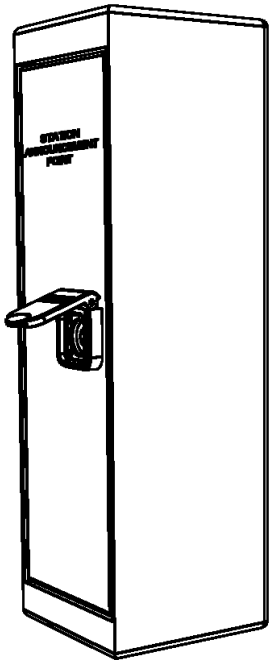
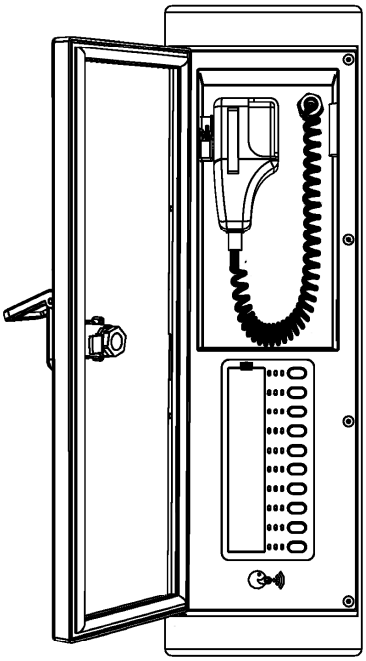
SAP03

Station Announcement Point





Installation Guide

ASL Document Ref.: U-0664-0590.doc
Issue: 02 complete, approved - Date: 02/12/13
Part Number: M0664_139

This equipment is designed and manufactured to conform to the following EC standards:

EMC: EN 55103-1/E1-E5, EN 55103-2/E5, EN 50121-4, ENV 50204

Safety: EN 60065

Pollution degree 2

Failure to use the equipment in the manner described in the product literature will invalidate the warranty.

A “Declaration of Conformity” statement to the above standards is available on request.

This product must be disposed of in accordance with the WEEE directive.

Contents

Additional User Documentation:

Additional reference information are available from the ASL’s website at www.asl-control.co.uk

Application Solutions (Safety and Security) Limited
Unit 17 Cliffe Industrial Estate
Lewes - East Sussex
BN8 6JL - UK
Tel: +44(0)1273 405411 Fax: +44(0)1273 405415

www.asl-control.co.uk

1 General Information

Technical Specification Summary

Supply Voltage Range ..... 15 – 40 V DC
Current Consumption
Minimum at 24 V DC supply - all LEDs off ..... 90 mA
Maximum at 24 V DC supply - all LEDs on ..... 110 mA

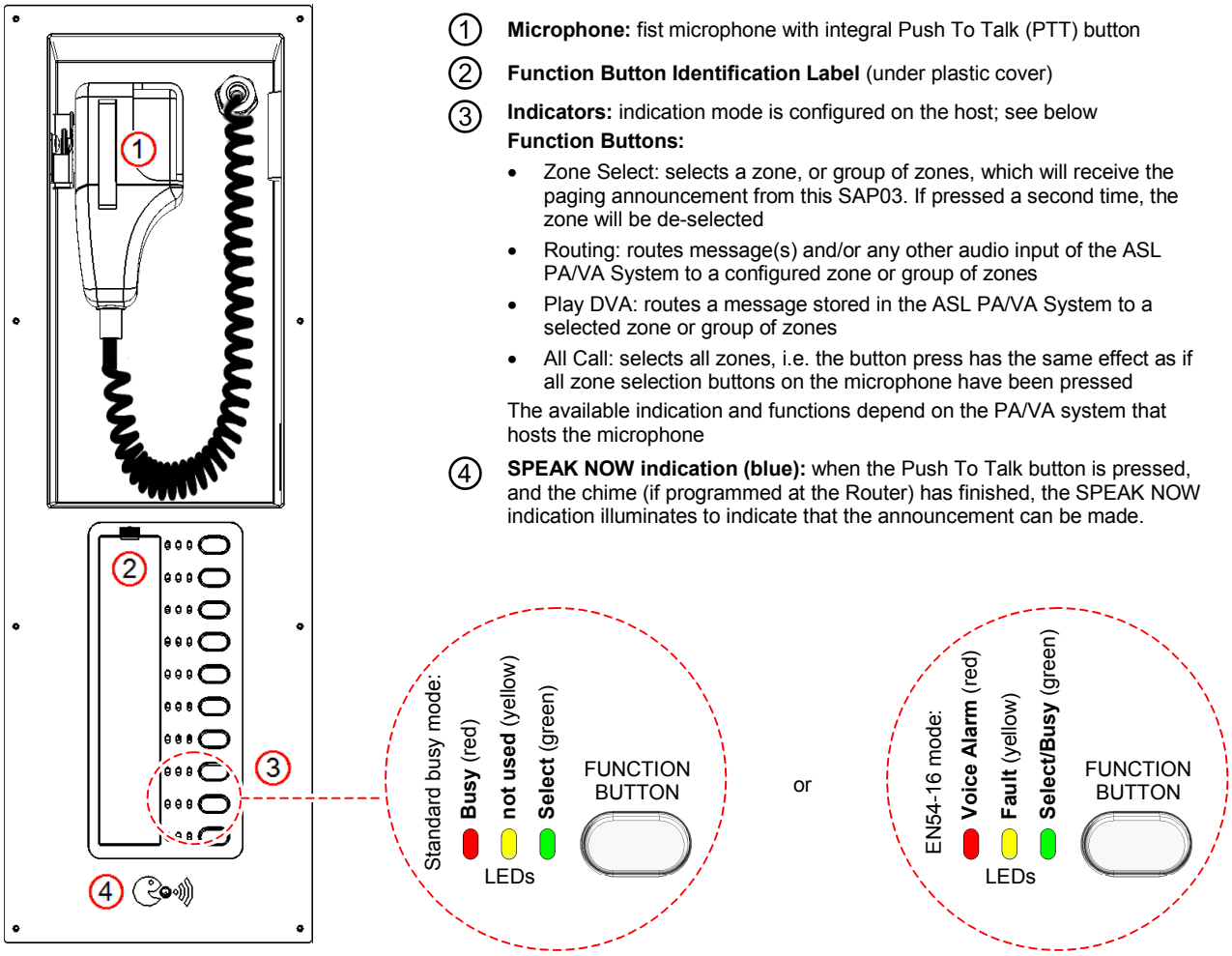
Microphone ..... fist with built-in PTT button
LED Indicator ..... Speak Now
Function Buttons (zone selection or other function) ..... 10 mechanical push-buttons

ASL PA/VA System Connections[1] ..... 2 x microphone interfaces (RJ45) for dual host connection
Audio Output ..... analogue audio / balanced / 0 dBu nominal / 220 Ω
Microphone Control Data ..... EIA RS485 / 19200 baud / ASL Serial Protocol

Format / Colour ..... wall mounting metal box / Agate Grey RAL7038 (Low Smoke and Fume, Zero Halogen)
Dimensions (H x W x D) / Weight ..... 500 mm x 150 mm x 151.5 mm / 10.5 kg

Temperature (storage and operating) ..... –20 °C to +55 °C (storage) / –10 °C to +55 °C (operation)
Humidity Range ..... 0% to 95% non-condensing
Ingress Protection ..... IP65 (with door closed, and back box fixing and cable entry holes sealed)

Front Panel Indicators and Controls



① **Microphone:** fist microphone with integral Push To Talk (PTT) button

② **Function Button Identification Label** (under plastic cover)

③ **Indicators:** indication mode is configured on the host; see below
Function Buttons:

- Zone Select: selects a zone, or group of zones, which will receive the paging announcement from this SAP03. If pressed a second time, the zone will be de-selected
- Routing: routes message(s) and/or any other audio input of the ASL PA/VA System to a configured zone or group of zones
- Play DVA: routes a message stored in the ASL PA/VA System to a selected zone or group of zones
- All Call: selects all zones, i.e. the button press has the same effect as if all zone selection buttons on the microphone have been pressed

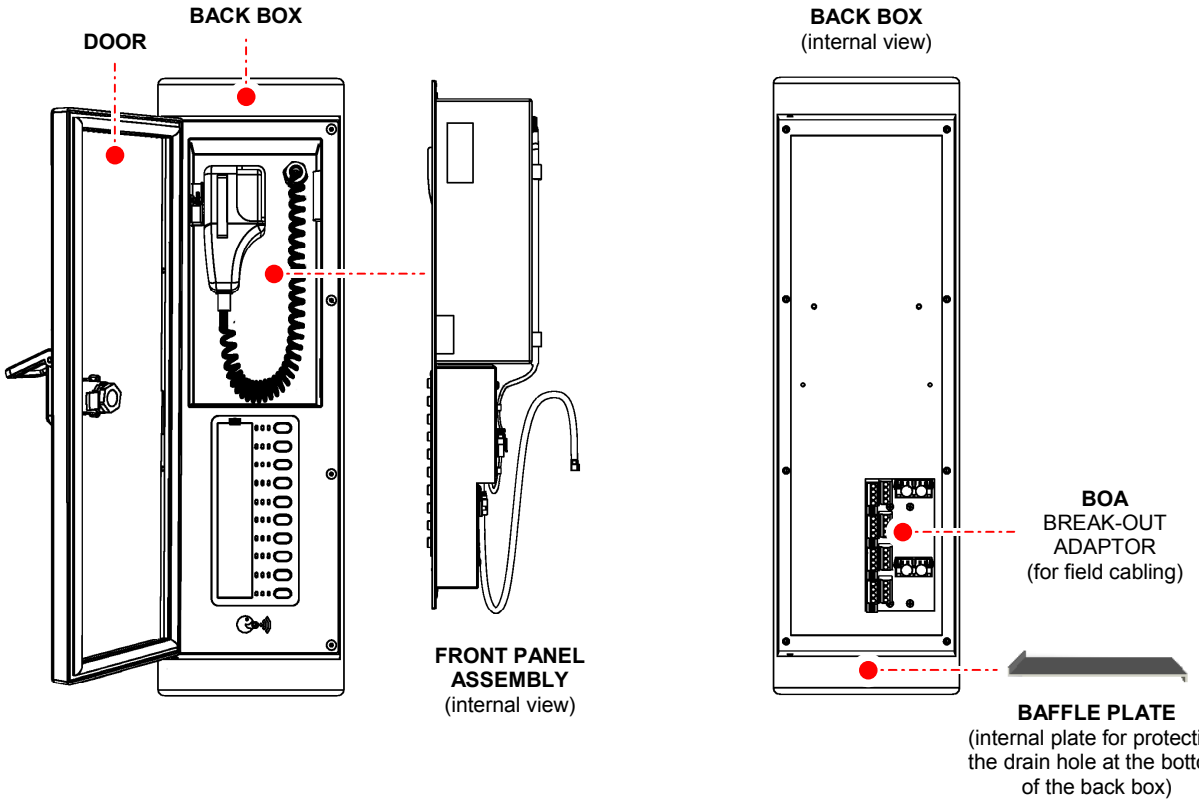
The available indication and functions depend on the PA/VA system that hosts the microphone

④ **SPEAK NOW indication (blue):** when the Push To Talk button is pressed, and the chime (if programmed at the Router) has finished, the SPEAK NOW indication illuminates to indicate that the announcement can be made.

[1] ASL PA/VA systems: refer to ASL for connectivity and software compatibility details

2 Installation

Main Components:



External Cabling:

Connection	Signals	Cable Description	Type
Router Connection	Audio	1 x 2-core, twisted, screened	Low Smoke and Fume (LSF) CAT5 STP or FTP lead can be used Fire rated equivalent can be used
	Microphone data	1 x 2-core, twisted, screened	
	Power supply	1 x 2-core, twisted, screened	
Ethernet Connection	Ethernet	LAN cable	Suitable CAT5 LAN cable

1) All cable ends to be fitted with suitable bootlace for connection to the Break-Out Adaptor (BOA)
2) For EMC compliance:
   - Screened cables must be used where specified
   - All field cable screens must be connected to the back box
   - All screen tails must be less than 3 cm

Refer to BS 7671 (Requirements for Electrical Installations) or other appropriate local standards for guidelines on maximum potential cable lengths given the actual installation parameters.

Equipment and Tools:

- The SAP03 unit
- Suitable cable glands/conduit fixings, preferably with cable screen earthing facilities
- A small flat bladed screwdriver
- A 2.5 mm Allen key or driver
- Suitable wire cutters, strippers and cable ferrules
- A drill with bits and hole cutters suitable for cutting 2 mm mild steel, for the back box mounting holes and cable glands
- Suitable fixings and tools for wall mounting
- Sealant
- Completed slip-in button identification label (from paper sheet supplied or from the Microsoft Word® template available from ASL)

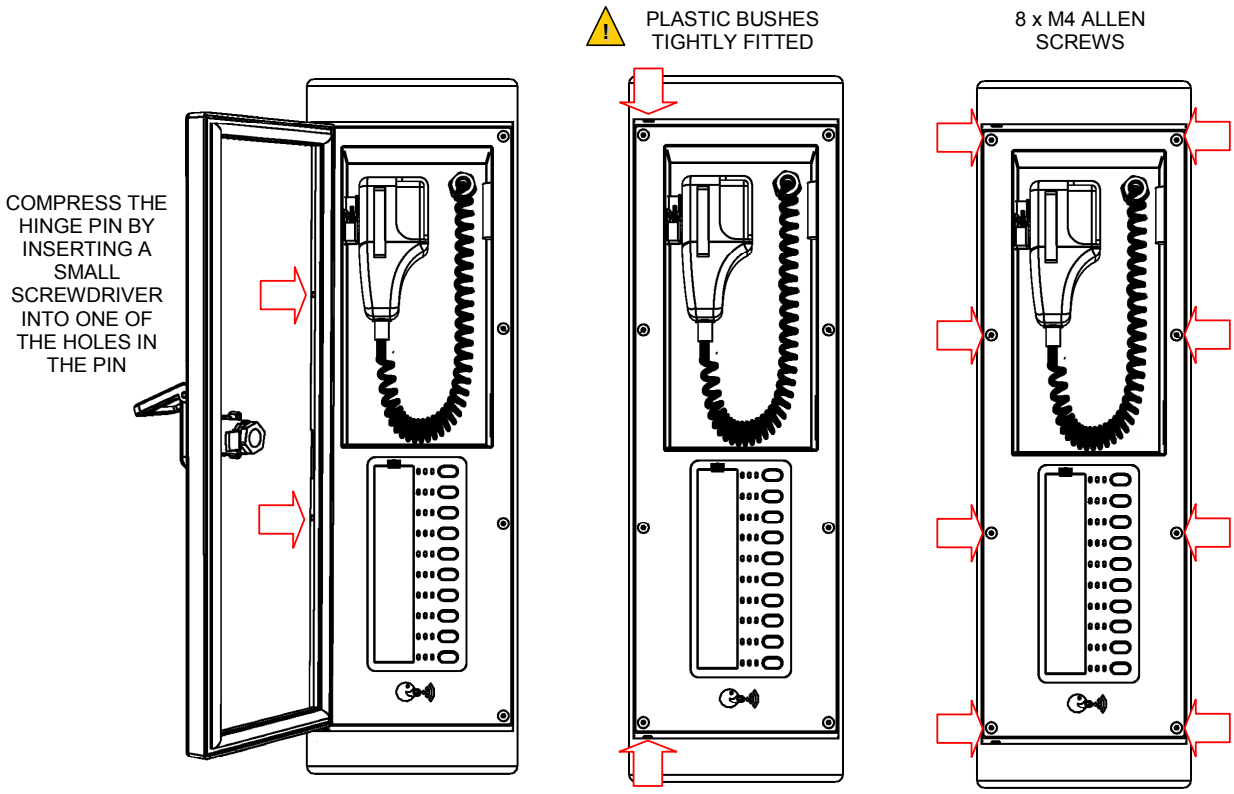
Recommended Installation Procedure

> Please read and observe the safety information guidelines available on the product and in Section "5 Safety and Precautions" (page 11) prior to installation. Failure to follow these guidelines may cause personal injury and/or damage to the equipment.

1. Open the SAP03 door using the KABA key provided.

2. Remove the SAP03 door by compressing the hinge pin; see Figure 1 (page 5).

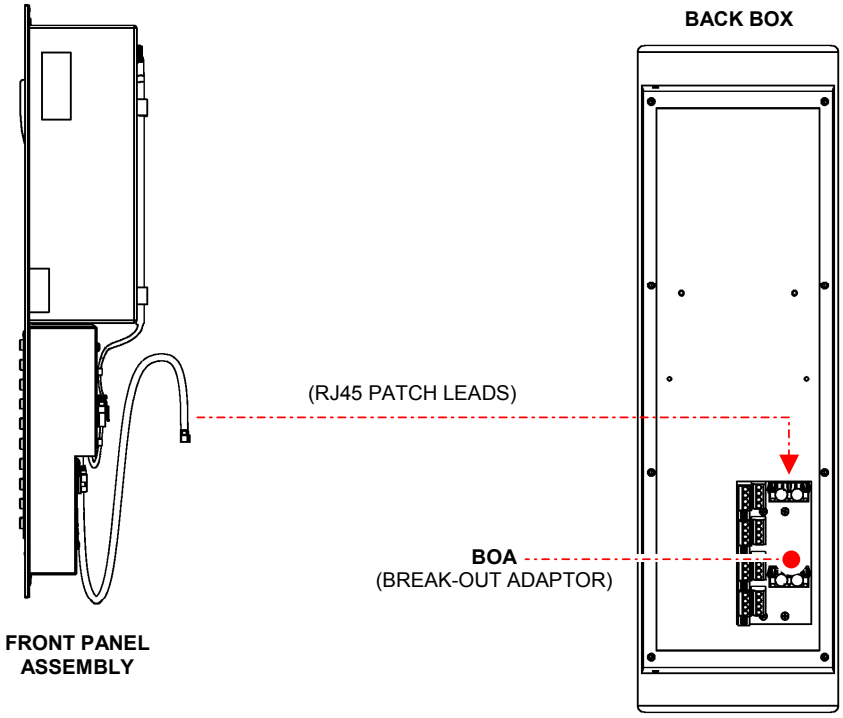
Figure 1 SAP03 door and front panel fixing



3. The SAP03 front panel/electronics assembly is normally supplied disconnected from the back box in a separate box. When the SAP03 electronics/front panel is supplied fitted to the back box it must be removed from the back box as follows:

- **a.** Remove the SAP03 front panel assembly by removing the 8 x M4 Allen screws.
- **b.** Disconnect the SAP03 front panel assembly by unplugging the patch lead from the RJ45 connector on the Break-Out Adaptor (BOA); see Figure 2 (page 6).
- **c.** Store the front panel assembly, door and fixing screws safely.

Figure 2 SAP03 front panel connection to back box



4. Drill holes in the back box for cable gland or conduit entry and wall mounting according to the particular installation conditions.

a. Wall mounting holes: refer to Figure 7 (page 10) for SAP03 mechanical dimensions.

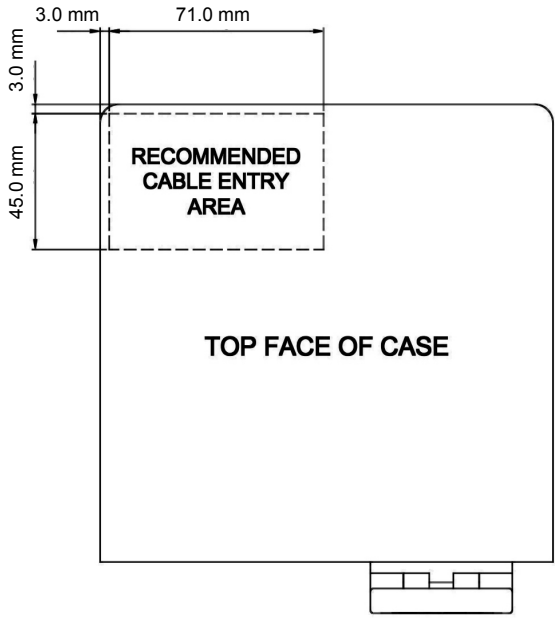
b. Cable gland or conduit entry holes: observe the following recommendations.

1) The SAP03 is primarily designed for top entry of cables.

   Please refer to ASL if a different cable entry positioning is required.

2) It is vital that the cable glands or conduit are positioned within the area shown in the Figure 3 (page 6). Failure to do so will cause difficulty when fitting the front panel/electronics assembly.

Figure 3 Positioning of cable glands or conduits on the top (outside view of top from above)



5. Deburr all newly drilled holes in order to prevent any damage to the cabling.

6. Mount the SAP03 back box to the wall using appropriate fixings.

> ⚠ To prevent injury, the back box must be securely attached to the wall.

7. Ensure that the power supply from the central equipment rack is switched off.

8. Feed the installation cables into the unit through the cable glands or conduit.

9. Ensure that mounting holes and cable entry points are adequately sealed to preserve the unit's IP rating.

10. Connect the field cabling to the screw-in terminals on the Break-Out Adaptor (BOA) that is secured to the SAP03 back box.

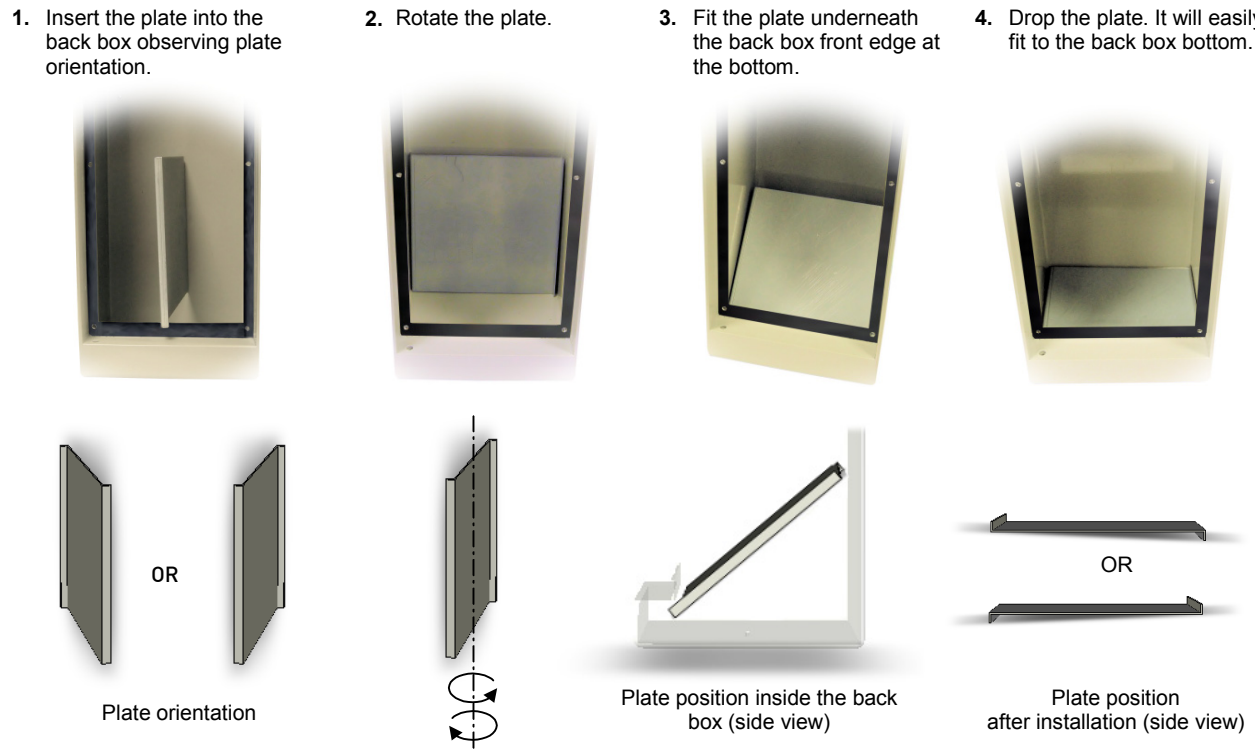
Refer to Section "3 Connections" (page 9) for details.

> ⚠ For EMC compliance ensure that:
> - All field cabling screens are connected to the back box. This should be via one of the SCREEN screw-in terminals provided on the Break-Out Adaptor.
> - All cable tails are less than 3 cm.

11. Ensure all swarf is removed from the enclosure.

12. Fit the baffle plate into the back box; see Figure 4 (page 7).

Figure 4 SAP03 baffle plate installation



13. Re-install the SAP03 front panel assembly.

a. Plug the patch leads to the appropriate RJ45 connector on the Break-Out Adaptor (BOA); see Figure 2 (page 6).

The patch leads and RJ45 connectors are colour-coded for easy installation.

b. Fix the SAP03 front panel assembly using 8 x M4 Allen screws ensuring that no leads are trapped between the front panel and the back box; Figure 1 (page 5).

14. Re-fit the door; see Figure 1 (page 5).

> ⚠ Make sure that BOTH plastic bushes are tightly fitted to the door fixing holes in order to preserve the unit's IP 65 rating.

15. Insert the completed button identification label into the label slot; see Figure 5 (page 8).

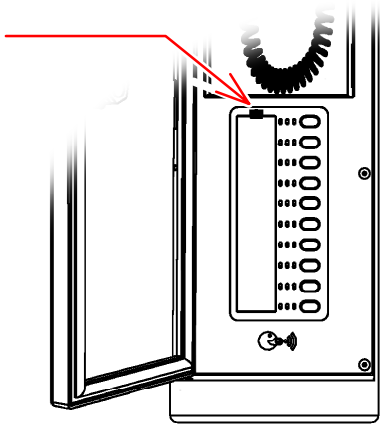
Figure 5 Fitting the zone identification label

1) Remove the label protection cover by pressing in on the plastic clip and lifting the cover off.

2) Fit the zone identification label into the slot.

3) Fit the label protection cover back in place.

(The button identification label can be produced from the paper sheet supplied or from the Microsoft Word® template available from ASL)



16. Power the unit on from the central equipment rack.

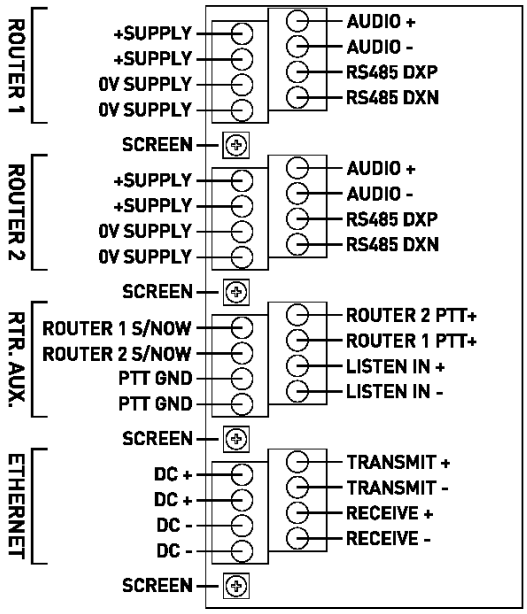
17. Commission the microphone.

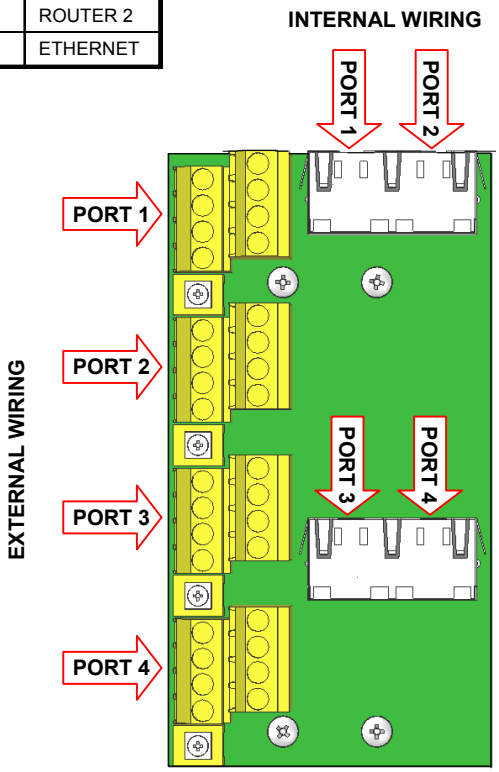
18. Close and lock the door using the KABA key.

3 Connections

Figure 6 Break-Out Adaptor (BOA) terminal allocation

RJ45 Patch Cable Colour	Connector	
Blue	PORT 1	ROUTER 1
Red	PORT 2	ROUTER 2
Black	PORT 4	ETHERNET



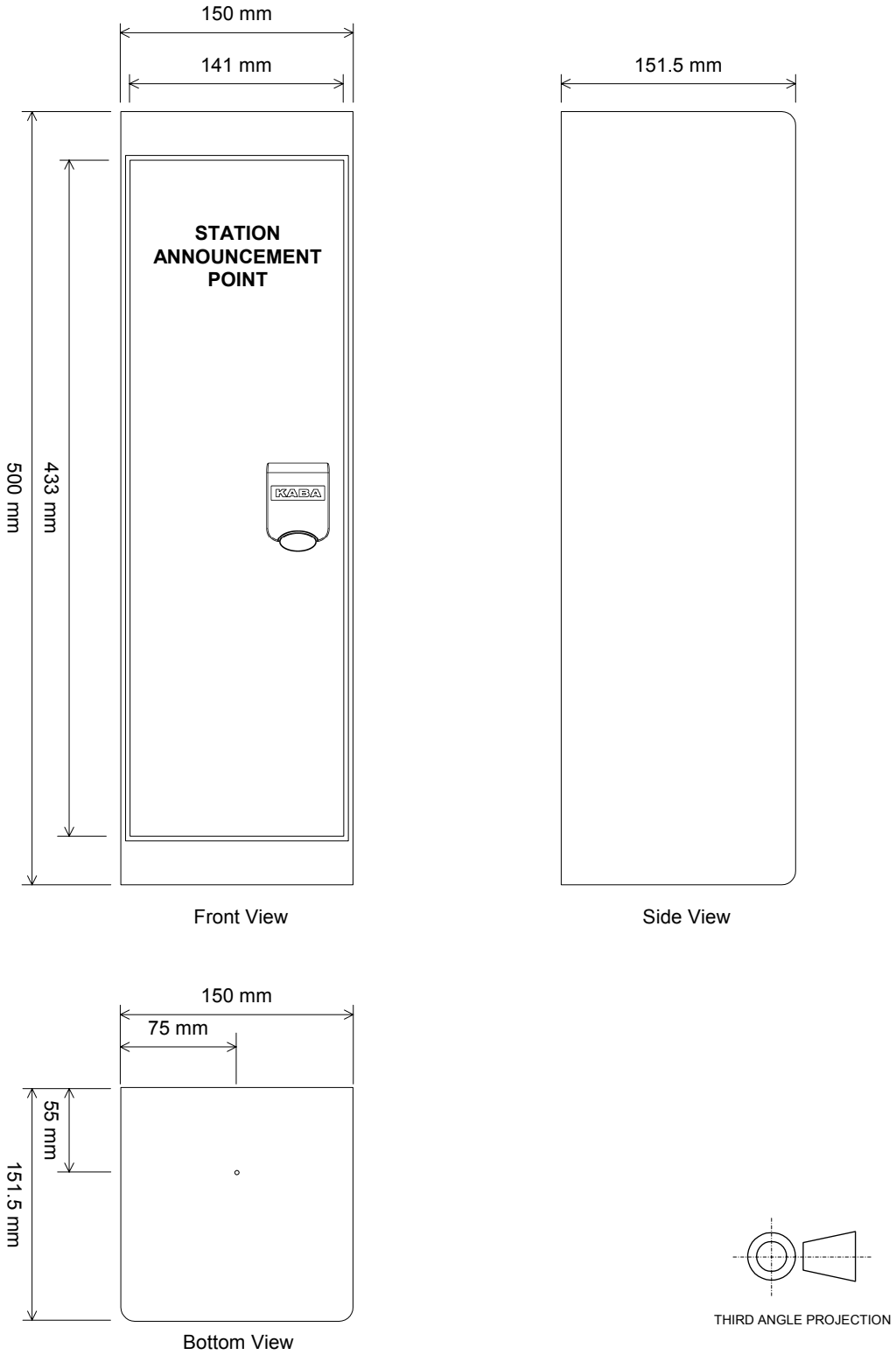


Port		Patch Cable Colour	Signal	RJ45 Pin	Description
PORT 1	ROUTER 1	Blue	AUDIO +	1	Balanced audio output (+ve / 0 dBu nominal / 220 Ω)
			AUDIO -	2	Same as above, but -ve
			RS485 DXP	3	RS485 Data+ (19200 baud) / ASL Serial Protocol
			RS485 DXN	6	Same as above, but Data-
PORT 2	ROUTER 2	Red	+ SUPPLY	4	+V supply input (15 to 40 V DC from equipment rack)
			+ SUPPLY	5	+V supply input (15 to 40 V DC from equipment rack)
			0V SUPPLY	7	0 V supply
			0V SUPPLY	8	0 V supply
PORT 3	RTR.AUX	Not fitted	NA	NA	Not used
PORT 4	ETHERNET	Black	TRANSMIT +	1	100BASE-T Ethernet
			TRANSMIT -	2	100BASE-T Ethernet
			RECEIVE +	3	100BASE-T Ethernet
			RECEIVE -	6	100BASE-T Ethernet
			DC+	4, 5	PoE (Power over Ethernet) not used
			DC-	7, 8	PoE (Power over Ethernet) not used

1) ROUTER 1 is used for connection to a Router as standard
2) ROUTER 2 port is used for connection to the “B” Router in a dual host connection with “A” and “B” Routers
3) The ETHERNET port is provided for maintenance purposes only and should not be connected except for this purpose.

4 Mechanical Dimensions

Figure 7 Mechanical dimensions



5 Safety and Precautions

Observe all safety information both on the product and in this section.

Environmental

The temperature and humidity ranges shown in the specifications for this product must not be exceeded.

This equipment must not be installed in an area that is subject to a corrosive atmosphere.

When installed in accordance to the instructions in this document, the unit with door closed provides IP65 ingress protection.

With the door opened the apparatus should not be exposed to dripping or splashing nor have objects filled with liquids such as vases placed upon it.

Installation

> To prevent injury, the back box must be securely attached to the wall in accordance with the installation instructions.

Electrical Safety

> Ensure power supply cabling is adequately rated.
>
> Always replace blown fuses in the supply to this equipment with the correct type and rating.

ESD Precautions

This product contains static-sensitive devices. Observe ESD precautions when handling the front panel assembly.

EMC

In the close proximity of some radio frequency transmitters, the signal to noise ratio of this product may be reduced. If this occurs, ensure adequate system RF earthing or re-locate the equipment or signal cables.

Unpacking and Handling

The equipment should be unpacked and inspected immediately on receipt. If damage has occurred please advise your carrier or supplier.

> This equipment contains electronic devices that are sensitive to electrostatic discharge. Please take precautions to avoid damage to the electronics by static electricity.

It is advisable to retain the original equipment packing in the event that the equipment ever needs returning for service.

Ensure that the name and address of the Authorised Distributor from whom you purchased the unit is recorded on the “Service and Warranty” page of this manual for future reference.

Packing for Return for Repair

> All electronics assemblies must be properly packed in ESD protective packing for transport, to prevent physical and ESD damage.

> The filler material used for packing for return for repair must be antistatic or static dissipative, as this may come into contact with exposed connectors, wiring, or PCB assemblies. The use of non-conductive filler material may cause damage to the electronic assemblies reducing their operational life, or even destroying them.

Advice on packing the product for return can be provided by ASL.

Service and Warranty

Name and Address of Authorised Distributor:

This product carries a full warranty. For full details of warranty and service agreements, please contact the Authorised Distributor who supplied the product to you.

Exclusions

The warranty does NOT cover:

1. Customer misuse, including incorrect installation.
2. Damage other than manufacturing defects.
3. Transit / Courier damage.
4. Incorrect voltage or power supply used.
5. Incorrect input signal.
6. Abnormal environmental operating conditions.
7. Damage incurred by accident, fire, lightning or other hazard.
8. Modification to the unit or inexpert / attempted repair.
9. No fault found – where no fault can be found after extensive testing, indicating user error or failure in ancillary equipment.
10. Electronic assemblies which are improperly packed when returned for repair or service.

Should any of the above apply, Application Solutions (Safety and Security) Limited reserves the right to raise any relevant charges to the customer.

Application Solutions (Safety and Security) Limited shall not be liable for any indirect, special or consequential loss or damage (including without limitation any loss of profits) arising from the use of this product or for any breach of this warranty.

In the interest of continual product development, Application Solutions (Safety and Security) Limited reserves the right to make changes to product specification without notice or liability.

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