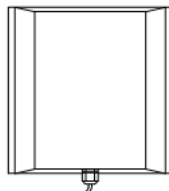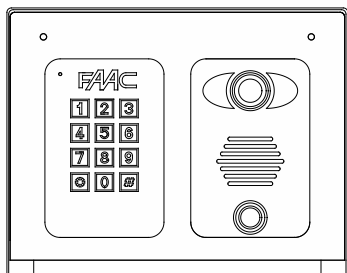# Installation Instructions

WIFI-PRO2 / Part No. 4402

PROFESSIONAL INSTALL ONLY

Do NOT give this manual to end user!

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

v1.1

FAAC

Index

Section	Pages

Site Survey

WiFi

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!

Mbs

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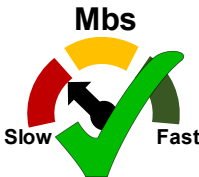
YES!
I have at least 1 Mb **UPLOAD** speed. If not STOP! This system may operate intermittently remotely or have delayed PUSH notifications.

WPA / WPA2

Wi Fi

SECURITY

YES!
My wifi Internet Security is WPA or WPA2 or better.

Wi Fi ™

b/g/n

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).
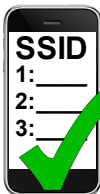
SSID
1: _____
2: _____
3: _____

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

Please consult with the person that configured the Wi-Fi network on the premise if you need help with these steps.

Overview of Product

Security screw access

Microphone

Keypad

Camera

Night vision LEDS (short range, up to 5 feet)

Speaker

Call button
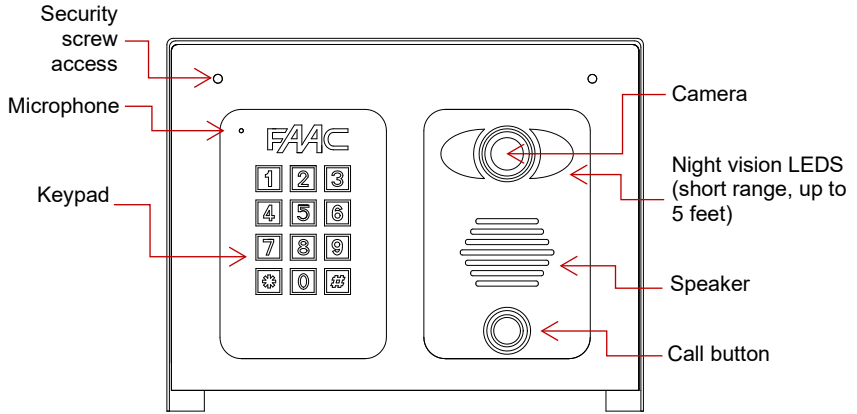
Now let's have a look inside...

Power filter board

Pedestal mounting holes

Call button

Main intercom module

Speaker volume

keypad module

Camera module

Code button

FAAC **FAAC**
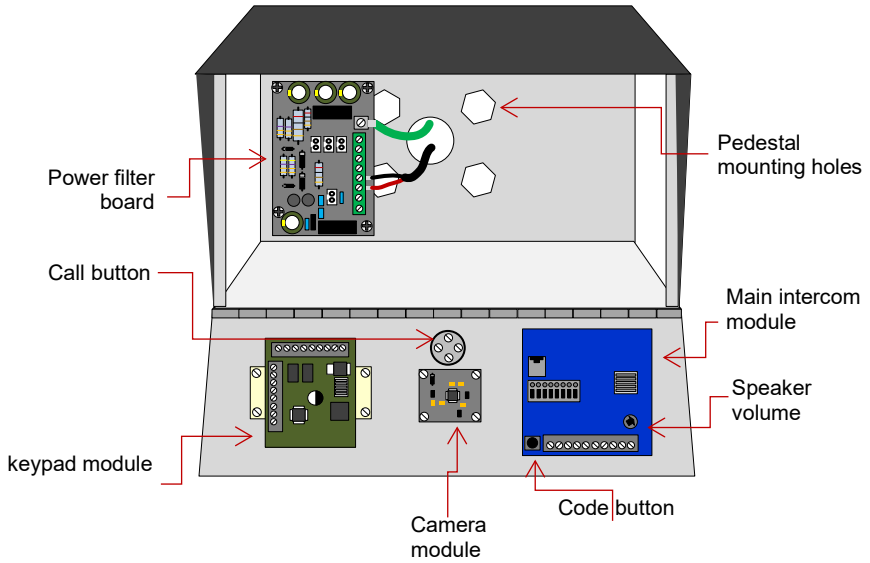
Main Intercom Module in Detail...

RJ 45 socket for CAT5 Ethernet connection to router / modem

Quick connect terminals for Ethernet connection to router/access point/switch

Speaker volume

Code button

24v DC (pre-wired) from power module

N/O COM N/C   N/O COM N/C

Relay1 Relay2   Exit button (N/O)

Keypad Module in Detail…

Full / Auto (keypad illumination)

Relay 2 N/O and N/C Common selector

Not used

Relay3 (100 codes)

24v DC Power (Pre-wired)

N/C COM N/O   N/C N/O

Egress Wire N/O exit button to here & GND (-)

Relay1 (1000 codes)

Relay2 (100 codes)

Power
Module in
Detail…

Ground rod **MUST** be
connected for warranty

Power out

Solar Panel IN

24vdc IN (do not use 12v here)

12v DC IN or 12v
Battery HERE

1A quick blow input fuse

Antenna Installation

Intercom wall/pillar
mounted

Mount the antenna as
high as possible and
away from obstructions
such as vehicles, shrubs
and trees to maximise
signal strength.

Do NOT mount antenna
at ground level.

Pedestal
mounted
version

Antenna cable (do
not cut or join).

Antenna mounted
inside gate or fence
to improve range.

Note: Ensure you have only one SSID within range of the intercom.
If you have a mesh system or multiple repeaters with the same
SSID that the intercom can see STOP install. This system will not
operate correctly.

Power to Call Box

1

IF necessary, remove 4 screws and remove the power conditioning module.

2

After fitting the box to the gooseneck, re-fit the module and connect a **14-gauge** ground wire to the ground terminal.

3

Use minimum **16-gauge** wire from the 24v DC adaptor provided to the terminals shown.

Surge protected 110v

24v DC PSU

16-gauge **MIN**

25 feet **MAX**

Call box

4

Earth Rod (close as possible)

Maintain manufacturer's warranty by adhering to the guidelines shown. Use 110v surge protected supply.

Power Consumption:
Standby = 80mA
Calling Out = 300mA

Relay Wiring Tips

Intercom Module

Pedestrian Gate

Magnetic Lock

N/C

COM

Separate Lock Power Supply

Optional Exit button (N/C)

COM

N/O

Gate Controller unit

Automatic Gates
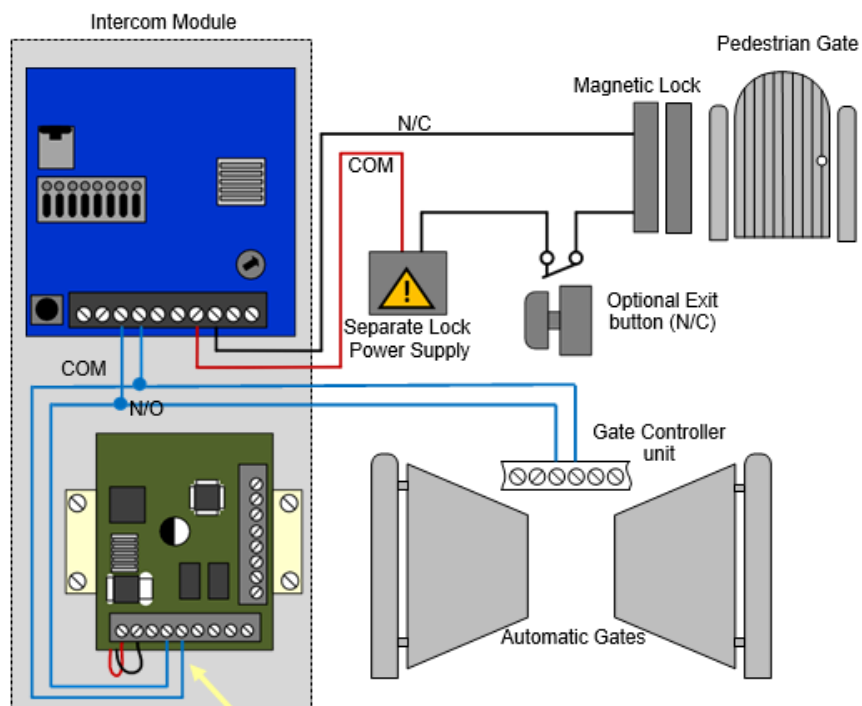
Remember to wire keypad relays to lock or gates as well as the main intercom module.
Note: Relay 2 can be set to N/O or N/C as per keypad detail section.

Note: Never connect any electric lock to the power supply provided with the intercom. It is good practice and professional to power a lock from a separate power supply.

App Install

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!

App Store > Utilities > Paul Creighton

wifi-pr
Paul Creig

Details

Screensh

Get

WiFi Pro 2
AES Global   Lifestyle
PEGI 3

WiFi Pro 2 App running
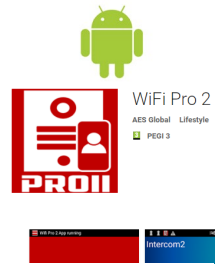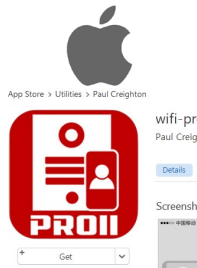
Intercom2

WIFI Setup

Step 1

Loosen top screws

FAAC
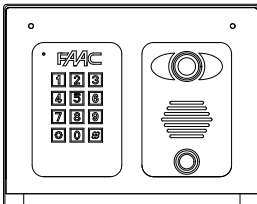
Landscape
Pedestal Style

Open the intercom and connect antenna.

Step 2
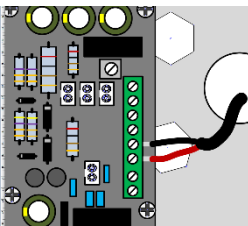
Connect 24v DC power with the power supply provided.

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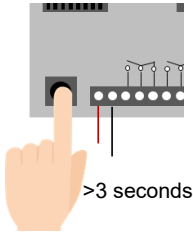
Press and HOLD the code button for more than 3 seconds. A tone will be heard when the button is released.

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).

>3 seconds

Step 4a

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.

Network X

Network Y

Bell-123456

Step 4b

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.

Wifi passcode

Bell-xxxxxx

123456789

Step 5a, 5b, 5c
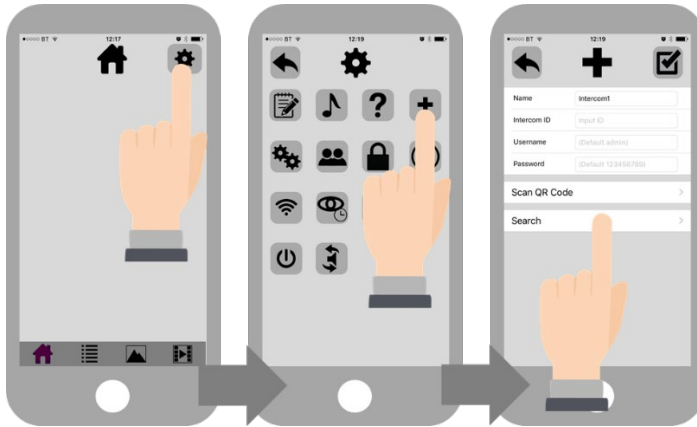
After pressing SEARCH, the APP will now search for the intercom and should detect it.

Step 5d, 5e
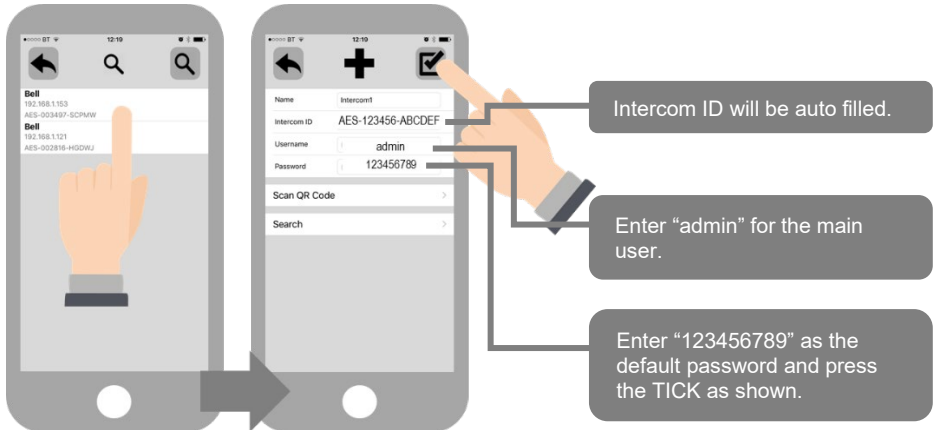
Intercom ID will be auto filled.

Enter "admin" for the main user.

Enter "123456789" as the default password and press the TICK as shown.

Step 6

Should be showing ONLINE status.

Press the Video icon to view live video.
Note: at close proximity, you will experience acoustic feedback. This is normal.

TIP: If you can view live video, and hear acoustics, then this proves that the intercom hardware is working as it should.
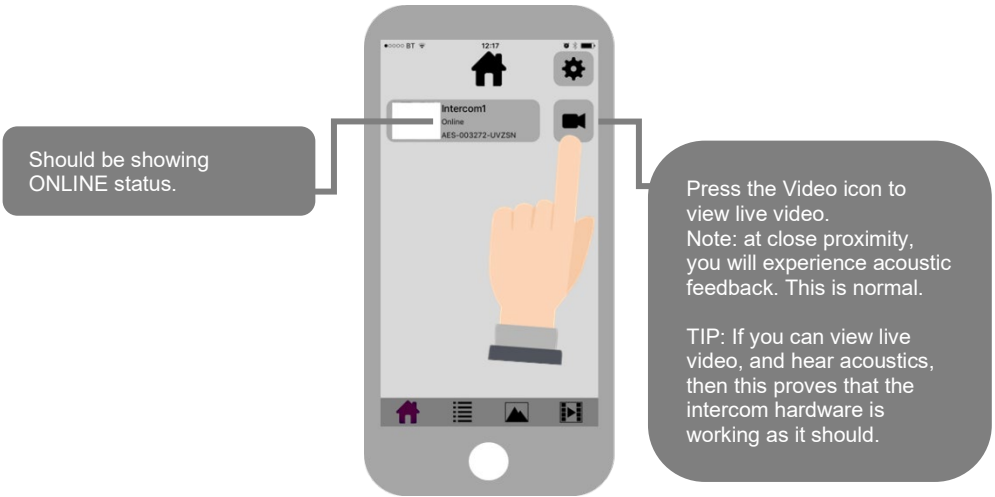
Step 7a,b,c,d

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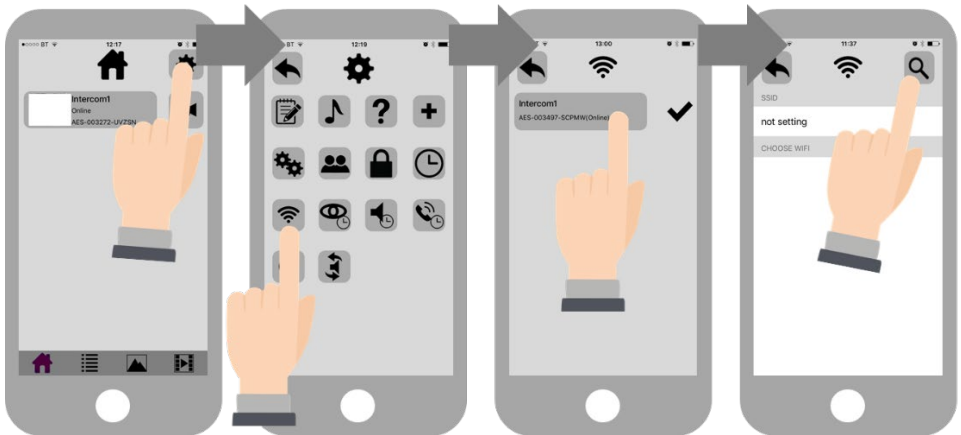
The intercom is now searching the area for wifi networks and will display all compatible networks on the App screen.

Step 7e,f,g
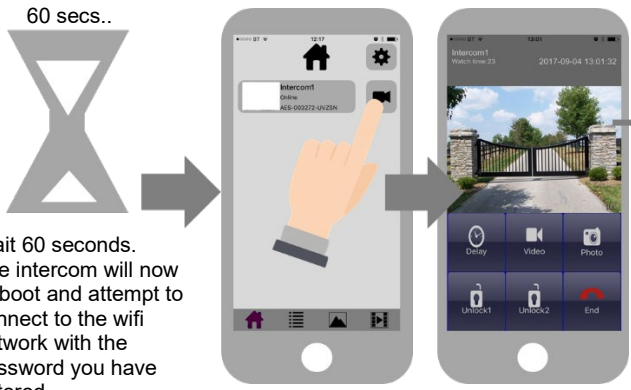
Enter the WIFI PASSCODE for the network which you are connecting to.

⚠️

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 8

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.

Ensure the date & time stamp are correct on the system. If this is not correct it will prevent PUSH notifications being sent ot the devices, therefore potentially missed calls.

If incorrect follow the steps below to correct:
- **Go to settings and then time settings, clock icon.**
- **Select the correct time zone and save.**
- **Go back to settings and click on the reboot icon, confirm reboot.**
- **This will correct the time on the intercom.**

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.

5. The video is inconsistent at different times of the day
A: Make sure the antenna has a clear line of sight and nothing is obstructing it.

LAN Setup
(When WiFi signal too weak or too far from signal)

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

Option 1
Connect RJ45 Ethernet crimped socket.

Test with laptop or LAN tester first.

Option 2
Use provided spring-release terminals observing colour code shown.

Ethernet can travel up to 100 metres (320 feet) on CAT5/CAT6 cable. Longer distances will require a switch every 100 metres (320 feet).
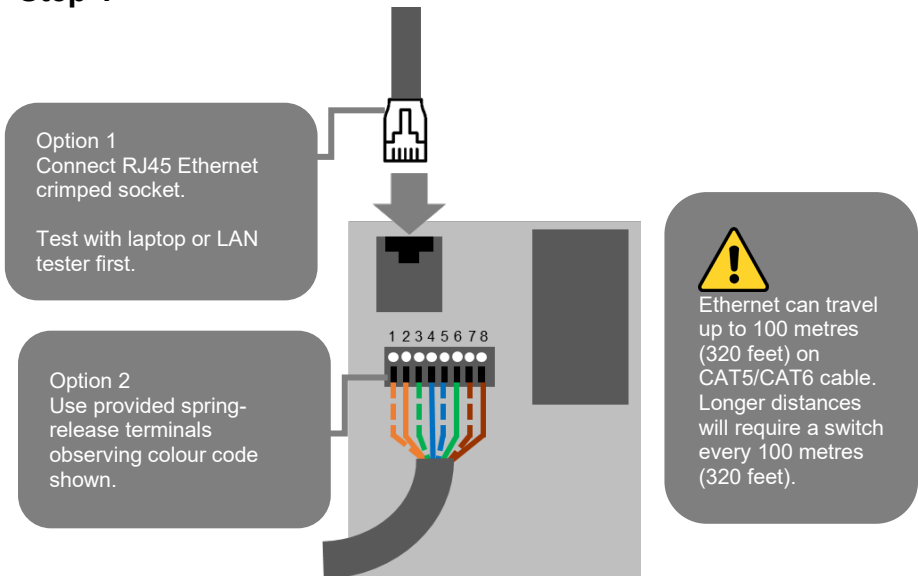
Color Codes:

Pin	Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Red / White
8	Red

Step 2a, 2b, 2c.
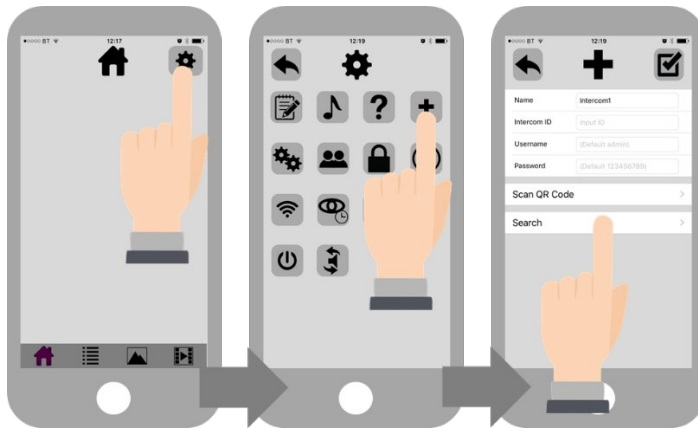
Insert the intercom ID. This can be found on the test slip in the box or by following steps 5-7 in WiFi setup.

Step 2d, 2e

Intercom ID will be auto filled.

Enter "admin" for the main user.

Enter "123456789" as the default password and press the TICK as shown.

Step 3

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, test the LAN cable to ensure there are no connection/crimp issues.
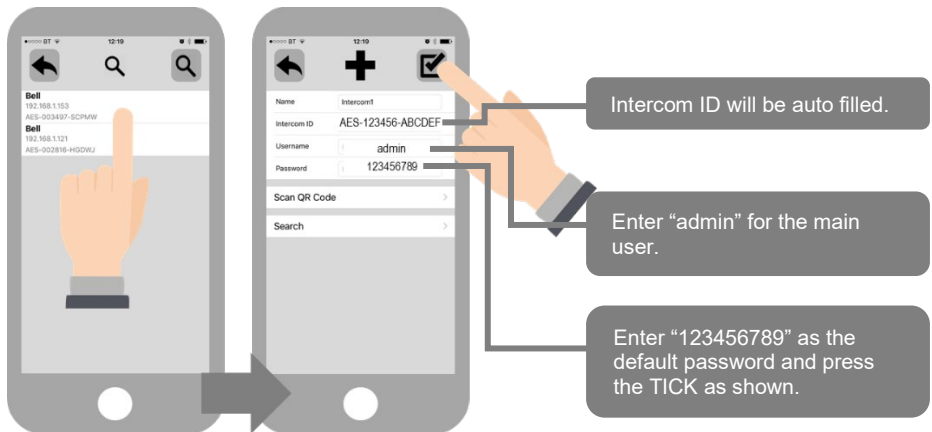
Intercom Test

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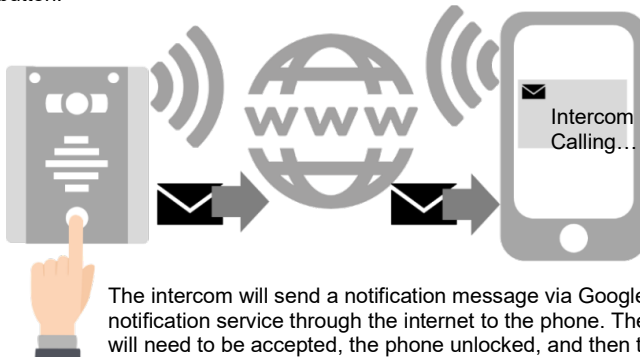
The intercom will send a notification message via Google™ PUSH notification service through the internet to the phone. The notification will need to be accepted, the phone unlocked, and then the APP will launch to reveal the visitor and give the user an opportunity to either accept or reject the call..

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

| Swipe the notification left | Press "VIEW" | Phone will now launch app | Swipe green icon to answer |
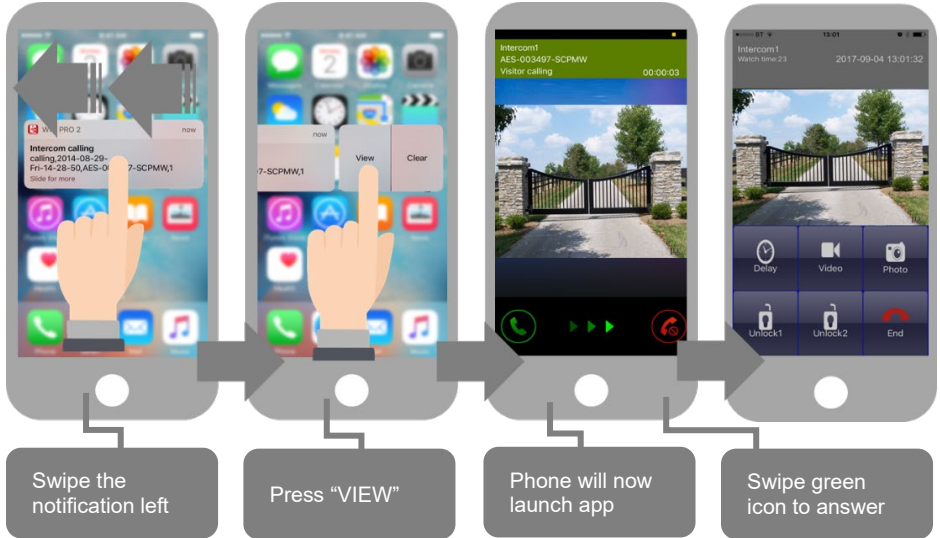
Note: Various versions of IOS and Android OS will have different notification acceptance techniques. Please refer to online support for your device if needed.

Ring

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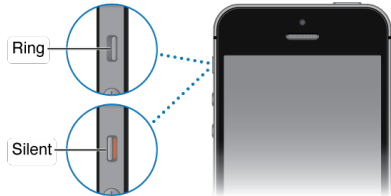
TIP: Make sure ringer switch is ON and volume is turned up.

●○○○○ BT 🛜   15:46   🔋 ⚡ 📶

‹ Privacy   **Microphone**

Instagram

Messenger

Wifi Pro 2

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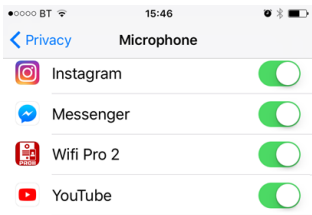
TIP: If there is no voice from the speaker at the gate, check the iphone microphone permissions in Settings/privacy/microphone

●○○○○ BT 🛜   15:46   🔋 ⚡ 📶

‹ Notifications   **Wifi Pro 2**

Allow Notifications

Show in Notification Centre

Sounds

Badge App Icon

Show on Lock Screen

Show alerts on the Lock screen, and in Notification Centre when it is accessed from the Lock screen.

ALERT STYLE WHEN UNLOCKED

None   Banners   Alerts
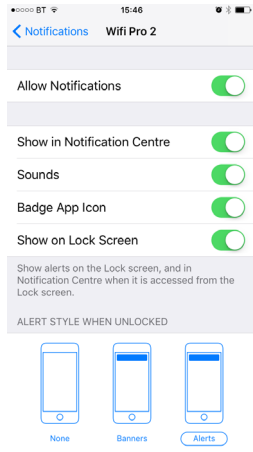
TIP: If you don't get notifications then check settings/notifications and select the app.

Adding Additional APP Users

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

ADMIN Phone   ADMIN Phone   ADMIN Phone   ADMIN Phone

Note how existing users can be deleted

Enter a NEW username & password

New Phone   New Phone   New Phone   New Phone

Be sure to enter NEW username & password as created by the admin phone.

Other Settings

Edit Intercom details

Ring tones

Check APP version

Add an intercom (can have up to 6 doors/gates calling one device)

Add/edit users

Change relay times (1-9 secs)

Turn off config mode (extra security)

Set time zone + (daylight saving adjust)

Set max monitoring time

Set max talking time.

Wifi settings & signal strength

Set max ringing time (from intercom)

Reboot intercom

Set sound option. Duplex, simplex1, simplex2.

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 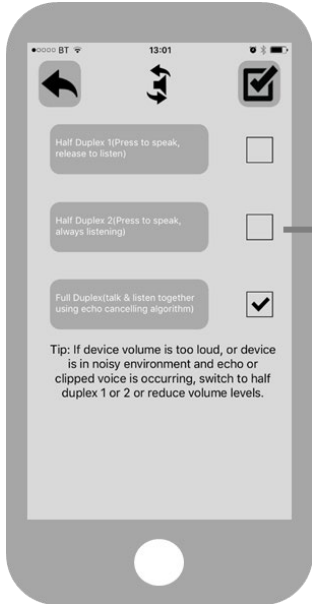need to be set in half duplex mode (phone user will press to talk). This may also be required if a phone is in a particularly noisy environment, or the intercom is located near a busy main road with high levels of traffic noise.
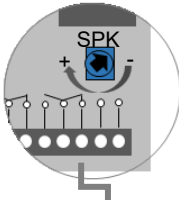

Choose the speech option which best suits the individual and he device being used.
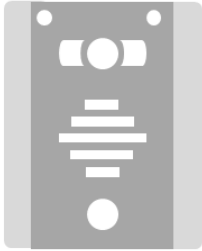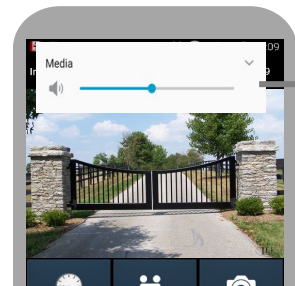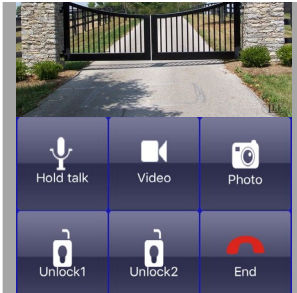
Suggest 80% MAX volume

Suggest 50% MAX volume on Android

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

FAAC

FAAC

Using the APP

Thumbnail preview

Settings

Call Log (shows images of visitors whom calls were accepted or previewed on this device.

View Camera & listen

If you took snapshots of a visitor while on a call, view them here.

Home

If you took video recordings of visitors, you can view them here.

Android users press BACK button to run in "background" mode or "close app" to save battery. (notifications will launch app again)

Press to extend talking time

Record video of visitor to your phone. (some versions of phone need codec installed to play this format).

Gate/door release 2. Momentary press to TRIGGER.
Press and HOLD for 3 seconds to LATCH open.
Momentary press again to UNLATCH

Take pictures of visitors on your phone.

End call.

Gate/door release 1. Momentary press to TRIGGER.
Press and HOLD for 3 seconds to LATCH open.
Momentary press again to UNLATCH

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.

RED when incorrect codes entered and outputs are locked out.
● GREEN when output 1 activated.
● RED when output 2 activated.
○ CLEAR when output 3 activated

FAST FLASHING – Wrong code entered / error.

SLOW FLASHING - in normal standby mode.

ON in programming mode.

ON when relay 3 activated.
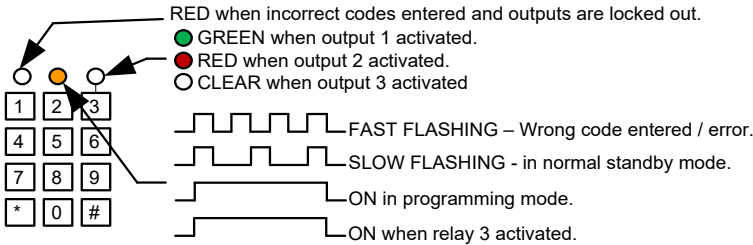
TIP: After power up, as a security precaution, the keypad cannot be programmed for 60 seconds. Once this time elapses, you may begin.
TIP: Flashing amber LED is normal standby mode!

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.
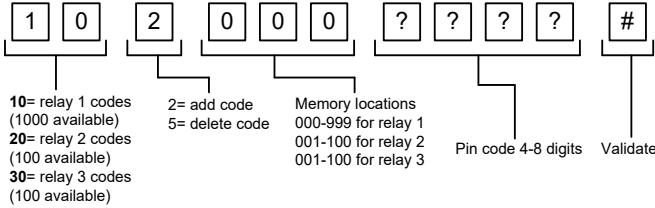
Enter a new ENGINEER/INSTALLERS code…

Go into programming mode firstly then enter the following sequence…

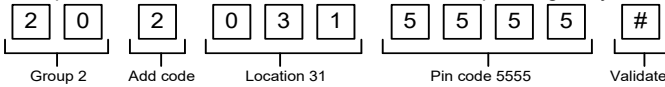| 0 | 1 | ? | ? | ? | ? | # |
| Location | | 4-8 digit code | | | | Validate |

Replace ???? with your new ENGINEERS code.
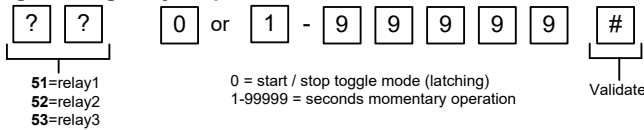
Enter or delete new user/Homeowner codes

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…

| 1 | 0 | | 2 | | 0 | 0 | 0 | | ? | ? | ? | ? | | # |

10= relay 1 codes (1000 available)
20= relay 2 codes (100 available)
30= relay 3 codes (100 available)

2= add code
5= delete code

Memory locations
000-999 for relay 1
001-100 for relay 2
001-100 for relay 3

Pin code 4-8 digits

Validate

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

| 2 | 0 | | 2 | | 0 | 3 | 1 | | 5 | 5 | 5 | 5 | | # |

Group 2   Add code   Location 31   Pin code 5555   Validate

Programming relay output times and modes…

| ? | ? | | 0 | or | 1 | - | 9 | 9 | 9 | 9 | 9 | | # |

51=relay1
52=relay2
53=relay3

0 = start / stop toggle mode (latching)
1-99999 = seconds momentary operation

Validate

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

| ? | ? | | 5 | | ? | ? | ? | | # |

10=relay1
20=relay2
30=relay3

Delete code

ID location to be deleted

Validate
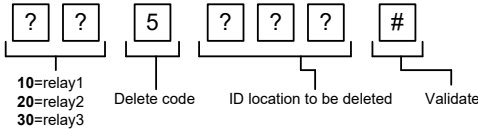
Delete an entire group of codes

| ? | ? | | 0 | 9 | 9 | 9 | | # |

10=relay1 group
20=relay2 group
30=relay3 group

Super delete code

Validate
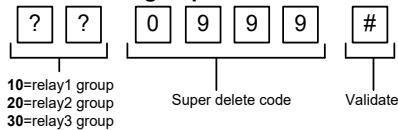
Programming super user codes…

A super user code can activate any of the 3 relays

| 0 | 2 | | ? | ? | ? | ? | | # |

Location   4-8 digit code   Validate
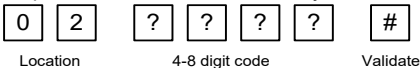
Restoring defaults

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

| 9 | 9 | 9 | 9 | | # |

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.

Problem/error	Symptoms caused	Solution
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.
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.

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

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Warranty Terms

To the original purchaser only:

FAAC International, Inc., warrants, for twenty-four (24) months from the date of invoice, the gate operator systems and other related systems and equipment manufactured by FAAC S.p.A. and distributed by FAAC International, Inc., to be free from defects in material and workmanship under normal use and service for which it was intended provided it has been properly installed and operated.

FAAC International, Inc.'s obligations under this warranty shall be limited to the repair or exchange of any part of parts manufactured by FAAC S.p.A. and distributed by FAAC International, Inc. Defective products must be returned to FAAC International, Inc., freight prepaid by purchaser, within the warranty period. Items returned will be repaired or replaced, at FAAC International, Inc.'s option, upon an examination of the product by FAAC International, Inc., which discloses, to the satisfaction of FAAC International, Inc., that the item is defective. FAAC International, Inc. will return the warranted item freight prepaid.

The products manufactured by FAAC S.p.A. and distributed by FAAC International, Inc., are not warranted to meet the specific requirements, if any, of safety codes of any particular state, municipality, or other jurisdiction, and neither FAAC S.p.A. or FAAC International, Inc., assume any risk or liability whatsoever resulting from the use thereof, whether used singly or in combination with other machines or apparatus.

Any products and parts not manufactured by FAAC S.p.A. and distributed by FAAC International, Inc., will carry only the warranty, if any, of the manufacturer. This warranty shall not apply to any products or parts thereof which have been repaired or altered, without FAAC International, Inc.'s written consent, outside of FAAC International, Inc.'s workshop, or altered in any way so as, in the judgment of FAAC International, Inc., to affect adversely the stability or reliability of the product(s) or has been subject to misuse, negligence, or accident, or has not been operated in accordance with FAAC International, Inc.'s or FAAC S.p.A.'s instructions or has been operated under conditions more severe than, or otherwise exceeding, those set forth in the specifications for such product(s).

Neither FAAC S.p.A. nor FAAC International, Inc., shall be liable for any loss or damage whatsoever resulting, directly or indirectly, from the use or loss of use of the product(s). Without limiting the foregoing, this exclusion from liability embraces a purchaser's expenses for downtime or for making up downtime, damages for which the purchaser may be liable to other persons, damages to property, and injury to or death of any persons.

FAAC S.p.A. or FAAC International, Inc., neither assumes nor authorizes any person to assume for them any other liability in connection with the sale or use of the products of FAAC S.p.A. or FAAC International, Inc. The warranty herein above set forth shall not be deemed to cover maintenance parts, including, but not limited to, hydraulic oil, filters, or the like. No agreement to replace or repair shall constitute an admission by FAAC S.p.A. or FAAC International, Inc., of any legal responsibility to effect such replacement, to make such repair, or otherwise. This limited warranty extends only to wholesale customers who buy directly through FAAC International, Inc.'s normal distribution channels. FAAC International, Inc., does not warrant its products to end consumers.

Consumers must inquire from their selling dealer as to the nature and extent of that dealer's warranty, if any. This warranty is expressly in lieu of all other warranties expressed or implied including the warranties of merchantability and fitness for use. This warranty shall not apply to products or any part thereof which have been subject to accident, negligence, alteration, abuse, or misuse or if damage was due to improper installation or use of improper power source, or if damage was caused by fire, flood, lightning, electrical power surge, explosion, wind storm, hail, aircraft or vehicles, vandalism, riot or civil commotion, or acts of God.

Regulatory Compliance

FC

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)

CE

This product is not a complete product until fully installed. It is therefore considered a component part of an overall system. The installer is responsible to check that the end installation complies with local regulatory requirements. This equipment forms part of a "fixed installation"