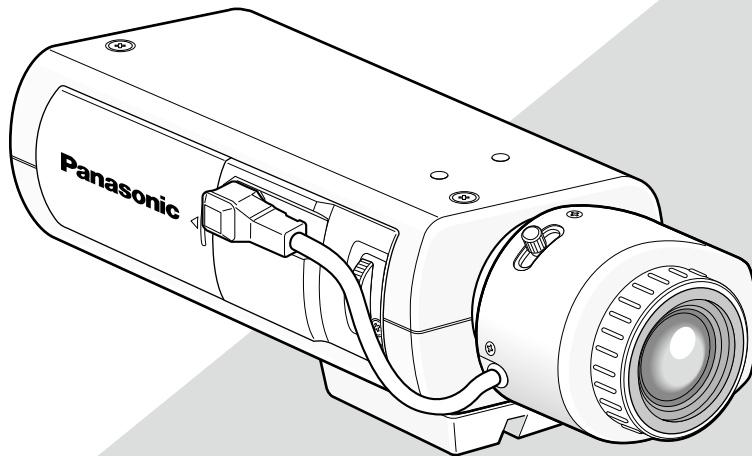


Panasonic

Operating Instructions

Color CCTV Camera

Model No. **WV-CP500L/G**
WV-CP504LE



This illustration represents WV-CP500L/G.
Lens: Option

Before attempting to connect or operate this product,
please read these instructions carefully and save this manual for future use.

The model number is abbreviated in some descriptions in this manual.

Preface

About the user manuals

The operating instructions of the camera consist of 2 sets: these operating instructions (PDF) and Installation Guide.

This document explains how to configure the settings of the camera.

Refer to the installation guide for further information about how to install the camera.

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About the setup menus

Performing each setting item in the setup menu should be completed in advance to use this unit. Perform the settings for each item in accordance with the conditions of the camera shooting area.

The following is an example of setup procedure when LANGUAGE is set to ENGLISH.

Setup menu list

Setup item	Description	Reference Pages
CAMERA ID	This item specifies the camera title. The camera title that indicates the camera location and other information about the camera is created with alphanumeric characters and symbols, and is displayed on the screen.	7
CAMERA	Performs the camera operation settings.	8
SCENE1/SCENE2	Selects a scene file. It is possible to register and save the settings as a scene file in case that it is necessary to change the settings such as when shooting at night or on holidays.	8
ALC/ELC	Selects the method of controlling the quantity of light in accordance with the lens to be used.	9
SHUTTER	Specifies the electronic shutter speed.	11
AGC	Specifies gain adjustment.	11
SENS UP	Specifies electronic sensitivity enhancement.	11
WHITE BAL	Specifies white balance adjustment.	12
DNR	Selects the level of the digital noise reduction function.	13
BW MODE	Performs the setting regarding the simple black-and-white mode such as switching between color and black-and-white images.	13
VMD	Performs the settings regarding the VMD (Video Motion Detector) function.	14
SYSTEM	Performs the settings regarding the camera system such as synchronization, and privacy zone.	18
SYNC	Specifies the synchronization type.	18
PRIVACY ZONE	Hides undesired portions in the camera shooting area.	19
STABILIZER	Decides whether or not to enable the image stabilizer.	20
EL-ZOOM	Toggles the electronic zoom on and off.	21
SPECIAL		
CHROMA GAIN	Adjusts the chroma level.	22
AP GAIN	Adjusts the aperture level.	22
PEDESTAL	Adjusts the pedestal (brightness) level.	22
PIX OFF	Corrects image defects such as flaws.	23
COMMUNICATION	Performs the communication setting of the system with a receiver into which this unit is integrated.	24
CAMERA RESET	Restores the settings in the setup menu to the default settings.	24
SER.NO.	Displays the serial number of this unit.	24
LANGUAGE	Selects a language to be used in the setup menu.	25

Basic operation

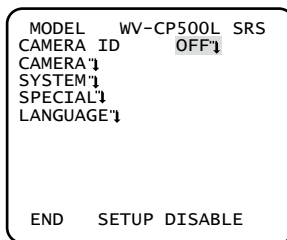
The description below explains how to operate the setup menu basically.

The operations in the setup menu are performed with the operation buttons after calling up the setup menu on the connected video monitor. Refer to the installation guide for further information about the operation buttons.

The operations in the setup menu can also be performed through the system controller (option).

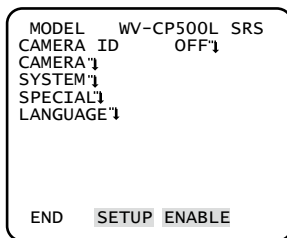
Screenshot 1

Hold down the setting button for more than 2 seconds simultaneously to call up the top screen of the setup menu.



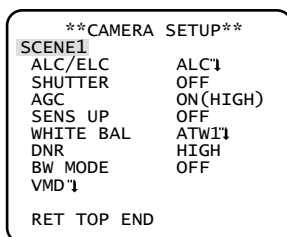
Screenshot 2

The setup mode changes to "ENABLE", and the setup menu becomes ready to be set.



Screenshot 3

The selected setup screen in the setup menu appears on the screen.



Note:

- If the top screen of the setup menu is called up with the operation buttons while a camera image is displayed, the setup mode is always "DISABLE" to prevent operation errors.
To configure the settings in the setup menu, change the setup mode to "ENABLE".
- The cursor is a reversely highlighted part.

Step 1

Press the up or down button to move the cursor to "END".

Step 2

Press the right button to move the cursor to "SETUP", and press the setting button to change the setup mode from "DISABLE" to "ENABLE".

Step 3

Move the cursor to the item to be set, and press the setting button.

Step 4

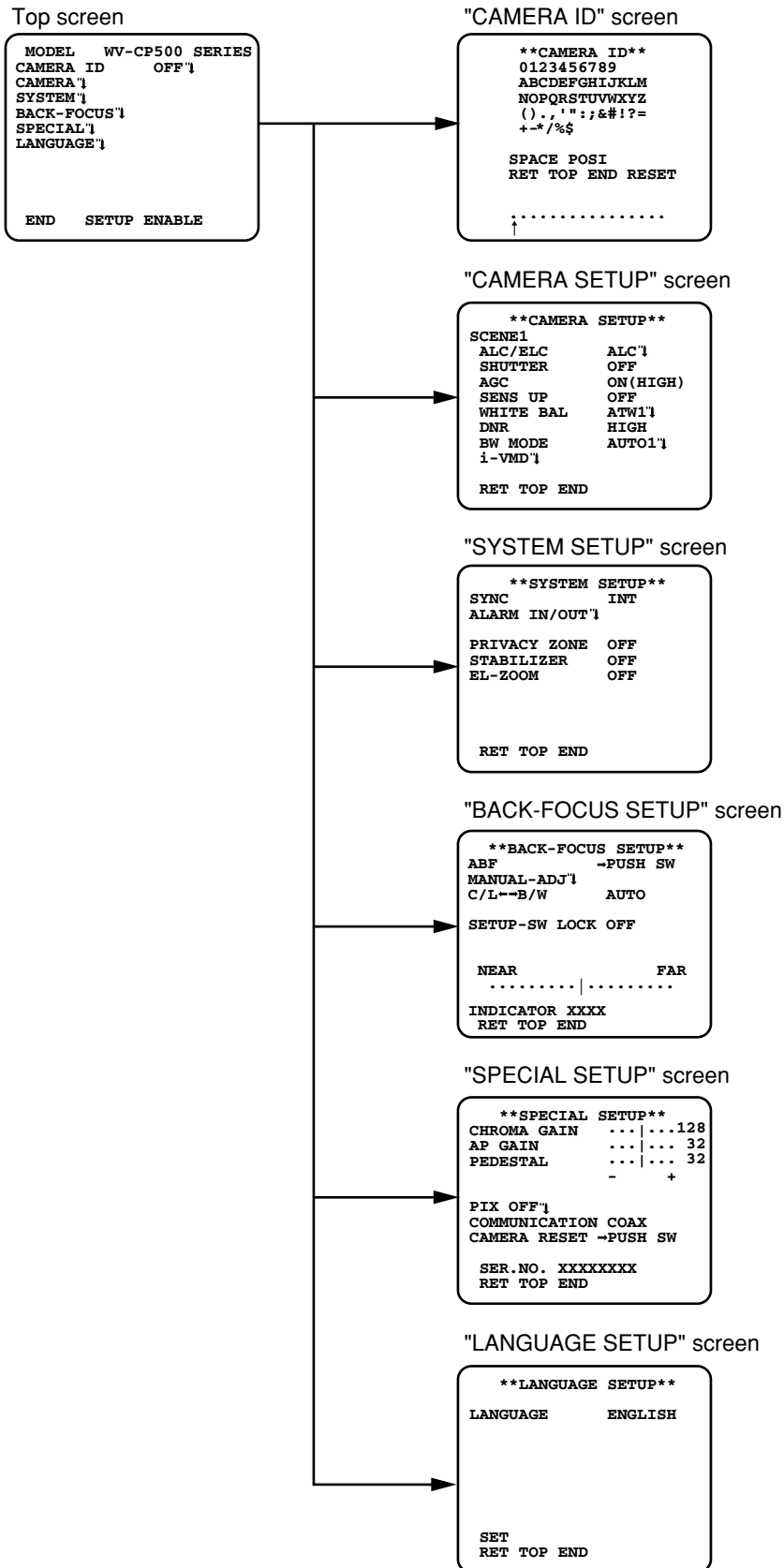
Perform the settings for each item.

- Selection of setting item:
Press the up or down button to move the cursor.
- Change of settings:
Press the right or left button.
- Display of advanced setup screen:
Press the setting button when "↵" is attached to the target setting item.
- Return to previous setup screen:
Move the cursor to "RET" and press the setting button.
- Return to the top screen:
Move the cursor to "TOP" and press the setting button.

Step 5

To return to the camera image screen, move the cursor to "END" and press the setting button.

Screen transition diagram



Camera title setting [CAMERA ID]

This item specifies the camera title. The camera title that indicates the camera location and other information about the camera is created with alphanumeric characters and symbols, and is displayed on the screen. The camera title is named with up to 16 characters. Follow the procedure below to specify the camera title.



Step 1

Select "ON" for "CAMERA ID", and then press the setting button.
→ The "CAMERA ID" appears.

Important:

- When "CAMERA ID" is set to "OFF", the camera title does not appear even after setting the camera title.

Step 2

Move the cursor to the target item with use of the up, down, right, and left buttons, and press the setting button to enter the character.
→ The entered characters are displayed in the editing area.

<Character entry>

- To revise a character, move the arrow (↑) in the entry range to a wrong character with use of the right or left button, and enter a correct character.
- To enter a blank, move the cursor to "SPACE" and press the setting button.
- To delete all the entered characters, move the cursor to "RESET" and press the setting button.

Step 3

Move the cursor to "POSI" and press the setting button after title entry.
→ The display positioning screen appears.

Step 4

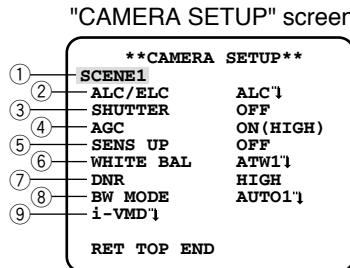
Use the up, down, right, and left buttons to decide the title position and press the setting button.
→ The camera title and title position are specified.

Camera operation setting [CAMERA SETUP]

The following describes the camera operation settings. The following settings can be configured on the "CAMERA SETUP" screen displayed from the top screen.

Refer to page 5 for how to call up the screen.

The settings configured on the "CAMERA SETUP" screen will be saved as a scene file.



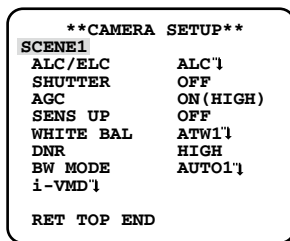
1. Register a scene file [SCENE1/SCENE2]

It is possible to register 2 patterns of scene file. For example, when different settings are to be applied between day and night, SCENE1 can be applied in the daytime and SCENE2 at night.

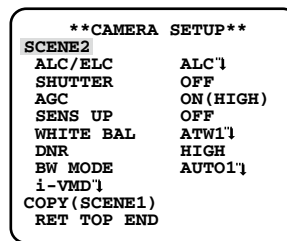
Change between the scene files can be made on shortcut operation.

"SCENE1" is set as the default setting.

Screen when "SCENE1" is selected



Screen when "SCENE2" is selected



Step 1

After confirming that "SCENE1" is selected, configure the settings of "ALC/ELC" through "VMD". (☞ Pages 9 - 14)
When using while changing the scene files, go to step 2.

Step 2

Move the cursor to "SCENE1" and use the right or left button to select "SCENE2".
→ The "COPY(SCENE1)" screen will be displayed.

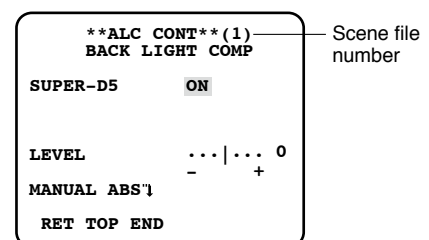
Step 3

To configure the settings of "SCENE2" using the settings of "SCENE1", press the setting button after moving the cursor to "COPY(SCENE1)".

→ The settings of "SCENE1" will be copied to "SCENE2".

Step 4

Edit the settings to be changed and saved as the settings of "SCENE2".
The number displayed at the right side of the title on each setting screen indicates a scene file number.



Step 5

Move the cursor to "SCENE1" and press the right or left button to select "SCENE1" to resume normal operation.

2. Light quantity control method selection [ALC/ELC]

The method of controlling the quantity of light is selected from the following in accordance with the lens to be used.

ALC (default): The iris of the lens is automatically adjusted in accordance with the brightness of a subject. Select "ALC" when using the SUPER-D5 function or when using an ALC lens. Refer to the following when configuring the SUPER-D5 settings.

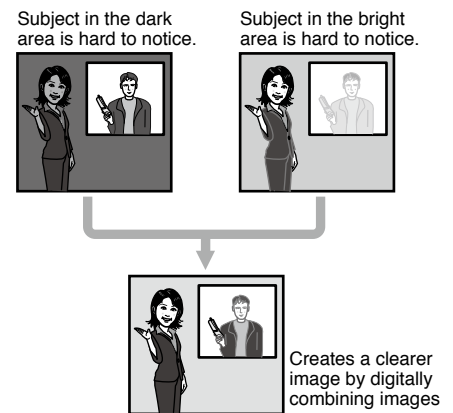
ALC+: Controls the quantity of light with a combination of the electronic shutter and auto iris. This selection is suitable at shooting a bright subject such as an outdoor subject with auto iris lens. Be aware that flicker may occur when a subject is under fluorescent lighting.

ELC: Controls the quantity of light with the electronic shutter. This selection is suitable for use of a lens with fixed iris or manual iris.

SUPER-D5 (super dynamic function)

If there is high contrast between the bright and dark areas in a shooting zone, the dark area becomes less visible because the camera adjusts the iris in accordance with the bright area. Conversely, adjusting the lens brightness for the darker areas causes the brighter areas to become washed out.

The SUPER DYNAMIC function digitally combines an image that is set up for a clear view of the brighter areas with an image that is set up for a clear view of the darker areas, creating a final image that preserves overall detail.



SUPER-D5 setting

When "ALC/ELC" is set to "ALC", the SUPER-D5 function is available. Follow the procedure below.

"CAMERA SETUP" screen

```
**CAMERA SETUP**
SCENE1
ALC/ELC      ALC1
SHUTTER      OFF
AGC          ON(HIGH)
SENS UP      OFF
WHITE BAL    ATW11
DNR          HIGH
BW MODE      AUTO11
i-VMD1
RET TOP END
```

"ALC CONT" screen

```
**ALC CONT**(1)
BACK LIGHT COMP
SUPER-D5     ON
LEVEL        ...|... 0
MANUAL ABS1  -    +
RET TOP END
```

Area setting screen

```
**AREA **(1)
POSITION     -PUSH SW
UPPER LEFT
[ ]
DEL
RET TOP END
```

Step 1

Set "ALC/ELC" to "ALC" and press the setting button.

→ The "ALC CONT" screen appears.

Note:

- When "ALC/ELC" is set to "ELC" or "ALC+" and the setting button is pressed, the "ELC CONT" screen or "ALC+ CONT" screen appears.
- When "ELC" or "ALC+" is selected, the SUPER-D5 function is disabled. "---" appears and "OFF" is selected.

Step 2

Move the cursor to "SUPER-D5" and select the item from the following:

ON (default): Activates the SUPER-D5 function all the time. (☞ See below)

OFF: Deactivates the SUPER-D5 function. (☞ Page 11)

Note:

- When "ON" is selected for "SUPER-D5", the following settings will be restricted.
SHUTTER: Only OFF and 1/120 are available. (☞ Page 11)
SENS UP: Only "OFF" and "AUTO" become available. (☞ Page 11)
- When "ON" is selected for "SUPER-D5", a shadow (black line) may appear at the boundary between a brighter area and a darker area. This is not a malfunction.
- When "ON" is selected for "SUPER-D5", the SUPER-D5 function will become more effective by slightly incrementing "LEVEL". However, flickering or noise may be observed frequently when "LEVEL" is too much incremented.
- When flickering or noise is observed frequently due to the illumination of light, select "OFF".
 - (1) When flickering or color deterioration is observed
 - (2) When noise is produced in a bright area on the screen

When using the SUPER-D5 function

Follow the procedure below.

Step 1

Move the cursor to "LEVEL" and use the right or left button to adjust the level.

When not using the SUPER-D5 function

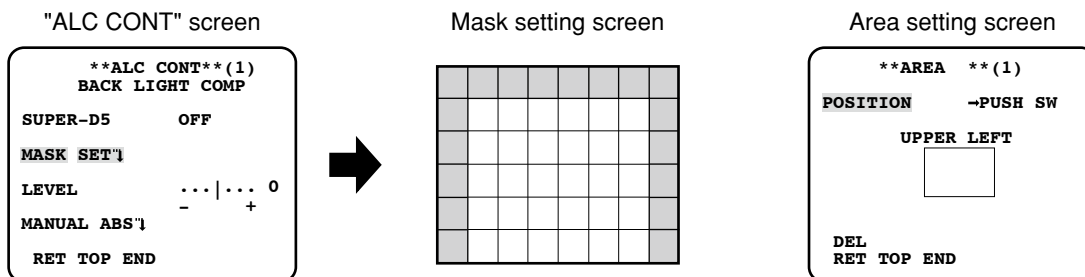
Follow the procedure below.

Step 1

When the SUPER-D5 function is set to "OFF", bright areas of an image are masked to facilitate the visibility of dark areas.

Move the cursor to "MASK SET" and press the setting button.

→ The mask setting screen appears.



Step 2

Mask bright areas.

Use the up, down, right, and left buttons to select an area to be masked and press the setting button. When the selected area is masked, the masked area will start blinking (between stripes and white screen). When selecting another area after masking, the masked area will be edisplayed in white. Repeat the above procedure to mask other areas as necessary.

Note:

- To cancel the masking, select the masked area to be canceled, and then press the setting button.
- To cancel all the masking, hold down the right and left buttons for more than 2 seconds simultaneously.

Step 3

Hold down the setting button for more than 2 seconds simultaneously after completion of masking.
→ The "ALC CONT" screen ("ELC CONT" or "ALC+ CONT" screen) appears again.

Step 4

Move the cursor to "LEVEL" and use the right or left button to adjust the level.

3. Electronic shutter setting [SHUTTER]

The variation in electronic shutter speed allows users to perform the following.

- Increased shutter speed prevents blurring fast-moving subjects.
- If flicker is observed under fluorescent lighting of 60 Hz, selection of "1/120" for the speed can reduce flicker.

The electronic shutter speed is selectable from the following: The setting of the SUPER-D5 function restricts the available setting range.

When the SUPER-D5 function is set to "OFF": OFF (1/50) (default), 1/120, 1/250, 1/500, 1/1 000, 1/2 000, 1/4 000, and 1/10 000

When the SUPER-D5 function is set to "ON": OFF (1/50) (default), 1/120

Note:

- When "ALC/ELC" is set to "ELC" or "ALC+" (☞ page 9), "---" appears and the electronic shutter function cannot be activated.
 - If the controller, WV-CU254 or WV-CU204 is used, SW LED and the status of "SHUTTER" are not correctly displayed.
-

4. Gain control setting [AGC]

Select a gain control setting from the following.

ON (HIGH) (default)/ON (MID)/ON (LOW): Automatically increases the gain to make the screen brighter when the illuminance of the subject becomes darker.

HIGH, MID and LOW indicate the gain level.

OFF: Does not increase the gain.

Note:

- When "SENS UP" is set to the AUTO mode, "AGC" cannot be set to "OFF".
-

5. Electronic sensitivity enhancement setting [SENS UP]

Use of the electronic sensitivity enhancement function increases the quantity of light stored on the CCD, and accordingly the image becomes brighter. The magnification is unchanged for selection of FIX, and the magnification is changeable in accordance with the illuminance of a photographic subject for selection of AUTO.

The magnification of the electronic sensitivity is selectable from the following. The setting of the SUPER-D5 function restricts the available setting range.

When the SUPER-D5 function is set to "OFF": OFF (default)/X2 AUTO/X4 AUTO/X6 AUTO/X10 AUTO/X16 AUTO/X32 AUTO/
OFF/X2 FIX/X4 FIX/X6 FIX/X10 FIX/X16 FIX/X32 FIX

When the SUPER-D5 function is set to "ON": OFF (default)/X2 AUTO/X4 AUTO/X6 AUTO/X10 AUTO/X16 AUTO/X32 AUTO

Note:

- When "ALC/ELC" is set to "ELC" or "ALC+" (☞ page 9), or "SHUTTER" is set to "1/120" (☞ page 11), only the AUTO mode is enabled.
- When "SHUTTER" is set to "OFF" or other than "1/120", the electronic sensitivity enhancement setting cannot be performed. "---" appears and "OFF" is selected.
- It is impossible to select "AUTO" for "SENS UP" and "1/120" for "SHUTTER" using the following system controller. Use the operation buttons for the setting.
WV-CU300, WV-CU354, WV-CU204, WV-CU254

- When the magnification of "SENS UP" is increased, the screen becomes coarser, more whitish, or more flawed. However, this phenomenon is normal.
- If the controller, WV-CU254 or WV-CU204 is used, SW LED and the status of "SENS UP" are not correctly displayed.

6. White balance setting [WHITE BAL]

The white balance adjustment is selectable from the following.

ATW1 (default): Activates the automatic color temperature tracking mode. The camera continuously measures the color temperature of the light source and automatically adjusts the white balance. The adjustment of the color temperature ranges from approx. 2 700 K to 6 000 K.

Note:

- If the situation meets one of the following or other, color may not be accurately reproduced.
 - The subject is mostly highly-colored.
 - The photographic atmosphere is under the bright blue sky or at nightfall.
 - The illumination of the light illuminating the subject is insufficient.

ATW2: Activates the sodium lamp automatic color temperature tracking mode. The camera automatically achieves an optimal white balance under the sodium lamp. The adjustment of the color temperature ranges from approx. 2 000 K to 6 000 K.

AWC: Activates the automatic white balance control mode. This adjustment is suitable for a location where a light source is stable. The adjustment of the color temperature ranges from approx. 2 000 K to 10 000 K. When "AWC" is selected, the white balance needs to be adjusted.

When "AWC" is selected, follow the steps below to adjust the white balance.

"CAMERA SETUP" screen

```

**CAMERA SETUP**
SCENE1
ALC/ELC      ALC↓
SHUTTER      OFF
AGC          ON(HIGH)
SENS UP      OFF
WHITE BAL    AWC→PUSH SW
DNR          HIGH
BW MODE      AUTO1↓
i-VMD↓

RET TOP END

```

Step 1

Set "WHITE BAL" to "AWC" and press the left button to change to "AWC → PUSH SW".

Step 2

Press the setting button and adjust the white balance.

"PUSH SW" is reversely highlighted during adjustment. When the reversely highlighted display is restored, the white balance adjustment is completed.

Step 3

Press the right button to select "AWC".

Refer to the following for fine adjustment of the white balance.

Note:

- The adjustment of the color temperature ranges from approx. 2 000 K to 10 000 K. If the correct range is out of this adjustment range or lighting directed to a subject is too dark, the white balance may not completely adjusted. In such a case, "PUSH SW" stays reversely highlighted.

Manual fine adjustment of white balance

The white balance is manually fine adjusted after white balance automatic adjustment in the automatic color temperature tracking mode (ATW1, ATW2) or automatic white balance control mode (AWC).

Follow the procedure below.

"CAMERA SETUP" screen

```

**CAMERA SETUP**
SCENE1
ALC/ELC      ALC`1
SHUTTER      OFF
AGC          ON(HIGH)
SENS UP      OFF
WHITE BAL    ATW1`1
DNR          HIGH
BW MODE      AUTO1`1
i-VMD`1
RET TOP END
    
```



Fine adjustment screen

```

**ATW1** (1)
R          ... | ... 0
           -   +
B          ... | ... 0
           -   +
RET TOP END
    
```

Step 1

Set "WHITE BAL" to "ATW1", "ATW2" or "AWC" and press the setting button.

→ The fine adjustment screen appears.

Step 2

Move the cursor to "R" and "B" and use the right or left button to fine adjust the level for each.

When the level indicator moves in the "+" direction, the color becomes deeper, and when the level indicator moves in the "-" direction, the color becomes lighter.

7. Digital noise reduction function setting [DNR]

The digital noise reduction function reduces noise automatically under the condition of low illuminance.

The effect level of the noise reduction function is selectable from the following:

LOW: Low level of noise reduction (small residual image).

HIGH (default): High level of noise reduction (large residual image).

8. Black-and-white mode setting [BW MODE]

The settings relating to the black-and-white mode can be configured. Follow the procedure below.

"CAMERA SETUP" screen

```

**CAMERA SETUP**
SCENE1
ALC          ALC`1
SHUTTER      OFF
AGC          ON(HIGH)
SENS UP      OFF
WHITE BAL    ATW1`1
DNR          HIGH
BW MODE      OFF
VMD`1
RET TOP END
    
```

Step 1

Move the cursor to "BW MODE" and select the black-and-white control from the following:

AUTO: Automatically toggles between color and black-and-white images in accordance with the screen brightness (illuminance).

The simple black-and-white mode is selected for dark images, and the color mode is selected for bright images. The IR filter does not change over.

A color image is changed to black-and-white image when the ambient brightness (illuminance) of the camera is approx. 0.1 lx or less.

OFF(default): Displays color images.

Note:

- If a subject is always moving or the screen is occupied with a uniform color, brightness determination may be not performed successfully because the brightness is merely determined by information from the CCD image sensor.
 - To obtain color images, a sufficient level of illuminance (approx. 30 lx or more) is required.
 - The switching illuminance level varies with subjects, light sources, and lenses.
 - The switching illuminance level varies in accordance with AGC setting. (☞ Page 11)
 - The switching illuminances described above are reference values. The switching illuminance shall be decided based on the actual installation environment.
-

9. VMD setting [VMD]

The VMD function can detect a motion of an object and interference in camera operation. When the VMD function detects a motion of an object and interference in camera operation, an alarm signal can be provided.

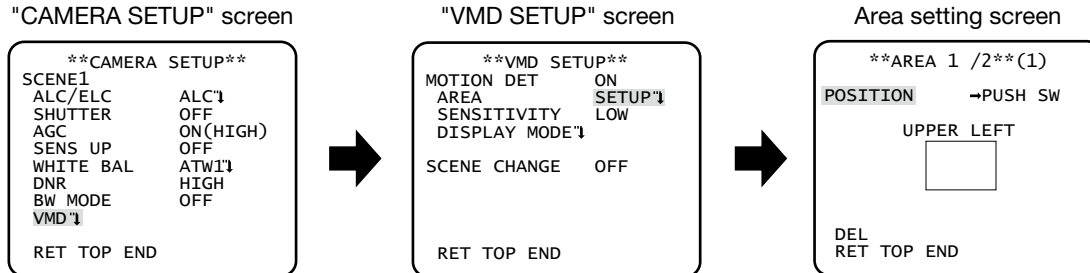
Refer to the following for important information about the settings regarding motion detection function and interference detection function:

Important

- The detection function does not work properly in the following cases: In such a case, adjust the detection area or detection sensitivity.
 - The brightness (illuminance) level between the background and moving subject is similar, or the change in illuminance is significant.
 - The lens is dirty or has a water droplet on the surface.
 - The luminance of an image is low, e.g. image in the night.
 - A subject is moving straight toward the camera or vice versa.
 - A subject moves too fast or too slow.
 - A subject is too small or too big.
 - Moving objects are too many.
 - A subject is in a reflective environment such as subject behind a widow or subject in reflection of road surface.
 - The camera is swaying.
 - A subject is receiving external light such as sunlight and car headlight.
 - A fluorescent light is flickering.
 - The interference detection may not work in the following cases:
 - Only a part of the lens is hidden, or the cover is transparent.
 - Subjects are similar between before and after changing the camera direction.
 - The detection function may not work properly for approx. 1 minute after turning on the power, after completing settings in the SETUP menu, and after changing the camera view angle.
-

Perform the settings relating to the motion detection

The settings relating to the motion detection are performed as follows: Up to 2 detection areas can be set. Follow the procedure below.



Step1

Move the cursor to "VMD" and press the setting button.
 → The "VMD SETUP" screen appears.

Step2

Move the cursor to "MOTION DET" and perform the setting.
ON: Provides an alarm signal when motion is detected.
OFF (default): Disables the motion detection.

Step3

Move the cursor to "AREA" and select a detection area.
ALL (default): All areas are selected for detection.

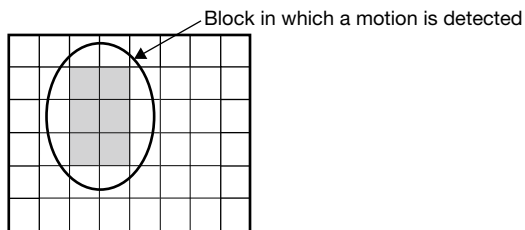
SETUP: Up to 2 areas can be selected for detection after selection of "SETUP" and pressing the setting button. Refer to page 16 for how to set the detection area.

Step4

Move the cursor to "SENSITIVITY" and select the detection sensitivity from the following:
 LOW (default)/MID/HIGH

Step5

Move the cursor to "DISPLAY MODE" and press the setting button.
 → The demonstration mode is conducted, and the blocks in which a motion is detected are shown in white.



Setting of scene change detection

A change in a subject can be detected, e.g. covering the camera with a cloth, a cap, or others, or notably changing the camera direction.

Follow the procedure below.

"CAMERA SETUP" screen

```
**CAMERA SETUP**
SCENE1
ALC/ELC      ALC↓
SHUTTER      OFF
AGC          ON(HIGH)
SENS UP      OFF
WHITE BAL    ATW1↓
DNR          HIGH
BW MODE      OFF
VMD↓
RET TOP END
```



"VMD SETUP" screen

```
**VMD SETUP**
MOTION DET   OFF
SCENE CHANGE OFF
RET TOP END
```

Step1

Move the cursor to "VMD" and press the setting button.

→ The "VMD SETUP" screen appears.

Step2

Move the cursor to "SCENE CHANGE" and perform the setting.

ON: Provides an alarm signal when interference is detected.

OFF (default): Disables interference detection.

Setting of detection areas

The detection areas for motion detection and the detection of appearance/disappearance of stationary objects are specified. Up to 2 detection areas can be set.

Follow the procedure below.

"VMD SETUP" screen

```
**VMD SETUP**
MOTION DET   ON
AREA         SETUP↓
SENSITIVITY  LOW
DISPLAY MODE↓
SCENE CHANGE OFF
RET TOP END
```



Area setting screen

```
**AREA 1 /2**(1)
POSITION     →PUSH SW
UPPER LEFT
[ ]
DEL
RET TOP END
```

Step1

Move the cursor to "AREA" and select "SETUP", and then press the setting button.

→ The "AREA" screen appears.

Step2

Move the cursor to the number at the right of the title and select the area number using the right or left button.

Step3

Move the cursor to "POSITION" and press the setting button.

Step4

Use the up, down, right, and left buttons to determine the left upper position of the area to be set and press the setting button.

Note

- The area of the selected number is shown with green frame, and other selected areas are shown in white frame.
-

Step5

Use the up, down, right, and left buttons to determine the right lower position of the area to be set and press the setting button.

→ The mark "*" is displayed at the right of the number and the area is saved.

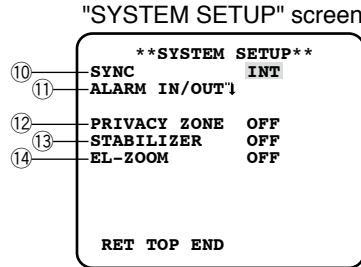
Note

- To delete the area, select the area number and press the setting button after moving the cursor to "DEL".
 - To change the settings of the area, select the area number and repeat the procedure from step 3.
-

Camera system setting [SYSTEM SETUP]

Performs the settings relating to the camera system such as synchronization, and privacy zone.

The following settings can be configured on the "SYSTEM SETUP" screen displayed from the top screen. Refer to page 5 for how to call up the screen.



10. Synchronization method selection [SYNC]

This unit supports the following 3 types of synchronization methods, and one of the following is selected.

- (1) Multiplexed vertical drive signal (VD2)
- (2) Synchronization is performed on the basis of the power supply frequency.
- (3) Internal synchronization (INT) (default)

Input of a multiplexed vertical drive signal (VD2) automatically switches to the VD2 synchronization even if the camera is set to other than the VD2 synchronization method.

When other than the VD2 synchronization is selected, either the power supply synchronization or internal synchronization can be selected.

Note:

- The power supply synchronization (LL) setting is changeable only in the 50 Hz areas. The power supply synchronization (LL) cannot be setup in the 60 Hz areas.
-

Setting of the power supply synchronization (LL) mode

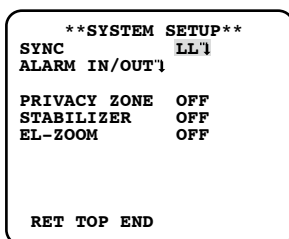
The adjusting video signal of the camera and the criterial external synchronizing input signal (power) are connected to a 2-input oscilloscope and the phase is adjusted.

Note:

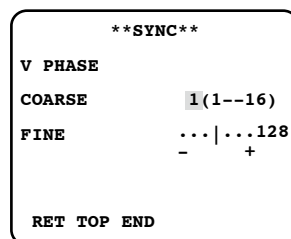
- Movement of the camera or presence of a spike noise in the power line may cause vertical phase change. In such a case, adjust the phase again.
-

Follow the procedure below.

"SYSTEM SETUP" screen



"SYNC" screen



Step 1

Set "SYNC" to "LL" and press the setting button.
→ The "SYNC" screen appears.

Step 2

Connect the video output signal and external synchronizing input signal of the camera to a 2-input oscilloscope, and move the cursor to "COARSE".

Step 3

Adjust the oscilloscope to the vertical rate, and extend the vertical synchronizing part of the oscilloscope.
Move the cursor horizontally with use of the right or left button to roughly adjust the vertical phase.
The phase can be adjusted in 16 steps by 22.5 degrees.
1 (1--16) : 0 °/2 (1--16) : 22.5 °/ · · /16 (1--16) : 337.5

Step 4

Move the cursor to "FINE", and fine adjust vertical phases.

11. Privacy zone setting [PRIVACY ZONE]

When undesired portions in the camera shooting area (on the screen) exist, those portions (privacy zone) are hidden. Up to 8 portions can be specified for the privacy zone.

ON (1): Grays the zone.

ON (2): Mosaics the zone.

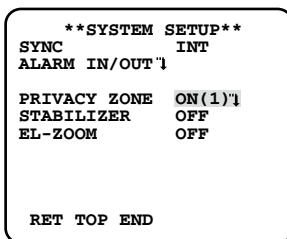
OFF (default): Displays the zone normally.

Follow the procedure below.

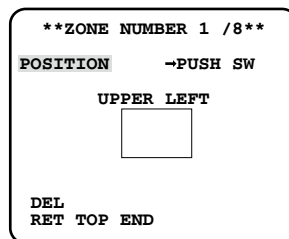
Note:

- The privacy zone function is disabled at initializing the unit, i.e. right after turning on the power.
-

"SYSTEM SETUP" screen



Zone setting screen



Step 1

Move the cursor to "PRIVACY ZONE", select "ON (1)" or "ON (2)", and press the setting button.
→ The zone setting screen appears.

Step 2

Move the cursor to the number at the right of the title and select the zone number using the right or left button.

Step 3

Move the cursor to "POSITION" and press the setting button.

Step 4

Use the up, down, right, and left buttons to determine the left upper position of the zone to be set and press the setting button.

Step 5

Use the up, down, right, and left buttons to determine the lower right position of the zone to be set and press the setting button.

→ The asterisk mark "*" will be displayed after the number and the zone setting will be saved.

Note:

- To delete a zone, select the zone number and press the setting button after moving the cursor to "DEL".
 - To change the settings of a zone, select the zone number and repeat from step 3.
-

12. Image stabilizer setting [STABILIZER]

Whether or not to enable the image stabilizer is determined.

This function is effective for the case that the camera is installed on a power pole or other poles.

ON: Enables the image stabilizer.

OFF (default): Disables the image stabilizer.

Important:

- When "ON" is selected for the image stabilizer, the view angle becomes narrower and the resolution becomes lower. When "ON" is selected for the image stabilizer, check the view angle and resolution at camera installation.
 - The image stabilizer function may not work for the following subjects or conditions:
 - Dark subject
 - Less contrasty subject (e.g. white wall)
 - Short cycled image shaking such as mechanical vibration
 - Large amplitude image shaking
-

13. Electronic zoom setting [EL-ZOOM]

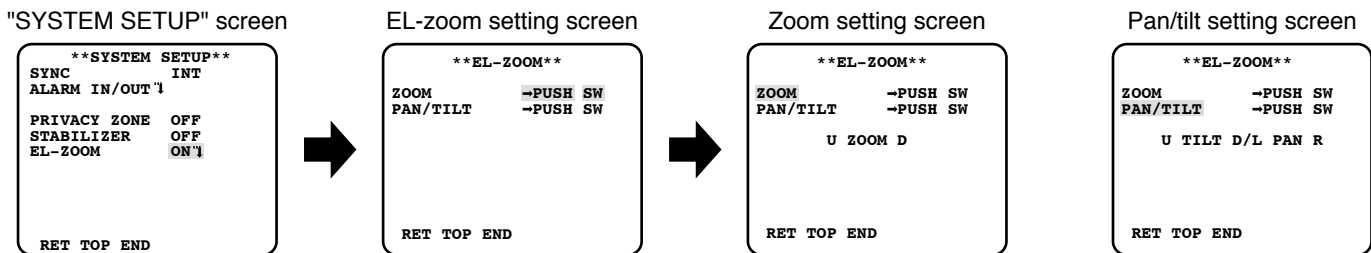
Select "On" or "Off" to determine whether or not to use the electronic zoom.

When "ON" is selected, the zoom factor and the panning/tilting settings can be configured.

ON: Uses the electronic zoom.

OFF (default): Does not use the electronic zoom.

Follow the procedure below.



Step 1

Move the cursor to "EL-ZOOM", select "ON" and press the setting button.

→ The "EL-ZOOM" screen will be displayed.

Step 2

Move the cursor to "PUSH SW" of "ZOOM" and press the setting button.

→ The zoom setting screen appears.

Step 3

Adjust the angular field of view by changing the electronic zoom factor (up to 2x) using the up or down button.

Note:

- When the zoom factor is incremented, resolution will be deteriorated.

Step 4

Move the cursor to "PUSH SW" of "PAN/TILT" and press the setting button.

→ The pan/tilt setting screen appears.

Step 5

Use the up, down, right, and left buttons to determine the image position and press the setting button.

The position can be changed in the range of zoom factor set in the "EL-ZOOM" screen.

Note:

- To reset to the default, hold down the right and left buttons for more than 2 seconds simultaneously while the zoom setting screen or pan/tilt setting screen is displayed.

Special menu setting [SPECIAL SETUP]

The special menu setup is performed including the setting of the camera image quality and the communication configuration when a receiver is used. The following settings are to be configured on the "SPECIAL SETUP" screen displayed from the top screen. Refer to page 5 for how to call up the screen.

```
**SPECIAL SETUP**
CHROMA GAIN  ...|...128
AP GAIN      ...|... 32
PEDESTAL     ...|... 32
              -      +

PIX OFF 1
COMMUNICATION COAX
CAMERA RESET -PUSH SW

SER.NO. XXXXXXXX
RET TOP END
```

Chroma level adjustment [CHROMA GAIN]

Use the right or left button to adjust the color density of the camera image. When the level indicator moves in the "+" direction, the color becomes deeper, and when the level indicator moves in the "-" direction, the color becomes lighter. Be sure to view a vector chromaticity indicator or a monitor when the adjustment is performed.

Aperture level adjustment [AP GAIN]

Use the right or left button to adjust the image quality. When the level indicator moves in the "+" direction, the image becomes sharper, and when the level indicator moves in the "-" direction, the image becomes softer. Be sure to view a monitor when the adjustment is performed.

Note:

- Moire (interference fringes) may be observed when shooting a subject with fine pattern such as a carpet or a curtain. In such a case, move the indicator in the "-" direction to reduce moire.
-

Pedestal level adjustment [PEDESTAL]

Use the right or left button to adjust the pedestal level of the camera. When the level indicator moves in the "+" direction, the image becomes brighter, and when the level indicator moves in the "-" direction, the image becomes darker. Be sure to view a waveform monitor or a monitor when the adjustment is performed.

Note:

- Holding down the right and left buttons for more than 2 seconds simultaneously restores the settings of "CHROMA GAIN", "AP GAIN", and "PEDESTAL" to the default settings.
-

Flaw compensation [PIX OFF]

Flaws in the displayed camera image are corrected. Up to 16 points can be corrected.

Follow the procedure below.

"SPECIAL SETUP" screen

```
**SPECIAL SETUP**
CHROMA GAIN  ...|...128
AP GAIN      ...|... 32
PEDESTAL     ...|... 32
-            -      +

PIX OFF 1
COMMUNICATION COAX
CAMERA RESET -PUSH SW

SER.NO. XXXXXXXX
RET TOP END
```



"PIX OFF" screen

```
**PIX OFF**

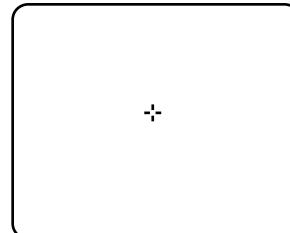
 1   2   3   4
 5   6   7   8
 9  10  11  12
13  14  15  16

000 000

RET TOP END
```



Pixel compensation positioning screen



Step 1

Move the cursor to "PIX OFF" and press the setting button.

→ The "PIX OFF" screen appears.

Step 2

Select a number (1 to 16) with which a pixel compensation point is registered and press the setting button.

→ The pixel compensation positioning screen appears.

Step 3

Use the up, down, right, and left buttons to move the crosshair cursor to the center of the flaw to be corrected and press the setting button.

→ The flaw is corrected and the pixel compensation point is registered. The "PIX OFF" screen appears again. "*" is attached at the right side of the number when registration is completed. The coordinate is expressed in figures.

Note:

- To clear the registered pixel compensation point, move the cursor to the number with which the target pixel compensation point is registered on the "PIX OFF" screen and press the setting button. The pixel compensation positioning screen appears, and then hold down the right and left buttons for more than 2 seconds simultaneously. The "PIX OFF" screen appears, the pixel compensation point is cleared, and "*" at the right side of the number disappears.

Communication setting [COMMUNICATION]

The required communication configuration is performed to use this unit integrated into the system with a receiver.

COAX (RCV): Select COAX (RCV) when using our receiver (e.g. WV-RC100 or WV-RC150).

COAX (default): Does not use any receiver.

Default resetting [CAMERA RESET]

The settings in the setup menu are restored to the default settings.

The default settings are restored by moving the cursor to "PUSH SW" of "CAMERA RESET" and holding down the right, left, and setting buttons for more than 2 seconds simultaneously.

Note:

- The data of the registered pixel compensation points is not cleared.
-

Serial number viewing [SER.NO.]

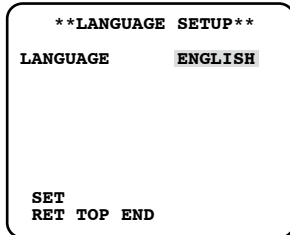
The serial number of this unit appears.

Language selection [LANGUAGE SETUP]

A language for the setup menu is selected from the following: The language selection can be made on the "LANGUAGE SETUP" screen displayed from the top screen. Refer to page 5 for how to call up the screen.

JAPANESE/ENGLISH (default)/FRANÇAIS/ESPAÑOL/DEUTSCH/ITALIANO/РУССКИЙ

"LANGUAGE SETUP" screen



To change the language to be used, use the right or left button to select the target language, move the cursor to "SET", and press the setting button.

Note:

- When the language is changed, the specified camera title is cleared.
-

Shortcut operation

Use of a system controller with the "camera function" button allows users to perform the shortcut settings with use of the numeric keypad and camera function button. The available shortcut operations with this unit are shown as follows:

System controller operation	Setting contents
[8] + [4] + [Camera function]	Super Dynamic ON
[8] + [5] + [Camera function]	Super Dynamic OFF
[9] + [1] + [Camera function]	Simple black and white control (BW) OFF
[9] + [2] + [Camera function]	Simple black and white control (BW) AUTO
[9] + [3] + [Camera function]	Camera title (CAMERA ID) ON
[9] + [4] + [Camera function]	Camera title (CAMERA ID) OFF
[9] + [8] + [Camera function]	Electronic zoom ON
[9] + [9] + [Camera function]	Electronic zoom OFF
[1] + [6] + [9] + [Camera function]	Iris of lens (IRIS) OPEN
[1] + [7] + [0] + [Camera function]	Iris of lens (IRIS) CLOSE
[1] + [7] + [1] + [Camera function]	Electronic shutter (SHUTTER) ON
[1] + [7] + [2] + [Camera function]	Electronic shutter (SHUTTER) OFF
[1] + [7] + [3] + [Camera function]	Electronic shutter speed, 1 step faster
[1] + [7] + [4] + [Camera function]	Electronic shutter speed, 1 step slower
[1] + [7] + [5] + [Camera function]	Gain adjustment (AGC) ON
[1] + [7] + [6] + [Camera function]	Gain adjustment (AGC) OFF
[1] + [7] + [7] + [Camera function]	Electronic sensitivity up (SENS UP) FIX ON
[1] + [7] + [8] + [Camera function]	Electronic sensitivity up (SENS UP) FIX OFF
[1] + [7] + [9] + [Camera function]	Electronic sensitivity, 1 step up (FIX)
[1] + [8] + [0] + [Camera function]	Electronic sensitivity, 1 step down (FIX)
[1] + [8] + [1] + [Camera function]	Electronic sensitivity up (SENS UP) AUTO ON
[1] + [8] + [2] + [Camera function]	Electronic sensitivity up (SENS UP) AUTO OFF
[1] + [8] + [3] + [Camera function]	Electronic sensitivity, 1 step up (AUTO)
[1] + [8] + [4] + [Camera function]	Electronic sensitivity, 1 step down (AUTO)
[1] + [8] + [5] + [Camera function]	Power supply synchronizing phase adjustment (FINE), 1 step up
[1] + [8] + [6] + [Camera function]	Power supply synchronizing phase adjustment (FINE), 1 step down
[2] + [0] + [1] + [Camera function]	Image stabilizer (STABILIZER) ON
[2] + [0] + [2] + [Camera function]	Image stabilizer (STABILIZER) OFF
[2] + [0] + [7] + [Camera function]	Motion detection (MOTION) ON
[2] + [0] + [8] + [Camera function]	Motion detection (MOTION) OFF
[2] + [1] + [1] + [Camera function]	Scene change ON
[2] + [1] + [2] + [Camera function]	Scene change OFF
[2] + [1] + [3] + [Camera function]	Scene file 1
[2] + [1] + [4] + [Camera function]	Scene file 2
[2] + [1] + [5] + [Camera function]	Gain (AGC), 1 step up
[2] + [1] + [6] + [Camera function]	Gain (AGC), 1 step down

Panasonic Corporation

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