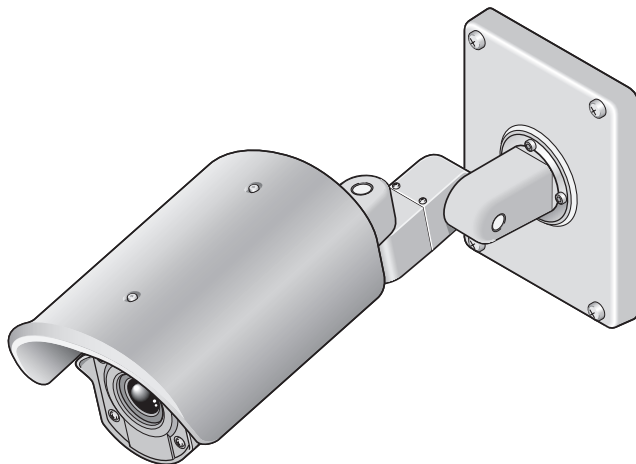


INSTRUCTION MANUAL

Color CCD Camera

VCC-XZ200



Please read this manual before installing and using this camera, and always follow the instructions in it for proper use. Be sure to keep it handy for later reference.

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☞ The contents in angle brackets <> are the menu screen title.

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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.

Precautions

■ In case of a 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 damage.

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.

■ Approvals: IP66

The unit has not been investigated by UL for outdoor use.

Ensure all openings in enclosure are sealed as per manufacturer's instructions.

Characteristics

- Complies with the IP66 international standard for dust and water protection (The IP66 has not been verified by UL.)
- Equipped with motorized zoom pan focus auto iris lens. Thanks to its large depth of field, focused images can be obtained in a wider range of scene without intentional focusing.
- Partial masking can be applied for any part of an image you want to hide.
- Motion sensor can be enabled to detect every action of intruders.
- Detects intruders using an external switch or a motion sensor, automatically zooms in on the images, and notifies using alarm signs.
- Configurable preference settings with view on screen.
- Day/Night Automatic Switching

Useful Operations

■ Putting titles to camera images:

⇒ OPTION → TITLE (see page 9)

■ Capturing clear image of fast-moving subject by increasing shutter speed:

⇒ SHUTTER (see page 21)

■ Connecting to an external door switch or infrared sensor:

⇒ OPTION → ALARM (see page 28)

■ Hiding partial image for privacy protection:

⇒ OPTION → PRIVACY MASK (see page 26)

■ Adjusting a zoom simply:

⇒ Use Select button (see page 5)

■ Switching between “color” and “black-and-white” mode of DAY/NIGHT function using external switch, etc.:

⇒ DAY/NIGHT (see page 23)

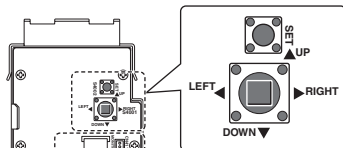
Accessing the Main Menu

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

In this manual, the buttons and their names on the camera are used for description.

■ Removing the camera cover and setting up the camera using the buttons on the circuit board

Place the camera cover back once you have finished settings (See the INSTALLATION MANUAL that comes with the unit).



SET button

Press and hold for about 1 second for the main menu to appear.

Select button (UP, DOWN, RIGHT, LEFT)

Press up, down, left, right to select an item on the settings screen or change a setting value.

<Zoom operations>

The zoom functions can be operated using the Select button during live mode (with no settings screen displayed).

Wide: Press ◀(LEFT)

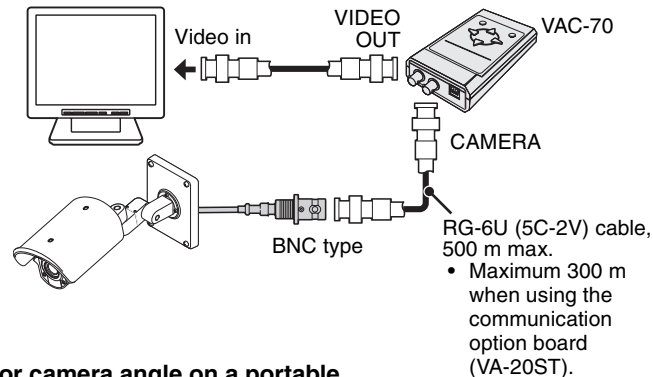
Tele: Press ▶(RIGHT)

■ Using the Camera Control Unit (VAC-70: Separately ordered)

Camera can be controlled remotely during setting or adjustment.

- Please refer to the instruction manual for VAC-70.

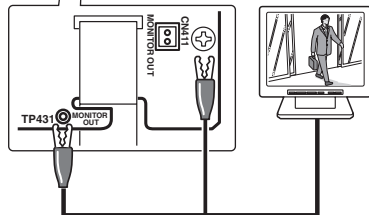
Note: Make sure to disconnect the unit after setting or adjustment is completed.



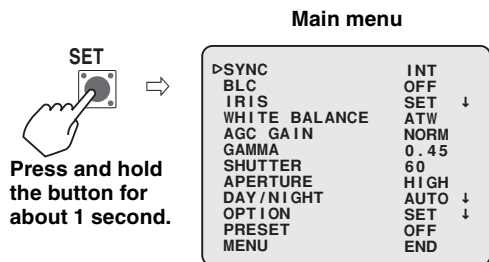
■ Checking the settings screen or camera angle on a portable monitor

Connect the MONITOR OUT pin and the ground on the circuit board to a monitor using an alligator clip cable.

It is also possible to connect a monitor using the MONITOR OUT connector.

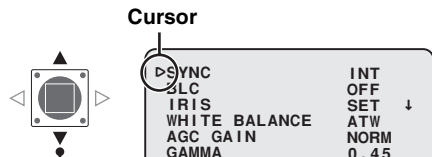


1 Access the main menu.



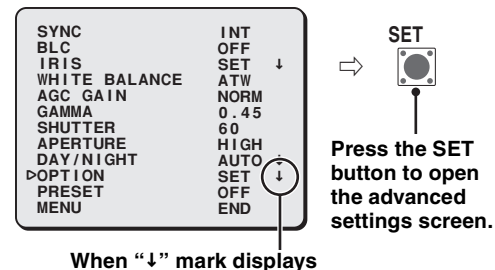
Note: After the expiration of a predetermined time interval (3 minutes) without any operation, the settings screen goes off automatically and returns to normal monitoring screen.

2 Select item.

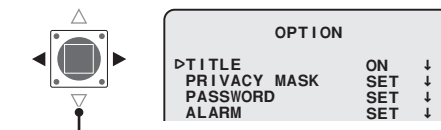


Moves the cursor "▷" using the Select button UP and DOWN to select the item.

3 Open the advanced settings screen.



4 Specify values.



Press the Select button RIGHT and LEFT to switch over to other values.

Accessing the Main Menu

5 Close the settings screen.

Once the settings are complete, set <MENU> to "END" and press the SET button.



- 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.



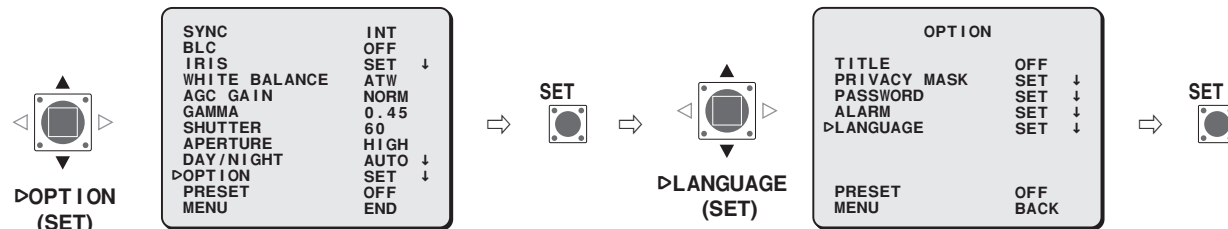
Note: To reset all the settings, set <PRESET> to "ON" in the Main menu and press the SET button. (The <PRIVACY MASK> and <PASSWORD> will not be initialized.)

▷SYNC	INT
BLC	OFF
IRIS	SET ↓
WHITE BALANCE	ATW
AGC GAIN	NORM
GAMMA	0.45
SHUTTER	60
APERTURE	HIGH
DAY/NIGHT	AUTO ↓
OPTION	SET ↓
PRESET	OFF
MENU	END

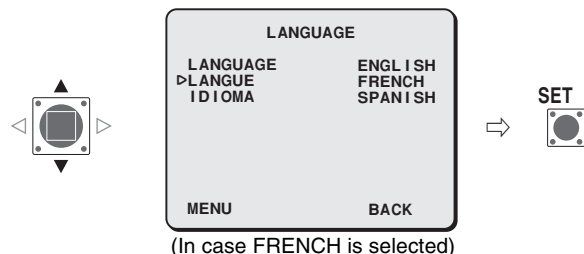
Items		Settings	See page
SYNC		Adjusting Synchronization	13
BLC		Setting for Backlight Compensation	14
IRIS		Adjusting Iris Level	15
WHITE BALANCE		Adjusting White Balance	16
AGC GAIN		Setting for Gain	19
GAMMA		Adjusting Gamma	20
SHUTTER		Setting for Shutter Speed	21
APERTURE		Adjusting Subject Outline	22
DAY/NIGHT		Setting for Day/Night (Color/Black-and-White/Auto) Function	23
OPTION	TITLE	Setting for Camera Name	9
	PRIVACY MASK	Privacy Masking	26
	PASSWORD	Password	11
	ALARM	Input of Alarm Signal	28
	LANGUAGE	User's Language	8
PRESET		Initializing Settings	This page on the left
MENU		Closing a Screen/Returning to Previous Screen	This page on the left

Selecting Display Language <LANGUAGE>

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

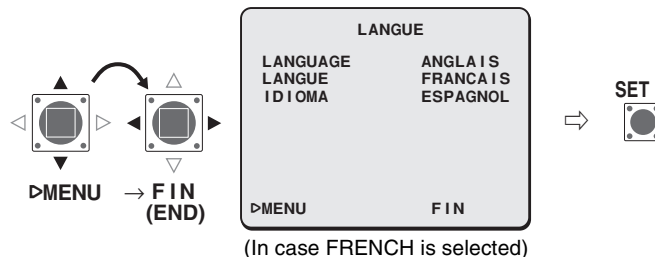


1 Select a language and press the SET button.



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

2 Select <MENU> – “FIN” (“END”) and press the SET button.

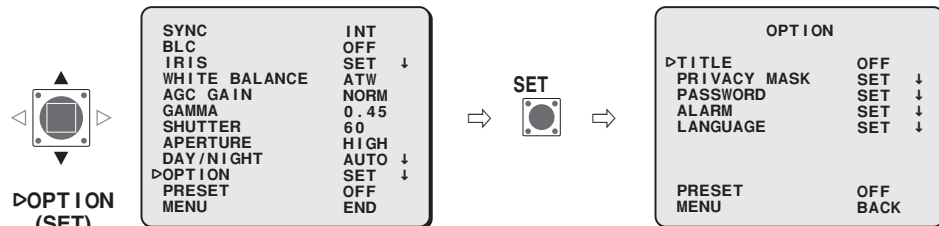
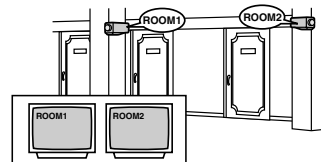


⇒ Closes the settings screen.

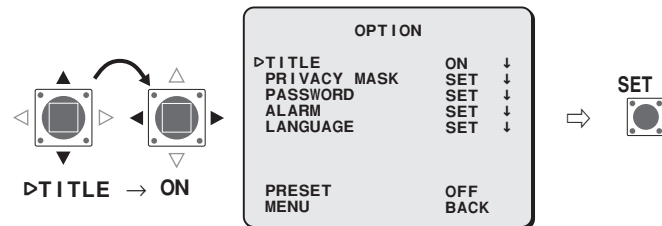
- If you press the SET button while “RETOUR” (“BACK” or “ATRAS”) is selected, the previous screen will reappear.

Naming Cameras <TITLE>

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.



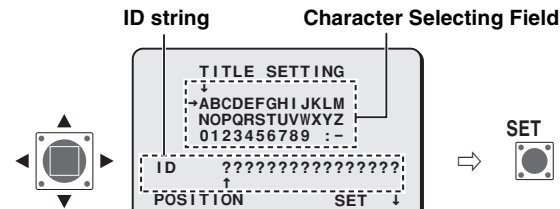
1 Set <TITLE> to “ON” and press the SET button.



⇒ The “TITLE SETTING” screen appears.

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

A character is selectable when two arrows, (→) and (↓), point at the character.



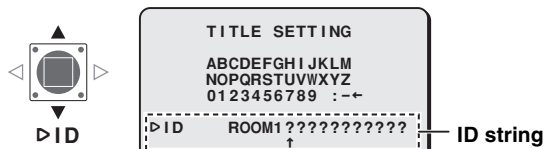
⇒ The characters are displayed starting from (↑) in the “ID string”.

- You can enter up to 16 characters.

MEMO: If you want to overwrite the character, select <ID> and move (↑) onto it in the “ID string”, and then choose any new letter.

3 Repeat step 2 to complete the name and select <ID>.

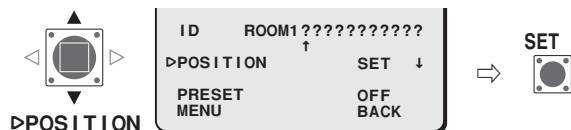
Example: ROOM1



- 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 “???...”.

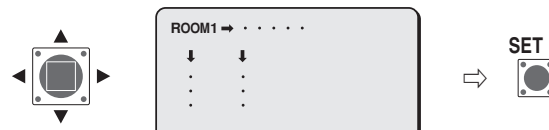
MEMO: If you want the name to be displayed on the monitor in two lines, insert the line feed mark (↵) in the “ID string” wherever you want to start a new line. On the monitor screen, the name will be displayed in two lines. You can enter up to 16 characters including the line feed mark (↵).

4 Select <POSITION> – “SET” and press the SET button.



⇒ On the normal monitoring screen, the name will be displayed.

5 Determine the location where the name should be displayed, and then press the SET button.



⇒ Returns to the settings screen.

6 Set <MENU> to “END” and press the SET button.

⇒ Closes the settings screen and displays 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

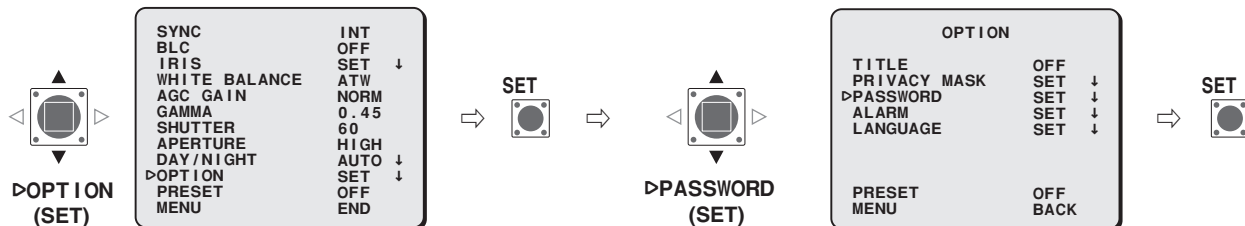
Set <PRESET> to “ON”, and press the SET button.

⇒ All the characters will be displayed with “?”.

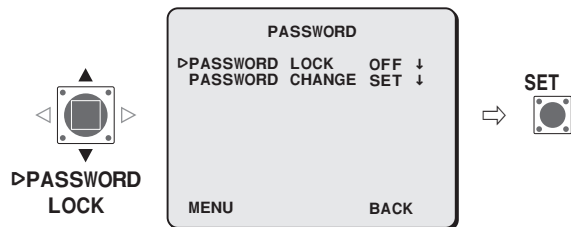
- MEMO:**
- If <ALARM SIGN> is “ON” (see page 32), if an alarm signal is input, the camera name on the screen will blink during the time that has been set in <DURATION> (see page 31). When the camera name is not specified, “???...” will blink.
 - If <MOTION> is “ON” (see page 29), the camera name on the screen will also blink when the motion sensor detects movement.
 - When <PRIVACY MASK> is “ON” (see page 26), the camera name will not be displayed.

Password Lock Setting/Cancelling <PASSWORD>

You can lock the accessing the main menu by specifying a password. You will be prompted to enter the password to access the main menu.

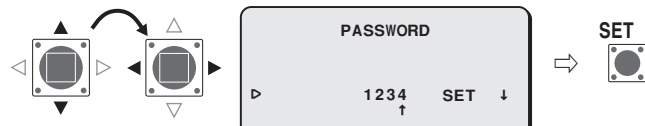


- 1** Select <PASSWORD LOCK> and press the SET button.



⇒ The "PASSWORD (????)" screen appears.

- 2** Enter the password (default: 1234) and press the SET button.



⇒ You will see the "OK" message.

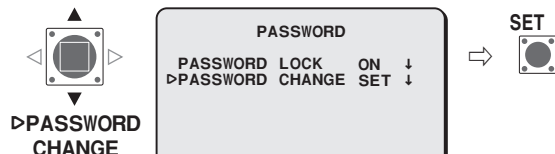
Note: If you enter an incorrect password, you will see the "NG" message. If you fail to enter the valid password three times successively, the prompt display will disappear. Start again from the beginning.

- 3** Press the SET button.

⇒ Displays <PASSWORD LOCK> – "ON".

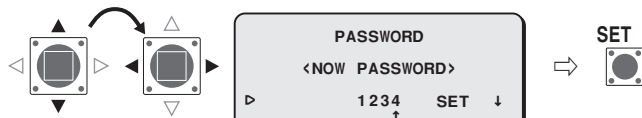
- "1234" is a factory default password; it is recommended you change it to your own password. Advance to step 4.
- If you want to finish the setting, advance to step 7.

- 4** Select <PASSWORD CHANGE> and press the SET button.

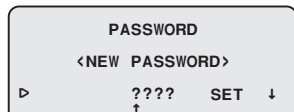


⇒ The <NOW PASSWORD> “????” screen appears.

- 5** Enter the current password and press the SET button.



⇒ The <NEW PASSWORD> “????” screen appears.



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

✎ Write down the new password before you forget it.

⇒ You will see the “OK” message.

- 7** Set <MENU> to “END” and press the SET button.

⇒ Closes 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.

■ To cancel the password lock

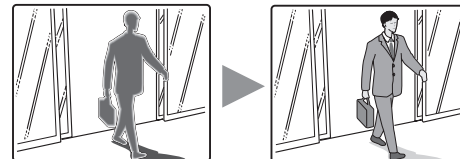
Press the SET button on <PASSWORD LOCK> – “ON”, and then enter the password.

⇒ You will see “OFF” instead of “ON”.

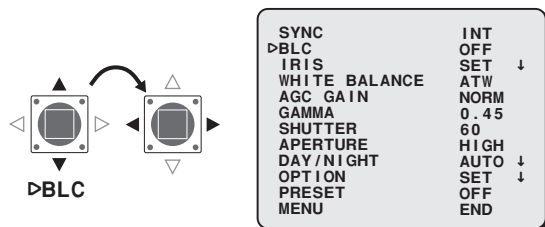
- 13** For accessing the main menu, see pages 5 – 7.

Backlight Compensation <BLC>

If the images of subjects are not clear because of backlight, compensate for it by adjusting conditions or changing the compensation method.



1 Select <BLC> and specify a compensation method.



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

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

■ CENT (Center zone metering)

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

■ MULT1 (Multi-spot metering, Normal mode)

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

■ MULT2 (Multi-spot metering, High mode)

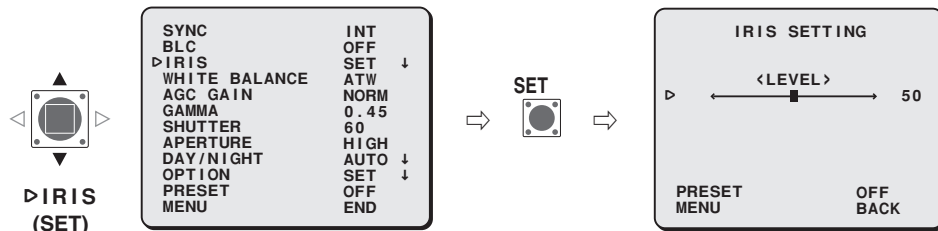
Compared to MULT1, faster backlight compensation is possible against a lesser amount of light.

■ OFF

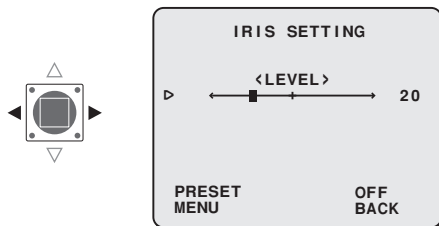
No compensation is performed for backlight.

Adjusting Iris Level <IRIS>

If you need to adjust the brightness, follow the steps below.



1 Adjust the brightness (iris) (0 – 100).



- The greater the number, the brighter it gets.

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

⇒ Closes 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.

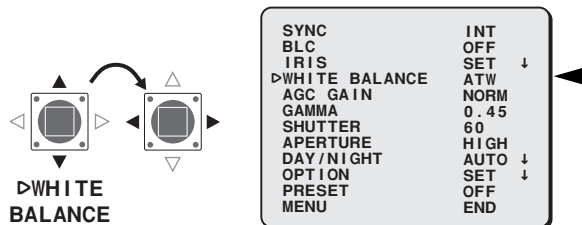
Note: • Under extremely bright lighting, unfavorable phenomena may occur such as swaths of smear on the screen, because light intensity entering the lens is too high to be controlled. Reduce the intensity by changing the angle of the lighting source or by other means.

- If the images of subjects under fluorescent lighting are flickering, replace fluorescent lighting with incandescent lighting.

Setting White Balance <WHITE BALANCE>

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.

1 Select <WHITE BALANCE> and specify a mode.



■ ATW (Auto-Tracing White Balance)

Automatic setting for white balance.

■ AWC (One-Push Adjustment): (see next page)

Adjusts white balance by shooting white paper or wall.

■ 3200 (Halogen light or incandescent lamp, etc.) (Fixed)

Targeted at around 3200 K of color temperature.

■ 5600 (Daytime sunlight) (Fixed)

Targeted at around 5600 K of color temperature.

■ FLUO (Fluorescent lamp) (Fixed)

Targeted at around 4200 K of color temperature.

■ MWB (Manual White Balance): (see page 18)

Fine-adjusts red and blue manually.

2 For advanced settings (AWC or MWB), press the SET button.

⇒ Each corresponding settings screen will appear.

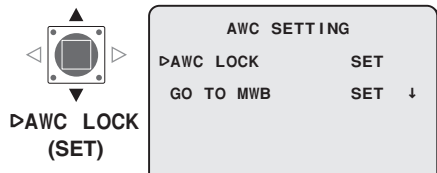
- Advance to next page when selecting "AWC".
Advance to page 18 when selecting "MWB".

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

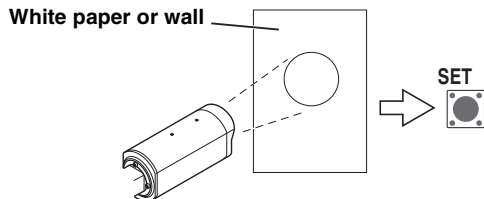
⇒ Closes the settings screen and returns to the normal monitoring screen.

AWC SETTING (One-Push Adjustment)

1 Select <AWC LOCK> – “SET”.



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



- ⇒ The cursor “▷” lights off, and white balance adjustment will start. The adjustment will end after about 2 seconds when “▷” lights again.
- 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 next page)

MEMO: Transferring to the “MWB SETTING” screen through <GO TO MWB>, white balance mode (see page 16) will be changed to “MWB”.

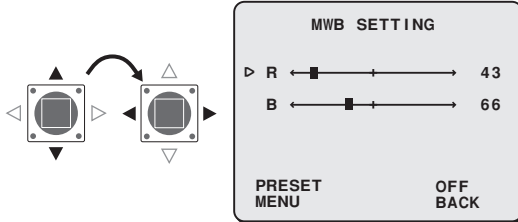
3 Set <MENU> to “END” and press the SET button.

⇒ Closes 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.

MWB SETTING (Manual White Balance)

1 Select <R> or 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.

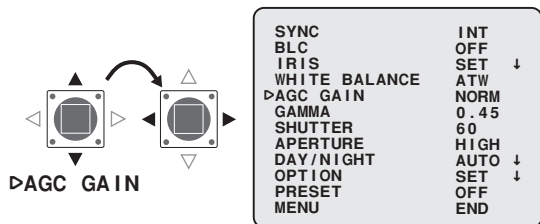
⇒ Closes the settings screen and returns to the normal monitoring screen.

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

Setting Gain Value <AGC GAIN>

If you need to adjust the sensitivity in dark places (AGC*), follow the steps below.

1 Select <AGC GAIN> and specify a mode.



■ NORM

Normal setting

■ HIGH (For a dark subject)

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

- This setting causes noise generation and a grainy image.

■ OFF

Fixed gain setting

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

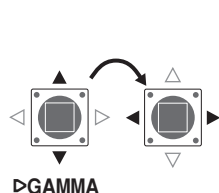
⇒ Closes the settings screen and returns to the normal monitoring screen.

*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.

Correcting Gamma Characteristic <GAMMA>

Change the mode for Gamma correction*.

1 Select <GAMMA> and specify a mode.



SYNC	INT
BLC	OFF
IRIS	SET ↓
WHITE BALANCE	ATW
AGC GAIN	NORM
▷GAMMA	0.45
SHUTTER	60
APERTURE	HIGH
DAY/NIght	AUTO ↓
OPTION	SET ↓
PRESET	OFF
MENU	END

■ 0.45

Gamma value of $\gamma = 0.45$

■ 1

Gamma value of $\gamma = 1$

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

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

* About Gamma correction

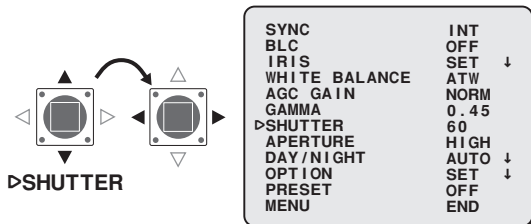
Gamma (γ) is a value representing a responsiveness characteristic of image contrast. Every input and output device of image data has its own Gamma value; the overall Gamma value must be corrected to be equal to 1. If a CRT monitor has a Gamma value of 2.2, for example, the value for this unit must be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

Specifying Shutter Speed <SHUTTER>

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.

1 Select <SHUTTER> and specify a shutter speed.



- Select from: 60, 100, 250, 500, 1000, 2000, 4000 and 10000 (e.g., 60 refers to 1/60 second)

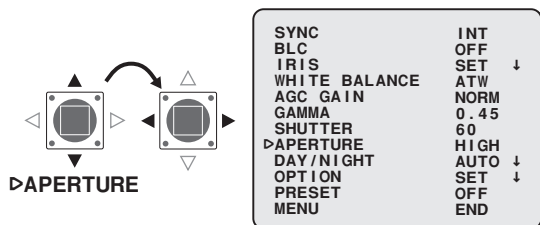
2 Set <MENU> to “END” and press the SET button.

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

Accentuating Subject Outline <APERTURE>

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

1 Select <APERTURE> and specify a mode.



■ OFF

No accentuating is performed for aperture.

■ NORM

Normal setting

■ HIGH

Setting with which the outline becomes crisper than the NORM setting.

■ Hipls (High plus)

Setting with which the outline becomes crisper than the HIGH setting.

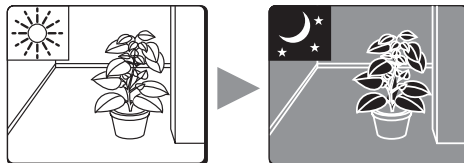
2 Set <MENU> to “END” and press the SET button.

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

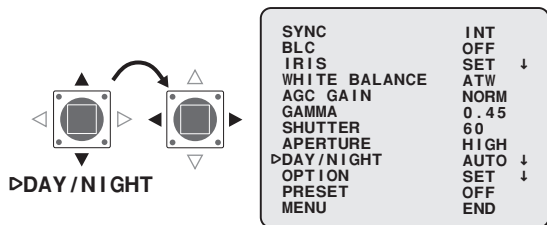
* Aperture means outline correction. The more the outline is highlighted, the higher the apparent resolution looks.

Adjusting DAY/NIGHT Function <DAY/NIGHT>

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.



1 Select <DAY/NIGHT> and specify a mode.



⇒ Image switches immediately after the selection is made.

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.

2 For advanced settings “AUTO” or “B/W”, press the SET button.

⇒ Each corresponding settings screen will appear.

- Advance to next page when selecting “AUTO”.
Advance to page 25 when selecting “B/W”.

■ AUTO: (see next page)

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

■ COLOR

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

■ B/W (Black-and-White): (see page 25)

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

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

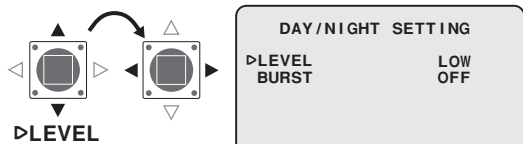
⇒ Closes the settings screen and returns to the normal monitoring screen.

MEMO: If a communication option board (VA-20ST) is connected: AUX command issued from the control devices can switch modes.
If a network option board (VA-20LAN) is connected: AUX command issued from the control panel on the web browser can switch modes.

AUX1: Color AUX2: Black-and-White AUX3: Auto

Adjusting Automatic Setting (AUTO)

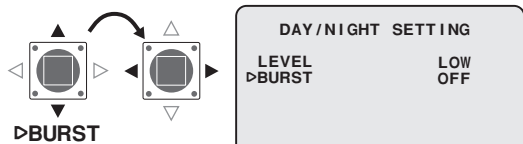
- 1 Select <LEVEL> and specify a level for DAY/NIGHT switching.



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 dark.

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.

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



ON : The burst signals are inserted to the B/W image to avoid image distortion at switch over from COLOR to B/W.

OFF : The burst signals are unused.

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

⇒ Closes 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.

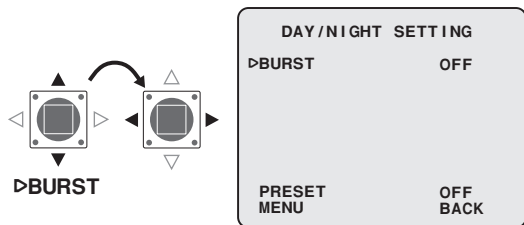
Note:

- If an infrared lighting system is used, the B/W mode may switch to COLOR when a subject reflects the light intensely. Place the unit out of the infrared lighted area.
- When <MOTION> is “ON” (see page 29), the motion sensor detection will be interrupted during switching over from B/W to COLOR mode and from COLOR to B/W mode.

* The burst signals are color synchronization signals required for reproducing color.

Adjusting Black-and-White Setting (B/W)

- 1** Set <BURST> to “ON” or “OFF” for the burst signal*.



- ON** : The burst signals are inserted to the B/W image to avoid image distortion at switch over from COLOR to B/W.
- OFF** : The burst signals are unused.

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

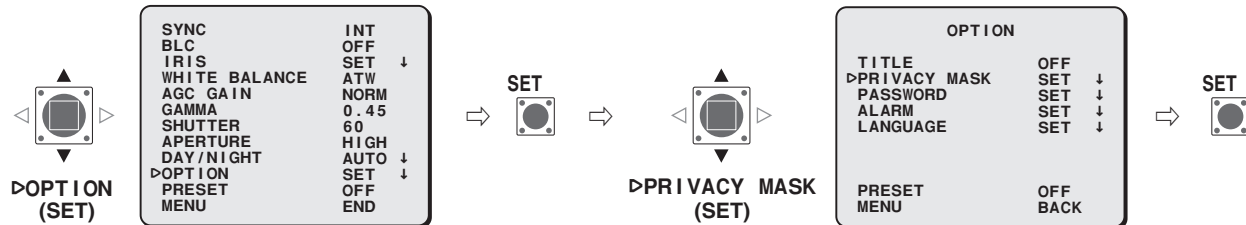
⇒ Closes the settings screen and returns to the normal monitoring screen.

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

* The burst signals are color synchronization signals required for reproducing color.

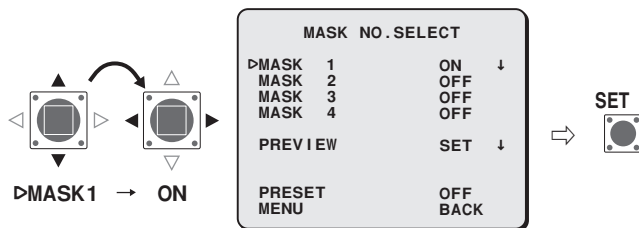
Hiding Image Partially <PRIVACY MASK>

If privacy protection is required for any shot, apply the masking feature for any position to be prevented from being presented.



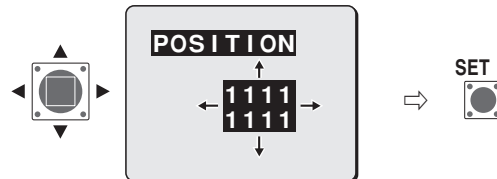
Privacy Masking Setting

1 Set <MASK 1> to “ON” and press the SET button.



⇒ The “POSITION” screen appears.

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

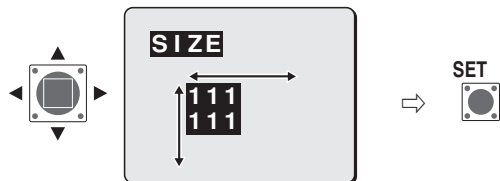


⇒ The “SIZE” screen appears.

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 **3**.

Privacy Masking Setting (continued)

3 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.

⇒ Returns to the "MASK NO.SELECT" screen.

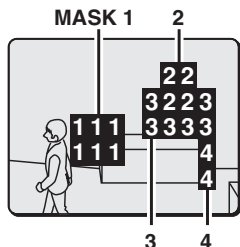
To set multiple masks, repeat steps 1 to 3.

■ To preview the entire specified "MASK NO."

Select <PREVIEW> and press the SET button.

To return to the previous screen, press the SET button.

(Example: 4 maskings)



MEMO:

When multiple masking positions overlap, the masking setting with the smaller "MASK NO." will be preceded.

■ To cancel the masking setting

Change "ON" of the MASK number to "OFF" in "MASK NO.SELECT" screen.

■ To change the previously specified masking setting

Choose "ON" instead of "OFF" in "MASK NO.SELECT" screen, and press the SET button.

After canceling the previous masking setting, set the masking position again.

4 Set <MENU> to "END" and press the SET button.

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

The specified masking position appears on the screen.

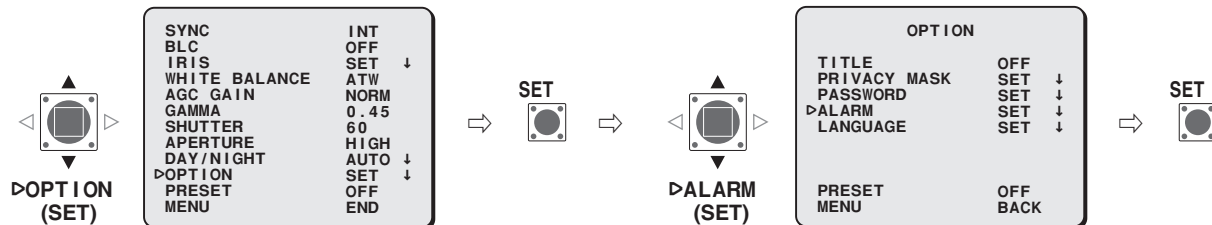
- If you want to return to the previous screen, select "BACK" and press the SET button.

MEMO: If <ALARM SIGN> is "ON" (see page 32), the alarm notification "A" will be shown on all the masks during the time set in <DURATION> (see page 31) when an alarm signal comes in.

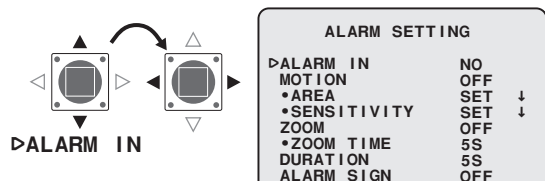
The same applies if <MOTION> is "ON" (see page 29) and the motion sensor detects movement.

Specifying Alarm Input <ALARM>

If you have connected an external door switch or an infrared sensor, specify the following settings. This unit has a built-in motion sensor, which outputs alarm signals when any moving subject, such as a would be intruder, is detected.



1 Select <ALARM IN> and specify a polarity for the signal.



NO : Normal Open (When closed, detects an alarm input.)

NC : Normal Close (When opened, detects an alarm input.)

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

⇒ Closes 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.

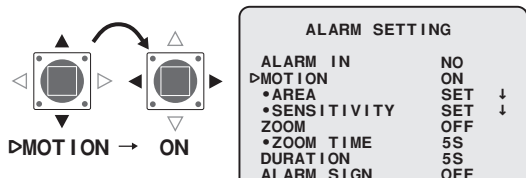
■ About an alarm sign

- You can use the alarm setting so that the displayed image will be zoomed in when the signal is input (see page 31).
- Alarm sign indicates when an alarm signal is input (see page 32).

Note: The alarm feature(s) of this camera has not been investigated by UL.

Motion Sensor Setting

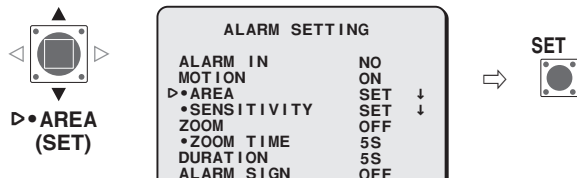
1 Select <MOTION> and specify “ON”.



ON : Detects when the motion sensor responded.

OFF : The motion sensor is unused.

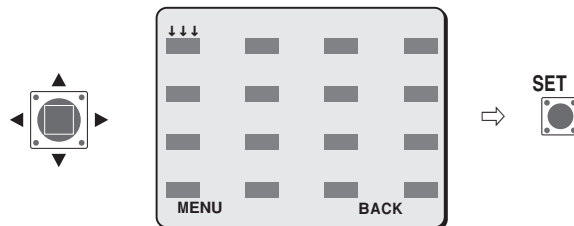
2 Select <•AREA> and press the SET button.



⇒ The screen for motion-detected area appears.

3 Move the cursor to the area where should not be motion-detected and press the SET button to change “---”.

e.g., frequently moving objects such as trees swaying in the wind as well as flickering.



4 Set <MENU> to “BACK” and press the SET button.

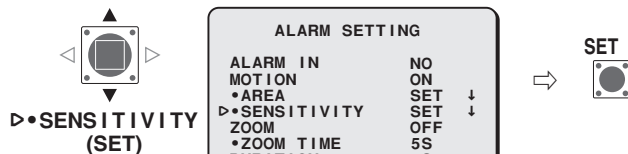
⇒ Returns to the “ALARM SETTING” screen.

- You should adjust the detection sensitivity if false alarms occur very frequently (See next page).

If you want to finish the settings, advance to step 8.

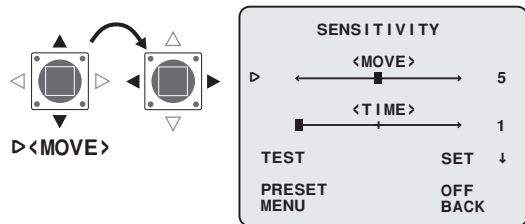
Motion Sensor Setting (continued)

- 5** Select <•SENSITIVITY> and press the SET button.



⇒ The "SENSITIVITY" screen appears.

- 6** Select <MOVE> and specify a sensitivity level (1 –10).



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

- 7** Select <TIME> and specify a detection time of duration (1 – 60).

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

■ To confirm the sensitivity of the motion detection

Select <TEST> and press the SET button.

- Make sure that the motion-detected area is properly specified by placing your hand or other objects in front of the lens.

To finish the test, press the SET button.

- 8** Set <MENU> to "END" and press the SET button.

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

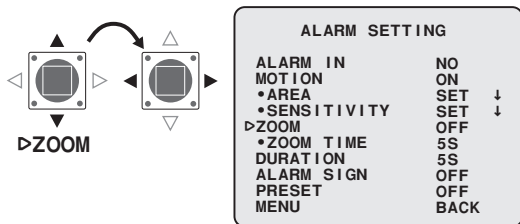
- If you want to return to the previous screen, select "BACK" and press the SET button.

MEMO: Alarm sign indicates when any moving subject is detected (see page 32).

MEMO: If <ZOOM> is enabled (see page 31), the image on the screen will be zoomed up when the motion sensor detects movement.
If <ALARM SIGN> is "ON" (see page 32) when <PRIVACY MASK> is "ON" (see page 26), the alarm notification "A" will be shown on all the masks.

Setting Zooming Up at Alarm Detection

- 1 Select <ZOOM> and specify the zoom factor for alarm detection (included motion-detected).



- Select from: OFF (no zoom), x1.0, x1.4, x2.0, x2.6

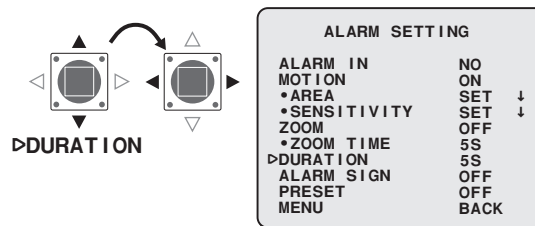
- 2 Select <•ZOOM TIME> and specify duration time for zooming (when zoom has been set in step 1).

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

Note: You should not specify longer <•ZOOM TIME> than <DURATION> time. Otherwise, <DURATION> setting will change correspondingly. Confirm both times before specifying proper values.

Setting Alarm Duration

- 1 Select <DURATION> and specify the duration for the alarm sign indication (a time until next alarm input becomes enabled).

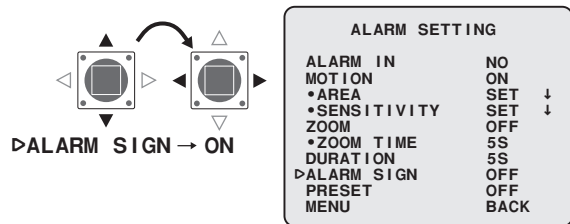


- Select from: 5S, 10S, 15S, 20S, 30S, 1M, 2M, 3M, 4M, 5M
(S = second, M = minute)

Note: You should not specify shorter <DURATION> than <•ZOOM TIME>. Otherwise, <•ZOOM TIME> setting will change correspondingly. Confirm both times before specifying proper values.

Setting Alarm Detection Notification

1 Select <ALARM SIGN> and specify “ON”.



ON : If an alarm signal (including motion detection) comes in, alarm notification is displayed during the time set in <DURATION>.

- If <TITLE> is “ON” (see page 9), the camera name on the screen blinks.
- If <PRIVACY MASK> is “ON” (see page 26), “A” will be shown on all the masks.

OFF : The alarm notification is unused.

■ Once the settings are complete

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

⇒ Closes 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.

Troubleshooting

Before seeking repair service, please review the following points first. If the trouble persists, consult your dealer or an Authorized Sanyo Service Center.

Symptom	Items to Be Checked
No images available:	<ul style="list-style-type: none">• Is the coaxial cable connected securely?• Is lighting appropriate?• Is power supplied? (See “Connections” in the installation manual.)• Are power supply and voltage appropriate? (See “Connections” in the installation manual.)
Distorted images:	<ul style="list-style-type: none">• Is sync adjusted by the line lock? (see page 13)
Unclear images:	<ul style="list-style-type: none">• Is the lens transparent without blur? (Use commercial cleaning paper and liquid to wipe out.)• Is the iris adjusted? (see page 15)
Unrecognizable subject in the backlight:	<ul style="list-style-type: none">• Is backlight compensation specified? (see page 14)
Poor color images:	<ul style="list-style-type: none">• Is white balance adjusted? (see page 16)
Inappropriate contrast or outline of images:	<ul style="list-style-type: none">• Did you try Gamma characteristic adjustment? (see page 20)• Is the aperture adjusted? (see page 22)
Frequent false detection by Motion Sensor:	<ul style="list-style-type: none">• Is detection sensitivity adjusted? (see page 30)

Symptom	Items to Be Checked
Distorted picture after switching from COLOR to B/W mode of DAY/NIGHT:	<ul style="list-style-type: none">• Is “ON” specified for “BURST”? (see pages 24, 25)

Service

The camera is a precision instrument. Handle it carefully and always follow the safety precautions. If the camera requires service, never try to repair it yourself or open the casing.

For servicing, maintenance, or repairs, consult your dealer or an Authorized Sanyo Service Center.

Specifications

Scanning system	NTSC standard 525 lines, 60 fields/sec.
Image sensor	1/4" interline transfer method CCD
Number of effective pixels	768(H) x 494(V)
Horizontal resolution	More than 520 TV lines
Minimum illumination (approx.)	Gain high: 0.06 lx (F 1.9, B/W mode), 1.2 lx (F1.9, color mode)
Video output	1.0 V(p-p)/75 Ω , composite, BNC
Video S/N ratio	More than 48 dB (AGC OFF: More than 50 dB)
Lens	Built-in motorized zoom pan focus auto iris lens, f=2.8 - 7.3 mm (2.6x), F=1.9 - 3.0
Backlight compensation	OFF , Multi-spot metering (High/Normal), Center zone metering
White balance	Auto-Tracing White balance (ATW) , One-push (AWC), Manual White Balance (MWB), Halogen light or incandescent lamp, etc. (3200), Daytime sunlight (5600), Fluorescent lamp (FLUO)
Gain control	Normal/High/OFF
Electronic shutter	1/60 , 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 sec.
Gamma	0.45/1
Aperture compensation	High plus/ High/Normal/OFF
Sync system	Internal sync/Line lock
Day/Night mode	Auto (Low/High) , Color, B/W, External control
Camera title	OFF/ON , Up to 16 characters, adjustable title position
Privacy masking	OFF/ON , Max. 4 masked locations
Alarm input	External x 1, NO/NC selectable, with alarm zoom function
Motion detector	OFF/ON , Motion zoom function

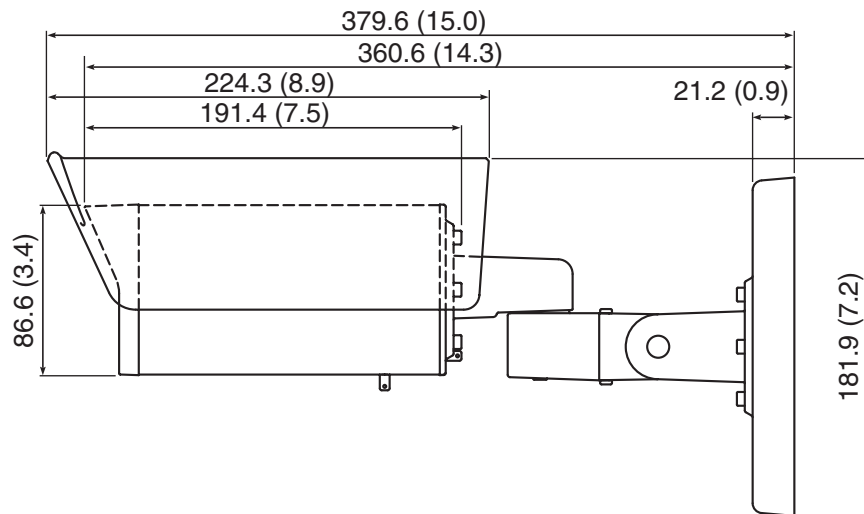
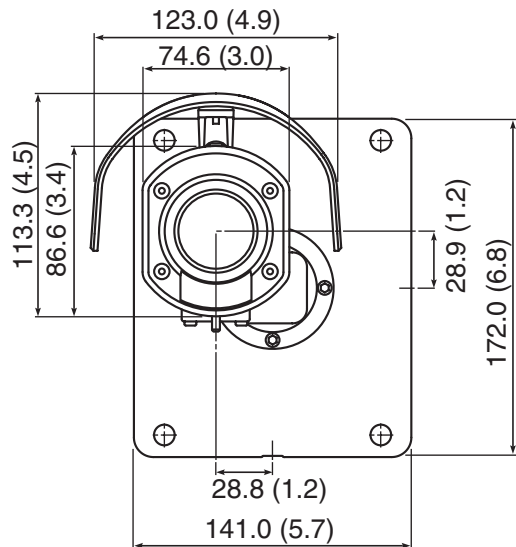
Communications	Simplified controller (VAC-70: Separately ordered) supported RS-485 (VA-20ST: Option board) Network (VA-20LAN: Option board)
Operating Environment (with power source connected)	Temperature: -20°C - +50°C (-4°F - 122°F) • When heater (VA-50H: Option board) is used: -30°C - +50°C (-22°F - 122°F) Humidity: less than 90 % RH (no condensation)
Power supply	24 V AC \pm 10%, 60 Hz/ 12 - 15 V DC
Power consumption (approx.)	3.5 W (without options) 6.0 W (with options) Max. 13.0 W (with heater turned on: VA-50H, option board)
Dimensions: mm (inch)	Base: W141.0 (5.7) x H172.0 (6.8) Main unit: • W74.6 (3.0) x H86.6 (3.4) x D360.6 (14.3) (without sunshade) • W123.0 (4.9) x H113.3 (4.5) x D379.6 (15.0) (with sunshade)
Weight (approx.)	1.6 kg (56.4 oz) (without sunshade) 1.8 kg (63.5 oz) (with sunshade)

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

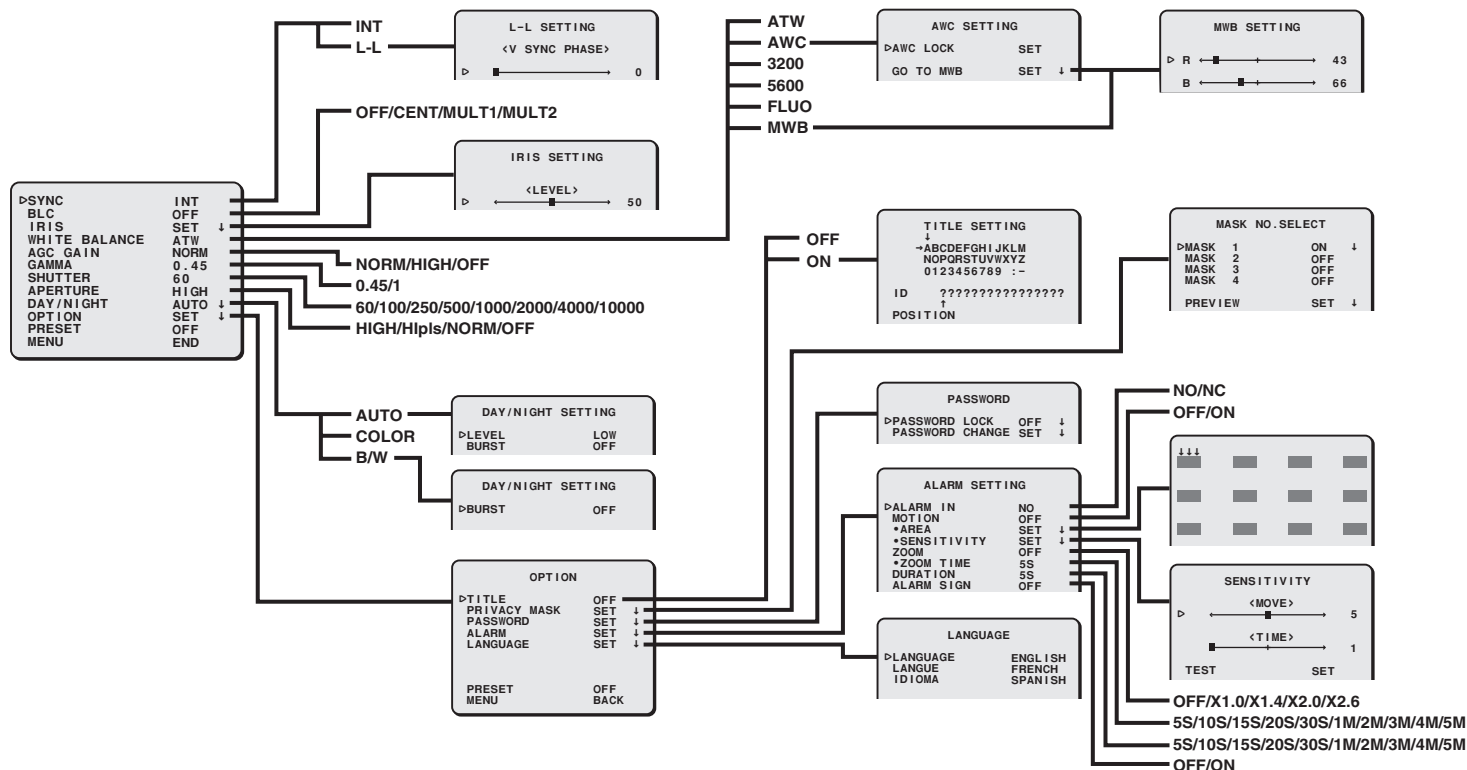
■ Accessory

- CD-ROM for Instruction manual 1
- Installation manual 1
- Hexagonal wrench, Large and Small each 1
- Fixer 1
- Desiccant 1
- Sunshade 1 set

Dimensions : mm (inch)



Screen Sequence



SANYO