



INSTRUCTION MANUAL
(Warranty attached)

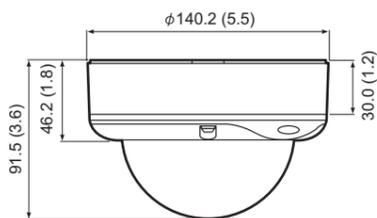
VDC-C1574VA
VDC-D1584VA
VDC-W1594VA

COLOR CCD Camera

About this manual

- Before installing and using the camera, please read this manual carefully. Be sure to keep it handy for later reference.
- This instruction manual covers the following models. Any difference among the three models is indicated when necessary.
VDC-C1574VA
VDC-D1584VA
VDC-W1594VA

Dimensions: mm (inches)



Depending on the conditions of use, installation and environment, please be sure to make the appropriate settings and adjustments. If you need help with installation and/or settings, please consult your dealer or an Authorized Sanyo Service Center.

TROUBLESHOOTING

Before sending the camera out for repair, check the items below. If the problem persists after checking these items, consult your dealer or an Authorized Sanyo Service Center.

■ If no image appears

- Is the coaxial cable attached securely?
- Are the power and voltage normal?
- Has the iris of the lens been adjusted correctly (with the level volume)?
- Is there adequate illumination?

■ If the image is unclear

- Is the monitor adjusted correctly?
- Is the lens in focus?
- Is the lens clean?
Dirt or fingerprints on the lens can adversely affect the image. Gently wipe any dirt or fingerprints off the lens with a soft cloth or lens cleaning paper and cleaning fluid (commercially available).

SERVICE

The camera is a precision instrument. Handle it carefully and always follow the safety precautions. If the camera requires service, never try to repair it yourself or open the casing. For servicing, maintenance, or repairs, consult your dealer or an Authorized Sanyo Service Center.

INFORMATION TO USER

Safety Guard



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

For the customers in Canada
This Class B digital apparatus complies with Canadian ICES-003.
Pour la clientèle canadienne
Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada.

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

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

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

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

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

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

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

SPECIFICATIONS

	VDC-C1574VA	VDC-D1584VA	VDC-W1594VA
Scanning system	NTSC standard 525 lines, 60 fields/sec.		
Image sensor	1/3" interline transfer method CCD		
Number of effective pixels	768 (H) x 494 (V)		
Horizontal resolution	More than 520 TV lines	More than 480 TV lines	
Minimum illumination (approx.)	1.0 lx (F1.4)	0.05 lx (F1.4, B/W mode) 1.0 lx (F1.4, color mode)	1.0 lx (F1.4)
Video output	1.0 V(p-p) / 75 Ω, composite, BNC		
Video S/N ratio	More than 50 dB (AGC off)		
Lens	Built-in vari-focal auto-iris, f = 2.6 - 6 mm, F = 1.4 - 2.0		
Pan/Tilt adjustment	Pan: ±180°, Tilt: ±60° (Ceiling Installed)		
Backlight compensation	OFF / ON (Center zone metering)		
Iris setting	AI / EI (Only AI is available for the built-in lens)		
White balance	ATW / ATW-A		ATW / ATW-A
Gain control	ON / OFF		
Wide dynamic range	-	-	ON / OFF
Dynamic range	-	-	54 dB typical
Sync system	DC 12 V user: Internal sync, AC 24 V user: Line-lock		
Day/Night function	-	Always active	-
Operating environment	Temperature: -10 - +50°C (14 - 122°F)		-10 - +40°C (14 - 104°F)
	Humidity: less than 90% RH (no condensation)		
Power supply	24 V AC ±10%, 60 Hz/12 - 15 V DC		
Power consumption (approx.)	2.6 W	2.6 W	4.0 W
Weight (approx.)	850 g (30 oz)		
Accessories	Hexagonal wrench, Large, Medium and Small each 1 Rubber cushion 1 Mounting screw 4 Screw hold 4 Mounting template 1		

● The factory setting value is represented in bold.

Appearance and specifications are subject to change without prior notice.

PRECAUTIONS

■ In case of a problem

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

■ Do not open or modify

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

■ Do not put objects inside the unit

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

■ Be careful when handling the unit

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

■ Do not install this unit close to magnetic fields

The magnetic fields may result in unstable operation.

■ Protect from humidity and dust

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

■ Protect from high temperatures

Do not install close to stoves, or other heat sources, such as spotlights, etc., or where it could be subject to direct sunlight, as this could cause deformation, discoloration or other damage. Be careful when installing close to the ceiling, in a kitchen or boiler room, as the temperature may rise to high levels.

■ Cleaning

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

■ Approvals: IP66

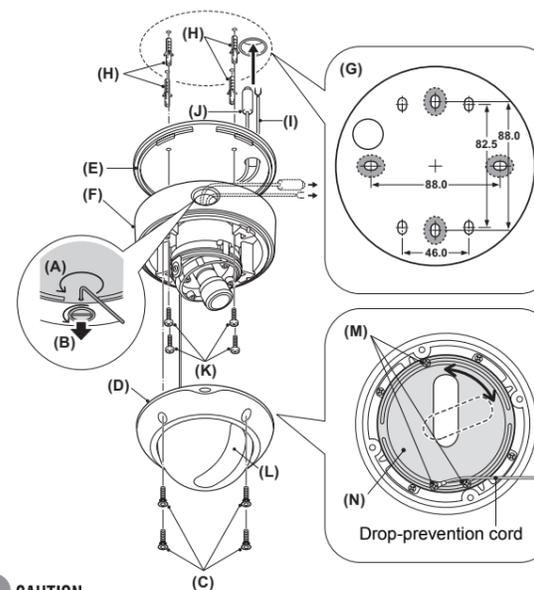
This unit has been certified to IP66 standards when properly installed. Ensure all openings in enclosure are sealed as per manufacturer's instructions. The IP66 has not been verified by UL.



SANYO Electric Co., Ltd.
Printed in Korea

L5BN2/US, US2, US3 (1106KP-CP-a)

INSTALLATION



! CAUTION

- Since the conduit hole cover is not waterproof-finished, always be sure to seal the cover entirely by caulking, for example, upon completion of installation.
- Make sure to perform waterproofing properly to the ceiling or wall where you are installing the unit.
- When setting up this camera, make sure that it is installed securely. Check that the installation location is strong enough to bear the camera weight before proceeding. Install on a ceiling or wall that has no surface unevenness. In addition, do not touch the camera unit except when settings and adjustments are necessary.

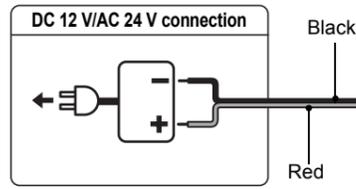
■ When routing the cables on ceiling or wall surfaces:

Loosen the conduit hole cover fixing screw (A) on the back of the camera unit base with the hexagonal wrench (medium), open the cover (B), and pass the connection cables through the conduit hole.

- 1 Loosen the four fixing screws (C) using the supplied hexagonal wrench (large) and remove the dome cover (D).
- 2 Make screw holes and a cable hole in the rubber cushion (E).
- 3 Attach the rubber cushion to the back of the camera unit (F).
- 4 Place the supplied "Mounting template" (G) on the mounting surface, and mark four positions shown in (G).
- 5 Drill holes at the positions as marked and insert the supplied screw holds (H) in the holes.
- 6 Cut a hole in the ceiling or the wall for routing the cables.
- 7 Pass the power cable (I) and video cable (J) from the camera unit through the cable hole in the ceiling or the wall.
- 8 Align the unit mounting holes of the camera unit with the holes in the ceiling or the wall.
- 9 Secure with the supplied mounting screws (K).
- 10 Carry out the settings and adjustments for the camera. Refer to "CONNECTIONS AND SETTINGS" for camera settings and lens adjustments.
- 11 If a whole surface of the lens does not show through the camera window (L), loosen the screws (M) and adjust the dome liner (N). And then secure the dome cover by tightening the fixing screws (C) with the hexagonal wrench (large).

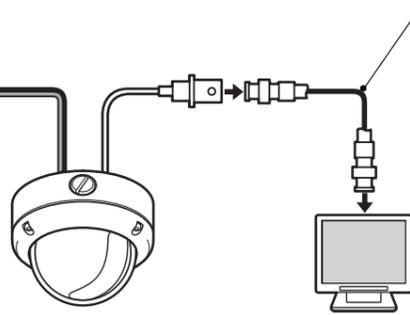
CONNECTIONS AND SETTINGS

CONNECTIONS



CAUTION

Check for polarity when using a DC 12 V power supply (Polarity does not matter when using a AC 24 V power supply).



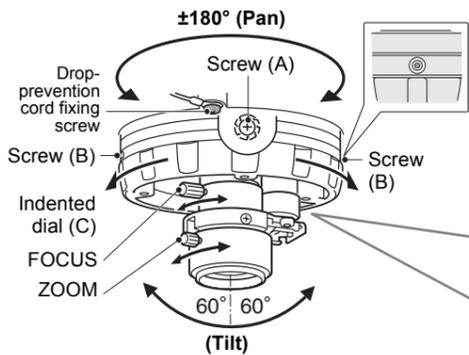
Supported coaxial cables

- You can use any of the following coaxial cables:
- RG-59U (3C-2V) Length: 250 m (273.4 yds) max.
 - RG-6U (5C-2V) Length: 500 m (546.8 yds) max.
 - RG-11U (7C-2V) Length: 600 m (656.2 yds) max.

CAUTION

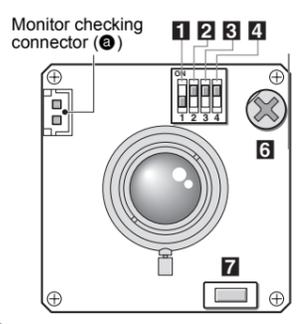
- When using an RG-59U (3C-2V) cable, do not attach it to piping or wiring.
- Select the cable according to the distance between the devices you wish to connect.
- If you use a cable other than the types above, the image or sync signal will be attenuated and will not be transmitted correctly.

LENS ADJUSTMENTS

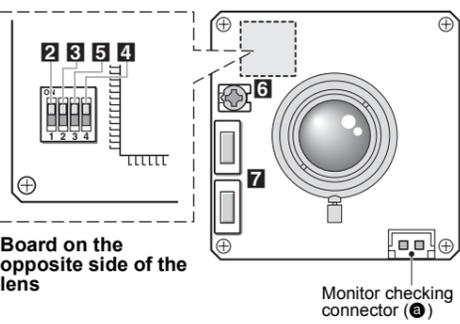


CAMERA SETTINGS

VDC-C1574VA / VDC-D1584VA



VDC-W1594VA



CHECKING THE CAMERA IMAGE

You can use the monitor checking cable (sold separately) to display an image on a monitor when setting up the camera to check the surveillance angle and range, lens focus, etc. Connect the connector of the monitor checking cable to the monitor checking connector (6) on the circuit board and connect the jack of the monitor checking cable to the monitor.

LENS ADJUSTMENTS

Once the camera has been installed, adjust the lens section.

CAUTION

- Be careful not to touch the lens section when changing the angle of the camera.
- When loosening the drop-prevention cord fixing screw, be careful not to loosen it too much; otherwise the dome cover may drop.

- 1 Loosen the drop-prevention cord fixing screw, then adjust the pan position ($\pm 180^\circ$) and the tilt position ($\pm 60^\circ$).
 - Loosen the screw (A) with a Phillips head screwdriver before adjusting the tilt position.
- 2 Loosen the zoom lever screw, turn the zoom lever to the right/left to determine the zoom position while viewing the camera images on the monitor, and then re-tighten the screw.
- 3 Loosen the focus lever screw, turn the focus lever to the right/left to determine the focus position while viewing the camera images on the monitor, and then re-tighten the screw.
- 4 Tighten the drop-prevention cord fixing screw.

NOTE on image direction (Wall Installed):

If the monitor image is misaligned, follow the steps below to adjust.

- ① Loosen the screws (B) with the supplied hexagon wrench (small).
- ② Turn the indented dial (C) to adjust the image direction.
- ③ Tighten the screws (B) after adjustments are finished.

DAY/NIGHT FUNCTION (VDC-D1584VA)

When connected to power, the VDC-D1584VA turns on the DAY/NIGHT function for continuous operation. The DAY/NIGHT function automatically switches over between color and black-and-white mode depending on the ambient brightness; for example, choosing color mode during daytime, and black-and-white mode for nighttime monitoring with its increased sensitivity in a darker environment.

NOTE:

This function is disabled if 4 is set to "Down".

CAMERA SETTINGS

The camera comes from the factory pre-adjusted and ready to install, but you can make adjustments or settings if you need. If you have trouble adjusting the camera, consult your dealer or an Authorized Sanyo Service Center. (◆=Factory default setting)

1 Backlight compensation setting (VDC-C1574VA, VDC-D1584VA)

ON ◆	Compensates for backlighting with the centerweighted metering mode.
Down ◆	This function is off.

NOTE:

- This function is disabled if 4 is set to "Down".
- If backlight compensation is not corrected in the VDC-C1574VA and VDC-D1584VA when 1 is set to "ON", you can correct by adjusting level volume 6.

2 Iris setting

ON ◆	AI: Normal setting (Auto iris)
Down	EI: Electronic iris

NOTE:

This factory preset is optimal, so it is not necessary to change the setting.

3 White balance setting

VDC-C1574VA, VDC-D1584VA

ON	ATW-A (Auto-tracing white balance - All): Automatic setting for white balance, covering wider range of color temperature than with "ATW". <ul style="list-style-type: none"> • May result in an excessively and unnaturally effected image, depending on the conditions.
Down ◆	ATW (Auto-tracing white balance): Automatic setting for white balance.

VDC-W1594VA

ON ◆	ATW-A (Auto-tracing white balance - All): Automatic setting for white balance, covering wider range of color temperature than with "ATW". <ul style="list-style-type: none"> • May result in an excessively and unnaturally effected image, depending on the conditions.
Down	ATW (Auto-tracing white balance): Automatic setting for white balance.

4 Auto Gain Control (AGC) setting

For adjusting the sensitivity of the camera. Use this setting for shooting in dark environments.

ON ◆	Normal setting
Down	Set this when there is excessive noise (AGC off)

5 Wide dynamic range setting (VDC-W1594VA)

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

ON ◆	When monitoring of subjects which differ in brightness.
Down	This function is off.

6 Level volume

If the entire image is too dark or bright, or the backlight compensation is not correct even after 1 is set to "ON", you need to adjust the level volume.

Counterclockwise (High)	Opens the lens iris, making the entire image brighter
Clockwise (Low)	Closes the lens iris, making the entire image darker

7 Adjusting synchronization error (AC 24 V users only)

Vertical sync disturbance may occur when a selector is used to switch between multiple cameras connected to one monitor. To prevent vertical sync disturbance, adjust 7.

VDC-C1574VA, VDC-D1584VA	Press the button to eliminate sync disturbances when needed.
VDC-W1594VA	Press each button to eliminate sync disturbances when needed.

CAUTION

When using the DC 12V adaptor, sync setting is set to internal sync.

SANYO INDUSTRIAL VIDEO COLOR CCD CAMERA LIMITED WARRANTY

OBLIGATIONS

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

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

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

For accessories and/or parts, call

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

THIS WARRANTY IS VALID ONLY ON SANYO PRODUCTS PURCHASED OR RENTED IN THE UNITED STATES OF AMERICA, EXCLUDING ALL U.S. TERRITORIES AND PROTECTORATES. THIS WARRANTY APPLIES ONLY TO THE ORIGINAL RETAIL PURCHASER OR END-USER. THE ORIGINAL DATED BILL OF SALE, SALES SLIP OR RENTAL AGREEMENT MUST BE SUBMITTED TO THE AUTHORIZED SANYO SERVICE CENTER AT THE TIME WARRANTY SERVICE IS REQUESTED. Subject to the OBLIGATIONS above and EXCLUSIONS below, SANYO Fisher Company warrants this SANYO product against defects in materials and workmanship for the periods specified below. SFC will repair or replace (at its option) the product and any of its parts which fail to conform to this warranty. The warranty period commences on the date the product was first purchased or rented at retail.

LABOR	PARTS	IMAGE DEVICE
3 YEARS	3 YEARS	3 YEARS

EXCLUSIONS

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

This warranty shall not apply to the cabinet or cosmetic parts, batteries or routine maintenance. This warranty does not apply to uncrating, setup, installation, removal of the product for repair or reinstallation of the product after repair.

This warranty does not apply to repairs or replacements necessitated by any cause beyond the control of SFC including, but not limited to, any malfunction, defect or failure caused by or resulting from unauthorized service or parts, improper maintenance, operation contrary to furnished instructions, shipping or transit accidents, modification or repair by the user, abuse, misuse, neglect, accident, incorrect power line voltage, fire, flood or other Acts of God, or normal wear and tear.

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

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

ATTENTION

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

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

Date of Purchase _____ Purchase Price _____

Where Purchased _____