



VCC-HD2300/HD2300P
VCC-HD2100/HD2100P

Chapter 5

Working with Administrator Configuration Screens

NETWORK SETTINGS
CLOCK SETTINGS
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NETWORK SETTINGS

Click **NETWORK** in the configuration menu to display the NETWORK SETTINGS screen.

On this screen, configure the following settings as required.

- A** Configuring basic network settings (NETWORK)
- B** Configuring DDNS setting (DDNS)
- C** Configuring HTTP settings
- D** Configuring RTSP/RTP settings
- E** Configuring access name settings (ACCESS NAME)
- F** Multicast settings (MULTICAST)



Required operation privilege: admin

Before attempting to configure these network settings, contact your network administrator.

A Configuring Basic Network Settings

Configure the environment required to connect to the camera via the network by specifying the IP address, subnet mask, and other information.

Manual Configuration

NETWORK SETTINGS

NETWORK HELP

SETTING ITEMS	SET VALUE
IP ADDRESS	FIX <input type="text" value="192"/> <input type="text" value="168"/> <input type="text" value="0"/> <input type="text" value="2"/>
SUBNET MASK	<input type="text" value="255"/> <input type="text" value="255"/> <input type="text" value="255"/> <input type="text" value="0"/>
GATEWAY	<input type="text" value="192"/> <input type="text" value="168"/> <input type="text" value="0"/> <input type="text" value="1"/>
MAC ADDRESS	08 - 00 - 7B - 81 - 29 - 7E
DNS	FIX
DNS(PRIMARY)	<input type="text" value="192"/> <input type="text" value="168"/> <input type="text" value="0"/> <input type="text" value="1"/>
DNS(SECONDARY)	<input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/>

SET CANCEL DEFAULT

- 1** In [IP ADDRESS], select “FIX” and type the IP address of the camera below it.
- 2** In [SUBNET MASK] and [GATEWAY], type your subnet mask and gateway addresses, respectively.
- 3** In [DNS (PRIMARY)] and [DNS (SECONDARY)], type your primary and secondary DNS server addresses and click **SET**.

Because you selected “FIX” in [IP ADDRESS], you specify here fixed DNS server addresses.

After completing the above steps, click the Close button to once disconnect and then reconnect to the camera to apply the changes.



To redo the procedure from the beginning, before clicking **SET**, click **CANCEL**.

To restore the factory default settings, click **DEFAULT**.

In [MAC ADDRESS], the MAC address of the camera is shown. You cannot change this address.

Automatic Configuration

The screenshot shows the 'NETWORK SETTINGS' window. A table lists network configuration items. Callout 1 points to the 'DHCP' dropdown for IP ADDRESS. Callout 2 points to the 'DNS' dropdown. Callout 3 points to the 'DNS (PRIMARY)' and 'DNS (SECONDARY)' fields.

SETTING ITEMS	SET VALUE
IP ADDRESS	DHCP
SUBNET MASK	192 . 168 . 0 . 2
GATEWAY	192 . 168 . 0 . 1
MAC ADDRESS	08 - 00 - 7B - 81 - 29 - 7E
DNS	AUTO
DNS (PRIMARY)	192 . 168 . 0 . 1
DNS (SECONDARY)	0 . 0 . 0 . 0

Buttons: SET, CANCEL, DEFAULT

1 In [IP ADDRESS], select “DHCP”.

The IP address, subnet mask, and gateway fields are automatically filled.

2 In [DNS], specify how you want to configure the DNS server addresses.

- **FIX:** In [DNS (PRIMARY)] and [DNS (SECONDARY)] (3), type your primary and secondary DNS server addresses and click **SET**.
- **AUTO:** Just click **SET**. Then, the system sets appropriate DNS server addresses automatically.

After completing the above steps, click the Close button to once disconnect and then reconnect to the camera to apply the changes.

B Configuring DDNS Settings

Using SANYO's DDNS service, you can connect to the camera from your Internet Explorer by simply entering the registered domain name, instead of the IP address of the camera.



To use the DDNS service, configure the following settings.

- Specify your DNS server address under [DNS SETTINGS] on this screen.
- Configure the port forwarding on your router. (For details, refer to your router's instruction manual.)

The screenshot shows the 'DDNS' configuration window. Callout 1 points to the 'ON' dropdown for DDNS. Callout 2 points to the 'USER NAME' and 'PASSWORD' fields. Callout 3 points to the 'REGISTER' button. Callout 4 points to the 'DOMAIN NAME' field.

SETTING ITEMS	SET VALUE
DDNS	ON
DOMAIN NAME	.user.ddns-sanyosecurity.com
DDNS SERVER NAME	members.ddns-sanyosecurity.com
USER NAME	08-00-7B-81-29-7E
PASSWORD	UZAV-XIGM-INMJ
INTERVAL TIME	10MIN
LOG	

Buttons: SET, CANCEL, DEFAULT

1 In [DDNS], select “ON”.

The [REGISTER] button (3) appears. The [USER NAME] and [PASSWORD] fields (2) show the automatically assigned user name and password, respectively.

2 Write down the user name and password shown in the [USER NAME] and [PASSWORD] fields.

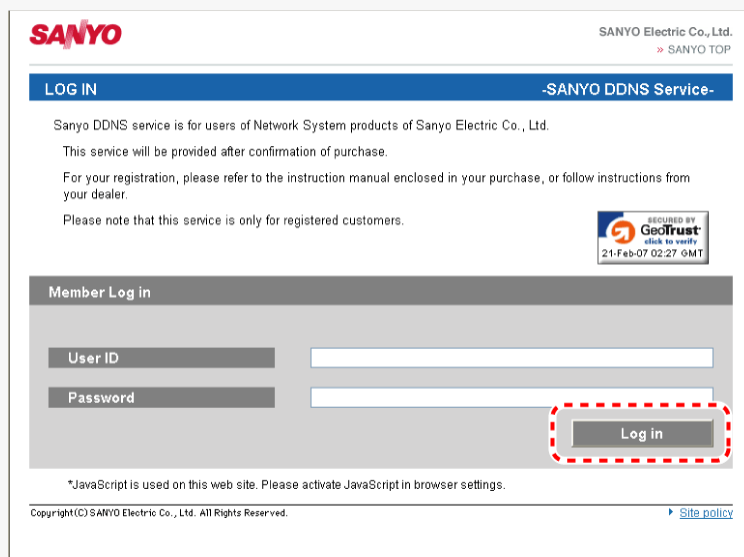
This information is required to register your domain name.

3 Click **REGISTER** to access the SANYO DDNS service site and register your domain name.

Follow the steps below to register your domain name.

1 On the LOG IN screen, enter the user name and password you wrote down and click **Login**.

The Domain Name registration/change screen appears.



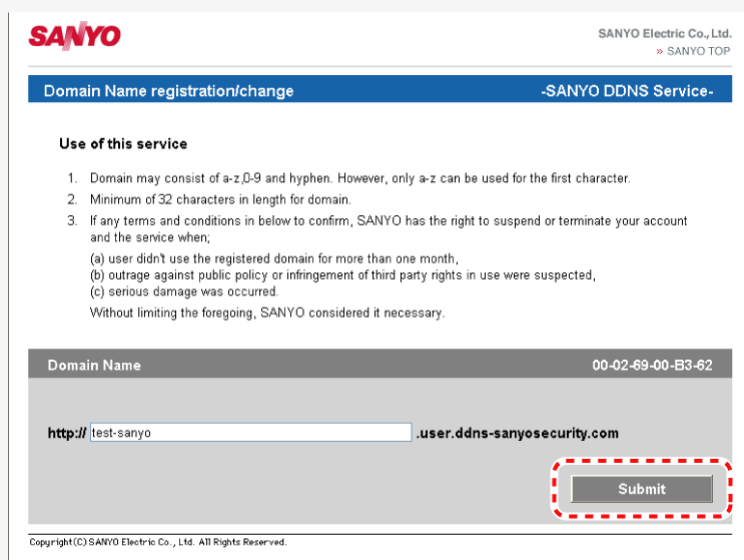
The screenshot shows the SANYO DDNS Service login page. At the top, there is a SANYO logo and the text "SANYO Electric Co., Ltd." and "» SANYO TOP". Below this is a blue header bar with "LOG IN" on the left and "-SANYO DDNS Service-" on the right. The main content area contains a message: "Sanyo DDNS service is for users of Network System products of Sanyo Electric Co., Ltd. This service will be provided after confirmation of purchase. For your registration, please refer to the instruction manual enclosed in your purchase, or follow instructions from your dealer. Please note that this service is only for registered customers." There is a "Member Log in" section with two input fields: "User ID" and "Password". A "Log in" button is located to the right of the "Password" field, highlighted with a red dashed border. A "SECURED BY Geotrust" badge is visible on the right side of the login section. At the bottom, there is a note about JavaScript and a "Site policy" link.



SANYO DDNS service site URL:
<https://www.ddns-sanyosecurity.com>

2 Enter the domain name you want to use and click **Submit**.

The domain name is registered with the DDNS server.



The screenshot shows the SANYO DDNS Service domain registration/change page. At the top, there is a SANYO logo and the text "SANYO Electric Co., Ltd." and "» SANYO TOP". Below this is a blue header bar with "Domain Name registration/change" on the left and "-SANYO DDNS Service-" on the right. The main content area contains a section titled "Use of this service" with a list of terms and conditions. Below this is a "Domain Name" section with a text input field containing "http:// test-sanyo" and a ".user.ddns-sanyosecurity.com" suffix. A "Submit" button is located to the right of the input field, highlighted with a red dashed border. At the bottom, there is a copyright notice.

- 4** Return to the **NETWORK SETTINGS** screen ([DDNS]) and, in [DOMAIN NAME], type the domain name you just registered before “.user.ddns-sanyosecurity.com”. Then, click **SET**.



The [DDNS SERVER NAME] field is automatically filled (“members.ddns-sanyosecurity.com”), so you do not need to type it.

The [INTERVAL TIME] setting (access interval to the server) is fixed to “10” (10 minutes).

In the [LOG] field, the DDNS update history log (one entry) is shown.

C Configuring HTTP settings

HTTP	
SETTING ITEMS	SET VALUE
HTTP PORT	80
SSL	OFF
SSL PORT NUMBER	443

SET **CANCEL** **DEFAULT**

- 1** In [HTTP PORT], type your HTTP port number.

Type a number between 1 and 65535.



The default port number depends on whether or not you enable SSL communication in [SSL].

When [SSL] is set to “OFF”: 80

When [SSL] is set to “ON”: 443

- 2** To use SSL communication, select “ON” in [SSL], type your SSL port number in [SSL PORT NUMBER], and click **SET**.

Using SSL communication enables the encryption of image transmission.



SSL communication is effective for JPEG streaming images only.

When SSL communication is enabled, you will be presented with a security warning dialog box when attempting to access the camera. However, this is not a problem and you can continue the operation by clicking [Yes].

If the message “This page contains both secure and nonsecure items...” appears, follow the steps below to erase it.

1 In Internet Explorer, click [Internet Options] in the [Tool] menu.

2 On the [Security] tab, click the [Custom Level...] button.

3 In the [Security Settings] dialog box, in the [Settings] section, select the “Display mixed content” radio button.

When SSL communication is enabled, the frame rate of the live streaming images may become slower depending on the resolution setting.

D Configuring RTSP/RTP settings

In [RTSP PORT], [RTP PORT (VIDEO)], and [RTP PORT (AUDIO)], type the desired port numbers and click **SET**.

RTSP/RTP	
SETTING ITEMS	SET VALUE
RTSP PORT	554
RTP PORT(VIDEO)	5556

SET CANCEL DEFAULT



The RTSP port number must be 554 or otherwise a number in the range of 1 to 65535.

The RTP port (video and audio) numbers must be even numbers in the range of 1026 to 65534 (except for numbers between 3874 and 5000, between 9874 and 10000, between 38087 and 38214, and between 49026 and 49152).

E Configuring Access Name Settings

If you intend to access the camera from video viewer or similar software, you may name each stream (access name) as you like for easy identification.

In [ACCESS NAME], type the access name (up to 32 alphanumeric characters) and click **SET**.

STREAMING(H.264)	
SETTING ITEMS	SET VALUE
ACCESS NAME	
STREAM	VideoInput/1/h264/1

SET CANCEL DEFAULT



Access name works for H.264 video only.

F Configuring Multicast settings

To enable multicast streaming, configure the multicast address, port numbers, and TTL for each stream, and click **SET**.

MULTICAST	
SETTING ITEMS	SET VALUE
MULTICAST ADDRESS	239 . 129 . 41 . 245
MULTICAST RTP PORT	5560
MULTICAST TTL	10

SET CANCEL DEFAULT



In [RTP PORT], specify an even number between 1026 and 65534. Make sure the specified number is not used as RTP unicast port number.
(except for numbers between 4000 and 5000, 10000, 10001, 38214, and 49152.)

The multicast TTL must be specified in the range of 1 to 255.

CLOCK SETTINGS

Click **CLOCK** in the configuration menu to display the CLOCK SETTINGS screen.

Before you start network operation, you need to configure the clock settings on this screen.

- A** Configuring camera title
- B** Configuring clock date/time and display style
- C** Configuring time zone and daylight saving mode
- D** Configuring automatic clock adjustment



Required operation privilege: admin, operator

A Configuring camera title

Configure the camera title that will be displayed on the live screen and in e-mails, image files, and so on.

SETTING ITEMS	SET VALUE
TITLE	Network Camera

In [TITLE], type the desired camera title and click **SET**.

You can type up to 16 alphanumeric characters.

The setting is saved and the camera title appears on the live screen.



Note that the camera title cannot include the following symbols: double quote ("), single quote ('), ampersand (&), greater-than sign (>), percent (%), backslash (\), less-than sign (<), vertical bar (|), and semicolon (;).

A warning dialog box will appear when you click **SET** if the camera title includes any invalid character.

B Configuring clock date/time and display style

1	CLOCK SET	DATE	2009 / JAN / 01 THU
		TIME	00 : 00 AM
2	CLOCK DISPLAY	12/24	24 HRS
		SIZE	MEDIUM
3	DATE/TIME FORMAT	POSITION	UP LEFT
			D/M/Y

1 In [CLOCK SET], configure the current date and time in [DATE] and [TIME], respectively.

The configured date and time settings will be reflected on the camera's built-in clock.

The day of the week is automatically set based on the date and time settings.

2 In [CLOCK DISPLAY], select the clock display style.

- 1** 12/24 (Clock type): 12HRS (12-hour clock), 24HRS (24-hour clock)
- 2** SIZE (Character size): SMALL, MEDIUM, LARGE
- 3** POSITION (Display position): UP LEFT, UP RIGHT, DOWN LEFT, DOWN RIGHT, OFF (Hidden)

3 In [DATE/TIME FORMAT], select the date/time display format and click **SET** .

► M/D/Y, Y/M/D, D/M/Y

C Configuring time zone and daylight saving mode

SETTING ITEMS	WEEK	MONTH	TIME
ON	LST - SAT	MAR	01 : 00
OFF	LST - SAT	OCT	01 : 00

1 In [TIME ZONE], select the region where the camera is used.

2 In [DAYLIGHT SAVING MODE], select whether or not to use the daylight saving mode.

Although an appropriate setting is automatically selected according to the [TIME ZONE] setting, you can change it manually.

► **NO USE:** Disables the daylight saving mode.

► **USE:** Enables the daylight saving mode.

3 In [DAYLIGHT SAVING], select when to start (in [ON]) and end (in [OFF]) the daylight saving mode and click **SET** .

Although an appropriate setting is automatically selected according to the [TIME ZONE] setting, you can change it manually.

D Configuring automatic clock adjustment

In [CLOCK ADJUST], select how you want to automatically adjust the camera's internal clock.

► **OFF:** Disables the clock adjustment function.

► **ON (NTP):** Enables automatic clock adjustment that retrieves the date and time information from the NTP server.

→ You need to configure the NTP settings.

► **LOGIN (PC):** Enables automatic clock adjustment that retrieves the date and time information from the PC when an admin user logs into it.

► **ALARM IN1:** Enables automatic clock adjustment that adjusts the clock to the specified time based on the signal received from the device connected to the ALARM IN1 terminal.

→ You need to configure the [CLOCK IN] setting.



It is recommended to select "ON (NTP)" when the camera is connected to the Internet.

If the camera is not connected to the Internet, select "LOGIN (PC)" or, using the supplied monitoring software "VA-SW3050Lite", enable the clock adjustment function (24-hour interval) in the clock setting.

Configuring NTP Settings

- 1 In [CLOCK ADJUST], select “ON (NTP)”.
- 2 Configure the required settings shown below and click **SET**.

The screenshot shows the 'SETTING ITEMS' and 'SET VALUE' table. Callout 1 points to the 'CLOCK ADJUST' dropdown menu. Callout 2 points to the 'TIME TO SYNCHRONIZE' dropdown menu. Callout 3 points to the 'NTP SERVER ADDRESS' text input field. Callout 4 points to the 'LOG' button. The 'REFRESH MANUALLY' button is also visible.

SETTING ITEMS	SET VALUE
CLOCK ADJUST	ON(NTP)
TIME TO SYNCHRONIZE	00 : 00
REFRESH MANUALLY	REFRESH
NTP	
NTP SERVER ADDRESS	
LOG	

Buttons: SET, CANCEL, DEFAULT

- 1 To automatically adjust the clock time every day, in [TIME TO SYNCHRONIZE], select the 24-hour time to which you want to adjust the clock (for example, “10:30”).

The screenshot shows the 'TIME TO SYNCHRONIZE' dropdown menu with the value '10 : 30' selected.

- 2 To adjust the clock to the current time, click **REFRESH**.
- 3 In [NTP SERVER ADDRESS], type the IP address or domain name of the NTP server from which you want to retrieve the date and time information.
- 4 In [LOG], the last entry of the operation log related to automatic clock adjustment is shown.



When “ON (NTP)” in [CLOCK ADJUST] is selected, the clock adjustment function adjusts the clock in the following timings.

- When the camera is turned on
- At the time selected in [TIME TO SYNCHRONIZE] (every day)
- When any change is made to the settings on this screen

To use a domain name, you must specify the DNS server address in [DNS SERVER ADDRESS] on the NETWORK SETTINGS screen.

Configuring CLOCK IN Setting

- 1 In [CLOCK ADJUST], select “ALARM IN1”.
- 2 In [CLOCK IN], select the 24-hour time to which you want to adjust the clock (for example, “22” for 10 p.m.) when the switch connected to the ALARM IN1 terminal turns on, and click **SET**.

The screenshot shows the 'SETTING ITEMS' and 'SET VALUE' table. Callout 1 points to the 'CLOCK ADJUST' dropdown menu. Callout 2 points to the 'CLOCK IN' dropdown menu. The 'REFRESH MANUALLY' button is also visible.

SETTING ITEMS	SET VALUE
CLOCK ADJUST	ALARM IN1
TIME TO SYNCHRONIZE	00 : 00
REFRESH MANUALLY	REFRESH
NTP	
NTP SERVER ADDRESS	
LOG	
CLOCK IN	22



The clock time will not be adjusted if the difference between the set time and the current time exceeds the range of -29 to +30 minutes.

If you set [CLOCK ADJUST] to “ALARM IN1”, the ALARM IN1 terminal will serve dedicatedly as a time adjustment terminal, so you can see only the item [POLARITY] in [ALARM IN1] on the ALARM SETTINGS screen.

USER SETTINGS

Click **USER** in the configuration menu to display the USER SETTINGS screen.
On this screen, configure the user authentication check at login.



Required operation privilege: admin, operator

A Disabling authentication check

Disabling the authentication check at login allows all users to log into the camera without authentication.

USER SETTINGS		HELP
SETTING ITEMS	SET VALUE	
ANONYMOUS USER LOG IN	OFF	

In **[ANONYMOUS USER LOG IN]**, select “ON” and click **SET**.



In this case, all login users are regarded as guest users.
This means that users will be presented with an authentication check dialog box if they attempt to perform any operation beyond the guest user privilege and must enter an adequate user name and password to proceed.

B Changing your password

Change your login user password (4 to 32 alphanumeric characters).

NAME	PASSWORD
admin	<input type="password"/>
admin2	<input type="password"/>
admin3	<input type="password"/>
operator	<input type="password"/>
guest	<input type="password"/>

SET CANCEL DEFAULT

In **[PASSWORD]**, type the new password for the relevant user and click **SET**.



Update your password periodically for security reasons.
To restore the default user passwords, click **DEFAULT**.

CODEC/STREAMING SETTINGS

Click **CODEC/STREAMING** in the configuration menu to display the CODEC/STREAMING SETTINGS screen. Configure the conditions of the video/image transmission.

- A** Configuring Aspect Ratio
- B** Configuring JPEG images
- C** Configuring H.264 video



Required operation privilege: admin, operator

If [SSL] is set to "ON" on the NETWORK SETTINGS screen, you cannot configure H.264 video.

A Configuring Aspect Ratio

CODEC / STREAMING SETTINGS	
ASPECT RATIO HELP	
SETTING ITEMS	SET VALUE
ASPECT RATIO	16:9

In [ASPECT RATIO], select the aspect ratio (width-to-height ratio) of the video/image by clicking the corresponding radio button and click **SET**.

- ▶ 16:9 (Landscape), 4:3 (Portrait)



Clicking **SET** reboots the camera.

B Configuring JPEG images

JPEG	
SETTING ITEMS	SET VALUE
RESOLUTION	1280x720
PICTURE QUALITY	ENHANCED
LIVE FRAME RATE	
admin	30 ips
operator	30 ips
guest	30 ips

1 Configure the resolution (RESOLUTION).

The available options vary depending on your selection in [ASPECT RATIO].

- ▶ **16:9**: 1920×1080, 1280×720, 1024×576, 640×360
- ▶ **4:3**: 2288×1712, 1600×1200, 1280×960, 1024×768, 800×600, 640×480, 320×240

2 Configure the image quality (PICTURE QUALITY).

- ▶ BASIC, NORMAL, ENHANCED, FINE, SUPER FINE

3 Configure the live video frame rate (LIVE FRAME RATE) for each operation privilege and click **SET**.

The available options vary depending on the model used.

- ▶ VCC-HD2300/VCC-HD2100: 0.1ips, 0.2ips, 0.5ips, 1ips, 3ips, 5ips, 10ips, 15ips, 30ips
- ▶ VCC-HD2300P/VCC-HD2100P: 0.1ips, 0.2ips, 0.5ips, 1ips, 2.5ips, 5ips, 8ips, 12.5ips, 25ips



Depending on the configured resolution, the available options for image quality and frame rate may be limited.

C Configuring H.264 video

H.264	
SETTING ITEMS	SET VALUE
RESOLUTION	1280x720
PRIORITY	QUALITY
PICTURE QUALITY	BASIC
BITRATE	6000
FRAME RATE	15 ips
PROTOCOL	RTP over UDP

SET CANCEL

1 Configure the resolution (RESOLUTION).

The available options vary depending on your selection in [ASPECT RATIO].

- ▶ **16:9:** 1920×1080, 1280×720, 640×360, 320×180
- ▶ **4:3:** 1600×1200, 1280×960, 1024×768, 640×480, 320×240

2 In [PRIORITY], select whether you put priority on the video/image quality or the bit rate.

- ▶ QUALITY, BITRATE

When your selection in [PRIORITY] is “QUALITY” (PICTURE QUALITY)

Then, the system shows an appropriate bit rate depending on the selected quality.

- ▶ BASIC, NORMAL, ENHANCED, FINE, SUPER FINE

When your selection in [PRIORITY] is “BITRATE” (BITRATE)

Type the bit rate directly, if you want to change it.

3 In [FRAME RATE], select the frame rate of the stream.

The available options vary depending on the model used.

- ▶ VCC-HD2300/VCC-HD2100: 15ips, 30ips
- ▶ VCC-HD2300P/VCC-HD2100P: 12.5ips, 25ips



Depending on the configured resolution, the available options for image quality and frame rate may be limited.

4 Select the H.264 video streaming method (PROTOCOL) and click **SET**.

- ▶ UDP (Unicast), RTSP, HTTP, MULTICAST

CAMERA SETTINGS

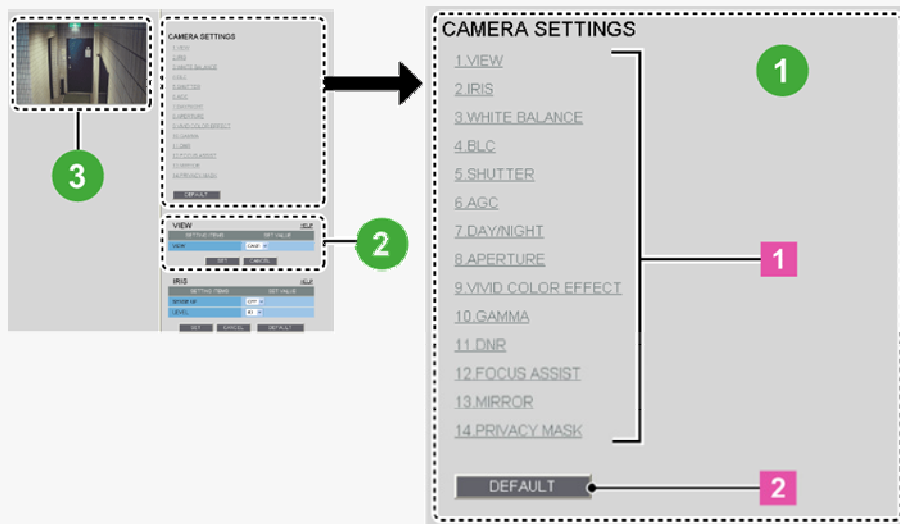
Click **CAMERA** in the configuration menu to display the CAMERA SETTINGS screen.

The CAMERA SETTINGS screen includes a sub menu from which you can access 14 camera settings to configure the monitoring and other conditions of the camera.



Required operation privilege: admin, operator

Function of Each Screen Component



1 Sub Menu List

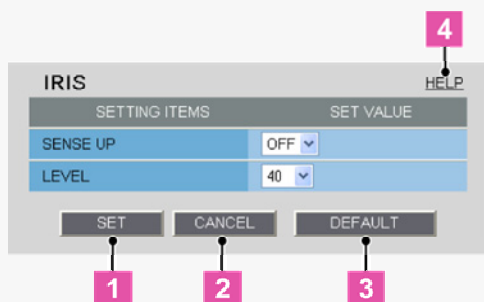
The CAMERA SETTINGS sub menu offers a list of camera settings.

1 Sub menu:	Click one of the menu items in the sub menu to jump to the desired camera settings.
2 DEFAULT :	Click this button to reset all the settings you configured for the selected view (CAM1/CAM2) to the defaults (factory settings).

2 Configuration Section

This area shows a series of camera settings. You can use the vertical scroll bar and scroll buttons to scroll the settings up and down.

For each camera setting configuration section, the following buttons are provided.



1 SET :	Click this button when finished configuring the camera settings you accessed by clicking each sub menu item.
2 CANCEL :	Click this button before clicking SET to restore the previous settings.
3 DEFAULT :	Click this button to reset the settings on the camera configuration screen to the defaults (factory settings).
4 HELP :	Click this to display a menu from which you can display the explanation of each configuration screen on the HELP screen.

Configuration Summary for Each Sub Menu Item

	Sub Menu	Operation	Application
1	VIEW	You can have two patterns of view settings (CAM1/CAM2) by configuring the monitoring conditions through sub menu items "2 IRIS" to "11 PRIVACY MASK".	VIEW
2	IRIS	Configure the lens iris.	VIEW
3	WHITE BALANCE	Adjust the white balance.	VIEW
4	BLC	Configure the backlight compensation function.	VIEW
5	SHUTTER	Configure the electronic shutter.	VIEW
6	AGC	Configure the gain of the video signal.	VIEW
7	DAY/NIGHT	Configure the Day/Night function that automatically switches the camera between color and black-and-white video modes depending on the luminance of the target. (This function is supported only by VCC-HD2300P/VCC-HD2300)	VIEW
8	APERTURE	Configure the contour compensation function.	VIEW
9	VIVID COLOR EFFECT	Configure the color saturation compensation function.	VIEW
10	GAMMA	Configure the gamma correction level.	VIEW
11	DNR	Configure the noise reduction function.	VIEW
12	FOCUS ASSIST	Configure the focus assist function to adjust the focus.	Common
13	MIRROR	Configure the mirror function to flip the subject on the monitor.	Common
14	PRIVACY MASK	Configure the privacy mask settings to mask portions of the subject you want to hide for privacy protection.	Common



"Application" in the above table means the following:

VIEW: The configured settings will be applied to "CAM1" or "CAM2", whichever you selected under [VIEW].

Common: The configured settings will be applied commonly to "CAM1" and "CAM2" selected under [VIEW].

3 Live Image Display Area

You can view how your changes affect the video image in real time.

VIEW

You can configure two patterns of monitoring conditions.

For example, select "CAM1" to configure the normal live monitoring conditions for daytime use and select "CAM2" to configure the monitoring conditions with the Day/Night function for nighttime use, respectively. Thus, you can switch the monitoring conditions depending on your needs.

SETTING ITEMS	SET VALUE
VIEW	CAM1

SET CANCEL

Configuring Monitoring Conditions

In [VIEW], select “CAM1” or “CAM2” and then configure the monitoring conditions by clicking each menu item in the sub menu.

Switching between Monitoring Conditions

In [VIEW], select “CAM1” or “CAM2”. The monitoring conditions configured for the selected view setting are now applied to the camera.

IRIS

Configure the lens iris according to the brightness of the subject displayed on the screen.



The configured settings will be applied to “CAM1” or “CAM2”, whichever you selected under [VIEW].

SETTING ITEMS	SET VALUE
SENSE UP	OFF
LEVEL	40

SET CANCEL DEFAULT

1 In [SENSE UP], select the electronic sensitivity boosting power.

► OFF, x2, x4, x8, x16, x32



Enabling the electronic sensitivity boosting function causes the following:

The exposure time of the camera's image sensing device will be increased automatically in dark situations. This may result in conspicuous afterimages, blurs, and white spots if the subject includes any moving object.

If [DAY/NIGHT] is set to “AUTO”, the electronic sensitivity boosting function will work only for black/white video images. (For VCC-HD2300P/VCC-HD2300)

[SHUTTER] is set to “OFF”, preventing you from configuring the electronic shutter setting (“SHORT” or “LONG”).

No motion sensor type can be selected in [MOTION] on the ALARM SETTINGS screen.

You cannot configure the electronic sensitivity boosting function in the following case:

When [AGC] is set to “OFF”.

A motion sensor type is selected in [MOTION] on the ALARM SETTINGS screen.

2 In [LEVEL], select the video signal level and click **SET**.

► 0 (dark) to 100 (bright)

WHITE BALANCE

Select and configure the white balance adjustment mode.

- ▶ **ATW:** Auto trace white balance
- ▶ **AWC:** Auto white balance control
- ▶ **3200:** Fixed white balance (for indoors)
- ▶ **5600:** Fixed white balance (for outdoors)
- ▶ **FLUORESCENT:** Fixed white balance (for fluorescent lighting)
- ▶ **MWB:** Manual white balance



The configured settings will be applied to “CAM1” or “CAM2”, whichever you selected under [VIEW].

Configuring the Auto Trace White Balance Mode (ATW)

Auto trace white balance (ATW) automatically adjusts the white balance to provide optimal colors, even if the light source for the target object is changed.

Enable the smart ATW function here because ATW may not produce desirable results if a single solid color occupies a large part of the subject.

SETTING ITEMS	SET VALUE
WHITE BALANCE	ATW
MASKING	OFF
SMART ATW	OFF

SET CANCEL DEFAULT

1 In [WHITE BALANCE], select “ATW”.

2 In [SMART ATW], select “ON” and click **SET**.

The camera now adjusts the white balance automatically based on the color information on the subject.



Do not use the smart ATW function in environments where the color temperature fluctuates. In an outdoor environment for example, smart ATW may not produce desirable results because the color temperature fluctuates depending on the time of the day (at sunrise, daytime, and sunset), weather (sunny or cloudy), and other conditions.

If Subject Includes an Extremely Bright Light Source

1 In [MASKING], select “ON” and click **SET**.

SETTING ITEMS	SET VALUE
WHITE BALANCE	ATW
MASKING	ON
SMART ATW	OFF

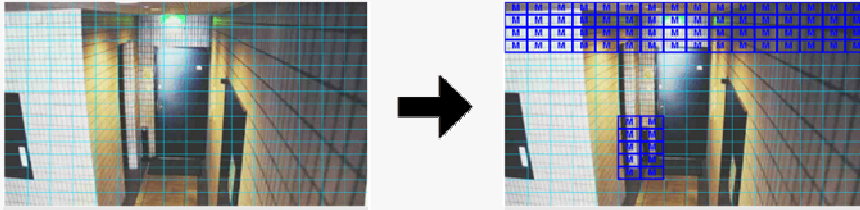
SET CANCEL DEFAULT

The ATW masking screen appears.

Mask the light source by the following procedure.

2 Drag the mouse over the live video image to select the area you want to mask.

The masked area is indicated by blue-bordered grid cells each containing the letter “M”.
You can mask more than one portion of the live image.



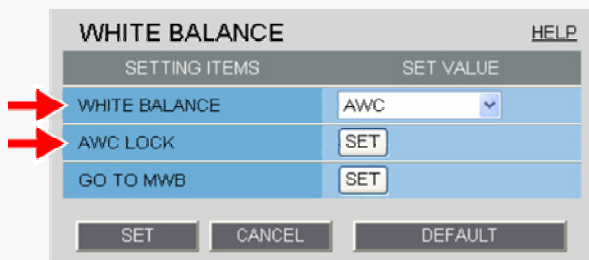
You can click one grid cell after another to set or cancel the masked area cell by cell.
To deselect a block of grid cells in the masked area, right-click one of grid cell and drag the mouse.

3 Click **SET** and then **BACK**.

The settings are saved and you return to the sub menu.

Configuring Auto White Balance Control Mode (AWC)

Use AWC if auto trace white balance (ATW) does not reproduce a natural white balance.
AWC allows you to automatically adjust the white balance by simply clicking **SET** with the camera lens directed toward a white wall, white paper and the like.



1 In [WHITE BALANCE], select “AWC”.

2 Direct the camera lens toward a white wall, white paper and the like and, in [AWC LOCK], click **SET**.

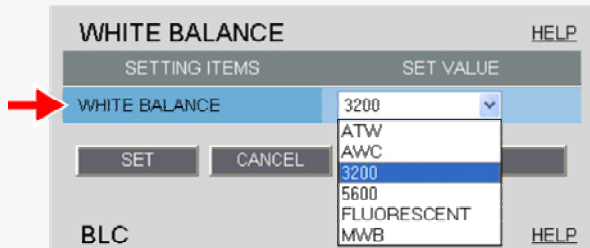
If the white balance adjustment does not reproduce desirable results, click **SET** again.
You need to follow the above steps also to re-adjust the white balance when the lighting conditions have been changed.



To fine-tune the white balance after this adjustment, in [GO TO MWB], click **SET**.

Configuring Fixed White Balance Mode (3200/5600/FLUORESCENT)

You can set the color temperature to a fixed value.

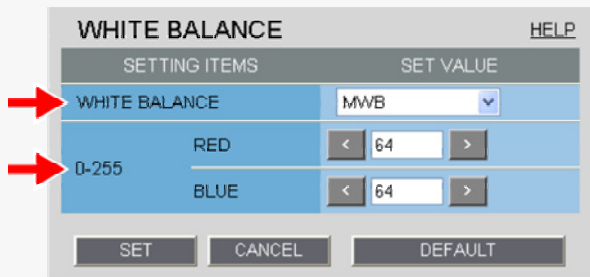


In [WHITE BALANCE], select the desired fixed white balance mode and click **SET** .

- ▶ **3200:** For indoors (Fixes the color temperature to 3200K.)
- ▶ **5600:** For outdoors (Fixes the color temperature to 5600K.)
- ▶ **FLUORESCENT:** For fluorescent lighting (Fixes the color temperature to 4200K.)

Configuring the Manual White Balance Mode (MWB)

Use the following procedure to manually adjust the gain values for the red and blue signals.



- 1 In [WHITE BALANCE], select “MWB”.
 - 2 In [RED] and [BLUE], specify the gain values for the red and blue signals, respectively, and click **SET** .
- ▶ **RED:** 0 (light) to 255 (dark)
 - ▶ **BLUE:** 0 (light) to 255 (dark)

BLC

You can use the backlight compensation (BLC) function to make the subject easily visible under strong backlight conditions.

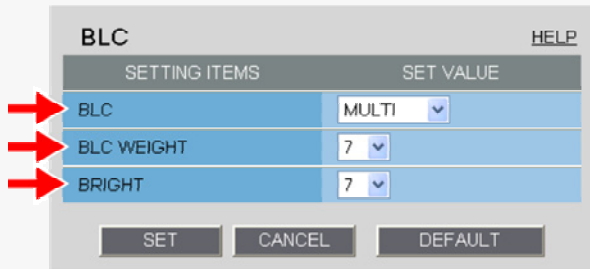
- ▶ **OFF:** Disables the backlight compensation function.
- ▶ **MULTI:** Selects the multi-spot evaluative metering mode.
- ▶ **CENTER:** Selects the center-weighted evaluative metering mode.
- ▶ **MASKING:** Selects the light source masking mode.



The configured settings will be applied to “CAM1” or “CAM2”, whichever you selected under [VIEW].

Configuring Multi-Spot Evaluative Metering Mode (MULTI)

Multi-spot evaluative metering compensates for the backlighting problem by evaluating the photometry of the entire screen.

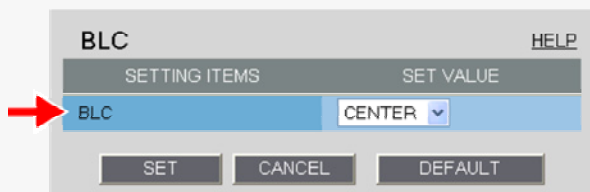


- 1 In [BLC], select “MULTI”.
- 2 In [BLC WEIGHT], select the backlight sensitivity.
 ► 0 (low sensitivity) to 15 (high sensitivity)
- 3 In [BRIGHT], select the compensation level for the brightness of the backlighting and click **SET**.
 ► 0 (low brightness compensation) to 15 (high brightness compensation)

Configuring Center-Weighted Average Metering Mode (CENTER)

Center-weighted average metering compensates for the backlighting problem by measuring the photometry of the specified area intensively.

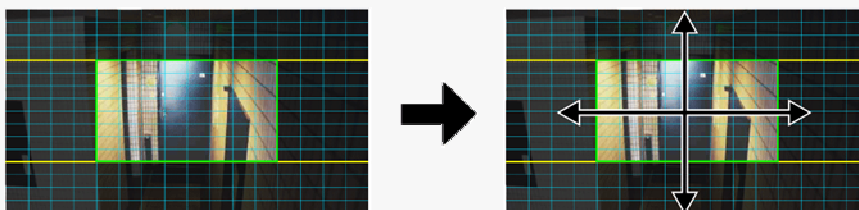
Configure the position and size of the center metering area.



- 1 In [BLC], select “CENTER” and click **SET**.

The BLC center/window weighting setting screen appears, showing a rectangle representing the center metering area in the center of the screen.

- 2 Drag the rectangle to set the center metering area in position.



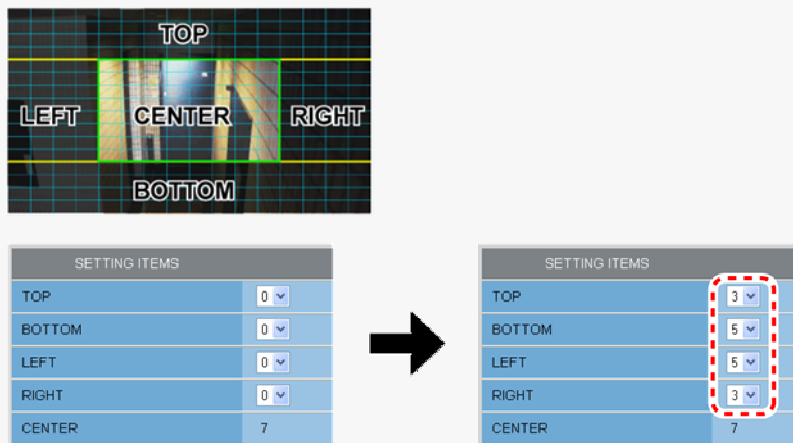
Center-weighted average metering may not be set depending on the position of the center metering area.

- 3 Resize the center metering area.

To resize the center metering area, place the mouse pointer over the border of the area and then drag it.

4 Configure the metering weight values for the four surrounding metering areas (TOP, BOTTOM, LEFT, and RIGHT).

Select a weight value for each of these metering areas depending on the installation environment.



► 0 (minimum) to 7 (maximum)



The weight value for the center metering area ([CENTER]) is fixed to “7”. You cannot change this value.

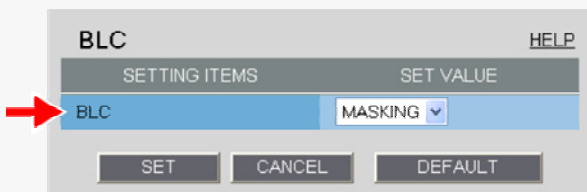
The brightness value represents the weight for each area and therefore does not affect the actual live video image from the camera.

5 Click **SET** and then **BACK**.

The settings are saved and you return to the sub menu.

Configuring Light Source Masking Mode (MASKING)

You can use light source masking to compensate for backlighting problems with human or other objects in the subject, by masking the light source in a bright background.

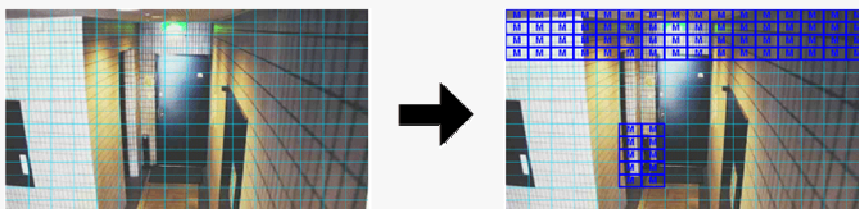


1 In [BLC], select “MASKING” and click **SET**.

The BLC masking screen appears.

2 Drag the mouse over the live video image to select the area you want to mask.

The masked area is indicated by blue-bordered grid cells each containing the letter “M”. You can mask more than one portion of the live image.





You can click one grid cell after another to set or cancel the masked area cell by cell.
To deselect a block of grid cells in the masked area, right-click one of grid cell and drag the mouse.

3 Click **SET** and then **BACK** .

The settings are saved and you return to the sub menu.

SHUTTER

Configure the electronic shutter or electronic iris settings according to the movement and luminance level of the subject.

- ▶ **OFF:** Disables the electronic shutter or electronic iris function.
- ▶ **SHORT:** Enables the fast shutter mode.
- ▶ **LONG:** Enables the long exposure shutter mode.
- ▶ **EI:** Electronic iris



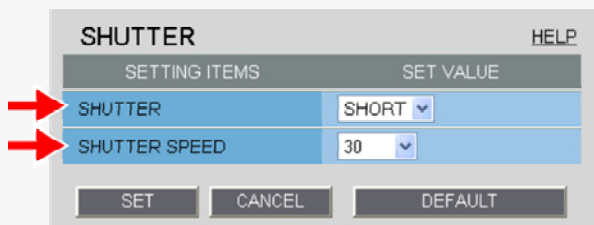
The configured settings will be applied to “CAM1” or “CAM2”, whichever you selected under [VIEW].

Configuring Fast Shutter Mode (SHORT)

The fast shutter mode has a shorter exposure time than the field storage time.
Configuring the fast shutter mode enables you to capture quick motion in the subject.



You cannot select “SHORT” to configure the fast shutter mode if the electronic sensitivity boosting ([SENSE UP] in [IRIS]) is enabled.



1 In [SHUTTER], select “SHORT”.

2 In [SHUTTER SPEED], select the desired shutter speed and click **SET** .

The available options vary depending on the model used.

- ▶ **VCC-HD2300P/VCC-HD2100P:** 25, 50, 120, 250, 500, 1000, 2000, 4000, 10000
- ▶ **VCC-HD2300/VCC-HD2100 :** 30, 60, 100, 250, 500, 1000, 2000, 4000, 10000



Each of the above shutter speed values represents the denominator “n” of the fraction 1/n. For example, selecting “500” means to set a shutter speed of 1/500 second.

Configuring Long Exposure Shutter Mode (LONG)

The long exposure shutter mode has a longer exposure time than the field storage time.
The long exposure shutter mode increases the sensitivity of the camera to make the subject brighter.



You cannot select “LONG” to configure the long exposure shutter mode if the electronic sensitivity boosting ([SENSE UP] in [IRIS]) is enabled.

SETTING ITEMS	SET VALUE
SHUTTER	LONG
SHUTTER SPEED	x1

SET CANCEL DEFAULT

1 In [SHUTTER], select “LONG”.

2 In [SHUTTER SPEED], select the desired shutter speed and click **SET**.

► x1, x2, x4, x8, x16, x32



Each of the above shutter speed values represents a multiple of the field storage time. The higher the value, the longer the exposure time.



Setting an excessively long exposure time may result in ghosts, blurs and white spots if the subject includes any moving object.

Configuring Electronic Iris Mode (EI)

The electronic iris controls both the AGC and the shutter speed to adjust the exposure.

SETTING ITEMS	SET VALUE
SHUTTER	EI

SET CANCEL DEFAULT

In [SHUTTER], select “EI” and click **SET**.



If you are using an auto iris lens, the electronic iris will activate automatically at the open end of the aperture to adjust the exposure even when [SHUTTER] is set to “OFF”.

AGC

Configure the video signal gain value automatically or manually.

Automatically configuring gain value using AGC

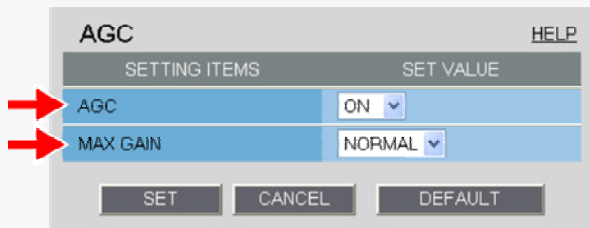
Manually configuring gain value



Auto Gain Control (AGC) is a function that automatically adjusts the gain value of the camera's video signal amplifying circuit according to the brightness of the subject to maintain a constant signal output.

The configured settings will be applied to “CAM1” or “CAM2”, whichever you selected under [VIEW].

Automatically configuring gain value using AGC



SETTING ITEMS	SET VALUE
AGC	ON
MAX GAIN	NORMAL

SET CANCEL DEFAULT

1 In [AGC], select “ON”.

2 In [MAX GAIN], select the maximum gain level for AGC and click **SET**.

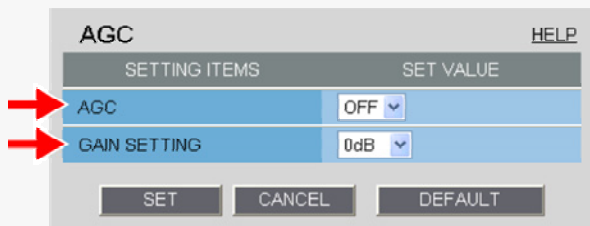
Selecting a higher gain level will improve the camera sensitivity in a dark condition, but increase the noise as well.

- ▶ **NORMAL:** For normal subject
- ▶ **MIDDLE:** For slightly dark subject
- ▶ **HIGH:** For dark subject



The maximum gain value varies depending on the mode set for [DAY/NIGHT]. (For VCC-HD2300P/VCC-HD2300)

Manually configuring gain value



SETTING ITEMS	SET VALUE
AGC	OFF
GAIN SETTING	0dB

SET CANCEL DEFAULT



If you set [AGC] to “OFF”, you cannot enable the electronic sensitivity boosting function (in [SENSE UP] in [IRIS]).

You cannot select “OFF” in [AGC] if [DAY/NIGHT] is set to “AUTO” or the electronic sensitivity boosting ([SENSE UP]) is enabled. (For VCC-HD2300P/VCC-HD2300)

1 In [AGC], select “OFF”.

2 In [GAIN SETTING], select the gain value of AGC and click **SET**.

- ▶ 0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB, 21dB, 24dB, 27dB, 30dB, 33dB, 36dB, 39dB, 42dB

DAY/NIGHT

The Day/Night function improves the camera's sensitivity by automatically switching the camera to the color mode in bright conditions and to the black-and-white mode in dark situations.

Using this function enables 24-hour surveillance with clear video images even during nighttime or in dark locations. You may also fix the camera to the color or black-and-white video mode without using the Day/Night function.

Automatically switching camera between color and black-and-white video modes using Day/Night function

Switching camera between color and black-and-white video modes when an external control signal is received

Fixing camera to color or black-and-white video mode



This function is supported only by VCC-HD2300P/VCC-HD2300.



The configured settings will be applied to “CAM1” or “CAM2”, whichever you selected under [VIEW].
In AUTO mode, turning off the camera in the black-and-white mode and then turning it back on again switches it to the color mode.

The focused position may differ between the color and black-and-white modes.

When using infrared lighting in the black-and-white mode, the camera may switch to the color mode due to strong reflection from objects in the subject. In this case, adjust the infrared lighting to prevent the switching of video to the color mode.

Automatically Switching Camera between Color and Black-and-White Video Modes

DAY/NIGHT		HELP
SETTING ITEMS	SET VALUE	
DAY/NIGHT	AUTO	
LEVEL	MIDDLE	

SET CANCEL DEFAULT

1 In [DAY/NIGHT], select “AUTO”.



If you select “AUTO”, you cannot set [AGC] to “OFF”.

2 In [LEVEL], select the luminance level at which the video mode is switched and click **SET**.

- ▶ **HIGH:** Sets a high luminance level (to increase the time during which the camera operates in the black-and-white mode).
- ▶ **MIDDLE:** Sets the luminance level to halfway between “LOW” and “HIGH”.
- ▶ **LOW:** Sets a low luminance level (to increase the time during which the camera operates in the color mode).
- ▶ **ADJ:** Enables the manual adjustment of the luminance level.

Manually Configuring Mode-Switching Luminance Level (ADJ)

You can select a luminance level between 1 and 7 for both the color to black-and-white switching and black-and-white to color switching. Switching occurs in darker conditions as the luminance level increases.

DAY/NIGHT		HELP
SETTING ITEMS	SET VALUE	
DAY/NIGHT	AUTO	
LEVEL	ADJ	
COLOR→B/W	4	
B/W→COLOR	4	

SET CANCEL DEFAULT

COLOR→B/W

Select the luminance level at which switching occurs from the color mode to the black-and-white mode.

B/W→COLOR

Select the luminance level at which switching occurs from the black-and-white mode to the color mode.



Changing one of these settings also changes the other setting based on the difference.

To prevent hunting in infrared (IR) lighting, set these luminance levels to widely different values.

Switching camera between color and black-and-white video modes when an external control signal is received

Using one of these alarm input terminals as the Day/Night switching terminal, however, enables the camera to be switched between the color and black-and-white video modes when an external control signal is received.

1 In [DAY/NIGHT], select “COLOR”.

2 In [EXT ALARM], select the desired alarm input terminal and click **SET**.

- ▶ **ALARM IN1:** Sets the ALARM IN1 terminal as the Day/Night switching terminal.
- ▶ **ALARM IN2:** Sets the ALARM IN2 terminal as the Day/Night switching terminal.
- ▶ **OFF:** Fixing Camera to Color Video Mode



You need to enable the ALARM IN1/2 terminal and configure the signal polarity in [POLARITY] on the ALARM SETTINGS screen.

Depending on the [POLARITY] setting, the camera will be switched between the color and black-and-white video modes as follows (commonly applied to CAM1 and CAM2):

- If [POLARITY] is set to “NO”: Color mode when open; Black-and-white mode when closed
- If [POLARITY] is set to “NC”: Color mode when closed; Black-and-white mode when open

If you set [EXT ALARM] to “ALARM IN1” or “ALARM IN2”, the corresponding alarm input terminal will serve dedicatedly as a Day/Night switching terminal, so you can see only the item [POLARITY] on the ALARM SETTINGS screen.

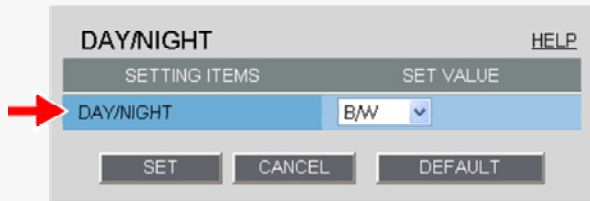
Fixing camera to color or black-and-white video mode

Fixing Camera to Color Video Mode

In [DAY/NIGHT] and [EXT ALARM], select “COLOR” and “OFF”, respectively, and click **SET**.

Fixing Camera to Black-and-White Video Mode

In [DAY/NIGHT], select “B/W” and click **SET** .

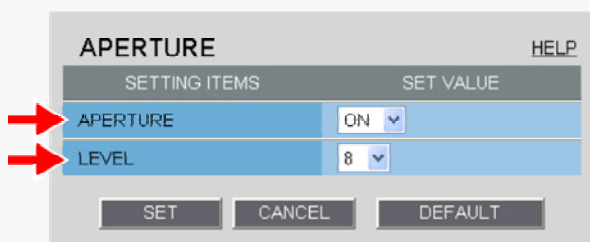


SETTING ITEMS	SET VALUE
DAY/NIGHT	B/W

APERTURE

You can use the contour compensation function to make the whole video image clearer.

Select “ON” in [APERTURE] and an appropriate correction level in [LEVEL] and click **SET** .



SETTING ITEMS	SET VALUE
APERTURE	ON
LEVEL	8

The higher the correction level, the greater the correction effect.

▶ 1 to 15

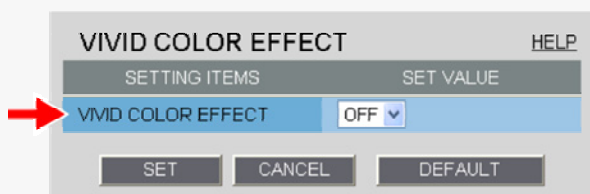


The configured settings will be applied to “CAM1” or “CAM2”, whichever you selected under [VIEW].

VIVID COLOR EFFECT

Use the color saturation compensation function to improve the vividness of the color.

In [VIVID COLOR EFFECT], select “ON” and click **SET** .



SETTING ITEMS	SET VALUE
VIVID COLOR EFFECT	OFF

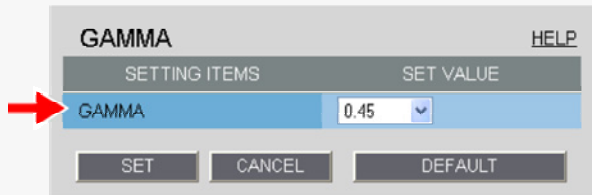


The configured settings will be applied to “CAM1” or “CAM2”, whichever you selected under [VIEW].

GAMMA

Set the gamma correction level to adjust the contrast or brightness level.

In [GAMMA], select the gamma correction level and click **SET** .



- ▶ **0.45:** Gamma correction level = 0.45
- ▶ **1:** Gamma correction level = 1
- ▶ **MODE1:** Increases the contrast of the whole subject.
- ▶ **MODE2:** Increases the contrast in dark areas further.

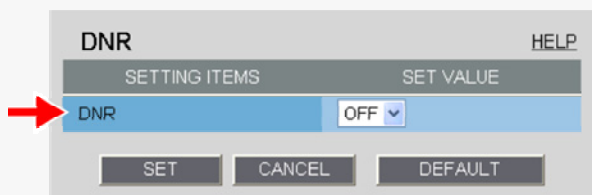


The configured settings will be applied to “CAM1” or “CAM2”, whichever you selected under [VIEW].
Selecting “MODE1” or “MODE2” may result in excessively bright images depending on the target object.

DNR

Configure the DNR (Digital Noise Reduction) function to reduce noise at low conditions.

In [DNR], select “ON” and click **SET** .



The configured settings will be applied to “CAM1” or “CAM2”, whichever you selected under [VIEW].
Enabling the DNR function may cause ghosts and blurs if the subject includes any moving object, which results in low resolution.

FOCUS ASSIST

Clicking [FOCUS ASSIST] in the configuration menu displays the [FOCUS ASSIST] screen.

If you have already completed focus adjustment on the camera, you do not need to follow the adjustment procedures described here.

You may also configure the back focus position switching mode as required to automatically adjust the back focus position when switching between the color and black-and-white video modes.



The configured settings will be applied commonly to “CAM1” and “CAM2” selected under [VIEW].

Adjusting focus

You can fine-adjust the focus from the configuration menu.

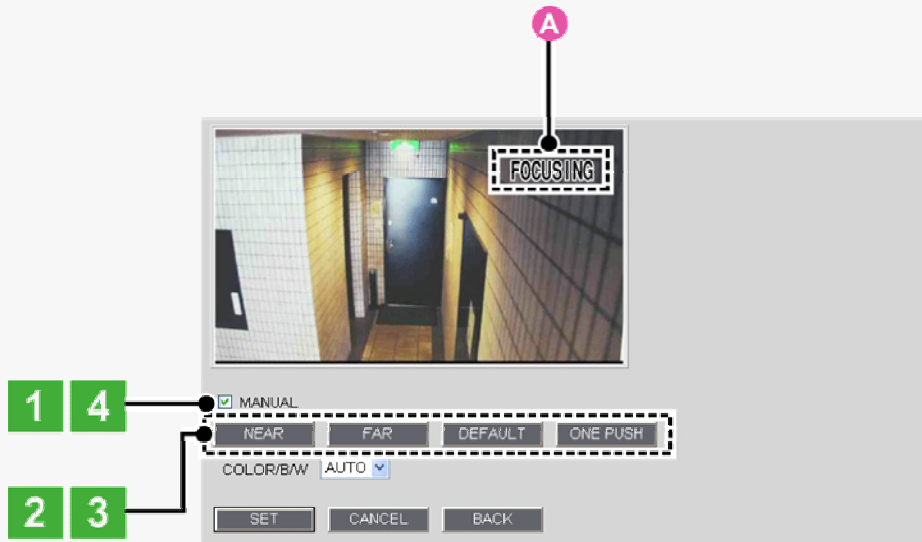
It is recommended to roughly adjust the focus using the lens levers and the buttons provided on the left-side face of the camera during installation.



The focus must be readjusted if the camera has lost focus due to difference in the subject distance or ambient temperature, the deterioration of the lens and installation environment, and the like that have been caused over the years.

1 Select the [MANUAL] check box.

You can now operate the **NEAR** , **FAR** , **DEFAULT** , and **ONE PUSH** buttons.



2 Click **ONE PUSH** to focus on the subject.

The camera automatically focuses on the subject. Note that the color of the status indicator (**A**) “FOCUSING” turns from black to orange.

If the camera fails to focus on the subject, the status indicator (**A**) will show “ERROR”. In this case, manually adjust the focus (in Step **3**).

3 Click **NEAR** / **FAR** to focus on the subject.

The back focus position has been changed.



To restore the default back focus position during re-adjustment etc., click **DEFAULT** . While the camera is initializing the back focus position, the status indicator (**A**) shows “INITIALIZING”.

4 Deselect the [MANUAL] check box.

Be sure to deselect the check box to prevent the loss of focus due to wrong operation.



The check box is automatically deselected if you switch from the focus adjustment screen to another screen.

Adjusting Back Focus Position

Follow the steps below to reduce the loss of camera focus that may occur when the Day/Night function is enabled.



This procedure is only for VCC-HD2300P/VCC-HD2300

In **[COLOR/B/W]**, select the back focus position switching mode. When finished, click **SET** and then **BACK** .

Select the mode suitable for your lens.



- ▶ **AUTO (for lens that does not support infrared focusing):**

Adjusts the camera to the last-set back focus position each time switching to the color/black-and-white video mode occurs.

- ▶ **FIX (for lens that supports infrared focusing):**

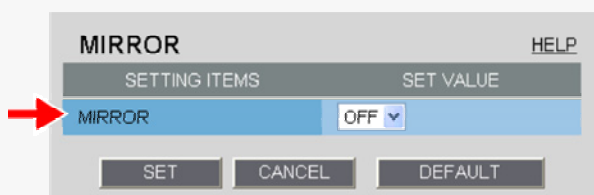
Fixes the camera to the last-set back focus position regardless of switching to the color/black-and-white video mode.

MIRROR

Use the mirror function to electronically flip the displayed subject.

If you installed the camera upside down or intend to monitor the subject in the mirror, configure the following settings according to the installation environment of the camera.

In [MIRROR], select the desired mirror mode and click **SET**.



- ▶ **OFF:** Disables the mirror mode (normal video).
- ▶ **HV:** Flips the video vertically and horizontally.
- ▶ **H:** Flips the video horizontally.
- ▶ **V:** Flips the video vertically.



The configured settings will be applied commonly to “CAM1” and “CAM2” selected under [VIEW].

PRIVACY MASK

You can configure the privacy mask settings to hide specific portions of surveillance video for privacy protection. When a privacy mask is set, the resolution, frame rate, and image quality of the live video image may be limited.



The configured settings will be applied commonly to “CAM1” and “CAM2” selected under [VIEW].

1 Click [PRIVACY MASK] in the sub menu.

The PRIVACY MASK SETTINGS screen appears.



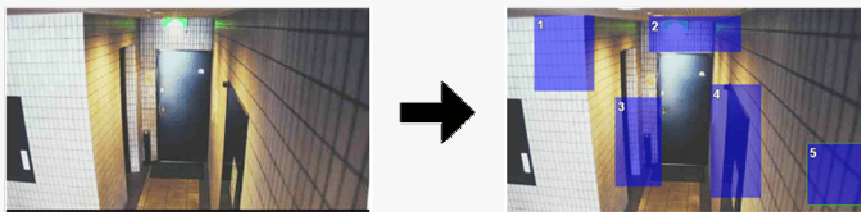


The mask setting screen shows the video at the angle of view that you see on the live screen.

2 Drag the mouse over the live video image to select the area you want to mask.

A mask pattern appears over the selected area.

You can set up to eight mask patterns on the screen.



To select a mask pattern, just click on it. The selected mask pattern is shown with a yellow green border.

To move a mask pattern, select it and then drag the mouse. To resize a mask pattern, place the mouse pointer over its border and then drag the mouse.

To delete a set mask pattern, click the **DELETE** button corresponding to the pattern number or drag it out of the screen.

3 Select the [SETTING ITEMS] check box.

Each mask pattern for which you selected the check box appears on the live screen.

You may select two or more check boxes.

SETTING ITEMS	SET VALUE
<input checked="" type="checkbox"/> MASK 1	DELETE
<input type="checkbox"/> MASK 2	DELETE
<input checked="" type="checkbox"/> MASK 3	DELETE
<input type="checkbox"/> MASK 4	DELETE
<input checked="" type="checkbox"/> MASK 5	DELETE
<input type="checkbox"/> MASK 6	DELETE
<input type="checkbox"/> MASK 7	DELETE
<input type="checkbox"/> MASK 8	DELETE
COLOR	BLACK
SEMI TRANSPARENT	OFF
<div> <div>SET</div> <div>CANCEL</div> <div>DEFAULT</div> <div>BACK</div> </div>	

4 In [COLOR], select the color of the mask pattern(s).

► BLACK, GREY, WHITE, RED, BLUE

5 In [SEMI TRANSPARENT], select whether to enable or disable the transparency of the mask pattern(s).

► OFF (Disables transparency), ON (Enables transparency)

6 Click **SET** and then **BACK**.

The settings are saved and you return to the sub menu.

ALARM SETTINGS

Click **ALARM** in the configuration menu to display the ALARM SETTINGS screen.

If you want the camera to record surveillance video or transmit a warning signal by detecting an alarm condition, configure the following settings on this screen.

- A** Detecting an alarm condition via alarm input terminal
- B** Detecting an alarm condition via built-in motion sensor
- C** Outputting an alarm signal from alarm output terminal



Required operation privilege: admin, operator

A Detecting an alarm condition via alarm input terminal

Configure the input conditions of each alarm input terminal provided on the rear face of the camera.

SETTING ITEMS		HELP
ALARM IN1	OFF	
POLARITY	NO	
DURATION	5SEC	



Before you start the following procedure, connect an external alarm device to one of the alarm input terminals ("ALARM IN1" in this example).
For details, refer to the "Alarm Input/Output Terminal Connections" section.



If you set [CLOCK ADJUST] to "ALARM IN1" on the CLOCK SETTINGS screen, the ALARM IN1 terminal serves dedicatedly as a time adjustment terminal. In this case, the [SET VALUE] column of [ALARM IN1] shows "CLOCK IN" in, allowing you to select a value in [POLARITY] only.

With VCC-HD2300P/VCC-HD2300: if you set [DAY/NIGHT] to "COLOR" and [EXT ALARM] to "ALARM IN1" or "ALARM IN2" under [DAY/NIGHT SETTINGS] on the CAMERA SETTINGS screen, the corresponding terminal will serve as a Day/Night switching terminal. In this case, "DAY/NIGHT" is displayed in [SETTING ITEMS], allowing you to select only the item [POLARITY].

1 In [ALARM IN1], select "ON".

2 In [POLARITY], select the signal polarity of the alarm input terminal.

- ▶ **NO (Normally Open):** The terminal is normally open and closes when an alarm signal is received.
- ▶ **NC (Normally Closed):** The terminal is normally closed and opens when an alarm signal is received.

3 In [DURATION], select how long you want the alarm state to be retained when the terminal receives an alarm signal and click **SET**.

The terminal will not accept subsequent alarm signals until the set duration expires.

- ▶ 5SEC, 10SEC, 15SEC, 20SEC, 30SEC, 45SEC, 1MIN, 2MIN, 3MIN, 4MIN, 5MIN
- ▶ CC (Retains the alarm state as long as the alarm signal persists.)



The alarm state will be retained for at least 5 seconds even if the alarm signal is instantaneous.

The configured duration value will be reset to the factory default value if you change any setting on the ALARM SETTINGS screen while an alarm state is retained.

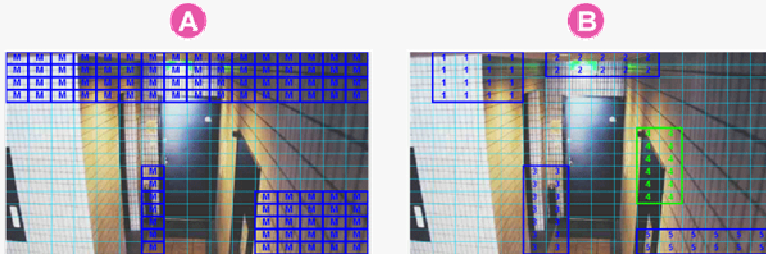
To configure the ALARM IN2 terminal to detect an alarm condition, select “ON” in [ALARM IN2] and specify the input conditions for it in the same way as for the ALARM IN1 terminal.

B Detecting an alarm condition via built-in motion sensor

This camera offers the built-in motion sensor function that automatically detects motion in the subject. The motion sensor detects an alarm condition in three ways as follows.

A Disabling motion detection in masked areas

B Detecting motion in specific areas



You cannot configure the motion sensor function if the electronic sensitivity boosting (SENSE UP) or the long exposure shutter mode (LONG) is enabled.

A Disabling motion detection in masked areas

Use the motion masking function to detect motion in the whole screen area, except for masked areas. Set a mask over any swaying tree, flickering light source, or other object to prevent unwanted detection.

1 On the ALARM SETTINGS screen, in [MOTION], select “MASKING”.

2 In [DURATION], select how long you want the alarm state to be retained when the motion sensor detects motion and click **DETAIL**.

The motion mask configuration screen appears.

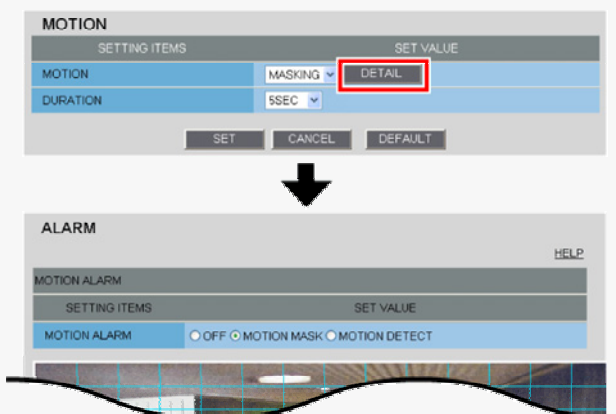
- ▶ 5SEC, 10SEC, 15SEC, 20SEC, 30SEC, 45SEC, 1MIN, 2MIN, 3MIN, 4MIN, 5MIN
- ▶ CC (Retains the alarm state as long as the motion alarm persists.)



The terminal will not accept subsequent alarm signals until the set duration expires.

The alarm state will be retained for at least 5 seconds even if the motion is instantaneous.

The configured duration value will be reset to the factory default value if you change any setting on the ALARM SETTINGS screen while an alarm state is retained.



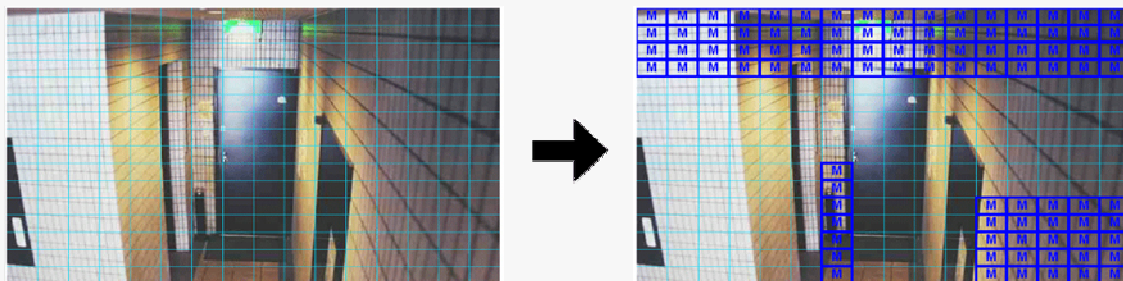


To switch the alarm detection method, in [MOTION ALARM], click the desired radio button.

3 Drag the mouse over live video/image to select the area you want to mask.

The masked area is indicated by blue-bordered grid cells each containing the letter “M”.

You can mask as many areas as you want without limitation.



You can unmask one grid cell at a time by clicking each grid cell in a masked area.

To deselect a block of grid cells in the masked area, right-click one of grid cell and drag the mouse.

4 In [SENSITIVITY], select the detection sensitivity.

The higher the value, the lower the sensitivity.

► 1 to 9



Checking how the motion sensor works

Click **TEST**.

If any motion is detected in a grid cell outside the masked area(s), that grid cell will be shown in red.

Correct the detection conditions as required.



While the sensor is working, this button is labeled as **END**. To finish checking the motion sensor, click the button.

5 Click **SET** and then **BACK**.

The settings are saved and you return to the ALARM SETTINGS screen.

B Detecting motion in specific areas

Use the motion detection function to detect motion in specific areas of the subject.

1 On the ALARM SETTINGS screen, in [MOTION], select “DETECT”.

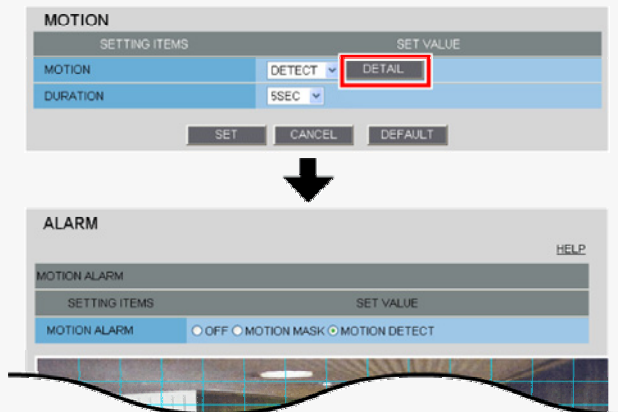
2 In [DURATION], select how long you want the alarm state to be retained when the motion sensor detects motion and click **DETAIL**.

The detection area configuration screen appears.

- 5SEC, 10SEC, 15SEC, 20SEC, 30SEC, 45SEC, 1MIN, 2MIN, 3MIN, 4MIN, 5MIN
- CC (Retains the alarm state as long as the motion alarm persists.)



- The terminal will not accept subsequent alarm signals until the set duration expires.
- The alarm state will be retained for at least 5 seconds even if the motion is instantaneous.
- The configured duration value will be reset to the factory default value if you change any setting on the ALARM SETTINGS screen while an alarm state is retained.

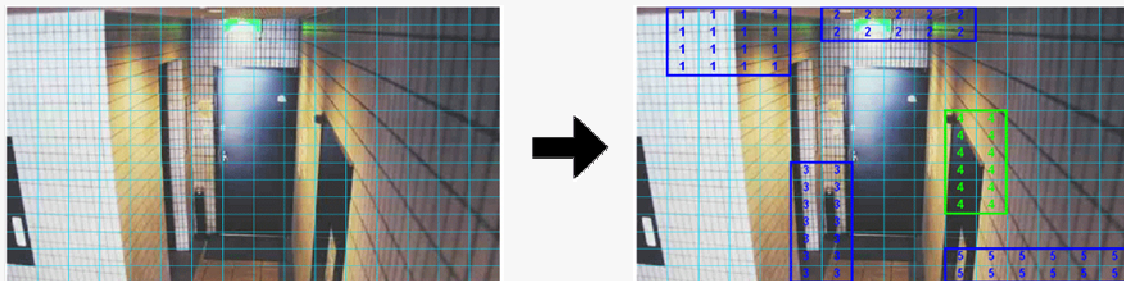


- To switch the alarm detection method, in [MOTION ALARM], click the desired radio button.

3 Drag the mouse over live video/image to select the detection area.

You can set up to five detection areas.

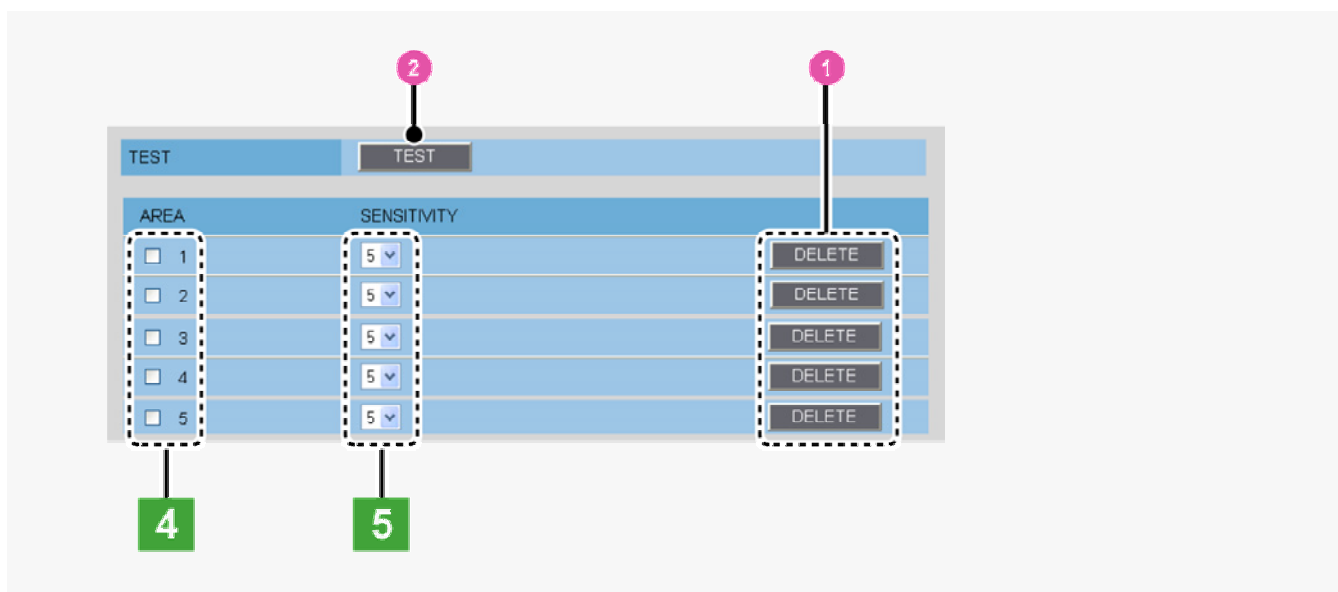
Each detection area will be given a number (1 to 5) as you add it. The currently selected area is shown in yellow green.



- To move a detection area, select it and then drag the mouse.
- To resize a detection area, place the mouse pointer over its border and then drag the mouse.
- To delete a set detection area, click the **DELETE** button (1) corresponding to the detection area number or drag it out of the screen.

4 In [AREA], select the check box next to the area number of the area you want to enable.

You may select two or more check boxes.



5 In [SENSITIVITY], select the detection sensitivity.

You can adjust the detection sensitivity to prevent unwanted detection.
The higher the value, the lower the sensitivity.

► 1 to 9

Checking how the motion sensor works

Click **TEST** (2).

If any motion is detected in a grid cell in the detection area, that cell will be shown in red.

Correct the detection conditions as required.



While the sensor is working, this button is labeled as **END**. To finish checking the motion sensor, click the button.

6 Click **SET** and then **BACK**.

The settings are saved and you return to the ALARM SETTINGS screen.

C Outputting an alarm signal from alarm output terminal

Configure the output conditions for each alarm output terminal.

- **A Configuring automatic alarm output:** Configure the terminal so that it outputs an alarm signal automatically when an alarm condition is detected.
- **B Configuring remote alarm output:** Configure the terminal so that it outputs an alarm signal when the corresponding Remote Alarm button is clicked.



Before you start the following procedure, connect an external alarm device to one of the alarm output terminals ("ALARM OUT1" in this example).
For details, refer to the "Alarm Input/Output Terminal Connections" section.

A Configuring Automatic Alarm Output

ALARM OUT	
SETTING ITEMS	SET VALUE
ALARM OUT1	ON
POLARITY	NO
ALARM OUT TIME	5SEC
TRIGGER	
ALARM IN	ALARM IN1
MOTION	OFF

1 In [ALARM OUT1], select “ON”.

2 In [POLARITY], select the signal polarity of the alarm output terminal.

- ▶ **NO (Normally Open):** The terminal is normally open and closes when an alarm signal is output.
- ▶ **NC (Normally Closed):** The terminal is normally closed and opens when an alarm signal is output.

3 In [ALARM OUT TIME], select how long you want the terminal to output an alarm signal.

The terminal will stop outputting the alarm signal when the set alarm output time expires.

- ▶ 2SEC, 5SEC, 10SEC, 15SEC, 30SEC, 45SEC, 1MIN, 2MIN, 3MIN, 4MIN, 5MIN



The alarm output time must be specified within the duration of the alarm input terminal you select under [TRIGGER].

4 Under [TRIGGER], configure the following alarm output conditions and click **SET**.

TRIGGER	
ALARM IN	ALARM IN1
MOTION	OFF

ALARM IN

Specify the alarm input terminal to which the alarm input device is connected. The ALARM OUT 1 terminal outputs an alarm signal when this terminal receives an alarm signal.

- ▶ **ALARM IN1:** The terminal outputs an alarm signal when the ALARM IN1 terminal receives an alarm signal.
- ▶ **ALARM IN2:** The terminal outputs an alarm signal when the ALARM IN2 terminal receives an alarm signal.

MOTION

You can configure the alarm output conditions in conjunction with the motion alarm function.

- ▶ **OFF:** The terminal does not output an alarm signal even when motion is detected in the subject by the motion sensor.
- ▶ **ON:** The terminal outputs an alarm signal when motion is detected in the subject by the motion sensor.

* To configure the **ALARM OUT 2** terminal to output an alarm signal, select “ON” in [ALARM OUT2] and specify the output conditions for it in the same way as for the **ALARM OUT1** terminal.

B Configuring Remote Alarm Output

ALARM OUT	
SETTING ITEMS	SET VALUE
ALARM OUT1	REMOTE
POLARITY	NO
ALARM OUT TIME	5SEC

1 In [ALARM OUT1], select “REMOTE”.



Selecting “REMOTE” does not cause the terminal to output an alarm signal automatically even if an alarm condition is detected.

2 In [POLARITY], select the signal polarity of the alarm output terminal.

- ▶ **NO (Normally Open):** The terminal is normally open and closes when an alarm signal is output.
- ▶ **NC (Normally Closed):** The terminal is normally closed and opens when an alarm signal is output.

3 In [ALARM OUT TIME], select how long you want the terminal to output the alarm signal and click **SET**.

The terminal will stop outputting the alarm signal when the set alarm output time expires.

- ▶ 2SEC, 5SEC, 10SEC, 15SEC, 30SEC, 45SEC, 1MIN, 2MIN, 3MIN, 4MIN, 5MIN
- ▶ CC (Stops outputting the alarm signal when the corresponding Remote Alarm button is clicked on the live screen.)

To configure the ALARM OUT 2 terminal to output an alarm signal when a Remote Alarm button is clicked, select “REMOTE” in [ALARM OUT2] and specify the output conditions for it in the same way as for the ALARM OUT1 terminal.

E-MAIL SETTINGS

Click **E-MAIL** in the configuration menu to display the E-MAIL SETTINGS screen.

Using the automatic e-mail transmission function, you can send an e-mail attached with an image if an alarm is detected, or after a fixed interval.

A Configuring basic e-mail transmission settings

B Configuring recipient e-mail addresses (RECIPIENT MAIL ADDRESS)

C Configuring authentication conditions (AUTHENTICATION)

D Configuring transmission conditions

E Configuring e-mail text (SUBJECT/TEXT)

Log information display area (LOG): In [LOG], you can view the SMTP (e-mail) transmission log.



Required operation privilege: admin, operator



For network-related settings, consult your network administrator.

A Configuring basic e-mail transmission settings

SETTING ITEMS	SET VALUE
E-MAIL	OFF
SSL	OFF
SMTP SERVER ADDRESS	
SMTP PORT NUMBER	25
USER MAIL ADDRESS	

1 In [E-MAIL], select “ON” to enable the e-mail transmission function.

2 In [SSL], select “ON” to use SSL communication.

If your e-mail server supports SSL, you can encrypt e-mail transmission.

3 Configure your e-mail server.

Type the following information on your e-mail server.

A SMTP SERVER ADDRESS

Type the address of your SMTP server (up to 64 alphanumeric characters).

B SMTP PORT NUMBER

Type the incoming port number of your SMTP server.

The available port numbers are 0 to 65535.



Normally, use the default value “25”. However, if you are using the submission port for security reasons or in other cases where you need to do so, change the default value.

4 In [USER MAIL ADDRESS], type the sender's e-mail address and click **SET**.

Here, you can type only one e-mail address (up to 64 alphanumeric characters).

B Configuring recipient e-mail addresses (RECIPIENT MAIL ADDRESS)

MAIL ADDRESS	IMAGE
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

RECIPIENT MAIL ADDRESS

TEST

1 In [MAIL ADDRESS], type the recipient e-mail addresses.

Here, you can type up to five e-mail addresses (up to 64 alphanumeric characters for each).

2 Select the check box for each e-mail address to which you want to send e-mails.

You can send e-mails to the selected e-mail address(es).

3 To attach an image file to an e-mail, select the [IMAGE] check box of the corresponding recipient address and click **SET**.



The attached image file will have the following file name:

CAMERA ID + _yymmddhhmmss.jpg

CAMERA ID is the leading four characters of the camera title. However, any of the following symbols, if included, will be replaced by a "-" (hyphen):

/ (slash), \ (backslash), ? (question mark), * (asterisk), : (colon), ; (semicolon), ' (single quote), " (double quote), < (less-than sign), > (greater-than sign), ! (broken bar)

* To send a test e-mail, click **TEST**.

A test e-mail is sent to each recipient e-mail address for which you selected the check box in Step 2.



The subject (SUBJECT) of this test e-mail will be "TEST".

C Configuring authentication conditions (AUTHENTICATION)

To perform an authentication check, you need to configure the authentication conditions.

AUTHENTICATION	USER ID	PASSWORD	POP3 SERVER ADDRESS
<input type="checkbox"/>			

1 In [AUTHENTICATION], select the authentication method.

► NO USE, POP3, SMTP

2 In [USER ID] and [PASSWORD], type the user ID and password, respectively.

Type the user ID (up to 48 alphanumeric characters) and password for authentication (up to 20 alphanumeric characters).

3 In [POP3 SERVER ADDRESS], type your POP3 server address and click **SET**.

If you selected “POP3” in [AUTHENTICATION], type the IP address or domain name of your POP3 server (up to 64 alphanumeric characters).

D Configuring transmission conditions

TRIGGER	NETWORK FAILURE
NETWORK FAILURE TIME	15SEC
INTERVAL	1MIN
JPEG IMAGE	OFF

1 In [TRIGGER], select the e-mail transmission conditions.

- ▶ **INTERVAL:** Sends an e-mail at fixed intervals.
- ▶ **ALARM IN1:** Sends an e-mail when the ALARM IN1 terminal receives an alarm signal.
- ▶ **ALARM IN2:** Sends an e-mail when the ALARM IN2 terminal receives an alarm signal.
- ▶ **MOTION ALARM:** Sends an e-mail when the motion sensor detects motion in the subject.
- ▶ **ALARM OUT1:** Sends an e-mail when the ALARM OUT 1 terminal outputs an alarm signal.
- ▶ **ALARM OUT2:** Sends an e-mail when the ALARM OUT 2 terminal outputs an alarm signal.
- ▶ **NETWORK FAILURE:** Sends an e-mail when the camera detects a network failure during network recording.

A If you selected “NETWORK FAILURE” ...

In [NETWORK FAILURE TIME], select the time from the occurrence of a network failure until the camera recognizes it as a recording trigger.

- ▶ 15SEC, 20SEC, 30SEC, 40SEC, 50SEC, 1MIN, 2MIN, 3MIN, 4MIN, 5MIN



The setting values are interlocked among E-MAIL SETTINGS, and FTP SETTINGS screens. (Note that the setting configured most recently will take precedence.)

B If you selected “INTERVAL” ...

In [INTERVAL], select the interval between e-mail transmissions.

- ▶ 1MIN, 2MIN, 3MIN, 4MIN, 5MIN, 10MIN, 15MIN, 30MIN, 1HOUR, 2HOUR, 3HOUR, 4HOUR, 5HOUR, 6HOUR, 7HOUR, 8HOUR, 12HOUR, 24HOUR

2 To attach a JPEG image file to an e-mail, in [JPEG IMAGE] select “ON”, and click **SET**.



You need to configure the JPEG image conditions on the CODEC/STREAMING SETTINGS screen.

E Configuring e-mail text (SUBJECT/TEXT)

Here, configure the subject and message text portions of the e-mail.

SUBJECT	<input type="text"/>
TEXT	<input type="text"/>
LOG	



An e-mail consists of the following portions.

- Subject
- Camera Title
- Data and time
- Camera's IP address
- Message (TEXT)

The camera title, date and time, IP address will be included automatically.

1 In [SUBJECT], type the subject (title) of the e-mail.

You can type up to 32 alphanumeric characters.

2 In [TEXT], type the message text and click .

You can type up to 64 alphanumeric characters.



In the [SUBJECT] and [TEXT] fields, you can use special symbol characters.

FTP SETTINGS

Click **FTP** in the configuration menu to display the FTP SETTINGS screen.

If you want to record images from the camera to an FTP server via the network, configure the FTP server settings and the image transmission conditions on this screen.

A Configuring FTP server settings

B Configuring transmission conditions



Required operation privilege: admin, operator

You can send JPEG images only.

A Configuring FTP Server Settings

1 In [FTP], select “ON”.

SETTING ITEMS	SET VALUE
FTP	ON
PORT NUMBER	21
SERVER ADDRESS	
USER ID	
PASSWORD	

2 In [PORT NUMBER], type the control port number configured on the server.

Type a number between 1 and 65535. This port number is normally “21” (default).

3 In [SERVER ADDRESS], type the server address. Then, in [USER ID] and [PASSWORD], type the user ID and password, respectively.

The number of characters you can type in these fields is as follows.

SERVER ADDRESS: Up to 64 alphanumeric characters

USER ID: Up to 48 alphanumeric characters

PASSWORD: Up to 20 alphanumeric characters

4 To use the passive FTP mode, in [FTP PASSIVE], select “USE”.

FTP PASSIVE	NO USE
DIRECTORY NAME	
FILE NAME	
TEMPORARY FILE	NO USE



When [FTP PASSIVE] is set to “USE”, users must specify a valid port number when making a connection request for sending data to the server.

5 In [DIRECTORY NAME], specify the name of the directory you want to create on the server.

You can type up to 32 alphanumeric characters.



If no directory name is specified, the system will automatically generate the following directory name.

When sending an alarm image in the event of an error: **ALARM_FTP**

When sending an image in fixed intervals: **INTERVAL_FTP**

6 In [FILE NAME], specify the name of the image file you want to send and click **SET**.

You can type up to 32 alphanumeric characters.



Each image file will have a file name consisting of the specified file name, the date/time, and the alarm factor (if [TRIGGER] is set to other than "INTERVAL"):

[FILE NAME] + [yy_mm_dd_hh_mm_ss] + [alarm_factor] + [0001 (Serial No.)].jpg]

If no file name is specified, the system will enter "sanyo" for the [FILE NAME].

* To use a temporary file, set [TEMPORARY FILE] to "USE".

This causes each image to be stored as a temporary file on the FTP server and then renamed to the specified file name.

The FTP server will store a single temporary file for the most recent image with the specified file name.



Temporary file name: sanyo_ftp_temp_[IP address].temp

Although the temporary file will be renamed to the specified file name and then stored in the specified directory as explained in steps 5 to 6, the renamed file name will not include the date/time and alarm factor information.

Both the temporary and permanent files will be overwritten if the same file name exists.

B Configuring transmission conditions

In [TRIGGER], select the image transmission trigger condition, configure items as necessary and click **SET**.

TRIGGER	INTERVAL
INTERVAL	1SEC
<div>SET CANCEL</div>	

- ▶ **INTERVAL:** Sends a still image in fixed intervals.
- ▶ **ALARM IN1:** Sends a still image when the ALARM IN1 terminal receives an alarm signal.
- ▶ **ALARM IN2:** Sends a still image when the ALARM IN2 terminal receives an alarm signal.
- ▶ **MOTION:** Sends a still image when the motion sensor detects motion in the subject.
- ▶ **ALARM OUT1:** Sends a still image when the ALARM OUT 1 terminal outputs an alarm signal.
- ▶ **ALARM OUT2:** Sends a still image when the ALARM OUT 2 terminal outputs an alarm signal.
- ▶ **NETWORK FAILURE:** Sends a still image when the camera detects a network failure during network recording.



You need to configure the alarm input/output conditions on the ALARM SETTINGS screen.

A If you selected "NETWORK FAILURE" ...

In [NETWORK FAILURE TIME], select the time from the occurrence of a network failure until the camera recognizes it as a recording trigger.

- ▶ 15SEC, 20SEC, 30SEC, 40SEC, 50SEC, 1MIN, 2MIN, 3MIN, 4MIN, 5MIN



The setting values are interlocked among E-MAIL SETTINGS, and FTP SETTINGS screens. (Note that the setting configured most recently will take precedence.)

B If you selected “ALARM IN1/2”, “MOTION”, or “ALARM OUT1/2” ...

In [DURATION], select the image transmission duration.

► 5SEC, 10SEC, 20SEC, 40SEC, 1MIN, 2MIN, 3MIN, 4MIN, 5MIN, 10MIN, 15MIN

C If you selected “INTERVAL”, “ALARM IN1/2”, “MOTION”, or “ALARM OUT1/2” ...

In [INTERVAL], select the interval between e-mail transmissions.

► 1SEC, 2SEC, 3SEC, 5SEC, 10SEC, 30SEC, 1MIN, 3MIN, 5MIN, 10MIN, 15MIN, 30MIN, 1HOUR, 2HOUR, 3HOUR, 4HOUR, 5HOUR, 6HOUR, 8HOUR, 12HOUR, 24HOUR



The interval options available when you selected “ALARM IN1/2”, “MOTION”, or “ALARM OUT1/2” in [TRIGGER] are only “1SEC” to “15MIN”.

In [INTERVAL], the pull-down menu will only show options that do not exceed the [DURATION] setting.

SECURITY SETTINGS

Click **SECURITY** in the configuration menu to display the SECURITY SETTINGS screen.

Configuring the security function on this screen enables you to restrict the PCs that can access the camera.



Required operation privilege: admin, operator1

1 In [SECURITY FUNCTION], select “ON”.

2 In [DEFAULT POLICY], select the global access policy.

Here, you specify the access policy for all PCs, except for those for which you configure the access settings in [NETWORK ADDRESS/SUBNET] (**3**).

<Global access policy>

► **AUTHORIZED**: Permits access to the camera.

► **REJECTED**: Rejects access to the camera.

SECURITY SETTINGS		HELP
SETTING ITEMS	SET VALUE	
SECURITY FUNCTION	<input type="radio"/> OFF <input checked="" type="radio"/> ON	
DEFAULT POLICY	AUTHORIZED ▼	

3 In [NETWORK ADDRESS/SUBNET], configure the access settings for individual PCs.

Type the IP address and the subnet mask of each PC and specify whether or not to grant it access to the camera. You can configure the access settings for up to 10 PCs.

<Individual access policy>

► **AUTHORIZED**: Permits access to the camera.

► **REJECTED**: Rejects access to the camera.



If there are duplicate address/subnet mask settings, one in the uppermost row is valid.

Example 1: When the global access policy (DEFAULT POLICY) is set to “AUTHORIZED” and the individual access policy is set to “REJECTED”

The PCs configured in [NETWORK ADDRESS/SUBNET 1] and [NETWORK ADDRESS/SUBNET 2] cannot access the camera because their individual access policy is “REJECTED”.

SECURITY FUNCTION	<input type="radio"/> OFF <input checked="" type="radio"/> ON					
DEFAULT POLICY	AUTHORIZED ▼					
NETWORK ADDRESS / SUBNET1	192	168	0	20	/ 32	REJECTED ▼
NETWORK ADDRESS / SUBNET2	192	168	0	200	/ 32	REJECTED ▼

Example 2: When the global access policy (DEFAULT POLICY) is set to “REJECTED” and the individual access policy is set to “AUTHORIZED” ...

The PCs configured in [NETWORK ADDRESS/SUBNET 1] and [NETWORK ADDRESS/SUBNET 2] can access the camera because their individual access policy is “AUTHORIZED”.

SECURITY FUNCTION	<input type="radio"/> OFF <input checked="" type="radio"/> ON					
DEFAULT POLICY	REJECTED					
NETWORK ADDRESS / SUBNET1	192	168	0	1	32	AUTHORIZED
NETWORK ADDRESS / SUBNET2	192	168	0	100	32	AUTHORIZED

4 Click **SET**.

The settings are saved.

OPTION SETTINGS

Click **OPTION** in the configuration menu to display the OPTION SETTINGS screen.
On this screen, you can perform system-related operations and log checks.
Click **SET** to execute or start the intended operation.



Required operation privilege: admin, operator1

OPTION SETTINGS		HELP
CAMERA REBOOT	SET	
FIRMWARE UPDATE	MAIN Ver. 0.00-01 (090817-14) SUB Ver. 0.00-01 (090806-00) SET	
FACTORY DEFAULT	SET	WITH NETWORK SETTINGS
MENU BACK UP	SET	
MENU UPLOAD	Browse...	SET

LOG

ACCESS LOG	OUTPUT
SYSTEM LOG	OUTPUT

Rebooting Camera (CAMERA REBOOT)

If the camera stops functioning for some reason or other, in [CAMERA REBOOT], click **SET** to reboot the camera system.

Updating Firmware Version (FIRMWARE UPDATE)

You can update the camera's firmware to the latest version.

1 Click **SET**.

The FIRMWARE UPDATE screen appears.

FIRMWARE UPDATE

FILE NAME: Browse...

EXECUTE CANCEL

2 Click **BROWSE** and select the firmware updater file.

3 Click **EXECUTE**.

The firmware update process starts. When the update process is completed, the camera system reboots and you reconnect to the camera automatically.

Once you reconnect to the camera, redisplay the OPTION SETTINGS screen and confirm that the firmware version has been updated.



Do not perform any operations on the screen or turn off the camera until the firmware update process is completed.

While the firmware is being updated, all camera functions stop working temporarily.

Restoring Factory Default Settings (FACTORY DEFAULT)

You can restore all the settings you have configured to the factory default settings.

FACTORY DEFAULT SET WITH NETWORK SETTINGS

In [NETWORK SETTINGS], select whether or not to restore the settings including the network settings and click **SET**.

▶ **WITH:** Includes the network settings.

▶ **WITHOUT:** Excludes the network settings.

An operation confirmation dialog box opens.

Backing Up Configured Settings (MENU BACKUP)

You can save the settings you have configured using the backup function.

MENU BACK UP

SET

In [MENU BACKUP], click **SET**. Then, select **SAVE** in a save confirmation dialog box and specify the backup destination file.



All the settings on the NETWORK SETTINGS screen and the [DATE/TIME] setting on the CLOCK SETTINGS screen are not saved.

Uploading Backed Up Settings (MENU UPLOAD)

You can restore the saved configuration settings of the camera from a backup file.

MENU UPLOAD

Browse...

SET

Click **BROWSE**, select the backup file you want to upload, and click **SET**.

The backup file is uploaded to the camera to restore the saved configuration settings.

When the upload process is completed, the camera system reboots.



All the settings on the NETWORK SETTINGS screen and the [DATE/TIME] setting on the CLOCK SETTINGS screen are not restored.

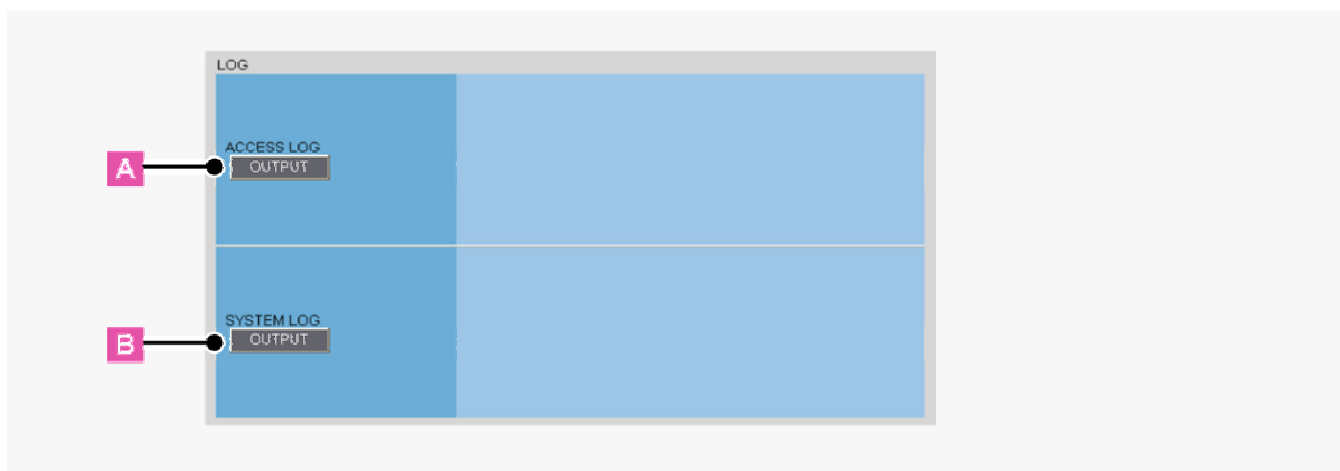
Viewing Logs (LOG)

Under [LOG], you can view the access and system logs.

You can click **OUT PUT** to output the content of each log into a text file.



The log information is deleted when the camera is powered off.



A ACCESS LOG

Shows the history of access to the camera in chronological order (up to 100 entries).

► Date and time, user name, authentication check result (OK/NG), connection destination IP address

B SYSTEM LOG

Shows a history of system operation in chronological order (up to 200 entries).