

Installation & User Instructions

MultiCOM Cellular Range

PROFESSIONAL INSTALL ONLY



Suitable from Firmware Version 3.0.8 (FOTA) **(Classic)**

Suitable from Firmware Version 2.0.8 (FOTA) **(Lite & Mini)**

Suitable from Firmware Version 1.0.5 (FOTA) **(Modular Multibutton)**

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 pages 3-4



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

Important things you Need to Know..



Please read this entire manual before installing this product.



To be installed by certified and qualified personnel / gate automation dealer only. **Not for DIY install!!**



Ensure there is a good 4G signal on site. 4G units will fall back to 3G service in some countries.



Set up, on a bench in the workshop **BEFORE** going to the site. Program the unit in the comfort of your workbench and call technical support should you have questions.



This product requires a regular voice & SMS SIM card. **Do not use a data-only SIM, as this will not work in the unit.**

To make voice calls on a 4G system and get optimum service, your SIM and provider will need to offer VOLTE support (Voice over LTE) otherwise the unit will be forced to fall back to 3G or 2G service to make calls.



Manufacturer warranty does NOT cover lightning/storm damage. In lightning prone areas, you **MUST** fit external surge protection and a lightning rod to maintain warranty on this product.

PHASE 2

Product Overview

Overview of Intercoms (Imperial Design)

Antenna Separate



Overview of Intercoms (Pedestal Design)

Antenna Integrated



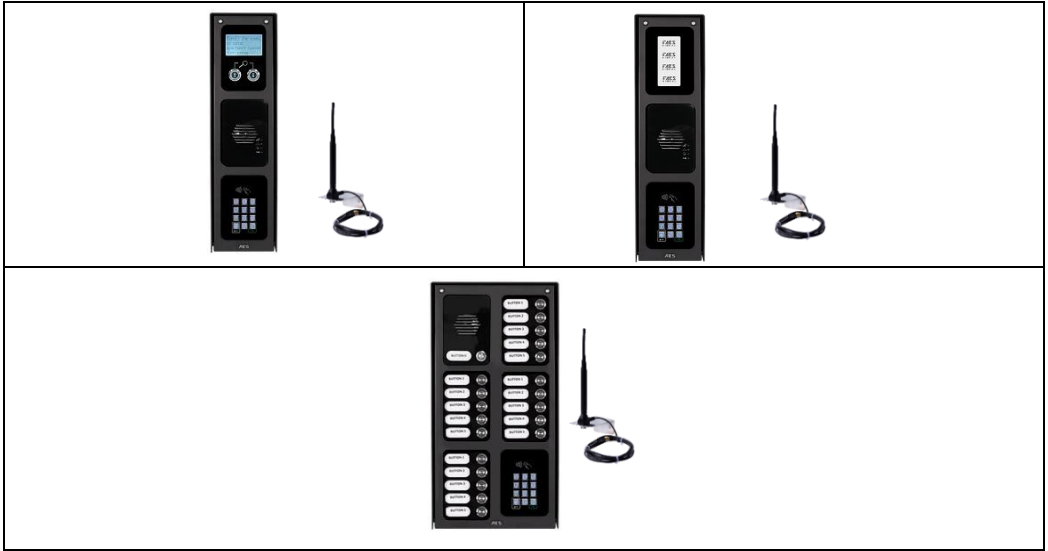
Overview of Intercoms (Flush Design)

Antenna Separate



Overview of Intercoms (Modular Pre-Set Design)

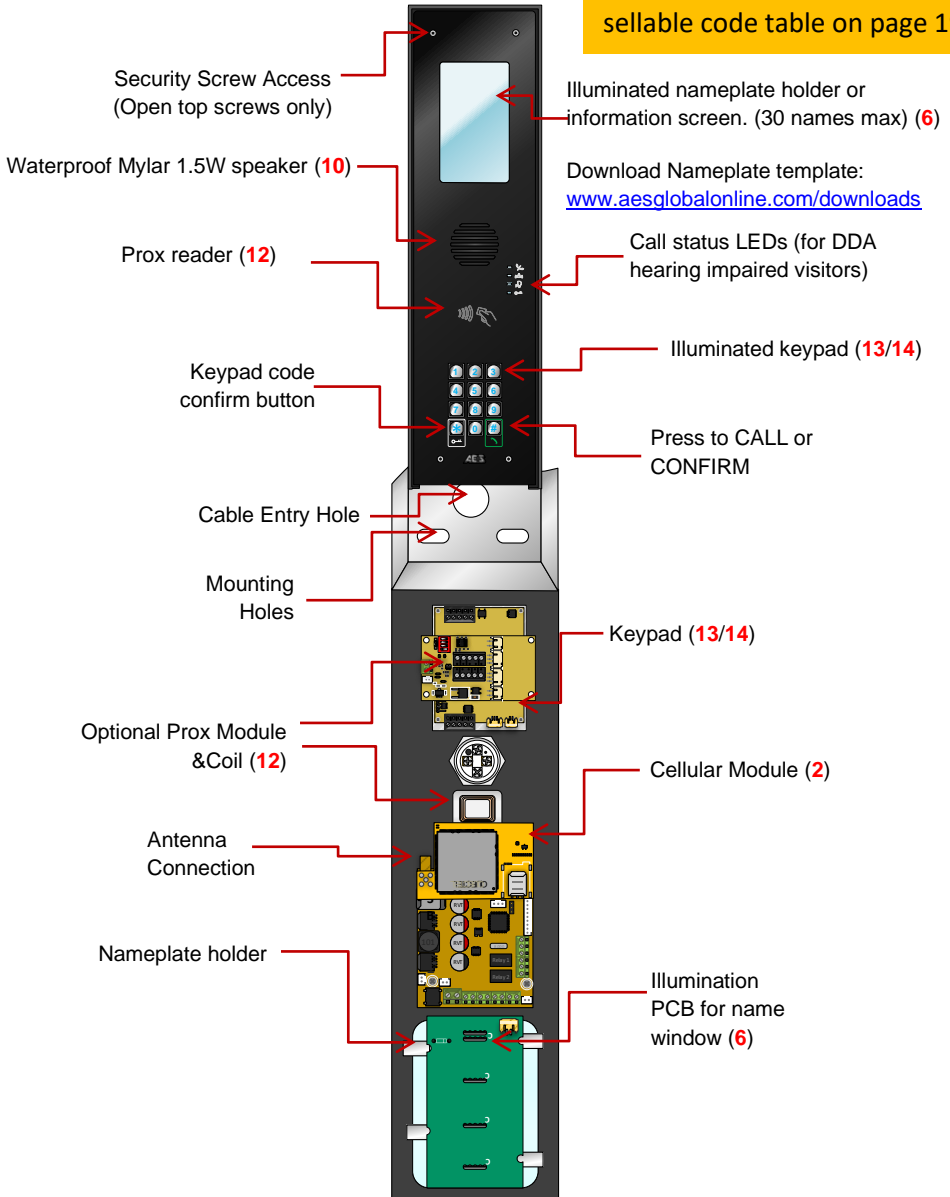
Antenna Separate



More Detail....

MultiCOM Lite Overview

Note: the numbers in the brackets (#) relate to the sellable code table on page 19



MultiCOM Lite Modular Overview

Illuminated nameplate holder or information screen (6)

Download Nameplate template:
www.aesglobalonline.com/downloads

Security Screw Access
(Open top screws only)

Waterproof Mylar 1.5W speaker (10)

Call status LEDs (for
DDA hearing impaired
visitors)

Prox reader (12)

Press to confirm after
entering door code

Illuminated keypad (13/14)

Press to CALL or
CONFIRM

Cable Entry Hole

Mounting
Holes

Keypad (13/14)

Optional Prox
reader (12)

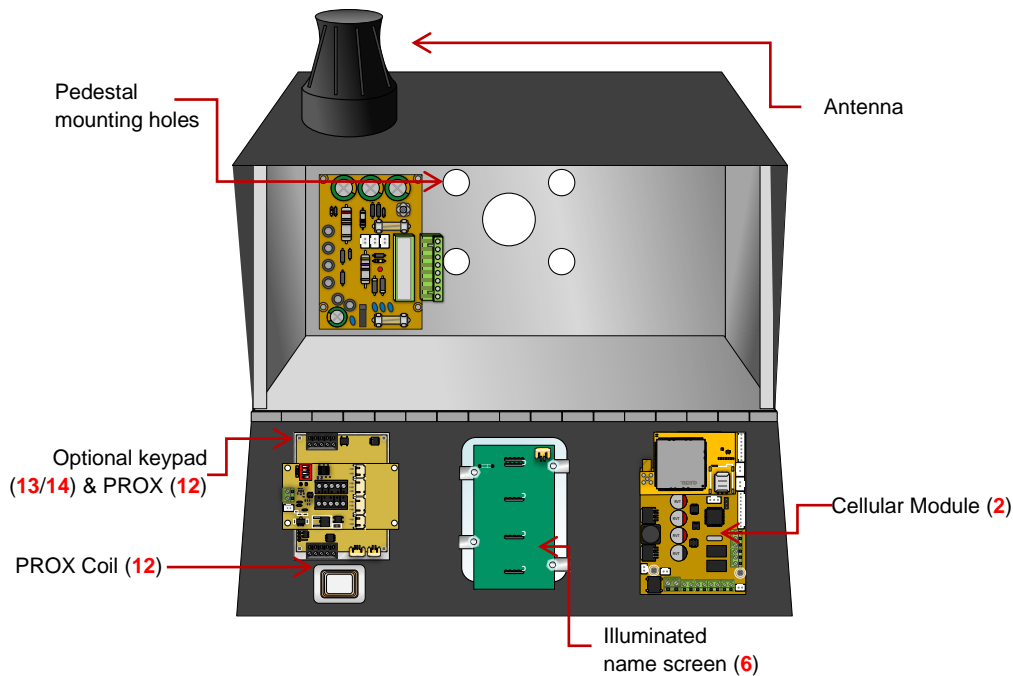
Slave connections for
additional keypad or prox
devices

Antenna connection

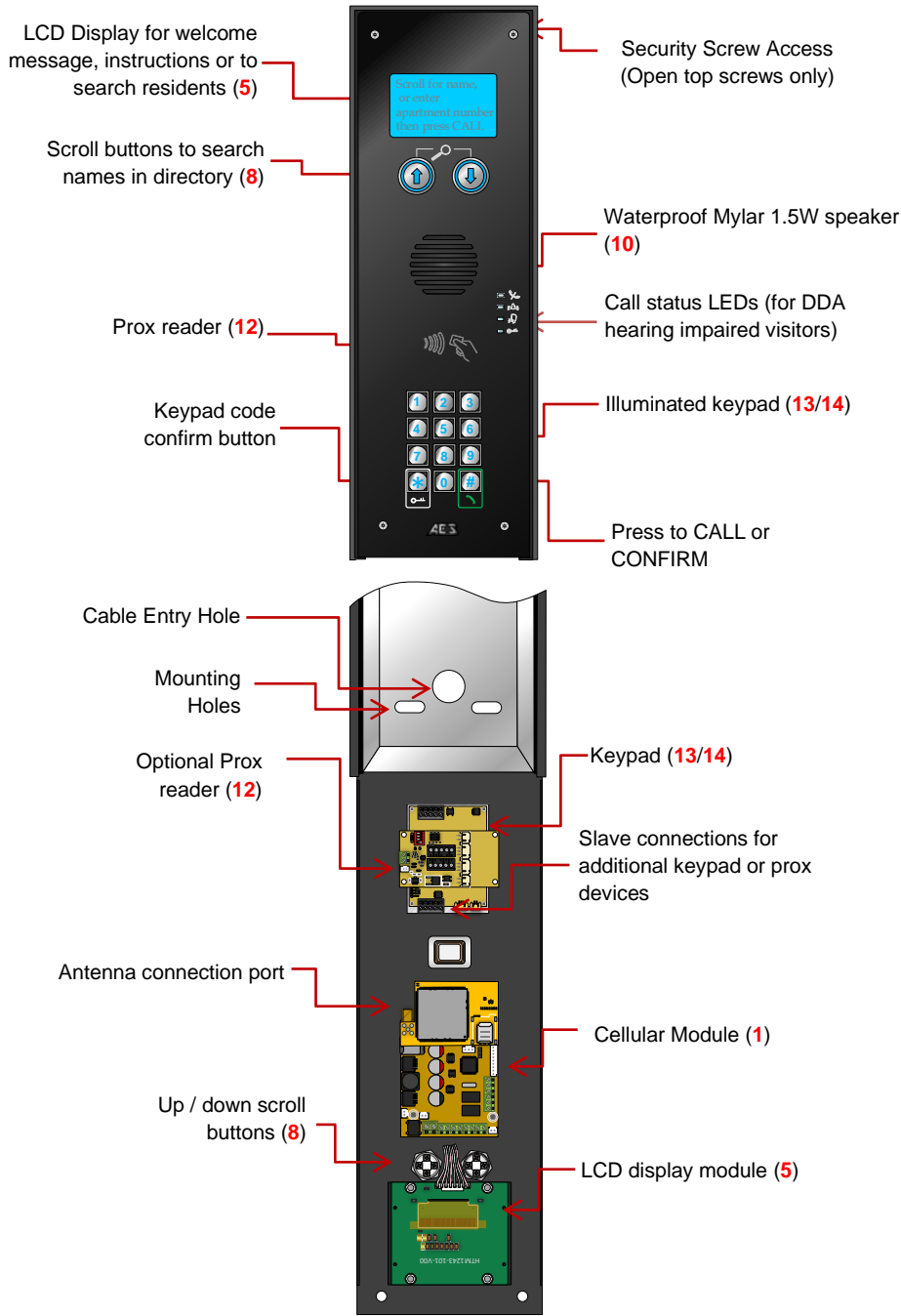
Cellular Module (2)

LED illumination module (6)

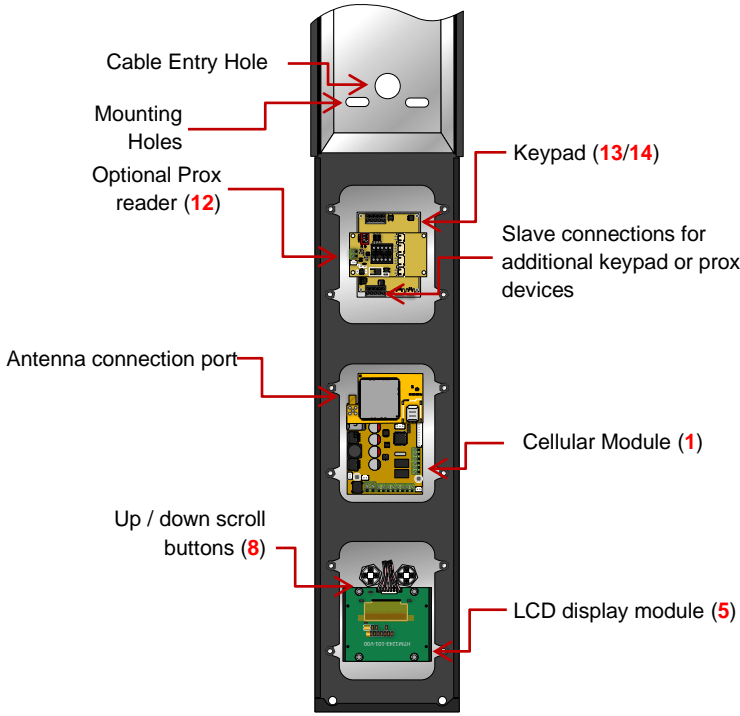
Pedestal Version



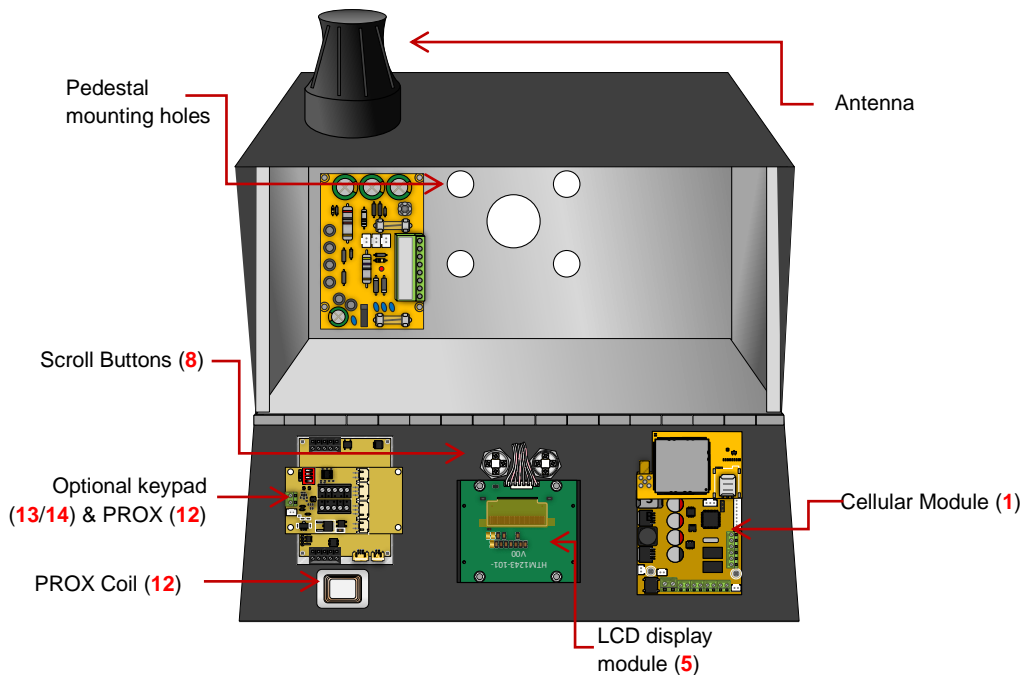
MultiCOM Classic Overview



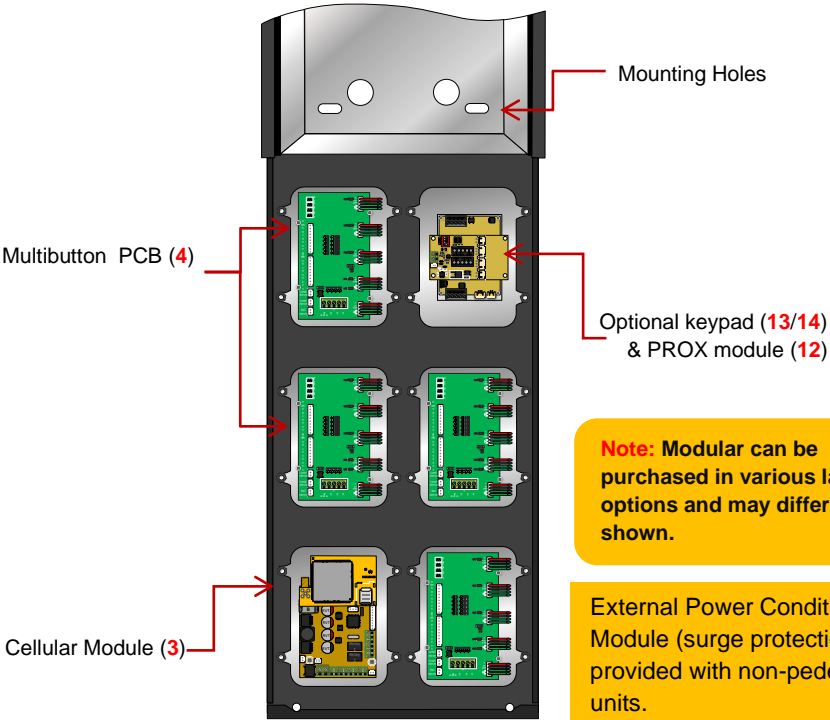
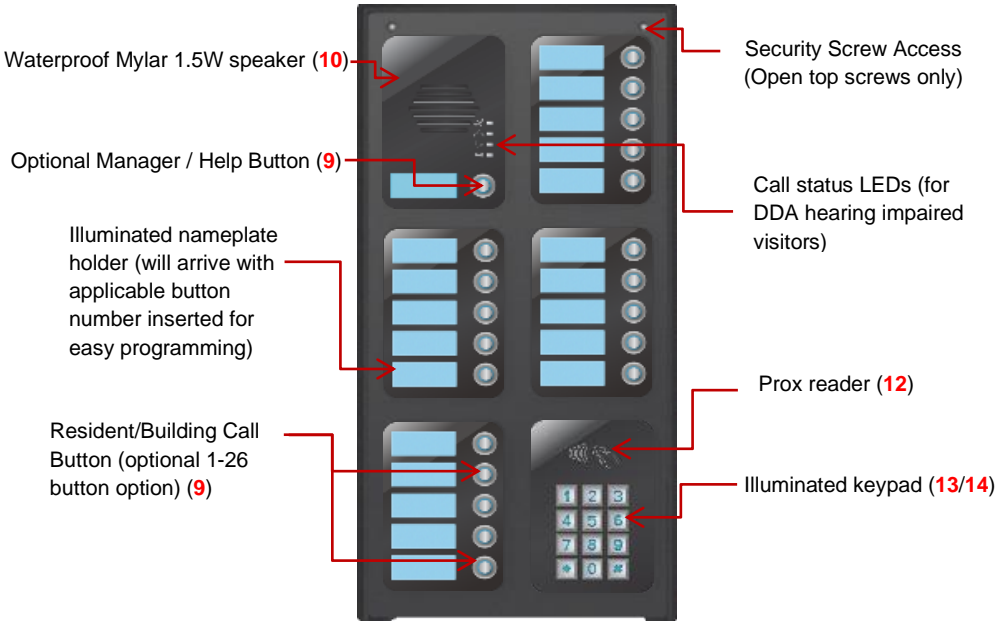
MultiCOM Classic Modular Overview



Pedestal Version



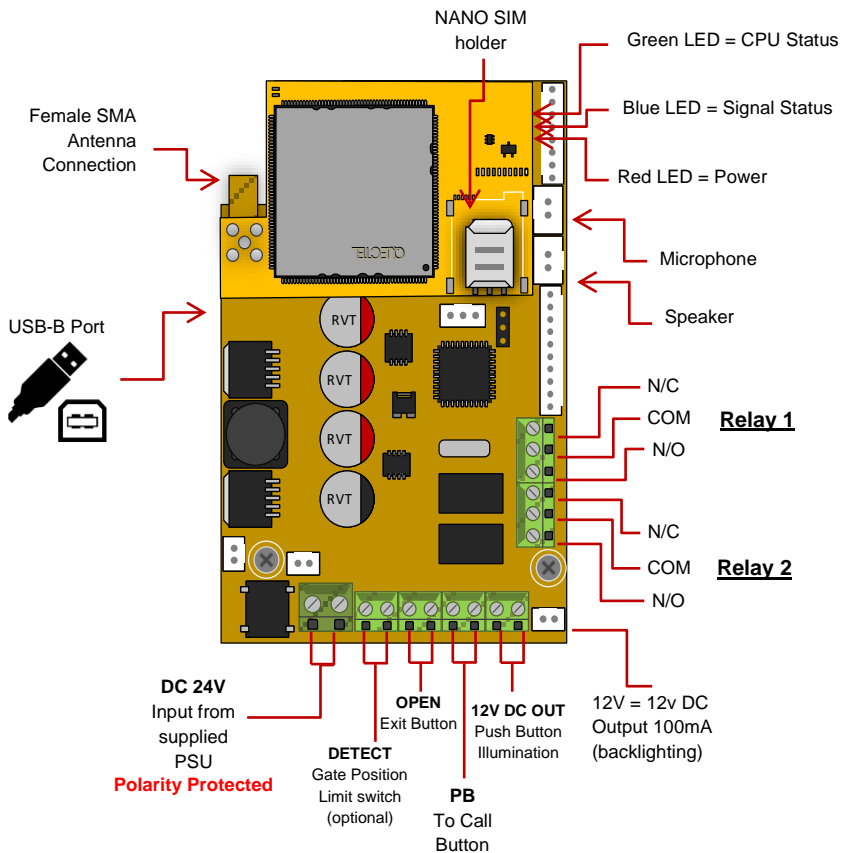
Modular Multibutton Overview



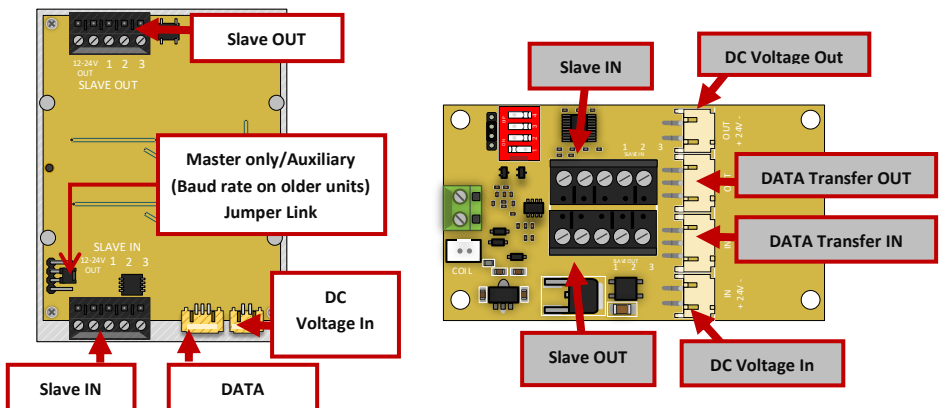
Note: Modular can be purchased in various layout options and may differ from shown.

External Power Conditioning Module (surge protection) provided with non-pedestal units.

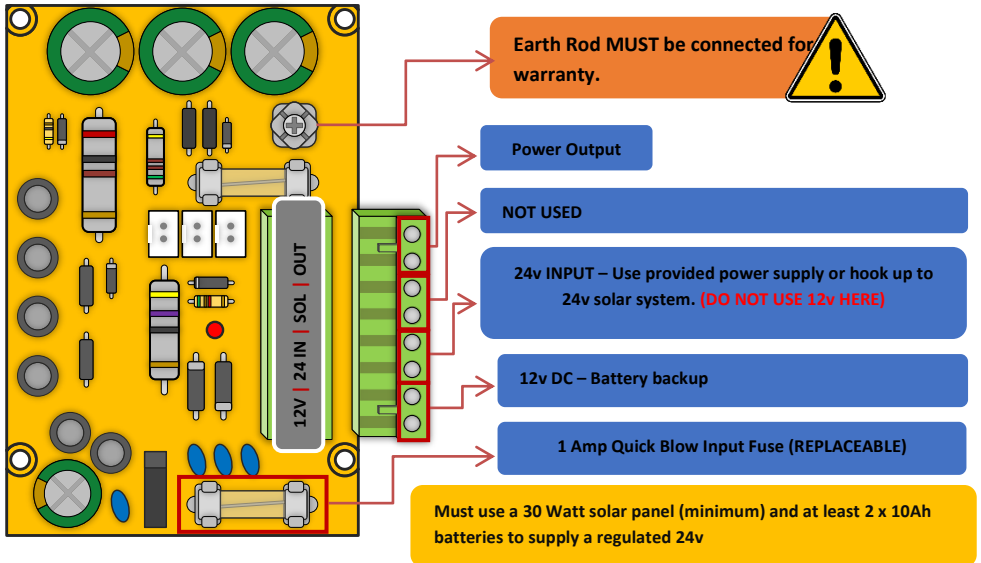
Main Cellular Module (1, 2 or 3) in Detail...



Keypad (13/14) & PROX Module's (12) in Detail

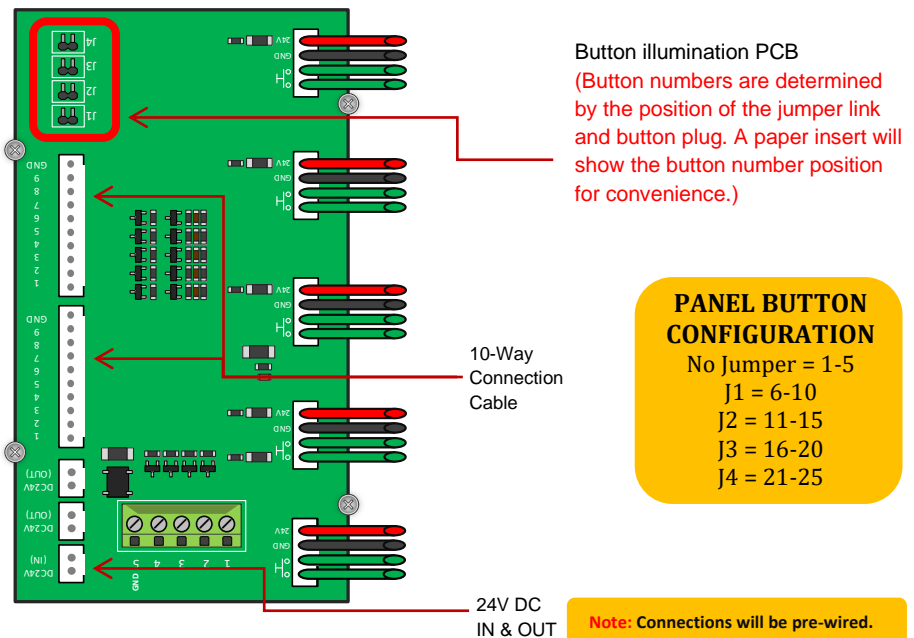


Overview of Surge PCB (7)



Overview of Multibutton PCB (4)

*Multibutton Systems Only



Component Sellable Codes		
	Component	Sellable Code
1	Cellular Module (Classic)	B4G-MULTI-CLASSIC-PCB-US
2	Cellular Module (Lite & Mini)	B4G-MULTI-LITE-PCB-US
3	Cellular Module (Multibutton)	B4G-MULTI-MOD-PCB-US
4	Modular Multibutton PCB	MOD-NP-MB
5	LCD Screen	MULTICOM-LCD-01
6	Illuminated Name Screen	MC-NP
7	Surge PCB	SURGE3
8	Arrow button	BMB1-ARROW
9	Multibutton buttons	ECO-BUTTON
10	Speaker	SPK-ASSM
11	GSM mic	MPA
12	Prox PCB and coil	PROX-PCB-PRIME6
13	Blue prime keypad	PRIME-KP-B-KIT
14	White prime keypad	PRIME-KP-W-KIT

Technical Specifications

GENERAL	
Front Panel	<p>Portrait Orientation IBK = 3mm Acrylic on Imperial Design Marine Grade Stainless Steel BS316 Front Plate</p> <p>ISK = 1mm Marine Grade Stainless Steel BS316 on Imperial Design Marine Grade Stainless Steel BS316 Front Plate</p> <p>FBK = 3mm Acrylic on Flush Design Marine Grade Stainless Steel BS316 Front Plate</p> <p>FSK = 1mm Marine Grade Stainless Steel BS316 on Flush Design Marine Grade Stainless Steel BS316 Front Plate</p> <p>Landscape Orientation PED = Pedestal Surface Mount. Powder Coated Marine Grade Stainless Steel BS316 Front Plates with 3mm Acrylic on Design Marine Grade Stainless Steel BS316 Modular Plates</p>
Hood Cover (MOD, IBK, PED)	Powder coated Aluminium
Mounting Housing (Backbox)	Marine Grade Stainless Steel BS316
Mounting Type	IBK/ISK = Surface Mounted FBK/FSK = Flush Mounted PBK/PSK = Surface Mounted
Call Button	Stainless-steel button with illuminated LED Ring (max. 4 separate buttons)
Power Supply	24V DC (24v dc 2A adaptor included)
Power Consumption	GSM PCB w/Screen & Keypad & Prox Standby Current: 80mA Dial Out: 310mA Max Current: 2A
Solar Power	30Watt Solar Panel (minimum) 2x 12V 10AH Batteries connected in series to provide 24V output. The power output must be regulated.
Ingress Protection:	IP55
Approvals	FCC, CE
Dimensions	See catalogue
Operating Temperatures	-15 to +55°C / -13 to 131°F
KEYPAD MODULE	
Backlighting	Blue / White
Baud Rate	9600
Code Length	4 Digits (fixed)
Confirmation Key	* = Keypad Code confirm # = Start/End Call

Cellular	
Modem Models	4G Europe - SIM7500E 4G USA - SIM7500A 4G USA - QUECTEL EC25-AFX 4G AUS/NZ - SIM7500SA
Frequency Range	GSM900 880-915MHz, DCS 1800 1710-1785MHz WCDMA Band I 11920-1980MHz, WCDMA Band VIII 880-915MHz LTE B1, B3, B7 1920-9180MHz, 1710-1785MHz, 2500-2570MHz LTE B8, B20 880-915MHz, 832-862MHz
RF Output Power (EIRP)	32.55dBm (GSM 900), 29.73dBm (DCS 1800) 23.77dBm (WCDMA Band I), 23.78dBm (WCDMA Band VIII) 22.79dBm, 22.73dBm, 22.97dBm, 22.35dBm, 22.99dBm (LTE B1, B3, B7, B8, B20)
PROX TAGS	
Dimensions	40 x 25 x 4.5mm
Frequency	125 KHz
Type	Passive, fixed 10 digit.
Storage Temperatures	.-40°C to +85°C (-40°F to 185°F)
Operating Temperatures	.-40°C to +55°C (-40°F to 131°F)
Ingress Protection:	IP68
TECHNICAL DETAILS	
Dial Out Numbers per Apartment	3
Keypad Codes per Apartment (6 digit)	1
Prox Cards/Tags per Apartment	3
Automatic Trigger Events per Week	10
Modem Models	4G EU, 4G USA, 4G AUS/NZ
Relays	2
Relay Type	N/C and N/O
Relay Load	2 amps, 24v ac max
Permanent Visitor Codes, Cards and Caller ID	250
Time Restricted Visitor Codes, Cards and Caller ID	250
Temporary Visitor Codes, Cards and Caller ID	50

PHASE 3a

Setup &

Programming

(To be done before installing the intercom)



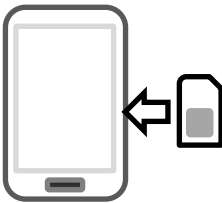
Cellular Coverage

Before installing this system, you need to be sure that there is good cellular coverage in the area it is to be installed. It is recommended that you conduct a site survey, and check reception on the site for cellular coverage. If reception is poor in the area, then this system is not recommended.

SIM Card

The system includes an AES SIM and will be pre-programmed with the APN to suit. If you wish to use a different SIM then the correct APN must be set for full operation. The alternative SIM will need to be a regular voice, SMS and data NANO SIM card, with at least 1GB of data allowance and capable of running on 4G service.

Do not use a data-only SIM, as this is only for tablets and will not work in the unit.



Alternative SIM Tips:

- 1) Ensure the SIM has calling credit and can make and receive calls on a mobile cell phone. (pre-pay)
- 2) Check that the SIM is not locked to a phone and can be used in other devices.
- 3) Check that the SIM does not have a PIN code request.
- 4) Disable voicemail service on the SIM.
- 5) You are now ready to begin programming.

Tip: IoT SIMs or certain networks may not operate as expected. Please ensure you have tested using a reputable network before reporting any faults.

If you wish to use the SIM card provided please follow the instructions with the SIM serial number. Further details can be found on our telecoms website.

www.aesglobaltelecom.com

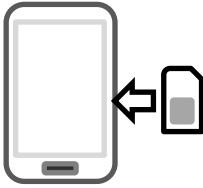
APN Details (for VoLTE / 4G services)

To achieve a full 4G network service, an Access Point Name (APN) will need to be set. The APN provides all the details that your device needs to connect to mobile data.

The system includes an AES SIM and will be pre-programmed with the APN to suit. If you wish to use a different SIM then the correct APN must be set for full operation

Pre-installed SIM: MODUS (AT&T); APN = 30304.mcs

Inserting the SIM card



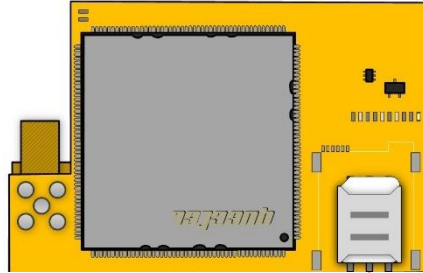
Please ensure the SIM card is a 4G NANO SIM card. Do not use a SIM card for a tablet, as these only support data, and do not support voice and SMS. You simply require a mobile phone type SIM card.

It is always good practice to check if the SIM is active by putting it into a phone and making a call.

Ensure SIM is activated.
Pre-pay SIM will need credit first.

WARNING

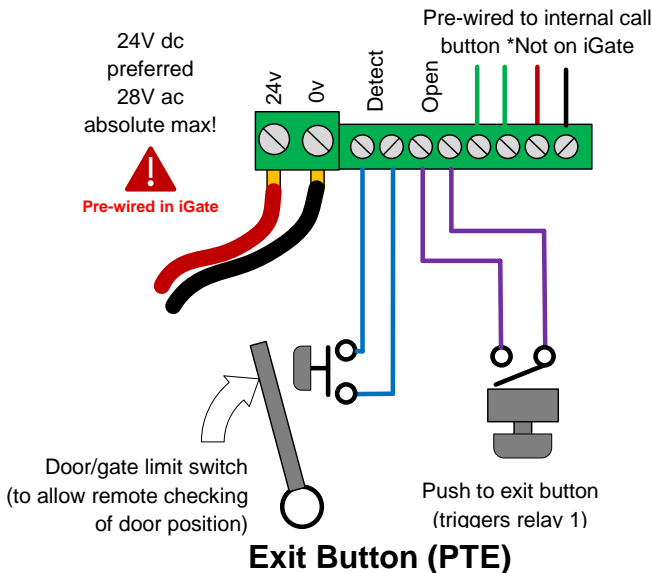
Ensure power is OFF. Do not hot insert or remove while power on.



Insert chamfered edge first.

Power Connections

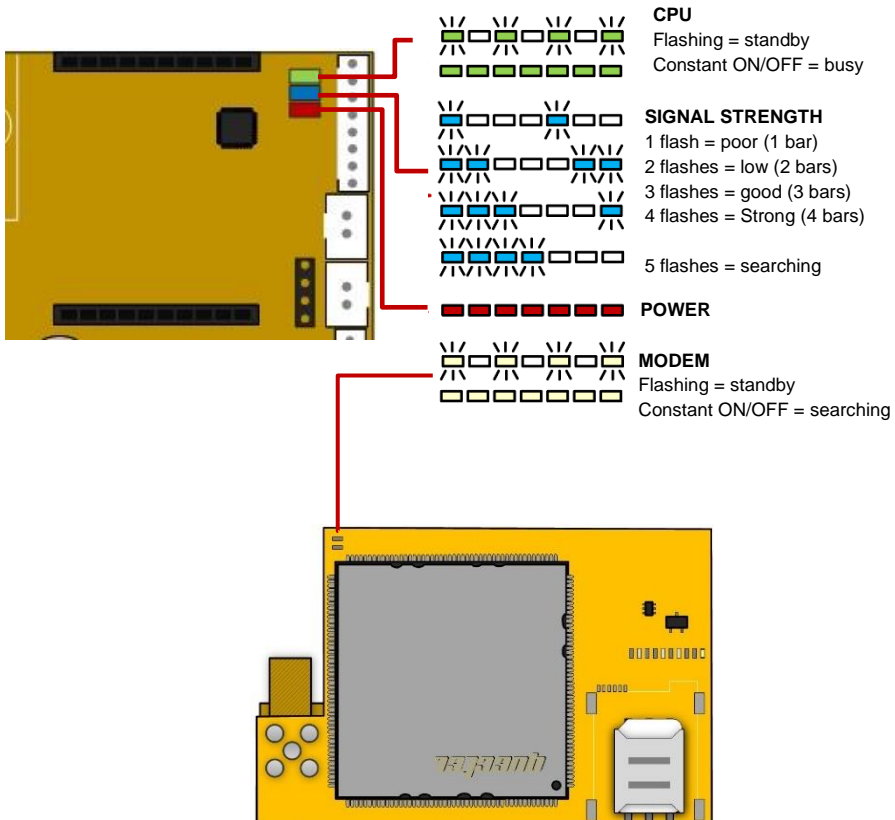
Perform a final check of wiring and ensure the antenna is connected before switching on the power. Once the power is switched on, the power LED should illuminate.



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

Status LEDs

The CPU, signal strength and power status LEDs are underneath the modem and so the diagram below shows the board without the modem for convenience.



Do NOT use fine gauge cable such as CAT5, CAT6, Alarm Cable etc to power this device as damage will occur.

0-2 metres (6 feet) – min 0.50mm² (18 gauge)

2-4 metres (12 feet) – min 0.75mm² (16 gauge)

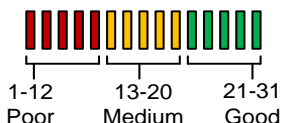
4-8 metres (24 feet) – min 1.0mm² (14 gauge)

Checking Signal Level and APN

When the green and white status LEDs (shown on previous page) flash to indicate network connection, the SMS string ***20#** can be sent to the intercom to check the signal level and APN.

Check Signal Level:

The intercom should then reply with a signal level between 1 and 31.



For optimal performance, the minimum signal level required is 13 on 4G systems.

Check APN Setting (required for VOLTE / 4G services):

The intercom is designed to obtain the APN dynamically i.e. automatically apply it. (If you do not get a GREEN LED on the PCB after a maximum 180 seconds then you may need to apply the APN manually).

Ensure the correct APN is being used for long term connection:

- (a) Ensure the APN* information is correct for the SIM card in use.
(If the SIM is provided by AES the APN should be '**30304.mcs**'.)
*You can obtain the correct APN to be used by contacting the SIM card supplier.
- (b) If the APN is incorrect, you can reset this by sending the below SMS string.
9999#38#X#
(replace X with the APN provided by the SIM supplier. E.g. 9999#38#30304.mcs#)
- (c) If there is no 2G/3G signal in your area the system will not be able to connect to the network at all without applying the APN.

If you purchased a unit with keypad you can view the pre-loaded APN list on our resources page (see QR code on next page) and locate the correct serial code. Then follow the process below.

Please note: this is not an exhaustive list- you may need to contact your provider for the correct APN.

1. Short the PB terminals on the PCB before turning unit on.
2. Upon power up, a long tone will be emitted from the speaker and the blue LED will remain solid - it is now in the APN setting mode.
3. After this, enter the APN serial number through the keypad then press #. (e.g. if you want to set APN No. 18, press 1 - 8, then #. A long beep will again be heard)
4. Reboot unit.

Reboot the Intercom:

The intercom will need to be rebooted after either one of the above processes is completed, to log on to the network with the new APN which you have stored.

If you send another signal level check, ***20#**, you may find that if the network mode was on 3G before, that it is now on 4G mode.

Using the AES PRO App



Due to the extensive number of features included in the app we would recommend watching the selection of YouTube videos detailing the features of the app pertaining to your intercom.



or search
"AES Global"

These QR codes will take you directly to the respective MultiCOM playlist on our YouTube channel which will take you through the setup and use of our new AES PRO app for MultiCOM systems.



EXTRA RESOURCES

This QR code will take you to our resources page where you can find datasheets and parameters of your intercom.

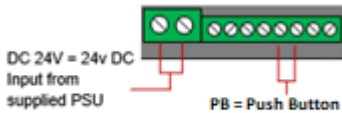
Help / Manager Button (optional)

All MultiCOM units have the ability to have a push button which can be programmed to call a manger or helpdesk when a visitor needs assistance. Useful for car parks and barriers etc.

You may have a pre-fitted button for a this such as the one on a modular speech module as shown here.



Tip: This button option is pre-connected as the help / manager button by default and can be programmed using button '0' option



All other MultiCOM units with no default help / manager buttons will require you to add your own push button.

This can be done by connecting into the 'PB' terminals on the PCB board.

Enter dial out number(s) for Manager / Help button:

9999#10#0#name#phonenumber1,phonenumber2,phonenumber3###

Trade Button Programming

Use the Help / Manager button as a trade button. Use the text string below to program the trade times. During the trade time set the unit will not call the phone number but will trigger relay one when the Help / Manager button is pressed. Outside of these times it will make a call when the button is pressed. (As long as the number has been programmed accordingly)

Add trade times:

9999#85#day,day,day,day,day,day,day#time1,time2#

(day=mon,tue,wed,thu,fri,sat,sun. Time1=start time, Time2= end time)

To delete trade button times:

9999#85#*#*#

Note: Use this feature with caution as it will allow access to anyone who presses the button during the pre-defined programmed days and times.

PHASE 3b

PC Programming

(Windows Compatible Only)

PC Programming

(Classic Models only)

1

Download HID Tool (Post 2022) from the Resources page (QR code on page 27). This is found under GSM Resources/Multicom Range/Extra Resources. Extract files and save to a folder on your desktop for convenience.

2



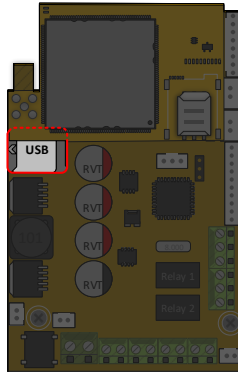
Connect a USB B-type cable (as shown below) to windows PC (windows 10 or later).



3



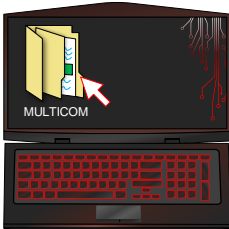
USB B-type cable (USB printer type cable)



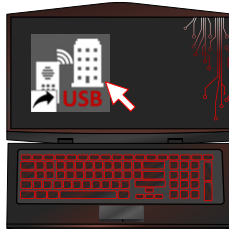
Insert the USB cable into the port shown. This can be done while the unit is powered on.

TIP: The intercom will need to be powered on and have a working SIM card, and be connected to the cellular network before PC programming can begin.

4



Open HID Tool folder



Copy the SHORTCUT icon to desktop for convenience



Double click and open software

PC Software Overview

The PC software has 4 tabs. Information can be downloaded from the intercom individually on each tab, edited, saved if needed, and uploaded back to the intercom again.

1. Enter default Engineers Passcode (9999) then press connect button

The screenshot shows the PC software interface with the following callouts:

- 1. Enter default Engineers Passcode (9999) then press connect button**: Points to the passcode input field at the top left.
- 2. Enter or edit cells of data and use buttons below accordingly.**: Points to the data table in the center.
- Enter optional site name**: Points to the site name input field below the table.
- Open an existing PC file to upload to the intercom**: Points to the first button in the bottom right row.
- Backup and save current data and settings to the PC**: Points to the second button in the bottom right row.
- Download any current data from the intercom to the PC software for editing**: Points to the third button in the bottom right row.
- Upload new data to the intercom to program it.**: Points to the fourth button in the bottom right row.

ID	Name	Phone 1	Phone 2	Phone 3
1	Jones	12345678901	98765432121	11223344557
2	Adams	01234567899		
3	Logan	01123456789	03456789101	
4	Goldberg	01123456789	75045678901	
5	Drummen	01234567890		
6	Smith	08901234567		

Tip:
The HID Tool folder contains four pre-configured excel spreadsheets (one for each tab) that can be populated for ease of use. Simply open the file then upload.

Resident / Family Screen

On the family data screen you can enter apartment number, family name, up to 3 phone numbers per family and other details as shown. This model will store up to 500 families.

Enter family name (will be displayed on directory) 14 digits max

Enter up to 3 phone numbers per family (3-14 digits)

The screenshot shows a software interface for managing resident and family data. It features a table with columns for apartment numbers, family names, and phone numbers. Below the table, there are input fields for apartment numbers, phone numbers, keypad codes, and Prox card serial numbers. Annotations with colored arrows point to specific fields and explain their requirements.

Apartment	Family Name	Phone 1	Phone 2	Phone 3	Keypad Code	Prox Card Serial
1001	Jones	1345678901	9876543210	1122334455	112233	0113456789
2002	Adams	0123456789		223344	223344	9876543210
3003	Robert	0112345678	0345678901	334455	011233	4096789321
4004	Goldberg	0212345678	7304567890	445566	054321	7891234567
5005	O'Brien	0789012345		556677	135790	9012345678
6006	Smith	0890123456		667788	223344	4567890123

Enter Apartment or house number (5 digits max)

For panels with Concierge / manager or help button, enter a phone number here

Enter keypad code, 1 per family (must be 6 digits)

Enter up to 3 Prox card serial numbers per family (10 digit card number)

Visitor Screen Section

On the visitor screen, there are 3 main sections...

1. Keypad codes.
2. Caller ID access (visitors can call the intercom to gain access by caller ID number recognition).
3. Proximity card section. Note Prox card storage is only available in certain hardware models fitted with a Prox reader.

Enter 250 permanent visitor keypad codes (4 digit). Choose relay 1-8, and set the trigger time.

Enter 250 time restricted visitor keypad codes (4 digit). Set start and end times in 24 hr format, no colon. Select days.

Enter 50 temporary codes, and set active time, from 1 – 168 hours.

The screenshot shows a software interface with three main data entry sections, each with a table of 5 rows and 5 columns. The first section (top) is for Keypad Codes, the second (middle) is for Caller ID Access, and the third (bottom) is for Proximity Card Storage. Each section has a header row with icons and labels. Arrows from the text blocks point to these sections. A yellow bar at the bottom contains icons for save, download, and other functions.

Selected models only – enter 250 visitor Prox card serial numbers here for 24/7 access, 250 time restricted Prox cards, and 50 temporary cards which auto expire from 1-168 hours

TIP: Any changes made on this tab must be saved or uploaded on this tab to take effect.

Use DOWNLOAD button to download and view all existing stored data.

TIP: An optional 6 character name can be added for Permanent and Time-Restricted Visitor information. This will make the Events Log easier to view.

TIP: Relays 1-8 can be selected on all Keypad and Prox sections (R1-2 are on the main Cellular module; R3-8 are for potential auxiliary units that may be included as part of the installation).

Enter up to 250 visitor caller ID phone numbers for 24/7 access, 250 time restricted phone numbers, and 50 temporary phone numbers

Settings

Change default engineer code (9999)
or default manager code (5555)

Set auto trigger, latch and unlatch
times to create time clock auto control

Set ringing time to attempt
calling each number before
dialling the next number.

Change relay trigger times for relay
trigger by DTMF. Note: Keypad pin code
relay times override this setting when
code entered

The screenshot shows the 'Settings auxiliary' screen with the following sections and callouts:

- Top Left:** Callouts point to fields for 'Change default engineer code (9999) or default manager code (5555)' and 'Set ringing time to attempt calling each number before dialling the next number'.
- Top Right:** A callout points to the 'TRIG LATCH UNLATCH' section, stating 'Set auto trigger, latch and unlatch times to create time clock auto control'.
- Middle Left:** A callout points to the 'RELAY TIMES' section, stating 'Change relay trigger times for relay trigger by DTMF. Note: Keypad pin code relay times override this setting when code entered'.
- Bottom Left:** A callout points to the 'APN' field, stating 'Set network APN for 4G connectivity (check APN for your network. This can usually be found online)'.
- Bottom Center:** A callout points to the 'OFF ON' switch, stating 'Enable latching relay by DTMF (default off)'.
- Bottom Right:** A callout points to the 'WELCOME' message field, stating 'Enter new screen instructions / welcome message (max 128 char)'.
- Bottom Center:** A callout points to the 'DISPLAY INFORMATION' section, stating 'Show / hide pin code entry on screen'.
- Bottom Left:** A callout points to the 'Mo Tu We Th Fr Sa Su' schedule, stating 'Set start and end times for visitor calls to be enabled. Green section=enabled. Red = disabled. Use 24hr format, no colon'.
- Bottom Center:** A callout points to the 'Restore defaults and delete all data on the intercom' button.

Set network APN for
4G connectivity (check
APN for your network.
This can usually be
found online)

Restore defaults and
delete all data on the
intercom

Enable latching relay by DTMF
(default off)
Enable callerID by all phone
numbers (default off)

Enter new screen
instructions / welcome
message (max 128 char)

Show / hide pin code
entry on screen

Program the phone
number of the SIM card
here, and set for daily
SMS (1) to recalibrate
time every day

Set start and end times for
visitor calls to be enabled.
Green section=enabled.
Red = disabled.
Use 24hr format, no colon

TIP: # character not permitted, to display # use "@" character.
/ creates a new
line.
= at the start means centre align

Auxiliary

This screen will allow you to name and set relay times for any auxiliaries you may have.

Family_Data Visitor_Data Settings Auxiliary

RELAY TIMES

3

1

4

1

5

1

6

1

7

1

8

1

1

RELAY NAMES

3

Western Gate

4

South Gate

5

Street Entrance

6

Side Entrance

7

Maintenance Entrance

8

1

Note: It is recommended to name the auxiliaries to easily identify which one was triggered in the events log.

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PHASE 4

Using the Intercom

(Only to be done after the unit is successfully programmed)

Calling a Resident

Scroll (Classic Model Only)



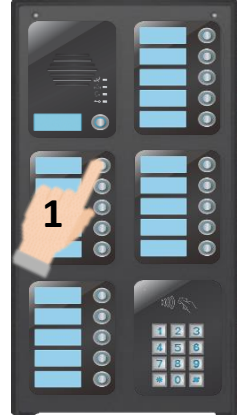
- 1: Scroll Up/Down
- 2: Press #/CALL

Direct Dial (All Models)



- 1: Enter Apt. number
- 2: Press #/CALL

Direct Dial (Multibutton Only)



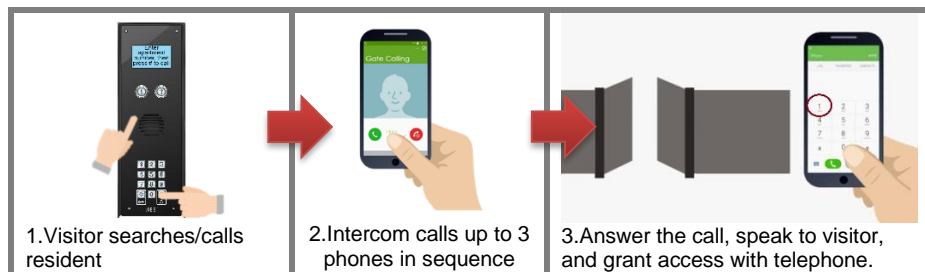
Using Keypad Codes & Prox IDs (Keypad / Prox Units)



Tip: Press # to confirm keypad code

Receiving A Call and Opening Gates / Door

Visitors can press the call button, which will initiate a call from your intercom to the designated phone numbers which will have been programmed by your installer.



Output 1

This is usually main gate/door.

Press 1# to open

Press 2# to hold open

Press 3# to un-hold

DISABLE DTMF Confirmation

Remove the '#' confirmation. Press 1, 2, 3 to trigger, latch & unlatch.

(False triggering may occur when disabled)

9999#34#X#

(X=1 enable; X=0 disable)

Output 2

This can be pedestrian gate, driveway lights or other.

Press 4# to open/activate

Press 5# to hold open/turn on

Press 6# to un-hold/turn off

ENABLE Latching feature via DTMF.
If latching is required.

9999#36#X#

(X=1 enable, X=0 disable)



Access Control by Calling the intercom (CallerID)

All residents can call the intercom to gain access at no call charge using CallerID.

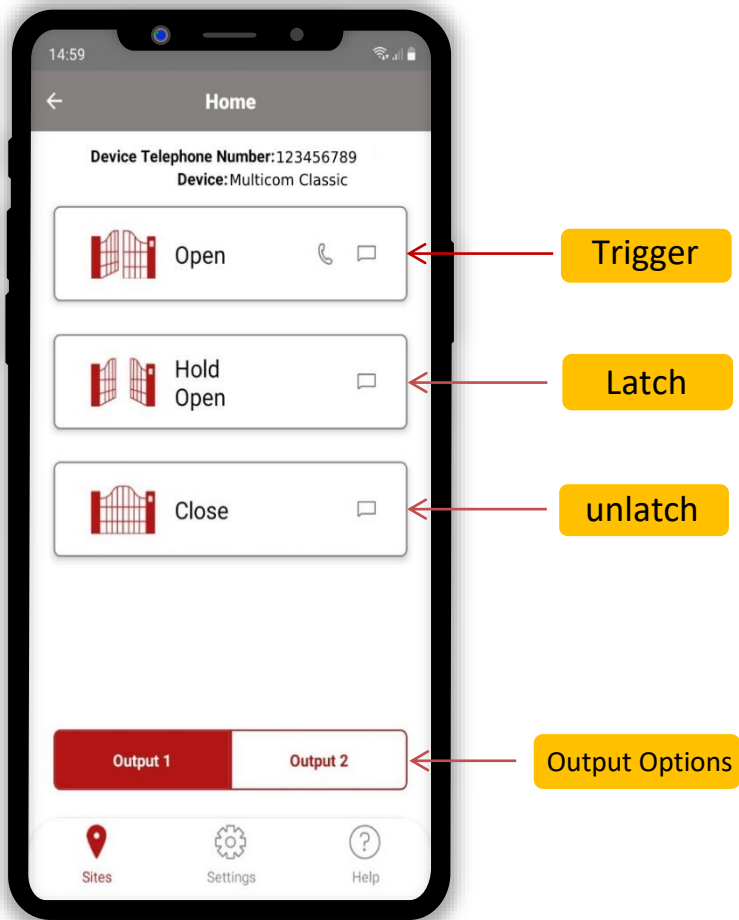
To open, simply ensure you have the phone number programmed for CallerID and then call the intercom phone number from the stored number and the relay will trigger as per programmed.

Tip: We recommend naming your intercom in your phonebook so you can call it by voice command.



Manager Controls of Gate / Door

This screen allows the installer or manager to manually trigger the gate.



PHASE 5

Installation



ATTENTION IMPORTANT INFORMATION



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

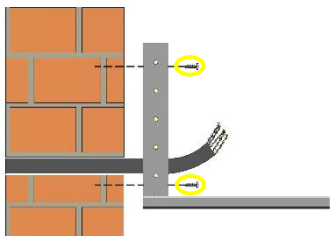
We recommend sealing all entry holes for prevention of insects that can cause issues with a risk of shorting out components.



How to Achieve & Maintain IP55 Rating

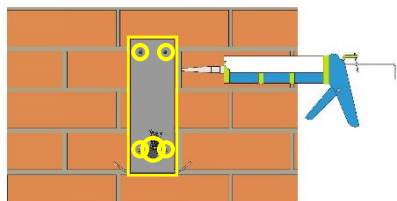
The IP55 rating attached to this unit is only achieved if the below steps have been followed. This is to prevent any unwanted water and/or bug ingress that can cause various issues with functionality and will void the warranty if not followed.

Step 1 – Mount to location

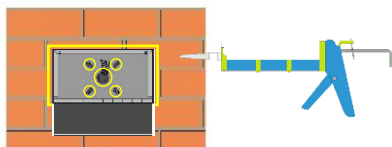


Use the provided mounting holes to attach the intercom via the chosen mounting option.

Step 2 – Seal unit



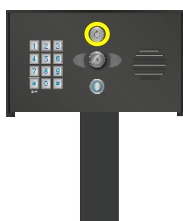
Seal all mounting or cable holes by using sealant such as silicone.



Ensure that any products being used are safe to use as some products can cause damage to the unit and/or the mounting location.

If surface mounting, seal around the back box especially when used on an uneven surface.

Step 3 – Close unit



Pedestal Design



Architectural, Imperial
& Modular Design

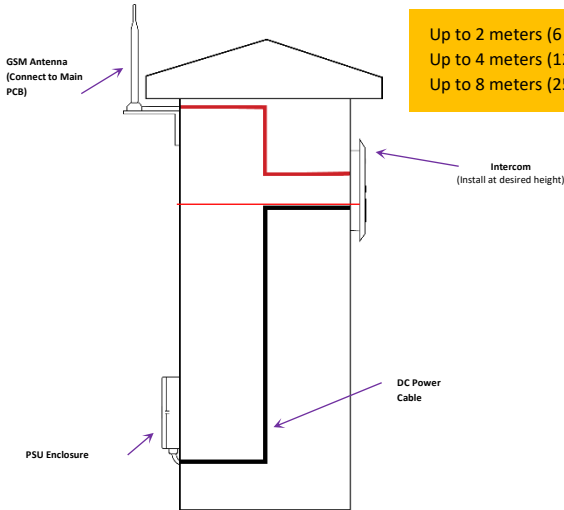


Flush Design

Ensure the security screws or cam lock is adequately closed to ensure a correct seal.

Power

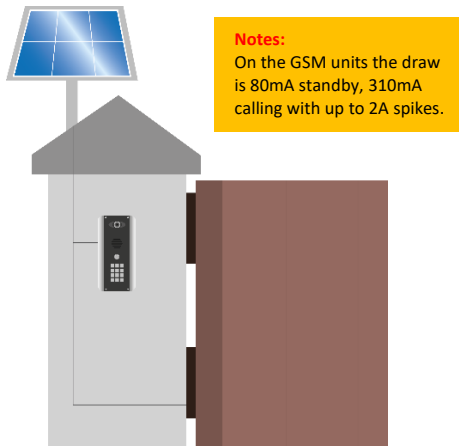
This intercom comes with a 24V dc power supply. The intercom requires up to 2 amps peak demand at times, therefore power cable is of extreme importance. Using insufficient power cable thickness will cause excessive stress on electronic components, and can therefore void the manufacturer's warranty. To avoid such problems, it is recommended (and is good practice) to locate the power supply as close to the intercom as possible. This avoids power cable noise and interference and enhances the lifetime of the product.



Solar Power

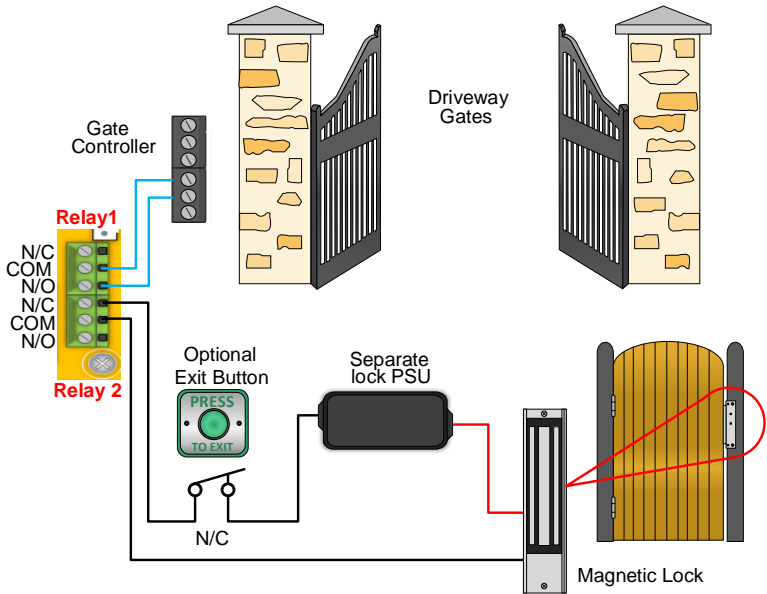
You can use solar power if required. You will require a DC voltage regulator applied at the gate board end as the voltage output can vary and cause too high a voltage, which will damage the intercom if over the 26v DC.

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

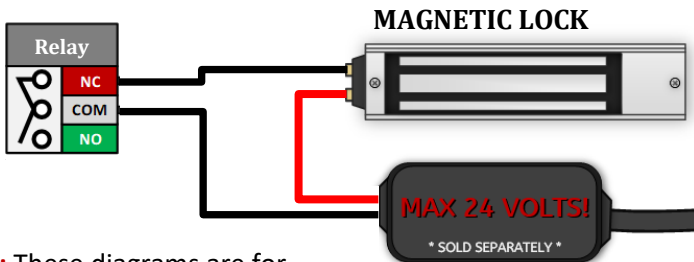
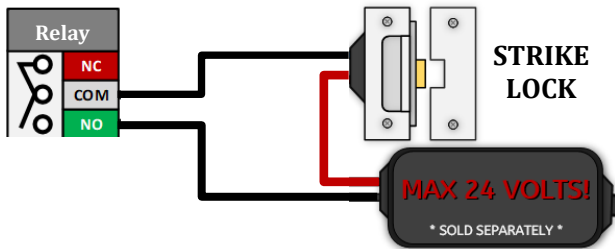


Relay Wiring Examples

Note: The manufacturer is not responsible for wiring to third party devices. Please consult the device instructions if having issues.



Additional Wiring Tips



DISCLAIMER: These diagrams are for demonstrational use only please use the manufacturer's instructions provided with the lock.

Connecting Auxiliary Devices

*Keypad module required



SLAVE OUT

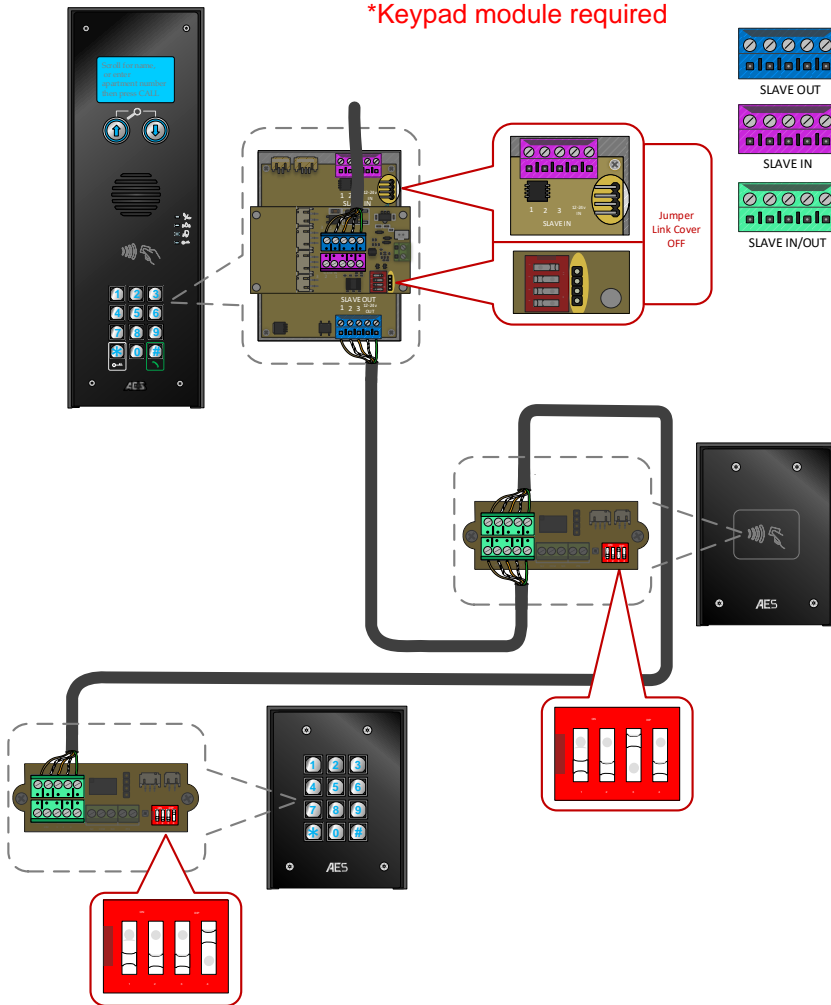


SLAVE IN



SLAVE IN/OUT

Colour code is for illustration purpose only. Terminals are black



This method of connecting devices requires the jumper links to be off (on all keypads and prox units) and the auxiliary function to be enabled via SMS.

SMS to enable Auxiliaries:
9999#00#1#

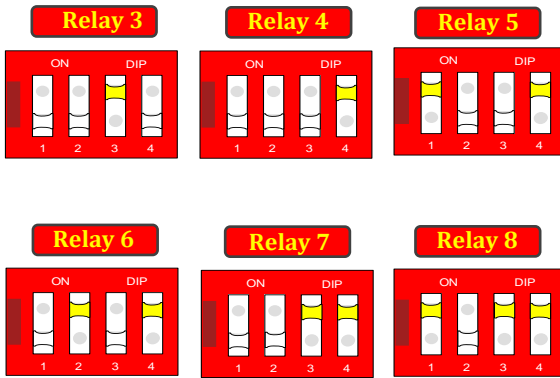
Maximum Devices

Up to a total of 6 devices can be connected to the one SIM module. Keypads can now be programmed per auxiliary device. Prox cards can now be programmed per auxiliary device.

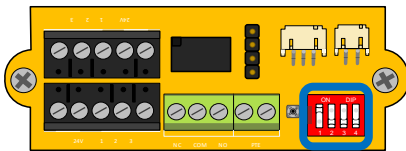
Maximum Distance

Cat5 cable – 50m per power supply with a maximum of 2 units.

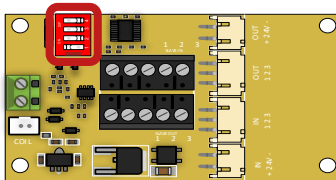
Auxiliary Device Relay Setup



Dip switch configuration for relays 3 to 8 on auxiliary devices.



The **sounder boards** dip switches set the **relay number** for the **auxiliary unit** it is in.



The dip switch of the prox must match the dip switch configuration of the auxiliary it wants to trigger



A keypad does not have dip switches. To assign the relay number use the keypad keys as follows.

***#91#RelayNumber#**

(Relay Number = 3-8)

PHASE 7

Aftercare

Complete List of Parameters

For a complete list of programming, SMS parameters check out our downloadable resources on our website.

Troubleshooting

Q. The unit will not power up. No LEDs on.

A. Check power supply voltage at intercom is 23.4v DC or more. Cable length from PSU to intercom should be less than 25 feet and in 14 gauge for longer distances. See guide. Check the fuse.

Q. The unit powers up but is not showing network reception or will not respond to SMS. (No green CPU light).

A. This means the unit is not able to detect the network for some reason.

-Power off the unit, remove the SIM and check it in a mobile phone to verify it can make a call and has calling credit if it is a Pay As You Go SIM.

-Disable any PIN code request if active on the SIM card.

-Check the SIM is a standard voice capable SIM. If you are unsure, contact your SIM card provider to verify.

-Check the reception is medium or good. Poor reception is not sufficient.

-Power off, remove the SIM, use fine sandpaper to lightly sand the SIM pads and try again.

-Check antenna is connected and does not have too many sharp bends on the antenna cable.

-Check the height of the antenna and make sure it is not inside a metal enclosure.

- Check correct power cable size for cable length from PSU. Refer to manual for guidelines

Q. The unit calls the first number, but there is not enough time to answer before it diverts to the next number.

A. Increase the no answer time as per programming instructions.

Q. The unit calls the first number, but voicemail comes on before it can ring the second number.

A. Decrease the no answer time as per programming instructions.

Q. The caller ID function does not work.

A. If your number is private or number withheld, then it will not work.

-Ensure the number is entered as you would normally dial it from another phone.

-For International customers, ensure the numbers have been entered with their international dialling code. If this does not work, try again without.

Q. There is no audio from the gate, but the person at the gate can hear ok.

A. This can be due to low reception or excessively long power cables.

-Check reception level by *20#.

-Change SIM card if necessary, to another network that may have better coverage.

-Purchase a high gain antenna.

This may also be caused by a defective microphone, water on a microphone from a sprinkler for example, or dirt/insects blocking the microphone hole. If reception is optimum and the problem persists, contact your supplier or installer.

Q. The audio quality that can be heard on the remote telephone is poor or humming (buzzing).

A. A small amount of GSM buzz can be considered normal on GSM intercoms, but not so much that causes an inability to hear the person speaking. This is a symptom of poor reception. Try the above steps on checking and improving reception. Consider fitting an external high gain antenna. Move the antenna further away. Remove any short bends in the antenna. Ensure the spare antenna cable is not rolled up inside the call station.

Q. The trigger keys do not work when the intercom calls a phone.

A. Check if you can hear the relay clicking at the gate when the keys are pressed during a call. If it can be heard, then the system is working, check to wire between the relay and the lock or gate panel. If the relays do not make a clicking sound, then check this feature on a different mobile cell phone or landline. If it works on a different phone, check the settings on the phone in question under DTMF tones.

Failure of DTMF tones to operate correctly is also a symptom of low reception or insufficient power cabling. Check the steps above on improving reception or addressing the power problem.

-Also check that the relays are not already latched with the *22# command. If they are latched, they need to be unlatched before the trigger keys will work.

-Sometimes excessively long power cables or thin power cables can cause this problem. Prove it by connecting a temporary extension lead and the power supply directly to the unit.

- Check relay 1 & 2 with multi-meter. If relay 2 works but relay 1 does not, then relay 1 may be defective.

-Check if it works by SMS. Try latching a relay then use the status button to check if the relay is latched. If that works, the problem could be the phone being used, or low signal strength at the intercom.

Q. The system was operating the gates fine, but now it will not trigger the gates.

99% of the time, this is caused by the user accidentally latching the relay. This latches the output relay permanently on. Send the intercom the following SMS *22#. The intercom should reply with a message detailing the relay status. If it has been latched, then the message will state "the relay is ON". In this case, refer to the user guide to read how to unlatch it again.

Q. The unit no longer calls out to phones but I can make a call to it from my phone.

A. Check there is a balance on the SIM card.

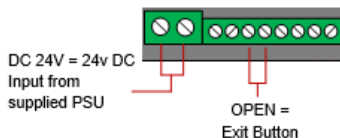
A. Switch off the power, remove the SIM, put it into a phone, and check that a call can be made from a phone. This will verify if the SIM is still working and in service.

Q. Forgot Engineers code for SMS programming

A. You will need to complete a hard reset by following the steps below.

Note this will erase all data stored on the PCB.

- 1) Power off the unit. (approx 60 secs)
- 2) Link the terminals marked OPEN.
- 3) Switch on the power
- 4) After several seconds the relay will click.
- 5) The unit will then clear memory and be defaulted
- 6) Remove the link and wait around 20 seconds.
- 7) Reboot the unit for good measure.



Firmware Updates

Option 1: FOTA (Firmware Over The Air)

FOTA allows you to update your intercom wirelessly without a PC.



9999#70X#

Passcode Bin File Link

Command
(Firmware Update)

Tip:
Set APN before
sending FOTA SMS!

Text string to use to get our latest firmware (Choose your model):

9999#70<http://23.105.204.41:2346/AES/Multicom-Classic/Latest#>

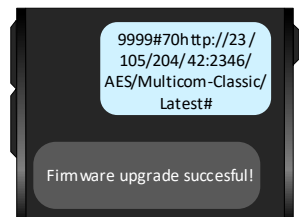
9999#70<http://23.105.204.41:2346/AES/Multicom-Lite/Latest#>

9999#70<http://23.105.204.41:2346/AES/Modular-Multibutton/Latest#>

****DO NOT TURN OFF YOUR INTERCOM DURING THE UPGRADE PROCESS****

****ADDITIONAL DATA CHARGES MAY APPLY****

Although unlikely due to the small update file size.



App Updates

We will continually monitor the app's performance and will release updates to enhance the user's experience and/or fix any issues that arise over time. These updates will be available via the iOS app store or the Android Play store. Enabling auto updates is recommended for the most up to date experience.

Extra Resources

Find all our support resources on our website or scan the QR code below.



www.aesglobalonline.com

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)**



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)

If you have an AB, AS, ABK, ASK call point it will have silver edges which are marine grade stainless steel so in normal weather conditions should not rust however it can dull or discolour 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. To avoid the dissemination of those substances in our environment and to diminish the pressure on 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.

Documentation Feedback

We are constantly working to produce the highest quality documentation for our products. We welcome your feedback. Send us your comments or suggestions about our online Help, printed, or PDF manuals.

Please include the following information with your feedback:

- Product name and version number
- Type of document: printed manual, PDF, or online Help
- Topic title (for online Help) or page number (for printed or PDF manuals)
- Brief description of content (for example, step-by-step instructions that are inaccurate, information that requires clarification, areas where more detail is needed, and so on)
- Suggestions for how to correct or improve the documentation

We also welcome your suggestions for additional topics you would like to see covered in the documentation.

Send email feedback to: docfeedback@aesglobalonline.com

Please keep in mind that this email address is only for documentation feedback and will not be responded to unless we require more details. If you have a technical question, please contact the technical department.

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 the 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 malfunction due to changes implemented by the phone providers after manufacturing of the product, or that which is outside of the 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 professional 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 the site, showing surge protection has been installed.

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

Free Extra 1 Year Warranty



If you register with us within 90 days of purchase and provide proof of purchase, you will be eligible for an extra year of warranty.



SCAN ME

This QR code will take you to the warranty section of our website. You can access the form for the warranty by scrolling to the bottom of the section and pressing the “Extra year warranty” button.

****Only available in selected countries****

Regulatory Compliance

EU-RED Declaration of Conformity

Manufacturer: Advanced Electronic Solutions Global Ltd

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

Complies with the following essential requirements for 2014/53/EU:

ETSI draft EN 301 489-1 V2.1.1 (2017-02) (Electromagnetic compatibility)

ETSI draft EN 301 489-52 (2016-11) (Electromagnetic compatibility, specific to cellular)
(2G bands 900/1800, 3G band 1,8 LTE bands 1, 3, 7, 8, 20).

Test report number LCS181101028AEA

ETSI EN 301 511 V12.5.1 (2017-03) (3.2 of directive 2014/53/EU)

ETSI TS 151 010-1 V12.8.0 (2016-05) (Digital cellular telecoms compliance)

Test report number LCS181101028AEB

ETSI EN 301 908-1 V11.1.1 (2016-07) (IMT Cellular networks, 3.2 of directive 2014/53/EU)

ETSI EN 301 908-2 V11.1.2 (2016-07) (CDMA spread / UTRA FDD)

Test report number LCS181101028AEC

ETSI EN 301 908-13 V11.1.2 (2017-07) (E-UTRA and UE standards)

Test report number LCS181101028AED

EN 62311 :2008 (Electromagnetic safety and human exposure)

Test report number: LCS181101028AEE

EN 60950-1, (A1, A11, A12, A2)

EN 62311

IEC 60950 (IT equipment safety)

Test report number: LCS181101029AS



The notified body is: Micom Labs (CAB number 2280).

This declaration is issued under the sole responsibility of the manufacturer.

Signed by:

A handwritten signature in black ink, appearing to read 'P. Creighton'.

Paul Creighton, Managing Director. Date: 4th Dec 2018

This product is not complete until fully installed. It is therefore considered a 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"

NEED MORE ASSISTANCE?

+1 (321) 900 4599

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

