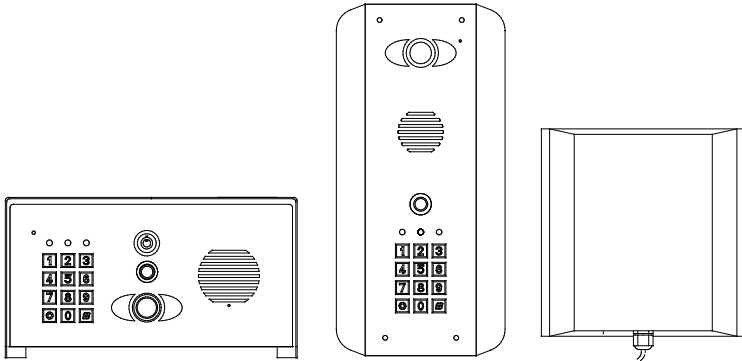


# Installation Instructions

For  
WiFi (PRO 2)

**PROFESSIONAL INSTALL ONLY**

Do NOT give this manual to end user!



Manual Version 1

The manufacturer cannot legally offer technical support to non-qualified gate or door installers. End users should employ the services of a professional install company to commission or support this product!



**Tip:** Site Survey BEFORE you begin. See Page 3!

**Bft**



## WARNING

Do not power from the gate controller. Only use the provided UL power supply, otherwise damage may occur and warranty may be void.



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# Site Survey



**YES!**

I have some wifi signal at the gate with my phone! If not, STOP. You will need some form of wifi extender, or repeater, or LAN/CAT5 cable!



**YES!**

I have at least 1 Mb UPLOAD speed. If not STOP! This system may operate intermittently remotely or have delayed PUSH notifications.



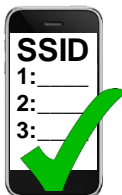
**YES!**

My wifi Internet Security is WPA or WPA2 or better.



**YES!**

My wifi network supports 802.11 b/g or n (2.4g frequency networks). Note: This device cannot run on "a" or "s" type networks (these are 5G frequency).

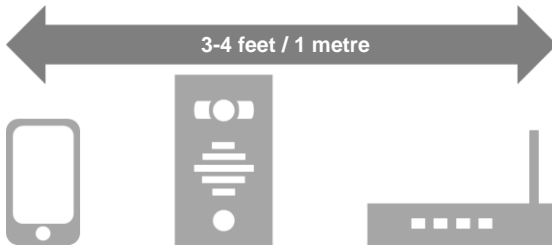


**YES!**

The network I am trying to connect to is a single network without duplicate SSID networks of the same name.

# Wifi Setup

## Step 1



Do not install the intercom. Power it up beside the router so that you can perform the configuration with the home owners phone beside the intercom and router.

Note: If you skip this step and proceed directly to installation, technical support may request you go back and perform this

## Step 2

Download and install the app on the end-user's phone.

Search for **wifi PRO 2** and find the icon, or scan the QR code if the phone has a QR scan app.

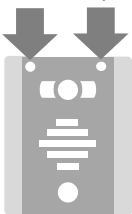
**Tip:** Be sure to accept ALL permissions during install, otherwise you will experience problems later!



## Step 3

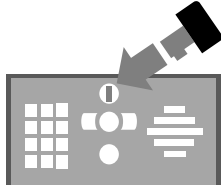
Open the intercom and connect antenna.

Loosen top screws



Portrait wall mount style

Use Key on lock



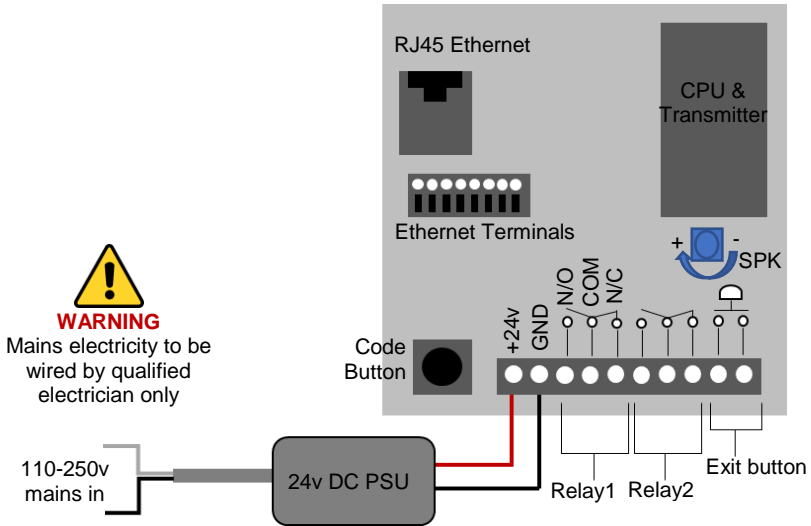
Landscape Pedestal Style

Architectural or "Portrait" oriented models will have security screws at the top. Loosen only these with the security screwdriver provided.

Pedestal style "Landscape" orientated units will have a locking key.

## Step 4

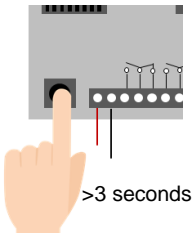
Connect 24v DC power with the power supply provided.



### WARNING

Mains electricity to be wired by qualified electrician only

## Step 5



Press and HOLD the code button for more than 3 seconds. A tone will be heard.

The intercom will now begin to transmit its own wifi network called BELL-XXXXXX (where XXXXXX is the 6 numerical digits from the serial ID number).

## Step 6a



With the user's phone, search for available wifi networks and connect to the BELL network.



**TIP:** Your phone needs to be within range of the intercom to detect this network.

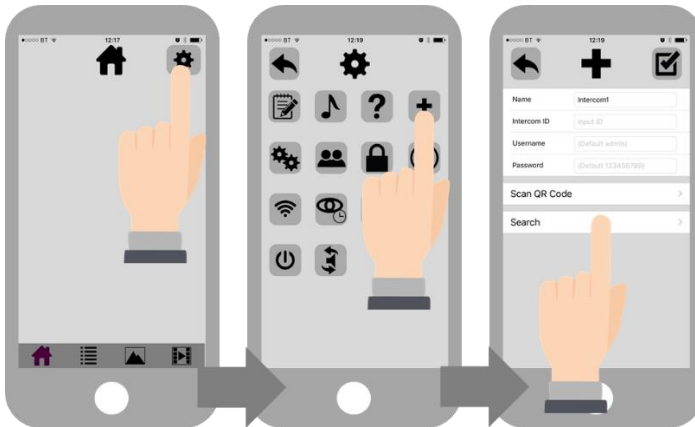
## Step 6b



Enter the default pass code **123456789** and the users phone should now be connected directly to the intercom.

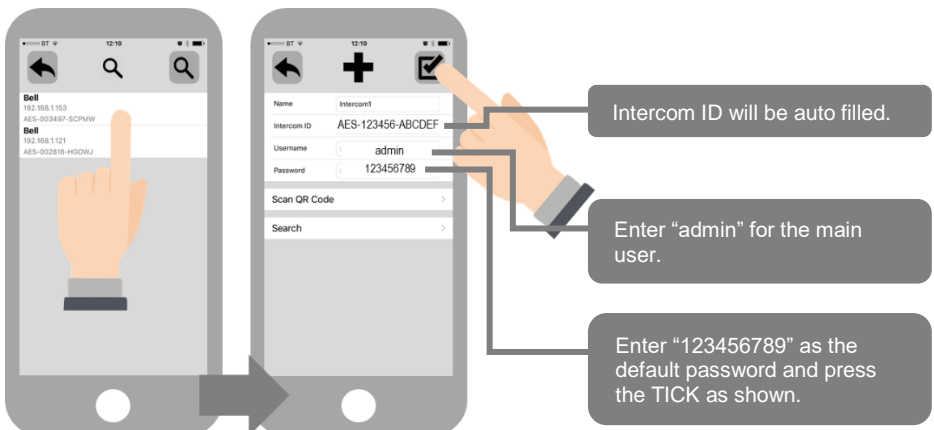
Press **CONNECT** on android devices and **DONE** on apple devices.

## Step 7a, 7b, 7c

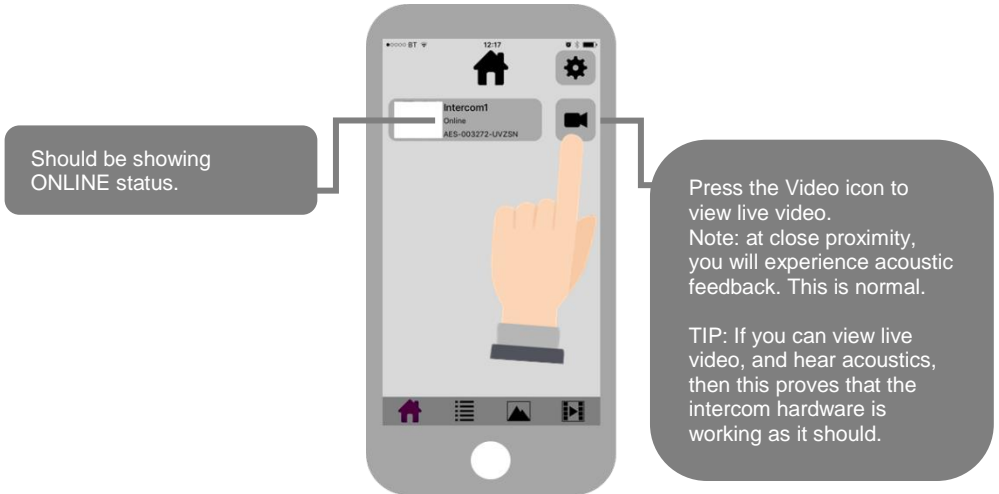


After pressing **SEARCH**, the APP will now search for the intercom and should detect it.

## Step 7d, 7e

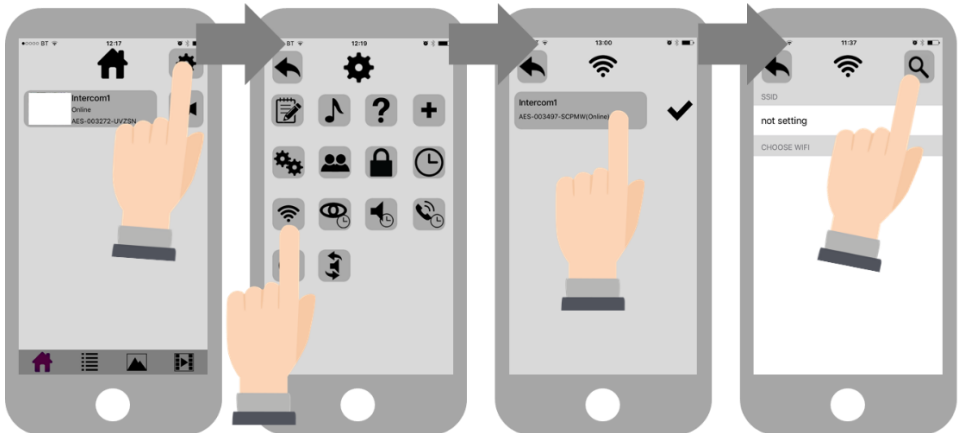


## Step 8



## Step 9a, 9b, 9c, 9d

Note: The intercom and phone are directly connected in a point to point link. Although we know the intercom is fully operational, we now need to connect it to the local wifi network.



The intercom is now searching the area for wifi networks and will display all compatible networks on the App screen.

## Step 9e, 9f, 9g



Enter the WIFI PASSCODE for the network which you are connecting to.



**WARNING:** Take care not to enter a typing mistake. The intercom will accept any wifi password and will not know if it is correct or not!



Wifi Signal strength must be at least 25%, or you will have problems!

## Step 10

60 secs..



Wait 60 seconds. The intercom will now re-boot and attempt to connect to the wifi network with the password you have entered.



If you can see live video and hear audio, the intercom has successfully connected to the network.



If for some reason this does not work, try connecting to the wifi network again and double check the wifi password is correct.



## Diagnostic Tips

### 1. Intercom is showing online status, but the video feed shows “fetching”.

A: This can be caused by poor power cable extended to the intercom, weak wifi, or too many devices connected to the wifi network and the router is incapable of managing the workload.

### 2. Intercom is not showing online status.

A: This can be caused by incorrect wifi password created, or wifi dropping in and out due to weak signal.

### 3. I can see video but there is no audio on the phone or there is no audio at the intercom.

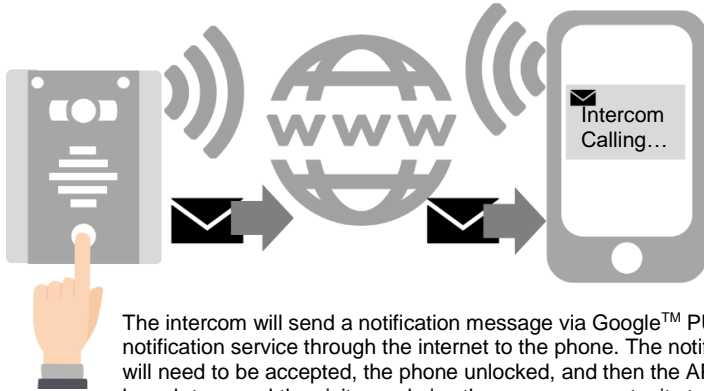
A: This can be caused by the audio settings being too low on the phone, or permissions for the app were not accepted during app install. Check microphone permissions for the app in the phone settings.

### 4. The status is showing online, then connecting, then online again.

A: This is normal when a phone roams between two wifi connections, or between wifi and data. Make sure the phone is stationary and either has good wifi or a stable data connection.



**Step 11 - Press the call button.**



The intercom will send a notification message via Google™ PUSH notification service through the internet to the phone. The notification will need to be accepted, the phone unlocked, and then the APP will launch to reveal the visitor and give the user an opportunity to either accept or reject the call..

## Answering on Android



Swipe down your notification banner when called, and press the Intercom notification.

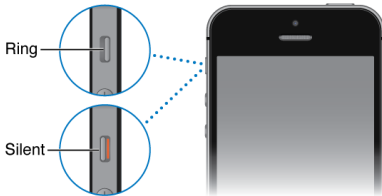
Your phone will now launch the app and you will see a snapshot of the visitor at which point you can answer or decline the call.

Press the green icon to accept.

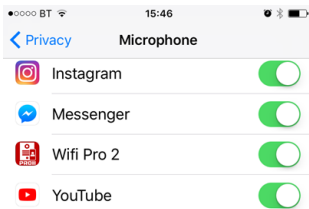
# Answering on Apple



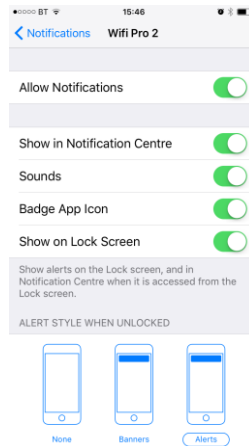
Note: Various versions of IOS and Android OS will have different notification acceptance techniques. Please refer to online support for your device if needed.



TIP: Make sure ringer switch is ON and volume is turned up.



TIP: If there is no voice from the speaker at the gate, check the iPhone microphone permissions in Settings/privacy/microphone

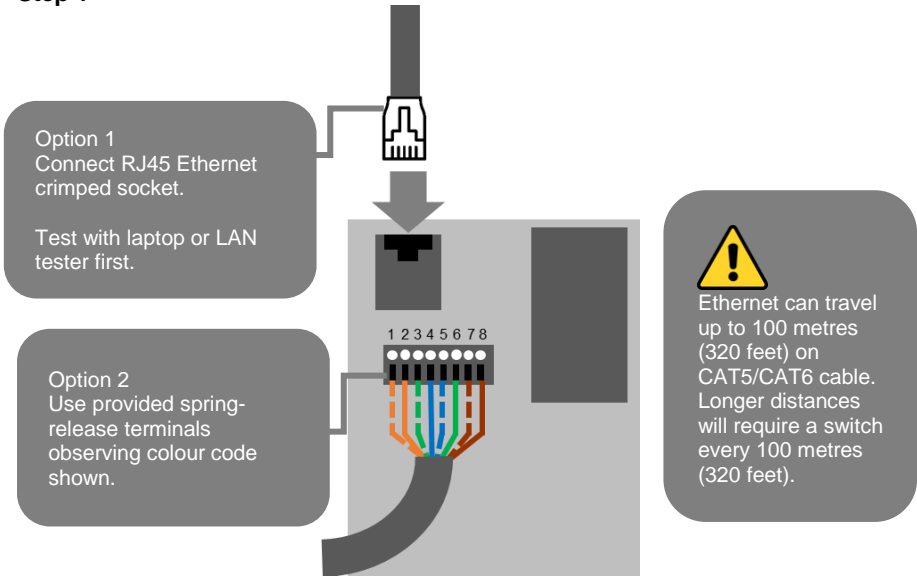


TIP: If you don't get notifications then check settings/notifications and select the app.

# LAN Setup

This intercom can also be connected to a LAN cable directly from the router or from a repeater or point-to-point wifi bridge device. Note: Ethernet LAN signals can travel 100m/300ft on CAT5 cable. Longer distances will require a powered switch or repeater every 100m/300ft.

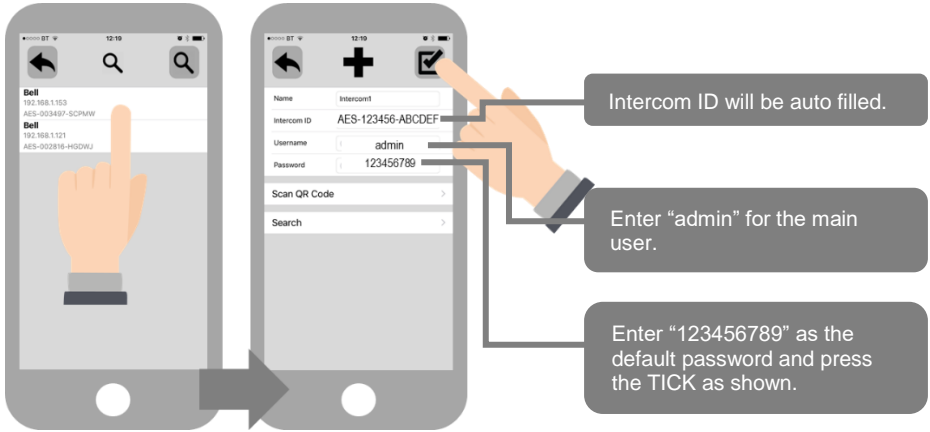
## Step 1



## Step 2a, 2b, 2c.

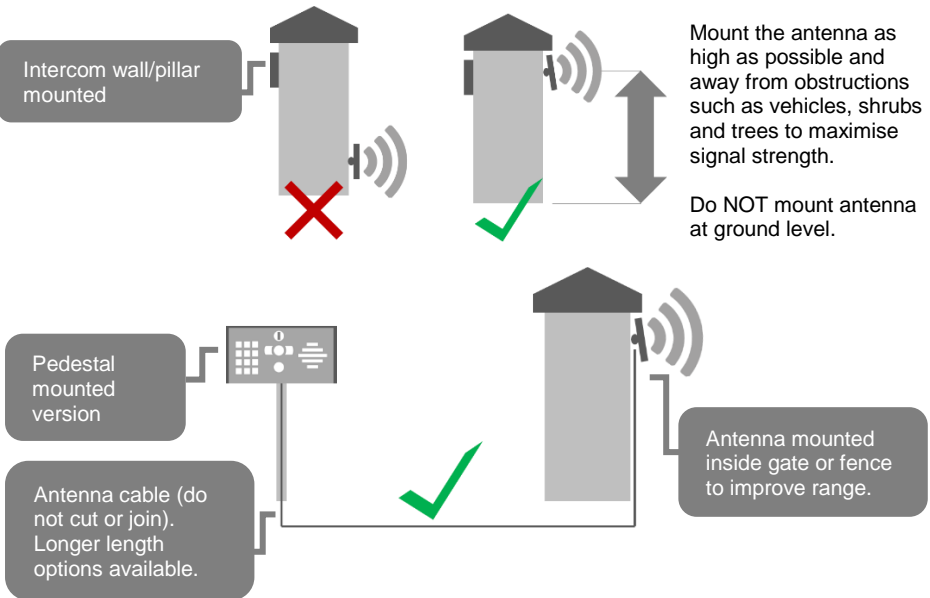


## Step 2d, 2e



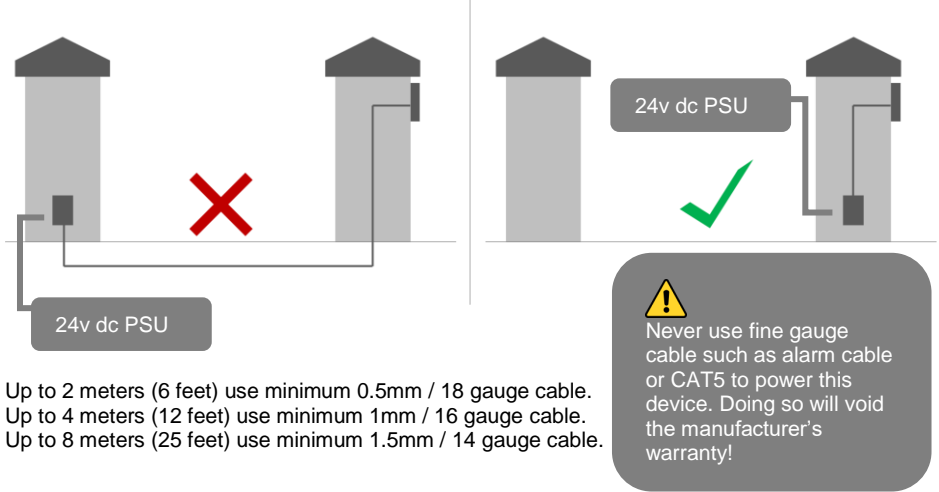
Now you can test the intercom as per steps 10 and 11 in "Wifi Setup" section.

## Installation

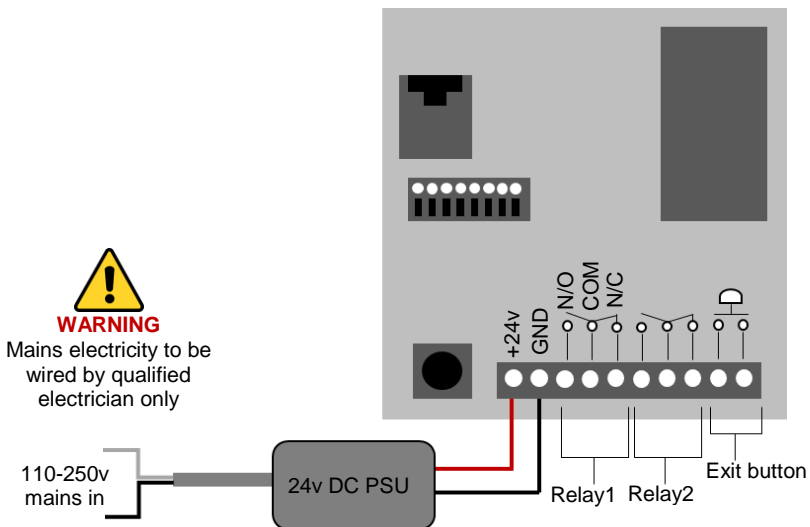


# Power

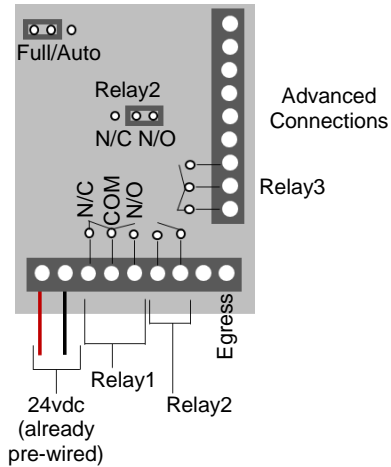
This intercom comes with a 24v dc power supply. The intercom requires up to 2 amps peak demand at times, therefore power cable is of extreme importance. It is preferred the 24v dc PSU is installed within close proximity of the intercom. However, on occasion this may be difficult to achieve. Please adhere to the cable thickness guide below or the device may be damaged and rendered out of warranty by the manufacturer.



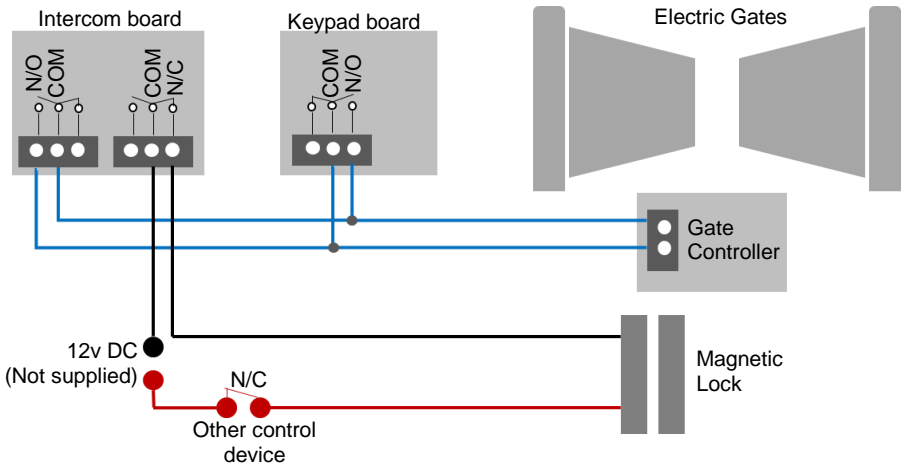
# Intercom Module Wiring



# Keypad Module Wiring

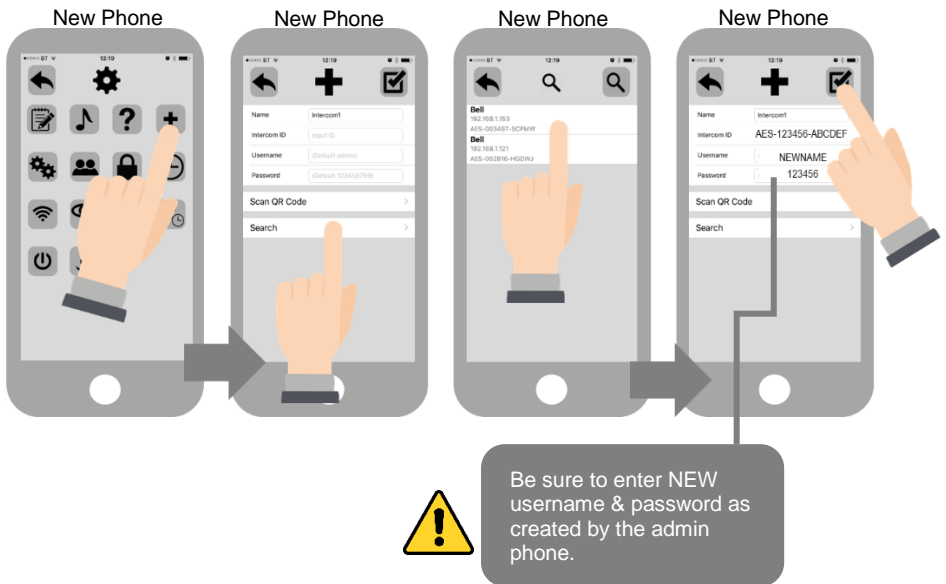
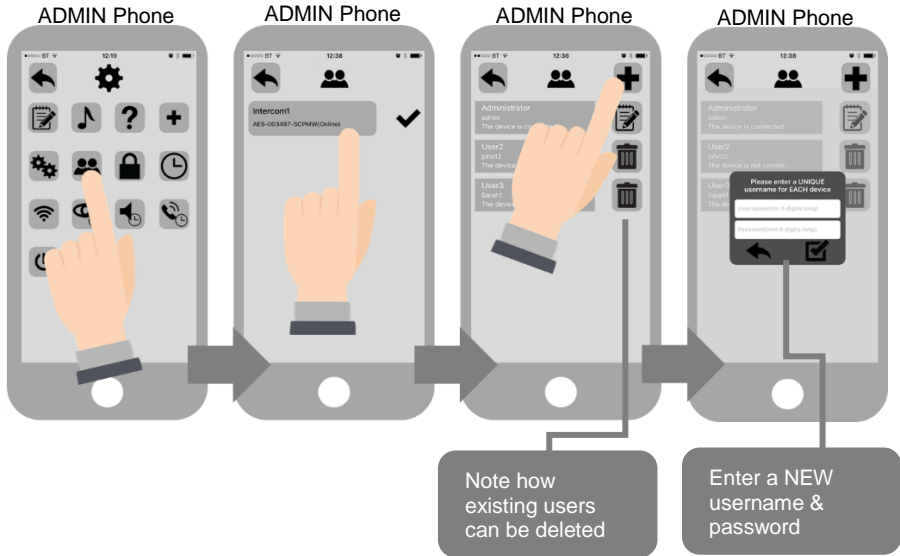


## Output Connections Example

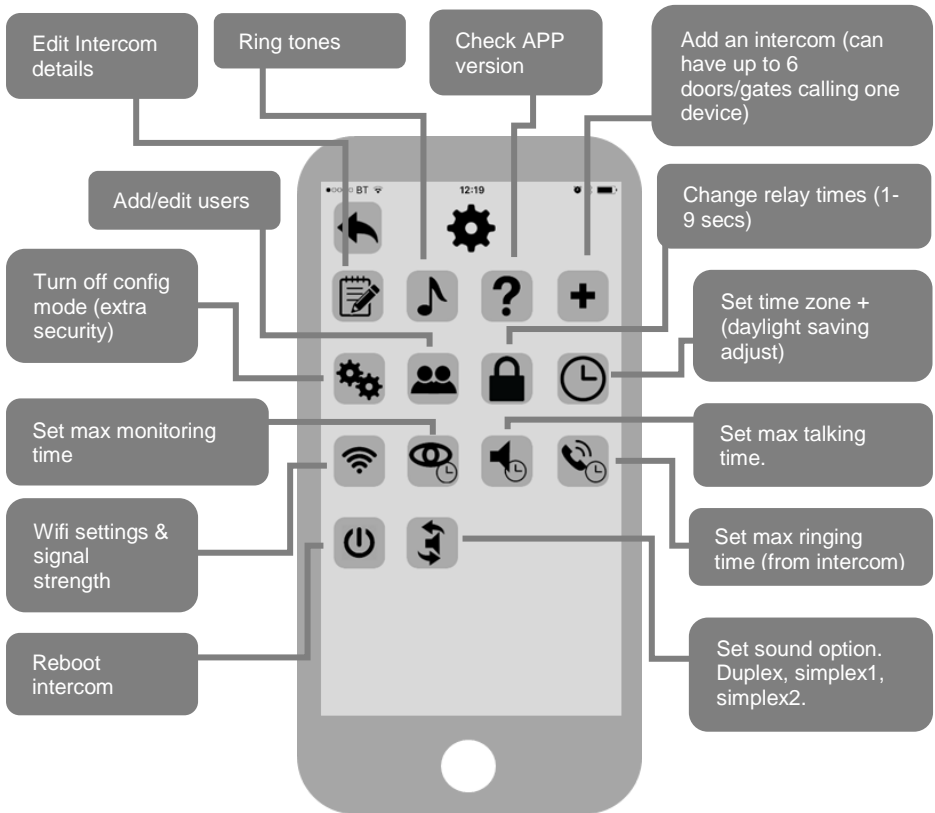


# Adding Additional APP Users

Additional users MUST be added with individual user names. Do NOT use the same username.



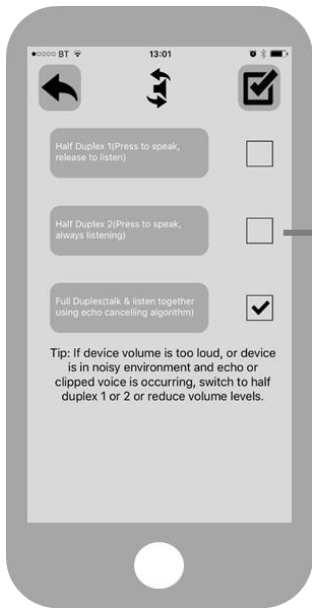
# Other Settings





# Sound, Volumes and Speech

This intercom is capable of full duplex speech, which means two people can have a conversation and appear to speak at the same time. Since various manufacturers of android phones, iphones and tablets all differ in acoustic performance, and different users may require varying levels of volume on their own handset, it may be possible to setup some devices in full duplex mode but others may need to be set in half duplex mode (phone user will press to talk). This may also be required if a phone is in a particularly noisy environment, or the intercom is located near a busy main road with high levels of traffic noise.



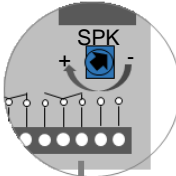
Choose the speech option which best suits the individual and the device being used.

Half Duplex 1(Press to speak, release to listen)

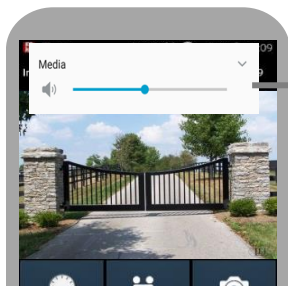
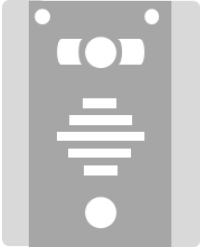
Half Duplex 2(Press to speak, always listening)

Full Duplex(talk & listen together using echo cancelling algorithm)

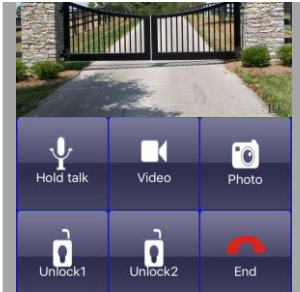
Tip: If device volume is too loud, or device is in noisy environment and echo or clipped voice is occurring, switch to half duplex 1 or 2 or reduce volume levels.



Suggest 80% MAX volume



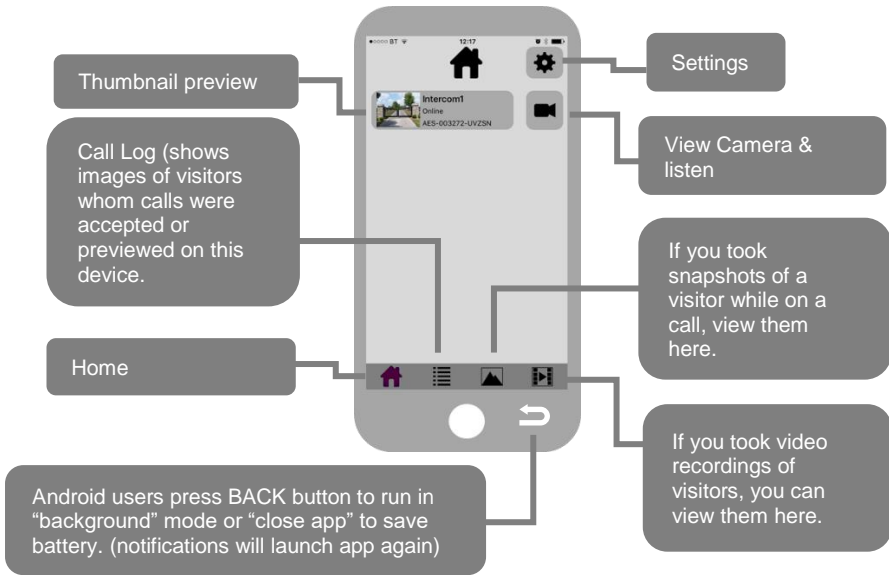
Suggest 50% MAX volume on Android



Hold talk	Video	Photo
Unlock1	Unlock2	End

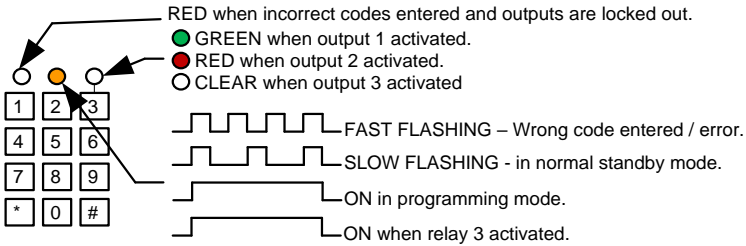
"Press and Hold" option appears when device set to half duplex 1 or 2.

# Using the APP



# Keypad overview

This keypad has 3 outputs, all independent from the intercom/app relays. The diagram below shows the LED indicators which indicate programming and relay status information.



**TIP:** After power up, as a security precaution, the keypad cannot be programmed for 60 seconds. Once this time elapses, you may begin.

**TIP:** Flashing amber LED is normal standby mode!

## Keypad Programming

### Quick start guide

1) Enter programming mode (amber LED should be ON)

0 0 0 0 \* \*

2) Enter a new user code...

1 0 2 0 0 0 ? ? ? ? #

3) Exit programming mode

\* \*

4) Enter the new user code to check the relay clicks.

**Tip:** The engineer code must be the same length as user codes. If using a 6 digit engineers code, then user codes must also be 6 digits long etc.

## Full Keypad programming

Enter programming mode..

0 0 0 0 \* \*

The unit is now in programming mode. Amber LED on the keypad should remain permanently on. 0000 is the default programming passcode.

Exit programming mode..

\* \*

The unit should exit programming mode and the amber LED should start flashing again.

Enter a new ENGINEER/INSTALLERS code...

Go into programming mode firstly then enter the following sequence...

0 1 ? ? ? ? #

Location

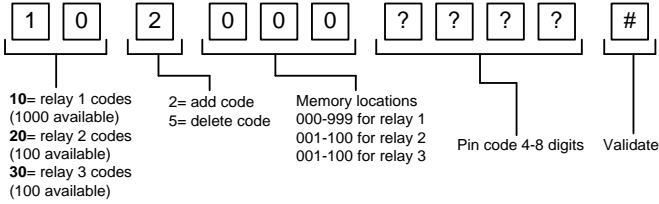
4-8 digit code

Validate

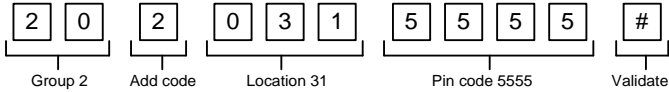
Replace ???? with your new ENGINEERS code.

## Enter or delete new user/Homeowner codes

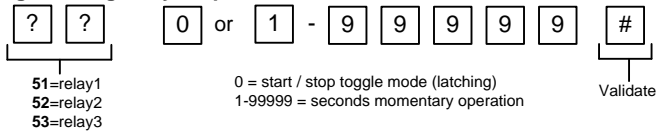
There are 3 groups of user codes. Group 10 for relay 1, group 20 for relay 2, and group 30 for relay 3. The programming sequence is shown below...



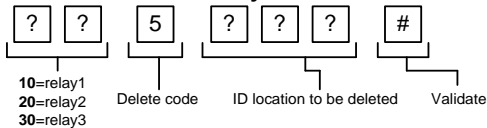
Example: Add user 31 to have access code 5555 operating relay 2....



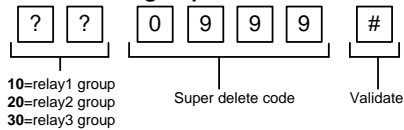
## Programming relay output times and modes...



## Delete a user code even if you don't know the code...

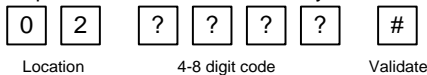


## Delete an entire group of codes



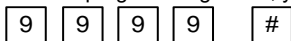
## Programming super user codes...

A super user code can activate any of the 3 relays



## Restoring defaults

When in programming mode, you can enter the following sequence...



### When the engineers/installers code is forgotten....

- 1) Wire a push button (or replicate with wire link) across the Egress terminal and (-)GND.
- 2) Switch off power for 1 minute.
- 3) Switch ON power.
- 4) during the first 60 seconds, press the EG button once to enable the function.
- 5) Enter the following code..

8 0 8 0 \* \*

The keypad should now be in programming mode, ready to accept new data. Change the installers/engineers code now as per instructions above.

## Using the keypad

### Using the standard codes...

Once you have exited out of programming mode, simply enter the user code.

### Using super user codes

? ? ? ? # 1 Activate output 1

? ? ? ? # 2 Activate output 2

? ? ? ? # 3 Activate output 3

## Troubleshooting

It is worth remembering that when you install this intercom, you are literally only supplying 25% of the overall system. The other 75% already exists with the customer. Namely the router, the wifi network, and the phones or devices.

Anything can go wrong with any part of that entire system. Therefore, it is a useful exercise to attempt to prove to the customer that the intercom hardware is working and operational before attempting to diagnose the root cause, especially when connected wirelessly to a network.

If the intercom is connected via wifi to the network, it is very useful to press and hold the code button on the board, then connect the phone DIRECTLY to the BELL wifi network (must be within wifi range of intercom). Open the app, and show the customer that when the phone is connected directly to the intercom, there is video and two way speech. The job is then to find out what part of the installation or overall system is causing the problem since the intercom hardware has been proven as operational.

We can say without doubt that when we do get hardware failures, the above process will not work and you will not get video and voice to the phone in a direct connection like this.

Below are the most common causes of problems with installs, starting with the most common first.

<b>Problem/error</b>	<b>Symptoms caused</b>	<b>Solution</b>
Wifi too weak at gate	App showing offline status, video image shows "fetching, long lag on calls, intermittently showing online/offline, delayed push notifications.	Increase the height of the antenna if possible, install a wifi booster either inside the house near the front of the property, or a loft or eaves mounted external wifi booster, or install a CAT5 cable from the intercom to the router.
Wrong power cable (too thin) installed from 24v adaptor to the intercom, or power adaptor too far from intercom.	Delayed push notifications, video lag, voice problems, freezing, relays not opening the gate.	Change the power cable to specifications shown within this manual.
Too many devices on home network	Lagging video or audio, delayed notifications, status showing intermittently online/offline, no or randomly operation of push notifications.	Turn off as many other devices as possible, reboot the router and then try again. If the unit works, it proves to the customer that their router needs to be upgraded to handle the demand.
Several wifi networks using the same SSID	Intercom works well sometimes and not well other times. The wifi signal strength on the app wifi screen can sometimes be strong and other times weak.	The intercom is jumping between networks depending on traffic and other devices connected to the same node. It is advisable to change the SSID name of the wifi network closest to the intercom to something individual.
Incorrect wifi password entered during setup	Offline status. Will not connect to the network	Try process again. Check the same wifi password works on your phone (forget the network and reconnect using the same password).
Additional user added incorrectly.	Can randomly display status "id already in use"	When an additional user was being added, the process was done incorrectly. Additional users MUST be added by the admin device first, with separate usernames created for each. The new usernames and passwords must be used by the new devices as shown in this manual to logon to the intercom.
Commercial firewall	App shows online when phone is in the same network but offline when phone on 3G/4G or on a remote wifi network, App works fine remotely to view gates but push notifications are not working at all.	This will be a job for the IT provider for the business. A port will need opened to allow P2P and PUSH notification traffic to pass through the firewall. Recommended unassigned ports which your network administrator can open are 6806, 6809 and 9123, 9124.

Insufficient upload speed	App shows online status locally and when phone is remote, but push notifications may be delayed, or video lag, or showing "fetching" on video screen.	This will need discussed with the ISP / broadband provider.

## Change History

Top version	Panel version	PCB version	Firmware version	IOS app version	Android app version
1	2	1.0	4.11.12.21.20171121	1	1

## Regulatory Compliance

FCC Id: 2ALPX-WIFI-IBK

Grantee: Advanced Electronic Solutions Global Ltd

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Output power listed is conducted. This device must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance. This device has 20MHz and 40 MHz bandwidth modes.



## EU-RED Declaration of Conformity

Manufacturer: Advanced Electronic Solutions Global Ltd

Address: Unit 4C, Kilcronagh Business Park, Cookstown, Co Tyrone, BT809HJ, United Kingdom

We/I declare, that the following equipment (Video intercom), part numbers:

WIFI-IBK, wifi-iB, wifi-ABK, wifi-AB, wifi-BD, wifi-BEK,

wifi-BEik, wifi-Bei, wifi-BFT-KPAD



Complies with the following essential requirements:

EN 301 489-1 V2.2.0 (2017-03) (Electro-Magnetic compliance)

EN 301-489-17 V3.2.0 (2017-03) (Electro-Magnetic compliance)

EN 62479:2010 (Maximum output power)

EN60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013 (Electrical Safety)

The manufacturer cannot legally offer technical support to non-qualified gate or door installers. End users should employ the services of a professional install company to commission or support this product!



**BFT Americas**

6100 Broken Sound Parkway N.W. Suite 14, Boca Raton, FL 33487