



VCC-6584

INSTRUCTION MANUAL

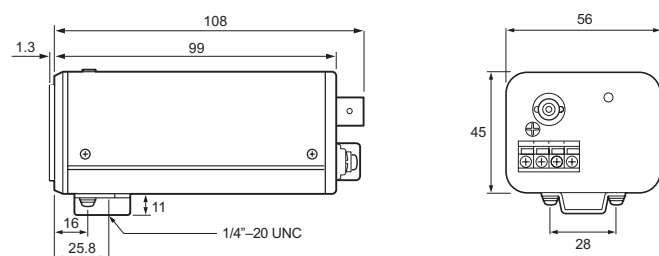
(Warranty attached)

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.

● Dimensions: mm



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.

INFORMATION TO USER

Safety Guard

THIS SYMBOL INDICATES THAT THERE ARE IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THIS UNIT.

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

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

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

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

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

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

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

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.

PRECAUTIONS

■ In case of problem

Do not use the unit if smoke or a strange odor comes from the unit, or if it seems not to function correctly. Turn off the power immediately, and 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, disconnect the power cord immediately, and 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.

■ Install away from electric or magnetic fields

If installed close to a TV, radio transmitter, magnet, electric motor, transformer, or audio speakers, the magnetic field they generate may cause image distortion.

■ Protect from humidity and dust

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

■ Protect from high temperatures

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

■ Cleaning

- Dirt can be removed from the cabinet by wiping it with a soft cloth. To remove stains, wipe with a soft cloth moistened with a soft detergent solution and wrung dry, then dry by wiping with a soft cloth.
- Do not use 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.

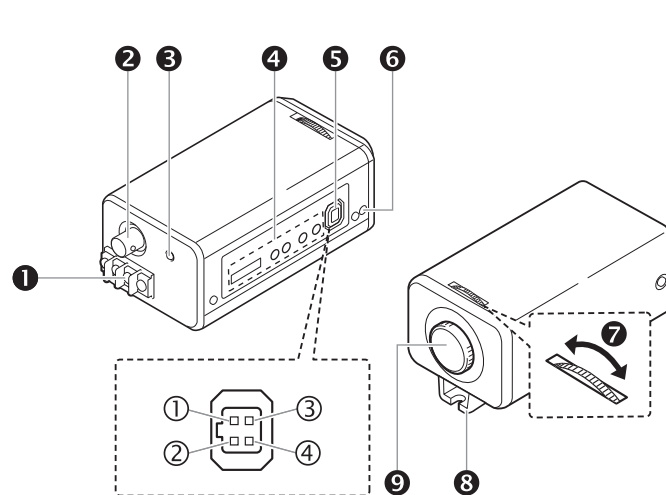
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L5AX4/US (0504TR-SY)



SANYO Electric Co., Ltd.
Printed in Japan

NAMES AND FUNCTIONS OF PARTS

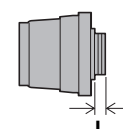


- 1 GND, AC24V, DC12V (ground terminal, AC 24 V or DC 12 V input terminal)**
- 2 VIDEO OUT (video output terminal: BNC connector)**
Connects to the video input terminal on the monitor, digital video recorder or time-lapse VCR.
- 3 POWER (power indicator)**
Lights when the camera power is on.
- 4 Camera adjustment/setting section**
See "CAMERA ADJUSTMENTS/SETTINGS".
- 5 LENS (lens iris output terminal)**
Used to connect the lens plug when the auto-iris lens is attached.
① Brake coil (-) ② Brake coil (+)
③ Drive coil (+) ④ Drive coil (-)

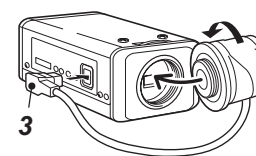
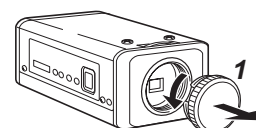
- 6 LOCK (flange-back lock screw)**
- 7 Flange-back adjustment dial**
- 8 Camera attachment bracket**
Used to attach the camera.
- 9 Lens mount cap**
Protects internal parts of the camera, such as the CCD, from damage.

● Attaching the lens
Use a DC type auto-iris lens (sold separately).

- NOTE:**
- Do not use a lens if length "L" is more than 5 mm. Otherwise, it may damage the camera and prevent proper installation.
 - Depending on the type of lens, the shape of the lens plug may differ. In this case, consult your dealer or an Authorized Sanyo Service Center.
 - When attaching a C mount lens, attach the lens to the camera after inserting the C mount ring (sold separately).



- 1 Remove the lens mount cap from the camera.**
- 2 Install the auto-iris lens.**
- 3 Connect the lens plug to the LENS terminal on the side of the camera.**



CS mount type lens

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 dial)?
- Is there adequate illumination?

■ If the image is unclear

- Is the monitor adjusted correctly?
- Is the flange-back position correctly set?
- Is the lens in focus?
- Is the lens dirty?
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.

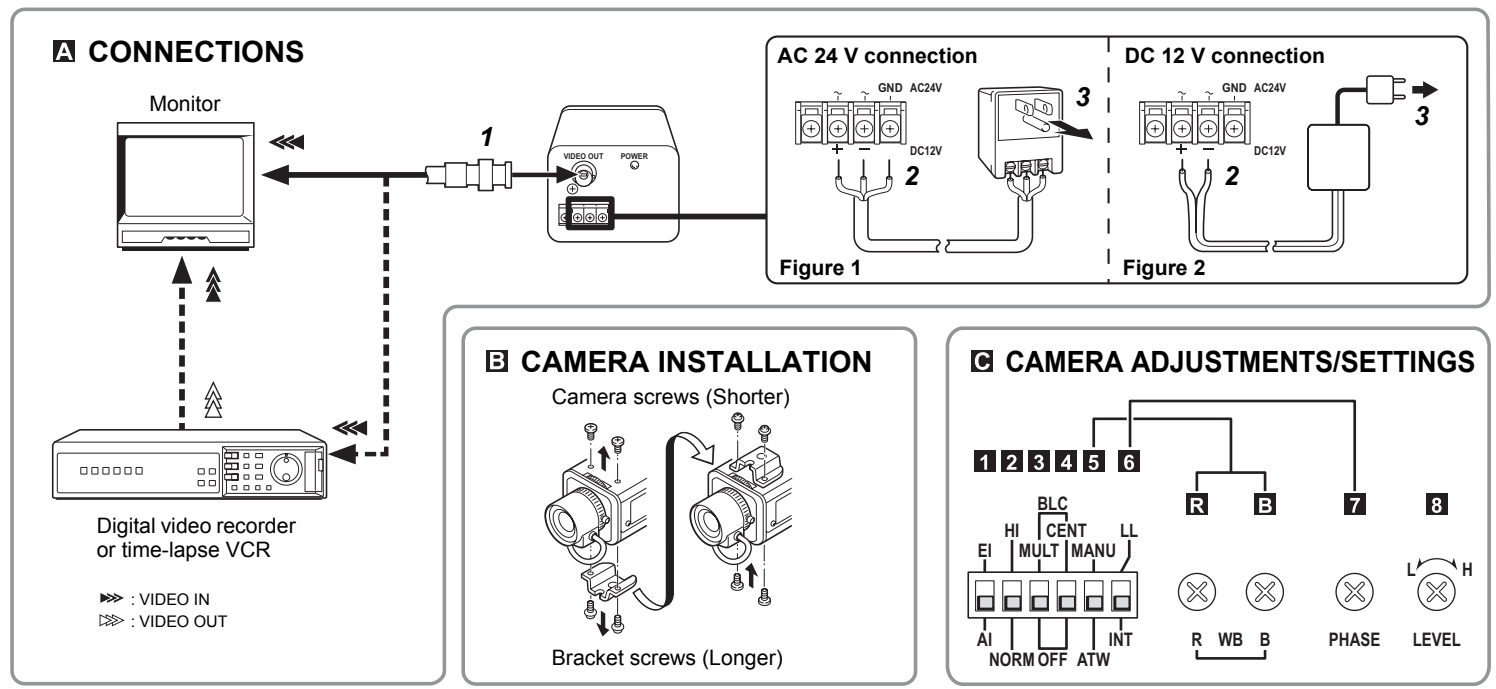
For servicing, maintenance, or repairs, consult your dealer or an Authorized Sanyo Service Center.

SPECIFICATIONS

Scanning system	: NTSC standard TV system (525 TV lines, 30 frames/s)
Interlace	: PLL 2:1 interlace
Image device	: 1/3 inch solid state image device CCD
Number of pixels in image area	: 768 (H) x 494 (V)
Sync system	: Internal sync/Line lock (only when using an AC 24 V adapter)
Resolution	: 520 TV lines horizontally, 350 TV lines vertically
Video output level	: 1.0 V(p-p)/75 Ω, composite
Image S/N ratio	: More than 48 dB (More than 50 dB for AGC OFF)
Minimum required illumination (incandescent lighting)	: GAIN HI: Approx. 0.5 lx (F 1.2 lens) GAIN NORM: Approx. 1.0 lx (F 1.2 lens)
Backlight compensation	: OFF/Multi-spot metering (2 modes)/Center-weighted metering
Iris function	: Auto-iris/Electronic-iris
Lens iris output terminal	: 4-pin
Flange-back	: 12.5 mm ±0.5 mm
White balance	: Auto/Manual
Gain control	: Normal/High
Lens mount	: CS mount
Operating environment	: Temperature: -10°C – +50°C (14°F – 122°F) Humidity: less than 90%RH (no condensation)
Power supply	: AC 24 V ±10%, 60 Hz/DC 12 – 15 V ±10%
Power consumption	: 3.6 W (with auto-iris lens)
Weight	: Approx. 280 g (without lens)

Appearance and specifications are subject to change without prior notice or obligations.

CONNECTIONS AND INSTALLATION



A CONNECTIONS

- What you need**
- Peripheral equipment (such as monitor, digital video recorder or time-lapse VCR)
 - Cables for connecting peripheral equipment and camera (coaxial cables, connecting plugs)
 - Power adapter (AC 24 V or DC 12 V)
- Supported coaxial cables**
- You can use any of the following coaxial cables:
- RG-59U (3C-2V) Length: 250 m max.
 - RG-6U (5C-2V) Length: 500 m max.
 - RG-11U (7C-2V) Length: 600 m max.

CAUTION

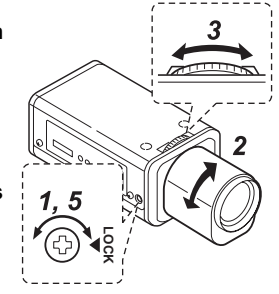
- When using an RG-59U (3C-2V) cable, do not use it on piping or air wiring.
- Select the cable according to the distance between the devices you wish to connect.
- If you use a cable other than the types above, the image or sync signal will be attenuated and will not be transmitted correctly.

- Making connections**
- Connect the camera and peripheral equipment.
 - Connect the power cable.
 - <When using an AC 24 V adapter>** Connect 3 wire grounded cable (use 18AWG+) as shown in Figure 1. To prevent a fire hazard use any UL listed wire rated VW-1 for the AC 24 V cable input terminal.
 - <When using a DC 12 V adapter>** Check that the polarity is correct and connect the cable as shown in Figure 2.
 - Insert the power adapter plug into the wall outlet. The POWER indicator (red) lights.

B CAMERA INSTALLATION

- Camera attachment bracket**
- The camera attachment bracket can be reconfigured as shown in Figure B above depending on the installation environment. As per design, use the removed screws.
- NOTE:**
- When monitoring lighting or other extremely bright objects (which exceed the maximum required illumination), smearing may occur in the vertical or horizontal direction (either above and below the high-brightness object or as a perpendicular band). In such a case, adjust the angle of illumination and other factors while observing the monitor.
 - When using the camera attachment stand (sold separately), select a location that will be able to withstand the weight of the camera and stand for many years, and fix them securely in place.

- Flange-back adjustment**
- This normally does not need adjustment. If the picture is out of focus at the telephoto position, adjust the flange-back position as described below.
- Loosen the LOCK screw.
 - Set to the maximum telephoto position and focus the picture using the focus ring.
 - Set to the maximum wide-angle position and focus the picture using the flange-back adjustment dial.
 - Repeat steps 2 and 3 if the image does not stay in focus when changing from a wide-angle shot to a telephoto shot.
 - When the setting is complete, tighten the LOCK screw.



C CAMERA ADJUSTMENTS/SETTINGS

The camera comes pre-adjusted and ready to install at time of factory shipment, but you may want to make adjustments or settings to adapt to the operating conditions or installation environment. If you have trouble adjusting the camera, consult your dealer or an Authorized Sanyo Service Center. (◆ = Factory default setting)

Iris setting **1**

Change iris setting when using either lens below.

EI (for indoor use)	When using a manual or fixed iris lens and the electronic iris function is on. • Set the lens aperture to the shortest F stop.
AI ◆	When using an auto-iris lens.

ADJUSTMENTS AND SETTINGS

NOTE on EI setting:

- If fluorescent lighting is used where the camera is installed, the object will flicker as a result. This type of phenomenon can be avoided by replacing the fluorescent lighting with incandescent lamps.
- If the light entering the lens exceeds the maximum required illumination, the image cannot be displayed properly. In that case, manually adjust the lens iris.

Gain control **2**

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

HI	Increased sensitivity allows shots to be taken in dark environments.
NORM ◆	Normal setting

NOTE:

The HI setting causes noise generation and a grainy image.

BLC: Backlight compensation **3 4**

This camera has three different backlight compensation modes. Change the mode to match the backlight condition.

	Multi-spot metering: normal mode When applying backlight compensation to the entire screen.	3 4
	Multi-spot metering: high mode When applying more backlight compensation than normal mode.	3 4
	Center-weighted metering When applying backlight compensation to only the central portion of the screen.	3 4
OFF ◆	This function is off.	3 4

NOTE on multi-spot metering:

If the background of the object is extremely dark, set to center-weighted metering mode.

WB: White balance (color compensation) **5 R B**

MANU	Lets you fine-tune the white balance manually.	
WB	• R (Red) dial R : Turn clockwise to augment screen red.	• B (Blue) dial B : Turn clockwise to augment screen blue.
ATW ◆	Compensation is performed automatically.	

Sync setting **6 7**

(Only when using an AC 24 V adapter)

LL	Line-Lock: Synchronizes the unit with power frequency when two or more cameras are connected via a switcher unit. When the image on the monitor rolls vertically, adjust the phase. • If using this unit as the second or subsequent camera; Adjust the roll by turning the PHASE dial 7 . • If using this unit as the first camera; Adjust the roll using the phase adjuster on the second and subsequent cameras.
INT ◆	Internal sync

NOTE:

When using a DC 12 V adapter, the sync setting is set to Internal sync.

LEVEL: Lens iris dial **8**

If the entire image is too dark or too bright when using an auto-iris lens, adjust the contrast using the LEVEL dial (**8**).

L (Counterclockwise)	Closes the lens iris, making the entire image darker.
H (Clockwise)	Opens the lens iris, making the entire image brighter.

**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 WARRANTYOR'S NEGLIGENCE, 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 _____