DHI-DB11
WiFi Video Doorbell

Quick Installation Guide

V1.0.0

Dahua Technology Co., Ltd

Foreword

General

This manual offers reference material and general information about the basic operation, maintenance, and troubleshooting for a Dahua Network Camera. Read, follow, and retain the following safety instructions. Heed all warning on the unit and in the operating instructions before operating the unit. Keep this guide for future reference.

Safety Instructions

The following categorized signal words with defined meaning might appear in the Guide.

Signal Words	Meaning
WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, lower performance, or unpredictable result.
NOTE	Provides additional information as the emphasis and supplement to the text.

Revision History

No.	Version	Revision Content	Release Time
1	V1.0.0	First Release.	January 2019
2	V1.0.1	Revised for North America	July 2019

Privacy Protection Notice

As the device user or data controller, you may collect personal data such as face images, fingerprints, license plate number, email address, phone number, GPS location and other sensitive or private information. You must ensure that your organization is in compliance with local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures include but not limited to: providing clear and visible identification to inform data subject the existence of surveillance area and providing related contact

About the Guide

- This user guide has been compiled with great care and the information it contains has been thoroughly reviewed and verified.
- The text was complete and correct at the time of printing. This guide may be periodically updated to reflect changes to the product or to correct previous information and the content of this guide can change without notice.
- If you encounter an error or have any questions regarding the contents of this guide, contact customer service for the latest documentation and supplementary information.
- Dahua accepts no liability for damage resulting directly or indirectly from faults, incompleteness, or discrepancies between this guide and the product described. Dahua is not liable for any loss caused by installation, operation, or maintenance inconsistent with the information in this guide.
- All the designs and software are subject to change without prior written notice. The product updates may cause some differences between the actual product and the Guide. Please contact the customer service for the latest program and supplementary documentation.
- Video loss is inherent to all digital surveillance and recording devices; therefore Dahua cannot be held liable for any damage that results from missing video information. To minimize the occurrence of lost digital information, Dahua recommends multiple, redundant recording systems, and adoption of backup procedure for all data.
- All trademarks, registered trademarks and the company names in the Guide are the properties of their respective owners.
- Please visit our website, contact the supplier or customer service if there is any problem occurred when using the device.
- Contact the supplier or customer service if you encounter any issue while using this unit.

FCC Information

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference;
- This device must accept any interference received, including interference that may cause undesired operation.

FCC compliance：

This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication. 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.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Legal Notices

Important Safeguards and Warnings

This chapter describes the contents covering proper handling of the device, hazard prevention, and prevention of property damage. Read these contents carefully before using the device, comply with them when using, and keep it well for future reference.

Installation and Maintenance Professionals Requirements

- All installation and maintenance professionals must have adequate qualifications or experiences to install and maintain CCTV systems and electric apparatus, and to work above the ground. The professionals must have the following knowledge and operation skills:
- Basic knowledge and installation of CCTV systems.
- Basic knowledge and operation skills of low voltage wiring and low voltage electronic circuit wire connection.
- Basic knowledge and operation skills of electric apparatus installation and maintenance in hazardous sites.

Power Requirements

- Install the unit in accordance with the manufacturer's instructions and in accordance with applicable local codes.
- All installation and operation must conform to your local electrical safety codes.
- Do not overload outlets and extension cords, which may cause fire or electrical shock.
- Do not place the camera near or in a place where the camera may contact overhead power lines, power circuits, or electrical lights.
- Ensure power conforms to SELV (Safety Extra Low Voltage) and that the limited power source is rated 16 VAC to 24 VAC, 12 VDC, or 24 VDC as specified in IEC60950-1. (Power supply requirement is subject to the device label).
- All input/output ports are SELV circuits. Ensure that SELV circuits are connected only to other SELV circuits.
- Ground the unit using the ground connection of the power supply to protect the unit from damage, especially in damp environments.
- Please install easy-to-use device for power off before installing wiring, which is for emergent power off when necessary.
- Protect the plug and power cord from foot traffic, being pinched, and its exit from the unit.
- Do not attempt to service the unit. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified personnel.
- If the unit is damaged and requires service, unplug the unit from the main AC power supply and from the PoE supply and refer to qualified service personnel. Damage may include, but is not limited to:
  - The power supply cord or plug is damaged.
  - Liquid has spilled in or on the unit.

    - An object has fallen on the unit.
    - The unit has been dropped and the housing is damaged.
    - The unit displays a marked change in performance.
    - The unit does not operate in the expected manner when the user correctly follows the proper operating procedures.
- Ensure a service technician uses replacement parts specified by the manufacturer, or that have the same characteristics as the original parts. Unauthorized parts may cause fire, electrical shock, or other hazards. Dahua is not liable for any damage or harm caused by unauthorized modifications or repairs.
- Perform safety checks after completion of service or repairs to the unit.
- Use attachments and accessories only specified by the manufacturer. Any change or modification of the equipment, not expressly approved by Dahua, could void the warranty.
- Incorporate a readily accessible disconnect device in the building installation wiring for quick power disconnect to the camera.
- Dahua assumes no liability or responsibility for any fire or electrical shock caused by improper handling or installation.

Application Environment Requirements

- Please use the device within the allowed humidity (<95%RH) and altitude (<3000m).
- Transport, use, and store the unit within the specified temperature and humidity range.
- Do not place the unit in a wet, dusty, extremely hot or an extremely cold environment; and avoid environments with strong electromagnetic radiation or unstable lighting.
- Do not use the device in the corrosive environment such as high salt fog area (sea, beach and coastal area), acid gas environment and chemical plants.
- Do not use the device in applications with strong vibrations such as in boats and vehicles.
- Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or cause a short circuit that may result in fire or electrical shock. Take care to not spill any liquid on the unit.
- If your installation environment is subjected to one of the conditions above, contact our sales staff to purchase cameras intended for the particular environment.
- Please don’t install the device near the place with heat source, such as radiator, heater, stove or other heating equipment, which is to avoid fire.
- Do not aim the lens at an intense radiation source (such as the sun, a laser, and molten steel for example) to avoid damage to the thermal detector.
- Use the factory default package or material with equal quality to pack the device when transporting.

Operation and Maintenance Requirements

- Do not touch the heat dissipation component of the unit. This part of the unit is hot and may cause a burn.
- Do not open or dismantle the device; there are no components that a user can fix or replace. Opening the unit may cause water leakage or expose components to direct light. Contact the manufacturer or a qualified service representative to service the camera or to replace a component, including the desiccant.
- Dahua recommends the use of a thunder-proof device in concert with the unit.

- Do not touch the CCD or the CMOS optic sensor. Use a blower to clean dust or dirt on the lens surface. Use a dry cloth dampened with alcohol and gently wipe away any dust on the lens.
- Use a dry soft cloth to clean the unit's housing. If the unit is particularly dusty, use water to dilute a mild detergent, apply the diluted detergent to a soft cloth, then gently clean the device. Finally, use a dry cloth to wipe the unit dry. Do not use a volatile solvent like alcohol, benzene, or thinner; or use a strong detergent with abrasives, which may damage the surface coating or reduce the working performance of the unit.
- Do not touch or wipe a dome cover during installation, this cover is an optical device. Refer to the following methods clean the dome cover:
- Stained with dirt: Use an oil-free soft brush or blower to gently remove the dirt.
- Stained with grease or fingerprints: Use a soft cloth to wipe gently the water droplet or the oil from the dome cover. Then, use an oil-free cotton cloth or paper soaked with alcohol or detergent to clean the lens from the center of the dome to outside. Change the cloth several times to ensure the dome cover is clean.

WARNING

- Modify the default password after login.
- Use attachments and accessories only specified by the manufacturer. Any change or modification of the equipment, not expressly approved by Dahua, could void the warranty.
- Internal and external ground connection should be stable.
- Do not supply power via the Ethernet connection (PoE) when power is already supplied via the power connector.
- Disconnect power before device maintenance and overhaul. It is prohibited to open the cover with power on in an explosive environment.
- Please contact the local dealer or the nearest service center if the device fails to work normally, please don't dismantle or modify the device.

Cybersecurity Recommendations

Mandatory actions to be taken towards cybersecurity

- **Change Passwords and Use Strong Passwords**
  - The number one reason systems get “hacked” is due to having weak or default passwords. It is recommended to change default passwords immediately and choose a strong password whenever possible. A strong password should be made up of at least 8 characters and a combination of special characters, numbers, and upper and lower case letters.
- **Update Firmware**
  - As is standard procedure in the tech-industry, we recommend keeping NVR, DVR, and IP camera firmware up-to-date to ensure the system is current with the latest security patches and fixes.

Recommendations to improve your network security

- **Change Passwords Regularly**
  - The length should be greater than 8 characters;
  - Include at least two types of characters; character types include upper and lower case letters, numbers, and symbols;
  - Do not use an account name or the account name in reverse order;
  - Do not use sequential characters, such as 123, abc, etc.;
  - Do not use repeated characters, such as 111, aaa, etc.;
- **Change Default HTTP and TCP Ports**
  - Change default HTTP and TCP ports for systems. These are the two ports used to communicate and to view video feeds remotely.
  - These ports can be changed to any set of numbers between 1025 and 65535. Avoiding the default ports reduces the risk of outsiders being able to guess which ports you are using.
- **Update Firmware and Client Software**
  - Keep your network-enabled equipment (such as NVRs, DVRs, IP cameras, etc.) firmware up-to-date to ensure the system is equipped with the latest security patches and fixes. When the equipment is connected to the public network, it is recommended to enable the “auto-check for updates” function to obtain timely information of firmware updates released by the manufacturer.
  - Download and use the latest version of client software.
- **Enable HTTPS/SSL**
  - Set up an SSL Certificate and enable HTTPS to encrypt all communication between your devices and recorder.
- **Enable IP Filter**
  - Enable the IP filter to prevent unauthorized access to the system.

- **Change ONVIF Password**
  - Older IP camera firmware does not automatically change the ONVIF password when the system credentials are changed. Update the camera's firmware to the latest revision or manually change the ONVIF password.
- **Forward Only Ports You Need**
  - Forward only the HTTP and TCP ports that are requited. Do not forward a wide range of numbers to the device. Do not DMZ the device's IP address.
  - Do not forward any ports for individual cameras if they are all connected to a recorder on site. Simply forward the NVR port.
- **Disable Auto-Login on SmartPSS**
  - Disable the Auto-Login feature on SmartPSS installed on a computer that is used by multiple people. Disabling auto-login prevents users without the appropriate credentials from accessing the system.
- **Use a Different Username and Password for SmartPSS**
  - Do not a username/password combination that you have in use for other accounts, including social media, bank account, or email in case the account is compromised. Use a different username and password for your security system to make it difficult for an unauthorized user to gain access to the IP system.
- **Limit Features of Guest Accounts**
  - Ensure that each user has rights to features and functions they need to perform their job.
- **Disable Unnecessary Services and Choose Secure Modes**
  - Turn off specific services, such as SNMP, SMTP, and UPnP, to reduce network compromise from unused services.
  - It is recommended to use safe modes, including but not limited to the following services:
  - SNMP: Choose SNMP v3 and set up strong encryption passwords and authentication passwords.
  - SMTP: Choose TLS to access a mailbox server.
  - FTP: Choose SFTP and use strong passwords.
  - AP hotspot: Choose WPA2-PSK encryption mode and use strong passwords.
- **Multicast**
  - Multicast is used to share video streams between two recorders. Currently there are no known issues involving Multicast. Deactivate this feature if not in use to enhance network security.
- **Check the Log**
  - The information stored in the network log file is limited due to the equipment's limited storage capacity. Enable the network log function to ensure that the critical logs are synchronized to the network log server if saving log files is required.
  - Check the system log if you suspect that someone has gained unauthorized access to the system. The system log shows the IP addresses used to login to the system and the devices accessed.
- **Physically Lock Down the Device**
  - Perform physical protection to equipment, especially storage devices. For example, place the equipment in a special computer room and cabinet, and implement access control permission and key management to prevent unauthorized personnel from accessing the equipment.

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- **Connect IP Cameras to the PoE Ports on the Back of an NVR**
  - Cameras connected to the PoE ports on the back of an NVR are isolated from the outside world and cannot be accessed directly.
- **Isolate NVR and IP Camera Network**
  - Ensure that the network for the NVR and IP cameras should not be the same network as a public computer network. Separate networks prevent unauthorized users accessing the same network the security system.
- **Secure Auditing**
  - Check online users regularly to ensure unauthorized accounts are not logged in to a device.
  - Check the equipment log to access the IP addresses used to login to devices and their key operations.

Table of Contents

1 Overview

The DHI-DB11 WiFi Video Doorbell is a component of the Dahua WiFi series. The doorbell offers Passive IR motion detection and transmits video and audio to a mobile phone for remote visual confirmation and communication with visitors. This device is compatible with Dahua NVRs and with the DMSS mobile application. The DHI-DB11 is certified to the IP55 Ingress Protection standard, making it the ideal camera for indoor and outdoor surveillance at homes and small retail or dining establishments.

The key features of this camera are:

WiFi Capability

The IPC-C26EN operates on the IEEE802.11b/g/n networks using the 2.4 GHz band. The camera has an internal dual antennae offering reliable performance.

Motion Detection

The camera includes a passive infrared (PIR) detector that detects motion without drawing attention to the camera. The detector covers up to 120° and a distance of 5.0 m (16.50 ft).

1.1 Video Doorbell Components

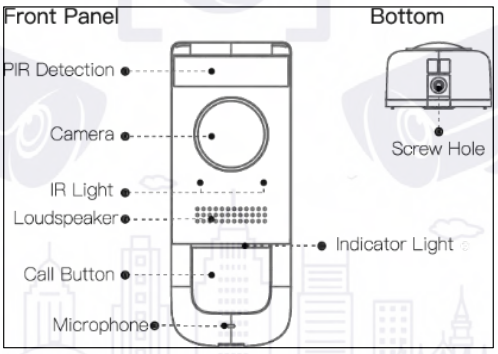

Figure 1-1: DHI-DB11 Front Detail

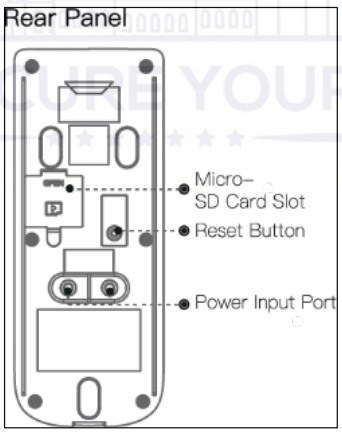

Figure 1-2: DHI-DB11 Rear Detail

1.2 LED Indicators

LED Indicator Light	Device Status
Spinning Blue	Calling
Solid Blue	Talking
Flashing Blue	Network Error

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2 Installing the Camera

The video doorbell ships with all the components to mount the camera to a wall. Before installing the camera consider the following:

- Review the “Installation Tips” section to help you choose an ideal mounting location.
- Decide whether to run the cables through the wall or along the wall.

2.1 Installation Tips

To ensure the best possible wireless performance, it is recommended to keep the following installation tips in mind when choosing a location for the camera:

- Place the unit as close to your Wi-Fi router or access point as possible.
- Reduce the number of obstructive materials between the camera and the router or access point. Concrete, brick, metal and wood are the most common materials in your house that can cause poor signal strength.
- The camera uses the 2.4 GHz band exclusively. Most new routers support both 2.4 GHz and 5GHz bands. It is recommended to use other WiFi devices on the 5 GHz band when possible to ensure the 2.4 GHz band is not overcrowded.
- Other electronic devices such as microwaves, TVs, cordless phones, and baby monitors can cause signal interference. It is recommended to install the camera as far away from these devices as possible.
- This unit is rated for outdoor use. Installation in a sheltered location is recommended.

2.2 Unpacking

This equipment should be unpacked and handled with care. If an item appears to have sustained damage during shipping, notify the shipper immediately.

Verify that all the parts listed below are included. If an item is missing, contact customer support or your local representative.

The original packing carton is the safest container to transport the unit, in the event the unit must be returned for service. Retain the carton and all shipping material for future use.

2.3 Parts List

Item	Quantity
Video Doorbell	1
Chime Kit	1
Screwdriver (Philips/Hex)	1
Level	1
Wall Anchors	4
ST3 x 20 Self-tapping Screws	4
Black Screws	3
Set Screws	2
Doorbell Wire Bundle	1
Wire Connectors	2
Wire Leads	2
Wire Clips	3

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2.4 Mounting the Doorbell to a Wall

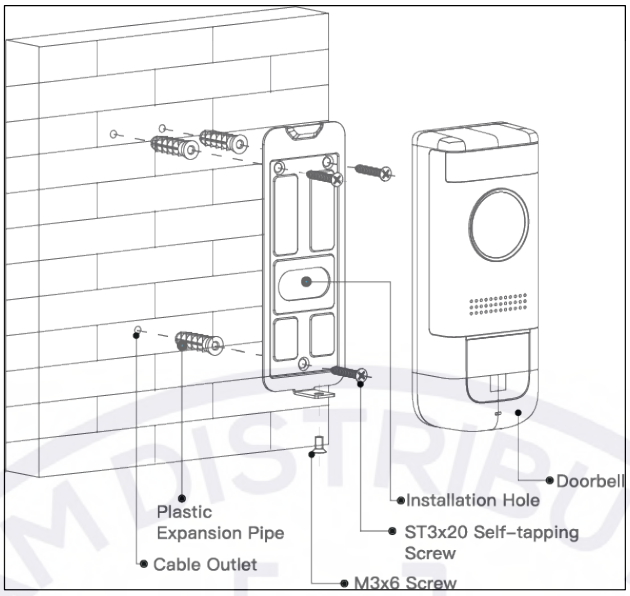


Figure 2-1: DHI-DB11 Installation Schematic

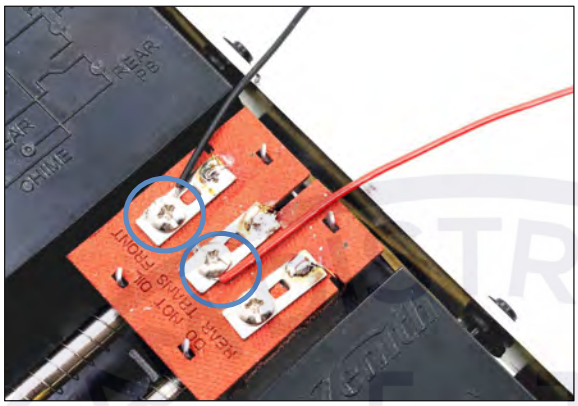
1. Remove the M3x6 screw from the bottom of the unit, then remove the mounting bracket from the underside of the doorbell.
2. Use the mounting bracket as a template to mark the position of the three (3) screw holes and the hole for routing the wires.
3. Drill the holes in wall according to the template.
4. Insert the three (3) wall anchors into the pre-drilled screw holes.
5. Attach the mounting plate to the wall using the three (3) ST3x20 self-tapping screws.
6. Route the wires from the DHI-DB11 through the center hole.
7. Slide the doorbell down the mounting bracket from top to bottom.
8. Attach the doorbell to the mounting plate with the M3x6 screw on the underside of the unit.

2.5 Wiring the DHI-DB11 to a Doorbell Chime

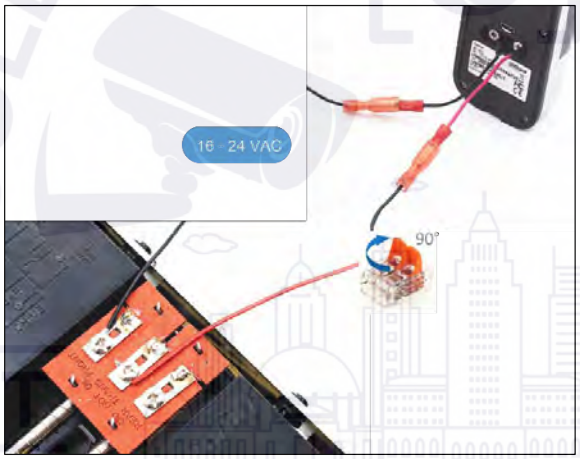
The DHI-DB11 Video Doorbell connects directly to a mechanical or to an electric door chime with the aid of the included DHI-DB11 Chime Kit. In general, the doorbell chime and the DHI-DB11 are both connected to the AC power input and the transformer wire from the chime is connected to the DHI-DB11 so that when a visitor pushes the DH-DB11 the chime plays the tone.

2.5.1 Wiring a Mechanical Chime

1. Cut the power to the mechanical door chime.
2. Remove the back cover from the mechanical chime to expose the electrical terminals.
3. Disconnect the existing wires from the FRONT and the TRANS terminals.
4. Attach the live wire to the FRONT terminal and attach the other wire to the TRANS terminal.



5. Attach the other end of the live wire to AC power input.
6. Attach the end of the other wire from the DHI-DB11 to the wire clip connected to the TRANS terminal on the chime.



7. Replace the chime cover.
8. Restore power to the mechanical chime.

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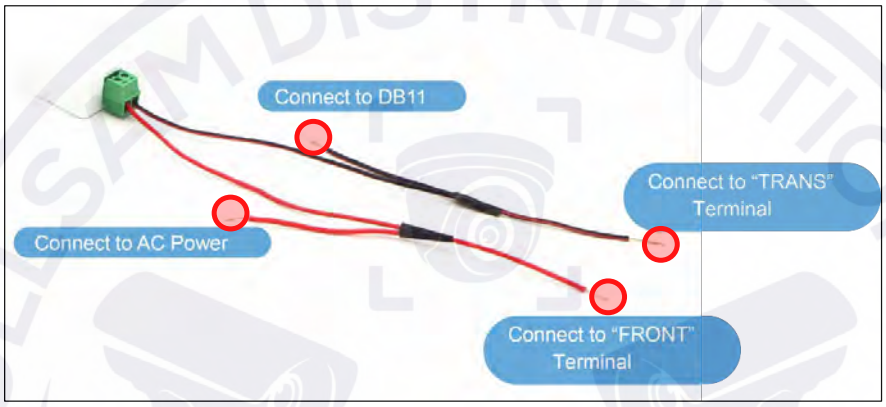
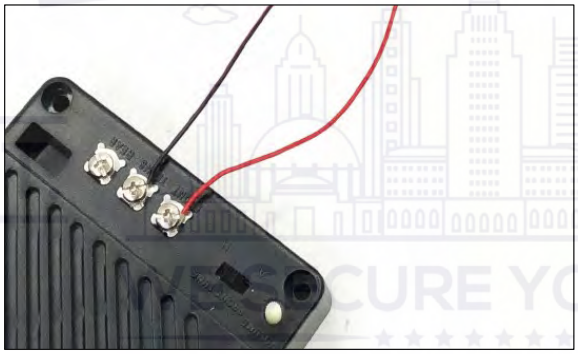
2.5.2 Wiring an Electrical Chime

1. Cut the power to the electrical door chime.
2. Remove the back cover from the electrical chime to expose the electrical terminals.
3. Disconnect the existing wires from the FRONT and the TRANS terminals.

4. Connect the wire harness to the input port on the Chime Kit.



5. Attach the end of the live wire to the TRANS terminal on the electric chime. Attach the other wire to the FRONT terminal.



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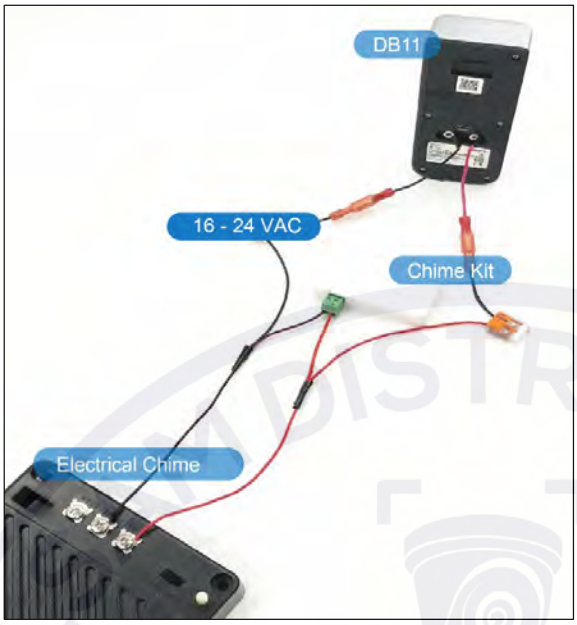
6. Attach the other end of the TRANS wire to the AC power input. Attach the other end of the FRONT wire to a wire clip.
7. Attach the live wire from the DHI-DB11 to the AC power input
8. Attach the other wire from the DHI-DB11 to the wire clip connected to the FRONT wire from the electric chime.

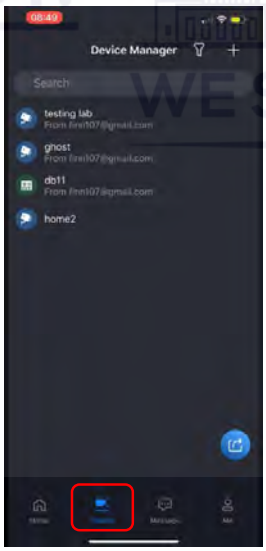


9. Replace the chime cover.
10. Restore power to the electrical chime.

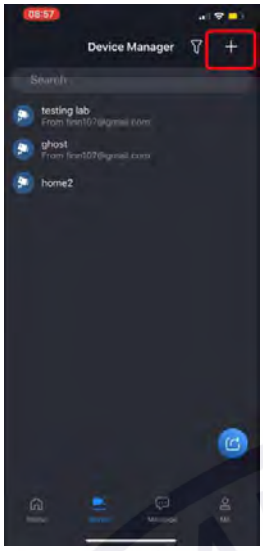
2.6 Connecting to the DMSS App

1. Install the free mobile app on your smart phone:
   - Apple App Store: iDMSS
   - Google Play Store: gDMSS
2. Tap the iDMSS or the gDMSS icon to open the app.

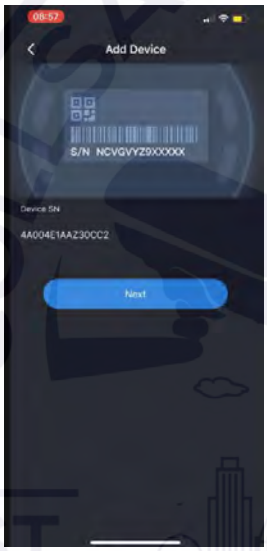
   Note: Ensure your mobile device is connected to the same 2.4 GHz WiFi network that will be used with for the camera. The camera does not work with 5 GHz WiFi networks.
3. Tap the Device icon at the bottom of the screen.



4. Tap the “+” icon at the upper-left corner of the screen and then tap **SN/Scan** to add the video doorbell.

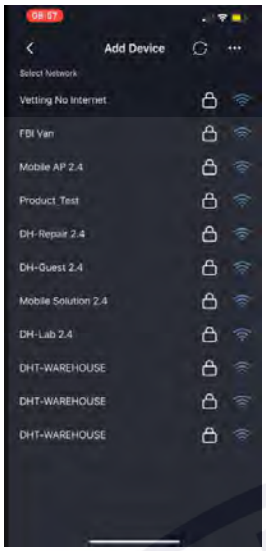


5. Scan the QR code on the back of the video doorbell. If the QR code does not work, tap **Manually enter SN** and type the video doorbell’s serial number. Then click **Next**.



6. Follow the directions on the Add Device screen and then click **Next** to continue.

7. Tap Join then select the WiFi network for the video doorbell.



8. Type the password for the selected WiFi network, then click Next.

9. Type a descriptive name for the video doorbell then tap the Save icon.

10. Type a security password for the video doorbell to initialize the device, then click Next. The initialization process may take some time to complete.

3 Troubleshooting

Issue	Solution
Cannot boot device	● Ensure you are using a 2.4GHz Wi-Fi network to configure the unit. The unit does not work with 5GHz networks. ● Ensure the camera is properly connected to power
No Picture/Signal	● Ensure your mobile device is within 1 ft (30 cm) of the camera during setup. ● Try repositioning the camera, router, or both to improve signal strength. ● Reset the device to the factory default and try to connect using the DMSS app again. Press the Reset button on the rear panel of the device for 5 seconds, until the blue LED stays on for 3 seconds then turns off. The device automatically reboots and restores the factory settings.
Device not online	● Check the LED indicator. If it is flashing blue then the unit failed to connect to the network. ● Check that the WiFi router is connected to the network.
No message when motion detection is triggered	● Check that the alarm subscription is enabled. ● Check that the PIR zone is enabled. ● Ensure the detection zone angle and distance are set properly.
No audio	● Ensure audio function on camera is turned on. ● Ensure audio is turned up on viewing device.
The warning light is not switching on automatically	● Ensure that you have enabled and configured white light deterrence.
The siren is not switching on automatically	● The camera siren cannot switch on automatically. You can control the camera siren manually using the Dahua DMSS app.