



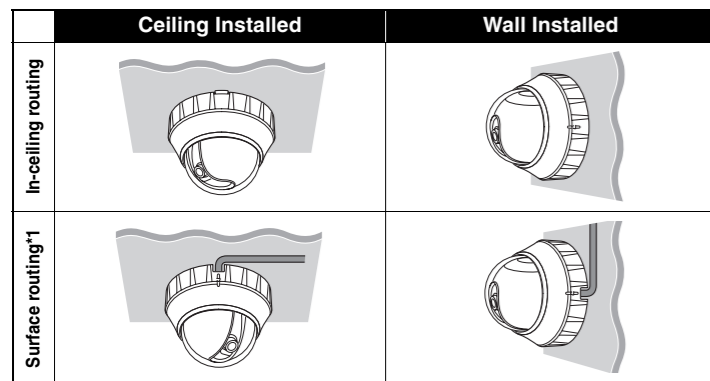
INSTRUCTION MANUAL

VCC-9684VA

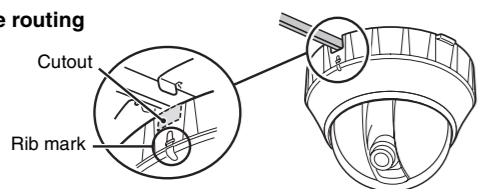
Color CCD Camera

About this manual

Before installing and using the camera, please read this manual carefully. Be sure to keep it handy for later reference.



*1 Surface routing



Safety Guard

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

WARNING: TO REDUCE 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

Important

- Be careful when opening holes for installing the unit. Work with the power and video cables pulled out for easy installation.
- Make sure to properly perform waterproofing for the ceiling or wall where you are installing the unit.
- Make sure that the surface in the installation location has no unevenness and is strong enough to bear the total weight of the unit.
- Install this unit in an environment where the temperature range stays between -10°C and +50°C/14°F and 122°F (no condensation allowed).
- As a precaution against static electricity damage, touch a nearby metal object (door knob, etc.) to dissipate static electricity in your body before touching this unit.

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 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 benzine, thinner or other chemical products on the cabinet, as this may cause deformation and paint peeling. Before using a chemical cloth, 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.

SPECIFICATIONS

| | |
|--------------------------------|--|
| Scanning system | : NTSC standard 525 lines, 60 fields/sec. |
| Image sensor | : 1/4" interline transfer method CCD |
| Number of effective pixels | : 768 (H) x 494 (V) |
| Horizontal resolution | : 540 TV lines, typical |
| Minimum illumination (approx.) | : 0.5 lx (F0.95) |
| Video output | : 1.0 V(p-p)/75 Ω, composite, BNC UTP support (VA-10T: option board) |
| Video S/N ratio | : More than 48 dB (AGC off: More than 50 dB) |
| Vari-focal lens | : f=2.8 - 8 mm, F0.95 - 1.7 |
| Rotation range | : (On the ceiling) Pan: ± 100 degrees Tilt: 0 - 90 degrees (On the wall) Pan: ± 90 degrees Tilt: 0 - 90 degrees |
| Backlight compensation | : OFF, Multi-spot metering (High/Normal), Center zone metering |
| White balance | : ATW/Manual |
| Electronic shutter | : 1/60, 1/100, 1/1000, 1/2000 sec. |
| Aperture compensation | : Sharp/Normal |
| Sync system | : Internal sync/Line-lock |
| Operating Environment | : Temperature: -10°C - +50°C (14°F - 122°F) Humidity: less than 90 % RH (no condensation) |
| Power supply | : 24 V AC ±10%, 60 Hz / 12 - 15 V DC |
| Power consumption (approx.) | : 2.4 W |
| Weight (approx.) | : 500 g (16 oz.) |
| Accessory | : Screw x1, Warranty x1 |

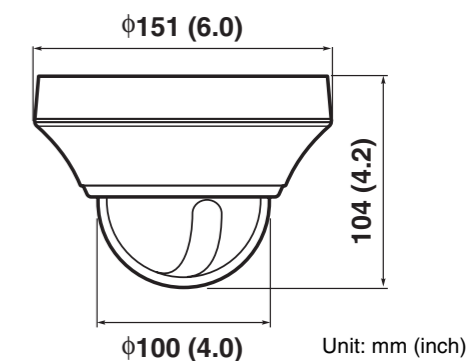
Appearance and specifications are subject to change without prior notice or obligations.

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.

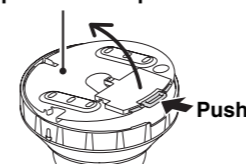
For servicing, maintenance, or repairs, consult your dealer or an Authorized Sanyo Service Center.

Dimensions

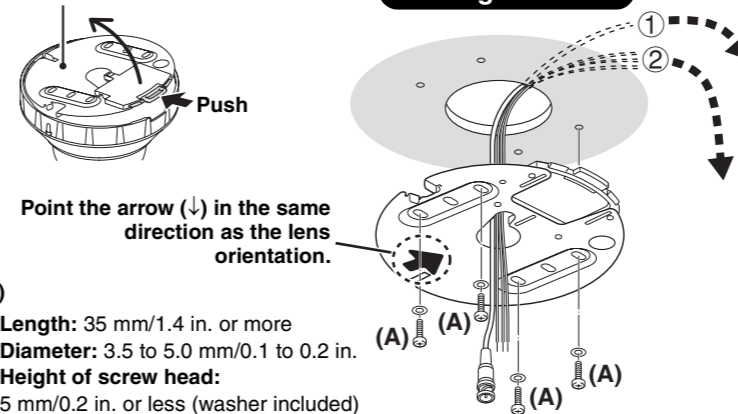


INSTALLING BASE PLATE AND CONNECTIONS

Open the base plate.



Ceiling Installed

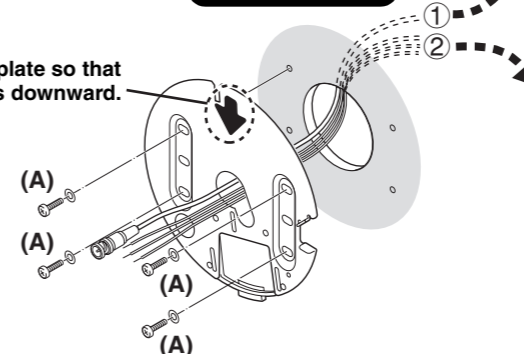


- (A)
- Length: 35 mm/1.4 in. or more
 - Diameter: 3.5 to 5.0 mm/0.1 to 0.2 in.
 - Height of screw head: 5 mm/0.2 in. or less (washer included)

Make sure to tighten the screws properly. Using screws of sizes other than specified may cause the unit to fall.

Wall Installed

Place the base plate so that the arrow points downward.



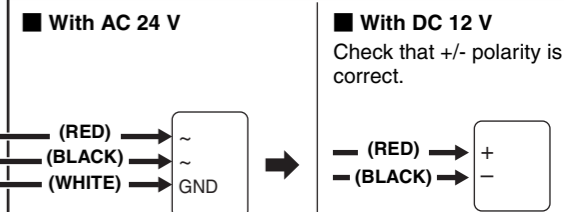
Monitor Connection



| Cable type | Length |
|----------------|----------------------|
| RG-59U (3C-2V) | 250 m (273 yds) max. |
| RG-6U (5C-2V) | 500 m (547 yds) max. |
| RG-11U (7C-2V) | 600 m (656 yds) max. |

- When using an RG-59U (3C-2V) cable, do not let it dangle in the air or attach it to piping.
- If you use a cable other than the types above, the image or sync signal will be attenuated and will not be transmitted correctly.

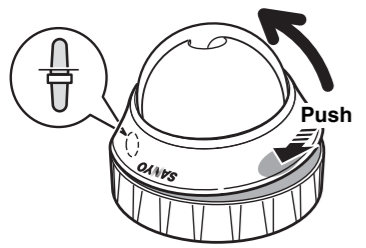
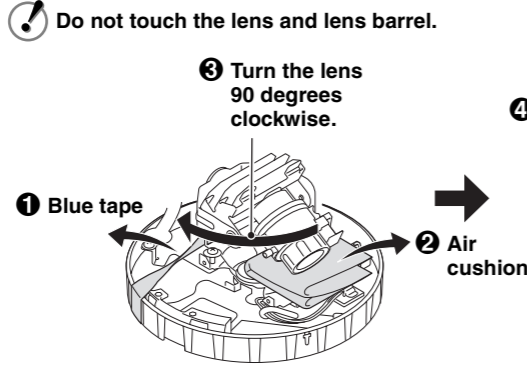
Power Supply Connection



For the connections, use cables thicker than 18 AWG.

INSTALLATION

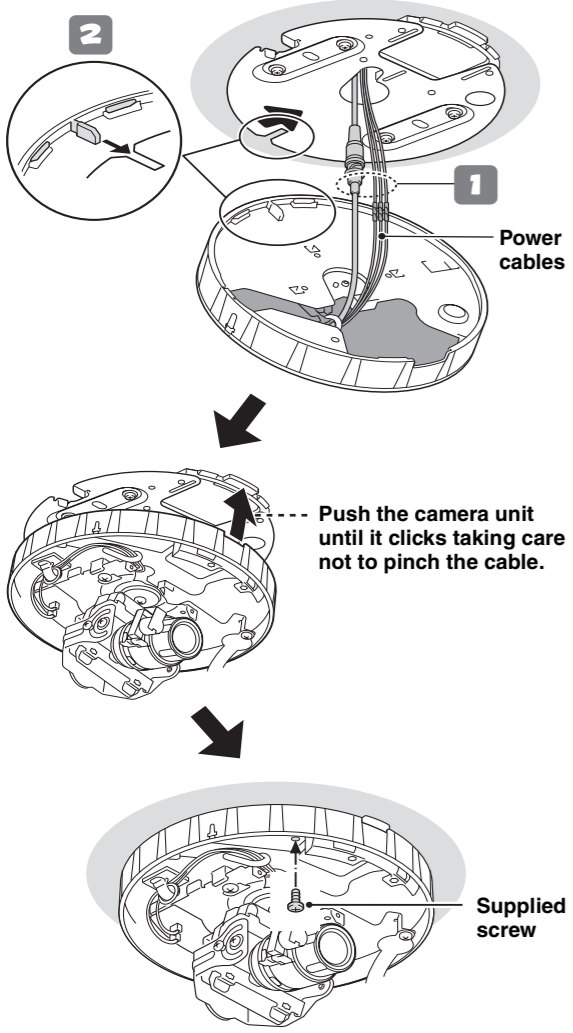
Preparation

- Remove the dome cover.**

- Remove the blue tape, air cushion and screw.**

- Turn the lens 90 degrees clockwise.**
- Screw**
- Loosen the black screw.**

Do not touch the lens and lens barrel.

A Installing on the Ceiling

- Connect the cables from the ceiling.**
- Mount the camera unit to the base plate.**



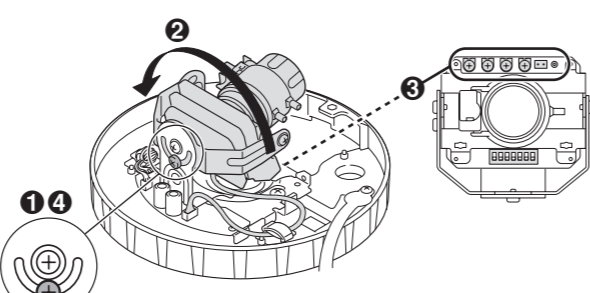
Power cables

Push the camera unit until it clicks taking care not to pinch the cable.

Supplied screw

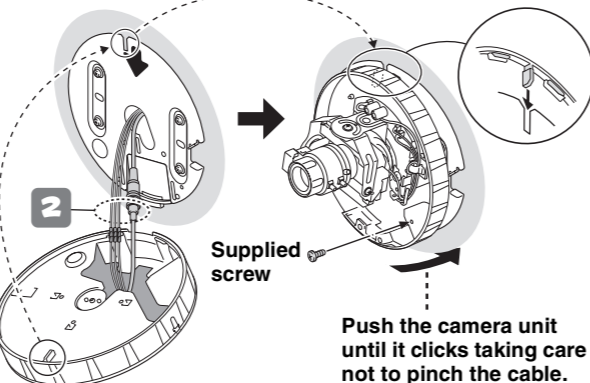
Make sure that the camera unit and base plate fit perfectly.

B Installing on the Wall

- Set the lens in the correct direction.**
 - Remove the black screw (A).
 - Turn the lens in the arrow direction to reverse the orientation.
 - Confirm that the dials are located at the top.
 - Temporarily tighten the removed black screw (A).

(Ceiling Installed) (Wall Installed)

A Black screw
- Connect the cables from the wall.**
- Mount the camera unit to the base plate.**



Supplied screw

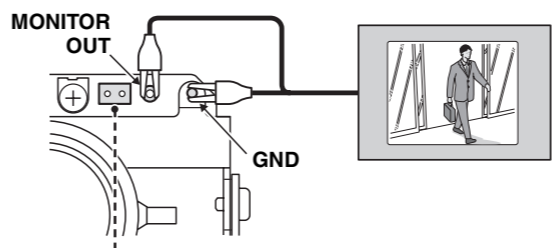
Push the camera unit until it clicks taking care not to pinch the cable.

Make sure that the camera unit and base plate fit perfectly.

ADJUSTING CAMERA IMAGE

Checks on monitor

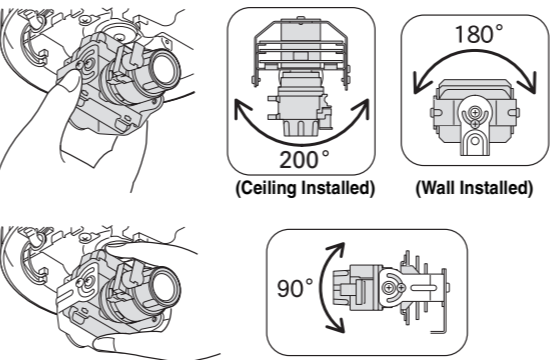
Connect a portable monitor.



A dedicated MONITOR OUT connector is provided for portable monitor.

Angle-of-view adjustment

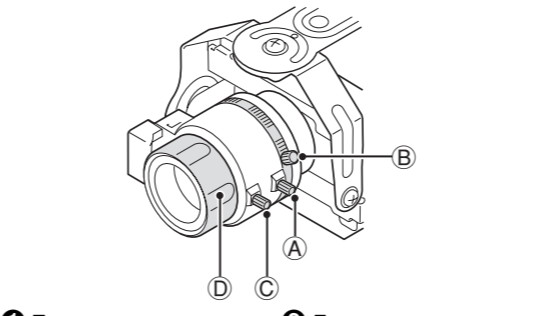
Adjust the angle of view by moving the lens unit.



200° (Ceiling Installed) 180° (Wall Installed) 90°

- Do not touch the lens and lens barrel.
- When rotating the lens unit, make sure a metal edge does not damage the cables.

Zoom and focus

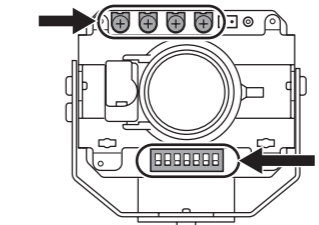


- Zoom**
Loosen the zoom ring knob (A), and turn the zoom ring (B) to zoom in or out.
- Focus**
Loosen the focus ring knob (C), and turn the focus ring (D) to focus on the object.

When finished, tighten the zoom and focus ring knobs (A C) securely.

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.

Camera adjustments/settings



The camera comes pre-adjusted and ready to install at the time of factory shipment, 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.

Electronic shutter speed setting (unit: second)

| 1/60 | 1/100 | 1/1000 | 1/2000 |
|------|-------|--------|--------|
| | | | |
| 1 2 | 1 2 | 1 2 | 1 2 |

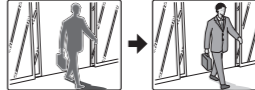
Switch1: MSB Switch2: LSB

Using the high speed electronic shutter indoors with low lighting, will give darker pictures. In such a case, add some lights to make sure the lighting is sufficient.
If the lighting is very bright, pay attention to the light angle in order to avoid or minimize the smear phenomenon effect.

Aperture compensation

| Sharp outline | Normal outline |
|---------------|----------------|
| | |
| 3 | 3 |

Backlight compensation



Only when using an auto-iris lens

| Multi-spot metering | High | Normal |
|---|------|--------|
| Backlight compensation to the entire screen* | | |
| | 4 5 | 4 5 |
| Center zone metering | | |
| Backlight compensation to the central portion of the screen | 4 5 | 4 5 |
| OFF | | |
| | 4 5 | 4 5 |

* If the background of the object is extremely dark, set to Center zone metering.

White balance (color compensation)

| Manual White Balance | Auto-Tracing White balance (ATW) |
|----------------------|----------------------------------|
| | |
| 6 | 6 |

Turn clockwise to augment the color.


Sync setting

| Line-Lock | Internal sync |
|---|---------------|
| Synchronizes the unit with power frequency* | |
| | |
| 7 | 7 |

* Adjust the roll by turning the LINE PHASE dial on the second and subsequent cameras.
If the vertical roll cannot be corrected by adjusting the LINE PHASE dial on the second and subsequent cameras, try adjusting the LINE PHASE dial on the first camera. If it still cannot be corrected, please check that the polarity of the power cords of all connected devices is correct.

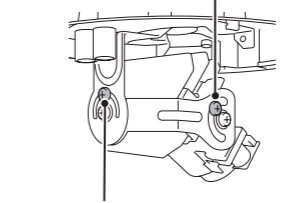
Lens iris level adjustment

If the entire image is too dark or too bright, adjust the condition.



Low (darker) High (brighter)

After finishing camera adjustments/settings ...

- Tighten the screw.**


For wall installation, securely tighten the screw you temporarily tightened.
- Install the dome cover.**
 - Push the dome cover until it clicks.
 - While holding down the dome cover, turn it in the direction of the arrow until the lens is completely visible through the camera window.