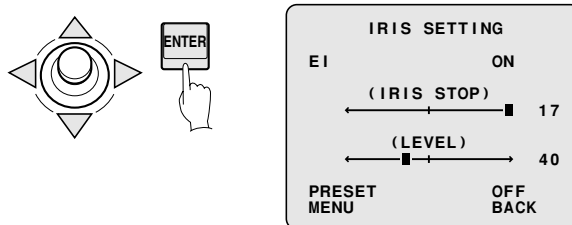
- 4 Use the joystick lever (◀ or ▶) to select EI. (Ex: ON)



Note: When SENSE UP is on for IRIS SETTING, the electronic shutter cannot be forcibly moved.

Lens aperture setting

- 5 Use the joystick lever (▲ or ▼) to move the cursor to IRIS STOP, then use the joystick lever (◀ or ▶) to select the value.

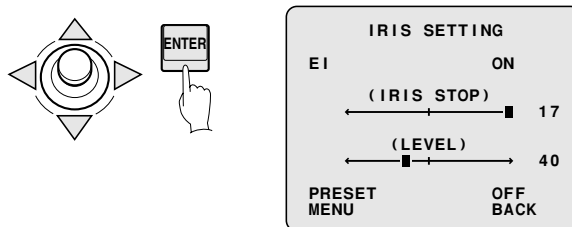


Available settings: 1 – 17 (Aperture opening)

Note:

- The smaller the value the more the aperture closes and the image darkens.
- Changes to the value directly control the aperture of the lens.

- 6 Use the joystick lever (▲ or ▼) to move the cursor to LEVEL, then use the joystick lever (◀ or ▶) to select the value.



Available settings: 0 – 100 (Level of opening)

Note:

- The smaller the value the more the video level drops, becoming darker.
- The LEVEL setting controls both AGC circuit gain and shutter speed, changing the amount of exposure.

- 7 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The VIEW SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

Note:

- If the iris views an unusually bright image, it can cause a smear that cannot be corrected by adjusting the light entering through the lens. In this case, arrange the physical angle of lighting in a way that will prevent on-screen smearing.
- If flickering of the target object occurs because of florescent lighting in the camera location, changing to incandescent lighting will prevent the flickering.

CAMERA SETTINGS

B WHITE BALANCE adjustment

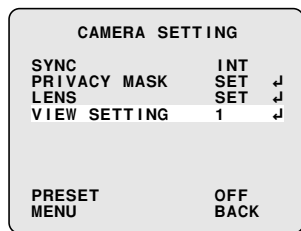
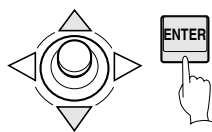
Adjustments can be made to 3 methods of white balance correction: Auto trace white balance (ATW), one-push automatic white balance (AWC), and manual white balance (MWB).

- 1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.

The CAMERA SETTING screen will appear.

- 2 Use the joystick lever (▲ or ▼) to move the cursor to VIEW SETTING, then press the ENTER button. (Ex: 1)

The VIEW SETTING 1 screen will appear.



- 3 Use the joystick lever (▲ or ▼) to move the cursor to WHITE BALANCE, then use the joystick lever (◀ or ▶) to select a white balance type “MWB”. Then press the ENTER button.

The MWB SETTING screen will appear.

The following methods are available for white balance correction. See the corresponding reference sections for additional setting options.

Available methods:

■ ATW (Auto trace white balance)

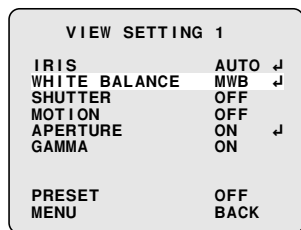
Even when light sources change, automatic adjustment assures capture of most suitable colors. When a bright light source prevents effective white balance, a mask can be placed over the light source. (See p33)

■ AWC (One-push automatic white balance)

White balance is adjusted automatically with one-push activation. AWC is usually set for white target objects (walls, paper, etc.) that do not return color faithfully in the ATW method. (See p34)

■ MWB (Manual white balance)

Fine adjustments for preferred colors can be done manually. This method is preferable when suitable colors cannot be obtained with the ATW method.

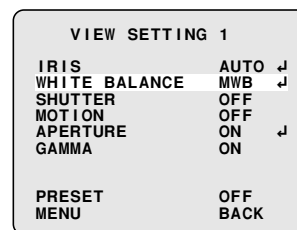
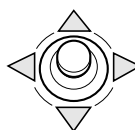


White balance additional settings 1

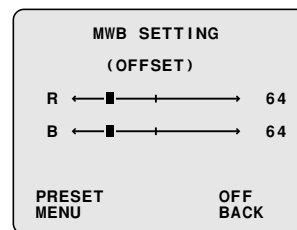
■ MWB setting

- 1 Use the joystick lever (▲ or ▼) to move the cursor to WHITE BALANCE, then use the joystick lever (◀ or ▶) to select a white balance type (Ex: MWB). Then press the ENTER button.

The MWB SETTING screen will appear.



- 2 Use the joystick lever (◀ or ▶) to adjust the value for “R” (red).



Available settings: 0 – 255

Note: The larger the number, the stronger red becomes.

- 3 Use the joystick lever (▲ or ▼) to move the cursor to “B”, then use the joystick lever (◀ or ▶) to adjust the “Blue” value.

Available settings: 0 – 255

Note: The larger the number, the stronger blue becomes.

- 4 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The VIEW SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

CAMERA SETTINGS

White balance additional settings 2

■ ATW setting

Automatic white balance settings are completed when ATW is selected. However, white balance will not be suitably adjusted if a bright light source or an excessively dark area from the environment is in the image. In this case, the bright light source or dark area should be masked so that it will not be detected.

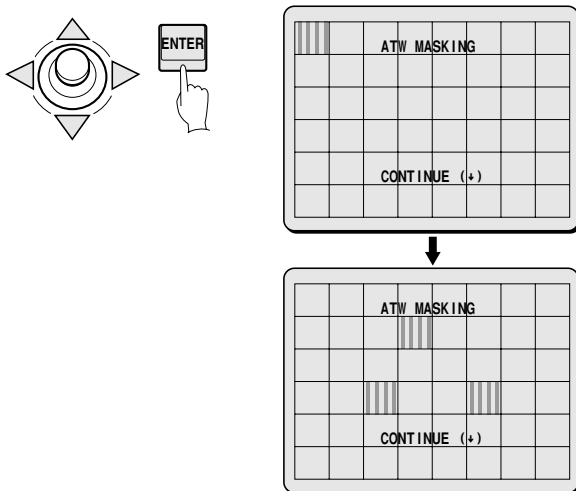
- 1 Use the joystick lever (▲ or ▼) to move the cursor to **ATW for WHITE BALANCE** and press the **ENTER** button. The ATW SETTING screen will appear.



- 2 Use the joystick lever (▲ or ▼) to select **ON** for **MASKING**, then press the **ENTER** button. The ATW MASKING screen will appear with the mask pattern blinking in the upper left corner of the screen.



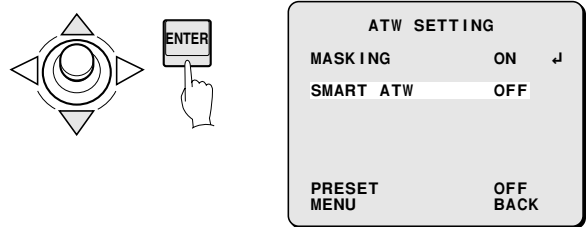
- 3 Use the joystick lever (▲ ▼ ◀ ▶) to move the mask pattern over the bright light source, then press the **ENTER** button. Use the same steps to place addition masks as needed.



Note: Initial settings place no masks on the screen. To cancel the placement of masks, press the **ENTER** button again.

- 4 Use the joystick lever (▲ or ▼) to move a mask pattern to the bottom area of the screen and continue holding the joystick lever straight down for 3 seconds.

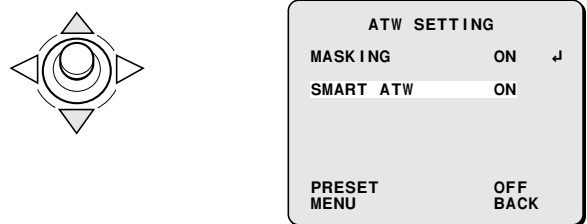
The **PRESET** and **MENU** items will appear on the screen. Use the joystick lever (▲ or ▼) to select **BACK**, then press the **ENTER** button. The ATW SETTING screen will reappear.



☞ SMART ATW setting

If saturation is high or a scene is bright, the most suitable colors may not be obtained. In this case, set the **SMART ATW** to **ON**.

- 5 Use the joystick lever (▲ or ▼) to move the cursor to **SMART ATW**, then use the joystick lever (◀ or ▶) to set **ON**.



6 Canceling a settings screen

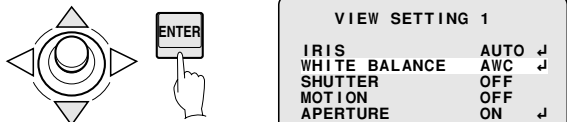
- Use the joystick lever (▼) to select **BACK** for **MENU**, then press the **ENTER** button. The **VIEW SETTING** screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select **END** for **MENU**, then press the **ENTER** button.

CAMERA SETTINGS

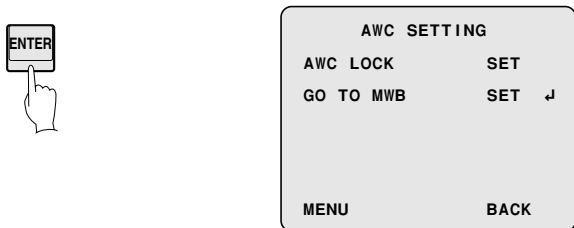
White balance additional settings 3

■ AWC setting

- 1 Use the joystick lever (▲ or ▼) to move the cursor to **AWC for WHITE BALANCE** and press the **ENTER** button. The AWC SETTING screen will appear.



- 2 With **SET** blinking for **AWC LOCK**, press the **ENTER** button. SET will light and adjustment of white balance will begin. After about 3 seconds, SET will begin blinking again, signaling that adjustment is complete.



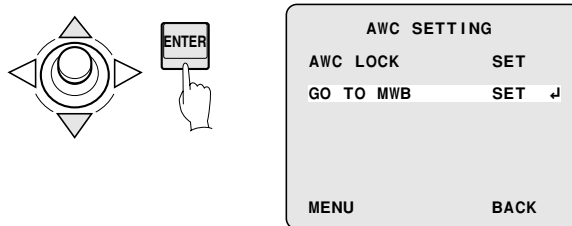
Note:

For even finer adjustment of coloration, choose SET for GO TO MWB. White balance mode will become MWB for fine adjustment. After fine adjustment with GO TO MWB, the white balance mode will automatically switch to MWB.

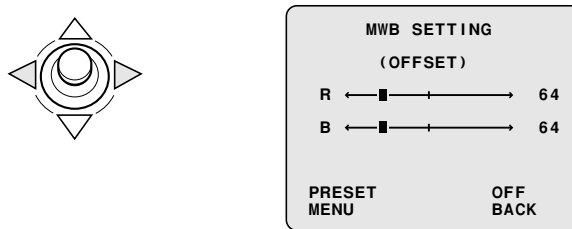
Note: Full adjustment may not be possible with just one activation of SET for AWC LOCK. In that case, press the **ENTER** button again.

GO TO MWB setting

- 3 Use the joystick lever (▲ or ▼) to move the cursor to **SET for GO TO MWB** and press the **ENTER** button. The MWB SETTING screen will appear and the “R” value will be blinking.



- 4 Use the joystick lever (◀ or ▶) to adjust the value for “R” (red).



Available settings: 0 – 255

Note: The larger the number, the stronger red becomes.

- 5 Use the joystick lever (▲ or ▼) to move the cursor to “B”, then use the joystick lever (◀ or ▶) to adjust the “Blue” value.

Available settings: 0 – 255

Note: The larger the number, the stronger blue becomes.

6 Canceling a settings screen

- Use the joystick lever (▼) to select **BACK** for **MENU**, then press the **ENTER** button. The **VIEW SETTING** screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select **END** for **MENU**, then press the **ENTER** button.

CAMERA SETTINGS

C Electronic SHUTTER setting

Sets the electronic shutter to either the fast shutter speed mode (SHORT) or the slow shutter speed mode (LONG).

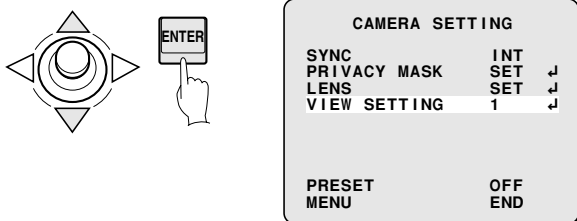
■ Fast shutter speed (SHORT) mode setting

- 1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.

The CAMERA SETTING screen will appear.

- 2 Use the joystick lever (▲ or ▼) to move the cursor to VIEW SETTING, then press the ENTER button. (Ex: 1)

The VIEW SETTING 1 screen will appear.

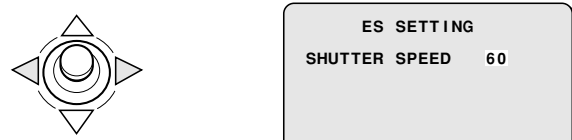


- 3 Use the joystick lever (▲ or ▼) to move the cursor to SHUTTER, then use the joystick lever (◀ or ▶) to select the speed mode for the electronic shutter. (Ex: SHORT) Then press the ENTER button.

The ES SETTING screen will appear and 60 (1/60 sec) will be blinking. This setting is suitable for fast moving target objects.



- 4 Use the joystick lever (◀ or ▶) to select a electronic shutter speed.



Available settings: 60, 100, 250, 500, 1000, 2000, 4000, 10000

Note: SHORT mode cannot be set if SENSE UP or IRIS is "ON".

■ Slow shutter speed (LONG) mode setting

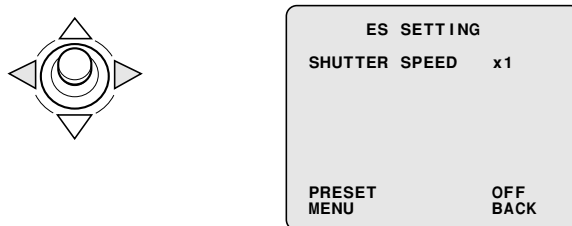
- 1 Use the joystick lever (▲ or ▼) to move the cursor to SHUTTER, then use the joystick lever (◀ or ▶) to select the speed mode for the electronic shutter. (Ex: LONG) Then press the ENTER button.

The ES SETTING screen will appear and x1 (1/60 sec) will be blinking. This setting is suitable for dark target objects.



Note: When a shutter speed is set, it can also be adjusted with the "ELS" button on the system controller.

- 2 Use the joystick lever (◀ or ▶) to select a electronic shutter speed.



Available settings: x1, x2, x4, x8, x16, x32 (Field times shown as multiples.)

- 3 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The VIEW SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

Note:

SHUTTER (LONG) cannot be set if any of the following settings is active.

- MOTION: ON
- IRIS: AUTO item SENSE UP (ON) or MANU item EI (ON)

CAMERA SETTINGS

D MOTION detector setting

This function divides the monitor screen into 48 zones (8 x 6). Based on information from the separate zones, target images that show intruder movements are detected and an alarm is generated. The degree of motion to be detected can be finely set.

Note:

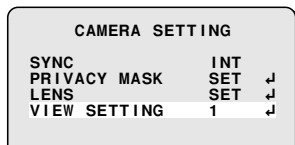
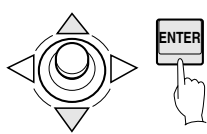
- Before activating this setting, use the system controller to select a surveillance location that will not detect motion.
- When SHUTTER speed is in **LONG** mode and IRIS SETTING has **SENSE UP** activated, the MOTION function cannot be turned **ON**.

1 In the **MAIN MENU**, select **SET** for **CAMERA** and press the **ENTER** button.

The **CAMERA SETTING** screen will appear.

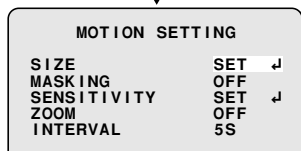
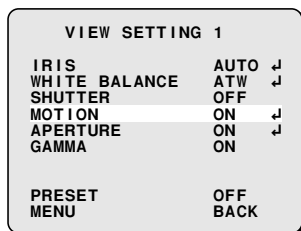
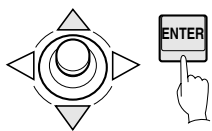
2 Use the joystick lever (**▲** or **▼**) to move the cursor to **VIEW SETTING**, then press the **ENTER** button. (Ex: 1)

The **VIEW SETTING 1** screen will appear.



3 Use the joystick lever (**▲** or **▼**) to move the cursor to **MOTION**, and then use the joystick lever (**◀** or **▶**) to select **ON**. Then press the **ENTER** button.

The **MOTION SETTING** screen will appear and **SET** for **SIZE** will be blinking.

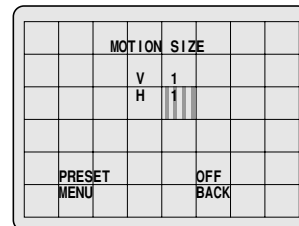


MOTION SIZE setting

Sets the target object size desired for detection in the 48 zone screen.

4 Press the **ENTER** button again.

The **MOTION SIZE** screen appears and the "1" for "V" will be blinking.

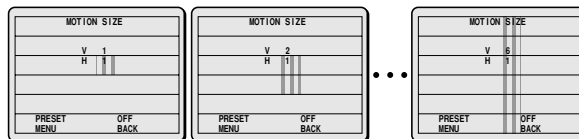


5 Set the size of the target object desired for detection

① Determine the vertical size

Tilt the joystick lever to the right (▶).

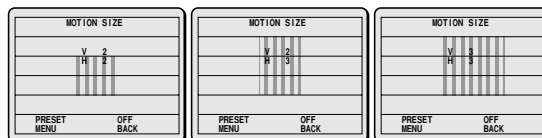
The "V" value (vertical pattern) will change to "2" and the detection pattern will expand downward. Repeating this motion will expand the pattern in the up and down direction. Tilting the joystick lever to the left will reduce the pattern size.



V 1, H 1

V 2, H 1

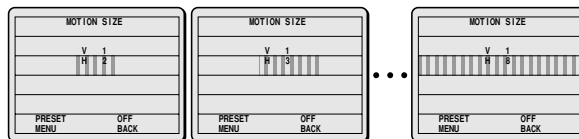
V 6, H 1



V 2, H 2

V 2, H 3

V 3, H 3



V 1, H 2

V 1, H 3

V 1, H 8

② Determine the horizontal size

Use the joystick lever (▼) to move the cursor to the "1" for "H", then tilt the joystick lever to the right (▶).

The "H" value (horizontal pattern) will change to "2" and the detection pattern will expand to the left. Repeating this motion will expand the pattern in the left and right direction. Tilting the joystick lever to the left will reduce the pattern size.

6 Canceling a settings screen

- Use the joystick lever (**▼**) to select **BACK** for **MENU**, then press the **ENTER** button. The **MOTION SETTING** screen will reappear.
- To return to the normal screen, use the joystick lever (**▼ ▶**) to select **END** for **MENU**, then press the **ENTER** button.

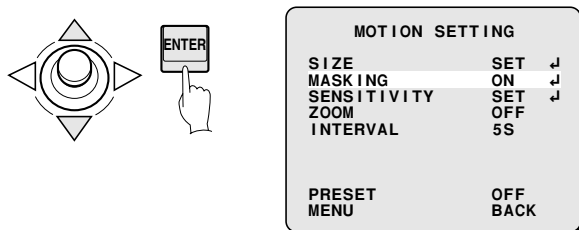
CAMERA SETTINGS

■ MOTION MASKING setting

Masking target objects that are not desired for detection (swaying trees, flickers of light, etc.) will prevent unwanted alarms from being generated. This is done in the MOTION SETTING screen.

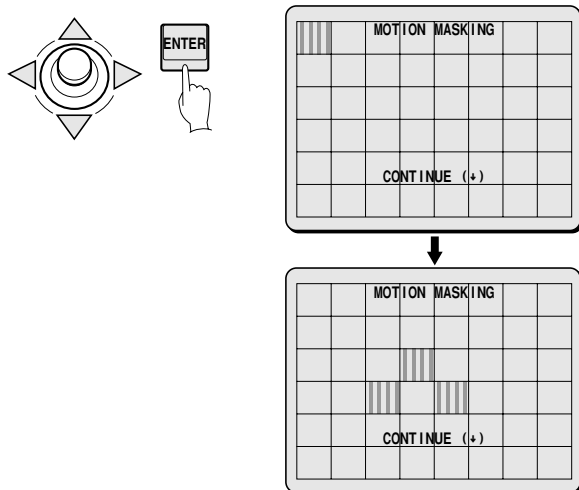
- 1 Use the joystick lever (▲ or ▼) to move the cursor to MASKING, and then use the joystick lever (◀ or ▶) to select ON. Then press the ENTER button.

The MOTION MASKING screen will appear, and the mask pattern will be blinking in the upper left corner of the screen.



- 2 Use the joystick lever (▲ ▼ ◀ ▶) to move the mask pattern to the target object that is not to be detected, then press the ENTER button.

Repeat these steps to set mask patterns in other locations.



Note: To clear a mask pattern, press the ENTER button again on the pattern.

- 3 Finishing motion pattern setting

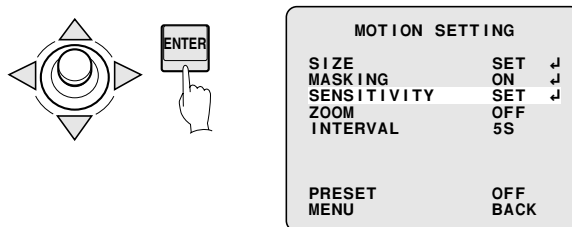
- Use the joystick lever (▲ or ▼) to move a mask pattern to the bottom area of the screen and continue holding it for 3 seconds. The PRESET and MENU items will appear on the screen.
- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The MOTION SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▲ ▶) to select END for MENU, then press the ENTER button.

■ SENSITIVITY setting

Set the degree of sensitivity for motion detection corresponding to MOTION SIZE. Sensitivity can be set so that natural motions on the screen such as wind and light changes will not be detected. When this is necessary, activate the following setting.

- 1 In the MOTION SETTING, select SET for SENSITIVITY and press the ENTER button.

The SENSITIVITY screen will appear.

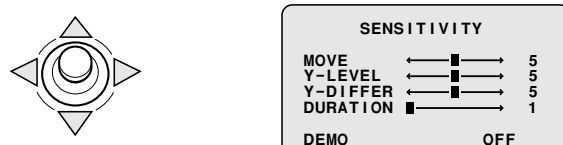


When necessary, adjust the following settings.

☞ Motion sensitivity (MOVE) setting

Use the joystick lever (▲ or ▼) to move the cursor to MOVE, then use the joystick lever (◀ or ▶) to adjust the movement value.

To avoid detection of small movements such as wind, make the value larger.



Available settings: 1 – 10

☞ Brightness level (Y-LEVEL)

Use the joystick lever (▲ or ▼) to move the cursor to Y-LEVEL, then use the joystick lever (◀ or ▶) to adjust the brightness level.

When noise from a dark screen is causing erroneous detections, make the value larger.

Available settings: 1 – 10

☞ Brightness differences (Y-DIFFER)

Use the joystick lever (▲ or ▼) to move the cursor to Y-DIFFER, then use the joystick lever (◀ or ▶) to adjust the brightness differences.

Changes in brightness can sometimes be mistakenly detected as motion. To avoid detection of the turning on and off of lighting, make the value larger.

Available settings: 1 – 10

CAMERA SETTINGS

Ⓜ DURATION setting

Use the joystick lever (▲ or ▼) to move the cursor to **DURATION**, then use the joystick lever (◀ or ▶) to adjust the detection time duration.

To avoid detecting fast movements, make the value larger.

Available settings: 1 – 60

Ⓜ Detected motion confirmation mode (DEMO)

Use the joystick lever (▲ or ▼) to move the cursor to **TITLE**, then use the joystick lever (◀ or ▶) to change **ON**.

When a motion is detected, patterns are shown in that location. While the detected motion is being confirmed, the **SENSITIVITY** settings are optimized. This mode can only be activated in the **SENSITIVITY** setting screen.

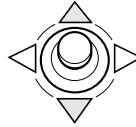
2 Canceling a settings screen

- Use the joystick lever (▼) to select **BACK** for **MENU**, then press the **ENTER** button. The **MOTION SETTING** screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select **END** for **MENU**, then press the **ENTER** button.

■ ZOOM setting

This item is set in the **MOTION SETTING** screen.

Use the joystick lever (▲ or ▼) to move the cursor to **ZOOM**, then use the joystick lever (◀ or ▶) to select the zoom magnification power (Ex.: x2).



MOTION SETTING		
SIZE	SET	↓
MASKING	ON	↓
SENSITIVITY	SET	↓
ZOOM	x2	
INTERVAL	5S	
PRESET	OFF	
MENU	BACK	

Available settings: OFF, x1.4, x2, x2.8, x4, x6

Note:

- When a suspicious motion is detected, the camera zooms in according to the set magnification power. The zoom takes effect for 5 seconds and then returns to the previous magnification level.
- The zoom focuses on the center of the screen. If the maximum optical performance is exceeded, zooming will stop at maximum magnification.

■ INTERVAL setting

This item is set in the **MOTION SETTING** screen.

Use the joystick lever (▲ or ▼) to move the cursor to **INTERVAL**, then use the joystick lever (◀ or ▶) to select the time interval (Ex.: 15S).



MOTION SETTING		
SIZE	SET	↓
MASKING	ON	↓
SENSITIVITY	SET	↓
ZOOM	OFF	
INTERVAL	15S	
PRESET	OFF	
MENU	BACK	

Available settings: 5S, 10S, 15S, 20S, 30S, 1M, 2M, 3M, 4M, 5M

Note: When a motion is detected, no other motions will be detected within the set interval of time.

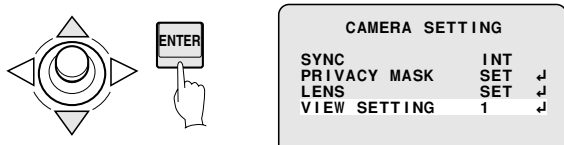
CAMERA SETTINGS

E Profile compensation setting (APERTURE)

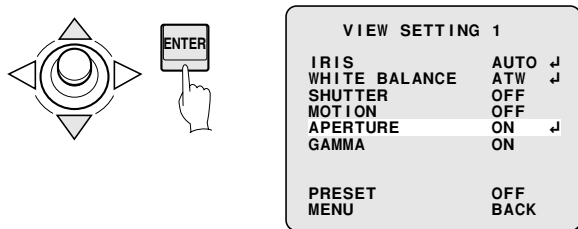
Set this function to further emphasize the profile of the target object. The amount of compensation can be adjusted for horizontal or vertical directions.

- 1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.
The CAMERA SETTING screen will appear.

- 2 Use the joystick lever (▲ or ▼) to move the cursor to VIEW SETTING, then press the ENTER button. (Ex: 1)
The VIEW SETTING 1 screen will appear.

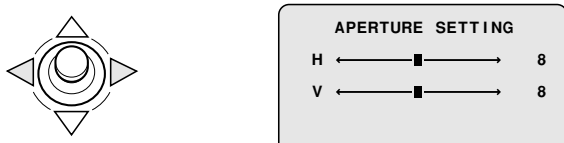


- 3 Use the joystick lever (▲ or ▼) to move the cursor to APERTURE and then use the joystick lever (◀ or ▶) to select ON. Then press the ENTER button.
The APERTURE SETTING screen will appear and the "H" value will be blinking.



- 4 Select the amount of profile compensation
Available settings: 1 – 15 (Compensation intensity)

- 1 Set the horizontal profile compensation
Use the joystick lever (◀ or ▶) to adjust the value for "H" (horizontal).



- 2 Set the vertical profile compensation
Use the joystick lever (▲ or ▼) to move the cursor to "V" (vertical), then use the joystick lever (◀ or ▶) to adjust the value for "V".

5 Canceling a settings screen

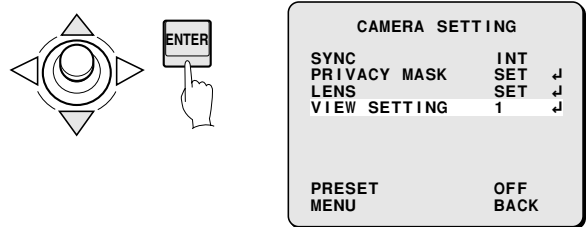
- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The VIEW SETTING 1 screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

F GAMMA correction setting

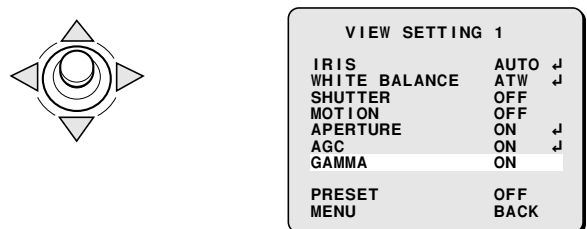
In addition to turning gamma correction ON or OFF, contrast sensitivity can be boosted at 2 levels.

- 1 In the MAIN MENU, select SET for CAMERA and press the ENTER button.
The CAMERA SETTING screen will appear.

- 2 Use the joystick lever (▲ or ▼) to move the cursor to VIEW SETTING, then press the ENTER button. (Ex: 1)
The VIEW SETTING 1 screen will appear.



- 3 Use the joystick lever (▲ or ▼) to move the cursor to ON for GAMMA, then use the joystick lever (◀ or ▶) to select the gamma correction.



Available settings:

- OFF: No gamma correction
- ON: Gamma correction ($\gamma = 0.45$)
- SMART 1: Correction 1
- SMART 2: Correction 2 (improves contrast for dark locations)

Note: When using SMART 1 or SMART 2, the target object may be too bright, so determine which setting is better for the target object.

4 Canceling a settings screen

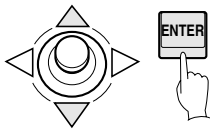
- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The CAMERA SETTING screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

AUTO MODE SETTINGS

There are 3 types of automatic panning available in AUTO MODE: Sequential pan (SEQ), Tour mode (TOUR), and Auto pan (PAN).

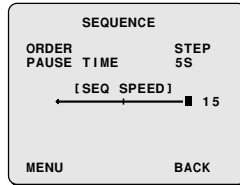
AUTO MODE item flow

MAIN MENU		
LANGUAGE	SET	↓
PRESET POSITION	SET	↓
CAMERA	SET	↓
AUTO MODE	SEQ	↓
AUTO FLIP	OFF	
ALARM	OFF	
FREEZE	OFF	
REFRESH	OFF	
STARTING POINT	OFF	
MENU	END	



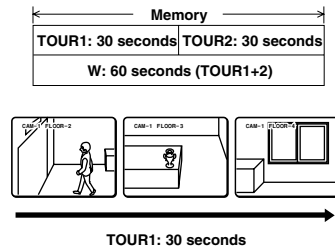
A SEQ; Sequential pan setting (See p41)

The SEQ function offers 2 types of sequential automatic display, smallest to larger preset position number (**STEP**) or by a random selection method unique to this device (**RANDOM**). It also allows setting of pause times and pan times for each PRESET POSITION. This function can be activated by pressing the **SEQ** and **+** buttons on the CAMERA keypad of the system controller.



B TOUR; Tour mode setting (See p41)

The TOUR function records an image track of all camera pan, tilt and zoom operations done within a 30 second period and then allows surveillance of this recorded image track. Two 30 second image tracks can be recorded, TOUR 1 and TOUR 2. In addition, TOUR 1 and TOUR 2 can be combined to create a separate 60 second image track. When a W track is created, stored data for TOUR 1 and TOUR 2 is cleared. To do this, set TOUR to "W". The image track can be activated by pressing the **TOUR** and **+** buttons on the CAMERA keypad of the system controller.



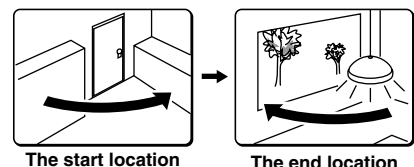
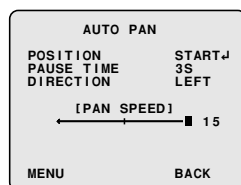
C PAN; Auto pan setting (See p42)

The PAN function stores a start point and an end point and then pans between them in a loop.

The following options are available for loop operation.

- Pause time can be set for the start/end points.
- Pan direction can be set to either right or left.
- Speed can be set for the pan motion (time of pan).

The loop can be activated by pressing the **PAN** and **+** buttons on the CAMERA keypad of the system controller.

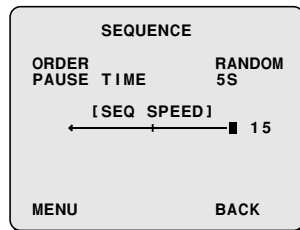


AUTO MODE SETTINGS

A Sequential pan setting

Example: Sequential pan will be set to RANDOM, surveillance location pause time will be 10 seconds, and pan speed to next surveillance location will be 5 seconds.

- 1 Set the PRESET POSITIONS (See p10)
- 2 In the MAIN MENU, select SEQ for AUTO MODE and press the ENTER button.
The SEQUENCE screen will appear.
- 3 Use the joystick lever (◀ or ▶) to select ORDER.
(Ex: RANDOM)



Available settings:

- **STEP:** locations are shown sequentially pan from smallest to largest PRESET POSITION numbers
- **RANDOM:** locations are shown in a random sequentially pan

- 4 Use the joystick lever (▲ or ▼) to move the cursor to "5S" for PAUSE TIME, then use the joystick lever (◀ or ▶) to select the pause time. (Ex: 10S)

Available settings: 3S, 5S, 10S, 15S, 20S, 30S, 45S, 60S, PRE (PRE uses individual values recorded for each of the PRESET POSITIONS.)

Note: To set pause times to be the same for all surveillance locations regardless of differing pause time values set for individual PRESET POSITIONS, set the PAUSE TIME to a numerical value. To use the differing pause times set for individual PRESET POSITIONS, set the PAUSE TIME to "PRE".

- 5 Use the joystick lever (▲ or ▼) to move the cursor to the SEQ SPEED value, then use the joystick lever (◀ or ▶) to set the speed for panning to new surveillance locations. (Ex: 5)

Available settings: 1 (slow) – 15 (fast)

- 6 Canceling a settings screen

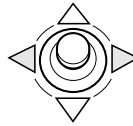
- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The MAIN MENU screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the ENTER button.

B Tour mode setting

Before recording in TOUR mode, move the camera in the normal viewing mode to the location from which to start the TOUR mode. This will make effective use of the tour time.

Example: A 30 second image track of camera pan, tilt and zoom operations will be recorded for TOUR 2.

- 1 In the MAIN MENU, select TOUR for AUTO MODE and press the ENTER button.
The TOUR screen will appear.
- 2 Use the joystick lever (◀ or ▶) to select the TOUR image track. (Ex: 2)



Available settings:

- **1:** Recording of 30 seconds of camera pan, tilt and zoom operations.
- **2:** Recording of 30 seconds of camera pan, tilt and zoom operations.
- **W:** Recorded pan, tilt and zoom camera operations for TOUR 1 and TOUR 2 are cleared after they are combined to form a separate 60 second image track.

Note: The only initial options for TRACE are OFF and SET. After recording of an image track, ON will be added as an option.

Joystick lever operation

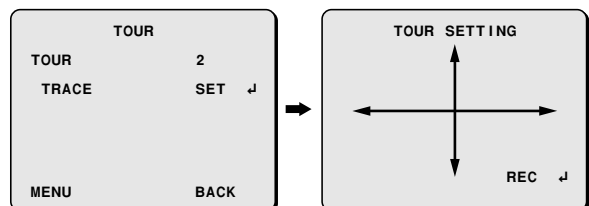
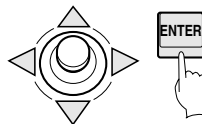
OFF: to ▶ side (ON appears), to ▶ side again (SET appears)

- **SET:** Select to allow recording of image track
- **ON:** Select to play the image track
- **OFF:** Select to not play the image track

- 3 Use the joystick lever (▲ or ▼) to move the cursor to TRACE, and then use the joystick lever (▶) to select SET. Then press the ENTER button.

The TOUR SETTING screen will appear. REC will be blinking, which means that recording has begun. Use the joystick lever (▲ ▼ ◀ ▶) to move the camera to form the image track to be stored.

If the operation shuts down midway through recording of the image, press the ENTER button. The TOUR screen will reappear.



AUTO MODE SETTINGS

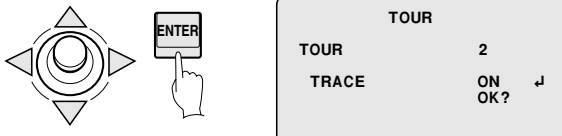
Note:

- “REC” will blink for 30 seconds when recording TOUR 1 or TOUR 2, and it will blink for 60 seconds for W. Complete your image track while REC is blinking.
- Focus information is recorded only at the beginning of recording or for one activation of one-push autofocus during recording. Multiple activations of one-push autofocus during recording will shorten the recording time.
- If track tracing operations are still in progress when the 30 or 60 seconds have elapsed, the recording will automatically stop and the TOUR screen will reappear.
- The image track of TOUR mode and replay of recorded zoom operations will not be complete. In particular, replay will differ if camera settings have been changed after setting of the TOUR mode.

TOUR MODE operation

- Confirm that “2” is selected for TOUR, and then move the cursor to TRACE. Use the joystick lever (▶) to change the setting to ON. Then press the ENTER button.

The confirmation message “OK?” will appear under ON.



- Press the ENTER button.

OK will disappear, and ON will begin blinking.

Note:

- To cancel the TOUR recording, with “ON” still displayed tilt the joystick lever to the left (◀) and press the ENTER button. When the confirmation message “OK?” appears, press the ENTER button.
- Only one of the image tracks (TOUR 1, TOUR 2, or W) can be set with “ON”.
- “ON” indicates tour replay availability.
- When TOUR MODE is in use, VIEW SETTING will be set to “0”.

- Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the ENTER button. The MAIN MENU screen will reappear.
- To return to the normal screen, use the joystick lever (▼▶) to select END for MENU, then press the ENTER button.

C Auto pan setting

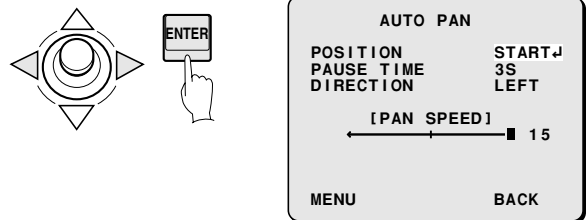
Example: A start point and end point will be set, the time for pausing at both the end point and at the start point will be set to 5 seconds, panning from the start point will be set to move to the right, and panning speed will be set to 8 seconds.

- In the MAIN MENU, select PAN for AUTO MODE and press the ENTER button.

The AUTO PAN screen will appear.

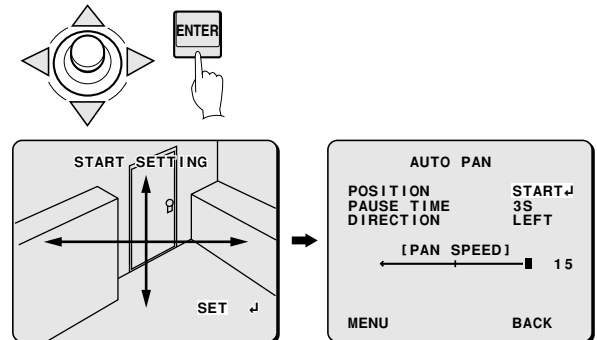
- Use the joystick lever (◀ or ▶) to select START (start point), then press the ENTER button.

The START SETTING screen will appear.



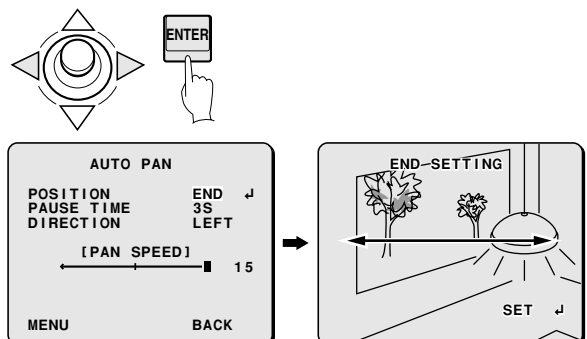
- Use the joystick lever (▲▼◀▶) to decide the starting location, then press the ENTER button.

The AUTO PAN screen will reappear and START will be blinking.



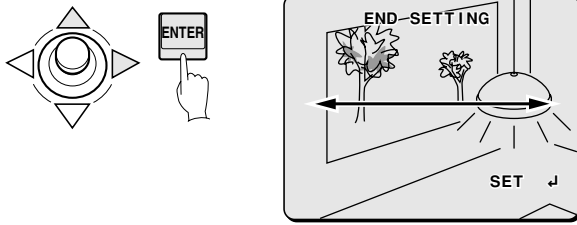
- Use the joystick lever (◀ or ▶) to select END (end point), then press the ENTER button.

The END SETTING screen will appear and SET will be blinking.



AUTO MODE SETTINGS

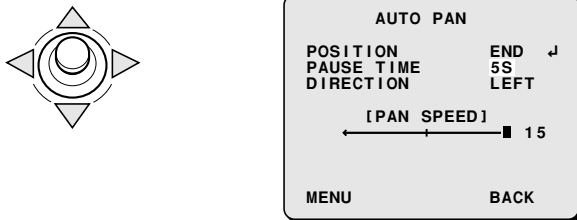
- 5** Use the joystick lever (▲ or ►) to decide the ending location, then press the **ENTER** button.
The AUTO PAN screen will reappear and END will be blinking.



Note:

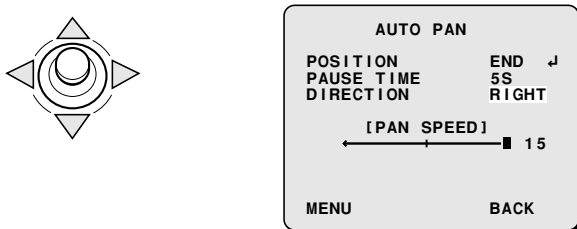
- During use of Auto Pan, if camera information for tilt, zoom and focus are different for the start point and end point, the information recorded for the start point will have priority.
- If the start point and the end point use the same location, the camera can pan in a 360 continuous loop.

- 6** Use the joystick lever (▲ or ▼) to move the cursor to **PAUSE TIME**, and then use the joystick lever (◀ or ►) to select the standby time between the end point and the start point. (Ex: 5S)



Available settings: 1S, 2S, 3S, 5S, 10S, 20S, 30S

- 7** Use the joystick lever (▲ or ▼) to move the cursor to **DIRECTION**, then use the joystick lever (◀ or ►) to set the direction of the pan. (Ex: RIGHT)

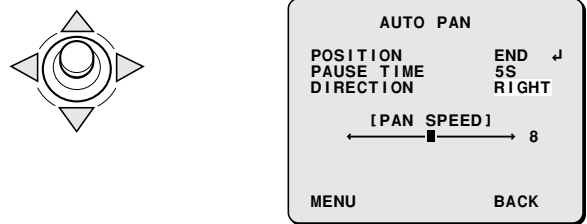


Available settings:

- **LEFT:** Camera pans left from start point to end point.
- **RIGHT:** Camera pans right from start point to end point.

- 8** Use the joystick lever (▲ or ▼) to move the cursor to **PAN SPEED**, then use the joystick lever (◀ or ►) to adjust the speed for the auto pan. (Ex: 8)

Available settings: 1 (slow) – 15 (fast)



- 9** **Canceling a settings screen**

- Use the joystick lever (▼) to select **BACK** for **MENU**, then press the **ENTER** button. The **MAIN MENU** screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ►) to select **END** for **MENU**, then press the **ENTER** button.

Note:

- When auto pan is used, autofocus will not function even if it is set to "ON". The focus setting will automatically be set to manual.
- When PAN MODE is in use, VIEW SETTING will be set to "0".

AUTO FLIP SETTING

When the on-screen image is inverted because tilting operations point the lens nearly straight down, AUTO FLIP will automatically rotate the image up or down, left or right, within a 0 to 180 degree range so that the surveillance view can be seen in an upright position.

1 In the MAIN MENU, select ON for AUTO FLIP.

Use the joystick lever (◀ or ▶) to change OFF to ON.



MAIN MENU	
LANGUAGE	SET ↕
PRESET POSITION	SET ↕
CAMERA	SET ↕
AUTO MODE	SEQ ↕
AUTO FLIP	ON
ALARM	OFF
FREEZE	OFF
REFRESH	OFF
STARTING POINT	OFF
MENU	END

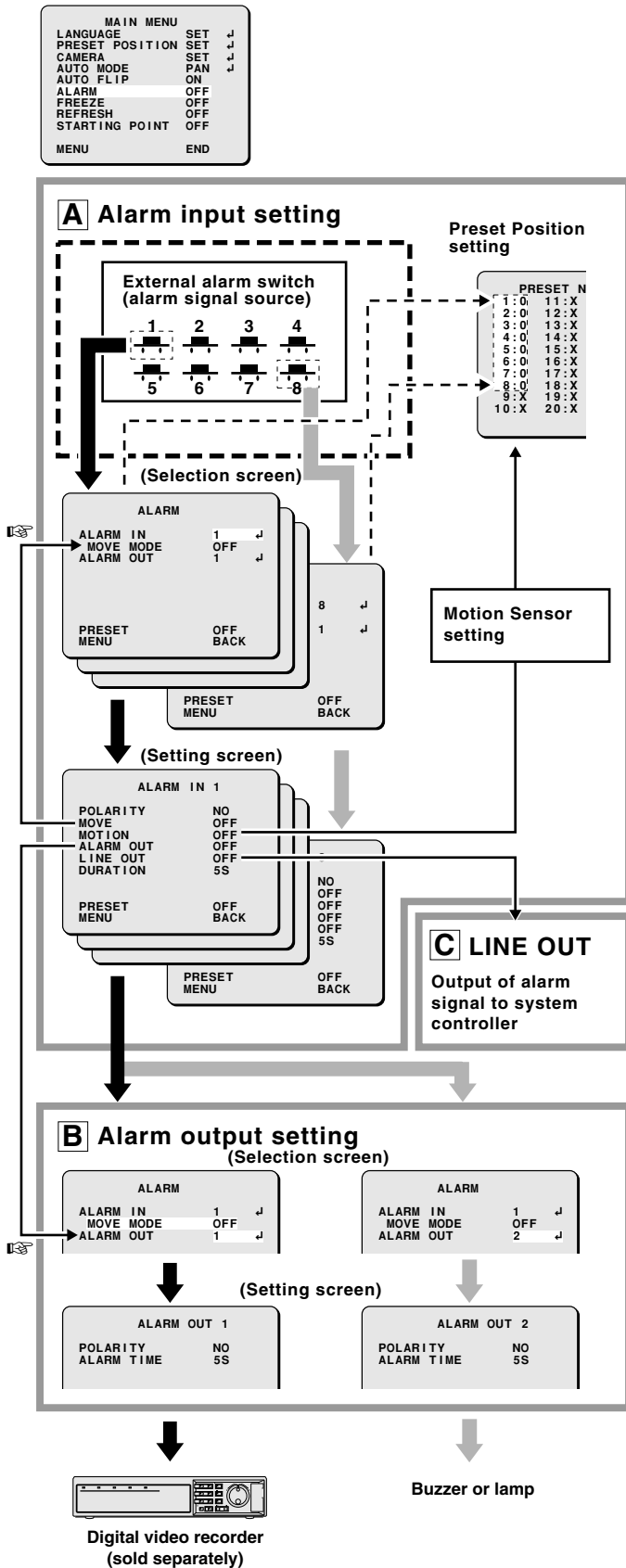
Note: The screen image will be flipped 180 degrees when a tilt operation exceeds the straight down position. The timing for this flip will be at the end of the tilt operation or at the tilt limit.

2 Use the joystick lever (▲ or ▼) to move the cursor to END, then press the ENTER button.

To return to the normal screen.

ALARM SETTING

ALARM item flow



The following settings are necessary for alarm detection.

- Connect the supplied alarm input expansion connector to the alarm input connector, then connect the external alarm (contactless) switch to the end of it.
- In the menu for preset positions, select a preset position from 1 to 8. (Preset positions 9 and higher cannot be used for alarm detection.)
- By setting the MOTION SENSOR for the preset position (1 – 8), external alarms and motion sensing can be detected at the same time.

A ALARM IN (ALARM) (See p46)

Make settings for time of alarm input. In the selection screen ALARM IN field where "1" is shown, an alarm screen number up to 8 can be selected with the joystick lever (◀ or ▶). The ALARM IN number of the selection screen is linked with the alarm switch ON/OFF, the preset position (1 - 8) and the MOTION SENSOR.

MOVE MODE

With MOVE MODE, AUTO setting is only possible when MOVE is set to ON for the corresponding ALARM IN setting screen.

For example, while the preset position is automatically being switched, set ON for MOVE in the ALARM IN 1 setting screen. In the next selection screen, select AUTO for MOVE MODE.

If an alarm is detected in this condition, the camera will move to preset position 1 at the next automatic switch of preset positions, and after pausing 5 seconds (DURATION initial setting), the camera will return to the screen in use before the switch.

Note: Operations such as motion zoom will be suspended and returned to AUTO MODE.

B ALARM OUT (ALARM) (See p47)

Make settings for time of alarm output. In the selection screen ALARM OUT field where "1" is shown, an alarm screen number up to 2 can be selected with the joystick lever (◀ or ▶).

When ALARM OUT is set to OFF, alarms cannot be output to peripheral equipment.

ALARM OUT

For example, when ALARM OUT is set to "1" in the ALARM IN 1 setting screen and ALARM OUT is set to "1" in the selection screen, the alarm output image becomes the camera image taken after moving to preset position 1. (If set to ALARM IN 3, image is from preset position 3.)

By connecting the camera's alarm output connector (1 or 2) to the input terminal of a time lapse video recorder or digital video recorder, the preset position 1 image will be recorded. For alarm output, be sure to match ALARM OUT number for each ALARM IN setting screen with the ALARM OUT number in the selection screen.

C LINE OUT

Sends the alarm signal to the system controller. When this signal is received, the **ALARM** indicator lamp on the system controller will flash. Alarm information such as date/time, camera and alarm type will be displayed in the alarm list.

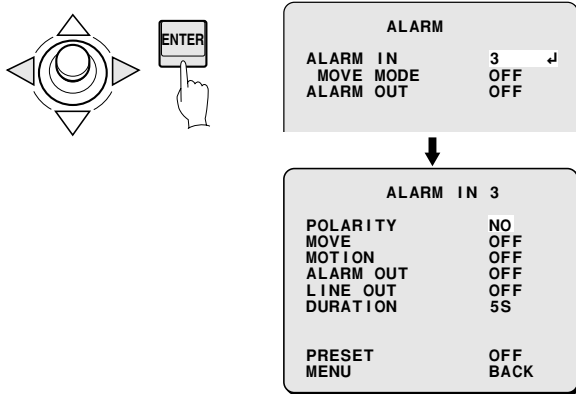
ALARM SETTING

A Alarm input setting

1 In the MAIN MENU, select ON for ALARM and press the ENTER button.

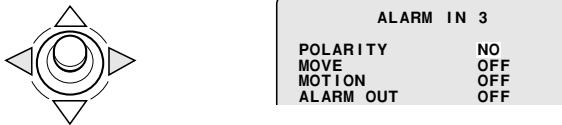
The ALARM screen will appear.

2 Use the joystick lever (◀ or ▶) to select the external alarm input number (Ex: 3), then press the ENTER button. The ALARM IN 3 setting screen will appear.



External alarm input polarity setting (POLARITY)

3 Use the joystick lever (◀ or ▶) to select POLARITY between "NO" and "NC".



Available settings:

- **NO:** Normal open (Normally open so closed condition is detected as input.)
- **NC:** Normal closed (Normally closed so open condition is detected as input.)

Adjust the alarm input settings for ALARM IN 3 as needed.

Move to preset setting (MOVE)

After activation of an alarm, the camera moves to the PRESET POSITION with the same number as the alarm number.

Use the joystick lever (▲ or ▼) to move the cursor to MOVE, then use the joystick lever (◀ or ▶) to select the preset move option.

Available settings:

- **ON:** When alarm is received, the camera moves to the PRESET POSITION with the same number as the alarm number.
- **OFF:** Does not move to a PRESET POSITION.

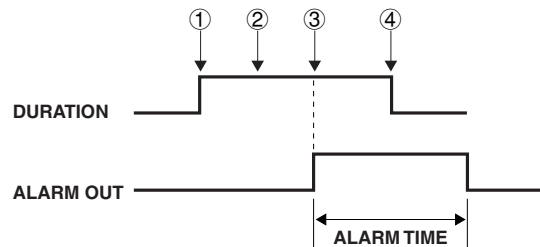
Motion sensor input setting (MOTION)

Matches information from the camera's motion sensor and the external alarm and outputs it.

Use the joystick lever (▲ or ▼) to move the cursor to MOTION, then use the joystick lever (◀ or ▶) to select the input.

Available settings:

- **OFF:** Does not output a motion sensor alarm.
- **AND:** Outputs an alarm when an external alarm input and motion sensor alarm are detected at the same time.



- ① External alarm input
- ② Move to preset position
- ③ Motion sensor detection
When an external alarm input is received, the camera moves to the preset position for the alarm input. After moving to the position, an alarm is output if there is detection by the motion sensor.
- ④ Returns to auto mode

- **OR:** Outputs an alarm if either an external alarm or a motion sensor alarm is detected.

Note:

- The "AND" and "OR" sensor input options are only possible when MOVE is set to "ON".
- When MOVE is set to "OFF", MOTION SENSOR will automatically be set to "OFF".

ALARM SETTING

■ Alarm output setting (ALARM OUT)

Selects the port for alarm output.

Use the joystick lever (▲ or ▼) to move the cursor to **ALARM OUT**, then use the joystick lever (◀ or ▶) to set the alarm output port.

Available settings:

- 1: Output to alarm 1
- 2: Output to alarm 2
- OFF: Does not output an alarm

■ Line output setting (LINE OUT)

Sets ON/OFF condition for alarm output to the communications line.

Use the joystick lever (▲ or ▼) to move the cursor to **LINE OUT**, then use the joystick lever (◀ or ▶) to select the alarm output for the communications line.

Available settings:

- ON: The alarm signal is output to the communications line.
- OFF: The alarm signal is not output to the communications line.

■ Alarm duration setting (DURATION)

Sets the duration of an alarm.

Use the joystick lever (▲ or ▼) to move the cursor to **DURATION**, then use the joystick lever (◀ or ▶) to select the alarm duration.

Available settings: 5S, 10S, 15S, 20S, 30S, 60S, 2M, 3M, 4M, 5M

Note: The alarm duration setting is only applied for an alarm that matches the set alarm number. Subsequent alarms for the same number will not be received during the set amount of time. However, if an alarm input with a different number is detected, the alarm will be immediately received and from that point operation will start based on settings selected for that alarm number.

4 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the **ENTER** button. The ALARM screen will reappear.
- To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the **ENTER** button.

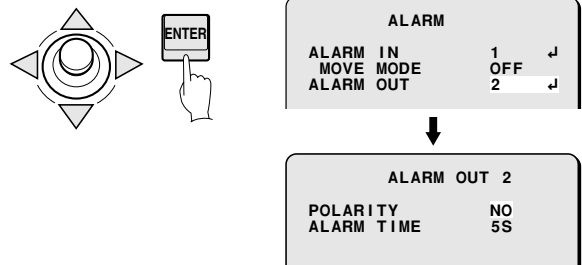
B Alarm output setting

1 In the MAIN MENU, select ON for ALARM and press the **ENTER** button.

The ALARM screen will appear.

2 Use the joystick lever (▲ or ▼) to move the cursor to **ALARM OUT**, then use the joystick lever (◀ or ▶) to select the external alarm output number. (Ex: 2) Then press the **ENTER** button.

The ALARM OUT 2 screen will appear.



3 Use the joystick lever (◀ or ▶) to select POLARITY between "NO" and "NC".



Available settings:

- NO: Normal open (Normally open so closed condition is detected as input.)
- NC: Normal closed (Normally closed so open condition is detected as input.)

4 Canceling a settings screen

- Use the joystick lever (▼) to select BACK for MENU, then press the **ENTER** button. The ALARM screen will reappear.
 - To return to the normal screen, use the joystick lever (▼ ▶) to select END for MENU, then press the **ENTER** button.
- Adjust the alarm input settings for ALARM OUT 2 as needed.

■ External alarm output time setting (ALARM TIME)

Use the joystick lever (▲ or ▼) to move the cursor to **ALARM TIME**, then use the joystick lever (◀ or ▶) to select the amount of time for external alarm output.

Available settings: 2S, 5S, 10S, 15S, 20S, 30S, 60S, 2M, 3M, 4M, 5M

FREEZE AND REFRESH SETTINGS

■ FREEZE setting

The FREEZE function, used during sequential pan displays a still image of the last seen surveillance location while the camera shifts to a new location. The still image is replaced by a new image when the camera has finished moving to a new location.

- 1 In the MAIN MENU, move the cursor to FREEZE, then use the joystick lever (◀ or ▶) to select ON.
Use the joystick lever (◀ or ▶) to change the setting to "OFF".



MAIN MENU	
LANGUAGE	SET ↕
PRESET POSITION	SET ↕
CAMERA	SET ↕
AUTO MODE	SEQ ↕
AUTO FLIP	OFF ↕
ALARM	OFF
FREEZE	ON
REFRESH	OFF
STARTING POINT	OFF
MENU	END

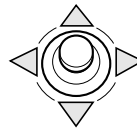
- 2 Use the joystick lever (◀ or ▶) to move the cursor to END, then press the ENTER button.
To return to the normal screen.

■ REFRESH setting

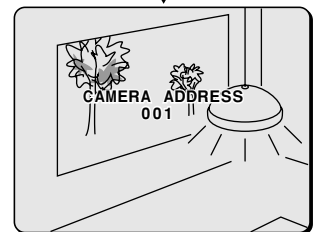
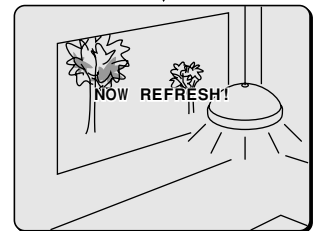
If the camera unit's horizontal rotation contact points become dirty, panning operations may become unstable and images can be disturbed. If used for long periods of time, the PRESET POSITIONS can also slip from their original positions. To avoid these kinds of situations, the REFRESH function performs a cleaning of the contact area.

- 1 In the MAIN MENU, move the cursor to REFRESH, then use the joystick lever (◀ or ▶) to select "SET", then press the ENTER button.

The message **NOW REFRESH!** appears on screen and cleaning of the horizontal contacts begins. The normal viewing screen will reappear after cleaning has been completed.



MAIN MENU	
LANGUAGE	SET ↕
PRESET POSITION	SET ↕
CAMERA	SET ↕
AUTO MODE	PAN ↕
AUTO FLIP	OFF ↕
ALARM	OFF
FREEZE	OFF
REFRESH	SET ↕
STARTING POINT	OFF ↕
MENU	END



Available settings:

- OFF: Refresh function will not activate.
- SET: Cleaning is done once.

STARTING POINT (0 DEGREES) ANGLE SETTING

- 1 Use the joystick lever (▲▼◀▶) to turn the camera to the angle desired to become "0" degrees.
- 2 In the MAIN MENU, move the cursor to STARTING POINT, then use the joystick lever (◀ or ▶) to set the North direction. (Ex: SET) Then press the ENTER button. "ON" will replace "SET", and the direction of the camera will become "0" degrees. To return to the previously established home position, use the joystick lever (◀ or ▶) to turn the setting to "OFF". The camera will return to the home position.



MAIN MENU		
LANGUAGE	SET	↓
PRESET POSITION	SET	↓
CAMERA	SET	↓
AUTO MODE	PAN	↓
AUTO FLIP	OFF	
ALARM	OFF	
FREEZE	OFF	
REFRESH	OFF	
STARTING POINT	SET	↓
MENU	END	

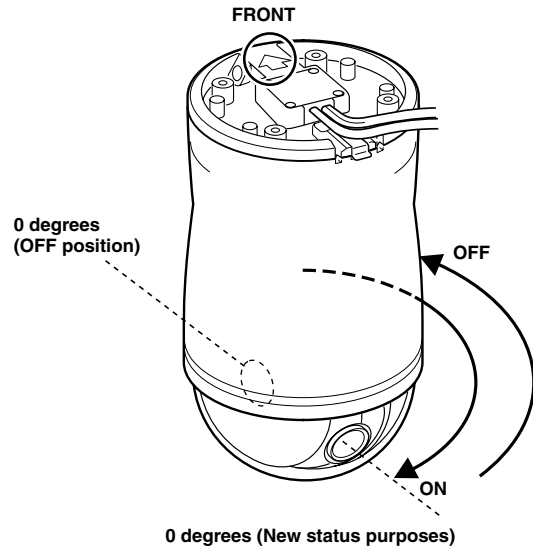
Available settings:

- **OFF:** Position marked by "FRONT" is 0 degrees.
- **ON:** A special position that has been set is 0 degrees.
- **SET:** Sets the designated surveillance position as 0 degrees.

Note:

- Calibration of degrees is in clockwise direction. East is 90 degrees when north is 0 degrees.
- The camera's angle information is taken and sent through the communications line for status purposes. (Sent through the RS-232C line on the system controller.)

- 3 Use the joystick lever (◀ or ▶) to move the cursor to END, then press the ENTER button. To return to the normal screen.



ADDRESS SETTINGS TABLE

In the table below, the circle mark indicates that the DIP switch is "ON".

Address (Camera No.)	Switch numbers							
	ON							
	1	2	3	4	5	6	7	8
0								
1	○							
2		○						
3	○	○						
4			○					
5	○		○					
6		○	○					
7	○	○	○					
8				○				
9	○			○				
10		○		○				
11	○	○		○				
12			○	○				
13	○		○	○				
14		○	○	○				
15	○	○	○	○				
16					○			
17	○				○			
18		○			○			
19	○	○			○			
20			○		○			
21	○		○		○			
22		○	○		○			
23	○	○	○		○			
24				○	○			
25	○			○	○			
26		○		○	○			
27	○	○		○	○			
28			○	○	○			
29	○		○	○	○			
30		○	○	○	○			
31	○	○	○	○	○			
32							○	
33	○						○	
34		○					○	
35	○	○					○	
36			○				○	
37	○		○				○	
38		○	○				○	
39	○	○	○				○	
40				○			○	
41	○			○			○	
42		○		○			○	

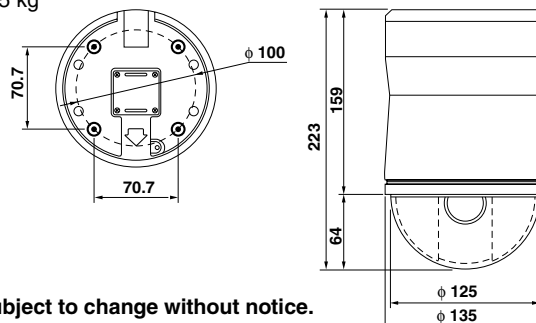
Address (Camera No.)	Switch numbers							
	ON							
	1	2	3	4	5	6	7	8
43	○	○		○		○		
44			○	○		○		
45	○		○	○		○		
46		○	○	○		○		
47	○	○	○	○		○		
48					○	○		
49	○				○	○		
50		○			○	○		
51	○	○			○	○		
52			○		○	○		
53	○		○		○	○		
54		○	○		○	○		
55	○	○	○		○	○		
56				○	○	○		
57	○			○	○	○		
58		○		○	○	○		
59	○	○		○	○	○		
60			○	○	○	○		
61	○		○	○	○	○		
62		○	○	○	○	○		
63	○	○	○	○	○	○		
64								
65	○							
66		○						
67	○	○						
68			○					
69	○		○					
70		○	○					
71	○	○	○					
72				○				
73	○			○				
74		○		○				
75	○	○		○				
76			○	○				
77	○		○	○				
78		○	○	○				
79	○	○	○	○				
80					○			
81	○				○			
82		○			○			
83	○	○			○			
84			○		○			
85	○		○		○			

Address (Camera No.)	Switch numbers							
	ON							
	1	2	3	4	5	6	7	8
86		○	○		○			
87	○	○	○		○			
88				○	○			
89	○			○	○			
90		○		○	○			
91	○	○		○	○			
92			○	○	○			
93	○		○	○	○			
94		○	○	○	○			
95	○	○	○	○	○			
96							○	
97	○						○	
98		○					○	
99	○	○					○	
100			○				○	
101	○		○				○	
102		○	○				○	
103	○	○	○				○	
104				○			○	
105	○			○			○	
106		○		○			○	
107	○	○		○			○	
108			○	○			○	
109	○		○	○			○	
110		○	○	○			○	
111	○	○	○	○			○	
112					○	○		
113	○				○	○		
114		○			○	○		
115	○	○			○	○		
116			○		○	○		
117	○		○		○	○		
118		○	○		○	○		
119	○	○	○		○	○		
120				○	○	○		
121	○			○	○	○		
122		○		○	○	○		
123	○	○		○	○	○		
124			○	○	○	○		
125	○		○	○	○	○		
126		○	○	○	○	○		
127	○	○	○	○	○	○		

SPECIFICATIONS

Image sensor	: 1/4"
Effective pixels	: 768 (H) x 494 (V)
Horizontal resolution	: Over 520 TV lines
Lens	: x22 zoom lens, f=3.6 – 79.2 mm (F1.6 – 3.8) Electronic zoom and gearing Zoom speed setting possible
Electronic zoom	: 16 power (combined with optic zoom gives 352 power max) Max zoom magnification setting possible Vertical resolution ON/OFF setting
Autofocus	: AUT/ONE-PUSH/MANUAL AF area setting possible (3 step)
Iris control	: AUTO/MANUAL, 1/2 EV steps
Synchronization method	: Internal synchronization/Line lock V phase adjustment possible
Lowest image illumination	: 1.2 lx (F1.6, AGC gain at maximum, COLOR mode) 0.06 lx (F1.6, B/W mode) 0.04 lx (F1.6, x32 electronic sensitivity increased, COLOR mode) 0.002 lx (F1.6, x32 SENSE UP, B/W mode)
S/N	: Over 48 dB
Backlight compensation	: Centerweighted average metering/multi-spot evaluative metering/multi-spot metering
Day/Night	: AUTO / COLOR / B/W settings available
Electronic shutter	: ● Fast shutter speed (SHORT) mode: 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 ● Slow shutter speed (LONG) mode: x2, x4, x8, x16, x32
Electronic sensitivity boosting	: AUTO/OFF, works with auto iris Up to x32 max setting possible
White balance	: ATW/AWC/MWB
AGC gain	: ON/OFF/MANUAL
Motion detector	: ON/OFF, individual settings possible
Aperture	: H/V setting possible
Privacy masking	: ON/OFF, max of 8 masked locations (Wide view screen; 1 screen max 4 masks) Password lock possible
Alarm input/output	: External input: 8, External output: 2, NO (Normal open)/NC (Normal closed) switch Motion detector with external alarm AND/OR output options
Screen titles	: ON/OFF, 16 characters
Preset functions	: 9 settings
Auto mode	: Sequential pan/auto pan/tour (2 tour recordings, 30 seconds each)
Rotation range	: Horizontal: 360° endless. Vertical: 0 – 180° (digital autoflip)
Rotation speed	: Horizontal- Preset: 360°/second. Manual: 0.5 – 120°/second Vertical- Preset: 360°/second. Manual: 0.5 – 120°/second
Preset positions	: 64 positions
Communications	: Coaxial control, RS-485
Operational temperature/humidity	: -10 – 50°C/below 90% RH
Power source	: AC24V ±10%, 60 Hz
Power consumption	: 15 W
Weight	: 2.5 kg

■ Dimensions: mm



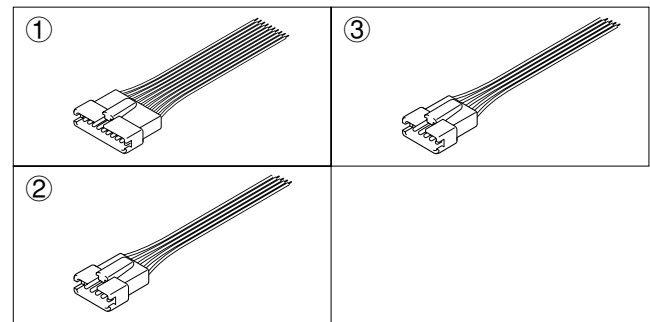
External appearance and specifications subject to change without notice.

MAIN FEATURES

- Pan, tilt and zoom operations as well as focus and iris settings can be done manually.
- Up to 64 preset positions can be set to store zoom and focus data for corresponding surveillance locations.
- Surveillance can be set up for automatic successive display of the locations established by the preset positions. (SEQUENTIAL PAN) In addition, each of the preset positions can be customized with 9 different camera settings. (VIEW SETTING)
- Automatic loop panning can be set after establishing start and end locations. (AUTO PAN)
- Manual pan, tilt and zoom operations can be saved in an image track (30 or 60 seconds), and the image track can be used to automatically repeat the set of camera operations. (TOUR MODE)
- For operations in which the camera is tilted beyond the straight down position, automatic top/bottom or left/right inversion of the image can be set for upright viewing of the image throughout 180 degrees of camera tilt. (DIGITAL AUTOFLIP)
- A cleaning function keeps horizontal rotation of the camera unit in smooth working order. (REFRESH)
- Nine different items can be set for camera surveillance conditions, such as white balance, iris and motion sensing. These set conditions are applied separately for each preset position when sequential pan is activated.
- Gray-colored masking patterns can be placed over defined areas to protect privacy. (PRIVACY MASK)
- One-push automatic white balance is available to adjust the image in surveillance locations where faithful color reproduction is difficult.
- Backlight compensation can be set to one of three different methods: multi-spot evaluative metering, 5 spot centerweighted average metering or 48 multi-spot metering.
- The monitor screen can be divided into 48 zones and based on image information for each zone, target objects for such images as intruder movements can be discerned and an alarm generated.
- The Day/Night function is a function that can adapt to a wide range of changing luminance levels by automatically switching to color during daytime, or to black and white at times of low luminance such as nighttime.

ACCESSORIES

- ① Alarm input expansion connector (10 pin) 1
- ② Camera control expansion connector (5 pin) 1
- ③ Alarm output expansion connector (5 pin) 1



**SANYO INDUSTRIAL VIDEO
COLOR VIDEO CAMERA LIMITED WARRANTY**

OBLIGATIONS

In order to obtain warranty service, the product must be delivered to and picked up from an Authorized Sanyo Service Center at the user's expense, unless specifically stated otherwise in this warranty. The names and addresses of Authorized Sanyo Service Centers may be obtained by calling the toll-free number listed below.

For product operation, authorized service center referral, service assistance or problem resolution, call

**CUSTOMER INFORMATION 1-800-421-5013
Weekdays 8:30 AM – 5:00 PM Pacific Time**

For accessories and/or parts, call

**PARTS ORDER INFORMATION 1-800-726-9662
Weekdays 8:30 AM – 5:00 PM Pacific Time**

THIS WARRANTY IS VALID ONLY ON SANYO PRODUCTS PURCHASED OR RENTED IN THE UNITED STATES OF AMERICA, EXCLUDING ALL U.S. TERRITORIES AND PROTECTORATES. THIS WARRANTY APPLIES ONLY TO THE ORIGINAL RETAIL PURCHASER OR END-USER. THE ORIGINAL DATED BILL OF SALE, SALES SLIP OR RENTAL AGREEMENT MUST BE SUBMITTED TO THE AUTHORIZED SANYO SERVICE CENTER AT THE TIME WARRANTY SERVICE IS REQUESTED.

Subject to the OBLIGATIONS above and EXCLUSIONS below, SANYO Fisher Company warrants this SANYO product against defects in materials and workmanship for the periods specified below. SFC will repair or replace (at its option) the product and any of its parts which fail to conform to this warranty. The warranty period commences on the date the product was first purchased or rented at retail.

LABOR	PARTS	IMAGE DEVICE
3 YEARS	3 YEARS	3 YEARS

EXCLUSIONS

This warranty does not cover (A) the adjustment of customer-operated controls as explained in the appropriate model's instruction manual, or (B) the repair of any product whose serial number has been altered, defaced or removed.

This warranty shall not apply to the cabinet or cosmetic parts, batteries or routine maintenance.

This warranty does not apply to uncrating, setup, installation, removal of the product for repair or reinstallation of the product after repair.

This warranty does not apply to repairs or replacements necessitated by any cause beyond the control of SFC including, but not limited to, any malfunction, defect or failure caused by or resulting from the use of any products operated outside of the operating temperature ranges stated in our product specification, (i.e., between 41 and 104 degrees Fahrenheit or between 5 and 40 degrees Celsius), unauthorized service or parts, improper maintenance, operation contrary to furnished instructions, shipping or transit accidents, modification or repair by the user, abuse, misuse, neglect, accident, incorrect power line voltage, fire, flood or other Acts of God, or normal wear and tear.

SFC does not guarantee that recorded pictures or information will be maintained on any product sent in for repair or replacement.

The foregoing is in lieu of all other expressed warranties and SFC does not assume or authorize any party to assume for it any other obligation or liability.

SFC DISCLAIMS ALL OTHER WARRANTIES EXPRESS OR IMPLIED, WITH REGARD TO THIS PRODUCT (INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS). IN NO EVENT SHALL SFC BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE OWNERSHIP OR USE OF THIS PRODUCT OR FOR ANY DELAY IN THE PERFORMANCE OF ITS OBLIGATIONS UNDER THIS WARRANTY DUE TO CAUSES BEYOND ITS CONTROL. SFC'S LIABILITY FOR ANY AND ALL LOSSES AND DAMAGES RESULTING FROM ANY CAUSE WHATSOEVER, ARISING OUT OF OR IN CONNECTION WITH THE SALE, USE OR OWNERSHIP OF THIS PRODUCT INCLUDING WARRANTOR'S NEGLIGENCE, ALLEGED DAMAGED OR DEFECTIVE GOODS, WHETHER SUCH DEFECTS ARE DISCOVERABLE OR LATENT, SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE PRODUCT.

ATTENTION

For your protection in the event of theft or loss of this product, please fill in the information below for you own personal records.

Model No. _____

Serial No. _____
(Located on back or bottom side of unit.)

Date of Purchase _____

Purchase Price _____

Where Purchased _____