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Introduction

Your unit is designed so it can be attached on the wall. When attached on the wall, the stand permits you to the unit for angular of camera view. The model number is located on the bottom and record the serial number in the space provided below. Refer to these numbers whenever you call upon your Commax dealer regarding this product.

Model No. _____ Serial No. _____

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous Voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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Important Safeguard

Damage Requiring Service - Unplug this equipment from the power source and refer servicing to qualified service personnel under the following conditions:

- a. when the power supply cord or plug is damaged;
- b. if liquid has been spilled or objects have fallen into the unit;
- c. if the equipment has been exposed to rain or water;
- d. if the equipment has been dropped or otherwise damaged;
- e. when the equipment exhibits a distinct change in performance - this indicates a need for service.

Water and Moisture - Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

Accessories - The product may fall, causing serious injury to a child or adult, and serious damage to the appliance. Any attaching of the appliance should follow the manufacturer's instructions, and should use an attaching accessory recommended by the manufacturer.

Object and Liquid Entry - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

Overloading - Do not overload power outlets and extension cords as this can result in a risk of fire or electric shock.

Lightening - For added protection for this product before a lightning storm, or when it is left unattached and unused for long periods of time, unplug it from the wall outlet and disconnect the other system. This will prevent damage to the product due to lightning and power-line surges. Be sure your antenna is properly grounded. If you live in an area heavily prone to lightning storms, it is recommended that you invest in power-line, telephone-line, RF cable and Actuator/Polarization surge protectors to protect your other system from possible damage.

Important Safeguard

Servicing - Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Replacement Parts - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or having the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

Safety Check - Upon completion of service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Power Line - The camera door camera system should not be located near overhead power lines or other electric light or power circuits, or where it can fall into power lines or circuits. When installing a door camera system, avoid dangerous contact with power lines or circuits.

Attachment - Do not use attachments not recommended by the product manufacturer as they may cause hazards.

Safety Check - Upon completion of service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Power Sources - This equipment should be operated only from the type of power source indicated on the marking label.

Grounding - This product is equipped with a polarized alternating-current line plug. This plug will fit into the power outlet only one way. This is a safety feature. If the plug should fail to fit, contact your electrician to replace your obsolete outlet.

Power Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them; pay particular attention to cords at plugs, convenience receptacles and the point where cords exit from the equipment.

Overloading - Do not overload power outlets and extension cords as this can result in a risk of fire or electric shock.

General Features

There is no where better than surveillance home, factory, office to make your house a security home. COMMAX surveillance system are here to provide positive visual and convenience life.

General Characteristics

The system consists of :

- For 12V DC Operation (power supplied from the monitor).
- Recess-Flushed Box
- Most Easy To Installation
- Rain Protection Housing For Recess
- Minimum Illumination : 0 Lux (300mm from the camera)
- Operating Temperature : -10° C ~ +40° C
- A Wide Variety Of Door Camera System To Suit Various Applications Are Available.
- Lens Allows For Easy Installation And Utilization Flexibility.
- With its covert design, the DRC series are suitable for Bank, Hotels, Apt, House and other commercial facilities.

Preparation

On Safety

- For DC operation, operate the unit on 12V DC.
- Should any solid object or liquid fall into the cabinet, disconnected the unit and have it checked by qualified personnel before operating it any further.
- The Connector will fit into the power outlet only one way. If you are unable to insert the connector fully into the outlet, contact your dealer.

On Installation

- Allow adequate air circulation to prevent internal heat build-up.
- Do not place the unit on surfaces (rugs, blankets,etc) or near materials(curtains, drapereis) that may block the ventilation slots.
- Do not install the unit near heat sources such as radiators or air ducts or in a place subejct to direct sunlight, excessive dust, mechanical vibration or shock.
- Keep the unit and glass away from equipment with strong magnets, such as a microwave oven or large loudspeakers.

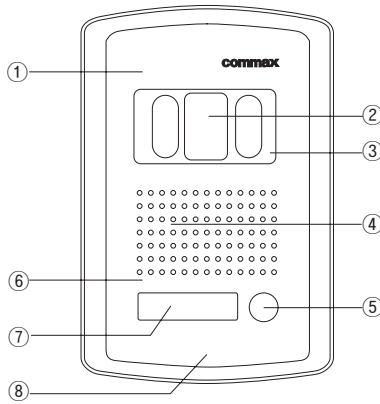
On Operating

- When the unit is not in use, turn off the power to conserve energy and to extend its useful life.
- Clean the cabinet, glass and controls with a drt soft cloth, or a soft cloth lightly moistened with mild detergent solution.

On Cleaning

- Do not use any type of solvent, such as alcohol or benzene, which might damage the finish.
- If you have any questions about this unit, contact your Commax dealer.*

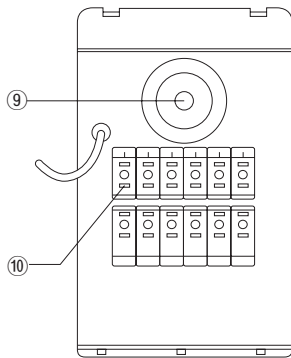
Location and Control of Functions



Front View

- ❶ **Microphone**
When Turn on the [CALL] button on the panel, and conversation with residents.
- ❷ **C.C.D. Camera Lens**
Built-in Black & White C.C.D. 1/3" lens (for DRC-4BA) and Color 1/4" C.C.D lens (for DRC-4CA).
- ❸ **Camera Protection Window**
Prevent the scratch from the other matters.
- ❹ **Speaker**
Aural from the resident.
- ❺ **Calling Button**
Turn on the [CALL] button if desired calling.
- ❻ **Front Panel**
No surface on corrosion material.
- ❼ **Name Card**(Model : DRC-4BAN, DRC-4CAN)
Indicated in resident address.
- ❽ **Screw Hole**
Use the assembly panel. **Note :** Before connection, contact to technical engineer.

Location and Control of Functions



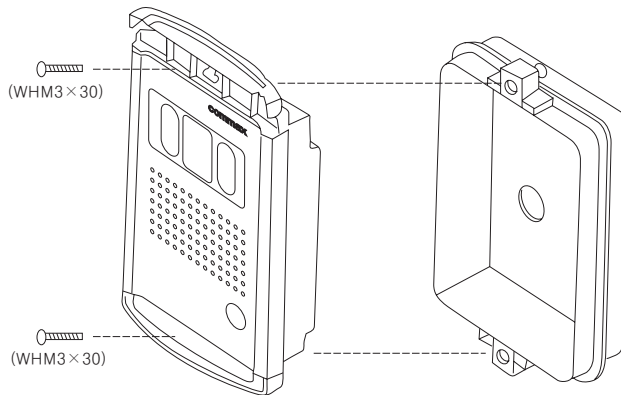
Rear View

- ❾ **Angular Field Of View For Camera**
Adjust the angular field of the camera for manually.
 - ❿ **Connection Wire Release**
 - ⓫ **Connection Terminal**
Use the connection with your residents.
- Note: Do not make any wire connections these terminals or level the cover off while the unit is plugged into an DC power supplier.**

Attaching Consideration

When selecting the location for attaching your unit, please remember...

- Bottom should be of sufficient strength to permit attaching.
- Allow adequate space on the both side of the unit for proper ventilation access to cable and unit for viewing easy.
- For angular field of camera view adjust by manually be sure there is sufficient space behind the unit to adjustment to angular field of view its position.
- A power cord should be within reach of the DC line cord with the cord properly extended and secured (For using adapter is supplied and optional).
- The area directly below the unit should not be used for cooking radiator or by other appliances generating heat or steam.
- Hold the unit and in various locations while you think through what will be the mos convenient location in your surveillance place. Keep in mind your normal work pattern especially the use of other counter top electrical appliances.
- Try your unit in various location in the Hotel Super Convention Department Store Factory Apt to find the area offering the best possible reception.



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How To Installation

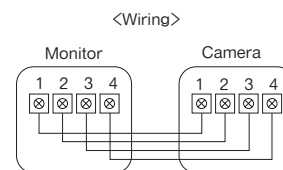
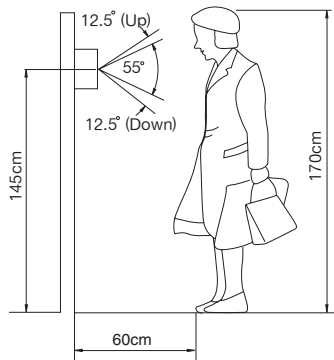
Connection Wires :

1. Connection wires to inside unit on the side of monitor.
(Notice : Checking to screw dimension : M3 X 30mm (With washer) :2 pieces - included).

2. Connection Terminal : Check the wire connection terminal level of the side of unit (Refer to wiring diagram).

Notice : Do not make any wire connections to these terminals while the unit is connection with standard wires.

Attention : Make sure that check the DC 12V or other wires.



Notes On Connecting

- Power plugs of connected equipment must be disconnected before installations.
- For details of wiring and operation of equipment to be connected, refer to their operation manuals.
- Coaxial cables for video signals and lenses are not supplied with the camera.

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Note On Use and Installation

Do Not Aim The Camera At The Sun

Do not aim the camera at the sun or point it at the sun even if you are not shooting.

Do Not Shoot Intense Light

Framing intense light such as a spotlight may cause bloom or smear. A vertical stripe may appear on the screen. However, this is not a malfunction.

Treat The Camera With Care

Do not drop the camera or subject it strong shock of vibration. Otherwise, the camera may malfunction.

Never Touch Internal Parts

Do not touch the internal parts of the camera other than that parts specified. Otherwise, the camera may malfunction.

Plug off when you do not intend to use the camera for a long time.

Do Not Splash Water On The Camera

Install the camera where the camera can be kept dry. If the camera gets wet, turn off the power and contact you dealer.

Install The Camera Where No Video Noise Appears

If cables are wired near electric lightning wires or a TV set, noise may appear in images. In this event, relocate cables or reinstall equipment.

Check The Ambient Temperature And Humidity

Avoid using the camera where the temperature is hotter or colder than specified. Otherwise, the quality of images may deteriorate or internal parts may be affected. Special care is required to use the camera at high temperature and humidity.

Should You Notice Any Trouble

If any trouble occurs while you are using the camera, turn off the power and contact your dealer. If you continue to use the camera when there is something wrong with it, the trouble may much worse and an unpredictable accident may occur.

Troubleshooting Guide

Before You Call

Try the troubleshooting guide on the following pages. If you still can't solve your problem, try one more thing before you call.

1. Attention to your unit is operating to the DC receptacle.
2. Do not disassembly before for qualified personnel.
3. Make sure that connector the unit back in and try your procedure again as block diagram.

Getting Help

If you still can't correct an operating problem, contact your dealer. If your dealer is unable to solve your problem, contact Commax Customer Service, **Please don't open the cabinet and attempt to repair the unit, as this will void your warranty.**

Unplug the unit and refer servicing to qualified service personnel when:

- The power supply or plug damaged.
- The unit has been exposed to rain or water.
- A solid object or liquid has fallen into the unit.
- The unit exhibits a distinct change in performance or will not operate normally.

Troubleshooting Guide

| Condition | Checking Points | Solution |
|-------------------------------|---|--|
| No Image | <ul style="list-style-type: none"> - Are the camera and connected equipment turned on ? - Is the lens adjusted properly ? | Make sure that system unit is plugged. Make sure that adjusted properly your desired. Make sure that system cable correct connection of the unit |
| Noise Picture | <ul style="list-style-type: none"> - Are cables connected correctly? | Make sure that connector is correct level. |
| Unnatural Color | <ul style="list-style-type: none"> - Are your correct connector? - Are you checking the monitor? - Is the monitor adjusted correctly? (when switched to manual adjustment)? - Was the white balance of the camera adjusted - Is the lighting too weak? | Check connectons between system, polarizer and relay. Make sure that CONT, BRT,COLOR as well as desired. Check that adjusted as well as matching to circumstance. Make sure that adjusted your monitor or other controls. |
| Dotted Lines or Strips | <ul style="list-style-type: none"> - Is often caused by local interference (e.g cars, neon signs, and hair dryers etc). | Make sure that your unit is stable or not environment. Make sure that readjustable to Back Focus of lens. |

Specification

| Model No. | DRC-4BA, DRC-4BAN (B & W) | DRC-4CA , DRC-4CAN(Color) |
|--------------------------------------|---|---------------------------|
| Input Voltage | DC12V, ±10% (Power supplied from the monitor) | |
| Connection Wire | 4 Wires (Polarity) | 2 Wires (Non-Polarity) |
| Image Device | 1/3" Black & White C.C.D. Camera | 1/4" Color C.C.D Camera |
| Scanning Frequency | Horizontal Range :15.735 KHz/60Hz (for EIA, NTSC) Vertical Range :15.625KHz/50Hz (CCIR, PAL) | |
| Communication System | Synchronization | |
| Angular Field Of View Lens | Horizontal : 68° Vertical : 55° Up Level : 12.5° Down Level: 12.5° | |
| Operating Ambient Temperature | -10° C to +40° C | |
| Weight (g) | 500 | |
| Dimensions (W/H/D)mm | 124/186/50 | |

External design, features, functions and specifications of the product can be changed without any prior, for promoting the quality of the product.

COMMAX LIMITED WARRANTY

What We Will Do

Commax warrants this product for normal home use within all over world a follows:

- For ninety days from original date of purchase or receipt as a gift and manual, COMMAX will, at its option, repair or replace a defective product at free charge to you.
- For additional nine months COMMAX will furnish all to defective parts. Labor is not included during this period.
- Parts and/or replacement product supplied under this warranty may be new or rebuilt at commax's option.

How To Obtain Warranty service

Deliver your set prepaid id o ny commax authorized service facility

Where To Get service

To locate your nearest commax authorized service facility, call the COMMAX Service Center 080-902-2222 Customer Information Service, toll free. The customer's sole remedy shall be such repair or replacement as is expressly provided above, and commax shall in no event be liable for any incidental or consequential damage arising out of the use or inability o use this product for any purpose whatsoever.

Some countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specified legal rights and you may also have rights which vary from products to consumer.

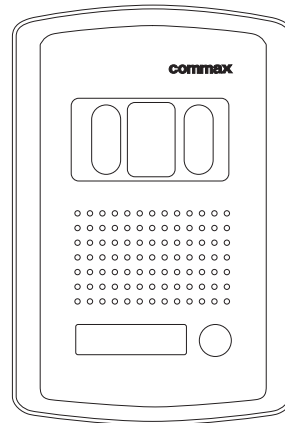
We bring good things to life- commax



commax[®]

Model No.;DRC-4BA (B&W) DRC-4CA (Color)
DRC-4BAN(B&W) DRC-4CAN(Color)

OUTDOOR Camera



Before operating the unit, please read this manually thoroughly and retain it for future reference

Use and Care Guide