**AIPHONE**®

VIDEO SENTRY COLOR TILT
COLOR TILT VIDEO ENTRY SECURITY INTERCOM

Models: **KB-3MRD,** *Master station with monitor*
KB-3HRD, *Sub-master station with monitor*

OPERATION MANUAL

This Manual and the Markings on the product contain various symbols in order that the product can be used safely and properly, and that the installer and user are protected from injury and property damage.

The following precautions must be thoroughly read and understood before proceeding.

KB-DAR

KB-3MRD
KB-3HRD
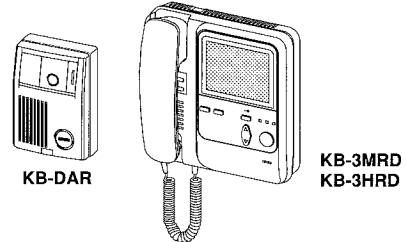
PRECAUTIONS ON INSTALLATION & WIRING

⚠ **WARNING** *Negligence could result in death or serious injury.*
⚠ **CAUTION** *Negligence could result in injury or damage to property.*

The following precautions also apply to KB-3HRD sub station with monitor.

⚠ **WARNING**

1. Do not connect any power source other than specified to terminals +, – on KB-3MRD. Fire or damage to the unit could result.
2. Do not open KB-3MRD. High voltage is present inside, and it can cause electric shock.
3. Do not change or alter KB-3MRD. It can cause fire or electric shock.
4. Make sure wires are connected properly before plugging in power supply.
5. Keep the KB-3MRD unit away from water or any other liquid. Fire or electric shock could result.
6. Do not put any forcible strength on the video monitor. Damage may result.
7. Keep AC plug away from moisture or dust.
8. Keep AC cord away from being marred or crushed.
9. Do not plug or unplug with wet hands.
10. Do not put any metal into KB-3MRD through openings. It can cause fire, electric shock or unit damage.

⚠ **CAUTION**

1. Do not install or make any wire terminations while power supply is plugged in. It can cause electrical shock or damage to the unit.
2. Do not manually hold down hook switch to verify chime volume. It sounds very loud in the handset, and can cause hearing damage.
3. Mount KB-3MRD on wall in a convenient location, but not where it could be bumped or jarred.
4. In case of electrical storms, unplug power supply from AC outlet. It can cause fire, electric shock, or power surge damage.
5. Do not install KB-3MRD components in any of the following locations, as it may cause the system to malfunction;
   – **High or extreme cold temperature area:** under direct sunlight, near equipment that varies in temperature, in front of air conditioner, inside a refrigerated area, etc.
   – **Places subject to moisture or humidity extremes.**(bathroom, cellar, greenhouse, etc.)
   – **Places subject to environmental conditions,** such as oil, dust, chemicals, salt, etc.
   – **Places subject to constant vibration or impact.**
   – **Places where noise generating devices** such as TV or radio are close by.

⚠ **GENERAL PRECAUTIONS**

1. KB-3MRD equipment, except for KB-DAR, is designed for indoor use only. Do not install outdoors.
2. KB-3MRD system is not operational during a power failure.
3. In areas where broadcasting station antennas are close by, intercom system may be affected by radio frequency interference.
4. Keep all DC wiring at least 30cm(1') away from AC 100~240V wiring, fluorescent lighting, or dimmer switches. Otherwise, cross AC wiring at a 90°angle.

Examples of Symbols;

⚠ **GENERAL PRECAUTIONS:** – ⚠ mark indicates caution statement (incl. danger and warning), which is specifically shown inside.

❗ **GENERAL INSTRUCTIONS:** – ● mark indicates contents which demands a specific action shown inside or attached.

🚫 **GENERAL PROHIBITIONS:** – 🚫 mark indicates contents which prohibit a specific action shown inside or attached.

🚫 **DISMANTLE PROHIBITIONS**

🚫 **MOISTURE PROHIBITIONS**

1 SYSTEM OUTLINE & COMPONENTS

VIDEO SENTRY COLOR TILT 3 - 5: KB-3MRD is an audio video entry security intercom for 3 video doors & max. 5 room stations with monitor.

Video door stations

PS24 : PS-24E for KB-3MRD
PS-24E, PS-24ME or PS-2410A per two KB-3HRD's
PT : AC transformer **PT-1210N** in USA
: Door release EL-9S, selectively controlled by RY-3DL (not shown)

2 NAMES & FEATURES

KB-3MRD

- Handset
- Station selector button
- Speaker
- Video monitor (TFT color LCD)
- Door release button
- Door call-in LED 1, 2, 3
- **MONITOR button**
  Instantly turns on audio & video of door to monitor handsfree, or to extend while communicating.
- Mic.
- **Tilt control button**
  Move door camera vertically from 0° to max. 40° (approx.).
- **ALL CALL button**
  Also, works for setting for PRIVACY mode.
- **TONE control button**
  Adjusts chime tone & receive volumes.
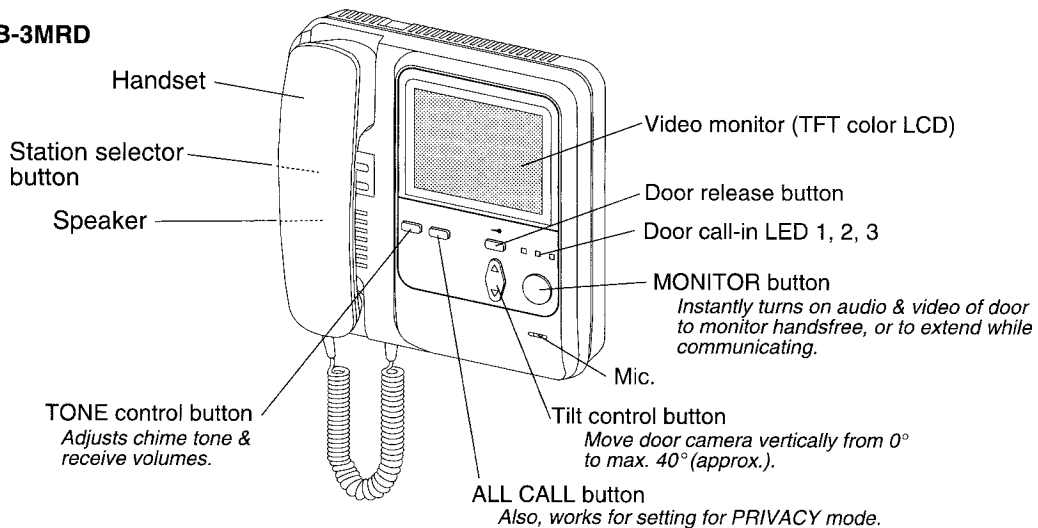
Left side
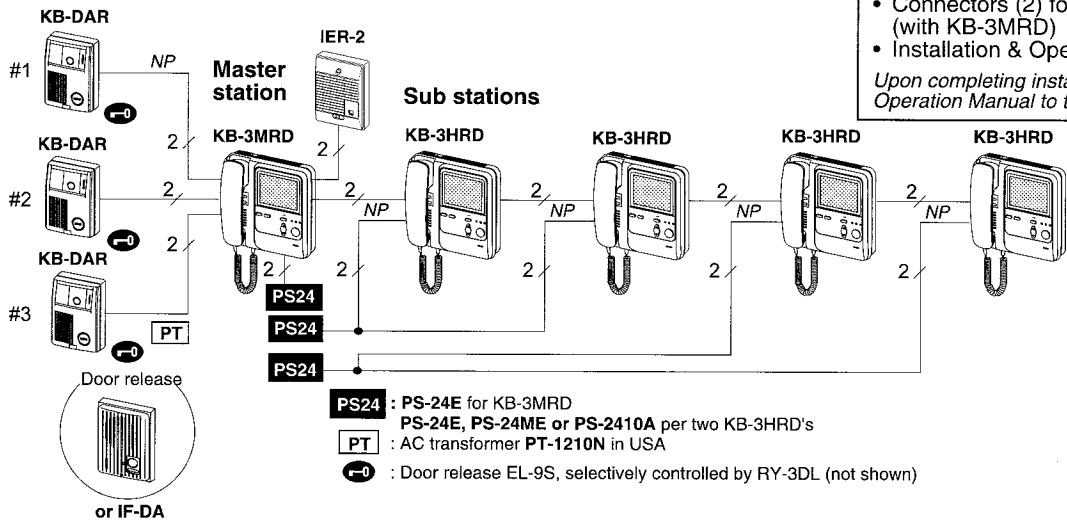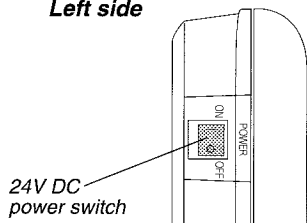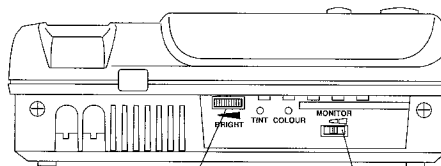

24V DC power switch

⚠ **Turn power switch off when system malfunctions.**

Bottom view

BRIGHT control

MONITOR:
Adjust audio monitor volume of door.
Can be turned off: OFF – MID – HIGH.

FEATURES

- Audio video entry security intercom 3 doors - 5 room stations with monitor with TILT camera control.
- Clear and bright image with TFT(*1) Color LCD monitor and DSP(*2) for door station.
- INSTANT - ON audio and video from door station when door calls or during monitoring from room station.
- Selective room calling with handsfree reply at called station.
- ALL CALL button.
- Selective door release control with RY-3DL adaptor.
- Max. 100m distance to farthest sub station w/monitor.
  See power supply requirements.

(*1) TFT = Thin Film Transistor
(*2) DSP = Digital Signal Processor

PRIOR SETTING

1. **Station selector button panel**
   (Set switches located under the cover)
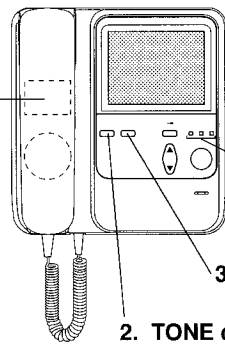
4. **In-use LED**

3. **ALL CALL button**
   for Privacy setting

2. **TONE control button**

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1. Setting Chime cut-off & White light turn on/off

Open the directory cover, pushing on either edge with ball-point pen.

Door 1 — 1
Door 2 — 2
Door 3 — 3

White light ON/OFF
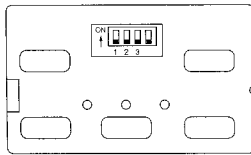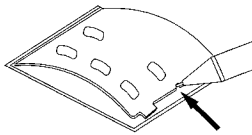
White light

Chime tone cut-off: *On each room station*

Put a switch 1 ~3 to upper ON position, which silences chime tone from that door station.

White light: *On KB-3MRD master only*

Put the left switch to upper ON position. In low light conditions, the white light turns on automatically when door calls. It is not activated in brightly lit conditions.

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2. Setting Chime tone/Receiver volumes with TONE control button
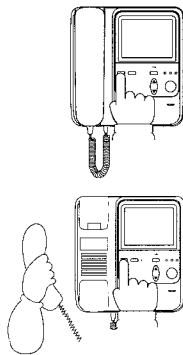
Chime tone: *On each room station*

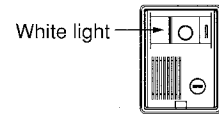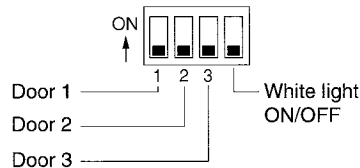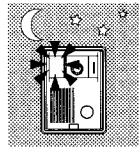In standby, press TONE control. Chime volume changes from STANDARD→ HIGH→ LOW.
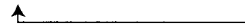
Handset receiver volume: *On each room station*

While communicating with door station or another room station, press TONE control. Receiver volume changes from STANDARD→ HIGH→ VERY HIGH.

NOTE: The setting is cancelled and returns to STANDARD position, when power switch is turned off or when power fails. Reprogram as needed.

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3. Setting for Privacy with ALL CALL button
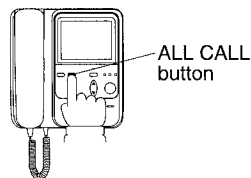
ALL CALL button

PRESS 2 sec. or more

Set Privacy mode: *On each room station*

In standby, press ALL CALL button for 2 sec. or more. ALL CALL button is lit green.

Release Privacy mode: *On each room station*

In standby, press ALL CALL button for 2 sec. or more. ALL CALL button is not lit any more.

NOTE: Privacy mode is cancelled when Power switch is turned off or when power fails.

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4. In-use LED

When All Call button is lit red and door call-in LED is on, the system is in use. Wait until lights go off to use the system.

DOOR CALL-IN
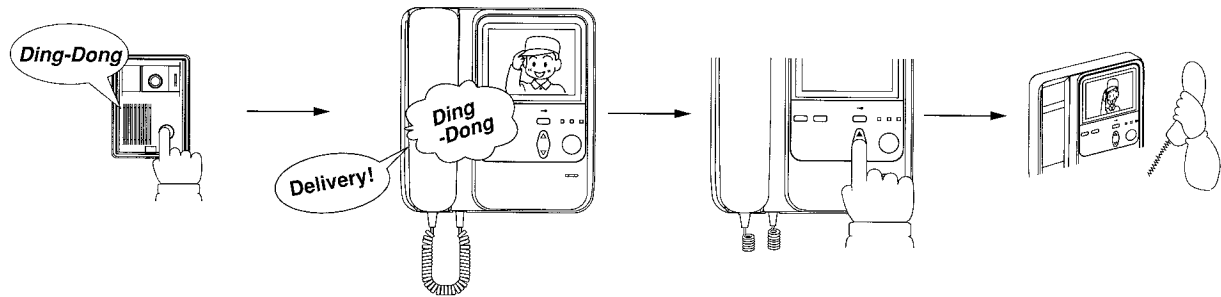
1. When call button is pressed at a door station (1 ~ 3).
2. At all room stations, chime tone sounds and image comes on.
3. Move the door camera with TILT control button, if necessary.
4. Lift handset on any room station.
5. When finished, replace handset. Image also turns off.

Operational notes

1. If call-in is not replied within approx. 30 sec., audio/image turns off.
2. Even after 30 sec., pick up the nearest handset to answer.
   The calling door station will be connected if answered within 30 seconds after the image turned off.
3. Door audio cannot be heard with MONITOR control (bottom) in OFF position (Listen to audio with handset).
4. Chime tone sounds at IER-2 call extension speaker.
5. Door audio cannot be heard during tilt operation.

Tone & LED annunciation:

|	Tone	Door call-in LED
Video door 1	4-tone chime	LED 1 flashing red (*)
Video door 2	2-tone chime	LED 2 flashing red (*)
Video door 3 (or audio)	8-tone chime	LED 3 flashing red (*)

(*) After the inside station has entered communication, the light remains steadily lit.

Calling inside with direct voice (Instant - On feature)

1. Momentarily depress CALL button on door station.
2. Speak toward the KB-DAR video door station. After chime tone sounds, start speaking.
3. Inside the room, after chime tone sounds and monitor shows the image, outside voice audio is heard.

Operational notes

1. The call-in image/audio times out automatically in approx. 2-1/2 minutes.
2. To reply, lift handset on any inside station.
3. When MONITOR volume control is turned OFF, the door audio cannot be heard.

MONITORING DOOR

1st Door 1

2nd Door 2 → *Audio of door* from speaker

3rd Door 3 from speaker

In standby, press MONITOR.

4th OFF

Who's calling? Pick up to call.
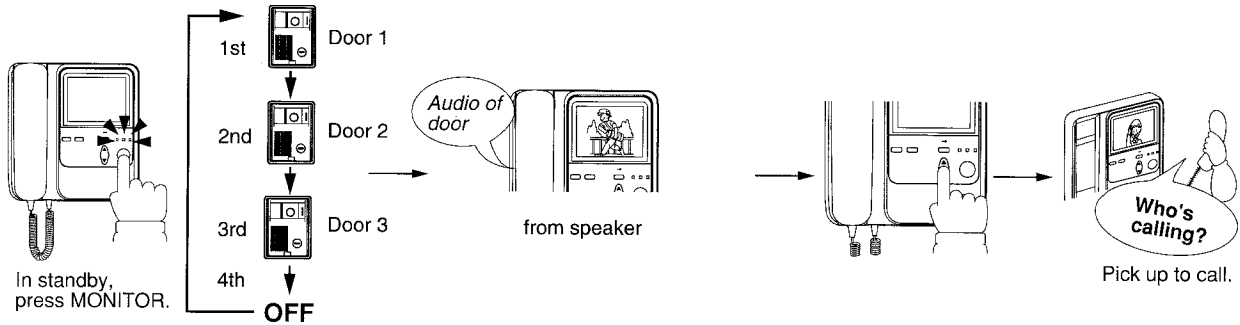
1. While in standby, press MONITOR button.
2. Both audio and image of door 1 turn on for approx. 30 sec.
3. Move the door camera vertically, pressing either top or bottom edge of TILT control button.
4. Press MONITOR button to view door 2.
5. Press MONITOR button third time to view door 3.
6. Press MONITOR button to end monitoring.

Operational notes

1. Door call-in LED: The lighting also moves as MONITOR button is pressed.
2. IF-DA audio door station at third door cannot be audio monitored.
3. Monitoring times out in approx. 30 sec. Press MONITOR within 30 sec. to view the same door.
4. Check MONITOR volume on bottom of the unit. Outside audio is not heard with MONITOR control in the OFF position.
5. Inside audio cannot be heard at door when handset is hung up.
6. During tilt operation, door audio is not heard.
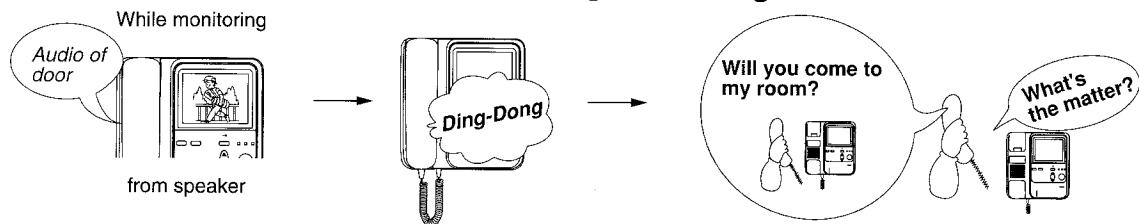7. Stop pressing TILT control, when the picture reaches the top or bottom.

When another room station calls in during monitoring

While monitoring
Audio of door from speaker → *Ding-Dong* → *Will you come to my room?* *What's the matter?*

• Selective call : double pretone
• All call : single pretone

1. View and hear door 1 to 3 hands free.
2. Room call-in starts with pre-tone, double (for selective call) or single-tone (for all call), ending monitoring mode.
3. Lift handset to connect with the calling room station.

When another door station calls in during monitoring

Audio of door from speaker → *Ding-Dong* *Delivery!* → *Yes?*
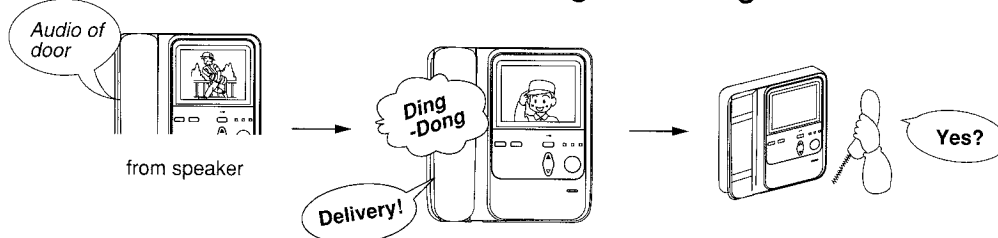
1. While one door station is being viewed on a monitor, another door station calls in.
2. When the door calls, the chime is heard, and the image changes to that of the calling door.
3. Lift handset to reply to the door.

Operational notes

1. Door audio & image times out in approx. 2-1/2 min.
2. To extend, press MONITOR button.

INTERNAL COMMUNICATION

Calling by selective call ⚠ KB-3SD sub station cannot call selectively.

Double pretone

Ken!

1. Lifting handset, press a station selector button 1 ~ 5. ALL CALL button turns on.
2. Call by voice, and communicate when the called: person replies hands free.
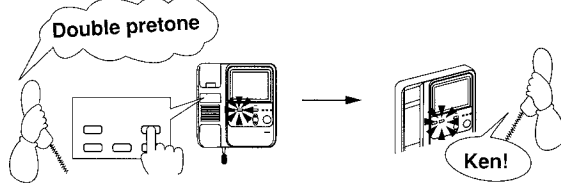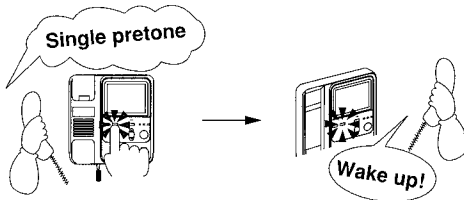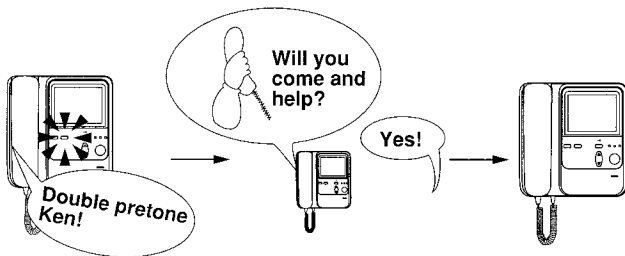
Calling by All Call

Single pretone

Wake up!

1. Lifting handset, press ALL CALL button. (ALL CALL button flashes red)
2. Call by voice, and communicate when the called person picks up to reply. (ALL CALL button turns on)

Answering selective call

*Will you come and help?*

Yes!

Double pretone Ken!

1. Double pretone sounds and voice is heard. (ALL CALL button is steadily lit)
2. Without lifting handset, reply toward the station mic.
3. When conversation is complete, the calling station simply hangs up handset.

Operational notes

1. On the other stations, ALL CALL button is steadily lit. On the other stations. (Pretone does not come out) Other room stations can not initiate the call.

Answering All Call

Single pretone Breakfast ready!

Yes!
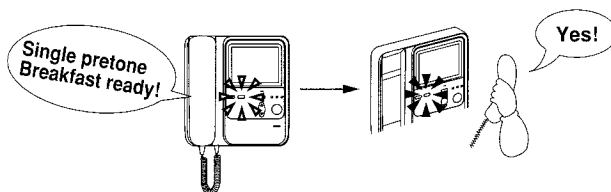
1. Single pretone sounds, and caller's voice is heard. (ALL CALL button flashes)
2. Pick up handset on any station, as needed. (ALL CALL button is steadily lit)

Receiving door call *during internal communication*

Ding-Dong

Ding-Dong

I'll answer!!

Okay!

Yes!
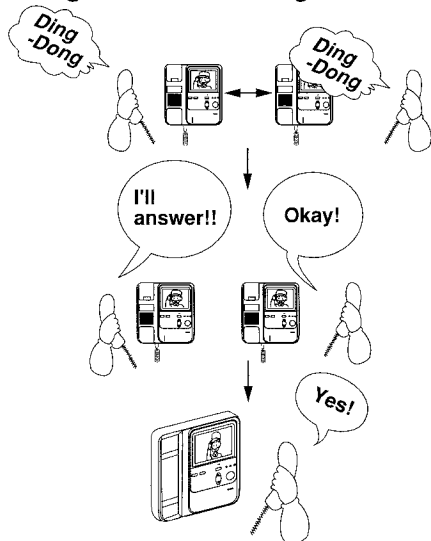
1. Chime tone is heard through handset being used, and image comes on.
2. Hang up both handsets to end internal communication.
3. Answering station picks up again to answer door.

Operational notes

1. Chime tone is not heard at the other room stations.
2. When called, image comes on at all the room stations.
3. When answered, the monitor turns off at the non-communicating room stations.
4. Any other room station cannot break in on the answered call from the door. Wait until ALL CALL button & door call-in LED go out.

TRANSFERRING DOOR CALL

Transferring

Selective call or All call
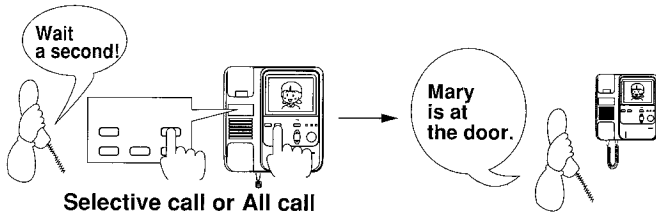
1. While communicating with the door, press a selector button (1 ~ 5) or ALL CALL button. (Call-in LED begins flashing)
2. Call by voice, and hear the response from the other station. (Inside audio cannot be heard at door)
3. First person hangs up handset after transferring call to second person.
4. Transferred station presses MONITOR button to connect to door. (Door call-in LED is steadily lit)

Operational notes

1. When the transferred room station is unavailable, press MONITOR button to reconnect with the door.
2. Transferring calls among room stations is not available. (End your present call and call the room station desired)
3. KB-3SD audio sub master station is not capable of calling the other room stations selectively, but can call with All Call.

Receiving a transferred call

1. Sounds double pretone (for selective call) or single pretone (for all call) sounds, and then voice comes in.
2. Lift handset and okay to answer the door.
3. Holding handset, press MONITOR button to connect with the door.

Activating door strike
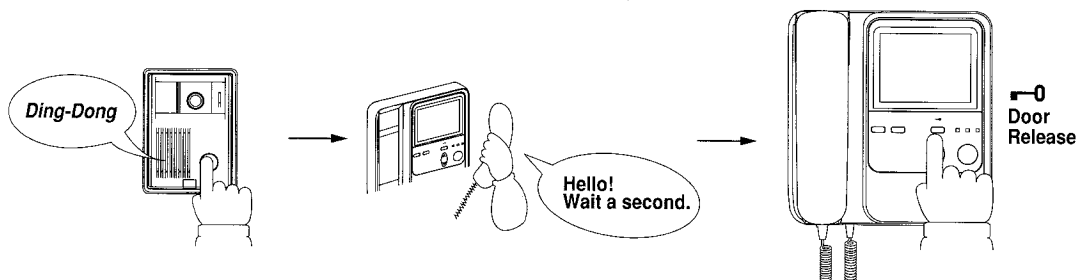
1. When door calls, pick up any handset to reply.
2. While the channel is established, depress and hold down Door Release button.

4 TECHNICAL PRECAUTIONS

Trouble-shooting guide

TROUBLE MODE	CAUSE OF TROUBLE	SOLUTION
• **The KB-3MRD system does not operate.**	When KB-3MRD master station POWER switch is turned off, the whole system does not operate.	Check POWER switch on KB-3MRD and power source.
• **Chime tone does not sound on room stations.**	Chime cut-off switch is set to ON position.	Chime cut-off switch at individual station(located under directory cover).
• **Communication and call tone volumes are smaller.**	Check volume controls.	Adjust each volume Chime, Receive and Monitor to higher position.
• **There is noise in communication.**	Communication can be interfered by computer, TV, Radio & Withby located close by.	Keep these devices 1m (3'3") away from intercom.
• **Door audio cannot be heard at room station when called.**	MONITOR switch is set to left OFF position.	Place MONITOR switch to mid or high position.
• **ALL CALL button is remains lit.**	Check the particular station to see if it is in Privacy mode.	Release Privacy mode by pressing ALL CALL for more than 2 sec.
• **Image does not come on.**	Check if KB-3MRD is affected by Cellular-phone or other devices producing electromagnetic wave and magnetic field.	Remedy by keeping these devices away from the intercom.
• **Image has occasional white lines.**	Check strong light such as sunlight coming into the lens.	This is not a malfunction. Remedy the cause.
• **Darker (whiter) image**	Check that BRIGHT control is adequately adjusted.	Adjust BRIGHT control as needed.

Cleaning

Clean the KB-3MRD/KB-3HRD equipment with a soft cloth dampened with neutral household cleanser. Never use any harsh cleaner or cloth.

LCD monitor

• It must be noted in advance that the TFT color LCD panel, though manufactured with very high precision techniques, inevitably has a very small portion of picture elements that are steadily lit or not lit at all, which is not considered a unit malfunction. The LCD monitor looks dark in bright sunlit area, etc. Adjust BRIGHT control to high position to increase monitor luminosity, or reduce ambient lighting.

Viewing image on LCD monitor

See the image right in front of the LCD monitor. When viewed down, the image may look too bright, and when viewed up, the image may look dim, but this is not a malfunction.

• Strong light, such as direct sunlight, etc. may cause silhouette on the monitor, but this is not a malfunction.
• At the gate or porch illuminated by fluorescent lamp, the picture may vary, but this is not a malfunction.
• In the night with low lighting conditions, the picture may look dim, but this is not a malfunction.
• When outside temperature lowers sharply after rainfall, etc., the inside of camera may fog up slightly, causing a blurry picture, but this is not a malfunction. Normal operation will be restored when moisture evaporates.
• Keep KB-3MRD power switch in on position. If not, KB-3HRD sub stations are not operational.

5 SPECIFICATIONS (KB-3MRD, KB-3HRD, KB-3SD)

• Power source: 24V DC.
• Current consumption: KB-3MRD: 860mA(max). 220mA(Standby).
KB-3HRD: 410mA(max). 80mA(Standby).
KB-3SD: 85mA(max). 50mA(Standby).
• Power supply: PS-24E (2A) for KB-3MRD.
PS-24E (2A), PS-24ME(0.9A),
PS-2410A (1A) for 2 x KB-3HRD's.

• Communication: Handset simultaneous. Handsfree simultaneous at room station (selective call).
• Housing & color: Fire-retardant ABS plastic. White.
• Dimensions: 185 (W) x 195 (H) x 84 (D) (mm). 7-1/4"(W) x 7-3/4"(H) x 7-1/2"(D).
• Weight: 1 Kgs. (2.2 lbs.) approx.
• Door release: 12V AC, 400mA.

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