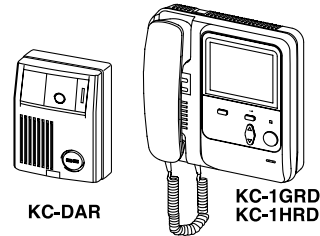


VIDEO SENTRY COLOR TILT AUDIO VIDEO ENTRY SECURITY INTERCOM


Models: **KC-1GRD**, *Main monitor station*
KC-1HRD, *Sub monitor station*


OPERATION MANUAL



PRECAUTIONS ON OPERATIONS

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.


 **WARNING** *Negligence could result in death or serious injury.*

 **CAUTION** *Negligence could result in injury or damage to property.*

Explanations of Symbols;




GENERAL PRECAUTIONS

The  mark indicates caution statement (incl. danger and warning), which is specifically shown inside.




GENERAL INSTRUCTIONS

The  mark indicates contents which demands a specific action shown inside or attached.



GENERAL PROHIBITIONS

The  mark indicates contents which prohibit a specific action shown inside or attached.












DISMANTLE PROHIBITIONS



MOISTURE PROHIBITIONS








WARNING

1. Inside the KC-1GRD/1HRD monitor station, high voltage is present. Do not open KC-1GRD/1HRD monitor case, as electric shock could result. 
2. Do not change or alter KC-1GRD/1HRD. It can cause fire or electric shock. 
3. Keep KC-1GRD/1HRD away from water or any other liquid. Fire or electric shock could result. 
4. Do not put any metal into KC-1GRD/1HRD through openings. It can cause fire, electric shock or unit damage. 
5. Keep AC cord of power supply from being marred or crushed. If damaged, fire or electric shock could result. 
6. Do not plug or unplug with wet hands. Electric shock could result. 
7. Keep AC plug away from moisture or dust. Fire could result. 
8. Do not use any power source other than specified. Fire or electric shock could result. 
9. Do not put any forcible strength on the video monitor. Damage may result. 



CAUTION

1. Before plugging in power supply, make sure wires are not crossed or shorted. Fire or electric shock could result. 
2. Verify chime volume while handset is on the hook. Chime sounds from KC-1GRD/1HRD speaker very loud near you, and can cause hearing damage. 
3. In case of electrical storms, unplug power supply from AC outlet. It can cause fire, electric shock, or unit damage. 
4. Do not install KC-1GRD/1HRD in any of the following locations, as it can cause fire, electric shock or unit damage: 
 - 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.
 - Where noise generating devices such as TV or radio are close by.
 - Places subject to steam or smoke (near heating equipment or cooking surfaces)



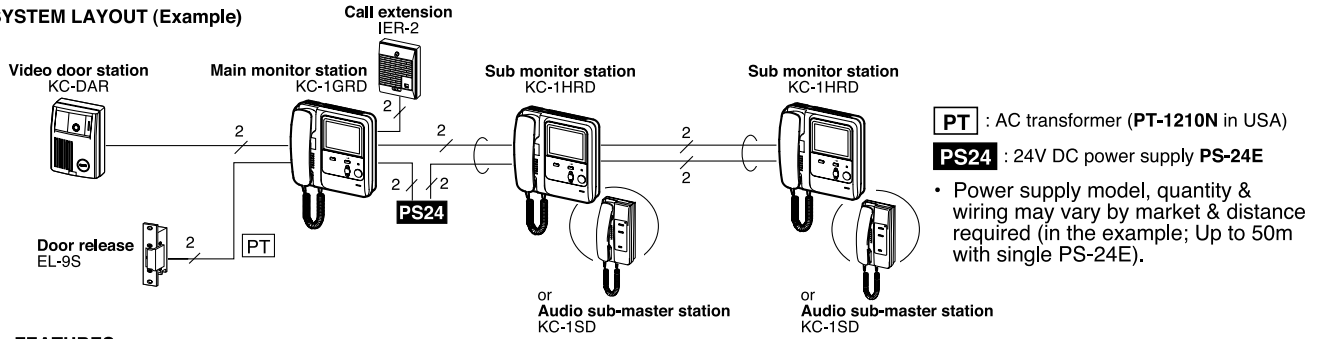
GENERAL PRECAUTIONS

1. KC-1GRD system is not operational during a power failure.
2. Electrical storms can cause functional problems.
3. Door station is weather resistant. However, do not spray water on door station. Unit trouble may result.
4. In areas where broadcasting station antennas are close by, intercom system may be affected by radio frequency interference.
5. KC-1GRD system has to be kept in the distance of more than 1m, 3'3" away from TV or radio.

2 SYSTEM OUTLINE & COMPONENTS

KC-1GRD, VIDEO SENTRY COLOR TILT is a 1 door - 3 monitors audio video entry security intercom, with door release feature. The inside monitor station is capable of tilting door camera from 0° (straight ahead) to max. 40° upward. Call extension speaker IER-2 is optional.

SYSTEM LAYOUT (Example)

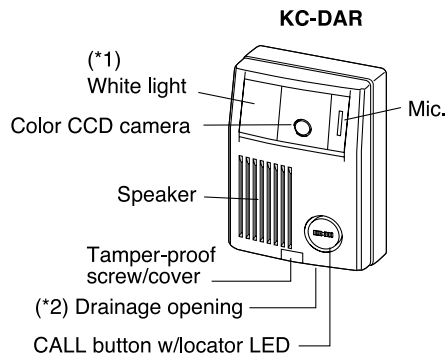


FEATURES

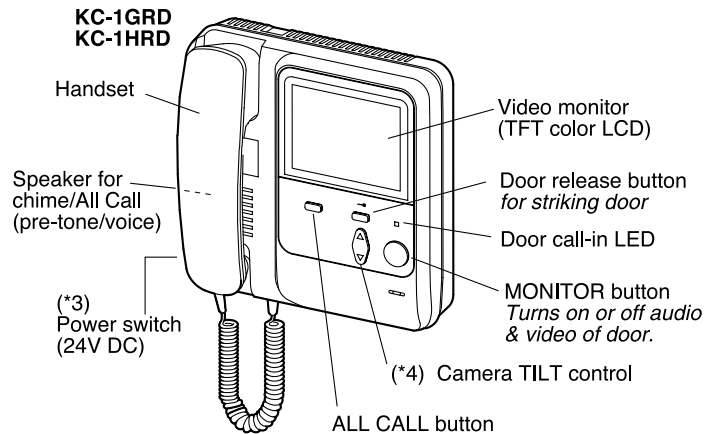
- Tilt camera control button. Views approximately 60cm horiz. by 124cm vert.(2"H, 4'1"V) when tilted fully
- Clear and bright image with color TFT* LCD monitor and DSP** video door station
- Hear and see before answering. **Instant-On** audio & video when door calls
- Door call-in with chime & video.(Video time out in approximately 30 sec.)
- Internal calling via voice with All Call.
- Monitor audio & video from door hands free. (Times out in approx. 30 sec.)
- White LED light turns on automatically toward dusk, illuminating a caller up to 30cm(1') away

* TFT = Thin Film Transistor
 ** DSP = Digital Signal Processor

3 NAMES & FUNCTIONS



(*1) **White light**: In low light conditions, it automatically turns on when camera is active. The light may be deactivated by setting LIGHT switch to OFF on KC-1GRD station.
 (*2) **Drainage opening**: Must not be covered with caulking seal, etc.

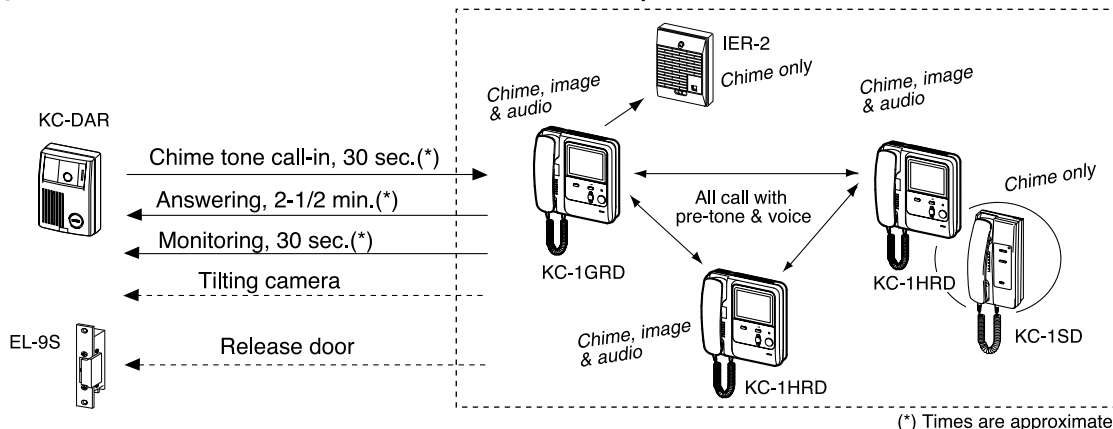


(*3) **Power switch**: Turn the power switch off when system malfunctions.
 (*4) **Camera TILT control**: Press on top/bottom of pad to move camera up or down. Views Camera tilts max. 40° upward.

4 OPERATIONS

SYSTEM

VIDEO SENTRY COLOR TILT 1 door – 3 monitor system



DOOR CALL-IN



Call-in is annunciated by 4-tone chime and blinking red light. Both video and audio from door are activated (**Instant-On** feature). Times out in 30 seconds approximately. **To reactivate**, press MONITOR button.

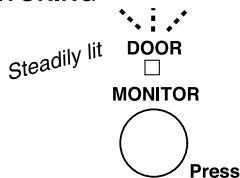
ANSWER DOOR

Pick up handset and speak to the caller. Talk channel turns off in approximately 2-1/2 minutes.

To reactivate, press MONITOR button again.

Note: Communication is not available during TILT operation.

MONITORING



In standby mode, press MONITOR button. Image and audio from door will be on for approximately 30 seconds.

Notes:

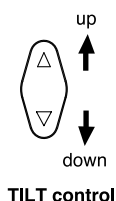
- If the MONITOR control on the bottom of the KC-1GRD or KC-1HRD is placed in the OFF position, no audio is heard from the door.
- Audio from the monitor will not be heard at the door until the monitor's handset is lifted.

RELEASE DOOR



While viewing the entry, depress DOOR RELEASE (Key-marked) button. Door strike is activated as long as the button is held down.

TILT DOOR CAMERA

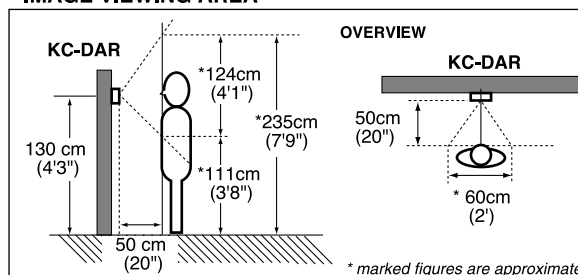


While video monitor is on, press on top/bottom of TILT control. Tilt door camera as needed.

Notes:

- Video door station can not be heard during tilt operation.
- Image may vary at each extremity of viewing area, but it is not a malfunction.

IMAGE VIEWING AREA



INTERNAL CALL (All Call)



When a station places a call, pre-tone and voice announcement is heard. All Call button blinks red. Pick up handset to reply (the light is steadily lit). Hang up when finished. If call is not answered, all call announcement times out in approx. 30 sec.

TRANSFER DOOR CALL

Place an ALL CALL to alert the other stations of the door call. At the called station, pick up to reply, and then press MONITOR button to connect with door.

ANSWER DOOR (during internal communication)

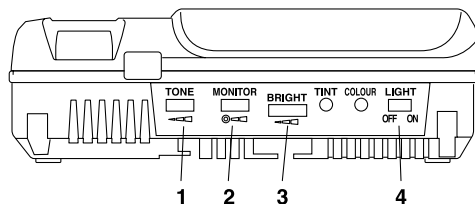
Chime tone sounds from each receiver. Hang up both handsets to end the internal call. Door call-in LED blinks. Answering station picks up handset again to communicate with the door.

ANSWER DOOR (during monitoring)

While monitoring handsfree, lift handset to establish communication with door station. Speak as needed. Hang up when finished.

RECEIVE INTERNAL CALL (during monitoring)

When the pretone and voice are heard from speaker, monitoring mode is turned off. Pick up to reply to the internal call.



Bottom view KC-1GRD, KC-1HRD

CONTROLS

On the bottom of monitor stations are 4 controls (as shown to the left):

- 1. TONE:** Varies chime volume to 3 positions: LOW - MID - HIGH. (OFF - MID - HIGH on KC-1HRD).
- 2. MONITOR:** Varies door audio to 3 positions: OFF - LOW - HIGH.
- 3. BRIGHT:** Varies brightness of monitor: DARK to BRIGHT.
- 4. LIGHT:** With LIGHT in OFF position, white LED's will remain deactivated when door calls. With LIGHT in ON position; During a low light situation the LED's will turn on when the door calls or the MONITOR button is pressed.

NOTE: * TINT, COLOUR controls: Not user-serviceable
* LIGHT: not included in KC-1HRD

OPTIONS

Call extension: Chime tone only is transmitted to IER-2 speaker. Volume is adjustable to 3 positions.

5 TECHNICAL PRECAUTIONS



Precautions on Operations

- KC-1GRD and KC-1HRD wall-mounted may collect dust. Clean unit as needed.
- Do not put anything on KC-1GRD or cover KC-1GRD with cloth, etc. Fire or unit trouble could result.
- KC-1GRD unit surface becomes warmer when it is on, but this is not a malfunction.
- When outside temperature lowers sharply after rain, etc., the inside of the camera may fog up slightly, causing a blurry picture, but this is not a malfunction. Normal operation will be restored when moisture dissipates.

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 either steadily lit or not lit at all, which is not considered a unit malfunction.
- The LCD monitor looks dark in the bright lit area, etc. Adjust BRIGHT control to high position to increase monitor luminosity, or reduce ambient lighting.

Before asking for repairs

In case it does not call or communicate properly, check the followings;

- If KC-1GRD power switch is turned off.
- If cause of trouble is not found, turn off power switch, and Contact your installing dealer for repair information.
- When tint does not come out properly;
 - Due to poor lighting on the object at night, there will be interference in the image. This is not a malfunction.
 - When gate or porch light is fluorescent, the image or color may vary. This is not a malfunction.
- 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.

Cleaning

Clean the KC-1GRD units with a soft cloth dampened with neutral household cleanser. Never use any abrasive cleaner or cloth.

6 SPECIFICATIONS

KC-1GRD, KC-1HRD

- Power source: DC 24V.
- Consumption: KC-1GRD: Max. 450mA. 70mA standby.
KC-1HRD: Max. 200mA. 50mA standby.
- Video monitor: 4 inch TFT color LCD.
- Power supply: PS-24E (2A).
- Call-in: 4-tone electronic chime & door call-in LED blinking red.
- Communication: Simultaneous with handset
- Ambient temperature: 0°C ~ 40°C (32°F ~ 104°F)
- Housing: Fire-retardant ABS plastic
- Color: Snow white
- Dimensions: 195 H x 185 W x 88 D (mm)
7-3/4"H x 7-1/4"W x 3-1/2"D
- Weight: 890g (1.96 lbs.) (approx.)
- Door release: Contact rating: AC 12V, 400mA.
- Wiring: KC-1GRD ~ KC-DAR: 2 wires (NP)
KC-1GRD/KC-1HRD ~ KC-1SD:
2 wires in loop plus 2 wires in same or separate-jacketed cable(for power supply).

KC-DAR

- Power source: Max. 22V (approx.) in operation.
DC 12V (approx.) in standby.
Supplied by KC-1GRD
- Consumption: Max. 350mA (approx.)
4mA (approx.) in standby
- Communication: Simultaneous in open voice
- Picture element: 1/4 inch color CCD
- Image view area: Horizontal 60cm (approx.)
Vertical 111 ~ 235cm (approx.)
at 130cm high (up to unit center)
and at 50cm from camera
2' H, 3' 8" ~ 7' 9"V at 4' 3" high at 20" from camera.
- Night viewing: White light projected up to 30cm (1') from door camera. The background scene beyond 30cm (1') cannot be seen
- 10°C ~ 60°C (14°F ~ 140°F)
- Ambient temperature: - 10°C ~ 60°C (14°F ~ 140°F)
- Housing: Fire-retardant ACS plastic
- Color: Gray
- Dimensions: 140 H x 105 W x 44 D (mm)
5-1/2"H x 4-1/8"W x 1-3/4"D
- Weight: 310g (0.68 lbs.) (approx.)

Wiring distance

(Diameter)	0.65mmø	1.0mmø	1.2mmø	22AWG	18AWG	16AWG
•KC-1GRD~KC-DAR	50m	100m	—	165'	330'	—
•KC-1GRD~KC-1HRD	50m	100m	—	165'	330'	—
(KC-1SD)						
•KC-1GRD~PS24	—	10m	20m	—	33'	65'
•KC-1GRD~IER-2	50m	100m	—	165'	330'	—

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.

WARRANTY

Aiphone warrants its products to be free from defects of material and workmanship under normal use and service for a period of two years after delivery to the ultimate user and will repair free of charge or replace at no charge, should it become defective upon which examination shall disclose to be defective and under warranty. Aiphone reserves unto itself the sole right to make the final decision whether there is a defect in materials and/or workmanship; and whether or not the product is within the warranty.

This warranty shall not apply to any Aiphone product which has been subject to misuse, neglect, accident, or to use in violation of instructions furnished, nor extended to units which have been repaired or altered outside of the factory. This warranty does not cover batteries or damage caused by batteries used in connection with the unit.

This warranty covers bench repairs only, and any repairs must be made at the shop or place designated in writing by Aiphone. Aiphone will not be responsible for any costs incurred involving on site service calls.

AIPHONE CO., LTD., NAGOYA, JAPAN
AIPHONE CORPORATION, BELLEVUE, WA, USA
AIPHONE EUROPE N.V., ANTWERP, BELGIUM

KC-1GRD-O/M(E) 0501C



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