



M13 Video Door Phone User Manual (Draft)

V0.7

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20140707

-
- M13 IP Video Door Phone Features

M13 Video door phone features

- IP addressable video door station
- DI / DO dry control for door release
- Digital color video camera, NTSC / PAL
- Call button, LED indication
- Built-in RFID sensor module
- Uses 12~24V DC power supply

Door Phone unit



Flush mount

Wall mount



IP addressable

The Front-View of the M13 Video door phone

- The figure below illustrates the front view of the M13. With the point numbers, you can find its name and a simple description of the part in the following table.



(Wall Mount Type)



(Flush Mount Type)

	<i>Part Name</i>	<i>Description of function</i>
1	Card Reader	The card reader has three advantages: <ul style="list-style-type: none">- RFID card reader control.- Active security function.- Open door function.
2	White LED (Night light)	The LED is for camera
3	Camera	The camera can be used for host monitor. <ul style="list-style-type: none">- Provide H.264 video stream for monitoring.- Provide motion JPEG stream for monitoring.
4	Speaker	For ring tone and free talking.
5	LED	The LED is as Status Indicator. <ul style="list-style-type: none">- The red LED is used to indicate register status, upgrade status, or reset default status.- The green LED is used to indicate the call is connected, or upgrade process is finished.
6	Calling Button	The Calling Button can be used for upgrade, reset default, or call status.
7	Microphone	A small hole for microphone input under the front edge of the M13.

The Back-View of the M13 Video door phone



(Wall Mount Type)



(Flush Mount Type)

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- M13 Video Door Phone Hardware Installation

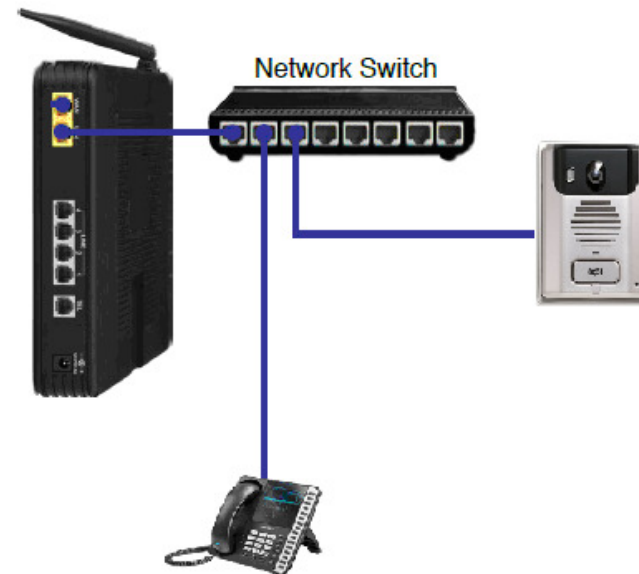
M13 Connection

■ The M13 video door phone only can be registered via IG7600's LAN port. Please connect M13 video door phone to IG7600's LAN port directly or via a network switch.

- Connect video door phone to IG7600's LAN port directly.



- Connect video door phone to IG7600's LAN port via network switch.



IMPORTANT: Disconnect the IG7600 (and Network switch) power when M13 video door phone is wiring. Keep power off until the wire connection has been made.

Cat.5e Ethernet Cable

- Cat.5e Ethernet Cable

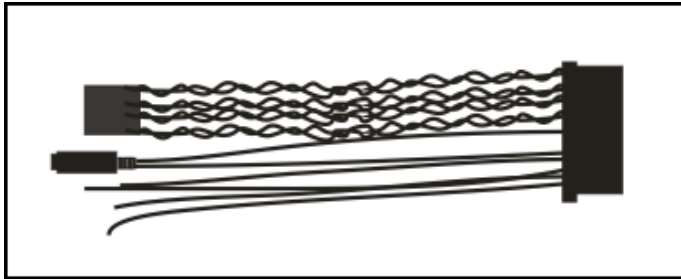
Cat. 5e Ethernet cable can be used to connect M13 video door phone and IG7600.

Cat. 5e Ethernet cable resistance - less than 0.094 Ohm/m.

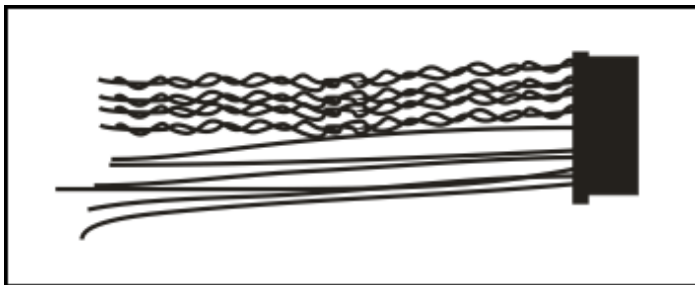
The maximum connection distance cannot exceed 100 meters. When the distance exceeds 100 meters, an individual switch/hub is needed to connect M13 video door phone and IG7600.

M13 Connector

- 14 pin connector with RJ45 and DC plug (Default)











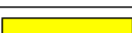

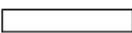



- 14 pin connector without Jack



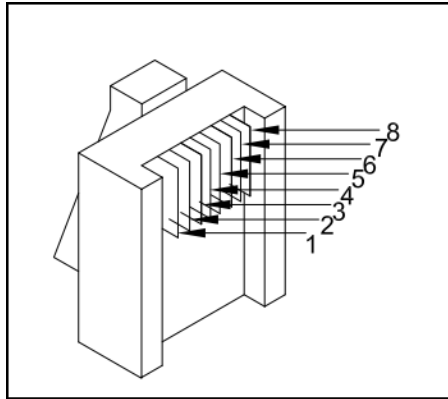
- Twist pair definition:
 - Pair1 : Pin1 & Pin 2.
 - Pair2 : Pin3 & Pin 4.
 - Pair3 : Pin5 & Pin 6.
 - Pair4 : Pin7 & Pin 8.

Color of Wire and Identification










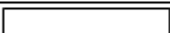






PIN	Function	Description	Pin color
1	R+	Network RX+	 white
2	R-	Network RX-	 orange
3	T+	Network TX+	 white
4	T-	Network TX-	 green
5	SP1	Power DC 12 to 24V	 white
6	SP1	Power DC 12 to 24V	 blue
7	SP2	Power GND	 white
8	SP2	Power GND	 brown
9	12V	Adaptor +12V	 red
10	GND	Adaptor GND	 black
11	NC	Relay: normal close(dry contact)	 purple
12	NO	Relay: normal open(dry contact)	 yellow
13	COM	Relay: common terminal(dry contact)	 gray
14	DI	Sensor input	 white

RJ-45 Connector & Cat 5e Ethernet Cable.

- RJ45 jack:



Wiring: CAT5e connect to 14 pin connector of M13

CAT5e		14 pin connector of M13	
1	 white/orange	1	 white
2	 orange	2	 orange
3	 white/green	3	 white
6	 green	4	 green
5	 white/blue	5	 white
4	 blue	6	 blue
7	 white/brown	7	 white
8	 brown	8	 brown

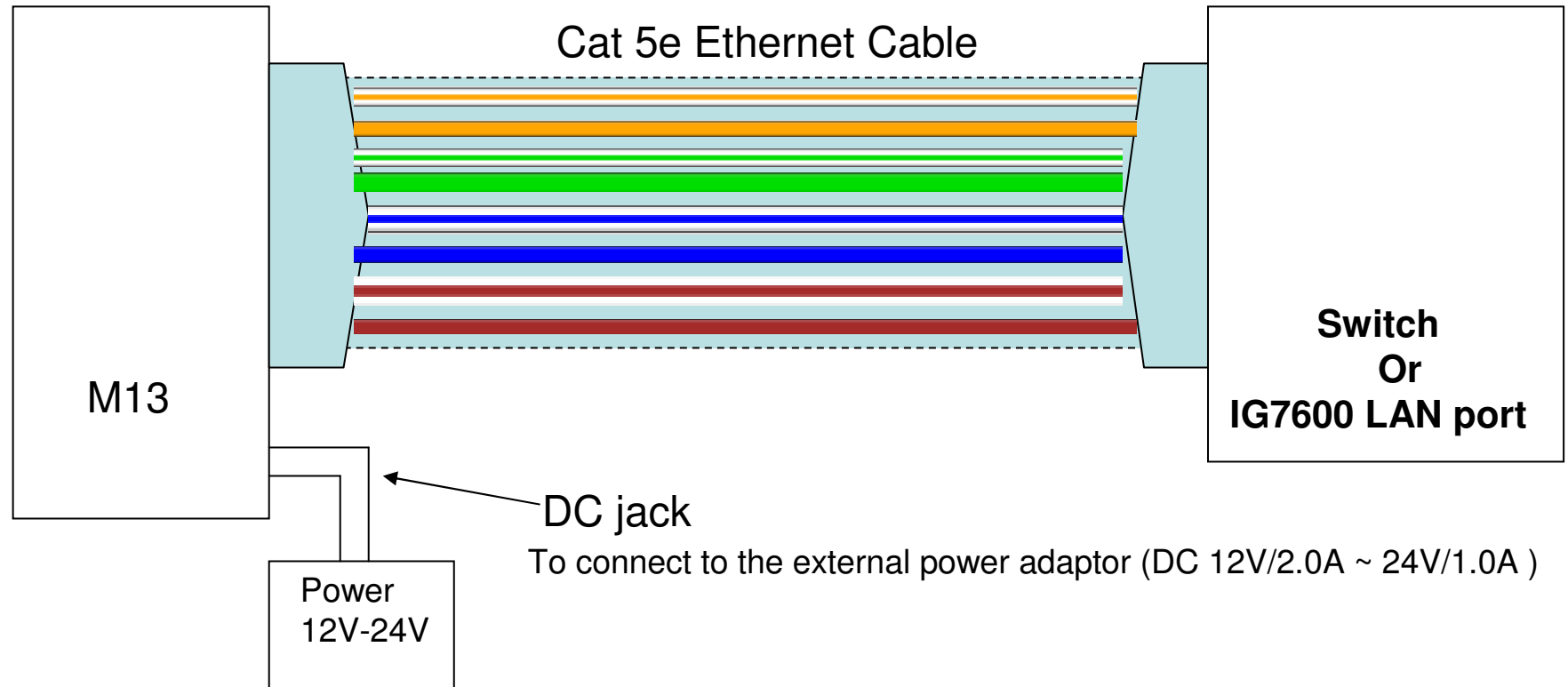
M13 Power Supply Connection

- Please choose from the two following options how to connect M13 to power supply
 1. M13's DC jack connected with power adaptor
 - In case power supply is available at the spot of M13 installation, please use the adaptor to connect the door station to power supply.
 2. M13 power connected via power wires of Ethernet cable
 - In case there is no power supply source available at the spot of M13 installation, please use Ethernet cable power wires to connect the door station to the power adapter as shown on the picture below.



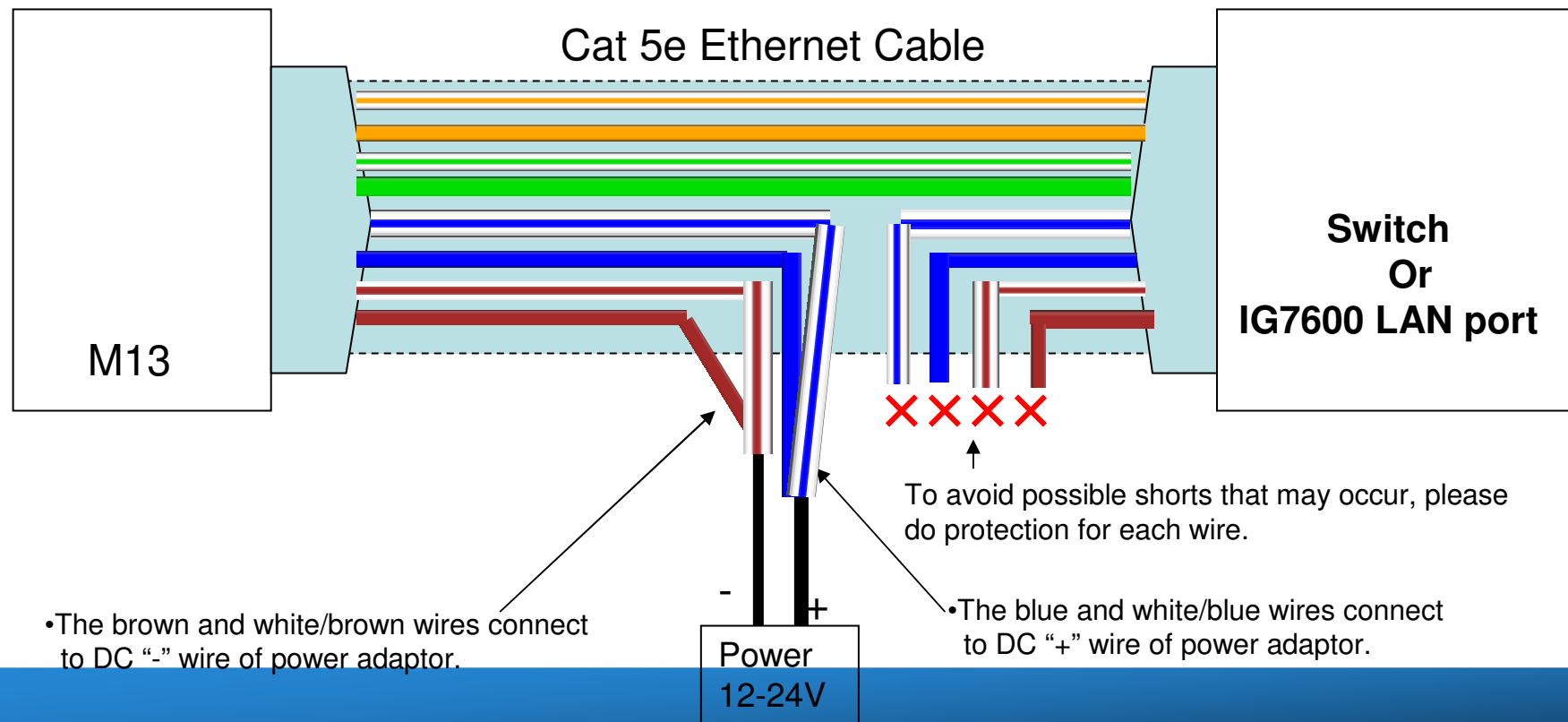
M13's DC jack connection with power adaptor

- Use an external power adaptor to M13 video door phone.



M13 power connection via power wires of Ethernet cable

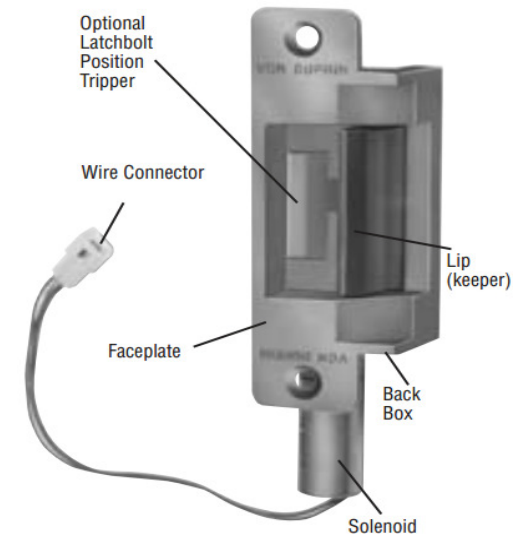
- Connect power adaptor via power wires of Ethernet cable.
- Based on different length of Cat. 5e Ethernet cable, you should use different voltage output power adaptor to ensure M13 video door phone work well.
 - Length $\leq 30\text{m}$: Use 12V/2A power adaptor
 - Length $\leq 100\text{m}$: Use 24V/1A power adaptor



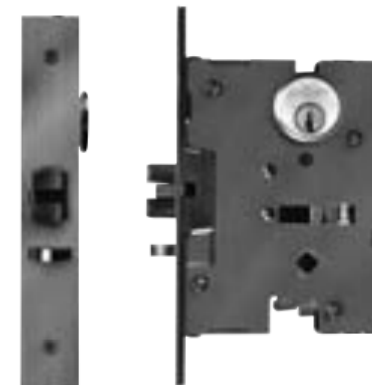
Power source reference for electric strike/lock



- Electric Strikes provide remote release of the locked door. They allow the door to be opened without retracting the latch bolt.
- This occurs by releasing of the electric strike lip (sometimes called keeper or gate). When the door closes the beveled latch bolt rides over the lip and falls into the electric strike pocket.
- The relay of the outdoor phone can switch the external power to electronic lock.
- The ground pin of external device should be connected to "GND"(pin 10, black) for common ground.
- On loss of power, the strike/lock is locked another supply is required to power the door strike.



Electric strike

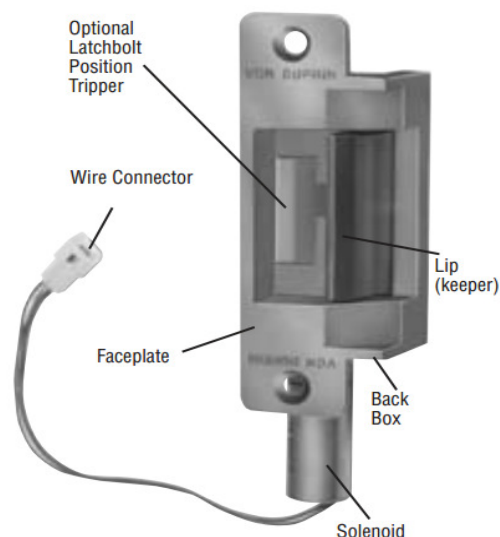
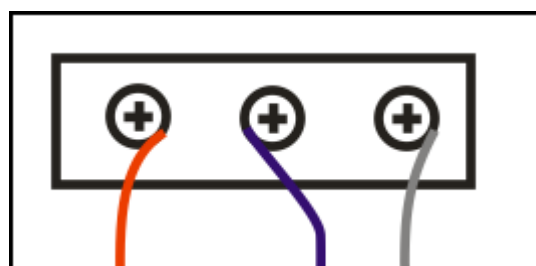
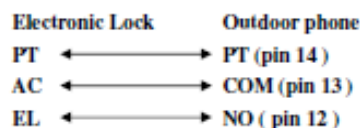


Electric mortise lock

Connections to electric strike (reference)

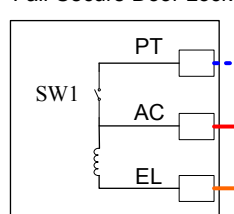


- The connectivity point defined on door phone for electronic door strike/lock is in accordance with – PT, AC, EL.



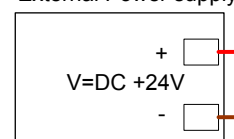
Electric strike

Fail-Secure Door Lock

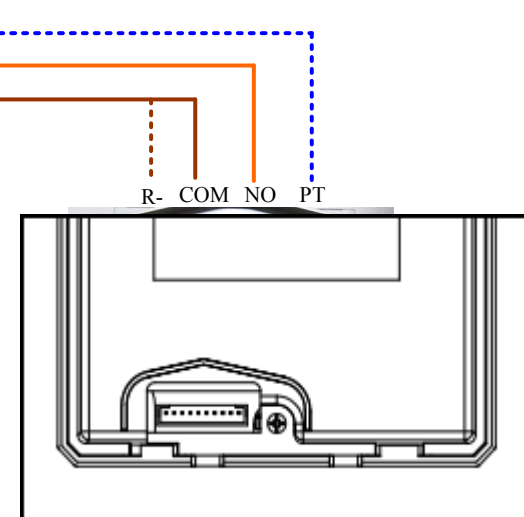


* When Lock on, SW1 → open
* When Lock open, SW1 → close

External Power supply



2KΩ 1/4W



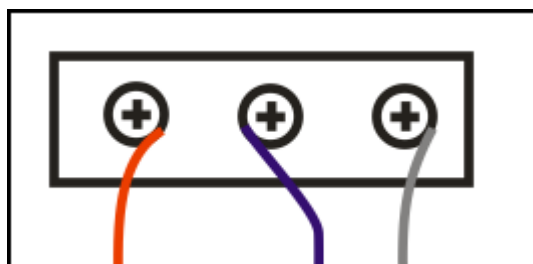
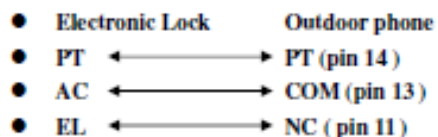
NOTES

- Connect to the electric door strike according to its specifications.
- Do not use the unoccupied terminals and ports for other purposes.
- In order to prevent miswiring, label both ends of each cable with the unit and terminal names to which they are to be connected.
- For connecting other manufacturer's products, refer to the instruction manuals for those products.
- The illustration of the unit's rear panel differs from the actual one. This is for simplifying the connection diagram.

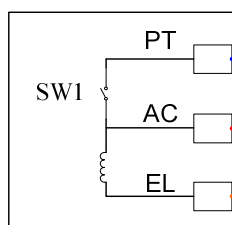
Connections to electric mortis lock (reference)



- The connectivity point defined on door phone for electronic door strike/lock is in accordance with – PT, AC, EL.

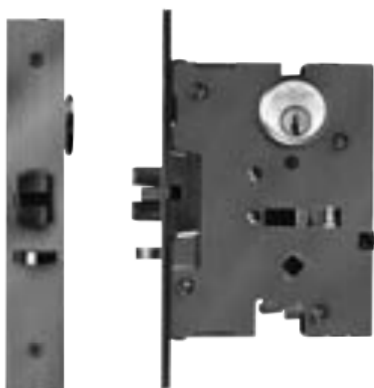
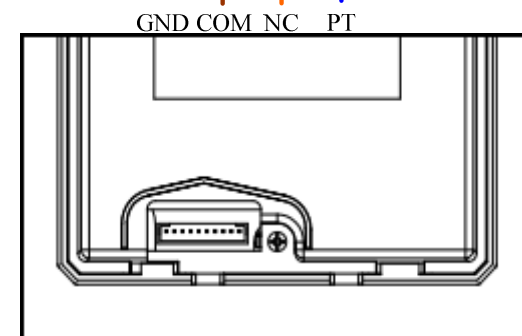
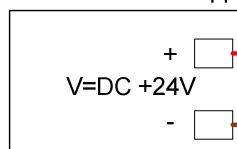


Fail-safe Door Lock



* When Lock on, SW1 → open
* When Lock open, SW1 → close

External Power supply



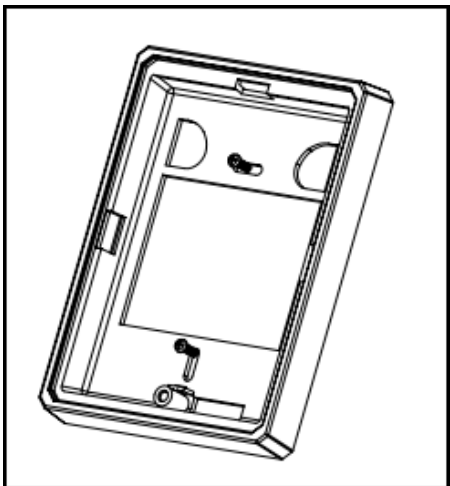
Electric mortise lock

NOTES

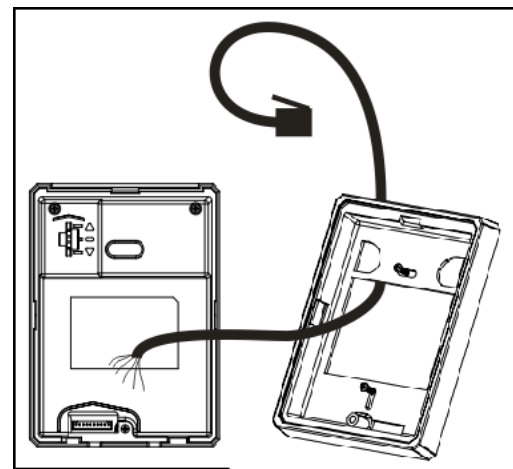
- Connect to the electric door strike according to its specifications.
- Do not use the unoccupied terminals and ports for other purposes.
- In order to prevent miswiring, label both ends of each cable with the unit and terminal names to which they are to be connected.
- For connecting other manufacturer's products, refer to the instruction manuals for those products.
- The illustration of the unit's rear panel differs from the actual one. This is for simplifying the connection diagram.

Mounting & surface wiring (Wall mount type)

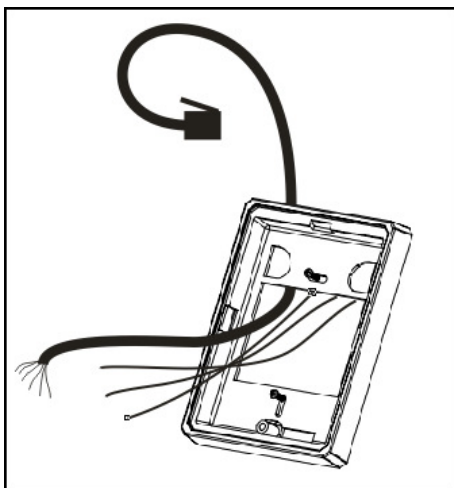
- Gecko into the wall, locked the Wall mount frame



- Wire connected with door phone unit

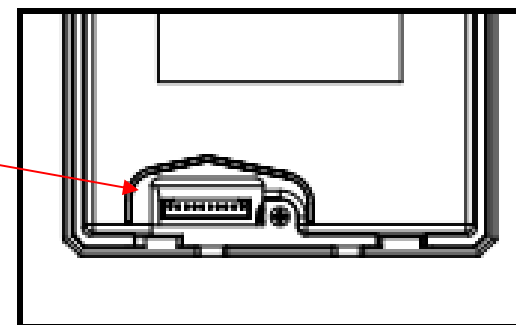


- Pull the wire from the Wall,



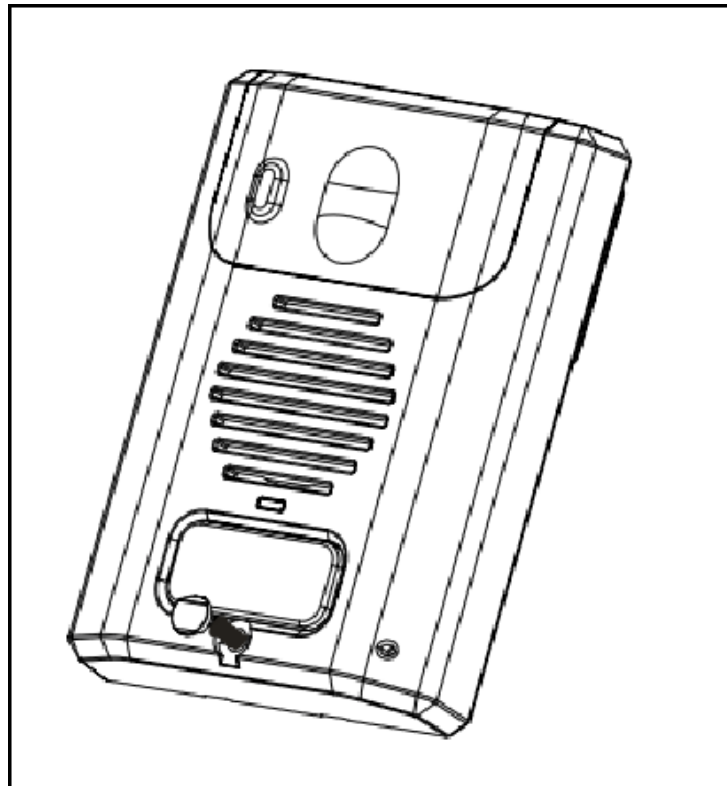
- Cable set connected to the back panel of door phone unit.

Cable set with RJ45 connector & wire set

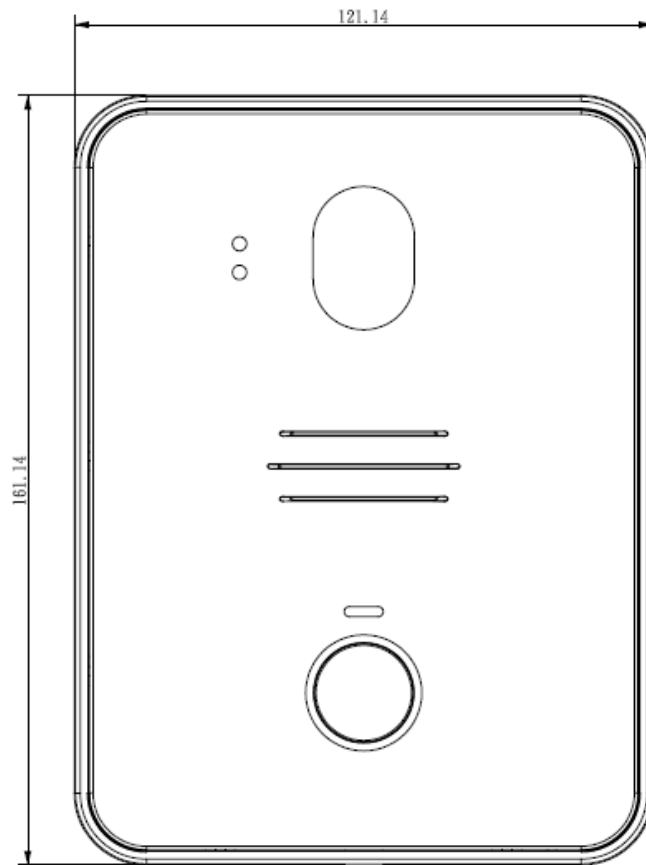


Complete the installation (Wall mount type)

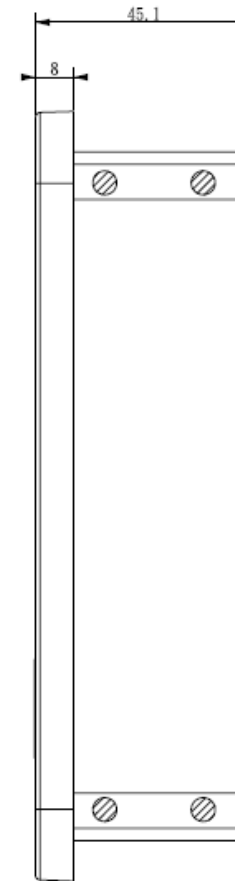
- The M13 outdoor phone will be pressed into the wall mount and use the fixed star screws and wrench
- Cleaning: Clean the units with a soft cloth dampened with a neutral household cleanser. Do not use an abrasive cleanser or cloth.



M13 Dimension (flush mount type)

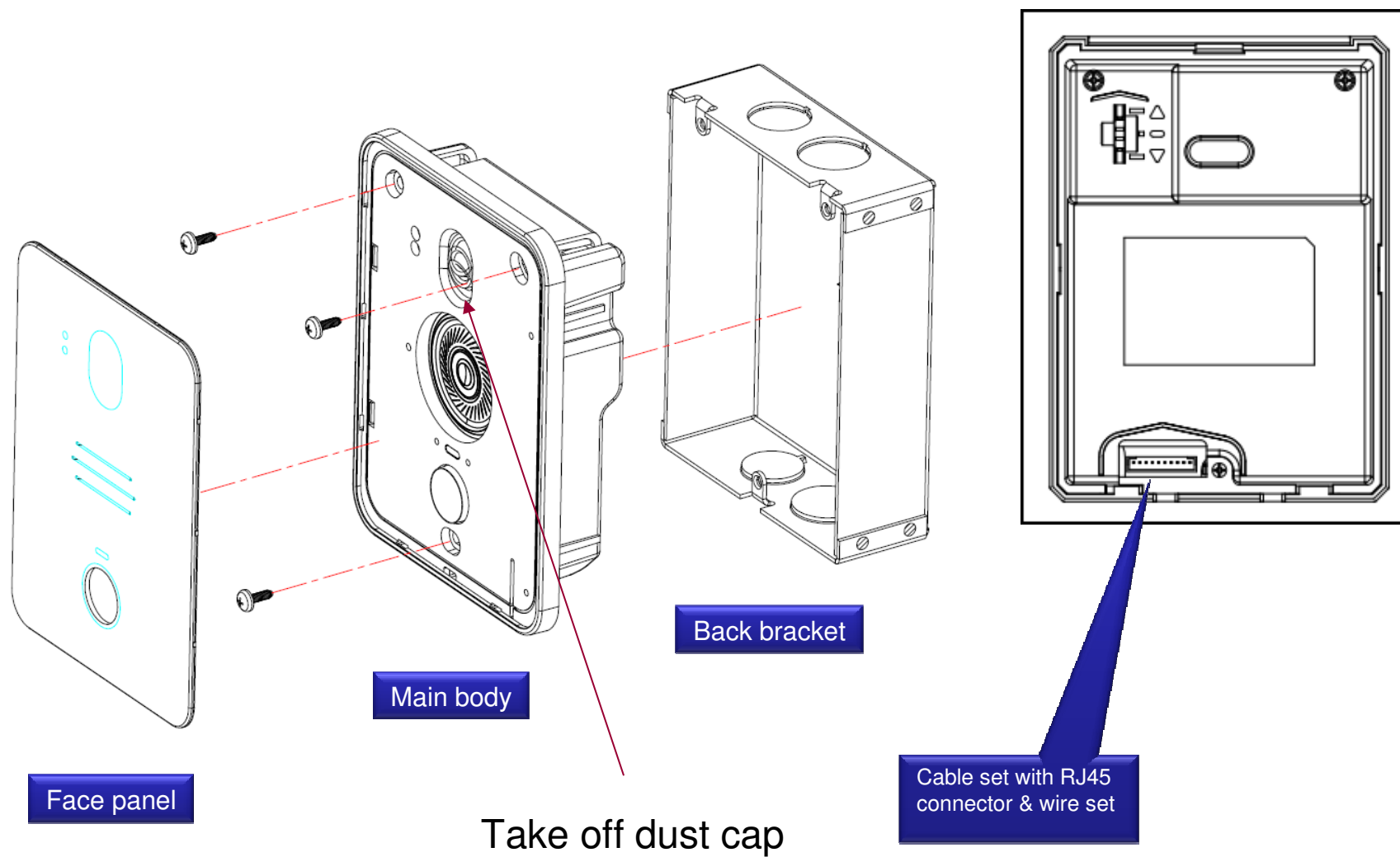


Front panel



Side view with back bracket

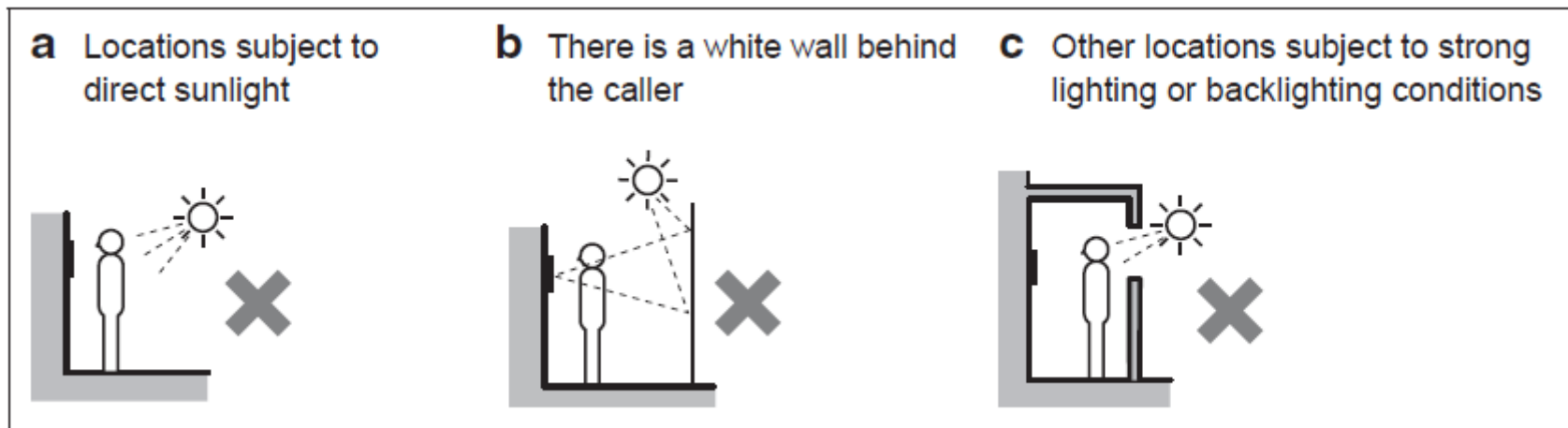
M13 Assembly (flush mount type)



Mounting locations



- Do not install this unit in any of the following locations where lighting or the ambient environment could impact the display on the Smartphone.
- video monitor due to the characteristics of the door station's camera.



-
- Video Door Phone Setting in IG7600

-
- IG7600 Software version requirement.
 - The software version must be V0.5.0.2 or later.
 - Login IG7600 web page by administrator account.

Level/Rights	Login	Default Password	
Administrator	admin1234	adminxxxxxx	
Administrator	support	supportxxxxxx	
xxxxxx = The last 6 alphanumeric characters of the system's WAN MAC Address (lower case)			

Open Door Allowance & Door phone Authentication

- Select Voice -> Phone -> Phone Extension

- This page allows you to configure the two topics for door phone.

- Open door allowance
- Door phone authentication

1. Open door allowance

- In the phone extension table, select “Yes” by the “Allow Open Door” field to enable the open door function for the phone number.

SIP Authentication

This table allows you to configure the authentication for SIP client.
The current range of the extension numbers is from 201 to 299.
NOTE: If you remove a phone number from the table, its configuration file and the voice messages will be removed from the system.

Phone No.	Number	Password	Mobile Number	Display Name	MAC Binding	Allow Open Door
1	201	*****	0751123456	Andy	14:7d:c5:93:c3:10	Yes ▼
2						No ▼
3						No ▼
4						No ▼
5						No ▼

2. Door phone authentication

- You can configure the authentication information for door phone in the table. When door phone connects with IG7600, the IG7600 will assign the default authentication information and finish the door phone registration automaticity.

Phone Number: The default door phone numbers is from 101 to 102.

Password: The password is for door phone registered.

Name: The door phone name, this name will be displayed on M54 for door phone related operation.

Mac Address: Door phone's Mac address.

48 No ▼

49 No ▼

FXS Phone Display Name Day COS Night COS PickUp Group

Door Phone Authentication

This table allows you to configure the authentication for door phone client.
The current range of the door phone numbers is from 101 to 102.

No.	Phone Number	Password	Name	Mac Address
1	<input type="text" value="101"/>	<input type="text" value="....."/>	<input type="text" value="Video Doorphone 1"/>	<input type="text" value="00:19:15:da:2d:cc"/>
2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Door Setting

- Select Voice -> Phone -> Door Settings

Door Settings

Door Phone	Status	Start Time(HH:MM)	End Time(HH:MM)	Open Time(ms)	Ring Time(s)	Talk Time(s)	Speaker Volume	MIC Volume	Open Door Password	Answering Position
101	Closed	18 : 0	6 : 0	1000	30	60	5	8		Operator
102	Disconnected	18 : 0	6 : 0	1000	30	60	5	8		Operator

☐ Allow Remote IP Phone Open Door

Apply

- **Door phone number:**
 - IG7600 supports up to 2 sets of door phone registered. The default door phone numbers are 101 and 102.
- **Status:**

It indicates door phone status.

 - **Closed:** Door phone is connected.
 - **Disconnected:** Door phone is disconnected.
- **Night light Start & End time:**
 - User can configure the night light start and end time.

-
- Open time:
 - Configure the outdoor phone relay triggered time. The range is from 500ms to 10s.
 - Ring time:
 - Configure the ring time.
 - Talk time:
 - Configure the talk time. When it is time out, the system will auto to end the call.
 - Speaker & MIC volume:
 - Configure the speaker and microphone volume for door phone.
 - Open door password:
 - When the password is set, the password is need for door released by Smartphone or IP phone.

- Answering Position setting:

- IG7600 allows user to set the answer phones. When visitor press door phone to call-in, the answer phones will ring.

ker ne	MIC Volume	Open Door Password	Answering Position
	8 ▼		Operator ▼ Extension Operator UCD Group
	8 ▼		

1. Extension:

=> Assign an extension number to answer door phone call-in.

Step 1. Select “extension”

Step 2. Enter an extension number.

Answering Position
Extension ▼
201

2. Operator:

=> When the “Operator” is selected, user needs to define the operator number.

Step1. select Voice -> System -> Numbering Plan -> Operator code -> Configuration.

The screenshot shows a web interface for configuring a network device. On the left is a navigation menu with the following items: Wizard, Device Info, Advanced Setup, Wireless, Voice, Phone, Trunk, System, Numbering Plan, Service Mode, Transmission, IGW Group, SMDR, UCD Call Log, Voicemail, NAT Traversal, and Diagnostics. The 'Voice' menu item is highlighted with a red box, and the 'System' menu item is also highlighted with a red box. The 'Numbering Plan' menu item is highlighted with a red box. The main content area is titled 'Numbering Plan' and contains the following text: 'Numbering Plan allows you to configure the extension number range. You can define the special extension number or service number. These settings will take effect after the system reboot.' Below this text are several input fields: 'Start Extension: 201', 'End Extension: 299', 'FXS Phone Number: 299', 'Start Extension' (input field with value 201), 'End Extension' (input field with value 299), 'FXS Phone Number' (input field with value 299), 'Outdoor Phone 1 Number' (input field with value 101), 'Outdoor Phone 2 Number' (input field with value 102), 'Operator code' (input field with value 0), and 'Start AA & VM Service Number' (input field with value 500). A 'Configuration' button is located at the bottom right of the main content area, highlighted with a red box.

Numbering Plan		
Numbering Plan allows you to configure the extension number range. You can define the special extension number or service number.		
These settings will take effect after the system reboot.		
Start Extension: 201	End Extension: 299	FXS Phone Number: 299
Start Extension	201	
End Extension	299	
FXS Phone Number	299	
Outdoor Phone 1 Number	101	
Outdoor Phone 2 Number	102	
Operator code	0	
Start AA & VM Service Number	500	
		Configuration

Step 2. In the Operator Configuration page, user needs to edit the operator-related settings.

Operator day: Set an extension number for call answer in daytime.

Operator night: Set an extension number for call answer in nighttime.

Alternate Operator day: Set a second extension number for call answer in daytime. When the first operator extension doesn't answer, the system will auto reroute to this extension.

Alternate Operator night: Set a second extension number for call answer in nighttime. When the first operator extension in nighttime doesn't answer, the system will auto reroute to this extension.

Reroute Time: Set a reroute time (0 or 15~180 seconds). When the first extension doesn't have any answer, system will reroute to second extension after time out.

Operator Configuration

This page allows you to configure the operator-related settings

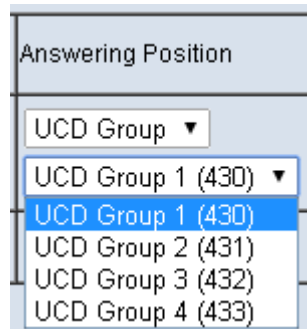
Operator day	<input type="text" value="202"/>
Operator night	<input type="text" value="202"/>
Alternate Operator day	<input type="text"/>
Alternate Operator night	<input type="text"/>
Reroute Time	<input type="text" value="0"/> (0, 15~180)

3. UCD Group

=> Select an UCD group, the phones in this UCD group will ring when door phone ring-in.

Step 1. Select “UCD Group”.

Step 2. Select one UCD Group from the list.



The screenshot shows a software interface with a light blue header bar labeled "Answering Position". Below this is a dropdown menu labeled "UCD Group" with a downward arrow. The menu is open, displaying a list of four options: "UCD Group 1 (430)", "UCD Group 1 (430)", "UCD Group 2 (431)", "UCD Group 3 (432)", and "UCD Group 4 (433)". The first two entries are identical, and the first one is highlighted with a blue background.

3.1 Add extension numbers into UCD Group.

Step 1. Select Voice -> System -> Numbering Plan -> Start UCD Group number -> Configuration.

The screenshot shows a network configuration interface. On the left is a sidebar menu with the following items: Wizard, Device Info, Advanced Setup, Wireless, Voice, Phone, Trunk, System, Numbering Plan, Service Mode, Transmission, IGW Group, and SMDR. The 'Voice' menu item is highlighted with a red box. Under 'Voice', the 'System' item is highlighted with a red box. Under 'System', the 'Numbering Plan' item is highlighted with a red box. The main area on the right contains configuration fields for various services. The 'Start UCD Group number' field is highlighted with a red box, and its 'Configuration' button is also highlighted with a red box.

Start AA & VM Service Number	500	
Start Virtual Extension Number	830	
Start PSTN Line number	700	
Start IP Trunk number	710	
Start Trunk Group number	80	
All Paging number	400	
All Paging Range	Both	▼
Start Paging Group number	401	Configuration
Start UCD Group number	430	Configuration

Step 2. Key in the extension number into “UCD Group Extension”.

UCD Group Configuration

UCD Group Number	Ring Mode	No Answer Time	Timer Enable	Reroute Time	Reroute Destination Type	Destination
430	All Ring ▼			30 seconds ▼	AA Menu ▼	500
431	All Ring ▼			30 seconds ▼	AA Menu ▼	500
432	All Ring ▼			30 seconds ▼	AA Menu ▼	500
433	All Ring ▼			30 seconds ▼	AA Menu ▼	500

UCD Group 1 Extension	UCD Group 2 Extension	UCD Group 3 Extension	UCD Group 4 Extension
201			
202			

-
- Allow Remote IP Phone Open Door (Check box)
 - When the check box is checked, system will allow user to open door by remote IP phone which is registered by IG7600 WAN port.

Door Card

- **Select Voice -> Phone -> Door Card**

- This page provides RFID card settings related operation.

- 1. Register Card**

Step 1: Click the “Start Register” button to begin assay.

Step 2: RFID cards to brush off the lens of door phone

Step 3: When displayed to the card number detection success.

Step 4: Click the “Stop Register” button to end the card detection.

The screenshot displays the 'Door Card' settings page. On the left is a navigation menu with the following items: Wizard, Device Info, Advanced Setup, Wireless, Voice, Phone, Phone Extension, Door Settings, Door Card (highlighted with a red box), and Programmable keys. The main content area is divided into three sections: 'Register Card' with a 'Start Register' button (highlighted with a red box); 'Edit Card' with input fields for ID, Name, and Status (set to 'Normal'), and 'Save' and 'Cancel' buttons; and 'Card List' with a table of registered cards. A red box highlights the first card's ID 'FDDE47A5000000000000000000000000' in the table, and a callout box points to it with the text 'Card Number displayed when card detection successes.' Below the table is a 'Delete Selected' button.

Register Card

Start Register

Edit Card

ID: Name: Status: Normal ▼

Save Cancel

Card List

No.	ID	Name	Status	Remove	Edit
1	FDDE47A5000000000000000000000000	Torn	Normal	<input type="checkbox"/>	Edit

Delete Selected

Card Number displayed when card detection successes.

2. Card information editing

Step 1: Click “Edit” button from “Card List” table.

Step 2: After “Edit” button is clicked, the card ID displayed in the “Edit Card” field. Edit the card owner name and status. The default status is “Normal”. If “Lose” status is selected, user would not be allowed to open door by this card.

Step 3: Click “Save” button.

The screenshot shows a web application interface with two main sections: 'Edit Card' and 'Card List'.

Edit Card Section:

- It contains three input fields: 'ID' (pre-filled with 'FDDE47A5000000000000000000000000'), 'Name' (pre-filled with 'Tom'), and 'Status' (a dropdown menu with 'Normal' selected and 'Lose' as an option).
- Below these fields are 'Save' and 'Cancel' buttons.

Card List Section:

- It contains a table with the following data:

No.	ID	Name	Status	Remove	Edit
1	FDDE47A5000000000000000000000000	Tom	Normal	<input type="checkbox"/>	Edit

Below the table is a 'Delete Selected' button.

-
- M13 Video Door Phone Operation

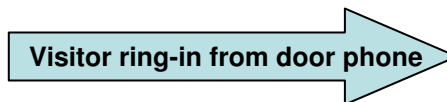
- M13 video door phone registration
 - Connect M13 video door phone to LAN of IG7600 (or via Ethernet switch), the IG7600 will finish M13 video door phone registration automatically without any operation.
- Answer video door phone call-in

User can answer the video door phone call-in by IP Phone (M62 or M22) or Smart phone.

 - Answer by IP Phone (Voice only)

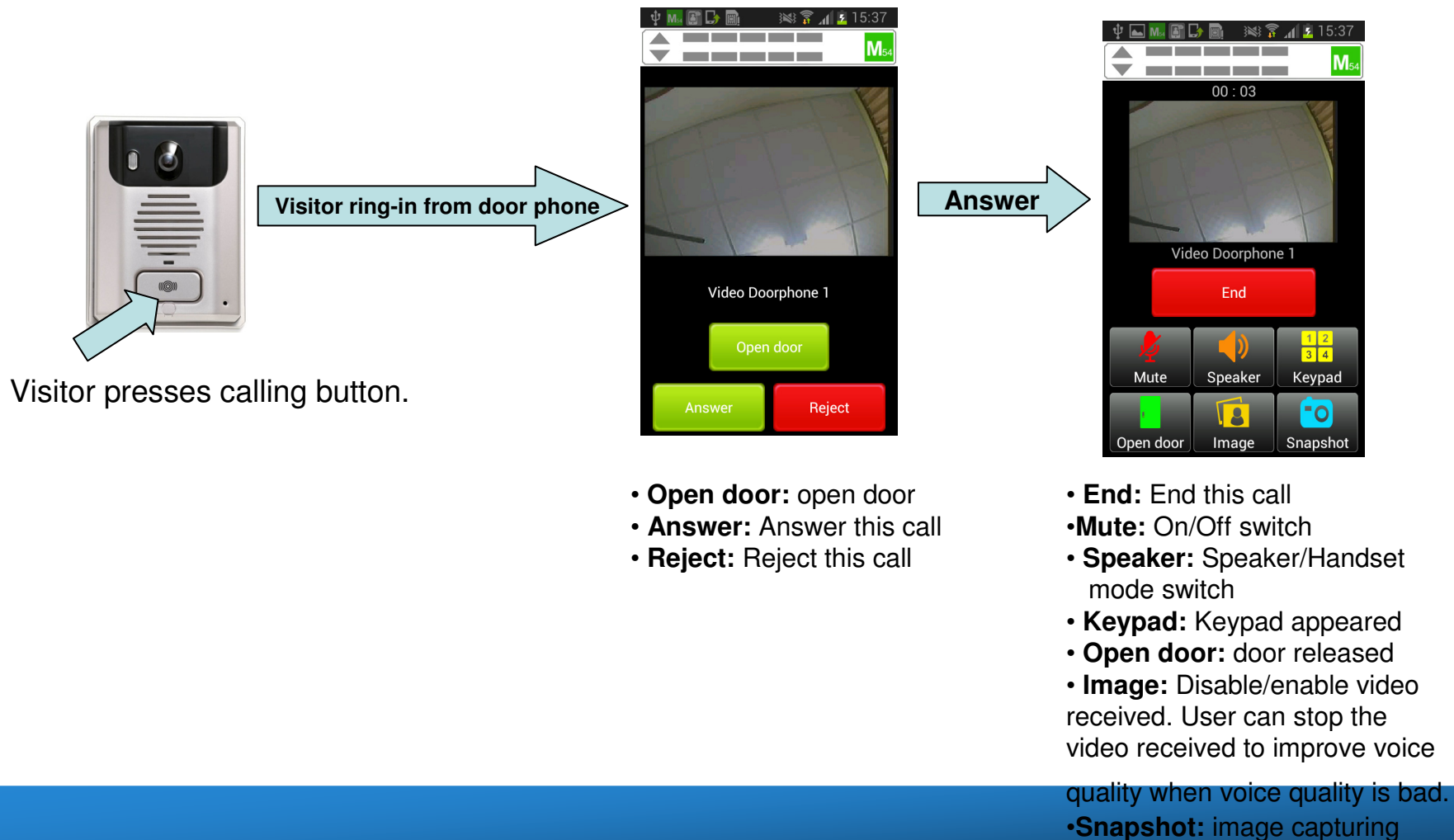


Visitor presses calling button.



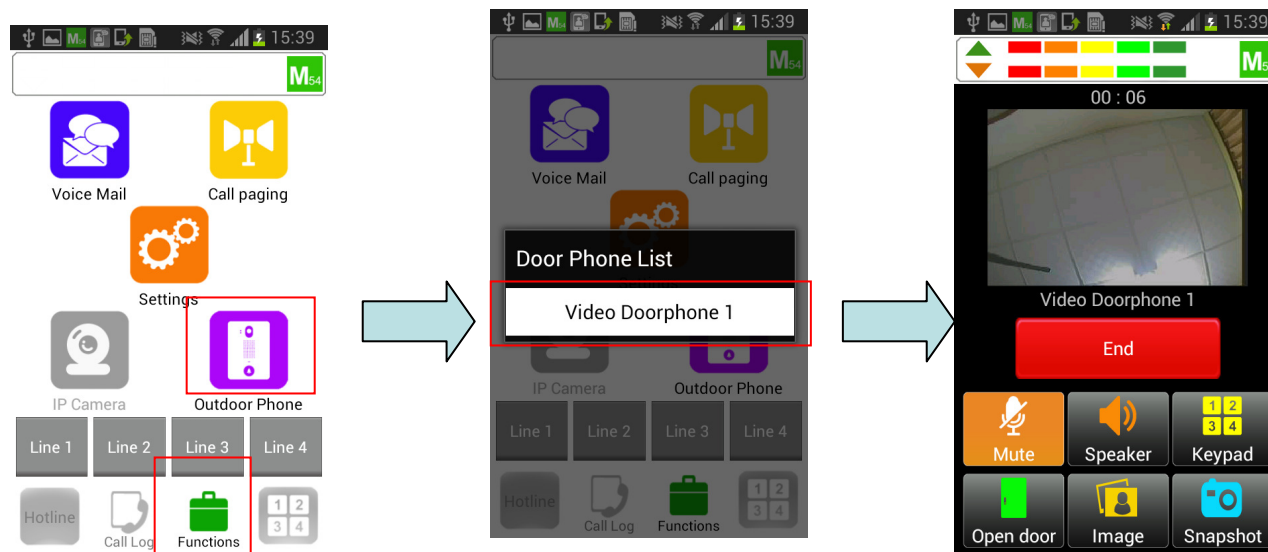
Pick up the call when phone is ringing.

■ Answer by Smartphone



■ Monitor

- User can use Smartphone to monitor outdoor phone.



- In M54, tap “Function” icon
- Tap “Outdoor phone” icon

- Select the door phone from list.

- **End:** End this call
- **Mute:** On/Off switch (Default is Mute On.)
- **Speaker:** Speaker/Handset mode switch
- **Keypad:** Keypad appeared.
- **Open door:** Open door
- **Image:** Disable/enable video received. User can stop the video received to improve voice quality when voice quality is bad.
- **Snapshot:** image capturing

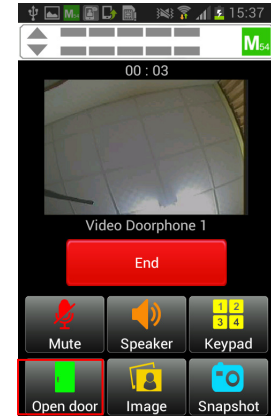
Open Door

- Open door

There are three ways to open door.

1. Remote door opening using Smartphone

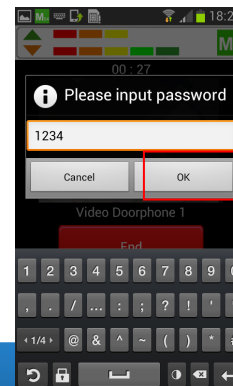
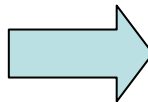
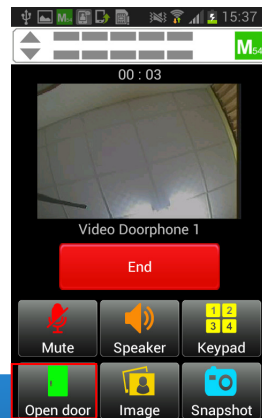
- When Smartphone is in talk/monitor mode with door phone, tap the **“Open door”** button.



- The password is needed when user sets password for door opening in IG7600.

(For password setting please refer to “door setting” section in IG7600 manual.)

Tap “Open door”
Button.



Input password, and then
tap the “OK” button.

2. Remote door opening using IP phone

- When user talks to the door phone using IP phone,

- No password setting

Press Keypad: “#””#”.

- open door with password input

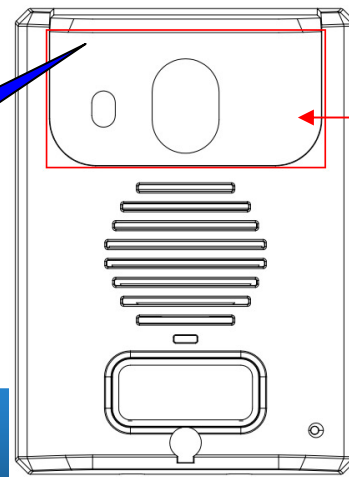
Press keypad: “#” + “password” + “#”.



3. Use RFID card to open door

(For RFID card registration, please refer to “Outdoor phone card ” section in IG7600 manual.)

Tap RFID card to this
area to open door .



Card reader
location

-
- M13 IP Video Door Phone Specification

Specification

Camera	High Quality CCD camera, Horizontal Resolution: 420 TVL, Effective Picture Elements: NTSC:510*492, PAL:500*582 (H*V)
Night Light	2 x LED (White)
Features	<ul style="list-style-type: none">• 1 * ISO14443 Card Reader, support RFID card• Speaker(8Ω/1W) x1, Microphone(-62±2dB) x1• 1 * DI/DO dry control for door release• 1 * Ethernet Interface
	<ul style="list-style-type: none">• IP connectivity• LED night function, make the image clearly.• Built-in RFID sensor module (MiFare format).• Monitor unit for outdoor image.
Support protocol	<ul style="list-style-type: none">• SIP 2.0 (RFC 3261)/TCP/IP/UDP, RTP, ARP, ICMP, DHCP, DNS, NTP• Power supply: External 12V/24V power supply• Audio codec: G.711 (A/u-law) , G.729• Audio quality: packet loss concealment, echo suppressor• Video codec: H.264 baseline real-time video codec• Automatic firmware and configuration update via TFTP



Wall mount



Flush mount