Installation & User Instructions
Praetorian Guard IP Intercom

PROFESSIONAL INSTALL ONLY

Manual Version 1.0

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 4-5

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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PHASE 1
Site Survey
The Praetorian Guard is designed to transmit the video and audio stream using on average 400 KBit/sec (peaking to 1Mbps). This loosely translates to requiring a minimum of 1.5Mbps UPLOAD speed on the network that the intercom is connected to. The higher the upload speed the better quality of image up to an approx. max of 4Mbps upload speed.

If you do not have sufficient upload speed then please look at upgrading your internet package, if possible.
Site Survey (Local WiFi)

WIFI Signal
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!

Upload Speed
I have at least 1.5 Mb UPLOAD speed. If not STOP! This system may operate intermittently remotely or have delayed PUSH notifications.

YES!
My WiFi Internet Security is WPA, WPA2, WPA3 or better.

Total distance of WiFi range will depend heavily on the property network setup. Max distance is 60m based on using a basic home router passing through 1 exterior wall. For the most reliable connection utilize the LAN or 4G Router options.

WiFi Signal Explained

Poor = System may not show ONLINE. Signal may drop out regularly or cause delay’s on the video loading or stop notifications receiving from being sent.

Fair = System will operate as expected in most instances. Signal may drop out from time to time or cause delay’s on the video loading or stop notifications receiving from being sent.

Good / Excellent = System will operate as expected in all instances. Signal should never drop or cause delay’s on the video loading
PHASE 2
Product Overview
**Overview of Call Points** *(Modular Design)*

<table>
<thead>
<tr>
<th>PRAE-IP-MOD</th>
<th>PRAE-IP-MOD-KP</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRAE-IP-MOD-PX</th>
<th>PRAE-IP-MOD-PX-KP</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
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</tbody>
</table>

**Overview of Call Points** *(Modular Design)*

<table>
<thead>
<tr>
<th>PRAE-4GXX-MOD-ROUTER</th>
<th>PRAE-4GXX-MOD-KP-ROUTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRAE-4GXX-MOD-PX-ROUTER</th>
<th>PRAE-4GXX-MOD-PX-KP-ROUTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
</tbody>
</table>
**Overview of Call Points (Architecture Design)**

<table>
<thead>
<tr>
<th>PRAE-IP-AB</th>
<th>PRAE-IP-AS</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>PRAE-IP-ABK</th>
<th>PRAE-IP-ASK</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRAE-IP-PX-ABK</th>
<th>PRAE-IP-PX-ASK</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
</tbody>
</table>
# Overview of Call Points (Portrait Flush Design)

<table>
<thead>
<tr>
<th>PRAE-IP-FB</th>
<th>PRAE-IP-FS</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="PRAE-IP-FB" /></td>
<td><img src="image2" alt="PRAE-IP-FS" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRAE-4GXX/FBK</th>
<th>PRAE-IP-FSK</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="PRAE-4GXX/FBK" /></td>
<td><img src="image4" alt="PRAE-IP-FSK" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRAE-IP-F-PX-ABK</th>
<th>PRAE-IP-F-PX-ASK</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5" alt="PRAE-IP-F-PX-ABK" /></td>
<td><img src="image6" alt="PRAE-IP-F-PX-ASK" /></td>
</tr>
</tbody>
</table>
Overview of Call Points  
(Pedestal Design)

<table>
<thead>
<tr>
<th>PRAE-IP-PED</th>
<th>PRAE-IP-KP-PED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRAE-IP-PX-PED</td>
<td>PRAE-IP-PX-KP-PED</td>
</tr>
</tbody>
</table>

Overview of Call Points  
(Pedestal Flush Design)

<table>
<thead>
<tr>
<th>PRAE-IP-PED-F</th>
<th>PRAE-IP-PED-F-KP</th>
</tr>
</thead>
</table>
## Overview of Optional Extra Devices

<table>
<thead>
<tr>
<th>MON-11</th>
<th>POWER CONDITIONING MODULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBC (future addition late 2021)</td>
<td>TBC (future addition late 2021)</td>
</tr>
</tbody>
</table>

www.BFTGateOpeners.com  |  (800) 878-7829  |  Sales@BFTGateOpeners.com
More Detail....

Architectural Model

- Security screw access
- Colour camera with night vision and IR cut filter
- Waterproof Mylar 1.5W speaker
- Optional PROX reader
- Optional illuminated keypad
- Illuminated IP67 push button
- Microphone
- Main intercom module
- Call button
- Camera module
- Mounting holes
- Cable entry hole
- Optional Keypad & PROX module

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Modular Version

- Security screw access
- Colour camera with night vision and IR cut filter
- Waterproof Mylar 1.5W speaker
- Infra-red night vision illuminators
- Optional illuminated keypad
- Illuminated IP67 push button
- Microphone
- Mounting holes
- Cable entry hole
- Optional Keypad & PROX module
- Call button
- Camera module
- Praetorian IP Module
Pedestal Version

Optional PROX Reader

Microphone

Night vision LEDs

Optional Keypad

Cam Security Lock

Camera

Speaker Module

Call Button

Pedestal mounting holes

Call button

Optional keypad module

IP PCB

Camera module
Main WIFI Module in Detail...

- Intercom ID
- RJ45 Socket
- Hard Reset
- Direct LAN cable Connection
- Voltage Outputs
- Push Button, Mic & Speaker Connections
- Direct Hotspot Button
- Antenna SMA Connector
- LED Indicators
  - RED = Network Connection
  - BLUE = Power
- Micro SD Card Slot
- Keypad Data Cable Connections
- Volume ‘POT’

Keypad & PROX Module’s in Detail

- Slave IN Connections
- Slave OUT Connections
- Baud Rate Jumper Link
- DC Voltage In
- DC Voltage
- Slave IN Connections
- Data Transfer IN
- Data Transfer OUT
- Slave OUT Connections
- Slave IN Connections
- DC Voltage In

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Overview of Surge PCB

*optional extra

Earth Rod MUST be connected for warranty.

Power Output

NOT USED

24v INPUT – Use provided power supply or hook up to 24v solar system. (DO NOT USE 12v HERE)

12v DC – Battery backup

1 Amp Quick Blow Input Fuse (REPLACEABLE)

Must use a 30 Watt solar panel (minimum) and at least 2x 10Ah battery
## Technical Specifications

### GENERAL

<table>
<thead>
<tr>
<th>Front Panel</th>
<th><strong>Portrait Orientation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AB/ABK = 3mm Acrylic on Architectural Design Marine Grade Stainless Steel BS316 Front Plate</td>
</tr>
<tr>
<td></td>
<td>AS/ASK = 3mm Marine Grade Stainless Steel BS316 on Architectural Design Marine Grade Stainless Steel BS316 Front Plate</td>
</tr>
<tr>
<td></td>
<td>FS/FSK = Flush Design Marine Grade Stainless Steel BS316 Front Plate</td>
</tr>
<tr>
<td></td>
<td>IMP/IMPK = 3mm Acrylic on Imperial Design Marine Grade Stainless Steel BS316 Front Plate</td>
</tr>
<tr>
<td></td>
<td>Modular = Powder Coated Marine Grade Stainless Steel BS316 Front Plates with 3mm Acrylic on Design Marine Grade Stainless Steel BS316 Modular Plates</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Landscape Orientation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>PED = Pedestal Surface Mount</td>
</tr>
</tbody>
</table>

<p>| Hood Cover (MOD, IMP(K), PED) | Powder coated Aluminium |
| Mounting Housing (Backbox) | Marine Grade Stainless Steel BS316 |
| Call Button | Stainless-steel button with illuminated LED Ring |
| Weatherproof | IP55 |
| Approvals | CE, FCC |
| Dimensions | See Overview of Call Points |
| Operating Temp. | -25 to +55°C / -13 to 131°F |
| Humidity | 10 to 85 % RH (non-condensing) |
| Power Supply | 24V DC |
| Power Consumption | <strong>IP PCB w/Keypad &amp; Prox</strong> |
| | Standby = 96mA |
| | Operating = 500mA |
| | Peak = 2000mA |
| Solar Power | 30Watt Solar Panel (minimum) |
| | 2x 12V 10AH Batteries connected in series to provide 24V output. |
| | Power output must be regulated. |</p>
<table>
<thead>
<tr>
<th>System Requirements</th>
<th>Mobile device: Newest iOS on iPhone/iPad, newest Android on Smartphone/Tablet</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Internet: High-Speed Landline Broadband Internet connection, DSL, cable or fibre optic, no socks or proxy server. Min. suggested upload speed of 1.5Mbps,</td>
</tr>
<tr>
<td></td>
<td>Network: Ethernet Network, with DHCP / WIFI 2.4GHz/5.8GHz (with applicable antenna)</td>
</tr>
<tr>
<td>Recommended Installation Height</td>
<td>Camera lens should be at a min. height of 145 cm (57 in). Before the installation please determine your optimal installation height.</td>
</tr>
</tbody>
</table>

**KEYPAD MODULE**

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>24V DC</th>
</tr>
</thead>
</table>
| Steel Keypad Module | 12 Square Metal Keys  
Blue illumination  
Keypad Codes configurable via App, **Slave connection to allow up to an additional 8 slave devices** |
| Silicon Keypad Module | 12 Round Silicon Keys  
Blue illumination  
Keypad Codes configurable via App, **Slave connection to allow up to an additional 8 slave devices** |

**VIDEO**

<table>
<thead>
<tr>
<th>Camera</th>
<th>HD 720p, dynamic (VGA – HD)</th>
</tr>
</thead>
</table>
| Lens | 120° (D), 109° (H), 65° (V)  
IR-capable |
| Display Resolution | Switchable in the app by the Admin user.  
HD resolution: 1280*720  
SD resolution: 640*480 |
| Video Codec | H264 |
| Night-Vision | Yes, light sensor, automatic IR-cut filter, 5 Infrared LEDs |
### Storage
- On-Board Micro SD Card (16GB included)
- Max read capacity 32GB

Estimated capacity based on 16GB:
- 5,592 Video Clips (3MB) {AVI.}
- 33,500 images (0.5MB) {JPG}

- Supports Hot Swapping.
- Auto overwrites oldest data at 70% capacity
- FAT32 Formatting

### MOTION SENSOR

<table>
<thead>
<tr>
<th>Type</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection Type</td>
<td>Digital (Pixel-based) Changes of pixilation. This is processed by the CPU identifying any major/minor changes in pixels that is defined by a predetermined algorithm.</td>
</tr>
<tr>
<td>Range</td>
<td>&gt;5m, depends on environment, distance is fixed</td>
</tr>
<tr>
<td>Configuration</td>
<td>Via App, e.g.</td>
</tr>
<tr>
<td></td>
<td>• Sensitivity (1-5)</td>
</tr>
<tr>
<td></td>
<td>• Enable/disable push notification</td>
</tr>
<tr>
<td></td>
<td>• Enable/disable detection &amp; recordings.</td>
</tr>
</tbody>
</table>

### AUDIO

<table>
<thead>
<tr>
<th>Audio Components</th>
<th>Speaker and microphone, noise reduction and echo cancellation (ANR, AEC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio Streaming</td>
<td>Two-way, full duplex &amp; half-duplex (switchable in-app)</td>
</tr>
<tr>
<td>Audio Codec</td>
<td>PCM/ARAW</td>
</tr>
</tbody>
</table>

### NETWORK

<table>
<thead>
<tr>
<th>WiFi</th>
<th>IEEE 802.11a/b/g/n/ac</th>
</tr>
</thead>
<tbody>
<tr>
<td>WiFi Security</td>
<td>WPA / WPA2 / WPA3</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>2.4GHz-2.4385GHz; 5.15GHZ-5.845GHZ</td>
</tr>
<tr>
<td>Ethernet</td>
<td>IEEE 802.3</td>
</tr>
<tr>
<td>Supported Protocols</td>
<td>HTTP, HTTPS, SSL/TLS, Bonjour, DNS, RTSP, RTP, TCP, UDP, RTCP, ICMP, DHCP, ARP</td>
</tr>
</tbody>
</table>

### THIRD-PARTY INTEGRATIONS

<table>
<thead>
<tr>
<th>Partners</th>
<th>N/A - Coming Soon</th>
</tr>
</thead>
<tbody>
<tr>
<td>API</td>
<td>N/A - Coming Soon</td>
</tr>
</tbody>
</table>
PHASE 3
Setup
(To be done before installing the intercom)
Configure Before Install

Step 1

Do not install the intercom. Power it up beside the router so that you can perform the configuration with the homeowners’ 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 before diagnosing further.*

Step 2 - Download and install the app on the end-user’s phone.

Search for **Praetorian Guard** and find the icon, or scan the QR code if the phone has a QR scan app.

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

**Tip:** Slight differences will be seen between the Android and iOS app versions, any major differences will be highlighted in the screenshots below.

Step 3 – Open the front panel by removing the security screws & Connect 24v DC power with the power supply provided to the SURGE PCB.

**Power Consumption:**
- Standby = 96mA
- Calling Out = 500mA
Connect to network using WiFi

Step 1 - Press and HOLD the code button for approx. 3-5secs and release. A tone will be heard. The intercom will now begin to transmit its own Wi-Fi network using the intercom ID reference. (E.g., AES-XXXXXX-XXXX)

>3 seconds

**Tip:** This will clear any currently stored WiFi connections from the system. You will need to reconnect to the WiFi network to allow the system to function again after pressing this button.

Step 2a – Find The WiFi Hotspot ID

With the user’s phone, search for available Wi-Fi networks and connect to the ‘Intercom ID’ network.

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

Step 2b – Enter password to connect via WiFi

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

Android: Press **CONNECT**

Apple: Press **DONE**

**Note:** Your device may state there is no internet connection. This is normal. Accept any prompts to stay connected for the next steps.
Step 3a, 3b, 3c – Find Intercom ID via the network connection

**Settings > Add > Search**

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

Step 3d, 3e

Intercom ID will be auto filled.

Enter “admin” for the main user.

Enter “123456789” as the default password and press SAVE.

Step 4

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.

If you can view live video, and hear acoustics, then this proves that the intercom hardware is working as it should.

Step 5a, b, c

**Note:** The intercom and phone are directly connected in a point-to-point link. It will still need connected to the network to be fully operational remotely.
Although we know the intercom is fully operational, we now need to connect it to the local Wi-Fi network.

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

**Step 5d, e**

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 Wi-Fi password and will not know if it is correct or not! Note that the intercom will show as ‘OFFLINE’ if an incorrect Wi-Fi Password has been entered as it will not be able to connect to the network at all.

Wi-Fi Signal strength must be at least ‘Fair’, or you will have problems!
Step 6

The intercom will now re-boot and attempt to connect to the Wi-Fi network with the password you have entered.

Wait 60 seconds then re-launch the APP.

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 Wi-Fi, or too many devices connected to the Wi-Fi network and the router is incapable of managing the workload.

2. Intercom is not showing online status.
   A. This can be caused by incorrect Wi-Fi password created, or Wi-Fi dropping 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: Possibly 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 Wi-Fi connections, or between Wi-Fi and data.

WIFI Connection Setup Complete.

Skip to ‘Time Sync & Testing’
Connect to network using LAN Cable

This intercom can also be connected to a LAN cable directly from the router or from a repeater or point-to-point Wi-Fi bridge device.

Note: Ethernet LAN signals can travel 100m/300ft on CAT5/6 cable. Longer distances will require a powered switch or repeater every 100m/300ft.

Step 1

Option 1
Connect RJ45 Ethernet crimped socket.
Data transfer LEDs will flash when plugged in.

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

Ethernet can travel up to 100 metres (300 feet) on CAT5/CAT6 cable. Longer distances will require a switch every 100 metres (300 feet) unless using any specialist equipment.

Step 2a, 2b, 2c – Find Intercom ID via the network connection.

Settings > Add > Search

After pressing SEARCH, the APP will now search for the intercom and should detect it.
Step 2d, 2e – Select the Intercom ID & input the login credentials.

Intercom ID will be auto filled.
Enter “admin” for the main user.
Enter “123456789” as the default password and press SAVE.

Step 3 - The intercom is now added to your device and should show Online.

Note: 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, check the LED indicators on the RJ45 socket on the PCB to ensure it is connected correctly to the network.

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 Wi-Fi, or too many devices connected to the Wi-Fi network and the router is incapable of managing the workload.

2. **Intercom is not showing online status**.
   A. This can be caused by incorrect Wi-Fi password created, or Wi-Fi dropping 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**.
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4. **The status is showing online, then connecting, then online again**.
   A: This is normal when a phone roams between two Wi-Fi connections, or between Wi-Fi and data.
Time Sync & Testing

**Step 1 -** Ensure the intercom is now added to your device and should show Online.

- Press the camera icon to view the camera feed
- Check the date/time stamp. The default date when the intercom has been reset is 1/1/1970.
- If the date has not updated automatically follow the steps below to correct this.

**Note:** If the date stamp is incorrect it will prevent notifications being sent to the connected devices causing the user to miss calls.

If the time stamp is incorrect it will affect the accuracy of any recorded events in the events log.

**Step 2 –** Clock Sync

- To enable or disable daylight saving select this checkbox and then the SAVE icon.
- Sync your device time to the intercom

**Step 3 –** Confirm intercom timestamp is now correct.

- Press the camera icon to view the camera feed
- Check the date/time stamp.
Step 4 – Close the app

PUSH notifications may not show while inside the app so to test that the PUSH notifications are working correctly you need to close the app.

Android: Select the ‘back’ button and then the ‘EXIT’ door icon will appear on the bottom left, tap this to completely close the application.

Step 5 - Press the call button.

The intercom will send a PUSH notification message via Google™ PUSH notification service through the internet to the phone.

The notification will need to be accepted and then the APP will launch to reveal the visitor and give the user an opportunity to either accept or reject the call.

The process to answer a call will depend on what device is being used. Please see next pages for the different process between Android and Apple.
Answering on Android

Swipe down to reveal the android notifications and press the Praetorian notification.

This will launch the app and reveal the answer screen. Press the icon shown to answer the call if you wish to speak to the visitor.

Press the appropriate lock icon (depending on which relay your installer has connected to the gate or door).
Answering on iOS (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.
PHASE 4

Installation

(Only to be done after the unit is successfully proven to be operating on the network during setup on phase 3.)

Recommendation!
Most technical calls received are due to installers using CAT5 or alarm cable to power the unit. Neither are rated to carry enough power (2 amp peak). Please use following cables:
0-2 (0-6 ft) use min 0.5mm² (18 gauge).
2-4 (6-12 ft) use min 0.75mm² (16 gauge).
4-8m (12-24 ft) use min 1mm² (14/16 gauge).

INSECT INGRESS WILL INVALIDATE WARRANTY
We recommend sealing all entry holes for prevention of insects that can cause issues with a risk of shorting out components.
Installation (Wi-Fi)

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.

- Intercom wall/pillar mounted
- Pedestal mounted version
- Antenna cable (do not cut or join). Longer length options available.
- Antenna mounted inside gate or fence to improve range.

Installation (LAN Cable)

- Pedestal mounted version
- Run of CAT5/6E Cable going back to customers router inside property.

MAX DISTANCE 100m (320ft)
This can be extended by using a ethernet cable extender (purchased separately).
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.

Please adhere to the cable thickness guide below or the device may be damaged and rendered out of warranty by the manufacturer.

Solar Power

You can use solar power if required. You will require a DC voltage regulator applied at the gate board end as the voltage output can vary and cause too high a voltage, which will damage the intercom if over the 26v DC.

Our systems would require as a minimum a 30W of solar panel capacity and 10ah battery capacity for our intercoms.

Notes:
On the WIFI units the draw is 96mA standby, 500mA calling with up to 2A spikes.

Power Consumption:
Standby = 96mA
Calling Out = 500mA
LAN Cable Setup Example

Note: You can run CAT5 cable up to 100m (320ft) for full connection.
Further distances can be achieved with additional equipment.

WiFi Setup Example

Note: Up to 60m using 2.4GHz with an average home router and clear line of sight.
Further distances can be achieved with advanced additional equipment.
PCB Wiring Example

- Antenna
- SD card
- Speaker Volume
- Exit button
- Magnetic lock
- N/C button
- 12v DC (not supplied)
- 24v DC From PSU
- Gate controller
- Ethernet Socket
- Serial Number
- Reset
- Relay 1
- Relay 2
- 8GB SD CARD
- Ethernet Socket
- Gate controller
- 24v DC From PSU
- N/C button
- 12v DC (not supplied)
Exit Button (PTE)

When the exit button is pressed it will trigger relay 1 for the pre-programmed time in the app.

(Default is 1 second)

Connecting Slave Devices

*Keypad module required

Note:
Up to a total of 8 devices can be connected to the one SIM module.

All keypads will be programmed with the same codes as the main unit.

All Prox units will store the same Prox cards. Power slave devices separately for longer distances.
Adding Additional APP Users

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

**Step 1**

On the **Admin user phone**, create a new username and password for any additional phones which you wish to add, as follows.

**Step 2**

On a **new phone** or tablet, perform the following steps to log on to the intercom with the details which have been created by the ADMIN phone above…

**Note:** Maximum 8 separate users and devices. Each device connected must be logged in with their own user account for correct operation. Only ADMIN can change critical system settings of the intercom.
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.

Intercom Volume

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

Suggest 80% MAX volume

Note: If the phone volume is too high an echo may be heard by the visitor at the intercom.

Intercom & Device Sound Options

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

Suggest 70% MAX volume.
Using Keypad Codes

Ensure you program a keypad code in the app first then follow the steps below to use them on the keypad to gain entry.

Tip: Press * to confirm keypad code
PHASE 5

Advanced Setup

(Only to be done after the unit is successfully proven to be operating on the network after installation)
Feature Shortcuts

- Activity Log
- Add / delete proximity cards / tags
- Add / delete keypad codes.
- Turn on / off notifications on events.

Settings Overview

- Standard Features
- Advanced Features
Standard Features

- Edit Intercom details
- Ring tones of in-app call (unable to change notification tone)
- Check APP version
- Add a new device ID

- Check current system firmware
- Add, edit or delete users
- Adjust relay trigger times
- Adjust intercom time (daylight saving)

- Wi-Fi settings
- Adjust maximum monitoring time
- Adjust maximum talking time
- Adjust maximum ringing time

- Reboot intercom
- Simplex / duplex audio selection

www.BFTGateOpeners.com | (800) 878-7829 | Sales@BFTGateOpeners.com
Edit Intercom Details

Intercom ID cannot be changed. Follow the add as a new device steps if ID is incorrect.

Add a New Device ID

Intercom ID can be added manually or auto filled by using the ‘SEARCH INTERCOM ID IN LAN’ button.

If you are connected via LAN you can pull the ID via the network.

Enter username, setup by the ADMIN

Enter password, setup by the ADMIN
Ringtones of In-app Call

Choose your preferred ringtone for calls while inside the app.

Note: The default call notification tone heard while not in the app cannot be changed.

Check APP version

Note: Check the Google Play or the Apple app store to ensure you are using the most recent version.
Check Intercom Firmware

Intercom Firmware Version

Note: See ‘Firmware Updates’ for more info.

Add, Edit or Delete Users & Logins

Add New User
Edit User
Delete User
Username
Password
Cancel
Save

Note: Administrator account cannot be deleted but the password can be edited by selecting the pencil icon to the user.
Adjust Relay Trigger Times

Choose how long each relay output will trigger for. This does not affect TMC keypad codes or MFT Prox IDs as they have their own independent times when added.

Relay 1 Trigger times
- 1.9
- 1.9

Relay 2 Trigger times
- 1.9
- 1.9

Adjust Intercom Time

Sync your device's date and time stamp to the intercom by pressing the button below.

NTP Server
- Enable/Disable Daylight Saving
- Sync to device timezone
Wi-Fi Settings

SSID currently connected to

Search for WiFi Networks. See WiFi Setup for more details

Note: If showing POOR signal level, STOP! You must reposition the antenna or look at alternative options to connect the intercom to the network.

Adjust Maximum Monitoring Time

Save Settings

Change the length of time you can view the camera direct from the app

Change the length of time you can view the camera direct from the app
Adjust Maximum Talking Time

Change the length of time you can talk when a call is answered before the call disconnects.

Adjust Maximum Calling Time

Change the length of time your intercom calls for.

Note: If you do not have a good data signal (i.e. 4G or WIFI) on the receiving device it may stop you from receiving the call correctly.

Note: All devices connected will receive a notification at the same time.
Reboot Intercom

Soft Reboot the intercom

Simplex / Duplex Audio Selection

Save Settings

Soft Reboot the intercom

Soft Reboot the intercom

Soft Reboot the intercom

Tip: If the volume on the device is too loud or is in a noisy environment, it may cause echo or clipping in audio. If this occurs, you can turn down the device's volume or switch to one of the simplex audio options.

Note: If the volume on the device is too high or is in a noisy environment, it may cause echo or clipping in audio. If this occurs, you can turn down the device’s volume or switch to one of the simplex audio options.
Advanced Feature Overview

Notifications on gate/door opening & motion sensor
Auto opening of gates on weekly schedule
Select resolution of camera stream
View activity log

Keypad codes
Prox cards
Voicemail option for missed callers
Motion detection option

Notifications

Enable/Disable app push notifications.
(Default = OFF)

Relay Trigger – Anytime the relay is triggered a notification will be sent.
This will affect PROX ID’s, Keypad Codes & In-App Relay triggers.
Relay 1 = Entrance 1
Relay 2 = Entrance 2

Motion Sensor – Anytime the motion sensor detects movement a notification will be sent.

Note: Motion Sensor feature needs Enabled too for this to work as expected. See Motion Sensor Settings.
Auto opening of gates on weekly schedule

Select resolution of camera stream

Note: If a latched command is used then an unlatch will be required to return the relay to its normal state.
Date & Time settings of the intercom must be accurate for correct operation.

Note: Data charges may apply if you exceed your personal allowance.
Activity Log

The log shows the most recent events which have occurred on the intercom. Some examples are shown. Some of the events capture images, or video from calls and can be played back by pressing the icons to the right.

Note: SD card must be inserted into the slot on the PCB for this feature to operate correctly.

The log will show the last 100 events. Older events can still be retrieved via a microSD reader.
Keypad Codes
*Keypad models only

There are 3 types of keypad code options which can be entered as shown.

1. **24/7 codes which work all of the time. (max 100)**
2. **Time restricted codes which only work on pre-set times and days. (max 100)**
3. **Auto Expire codes which are temporary. (max 100)**

Note: Press the * button to confirm the keypad code after entering it.

1. **24/7 Codes (max 100)**
   - Enter Name & Select which relay to trigger & how long the relay will trigger for. Then enter a keypad code & press SAVE

2. **Time Restricted Codes (max 100)**
   - Enter Name & Select the days & time a code should work, then enter the code & press SAVE

3. **Auto Expire Codes (max 100)**
   - Enter Name & Select how long the code should be valid for, then enter the code & press SAVE

Note: Time Restricted & Auto-Expire options are only available for Relay 1. The relay time is controlled via the main relay settings.

24/7 options have a relay time specific to each code.
PROX Cards/Tag IDs

*PROX models only

There are 3 types of PROX ID options which can be entered as shown.

4. 24/7 ID’s which work all of the time. (max 100)

5. Time restricted ID’s which only work on pre-set times and days. (max 100)

6. Auto Expire ID’s which are temporary. (max 100)

1. 24/7 ID’s (max 100)

2. Time Restricted ID’s (max 100)

Enter Name & Select which relay to trigger & how long the relay will trigger for. Then enter the card ID & press SAVE

3. Auto Expire ID’s (max 100)

Enter Name & Select how long the ID should be valid for, then enter the card ID & press SAVE

Note: Time Restricted & Auto-Expire options are only available for Relay 1. The relay time is controlled via the main relay settings.
24/7 options have a relay time specific to each code.
Voicemail Option for missed Callers

When voicemail is activated if a call is not answered then an audio message will play to ask the visitor to leave a message. A 20 second video recording can be viewed in the events log.

Enable/Disable Voicemail feature

Note: SD card must be inserted into the slot on the PCB for this feature to operate correctly.

The log will show the last 100 events. Older events can still be retrieved via a microSD reader.

Motion Detection Option

When motion sensor is activated a small video clip will record anytime the system picks up movement in the area.

The distance is fixed at max 5m with the option to choose how sensitive the sensor is. The higher the sensitivity the easier it will be to trigger the sensor to record.

Enable/Disable Voicemail feature

Change sensor sensitivity
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 Wi-Fi 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 Wi-Fi 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 Wi-Fi network (must be within Wi-Fi 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.

<table>
<thead>
<tr>
<th>Symptoms caused</th>
<th>Problem/error</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>App showing offline status, video image shows “fetching, long lag on calls, intermittently showing online/offline, delayed push notifications.</td>
<td>Wi-Fi too weak at gate</td>
<td>Increase the height of the antenna if possible, install a Wi-Fi booster either inside the house near the front of the property, or a loft or eaves mounted external Wi-Fi booster, or install a CAT5 cable from the intercom to the router.</td>
</tr>
<tr>
<td>Delayed push notifications, video lag, voice problems, freezing, relays not opening the gate.</td>
<td>Wrong power cable (too thin) installed from 24v adaptor to the intercom, or power adaptor too far from intercom.</td>
<td>Change the power cable to specifications shown within this manual.</td>
</tr>
<tr>
<td>Lagging video or audio, delayed notifications, status showing intermittently online/offline, no or randomly operation of push notifications.</td>
<td>Too many devices on home network</td>
<td>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.</td>
</tr>
<tr>
<td>Intercom works well sometimes and not well other times. The Wi-Fi signal strength on the app Wi-Fi screen can sometimes be strong and other times is weak.</td>
<td>Several Wi-Fi networks using the same SSID</td>
<td>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 Wi-Fi network closest to the intercom to something individual.</td>
</tr>
<tr>
<td>Offline status. Will not connect to the network</td>
<td>Incorrect Wi-Fi password entered during setup</td>
<td>Try process again. Check the same Wi-Fi password works on your phone (forget the network and re-connect using the same password).</td>
</tr>
<tr>
<td>Can randomly display status “id already in use”</td>
<td>Additional user added incorrectly.</td>
<td>When an additional user was being added, the process was done incorrectly. Additional users MUST be added by the admin device first, with</td>
</tr>
<tr>
<td>Issue</td>
<td>Solution</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>separate usernames created for each. The new usernames and passwords</td>
<td>This will be a job for the IT provider for the business. A port will need opened to allow</td>
<td></td>
</tr>
<tr>
<td>must be used by the new devices as shown in this manual to logon to the</td>
<td>P2P and PUSH notification traffic to pass through the firewall. Recommended unassigned ports</td>
<td></td>
</tr>
<tr>
<td>intercom.</td>
<td>which your network administrator can open are 6806, 6809 and 9123, 9124.</td>
<td></td>
</tr>
<tr>
<td>App shows online when phone is in the same network but offline when</td>
<td>Insufficient upload speed</td>
<td></td>
</tr>
<tr>
<td>phone is on 3G/4G or on a remote Wi-Fi network, App works fine remotely</td>
<td>This will need discussed with the ISP / broadband provider.</td>
<td></td>
</tr>
<tr>
<td>to view gates but push notifications are not working at all.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>App shows online status locally and when phone is remote, but push</td>
<td>Incorrect time.</td>
<td></td>
</tr>
<tr>
<td>notifications may be delayed, or video lag, or showing “fetching” on</td>
<td>Cycle to the settings menu and navigate to the clock settings and press “sync phone time” to</td>
<td></td>
</tr>
<tr>
<td>video screen.</td>
<td>sync the current time from the cellphone. This should only ever need done once as the time</td>
<td></td>
</tr>
</tbody>
</table>
App Updates

We will continually monitor the app’s performance and will release updates to enhance the users experience and/or fix any issues that arise overtime. These updates will be available via the iOS app store or the Android Play store.

Firmware Updates

Firmware updates will be released to fix any bugs or to add additional features where possible throughout the products lifetime.

The most recent firmware version your system is using can be found by using the app

The most recent firmware version will be available via the manufacturer website along with details of any changes made. The updates will be sent to all devices when it is released and if your system is ONLINE at the time it will update with no interaction from the user.

If you find your intercom is on an older firmware and may have missed the automatic rollout you can contact the manufacturer technical support via phone or live chat who can perform the update manually via a remote desktop application.
Intercom Maintenance

Bug ingress is a common issue in unit failures. Ensure that all components are sealed accordingly and check occasionally. (Do not open the panel in the rain / snow unless correctly equipped to keep the internals dry. Ensure the unit is securely closed after maintenance)

If you have an AB, AS, ABK, ASK callpoint it will have silver edges which are marine grade stainless steel so in normal weather conditions should not rust however it can dull or discolor over time. This can be polished with a suitable stainless-steel cleaner and cloth.

Environmental Information

The equipment that you bought has required the extraction and use of natural resources for its production. It may contain hazardous substances for the environment. In order to avoid the dissemination of those substances in our environment and to diminish the pressure on the natural resources, we encourage you to use the appropriate take-back systems. Those systems will reuse or recycle most of the materials of your end-of-life equipment.

The crossed-bin symbol marked in your device invites you to use those systems.

If you need more information on the collection, reuse and recycling systems, please contact your local or regional waste administration. You can also contact AES Global Ltd for more information on the environmental performances of our products.

Ingress

We recommend sealing all entry holes for prevention of insects that can cause issues with a risk of shorting out components.

To maintain the IP55 rating please follow the sealing instructions included. (also available online)
Warranty

Please note, by installing this product, you are accepting the following warranty terms:

1. The manufacturer’s warranty is a “return to base” 2 year warranty from date of manufacture. This means that any suspected defective components or items are returned to the manufacturer’s agent for investigation and diagnosis and returned at the cost of the customer.

2. The warranty does not cover, nor is the manufacturer or agent responsible for any of the following whatsoever: Storm damage, lightning or surge damage, flooding, accidental damage, vandalism or deliberate damage, un-explained corrosion or unusually harsh environments, failure of telephone networks, future un-interoperability between the product and network providers which cause mal-function due to changes implemented by the phone providers after manufacture of the product, or that which is outside of control of the manufacturer (e.g. 2G, 3G switch off, removal or inability to obtain VOLTE service), and damage due to not proper installation.

3. The manufacturer in no way accepts liability for any of the following incurred due to a product defect: Cost of attending site, inconveniences, labour rates, time lost, loss to or damage to property, security breaches, late payment clauses or breaches of any contracts between the installer and the client.

4. This is a profession install product only. The product is a component of an overall system. Therefore, it is the responsibility of the installer to certify the safety and compliance of the overall finished system. As soon as this product is fixed to another item, or connected to another third-party device, then the product has been modified, and compliance with local regulations in the country of install is strictly the responsibility of the installer.

5. Re-stocking fees may apply to items returned that are found to be non-defective. Complete units will also attract a re-stocking fee if returned for credit, regardless if a defect is discovered or not. Re-stocking fees may vary depending on the condition of the item being returned, and whether it can be determined as in brand new condition. The warranty terms do not entitle customers to an automatic full refund. For more details on returns procedures and re-stocking fees, contact the agent.

6. Items with physical signs of surge damage are not covered by warranty. Items with visible signs of surge damage will only be covered by warranty if photographic evidence is provided from site, showing surge protection has been installed.

Full warranty terms and conditions available upon request to AES Technical Department.
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)

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”