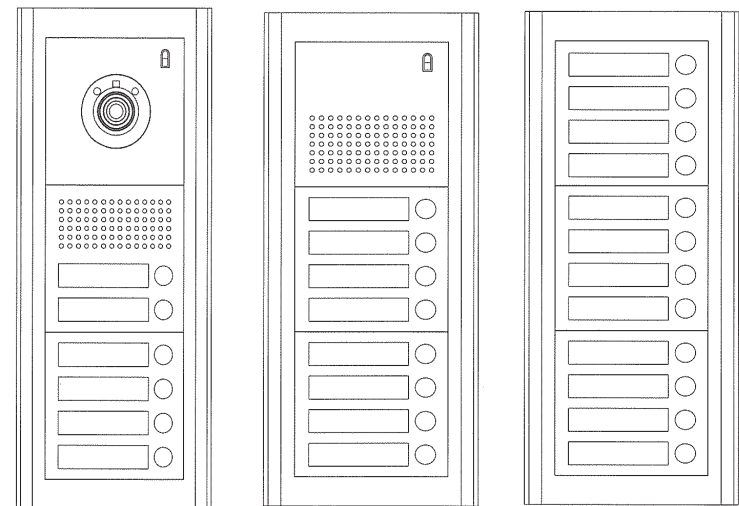


Since 1968

Home Network  
**COMMAX**

**COMMAX**



## User Manual

Multi-Entry System DRC-nMB/nMC DR-nMB/nMS

**COMMAX Co.,Ltd.**

513-11, Sangdaewon-dong, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea

Int'l Business Dept. : Tel.; +82-31-7393-540~550 Fax.; +82-31-745-2133

Web site : [www.commax.com](http://www.commax.com)

Printed In Korea / 2009.09

[www.commax.com](http://www.commax.com)

**COMMAX Co.,Ltd.**

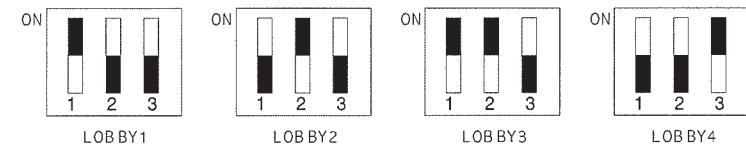


- Thank you for purchasing COMMAX products.
- Please carefully read this User's Guide (in particular, precautions for safety) before using a product and follow instructions to use a product exactly.
- The company is not responsible for any safety accidents caused by abnormal operation of the product.

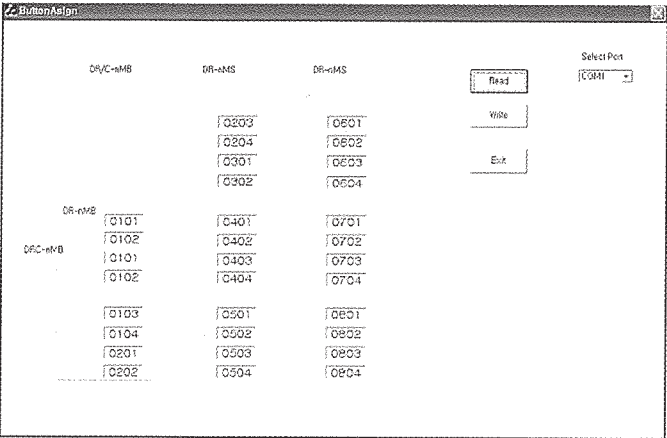
## 9. DIP switch setting

\*\* DIP SWITCH setting is needed to prevent data collision in case of installing more than one Multi Entry Panel (maximum 4 units)

- 1) It sets with DIP S/W on the back side of panels.
- 2) It sets with DIP S/W No.1 ~ 3 to assign each number.
- 3) In case of 4 units of panels, the DIP SW setting is as below

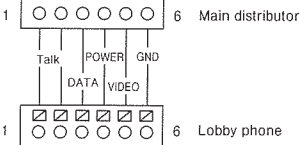


After changing number as below click the “write” button.



6) Wiring Diagram with Main Distributor

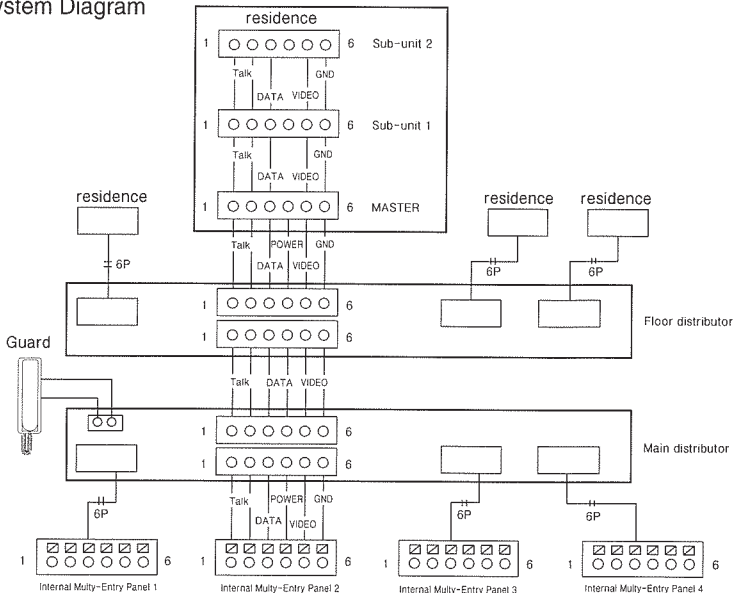
6)-1 Wiring Diagram with Main Distributor DR/DRC-nMB



6)-2 Wiring

- \* The wire should be installed with the proper polarity. Video door phone would not work in case of wrong wiring.
- \* Power is supplied from a main distributor (24V 3A)
- \* Coaxial cable (5C@V) should be used for video line of this system

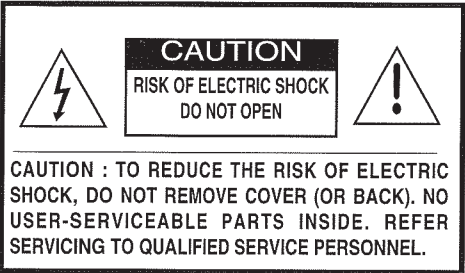
6)-3 WiringSystem Diagram



1. Introduction

WARNING

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 unit.

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly; that is, in strict accordance with the manufacturer’s instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limitations for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of the FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 to an outlet of a circuit different from that to which the receiver is connected.
- Consult the dealer or on experienced radio/TV technician for help.

**TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET, UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.**

## 2. Important Safety Instructions

**1. Read Instructions** - All the safety and operating instructions should be read before the product is operated.

**2. Retain Instructions** - The safety and operating instructions should be retained for future reference.

**3. Heed Warnings** - All warnings on the product and in the operating instructions should be adhered to.

**4. Follow Instructions** - All operating and use instructions should be followed.

**5. Cleaning** - Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol. Use a damp cloth for cleaning.

**6. Attachments** - Do not use attachments not recommended by the product manufacturer, as they may cause hazards.

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

**8. Accessories** - Do not place this product on an unstable cart, stand, tripod bracket, or table. The product may fail, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

**9. A product and cart combination** should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.



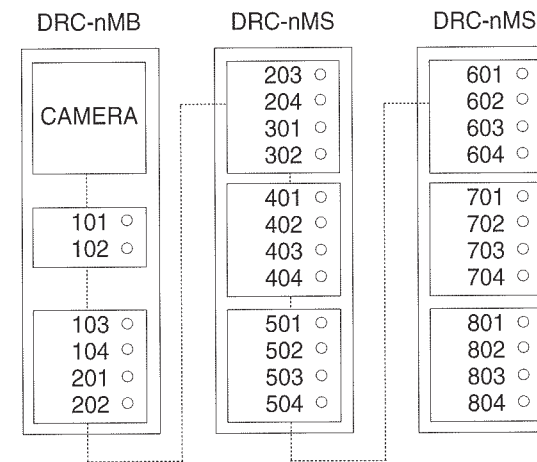
**10. Ventilation** - Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product. They protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided, or the manufacturer's instructions have been adhered to.

**11. Power Sources** - This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply in your home, consult your product dealer or local power company. For products intended for operation from battery power or other sources, refer to the operating instructions.

**12. Grounding or Polarization** - This product may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still cannot be inserted, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

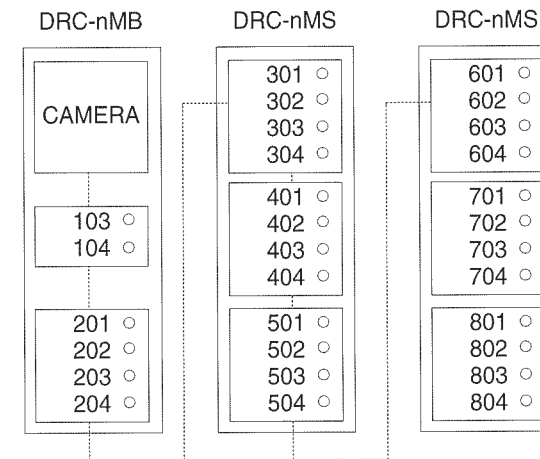
### 4) Wiring

The wiring of this product is as below.



### 5) The way to allocate Button assignment.

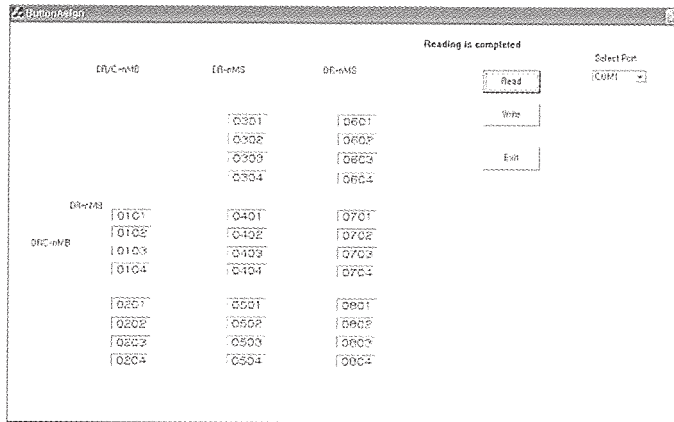
For example, user allocate the button number as below.



## Important Safety Instructions

## 8. How to use the registering residence program and wiring

- 1) Installation of program
  - 1)-1. Download all related files of CD to any directory in a PC.
  - 1)-2. Run the "Button assign.exe" in the directory.
- 2) Residence information is saved in Multi Entry Panel.



- 3) Button Assign
  - 3)-1 Connect the COM1 port of PC with CN7 port of DR/DRC-NM with RS-232 cable. The RS-232 cable is not included in this product package.
  - 3)-2 Double click the icon of Button Assign program
  - 3)-3 Select the port connected with your PC at the "Select Port" box in the upper right side. (COM1)
  - 3)-4 Upon clicking the "Read" button, all residence numbers for each button are displayed as shown in the above picture
  - 3)-5 To start programming, all residence numbers for buttons are designated as default value
  - 3)-6 User can change residence numbers for each button by clicking the button and entering the new number.
  - 3)-7 After registering the residence number you wish to change, click the "Write" button to save the change content
  - 3)-8 In case of DRC-nMB/nMC, it starts at 103 location. If you want to start with a different number, please start changing the number from that location.  
Ex) Default 103 at the 103 location, start changing the number to 101 in the 103 location.

"n" of DR-nMB is defined by the number of the button. According to the number, the model name is different. Ex) DR-4MB, DR-8MB  
DR-nMS is the expandable unit for DR-nMB Ex) DR-4MS, DR-8MS, DR-12MS

**13. Power-Card 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 paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

**14. Protective Attachment Plug** - The product is equipped with an attachment plug having overload protection. This is a safety feature. See instruction Manual for replacement of, or resetting the protective device. If replacement of the plug is required, be sure the service technician has uses a replacement plug specified by the manufacturer that has the same overload protection as the original plug.

**15. Outdoor Antenna Grounding** - If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode (Refer to the figure on page 5 ).

**16. Lightning** - For added protection of this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

**17. Power Lines** - An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits.

When installing on outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

**18. Overloading** - Do not overload wall outlets, extension cords, or integral convenience receptacles, as this can result in a risk of fire or electric shock.

**19. 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.

**20. 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.

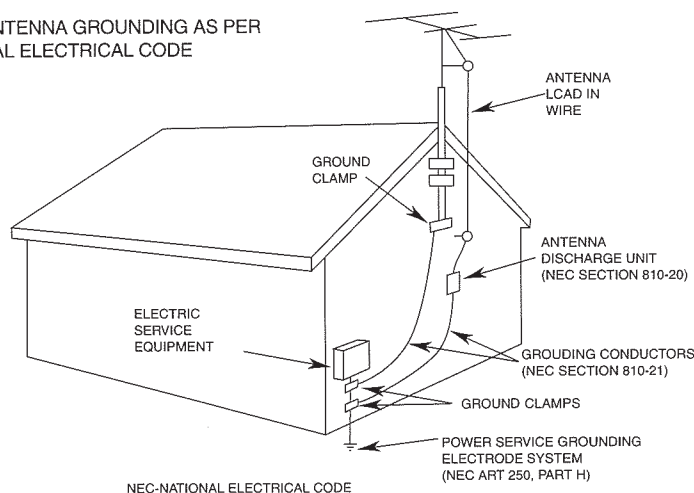
**21. Damage Requiring Service** - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions.

- A. When the power-supply cord or plug is damaged.
- B. If liquid has been spilled, or objects have fallen into the product.
- C. If the product has been exposed to rain or water.

## Important Safety Instructions

- D. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- E. If the product has been dropped or damaged in any way.
- F. When the product exhibits a distinct change in performance - this indicates a need or service.
22. **Replacement Parts** - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
23. **Safety Check** - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
24. **Wall or Ceiling Mounting** - The product should be mounted to a wall or ceiling only as recommended by the manufacturer.
25. **Heat** - The product should be situated away from heat sources such as radiators, heat resistors, or other products (including amplifiers) that produce heat.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE



## 5. Calling to Residence

- 1) Press the button of the residence you wish to call.  
(Refer to the name card for the information of residence)
- 2) Upon making a call, you will hear a calling sound at the multi panel.
- 3) After the residence answer it, you can talk to resident.
- 4) When any one is using the multi panels to call, you will hear the busy sound (Beep-Beep-Beep). Please wait and try to call again.

## 6. Calling / Talking duration

- 1) Call duration: 30 seconds
- 2) Talk duration: 60 seconds.
- 3) After finishing the call, press the "Call" button once more to end a call.
- 4) Press the "Call" button once more to cancel a call.

## 7. Other Connectable Product

- 1) Outside Distributor (CCU-OD)
- 2) Main distributor (CCU-BD): One Main Distributor supports up to 4 multi entry panels for one building and connects with outside Distributor (CCU-OD), Floor Distributor (CCU-FD), and a guard unit. (Building serial numbers of each building can be set by dip switch on the outside distributor)
- 3) The Floor distributor (CCU-FD): One floor distributor supports up to 4 residences on each Floor. (Floor numbers can be set by dip switch on the floor distributor)
- 4) Residence Units (APV-4AM, CAV-50M, DP-5HM): Main unit is connected up to 2 Sub-units in each residence. (Household number and section of Main and Sub unit can be set by dip switch on a Main unit)
- 5) GUARD Phone (TP-2HM): Resident can make a call to Guard phone  
(Guard phone has call receiving function only. Does not have out-calling function.)
- 6) Expander entry panel DR-12MS: one module is composed of 4 buttons and basically it can be expanded up to 12 buttons and it is possible to make a Number arrangement.  
DR/DRC-nMB is expandable up to 2 units of DR-12MS.



DR-nMB Overview and Function

- No. Description
- 1 C-MIC

2 Speaker

3 Call button

4 Name card

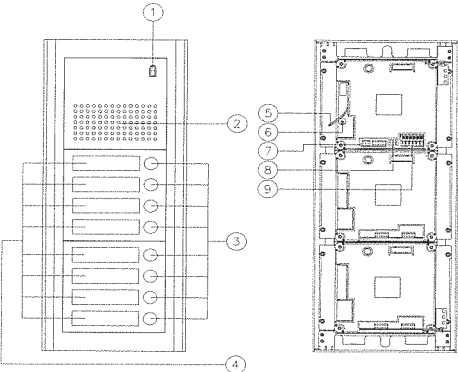
5 Door release contacts

6 Volum adjustment

7 RS-232 port for program download

8 Dip switch for DR/DRC-nMB ID setting

9 Wiring interface(connection with CCU-BD)



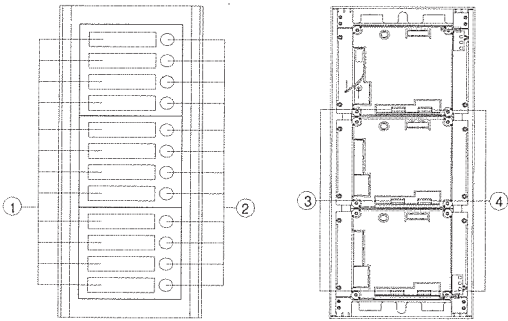
DR-nMS Overview and Function

- No. Description
- 1 Name card

2 Call button

3 IN Connector

4 OUT Connector



- 1)Press the button of the residence you wish to call. (Refer to the name card for the information of residence)
- 2) Upon making a call, you will hear a calling sound at the multi panel.
- 3) After the residence answer it, you can talk to resident.
- 4) When the multi panel is used by any one to call, you will hear the busy sound (Beep-Beep-Beep).
- Please wait and try to call again.

Table of Contents

1. Introduction

2. Important Safety Instructions

3. System Features

4. Function

5. Calling to Residence

6. Calling/ talking duration

7. Other connetable product

8. How to use the registering residence program and wiring

9. DIP Switch setting

1

2

6

7

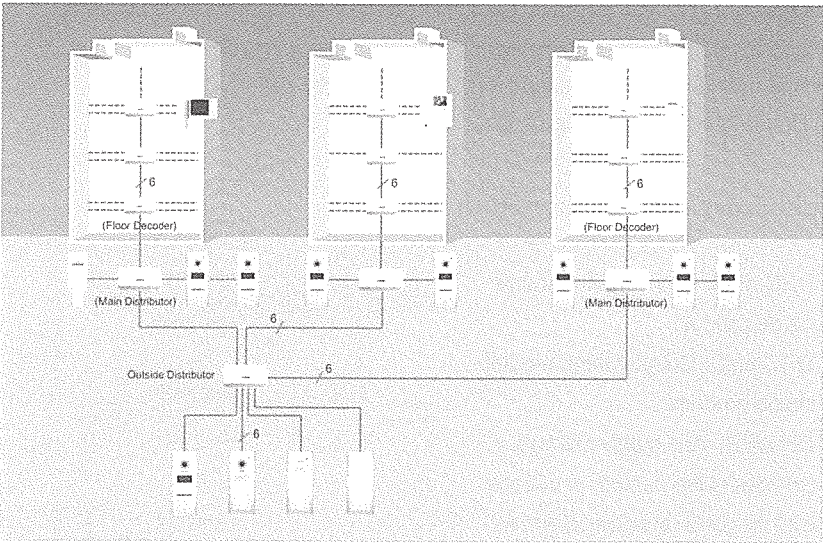
9

9

9

10

13



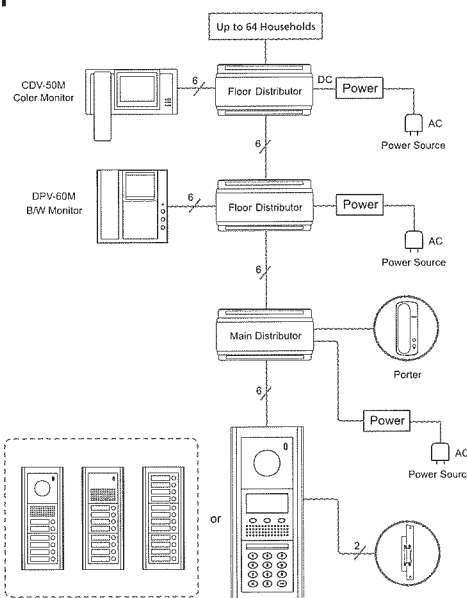
Commax Multi-Entry System is a star configuration system with 6-wiring installation. This system is designed for a small medium size building of less than 64 residences for each building and whole system can be expandable up to 12 buildings at maximum. This system supports to connect up to 3 residence units including main unit for each residence and also supports house to house call function.

### 3. System Features

- 1) Wiring: 6 wires including power source  
(All wiring can be used with UTP cable (CAT.5) except for Entry Panel)
- 2) Supporting up to 4 Multi-Entry Panels
- 3) Supporting up to 4 outside Multi-Entry Panels
- 4) Supporting up to 64 residences per building
- 5) Supporting up to 4 residences per floor
- 6) Supporting up to 3 residence units (Color video phone, B/W video phone and Audio phone available)
- 7) Supporting up to 12 buildings at maximum
- 8) Connecting residence units with a floor distributor for each floor
- 9) Connecting multi-entry panels with a main distributor for each building
- 10) Connecting outside multi-entry panels with outside distributor
- 11) All the Distributors need their own power sources respectively. (DC 24V/3A)
- 12) All the residence units (Color Video Phone, B/W Video Phone, and Audio Phone) are DC type products. Main unit is supplied power from Floor Distributor. Additional Sub-units need their own power source respectively.
- 13) Sound and video is continued for 30 seconds after call.
- 14) House to house call duration is for one minute.

### Multi Entry Panel Description

- 1) DRC-nMB: B/W camera module inside product.
- 2) DRC-nMC: Color camera module inside product.
- 3) DR-nMB: Audio only product.
- 4) n“n” means the number of buttons.  
Ex) If the number of residences is 6, the product model name will be DRC-6MB, DRC-6MC or DR-6MB.
- 5) DRC-nMS: “S” means the sub-unit. It can be expandable up to 12 residences.



### Specification and feature

Model	DRC-nMB	DRC-nMC
Current Consumption	DC 18~24V(Supplied from Main distributor) 245mA/40mA(In use/ Stand by)	DC 18~24V(Supplied from Main distributor) 245mA/40mA(In use/ Stand by)
Wiring	6 wires with polarity	6 wires with polarity
Image Device	1/3"(solid state imaging device)	C.C.D (solid state imaging device)
Transmission Method	Full Duplex	Full Duplex
Scanning Frequency	EIA(15.734KHz/60Hz)/CCIR(15.625KHz/50Hz)	NTSC STANDARD
Illumination	0.1 Lux(up to 300m/m forward)	0.1 Lux(up to 300m/m forward)
Light	Infrared LED	White LED (works at night)
Viewing Angle	Horizontal 68°, Vertical 55°	Horizontal 75°, Vertical 55°
Angle Adjustment	Up 13°, Down13°	Up 13°, Down13°
Operation Temperature	-10°C ~ +40°C	-10°C ~ +40°C
Dimension(mm)	146(W) x 347(H) x 44(D)	146(W) x 347(H) x 44(D)
Distance	TIV (0.8) : 100M/Coaxial (5C2V) : 100M	TIV (0.8) : 100M/Coaxial (5C2V) : 100M

Model	DR-n MB	DR-nMS/DRC-nMS(Expander unit)
Current Consumption	DC 18~24V(Supplied from Main distributor) 145mA/30mA(In use/ Stand by)	Supplied from Main distributor
Wiring	5 wires with polarity	Master-Slave connection
Image Device	Not support	Not support
Transmission Method	Full Duplex	Full Duplex
Operation Temperature	-10°C ~ +40°C	-10°C ~ +40°C
Dimension(mm)	146(W) x 347(H) x 44(D)	146(W) x 347(H) x 44(D)
Distance	TIV (0.8) : 300M	

#### 4. Function

- | No. | Description                                    |
|-----|--|
| 1   | C-MIC  |
| 2   | Lamp for CCD Camera                            |
| 3   | :It makes clear image at night with it's light |
| 4   | CCD Camera                                     |
| 5   | Speaker  |
| 6   | Call button                                    |
| 7   | Name card                                      |
| 8   | Camera angle adjustment                        |
| 9   | Door release contacts                          |
| 10  | Volum adjustment                               |
| 11  | RS-232 port for program download               |
| 12  | Dip switch for Lobby ID setting                |
| 13  | Wire connector                                 |

