

INSTRUCTION MANUAL BEDIENUNGSANLEITUNG MANUEL D'INSTRUCTIONS 使用说明书

Color CCD Camera
CCD-Farbkamera
Caméra CCD couleurs
彩色CCD摄像机

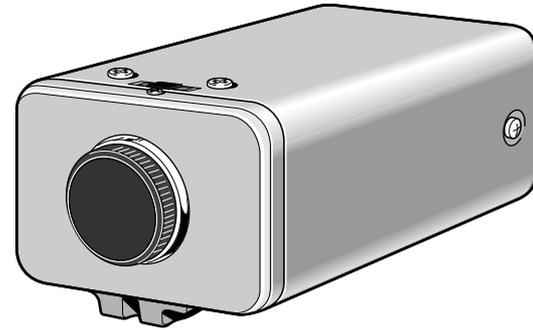
About this manual

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

Über diese Bedienungsanleitung

Lesen Sie bitte vor der Montage und dem Inbetriebnehmen der Kamera zuerst diese Bedienungsanleitung sorgfältig durch und bewahren Sie sie zum späteren Nachschlagen auf.

VCC-WD8575P



À propos de ce manuel

Avant d'installer et d'utiliser la caméra, veuillez lire ce manuel attentivement. Gardez-le à portée de main pour toute référence ultérieure.

关于本说明书

在安装和使用摄像机之前，请仔细阅读本使用说明书，并务必保存好本使用说明书，以备今后查阅。

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■ Characteristics

- Built-in Wide Dynamic Range Capability
- Day/Night Automatic Switching
- Configurable Preference Settings with View on Screen

Precautions

■ In case of problem

Do not use the unit if smoke or a strange odor comes from the unit, or if it seems not to function correctly. Turn off the power immediately and disconnect the power cord, and then consult your dealer or an Authorized Sanyo Service Center.

■ Do not open or modify

Do not open the cabinet, as it may be dangerous and cause damage to the unit. For repairs, consult your dealer or an Authorized Sanyo Service Center.

■ Do not put objects inside the unit

Make sure that no metal objects or flammable substance get inside the unit. If used with a foreign object inside, it could cause a fire, a short-circuit or damage. Be careful to protect the unit from rain, sea water, etc. If water or liquid gets inside the unit, turn off the power immediately and disconnect the power cord, and then consult your dealer or an Authorized Sanyo Service Center.

■ Be careful when handling the unit

To prevent damage, do not drop the unit or subject it to strong shock or vibration.

■ Do not install this unit close to magnetic fields

The magnetic fields may result in unstable operation.

■ Protect from humidity and dust

To prevent damage, do not install the unit where there is greasy smoke or steam, where the humidity may get too high, or where there is a lot of dust.

■ Protect from high temperatures

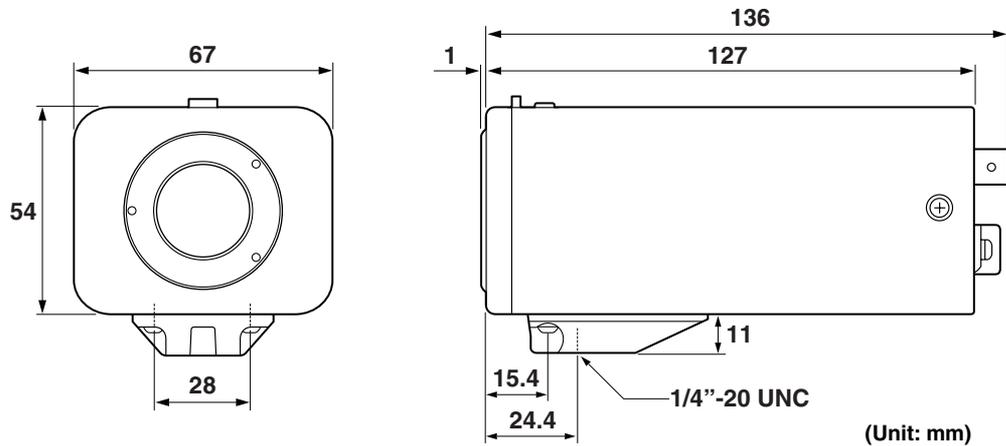
Do not install close to stoves, or other heat sources, such as spotlights, etc., or where it could be subject to direct sunlight, as this could cause deformation, discoloration or other damages.

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

■ Cleaning

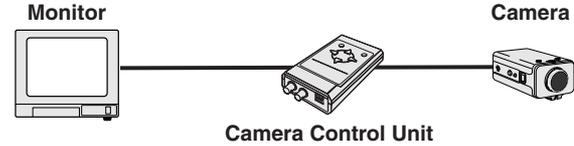
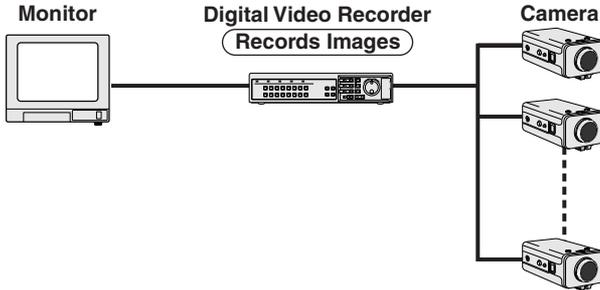
- Dirt can be removed from the cabinet by wiping it with a soft cloth. To remove stains, wipe with a soft cloth moistened with a soft detergent solution and wrung dry, then dry by wiping with a soft cloth.
- Do not use benzine, thinner or other chemical products on the cabinet, as this may cause deformation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

Dimensions

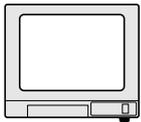


Connection Examples and Peripheral Devices (Sold separately)

■ For Camera Setup Only



Monitor



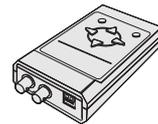
Monitors images from the camera.
Also available as settings screen.

Digital Video Recorder



Records images on a hard disk. Highly recommended for use in your monitoring system; images can be recorded over an extended time period and are free from degradation.

Camera Control Unit (VAC-70)



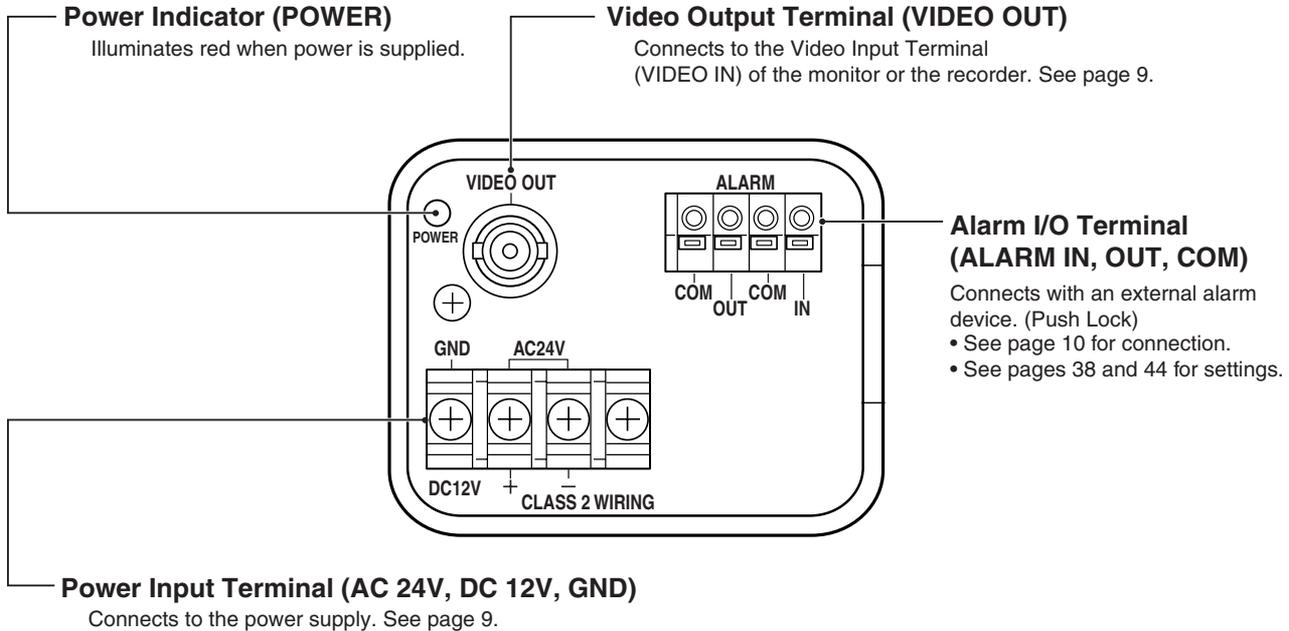
Simplified remote controller for camera settings.

Note:

- Make sure to disconnect the unit after settings are completed.

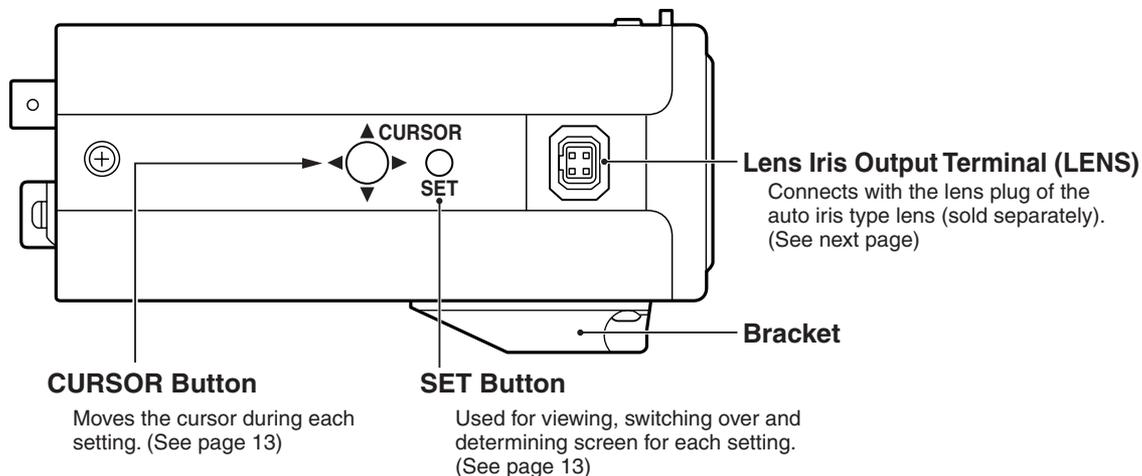
Part Names

Rear Panel



Part Names

Side Panel



Top Panel

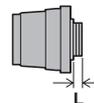


Installing Lens

You are recommended to use any DC type and CS mounting lens equipped with an auto iris.

Note:

- Apply adapter ring (sold separately) when you use any C mounting lens.
- Use any lens of which length (L: see the figure to the right) of the mounting screw is within 5 mm; otherwise you may fail to install or damage the lens.



Steps for Installing Lens

1 Remove the lens mounting cap.



2 Install the lens.

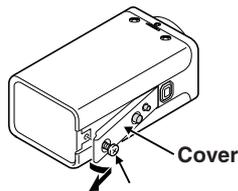


- ① Carefully align the lens mount with the camera opening, then turn the lens slowly to install it.
- ② Connect the plug to the Lens Iris Output Terminal (LENS).

If the plug does not fit into the terminal, replace it with the proper type.

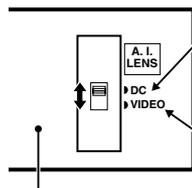
Switching Over Type of Auto Iris Lens (DC type is selected by default.)

1 Remove the side cover.



Loosen screw with a Phillips screwdriver.

2 Select a lens type by using the switch (A.I. LENS).



Inside the cover

DC type

Any lens without amplifier circuit (also referred to as “Coil lens” or “Without built-in EE amplifier”).

VIDEO type

Any lens with amplifier circuit (also referred to as “Built-in EE amplifier”).

3 Attach the side cover.

For VIDEO type lens

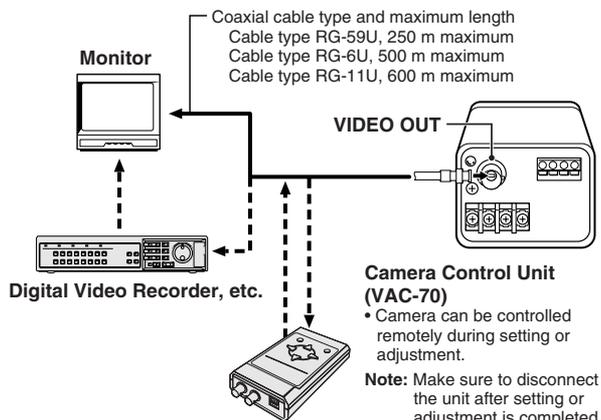
Adjust the iris by using LEVEL dial on the lens side.
(This unit has fixed ALC. Adjusting the ALC on the lens does not take effect.)

Connecting Devices

- Note:**
- All the power supplied to the system should be turned off when you connect devices.
 - Incorrect connections may cause failure and/or smoking; carefully read this and other instruction manuals for each device for proper connections.

Basic Connection and Power Connection

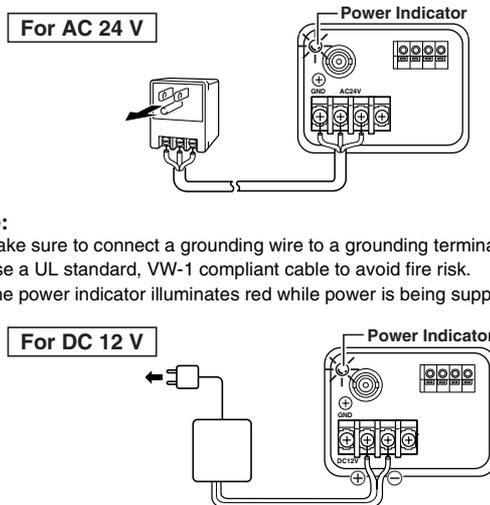
- 1** Connect the Video Output Terminal (VIDEO OUT) and the Video Input Terminal of the monitor or the digital video recorder using coaxial cable.



Note:

- If you use a type of cable other than listed above, images and synchronizing signals may not be transferred properly due to attenuation.
- Do not use coaxial cable RG-59U (3C-2V) for piping or overhead wiring.

- 2** Connect the power cord and insert the plug of the cord into a wall outlet.



Note:

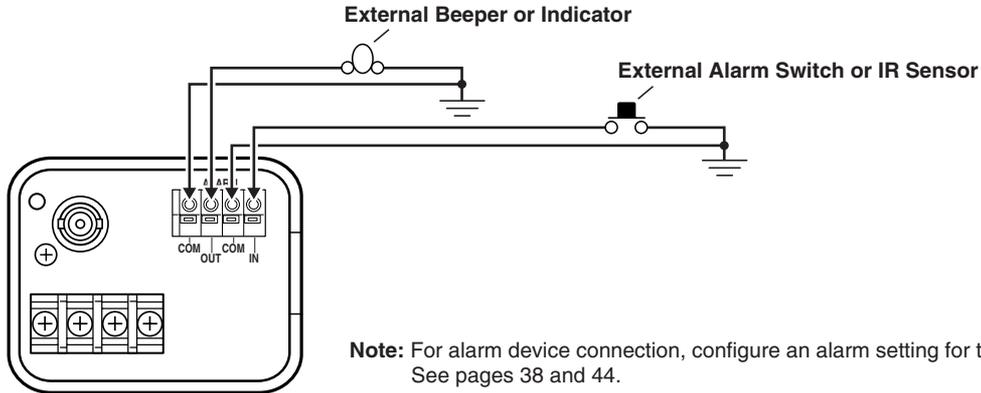
- Make sure to connect a grounding wire to a grounding terminal (GND).
 - Use a UL standard, VW-1 compliant cable to avoid fire risk.
- ⇒ The power indicator illuminates red while power is being supplied.

Note:

- Confirm the polarity of the plug: ⊕ (positive) and ⊖ (negative).
 - If long distance is necessary, be sure to use the proper cable so that the voltage at the power supply terminals falls in the operating range of this unit. A cable of improper length and/or thickness may cause a significant voltage drop.
- ⇒ The power indicator illuminates red while power is being supplied.

Connecting Alarm Devices

Connect the unit with External Alarm or Beeper.



Connecting Devices

Installing Camera

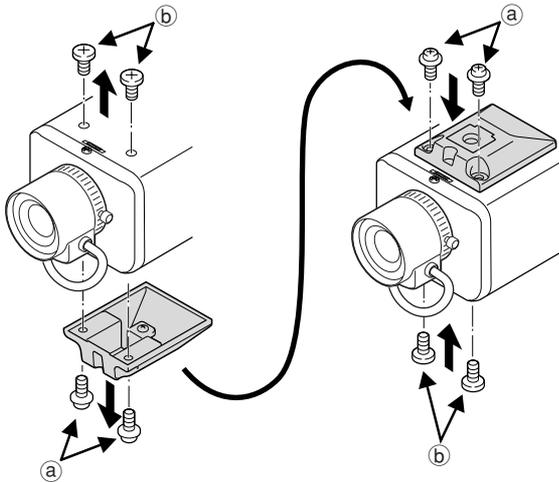
Install the camera in a correct location so that the intended object can be monitored properly. You should also adjust on the monitor side.

- You can change the bracket topside down, depending on the installation spot for the camera (see below).

Note:

- If you want to use a commercially available platform for the camera, select an appropriate type, taking into consideration the gross weight of the camera and platform, and secure it on a firm place.
- Images may blur under extremely bright lighting; adjust the lighting angle to get clear images.

■ Changing the Bracket for Mounting the Camera



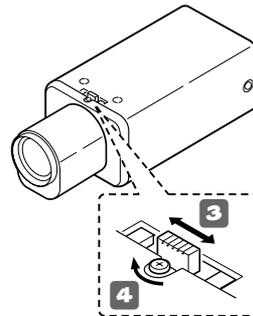
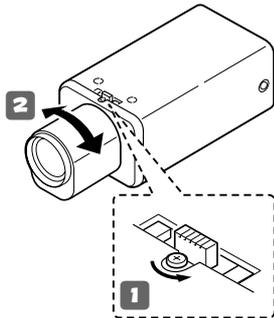
Note: Make sure to use the longer screws ① to secure the bracket.

Adjusting Flange Back

Flange back adjustment may be required to correct a focal distance error generated due to attachment thickness of the installed lens.

Normally you do not have to make any adjustment, however, you can adjust focus of the installed lens with auto iris, when it provides images out of focus at the maximum telephoto position. To adjust the flange back, follow the steps below.

- 1** Loosen the lock screw. (M2: +)
- 2** Set the zoom lens to the maximum telephoto position and then adjust focus by turning the focus ring of the lens.
- 3** Set the zoom lens to the maximum wide-angle position and then adjust focus by using the flange back adjusting lever.
- 4** Repeat steps **2** and **3** until the image stays in-focus when changing from a wide-angle position to a telephoto position. When the setting is complete, tighten the flange back lock screw.



Note: The flange back lock screw is tightened completely when its tip hits the invisible bottom, even though the screw head may seem still up in the air. Do not screw down any further beyond this normal position as illustrated in **Fig. 1**.

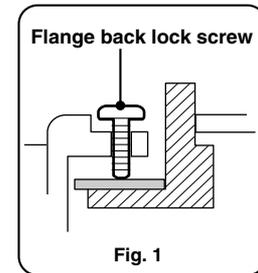
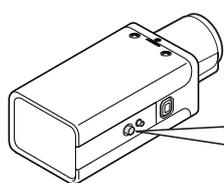


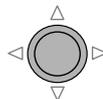
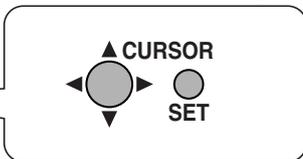
Fig. 1

Overview of Settings and Adjustments

You can configure various adjustments and preference settings on the monitor screen.



Buttons used for settings



CURSOR Button

Press the button up and down or side to side to select an item or set up.
 • Press and hold the button to continually change the items that appear.

SET Button

Press and hold the button to enter into the MAIN MENU, or perform other operations such as determining a selected value during the settings operation.

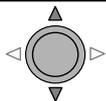


Accessing the MAIN MENU



Press and hold the button for about 1 second.

MAIN MENU		
LANGUAGE	SET	J
TITLE	OFF	J
SYNC	INT	J
EXPOSURE	SET	J
DAY/NIGHT	AUTO	J
WHITE BALANCE	ATW	J
ALARM	SET	J
OPTION	SET	J
PRESET	OFF	J
MENU	END	



Press the CURSOR button up and down to select the item.

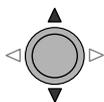
⇒ The selected item blinks.

LANGUAGE	Setting for User's Language. (See page 15)
TITLE	Setting for Camera Name. (See page 16)
SYNC	Adjusting Synchronization. (See page 18)
EXPOSURE	Setting for Iris, Wide Dynamic Range, Backlight Correction, Electronic Sensitivity, Shutter Speed. (See page 19)
DAY/NIGHT	Setting for Day/Night (Color/Black and White/Auto) Function. (See page 30)
WHITE BALANCE	Adjusting White Balance. (See page 34)
ALARM	Settings for Input/Output of Alarm Signal and Motion Sensor. (See pages 38 – 45)
OPTION	Setting or Adjustment for Gamma Characteristic, Aperture, Mirror Image, Negative/Positive, Privacy Masking, Electronic Zoom. (See pages 46 – 54)

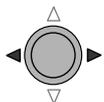
MEMO: For the Settings Screen List, see page 55.

Basic Operation for Settings and Adjustments

An Example for Basic Operation for Settings and Adjustments



Indicates to press the **CURSOR** button up and down to select an item.

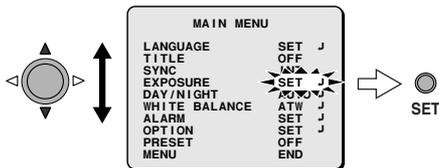


Indicates to press the **CURSOR** button side to side to switch over to other values.

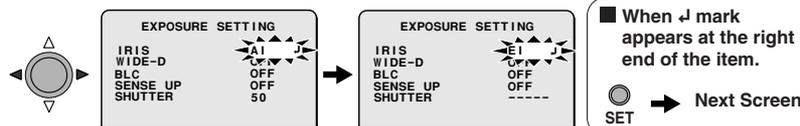


Indicates to press the **SET** button for decision.

1 Selecting item (blinking)



2 Specifying values



Note: After the expiration of a predetermined time interval (3 minutes) without any operation, the settings screen goes off automatically and returns to normal monitoring screen.

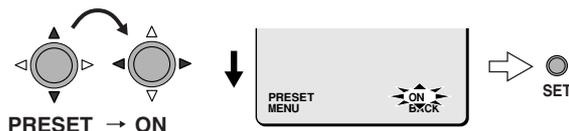
3 Once the settings are complete, set "MENU" to "END" and press the SET button. (Closing the setting screen.)



MENU → **END**

- If you press the SET button while "BACK" is selected, the previous screen will reappear.

■ To Reset Settings (Factory Default Settings)



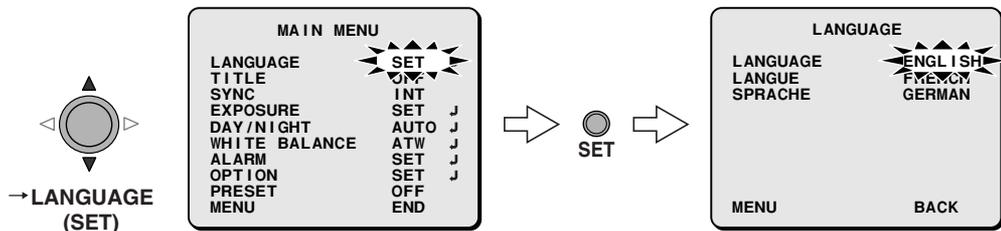
Select "PRESET" and choose "ON" instead of "OFF", and press the SET button.

- To reset all the settings, set "PRESET" to "ON" in the MAIN MENU and press the SET button. (The PRIVACY MASK SETTING will not be initialized.)

Selecting Display Language

For accessing the MAIN MENU, see page 13 – 14.

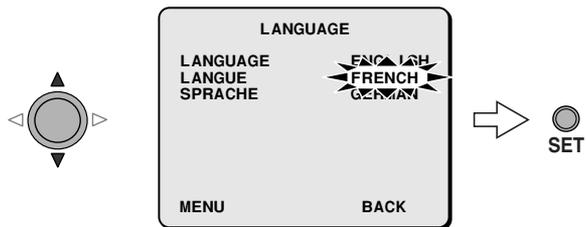
You can change the language displayed on the settings and adjusting screens. (Default setting: ENGLISH)



LANGUAGE (Language Selection)

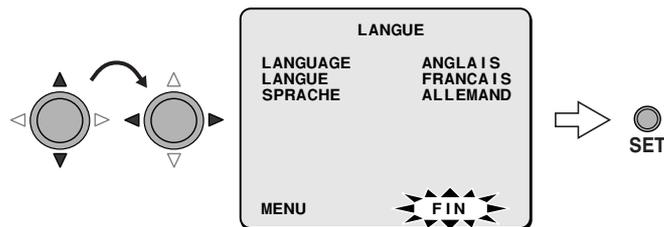
■ In case French is selected

1 Select a language and press the SET button.



⇒ Pressing the SET button will immediately change the screen title and the language on the right.

2 Set "MENU" to "FIN" (end) and press the SET button.



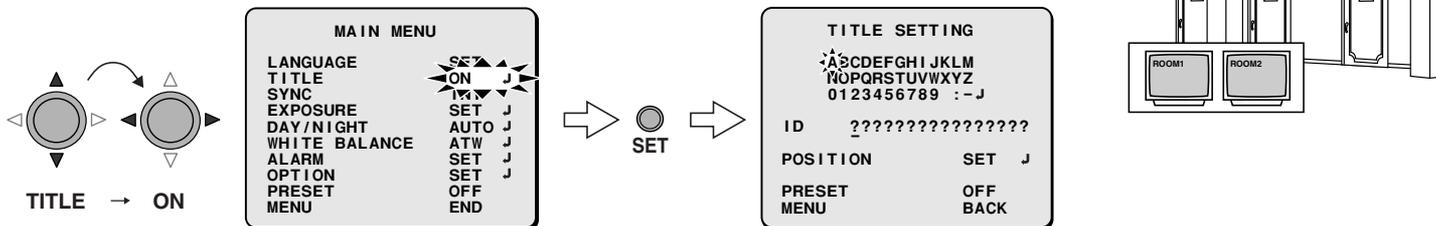
⇒ Finishes the setting screen.

- If you press the SET button while "RETOUR" (back) is selected, the previous screen will reappear.

Naming Cameras

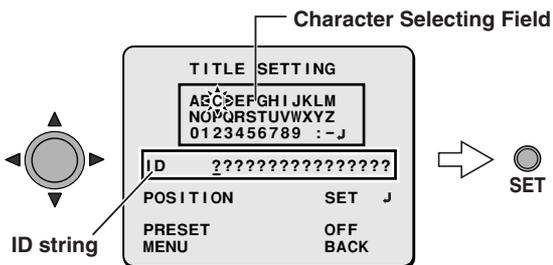
For accessing the MAIN MENU, see page 13 – 14.

You can give a name (title) to each camera. The specified names are displayed on the monitor so that you can easily distinguish the monitoring images when you use multiple cameras.



TITLE (Title Setting)

1 Choose a character(s) from the “Character Selecting Field”.



⇒ The characters are displayed starting from the left in the ID string.

2 Repeat step 1 to complete the title.

Example: CAM1

ID CAM1?????????????? ID String

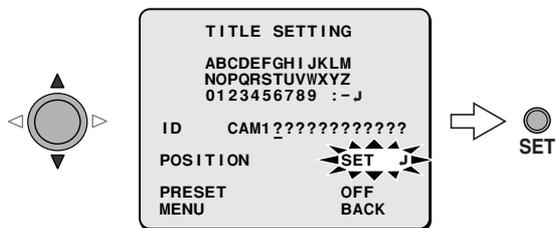
- You can enter up to 16 characters.
- The letters “???” do not appear on the monitoring screen, but if you select “ON” for the “TITLE” and then enter no letter at all, the monitor will show you “???”.

MEMO:

- If you want to overwrite the character, move the cursor onto it in the ID string and choose any new letter.
- If you want the name to be displayed on the monitor in two lines, insert the line feed mark (↵) in the ID string wherever you want to start a new line. On the monitor screen, the name will be displayed in two lines. You can enter up to 16 characters including the line feed mark.

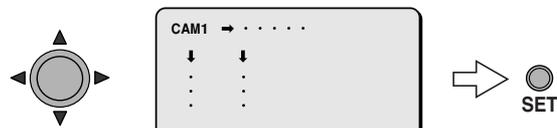
Naming Cameras

- 3** Select “POSITION” – “SET” and press the SET button.



⇒ On the normal monitoring screen, the name blinks.

- 4** On the monitor screen, determine the location where the name should be displayed by pressing the button up-down or side to side; and then press the SET button.



⇒ Returns to the settings screen.

- 5** Set “MENU” to “END” and press the SET button.

⇒ Finishes the settings screen and display the name on the normal monitoring screen.

- If you want to return to the previous screen, select “BACK” and press the SET button.

■ To delete the name specified:

Set “PRESET” to “ON“, and press the SET button.



⇒ All the characters will be displayed with “?”.
You will see “OFF” in place of “ON”.

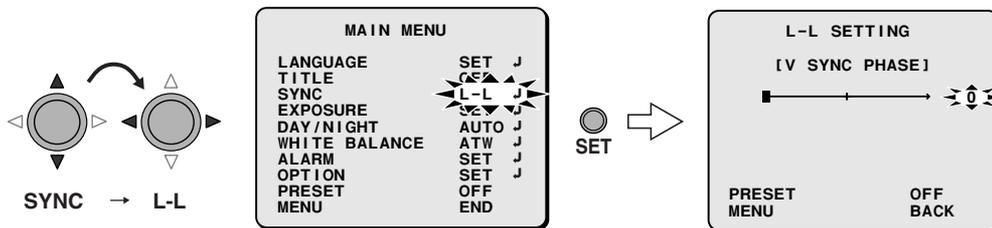
Adjusting Synchronization Error

For accessing the MAIN MENU, see page 13 – 14.

By default, the synchronization adjustment for the camera is performed internally (INT). However, you must make adjustments in the Line Lock (L-L) Setting screen, if the monitor screen seems out of sync after switching over among multiple cameras using AC 24 V.

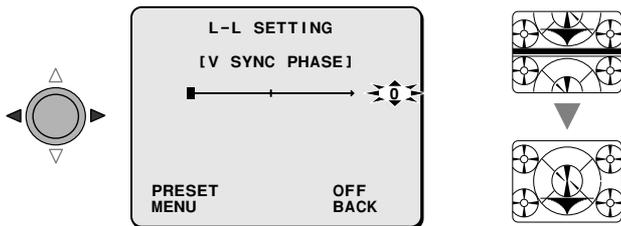
- If using this camera as the second or subsequent camera, adjust the roll using this setting.
- If using this camera as the first camera, adjust the roll using the phase adjusters on the second and subsequent cameras.

Note: The Line Lock setting is not available for DC 12 V operation.



L-L SETTING (Line Lock)

1 Adjusting Synchronization (0 – 524).



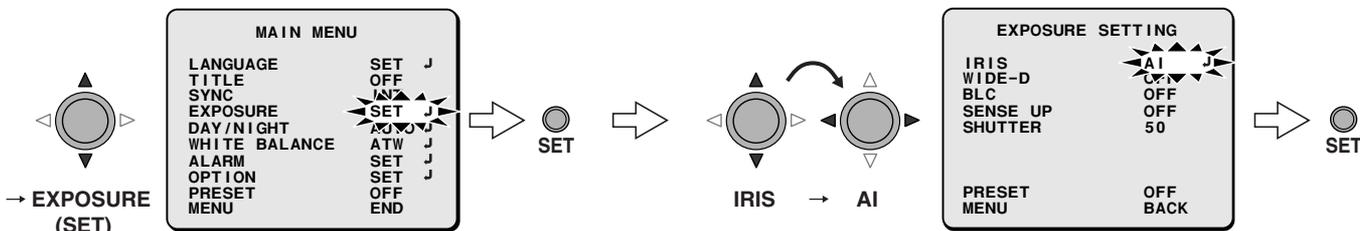
2 Set "MENU" to "END" and press the SET button.

- ⇒ Finishes the setting screen and returns to the normal monitoring screen.
- If you want to return to the previous screen, select "BACK" and press the SET button.

Adjusting Auto Iris

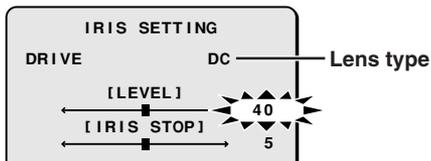
For accessing the MAIN MENU, see page 13 – 14.

This unit is designed to accept the DC type auto iris lens (sold separately) and is factory-configured to be ready-for-use with the optional lens. However, you can configure and/or make adjustments for preferred brightness depending on the environment, condition or other optional lens you use.



IRIS SETTING (AI: Auto Iris)

1 Verify the lens type which is displayed on the right side of the “DRIVE”.

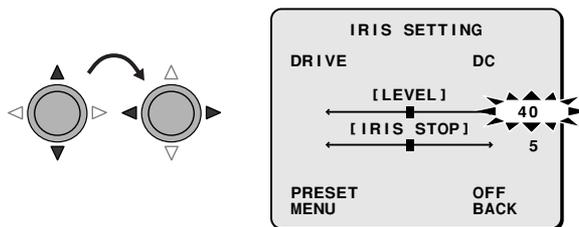


DC : DC type (Coil lens or Without built-in EE amplifier)
(Default setting)

VIDEO : VIDEO type (Built-in EE amplifier)

Note: The screen shows the status of A.I. LENS switch inside the cover. If the displayed type is different from your lens, switch to the proper type. Otherwise the iris will not work. (See page 8)

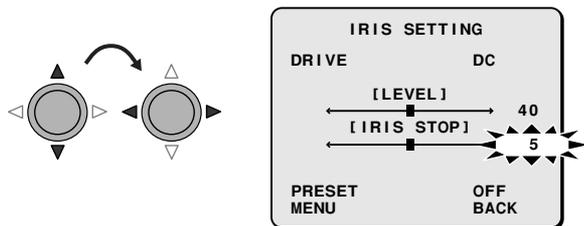
2 Select “LEVEL” and adjust the brightness (iris) (0 – 100).



⇒ The greater the number, the brighter the image.

IRIS SETTING (AI: Auto Iris) (continued)

- 3** Select “IRIS STOP” and specify an iris value (0 – 17).



- The greater the number, the wider the iris becomes.

- 4** Set “MENU” to “END” and press the SET button.

⇒ Finishes the settings screen and returns to the normal monitoring screen.

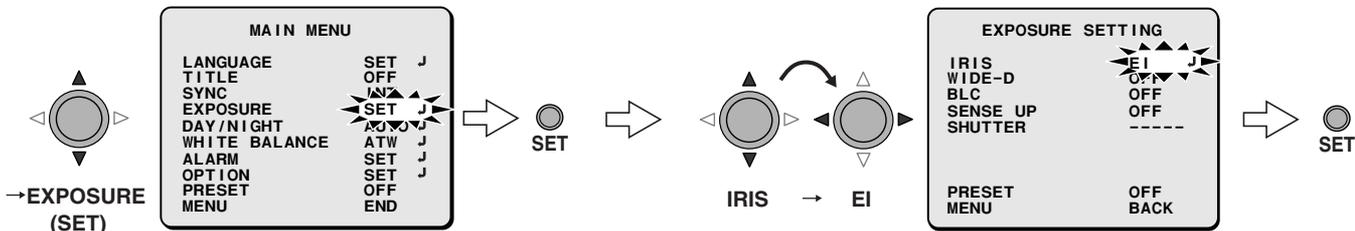
- If you want to return to the previous screen, select “BACK” and press the SET button.

Adjusting Electronic Iris (For Manual or Fixed Iris Lens)

For accessing the MAIN MENU, see page 13 – 14.

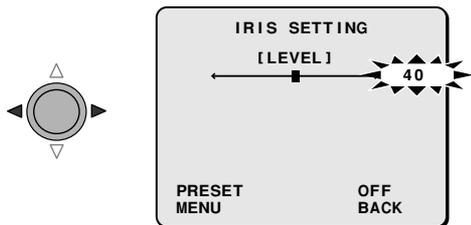
If you need to adjust the brightness for using manual iris lens or fixed iris lens, follow the steps below.

- Adjust the iris manually.



IRIS SETTING (EI: Electronic Iris)

1 Adjust the brightness (iris) (1 – 100).



- The greater the number, the brighter it gets.

2 Set "MENU" to "END" and press the SET button.

⇒ Finishes the settings screen and returns to the normal monitoring screen.

- If you want to return to the previous screen, select "BACK" and press the SET button.

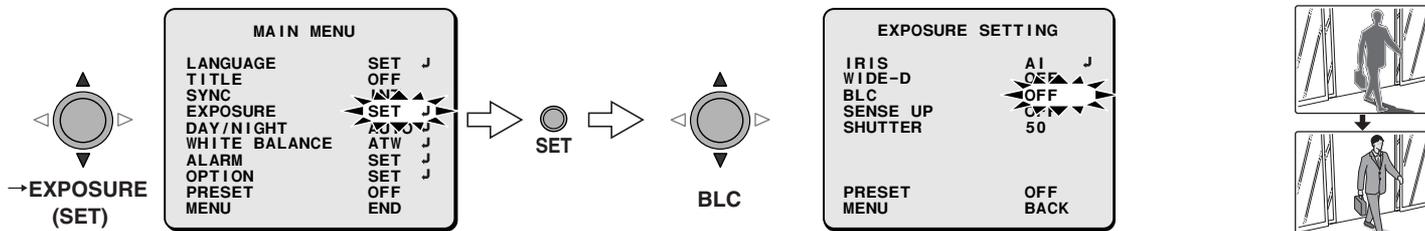
MEMO: A manual iris lens or a fixed iris lens is recommended for indoor monitoring.

- Note:**
- Under extremely bright lighting, unfavorable phenomena may occur such as swaths of smear on the screen, because light intensity entering the lens is too high to be controlled. Reduce the intensity by changing the angle of the lighting source or by other means.
 - If the images of subjects under fluorescent lighting are flickering, replace fluorescent lighting with incandescent lighting.
 - The shutter speed set in the AI mode will be overridden. (See page 29)
 - Setting "WIDE-D" to "ON" will force the iris setting from "EI" to "AI". This setting will remain "AI" after setting "WIDE-D" to "OFF". (See page 26)

Correcting Backlight

For accessing the MAIN MENU, see page 13 – 14.

If the images of subjects are not clear because of backlight, correct it by adjusting conditions or changing correction method.



Selecting Correction Method

1 Select a correction method.



■ CENT (Center-weighted metering): (See page 23)

Correction is made based on the optical measurement that is focused on the central area of the screen. (The image of subject to be corrected is located in the center of the screen.)

■ MULT (Multi-spot metering): (See page 25)

Correction is made based on the optical measurement and assessment of the entire screen. (The image of subject to be corrected is not limited to a center of the screen location.)

■ OFF

No correction is performed for backlight.

2 For advanced settings (when a method other than “OFF” is selected), press the SET button.

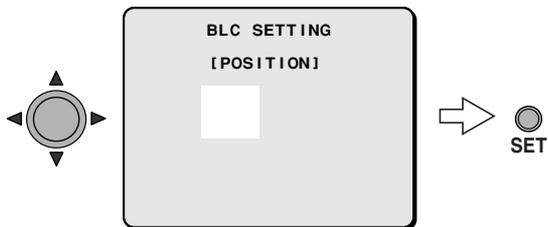
⇒ Each corresponding settings screen will appear.

Note: Setting “WIDE-D” to “ON” will switch “BLC” to “OFF”.
(See page 26)

Correcting Backlight

CENT (BLC SETTING) (Center-weighted Metering)

- 1 Locate the upper left corner of an area for which you want to correct backlight, and then press the SET button.



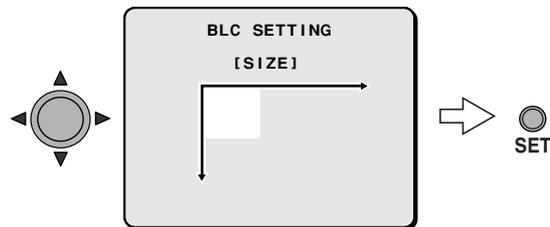
⇒ The “SIZE” screen appears.

MEMO: Here, determine the upper left position of the correction area.

Pressing the button further when the right end or the bottom end of the displayed area hits an edge will scale down the area size, but you can set your preferred size in step 2.

Note: • If “BLC” is set to “CENT”, “ZOOM” and “EL ZOOM” do not function. (See pages 42, 54)
Also note that no adjustment is possible for “BLC” – “CENT” if “ZOOM” is set to “ON”. (See page 42)

- 2 Specify the correction area size, and press the SET button.

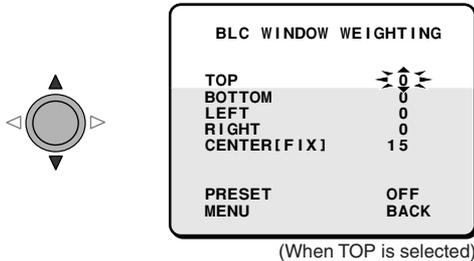


- From the datum point at the upper left corner of the area you set in step 1, the size can be scaled up or down, as well as side to side. Make the area size fit in with the subject size.

⇒ The “BLC WINDOW WEIGHTING” screen appears.

CENT (BLC SETTING) (Center-weighted Metering) (continued)

- 3** To correct areas other than center, select from the options.

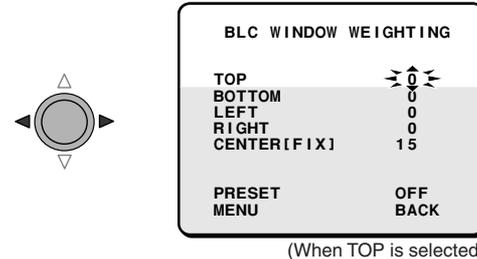


TOP : Upper
 BOTTOM : Lower
 LEFT : Left
 RIGHT : Right
 CENTER : Area set in step **2**.

- Selected area will be highlighted.
- The respective area varies depending on the setting (position and size of CENTER) you configured in steps **1** and **2**.

Note: The position and size specified for each area are common to those used for MOTION MASKING setting. (See page 38)

- 4** Specify a metering level (0 – 15).



- The “CENTER” is fixed to 15 (max).
- The light intensity for the area specified in “15” will be recognized as the same level as that of the “CENTER”.
- The light intensity specified with 0 (zero) will not be metered.
- Repeat steps **3** and **4** as required.

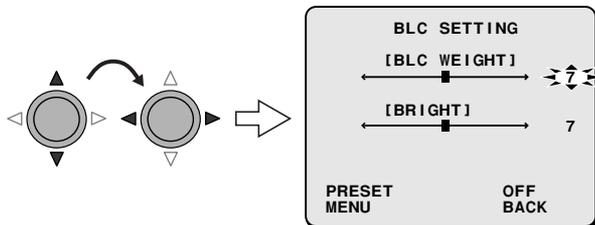
- 5** Set “MENU” to “END” and press the SET button.

- ⇒ Finishes the settings screen and returns to the normal monitoring screen.
- If you want to return to the previous screen, select “BACK” and press the SET button.

Correcting Backlight

MULT (BLC SETTING) (Multi-spot Metering)

1 Select an item and specify each level (0 – 15).



BLC WEIGHT : Effectiveness of backlight correction

BRIGHT : Brightness of the portion to which backlight correction is applied

- The greater the number, the greater the effect becomes.

2 Set “MENU” to “END” and press the SET button.

⇒ Finishes the settings screen and returns to the normal monitoring screen.

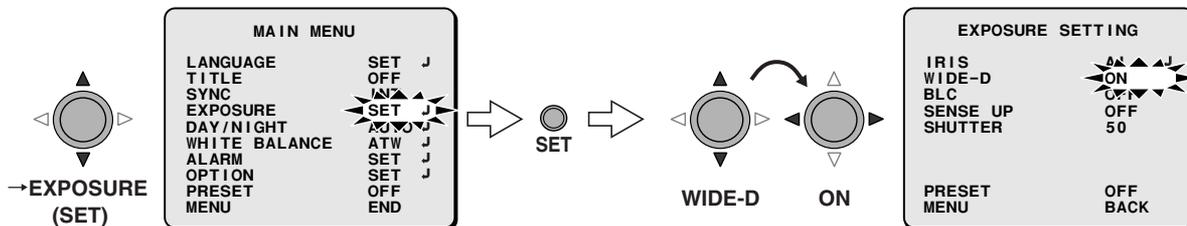
- If you want to return to the previous screen, select “BACK” and press the SET button.

MEMO: When the background of the subject is extremely dark, the central portion of the subject may become too bright after being corrected. In such cases, switch to “CENT”.

Setting Wide Dynamic Range

For accessing the MAIN MENU, see page 13 – 14.

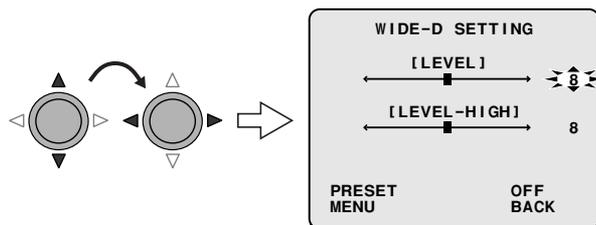
Correction is made for simultaneous monitoring of subjects which are different in brightness, one in a dark room and another in bright outdoor environment, for example.



Note: The setting is for use with the auto iris lens only. You cannot specify any value when the IRIS is set to EI.

WIDE-D SETTING (Wide Dynamic Range Setting)

1 Select an item and specify each level (0 – 17).



LEVEL : Brightness of whole screen

- The greater the number, the brighter the screen becomes.

LEVEL-HIGH : Effectiveness for bright subject including those out of doors.

- The greater the number, the clearer the bright subject becomes.

Setting Wide Dynamic Range

2 Set "MENU" to "END" and press the SET button.

⇒ Finishes the settings screen and returns to the normal monitoring screen.

- If you want to return to the previous screen, select "BACK" and press the SET button.

- Note:**
- Setting "WIDE-D" to "ON" will switch "BLC" to "OFF". (See page 22)
 - Afterimages may occur around contours of a moving object.
 - Setting "WIDE-D" to "ON" will switch both of "EL ZOOM" (see page 54) and "ZOOM" (see page 42) to "OFF".
 - If "WIDE-D" is "ON", the value specified with "SHUTTER" does not take effect. Setting "WIDE-D" to "OFF" will enable the shutter speed with the specified value. (See page 29)
 - If "IRIS" is set to "EI", setting "WIDE-D" to "ON" will force the iris setting from "EI" to "AI". This setting will remain "AI" after setting "WIDE-D" to "OFF". (See page 21)

About Wide Dynamic Range

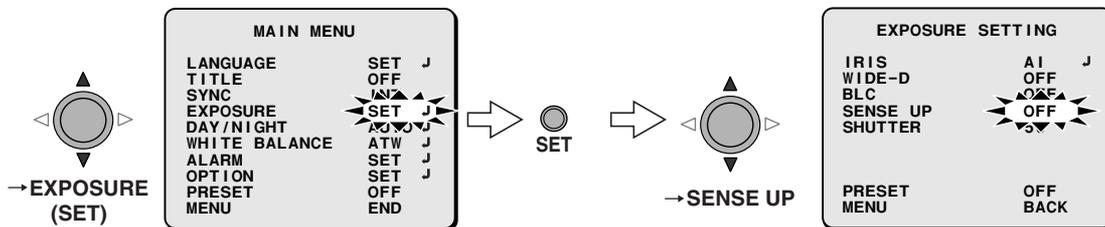
Brighter parts of an image are white-saturated, while darker parts black-saturated, when the difference between brightness and darkness within a screen (dynamic range) is extremely great: such unfavorable conditions can be imposed when the camera is installed in a room where sunlight or strong afternoon sunshine pours through the window or the entrance on the back. However, you can obtain clear images even under such harsh conditions of great difference of brightness and darkness by using the Wide Dynamic Range mode: it can synthesize a picture in a moment of time based on both the images taken with high shutter speed (bright subject getting clearer) and with low shutter speed (dark subject getting clearer).

Increasing Electronic Sensitivity

For accessing the MAIN MENU, see page 13 – 14.

If subject images are not very clear due to ambient darkness, you can increase the camera sensitivity by specifying the “SENSE UP” (increasing electronic sensitivity) option.

Note: If you specify this option, the exposure time of CCD will be extended as it grows dark. Thus, for moving subjects, the images may be associated with obtrusive residual vision or blurring.



SENSE UP (Increasing Electronic Sensitivity)

1 Specify the magnitude of sensitivity to increase.



You can select from: OFF, x 2, x 4, x 8, x 16, and x 40.

- Note:**
- If you select an option other than “OFF” the “-” symbol will be displayed for the “SHUTTER” and the shutter function will not work. Setting “SENSE UP” to “OFF” will display the shutter speed that was previously specified. (See page 29)
 - This function does not work unless the “AGC” is operational, even when the setting value (magnitude) is shown. (See page 31)
 - If you previously specified “MOTION” to either “OR” or “AND”, this function does not work. (See page 41 **16**)

2 Set “MENU” to “END” and press the SET button.

⇒ Finishes the settings screen and returns to the normal monitoring screen.

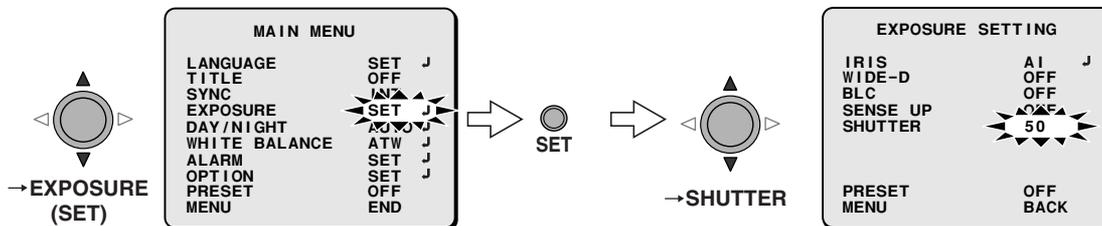
- If you want to return to the previous screen, select “BACK” and press the SET button.

Specifying Shutter Speed

For accessing the MAIN MENU, see page 13 – 14.

You can specify the electronic shutter speed to capture fast-moving subjects.

Note: With the increase in shutter speed number, faster movement can be captured, though the image becomes darker.



SHUTTER (Electronic Shutter)

1 Select a shutter speed.



You can select from: 50, 120, 250, 500, 1000, 2000, 4000, and 10000. (e.g., 50 refers to 1/50 second)

2 Set “MENU” to “END” and press the SET button.

⇒ Finishes the settings screen and returns to the normal monitoring screen.

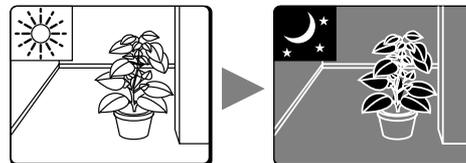
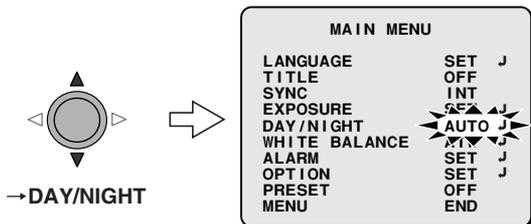
- If you want to return to the previous screen, select the “BACK” and press the SET button.

- Note:**
- If “SENSE UP” is selected for use, “-” symbol is displayed in the option field and you cannot specify any shutter speed. Setting “SENSE UP” to “OFF” will display the shutter speed that was previously specified. (See page 28)
 - If “EI” is specified for the “IRIS”, “-” symbol is displayed in the option field and you cannot specify any shutter speed. Setting “IRIS” to “AI” will display the shutter speed that was previously specified. (See page 21)
 - Setting “WIDE-D” to “ON” will disable the specified shutter speed, leaving the display of shutter speed. Setting “WIDE-D” to “OFF” will enable the shutter speed with the displayed value. (See page 26)

Adjusting DAY/NIGHT Function

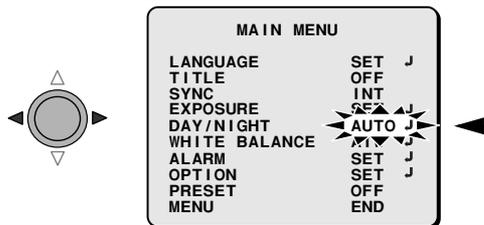
For accessing the MAIN MENU, see page 13 – 14.

The DAY/NIGHT function automatically switches over between COLOR and B/W mode depending on the ambient brightness; for example, choosing COLOR mode during daytime, and B/W mode for nighttime monitoring with its increased sensitivity in a darker environment. “AUTO” is preselected by default, which provides an automatic switch feature to detect the ambient darkness. As appropriate for any specific environment, you can fix the mode to either COLOR or B/W, and adjust the way the switching function works.



Selecting DAY/NIGHT Mode

1 Select a mode.



⇒ Image switches immediately after the selection is made.

2 For advanced settings, press the SET button.

⇒ Each corresponding settings screen will appear.

■ AUTO: See page 31.

Automatically switches between COLOR and B/W mode depending on the ambient brightness. (DAY/NIGHT function)

■ COLOR: See page 32.

Color image on a steady basis; suitable for always bright location or conditions.

- If you specify this mode, you can forcibly switch between COLOR and B/W by means of alarm input. (See page 43)

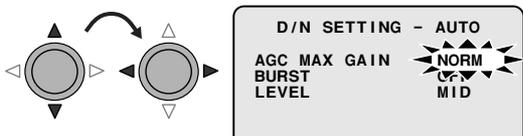
■ B/W (Black and White): See page 33.

B/W image on a steady basis; suitable when sensitivity is prioritized.

Adjusting DAY/NIGHT Function

D/N SETTING-AUTO

- 1 Select “AGC MAX GAIN” and specify the maximum value of gain for AGC*1.



NORM : Normal setting

MID : Setting with which a bright image is obtained in a lower illuminance than the NORM setting.

HIGH : Setting with which a bright image is obtained in a lower illuminance than the MID setting.

- For a dark subject, select MID or HIGH.

*1 AGC (Auto Gain Control) is a function to adjust automatically the gain of the Video signal from the camera so that an optimum signal level is obtained according to brightness of the object.

- 2 Set “BURST” to “ON” or “OFF” for the burst signal*2.

*2 The burst signals are color synchronization signals required for reproducing color. You should select “ON” in case where you observe any disturbance of picture caused by switching from color to black and white mode of a monitor, in particular when peripheral devices such as a switcher unit are connected.

- 3 Select “LEVEL” and specify a level for DAY/NIGHT switching.

LOW : Switches in darker conditions; i.e., color shot is preferred so that it does not switch from COLOR to B/W until it gets very dark.

MID : Moderate darkness

HIGH : Switches in brighter conditions; i.e., black and white shot is preferred so that switching from COLOR to B/W can easily occur when it gets a little bit dark.

- 4 Set “MENU” to “END” and press the SET button.

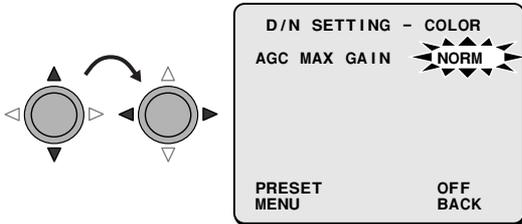
⇒ Finishes the settings screen and returns to the normal monitoring screen.

- If you want to return to the previous screen, select “BACK” and press the SET button.

- Note:**
- During the switching operation, you may hear switch-over noise inside the camera or see a distorted picture, but these are not signs of trouble.
 - If an infrared lighting system is used, the B/W mode may switch to COLOR when a subject reflects the light intensely. Set the infrared system in an appropriate location that does not affect the shot.
 - The motion sensor detection will be interrupted during switching over from B/W to COLOR mode and from COLOR to B/W mode.

D/N SETTING-COLOR

- 1 Select “AGC MAX GAIN” and specify the maximum value of gain for AGC*.

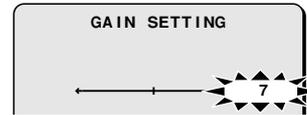


- OFF : Fixed gain setting
NORM : Normal setting
MID : Setting with which a bright image is obtained in a lower illuminance than the NORM setting.
HIGH : Setting with which a bright image is obtained in a lower illuminance than the MID setting.
- For a dark subject, select MID or HIGH.

* AGC (Auto Gain Control) is a function to adjust automatically the gain of the Video signal from the camera so that an optimum signal level is obtained according to the brightness of the object.

■ GAIN SETTING

Select “OFF” and press the SET button, and you can specify a value for the fixed gain. (0 – 7)



- The greater the number, the higher the sensitivity becomes in dark places.

Note: Selecting the “OFF” option invalidates the “SENSE UP” settings. (See page 28)

- 2 Set “MENU” to “END” and press the SET button.

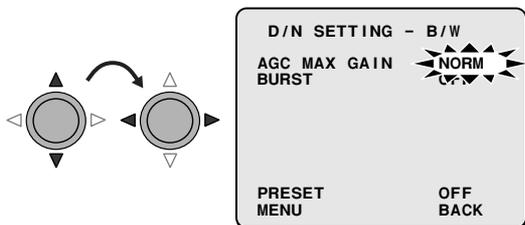
- ⇒ Finishes the settings screen and returns to the normal monitoring screen.
- If you want to return to the previous screen, select “BACK” and press the SET button.

MEMO: Once you have specified this mode, you can change mode through the alarm input. (See page 43)

Adjusting DAY/NIGHT Function

D/N SETTING-B/W (Black and white)

- 1 Select “AGC MAX GAIN” and specify the maximum value of gain for AGC*1.

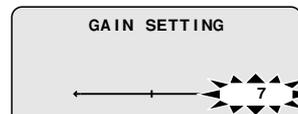


- OFF : Fixed gain setting
NORM : Normal setting
MID : Setting with which a bright image is obtained in a lower illuminance than the NORM setting.
HIGH : Setting with which a bright image is obtained in a lower illuminance than the MID setting.
- For a dark subject, select MID or HIGH.

*1 AGC (Auto Gain Control) is a function to adjust automatically the gain of the Video signal from the camera so that an optimum signal level is obtained according to brightness of the object.

■ GAIN SETTING

Select “OFF” and press the SET button, and you can specify a value for the fixed gain. (0 – 7)



- The greater the number, the higher the sensitivity becomes in dark places.

Note: Selecting the “OFF” option invalidates the “SENSE UP” settings. (See page 28)

- 2 Set “BURST” to “ON” or “OFF” for the burst signal*2.

*2 The burst signals are color synchronization signals required for reproducing color. You should select “ON” in case where you observe any disturbance of picture caused by switching from color to black and white mode of a monitor, in particular when peripheral devices such as a switcher unit are connected.

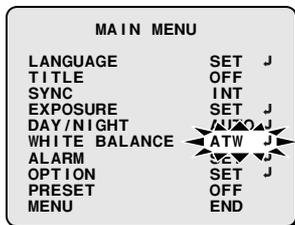
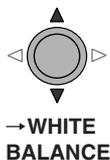
- 3 Set “MENU” to “END” and press the SET button.

⇒ Finishes the settings screen and returns to the normal monitoring screen.

- If you want to return to the previous screen, select “BACK” and press the SET button.

Adjusting White Balance

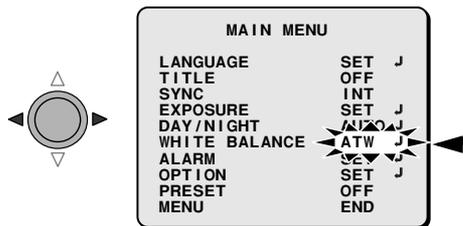
For accessing the MAIN MENU, see page 13 – 14.



With its default Auto-tracing White Balance (ATW) setting, this unit is able to obtain natural colors even when the light source is changed. However, you may manually change the white balance settings or its mode to obtain better tone, especially when the screen color does not match actual objects.

Selecting White Balance Mode

1 Select a mode.



2 For advanced settings, press the SET button.

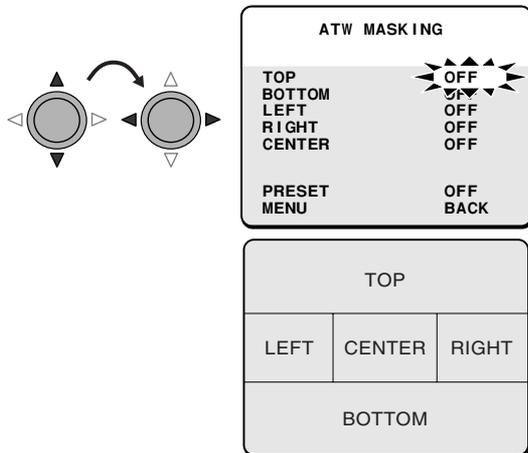
- ⇒ Each corresponding setting screen will appear.
- Except for ATW-A, 3200, 5600 and FLUE.

- **ATW (Auto-Tracing White balance): (See page 35)**
Automatic setting for white balance.
 - Used to mask an extremely bright light source on the screen.
- **ATW-A (Auto-Tracing White balance All) (Fixed):**
Automatic setting for white balance, covering wider range of color temperature than with "ATW".
 - May result in an excessively and unnaturally effected image, depending on the condition.
- **AWC (One-Push Adjustment): (See page 36)**
Adjusts white balance by shooting white paper or wall.
- **3200 (Indoor) (Fixed):**
Suitable for indoor use (targeted at around 3200 K of color temperature).
- **5600 (Outdoor) (Fixed):**
Suitable for daytime outdoor use (targeted at around 5600 K of color temperature).
- **FLUE (Fluorescent Light) (Fixed):**
Suitable for fluorescent light source (targeted at around 4200 K of color temperature).
- **MWB (Manual White Balance): (See page 37)**
Fine-adjusts red and blue manually.

Adjusting White Balance

ATW MASKING (Masking for ATW)

1 Select an area to be masked and specify "ON".

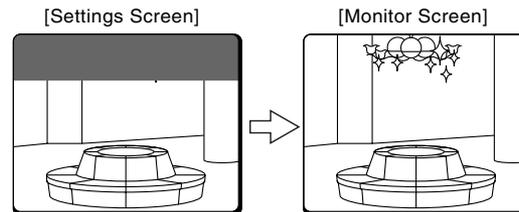


- ⇒ Masking will be applied for the area specified with "ON".
- You can specify multiple masks. Repeat the above steps as required.
 - To disable the mask, select the area and specify "OFF".

2 Set "MENU" to "END" and press the SET button.

- ⇒ Finishes the settings screen and returns to the normal monitoring screen.
- If you want to return to the previous screen, select "BACK" and press the SET button.

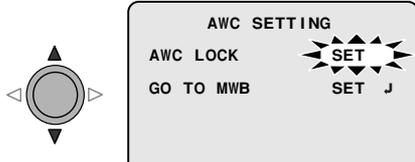
MEMO: • You can get an appropriate white balance by masking an extremely bright light source or dark location.



- While setting the area, the masking is shown but is not visible on the monitor screen.

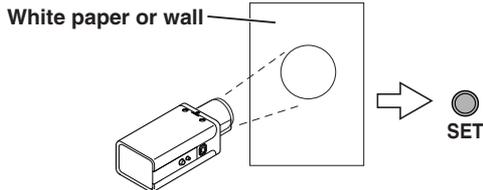
AWC SETTING (One-Push Adjustment)

1 Select “AWC LOCK” – “SET”.



⇒ “SET” blinks.

2 Point a camera to a white paper or wall to project an image on the whole screen, and press the SET button.



⇒ The blinking of “SET” stops and illuminates, and white balance adjustment will start. The adjustment will end after about 2 seconds when the blinking of “SET” restarts.

- If the adjustment does not yield a satisfactory result, press the SET button again.

■ To perform fine adjustment of color

In the “AWC SETTING” screen, select “GO TO MWB” – “SET”, and press the SET button.

⇒ The “MWB SETTING” screen appears. Specify values manually. (See page 37)

MEMO: Transferring to the “MWB SETTING” through “GO TO MWB”, white balance mode (see page 34) will be changed to “MWB”.

3 Set “MENU” to “END” and press the SET button.

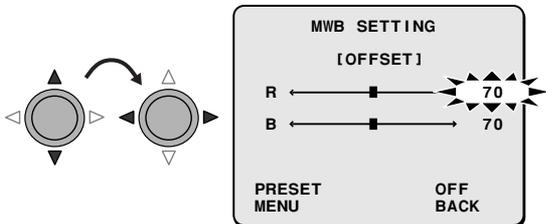
⇒ Finishes the settings screen and returns to the normal monitoring screen.

- If you want to return to the previous screen, select “BACK” and press the SET button.

Adjusting White Balance

MWB SETTING (Manual White Balance)

1 Select “R” or “B” to adjust tint (0 – 255).



R : Adjusting Red

B : Adjusting Blue

- The greater the number, the deeper the tint becomes.

2 Set “MENU” to “END” and press the SET button.

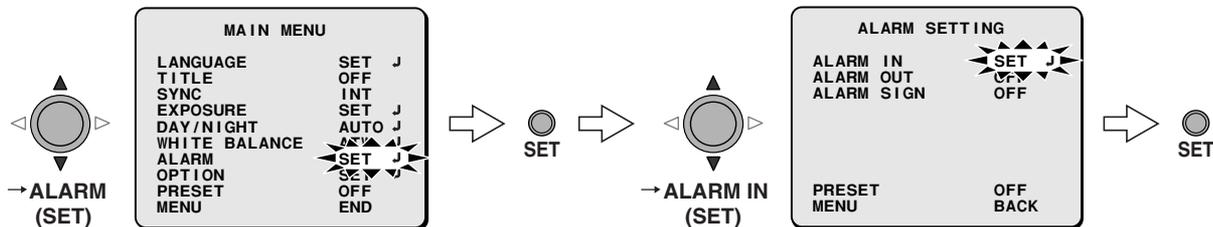
⇒ Finishes the settings screen and returns to the normal monitoring screen.

- If you want to return to the previous screen, select “BACK” and press the SET button.

Specifying Alarm Input

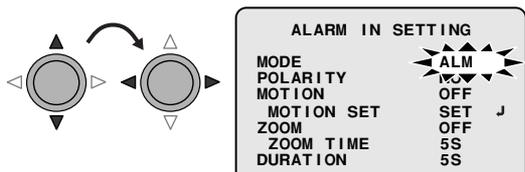
For accessing the MAIN MENU, see page 13 – 14.

If you have connected an external door switch or an infrared sensor to the alarm input terminal (ALARM IN) on the rear panel, specify the following settings. (For connecting alarm devices, see page 10; for the “Alarm Output” settings, see page 44). This unit has a built-in motion sensor, which outputs alarm signals when any moving subject, such as would be intruder, is detected. You should adjust the mask settings or detection sensitivity using “MOTION SET”, especially when false alarms occur very frequently.



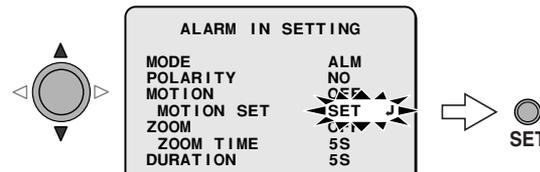
ALARM IN SETTING

1 Set “MODE” to “ALM” or “COLOR”.



ALM : Alarm Input Mode (Normal usage)
COLOR : Mode in which you can switch between COLOR and B/W externally by using the ALARM IN terminal.
 (See page 43)

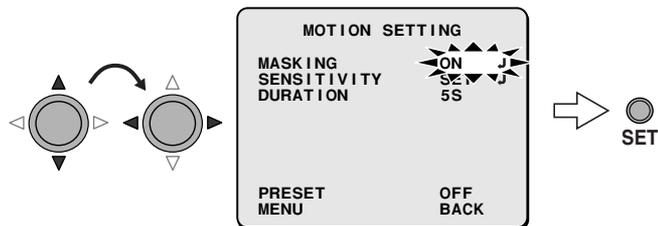
2 Select “MOTION SET” – “SET” and press the SET button.



⇒ The “MOTION SETTING” screen appears.

Specifying Alarm Input

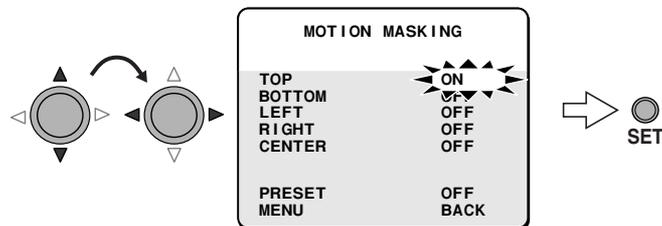
- 3** Select “MASKING” and specify “ON” and press the SET button.



⇒ The “MOTION MASKING” screen appears.

MEMO: Apply masking to what should not be motion-detected; e.g., frequently moving objects such as trees swaying in the wind as well as flickering.

- 4** Select a masking area and specify “ON”.



⇒ Masking will be applied for the area specified with “ON”.

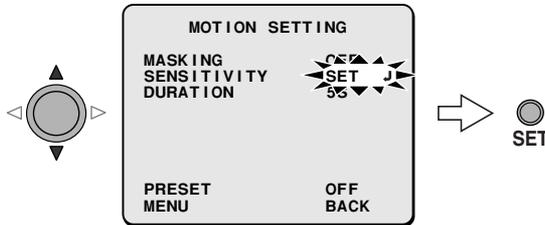
- You can specify multiple masks. Repeat this step as required.
- To disable the mask, select the area and specify “OFF”.
- The position and size for each area are common to those used for “CENT” (BLC SETTING). (See page 23)

- 5** Set “MENU” to “BACK” and press the SET button.

⇒ Returns to the “MOTION SETTING” screen.

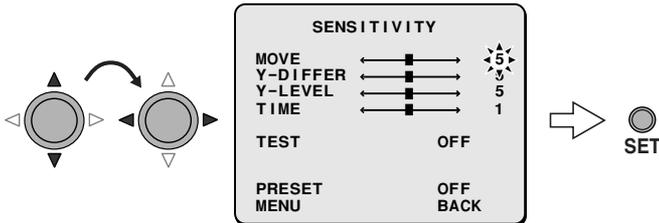
Specifying Alarm Input

- 6** Select “SENSITIVITY” – “SET” and press the SET button.



⇒ The “SENSITIVITY” screen appears.

- 7** Select “MOVE” and specify a sensitivity level (1 – 10).



⇒ The greater the number, the lower the responsiveness to movement becomes.

- 8** Select “Y-DIFFER” and specify a luminance difference level (1 – 10).

- The greater the number, the lower the responsiveness to the brightness variation, such as lighting on or off conditions.

- 9** Select “Y-LEVEL” and specify a luminance level (1 – 10).

- If false alarms occur very frequently because of noise in dark screens, increase the value.

- 10** Select “TIME” and specify a detection time of duration (1 – 60).

- The greater the number, the lower the detectability against fast-moving subjects.

- 11** Set “TEST” to “ON”.

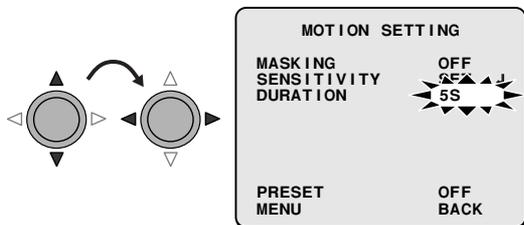
- You can test the sensitivity of the motion detection. When any motion is detected, the character color will turn into red on the screen.

- 12** Set “MENU” to “BACK” and press the SET button.

⇒ Returns to the “MOTION SETTING” screen.

Specifying Alarm Input

- 13** Select “DURATION” and specify a time until the next alarm input becomes enabled.



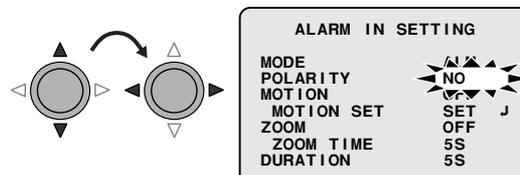
- Select from: 5S, 10S, 15S, 20S, 30S, 1M, 2M, 3M, 4M or 5M (S = second, M = minute)

Note: A new detection or an alarm output cannot be performed until the specified time of duration elapses.

- 14** Set “MENU” to “BACK” and press the SET button.

⇒ Returns to the “ALARM IN SETTING” screen.

- 15** Select “POLARITY” and specify a polarity for the signal.



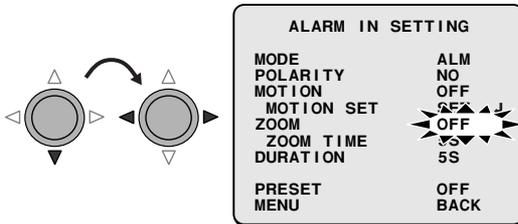
NO : Normal Open (When closed, alarm input is detected.)
NC : Normal Close (When opened, alarm input is detected.)

- 16** Select “MOTION” and specify the detection logic of the motion sensor and the alarm input.

OFF : The motion sensor is unused: Detects when an external sensor responded.
AND : Detects when both the motion sensor and an external sensor responded. (You cannot select this option when the “MODE” is specified with “COLOR”.)
OR : Detects when either the motion sensor or an external sensor responded. (During the “COLOR” mode, detection is solely dependent on the responsiveness of the motion sensor.)

Note: While the “SENSE UP” capability is enabled, the motion sensor does not work. If “SENSE UP” has been set to other than “OFF”, this setting is not available. (See page 28)

- 17** Select “ZOOM” and specify the zoom factor for alarm detection.



- Select from: OFF (no zoom), x 1.4, x 2.0, x 2.5.

- Note:**
- If you specify the “ZOOM” function, the center of the screen will be electronically zoomed in automatically when an alarm signal is supplied from external devices such as door switch or infrared sensor, etc.
 - Even though the “EL ZOOM” is already specified, the “ZOOM” settings you configure here will override it. Then “EL ZOOM” will be set to “OFF”. (See page 54)
 - When “ZOOM” is set to “ON”, the detection zone of the motion sensor is limited to CENTER (initial position and size). When switching “ZOOM” back to “OFF”, the above setting will revert to those specified before “ZOOM” was set to “ON”. Also note that no adjustment is possible for “BLC” – “CENT” if “ZOOM” is set to “ON”. (See page 23)
 - If “BLC” has been set to “CENT”, the “ZOOM” function will not work. (See page 22)

- 18** Select “ZOOM TIME” and specify duration time for zooming (if you specified “ZOOM” to other than “OFF” in step **17**).

- Select from: 5S, 10S, 15S, 20S, 30S, 1M, 2M, 3M, 4M or 5M (S = second, M = minute)

- 19** Select “DURATION” and specify a time until the next alarm input becomes enabled.

- Select from: 5S, 10S, 15S, 20S, 30S, 1M, 2M, 3M, 4M or 5M (S = second, M = minute)

- Note:**
- When the “MODE” is specified with “COLOR”, this setting will not appear.
 - When the alarm output starts, a new detection or an alarm output cannot be performed until the specified time of duration elapses.

- 20** Set “MENU” to “END” and press the SET button.

⇒ Finishes the settings screen and returns to the normal monitoring screen.

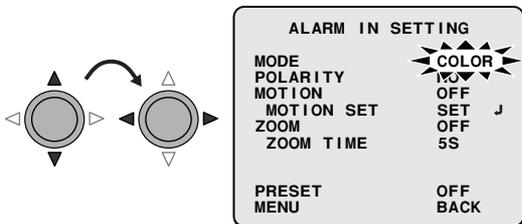
- If you want to return to the previous screen, select “BACK” and press the SET button.

MEMO: You can blink the camera name on the screen when an alarm signal is supplied. (See page 45)

Specifying Alarm Input

Using Alarm Input Terminal as DAY/NIGHT Switching

1 Set "MODE" to "COLOR".



MEMO: Specify this option when you want the switching between COLOR and B/W mode to be made by any external sensor or switch through the alarm input, independent on the ambient brightness.

- Note:**
- You must specify "COLOR" for the "DAY/NIGHT" mode to enable this setting. (See page 32)
 - The setting will take effect after you exit the settings screen.
 - You can select either "OFF" or "OR" alone for "MOTION" setting. (See page 41)

2 Select "POLARITY" and specify a polarity for the signal.

POLARITY Setting	Between ALARM IN and COM Terminals	Mode
NO	Open	COLOR
	Close	B/W
NC	Open	B/W
	Close	COLOR

NO: Normal Open (When closed, switches from COLOR to B/W.)
 NC: Normal Close (When opened, switches from COLOR to B/W.)

MEMO: For other settings, see pages 38 – 43.

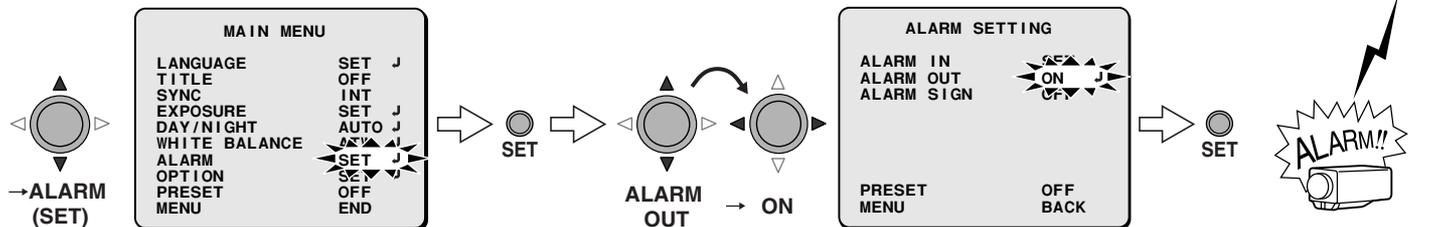
3 Set "MENU" to "END" and press the SET button.

- ⇒ Finishes the settings screen and returns to the normal monitoring screen.
- If you want to return to the previous screen, select "BACK" and press the SET button.

Specifying Alarm Output

For accessing the MAIN MENU, see page 13 – 14.

If you have connected an external beeper or indicator to the alarm output terminal (ALARM OUT) on the rear panel, specify the following settings. You can also obtain a notification on the screen while an alarm occurs. (For connecting alarm devices, see page 10.)



ALARM OUT SETTING (Alarm output)

1 Select “POLARITY” and specify a polarity for the signal.



NO: Normal Open (Closes when alarm input is detected).

NC: Normal Close (Opens when alarm input is detected).

MEMO: For the electrical characteristics of alarm output, the nominal output of the open collector (grounded emitter) is 18 V 25 mA.

2 Select “ALARM TIME” and specify duration time to output alarm.

- Select from: 5S, 10S, 15S, 20S, 30S, 1M, 2M, 3M, 4M or 5M (S = second, M = minute)

MEMO: You can display alarm on the monitor screen. (See page 45)

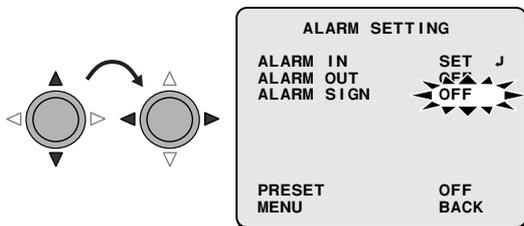
3 Set “MENU” to “END” and press the SET button.

- ⇒ Finishes the settings screen and returns to the normal monitoring screen.
- If you want to return to the previous screen, select “BACK” and press the SET button.

Specifying Alarm Output

ALARM SIGN (Alarm display)

- 1 Select “ALARM SIGN” on the “ALARM SETTING” screen and specify a displaying time.



- Select from: OFF (not display), 5S, 10S, 15S, 20S, 30S, 1M, 2M, 3M, 4M or 5M (S = second, M = minute)

⇒ If you specify any value other than “OFF”, the camera name on the screen will blink for the specified time of duration when an alarm occurs.

Alarm occurred



- MEMO:**
- If the camera name is not given, “??...” will blink on the screen.
 - Even if the “TITLE” is specified as “OFF”, the camera name will blink when an alarm occurs. (See page 16)

- 2 Set “MENU” to “END” and press the SET button.

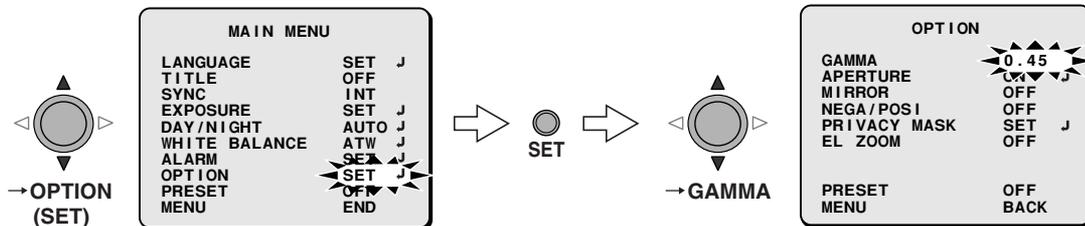
⇒ Finishes the settings screen and returns to the normal monitoring screen.

- If you want to return to the previous screen, select “BACK” and press the SET button.

Correcting Gamma Characteristic

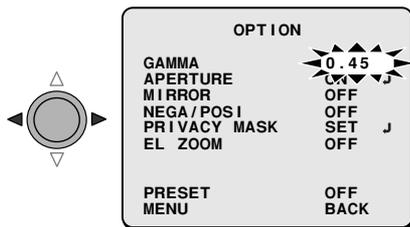
For accessing the MAIN MENU, see page 13 – 14.

If the contrast or brightness of the monitor screen does not seem appropriate, change the mode for Gamma correction*.



GAMMA setting

1 Select a mode for Gamma.



0.45 : Gamma value of $\gamma = 0.45$

1 : Gamma value of $\gamma = 1$

MODE1: Brighten dark spots.

MODE2: Highlight the contrast of whole screen.

2 Set "MENU" to "END" and press the SET button.

⇒ Finishes the setting screen and returns to the normal monitoring screen.

- If you want to return to the previous screen, select "BACK" and press the SET button.

Note: If you specify MODE1 or MODE2, the effect may vary depending on the subjects: Verify the effect before use.

MEMO: The gamma setting is possible individually for each of "OFF" and "ON" of "WIDE-D". (Initial setting is "OFF" : 0.45, "ON" : MODE2.)

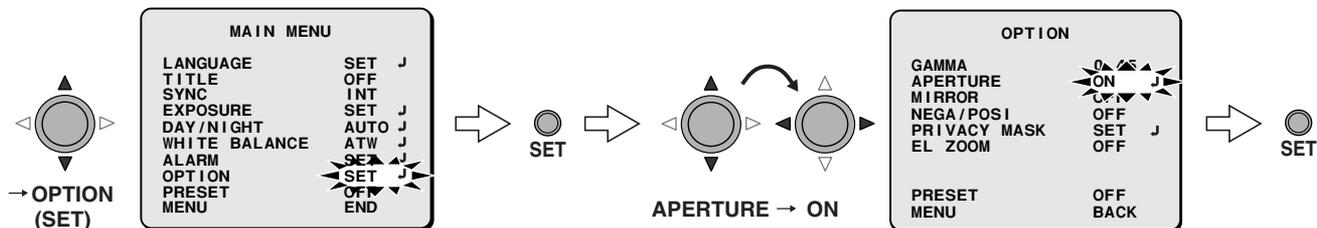
* About Gamma correction

Gamma (γ) is a value representing a responsiveness characteristic of image contrast. Every input and output device of image data has its own Gamma value; the overall Gamma value must be corrected to be equal to 1. If a monitor has a Gamma value of 2.2, for example, the value for this unit must be corrected to 0.45 ($2.2 \times 0.45 \approx 1$).

Accentuating Subject Outline

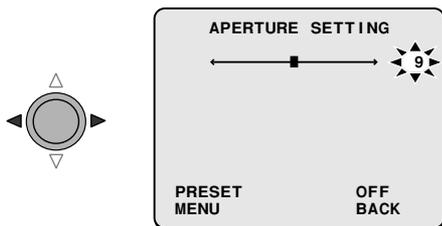
For accessing the MAIN MENU, see page 13 – 14.

By specifying the APERTURE* setting, you can accentuate the outline of the subject when its image is blurred and unidentifiable.



APERTURE SETTING

1 Adjust the outline (1 – 17).



- The greater the number, the crisper the outline becomes.

2 Set "MENU" to "END" and press the SET button.

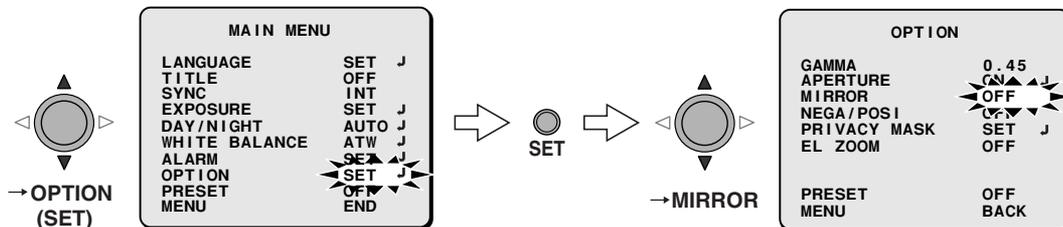
- ⇒ Finishes the setting screen and returns to the normal monitoring screen.
- If you want to return to the previous screen, select the "BACK" and press the SET button.

* Aperture means outline correction. The more the outline is highlighted, the higher the apparent resolution looks.

Inverting Images (horizontal/vertical)

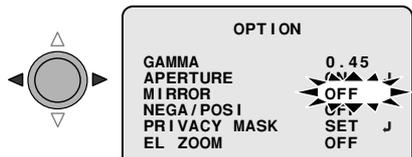
For accessing the MAIN MENU, see page 13 – 14.

If a camera is installed upside down, or monitoring subjects in a mirror or viewing backward from vehicle, you can invert the images vertically and/or horizontally.



MIRROR setting (Image Inversion)

1 Select an inversion mode.



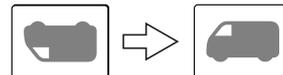
OFF : Normal



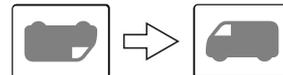
H : Horizontal inversion



V : Vertical inversion



HV : Horizontal and vertical inversion



2 Set "MENU" to "END" and press the SET button.

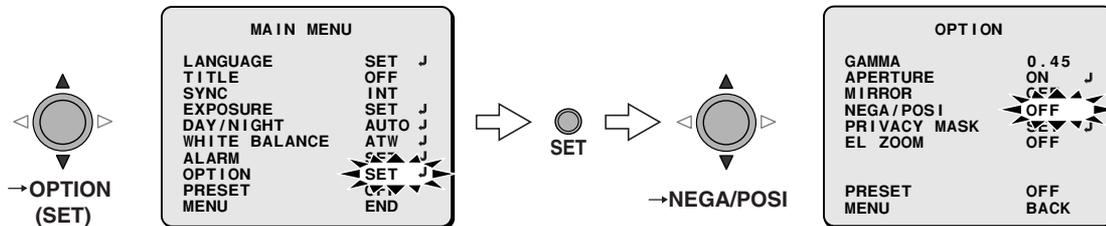
⇒ Finishes the settings screen and returns to the normal monitoring screen.

- If you want to return to the previous screen, select "BACK" and press the SET button.

Inverting Images (Brightness/Hue)

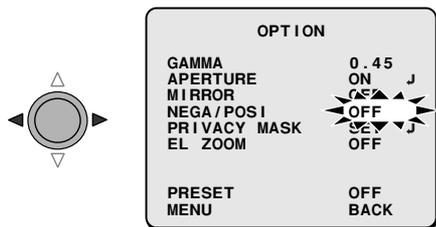
For accessing the MAIN MENU, see page 13 – 14.

You can record negative images of color film as positive images by reflecting the brightness and hue of the video signal.



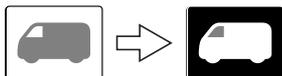
NEGA/POSI setting

1 Set “NEGA/POSI” to “ON” or “OFF”.



OFF : Normal image

ON : Negatively/positively inverted image



2 Set “MENU” to “END” and press the SET button.

⇨ Finishes the settings screen and returns to the normal monitoring screen.

- If you want to return to the previous screen, select “BACK” and press the SET button.

MEMO: If the inverted image is not easily viewable, make the following settings:

GAMMA : 1 (See page 46)

APERTURE : OFF (See page 47)

IRIS : Optimum value (See pages 19, 21)

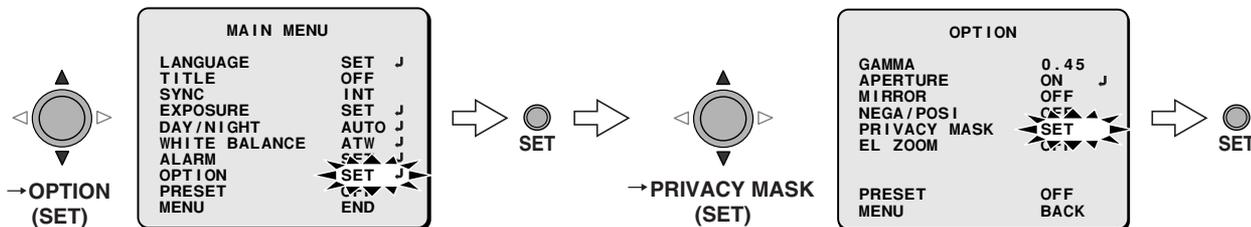
BLC : CENT (See page 22)

AGC : OFF (See page 32)

Hiding Partial Image (Privacy Protection)

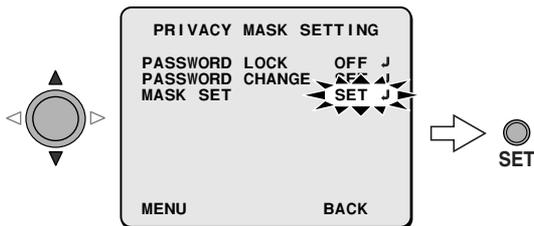
For accessing the MAIN MENU, see page 13 – 14.

If privacy protection is required for any shot, apply the masking feature for any position to be prevented from being presented. You can also lock the setting and its cancellation by specifying a password.



PRIVACY MASK SETTING

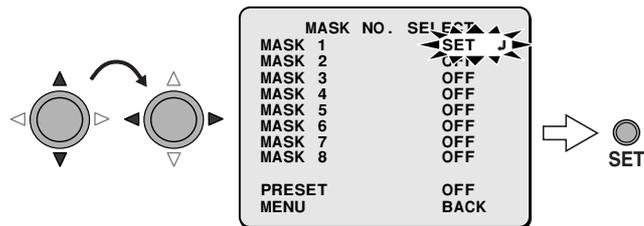
1 Select “MASK SET” – “SET” and press the SET button.



⇒ The “MASK NO. SELECT” screen appears.

Note: If “PASSWORD LOCK” is specified with “ON”, you must enter the password. (See page 52)

2 Set “MASK 1” to “SET” and press the SET button.



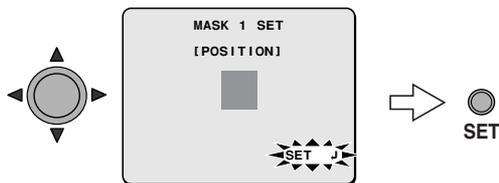
⇒ The “POSITION” screen appears.

- You can specify only “OFF” or “SET” for the first time setting. However, once the masking setting is made, then you can select any from “OFF”, “SET” or “ON” option.

Hiding Partial Image (Privacy Protection)

PRIVACY MASK SETTING (continued)

- 3** Locate the upper left corner of an area for which you want to mask, and then press the SET button.

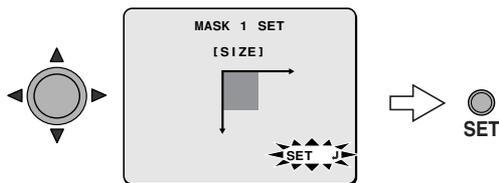


⇒ The “SIZE” screen appears.

MEMO: Here, determine the upper left position of the masking area.

Pressing the button further when the right end or the bottom end of the displayed area hits an edge will scale down the area size, but you can set your preferred size in step **4**.

- 4** Specify the masking size and press the SET button.

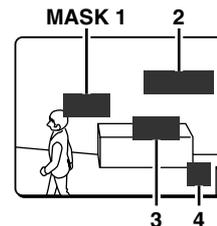


- From the datum point at the upper left corner of the area, the size can be scaled up or down, as well as side to side.
- ⇒ The “PRESET” and “MENU” appear on the screen.
- ⇒ To repeat a masking setting, select “MENU” and “BACK” and press the SET button, and then repeat steps from **2** to **4**.

MEMO: If you return to the masking setting screen using “BACK”, the specified mask number will be specified with “ON”. If you want to change the setting, specify “OFF”. And if you want to change the previously specified masking position and size, select “SET” and then press the SET button to establish a new setting.

MEMO: You can specify up to 8 maskings on the screen.

(Example: 4 maskings)



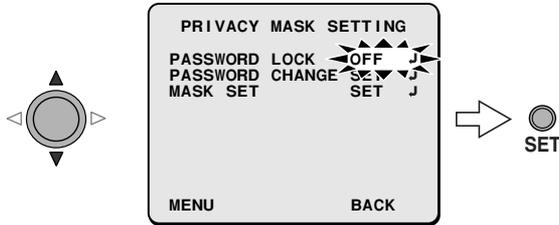
- 5** Set “MENU” to “END” and press the SET button.

- ⇒ Finishes the settings screen and returns to the normal monitoring screen.
- If you want to return to the previous screen, select “BACK” and press the SET button.

Hiding Partial Image (Privacy Protection)

■ To lock (protect) the settings:

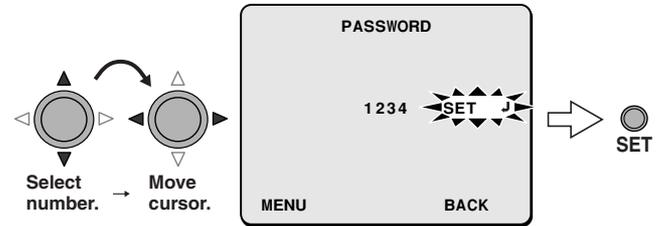
- 1 Select “PASSWORD LOCK” – “OFF” and press the SET button.



⇒ The “PASSWORD” screen appears.

- MEMO:**
- You must enter the valid password before you can lock the settings using a password.
 - “1234” is a factory-preset password; you are recommended to change it to your own password. (See page 53)

- 2 Enter the password (4 numerical values) and press the SET button.



- Enter “1234”.

⇒ If you enter a valid password, you will see the “OK” message and the “BACK” blinks.

Note: If you enter an incorrect password, you will see the “NG” message. If you fail to enter the valid password three times successively, the prompt display will disappear and “BACK” will blink. Press the SET button to return to the “PRIVACY MASK SETTING” screen.

- 3 Press the SET button.

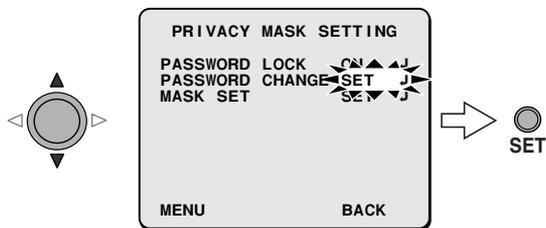
⇒ Returns to the “PRIVACY MASK SETTING” screen, and “ON” will blink next to “PASSWORD LOCK”.

MEMO: To disable the password lock, select “ON” and press the SET button, and then enter the password.

Hiding Partial Image (Privacy Protection)

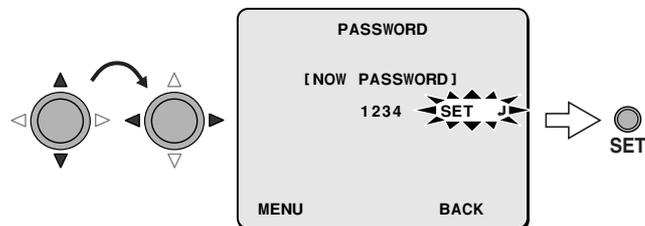
■ To change password:

- 1 Select “PASSWORD CHANGE” – “SET” and press the SET button.



⇒ The “NOW PASSWORD” screen appears.

- 2 Enter the current password and press the SET button.



⇒ The “NEW PASSWORD” screen appears.

Note: If you enter an incorrect password, you will see the “NG” message. If you fail to enter the valid password three times successively, the prompt display will disappear and “BACK” will blink. Press the SET button to return to the “PRIVACY MASK SETTING” screen.

- 3 Enter a new password (4 numerical values) and press the SET button.

Note: Write down the password before you forget it.

⇒ You will see the “OK” message and the “BACK” will blink.

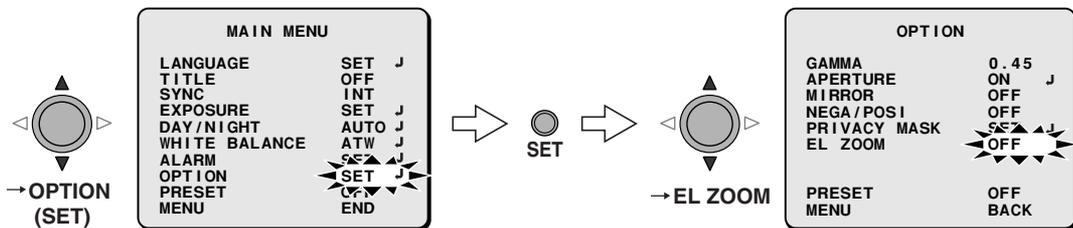
- 4 Press the SET button.

⇒ Returns to the “PRIVACY MASK SETTING” screen.

Multiplying Magnitude of Electronic Zoom

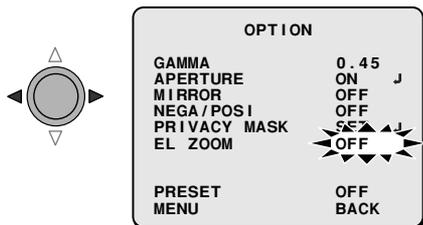
For accessing the MAIN MENU, see page 13 – 14.

In addition to zooming on the lens side, you can obtain further zooming by magnifying an electronic zoom factor.



EL ZOOM (Electronic Zoom)

1 Specify a zoom factor.



- Select from: OFF (no zoom), x 1.4, x 2.0, x 2.5, and MANU.
- If you select “MANU”, you can manually zoom in and out by pressing the CURSOR button vertically. (OFF – 2.5)
Pressing up the CURSOR button allows you to zoom in, while pressing down allows you to zoom out.

2 Set “MENU” to “END” and press the SET button.

⇒ Finishes the settings screen and returns to the normal monitoring screen.

- If you want to return to the previous screen, select “BACK” and press the SET button.

Note: “EL ZOOM” is not available under the following conditions:

- The zoom factor is specified for the alarm detection in the alarm setting. (See page 42)
- The WIDE-D (wide dynamic range) is set to “ON”. (See page 26)
- “BLC” is set to “CENT”. (See page 22)
- “MOTION” is set to other than “OFF”. (See page 41)

Settings Screens List

For accessing the MAIN MENU, see page 13 – 14.

[LANGUAGE]

[LANGUAGE]: Switches display language among English, German and French. (See page 15)

[TITLE]

[TITLE SETTING]: Names camera. (See page 16)

[SYNC] (INT/L-L)

[L-L SETTING](L-L) : Adjusts line lock phase. (See page 18)

[EXPOSURE]

EXPOSURE SETTING

[IRIS] (AI/EI)

[IRIS SETTING] (AI) : Adjusts for auto iris lens. (See page 19)

[IRIS SETTING] (EI) : Adjusts for manual iris lens. (See page 21)

[WIDE-D SETTING](ON/OFF) : Adjusts wide dynamic functions.
(See page 26)

[BLC](OFF/CENT/MULT) : Selects backlight correction mode.
(See page 22)

[BLC SETTING](CENT/MULT) : Adjusts backlight correction.
(See pages 23, 25)

[SENSE UP](OFF/x2/x4/x8/x16/x40) : Increases electronic sensitivity in dark place, etc. (See page 28)

[SHUTTER](50/120/250/500/1000/2000/4000/10000) :
Specifies shutter speed. (See page 29)

[DAY/NIGHT]

(AUTO/COLOR/B/W) : Selects DAY/NIGHT mode. (See page 30)

[D/N SETTING]: Adjusts for each mode. (See page 31 - 33)

[WHITE BALANCE]

(ATW/ATW-A/AWC/3200/5600/FLUE/MWB) : Selects mode for white balance. (See page 34)

[ATW MASKING]: Specifies mask for auto mode. (See page 35)

[AWC SETTING]: Adjusts through one-touch by focusing on white paper, etc. (See page 36)

[MWB SETTING]: Adjusts fine color manually. (See page 37)

[ALARM]

ALARM IN

[ALARM IN SETTING]: Used when external alarm devices are connected to the alarm input terminal.
(See page 38)

[MOTION SET]: Specifies settings for motion sensor. (See page 38)

ALARM OUT (OFF/ON)

[ALARM OUT SETTING](ON) : Used when external alarm devices are connected to the alarm output terminal. (See page 44)

[ALARM SIGN](OFF/5S/10S/15S/20S/30S/1M/2M/3M/4M/5M) :
Displays alarm on the monitor screen when the alarm comes on. (See page 45)

[OPTION]

[GAMMA] (0.45/1/MODE1/MODE2) : Corrects contrast or brightness.
(See page 46)

[APERTURE] (OFF/ON) : Accentuates subject outline. (See page 47)

[MIRROR] (OFF/H/V/HV) : Inverts subject horizontally and/or vertically.
(See page 48)

[NEGA/POS] (OFF/ON) : Invert brightness and hue of images.
(See page 49)

PRIVACY MASK

PRIVACY MASK SETTING

PASSWORD LOCK: Locks the mask settings by password.
(See page 52)

PASSWORD CHANGE: Specifies a new password. (See page 53)

MASK SET: Specifies masking on the screen for privacy protection. (See page 50)

EL ZOOM (OFF/x1.4/x2.0/x2.5/MANU) : Specifies electronic zoom factor. (See page 54)

■ Useful Operations

- Putting titles to camera images:
→ TITLE SETTING (See page 16).
- Capturing clear image of fast-moving subject by increasing shutter speed:
→ SHUTTER (See page 29).
- Connecting to an external door switch or infrared sensor:
→ ALARM IN SETTING (See page 38).
- Switching between color and monochrome mode of DAY/NIGHT function using external switch, etc.:
→ ALARM IN SETTING (See page 43).
- Controlling external beeper or indicator connected to camera by using alarm detection function:
→ ALARM OUT SETTING (See page 44).
- Inverting image horizontally and/or vertically:
→ MIRROR (See page 48).
- Inverting brightness and hue of images to record negative images of color shot as positive images:
→ NEGA/POSI (OFF/ON) (See page 49).
- Hiding partial image for privacy protection:
→ PRIVACY MASK SETTING (See page 50).
- Changing electronic zoom factor:
→ EL ZOOM (See page 54).

Troubleshooting

Before seeking repair service, please review the following points first. If the trouble persists, contact your local sales agent or installer.

Symptom	Items to Be Checked
No images available:	<ul style="list-style-type: none"> • Is the coaxial cable connected securely? • Is lighting appropriate? • Did you uncap the lens? • Is the setting for the Auto Iris switching correct? (See page 8) • Is power supplied? (See page 9) • Are power supply and voltage appropriate? (See page 9) • Are switch settings for DC and VIDEO correct? (See page 8)
Distorted images:	<ul style="list-style-type: none"> • Is sync adjusted by the line lock? (See page 18)
Unclear images:	<ul style="list-style-type: none"> • Is the focus of the lens adjusted? • Is the flange back adjusted? (See page 12) • Is the lens transparent without blur? (Use commercial cleaning paper and liquid to wipe out.) • Is the iris adjusted? (For AI or EI, see page 19 or 21 respectively.) • Is sensitivity increased to adapt dark environment? (See page 28)
Unrecognizable subject in the backlight:	<ul style="list-style-type: none"> • Is backlight correction specified? (See page 22)
Poor color images:	<ul style="list-style-type: none"> • Is white balance adjusted? (See page 34)

Symptom	Items to Be Checked
Distorted picture after switching from color to monochrome mode of DAY/NIGHT:	<ul style="list-style-type: none"> • Is "ON" specified for "BURST"? (See pages 31, 33)
Inappropriate contrast or outline of images:	<ul style="list-style-type: none"> • Did you try Gamma value adjustment? (See page 46) • Is the aperture adjusted? (See page 47)
Frequent false detection by Motion Sensor:	<ul style="list-style-type: none"> • Is detection sensitivity adjusted? (See page 38)

Specifications

Pickup device	1/3" CCD
Effective pixels	752 (H) x 582 (V), PAL
Horizontal resolution	More than 480 TV lines
Electronic zoom	x2.5 (with Alarm Zoom Function)
Synchronization method	Internal synchronization/Line lock, V phase adjustment possible
Lowest image illumination	1.0 lx (F1.2, COLOR mode, Normal Gain) 0.5 lx (F1.2, COLOR mode, High Gain) 0.025 lx (F1.2, COLOR mode, x40 electronic sensitivity increased, Normal Gain) 0.05 lx (F1.2, B/W mode, Normal Gain) 0.025 lx (F1.2, B/W mode, High Gain) 0.002 lx (F1.2, B/W mode, x40 electronic sensitivity increased, Normal Gain)
S/N	More than 50 dB (with AGC OFF)
Backlight compensation	OFF/Center-weighted metering/ Multi-spot metering
WIDE-D	OFF/ON (For auto iris only)
Electronic shutter	1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
Iris function	AI/EI
Electronic sensitivity boosting	AUTO/OFF, works with auto iris Up to x40 setting possible
White balance	Auto Tracing White balance (ATW), Auto Tracing White balance-All (ATW-A), One-push (AWC), Manual White Balance (MWB), Indoor (3200), Outdoor (5600), Fluorescent lighting (FLUE)
AGC gain	HIGH/MID/NORM/Manual
Gamma	0.45/1/MODE1/MODE2
Mirror image effect	OFF/Horizontally/Vertically/Horizontally and Vertically
Aperture	ON/OFF specifiable

Privacy masking	OFF/ON, Up to 8 spots, Lockable with password
DAY/NIGHT	AUTO / COLOR / B/W, specifiable COLOR / B/W switching sensitivity for AUTO mode, switchable COLOR / B/W mode working with external terminal (during COLOR mode), switchable ON/OFF for color burst for B/W mode.
ALARM INPUT & OUTPUT	External x 1, Output x 1, NO/NC switch Alarm output: Open Collector, Grounded Emitter with 18 V/25 mA
Motion sensor	Detectable area frame x 5 spot, specifiable location, Masking and Area ON/OFF
Camera title	OFF/ON, up to 16 characters, adjustable title position
NEGA/POSI inversion	OFF/ON
Communications	Simplified controller (VAC-70) supported
Power indicator	LED-red
Operational temperature/humidity	-10 ~ +50°C/below 90% RH (Non-condensing)
Power source	24 V ±10% AC, 50 Hz, 12 - 15 V DC
Power consumption	6 W
Weight	420 g
Dimensions (W x H x D mm)	67 x 54 x 128

- The appearance and specifications of the product are subject to change without notice.

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The SANYO logo consists of the word "SANYO" in a bold, sans-serif font. The letter "Y" is stylized with several vertical lines of varying lengths extending from its right side, creating a sense of motion or a signature.

SANYO Electric Co., Ltd.

Printed in Japan