

ECP-C1

Single Button Emergency Call Point with Built in AFIL Hearing Loop



Installation and User Guide



This product is designed and manufactured to comply with the following EC Directives for electrical and electronic equipment:

- 1) Restriction of Hazardous Substances (RoHS) Directive: 2011/65/EU
- 2) Electromagnetic Compatibility (EMC) Directive: 2014/30/EU
- 3) Low Voltage (LVD) Directive: 2014/35/EU

A 'Declaration of Conformity' statement to the above Directives, listing the applicable harmonised standards to which the equipment conforms, is available on request.

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



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

Additional User Documentation:

Additional reference information is available from the company website: www.zenitel.com.

Document Change History

Issue	Amendment Summary	Date
01	Complete / Approved	15/01/2024

Copyright © 2024 Zenitel GB Limited

Zenitel GB Limited

Unit 17 Cliffe Industrial Estate

Lewes - East Sussex

BN8 6JL - UK

Tel: +44(0)1273 405411 Fax: +44(0)1273 405415

www.zenitel.com

All rights reserved.

Information contained in this document is believed to be accurate, however, no representation or warranty is given and Zenitel GB Limited assumes no liability with respect to the accuracy of such information.

Contents

1	Safety and Precautions	4
2	Overview	5
3	Preparation.....	6
4	Unpacking and Handling.....	7
5	Installation.....	9
5.1	Cable Entry and Gland Points.....	9
5.2	Connectivity.....	10
5.3	Optional Connectivity	10
5.4	Mounting	11
5.4.1	Surface Mounting.....	11
5.4.2	Flush Mounting.....	14
6	Configuration.....	17
7	Operation	18
7.1	Front Panel	18
7.2	Standard Emergency Call Mode	19
7.3	Push-To-Talk Mode	19
7.3.1	Additional Optional Methods of Operation.....	19
8	Connections.....	20
9	Technical Specification.....	21
10	Mechanical Dimensions – Back Box	23
11	Storage and Preservation.....	24
12	Packing for Return.....	24
13	Appendix	25
13.1	Internal Wiring Diagram	25

Copyright © 2024 Zenitel GB Limited

Zenitel GB Limited
Unit 17, Cliffe Industrial Estate,
Lewes, East Sussex
England
BN8 6JL
Tel: +44(0)1273 405411
www.zenitel.com

All rights reserved.

Information contained in this document is believed to be accurate, however, no representation or warranty is given and Zenitel GB Limited assumes no liability with respect to the accuracy of such information.

1 Safety and Precautions

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

Weight



The ECP-C1 weighs approximately 5.5 kg.

Move and handle with care to avoid strain or impact injuries.

Environmental



The temperature and humidity ranges shown in the specifications for the ECP-C1 must not be exceeded.



The ECP-C1 should not be installed at altitudes exceeding 2000 m.



The ECP-C1 should not be used in tropical environments.



The ECP-C1 must not be installed in an area that is subject to a corrosive atmosphere, or may allow water or other liquids to come into contact with the external connections.

Servicing and Installation



Servicing and installation work should be carried out by qualified personnel only. Service Access is permitted only to those with the necessary training and expertise and who can take responsibility for their own safety when working on the ECP-C1.

ESD



The ECP-C1 contains static-sensitive devices. Observe ESD precautions when handling this product with the cover removed.

2 Overview

The ECP-C1 Help point is an Emergency Call Point Intercom incorporating Zenitel's advanced audio processing technology, and which is designed for use in applications such as for public transport infrastructure. The help point is operated to make a call to a configured Emergency Response Centre by means of a single red coloured call button, labelled "Alarm", and which is also identified by means of an alarm bell icon and Braille text which spells the text "ALARM".

The ECP-C1 includes a built-in Audio Frequency hearing Loop (AFIL), and is an Internet Protocol (IP) help point which can be managed through the Zenitel ICX and Connect range of intercom management products. Use of standard Telephony audio Codecs plus the Session Initiation Protocol (SIP) also enables the ECP-C1 to be compatible with a wide range of commercial telephony systems and telephone Private Branch Exchange (PBX) products. The ECP-C1 only requires a single external connection due to the inclusion of a Power over Ethernet (PoE) power supply.

The ECP-C1's rugged construction comprises of a self-coloured brushed stainless steel front plate and a painted stainless steel back box. The front panel is secured to the back box by means of six tamper-resistant screws, with each order being supplied with a set of a standard format hex screwdriver bit which fits the front panel screws. The light grey back box colour matches products in the Zenitel Public Address and Voice Alarm (PAVA) range which may be mounted in similar environments, including the Zenitel Station Announcement Point (SAP) microphone range.

The help point is designed for either surface or flush mounting. The back box itself provides for surface mounting applications, while a mounting adaptor plate which is supplied with the unit can be fitted to enable use in flush mount applications.

Associated Documentation

File Name	Document Title
A100K1119	Turbine IP Intercom Technical Manual

3 Preparation

1. Read and observe the safety instructions and guidelines in Section “1 Safety and Precautions” on page 4.



Failure to follow these instructions and guidelines may cause personal injury and/or damage to the equipment.

2. Gather the following documentation and tools:
 - 1 x Tricle Type A Tamper Proof screwdriver bit and hex screwdriver
 - 1 x pair of wire cutters/strippers.
 - RJ45 crimping tool.
 -
3. Gather the equipment (in its original packing).

4 Unpacking and Handling

1. Observe any markings or warnings on the package prior to handling and opening.
2. Check the equipment package for signs of damage during transport. Report problems to the carrier or supplier.
3. Unpack the equipment in a dry area, handling the equipment with care.
4. Check the equipment package contents for completeness. Report any missing items immediately.

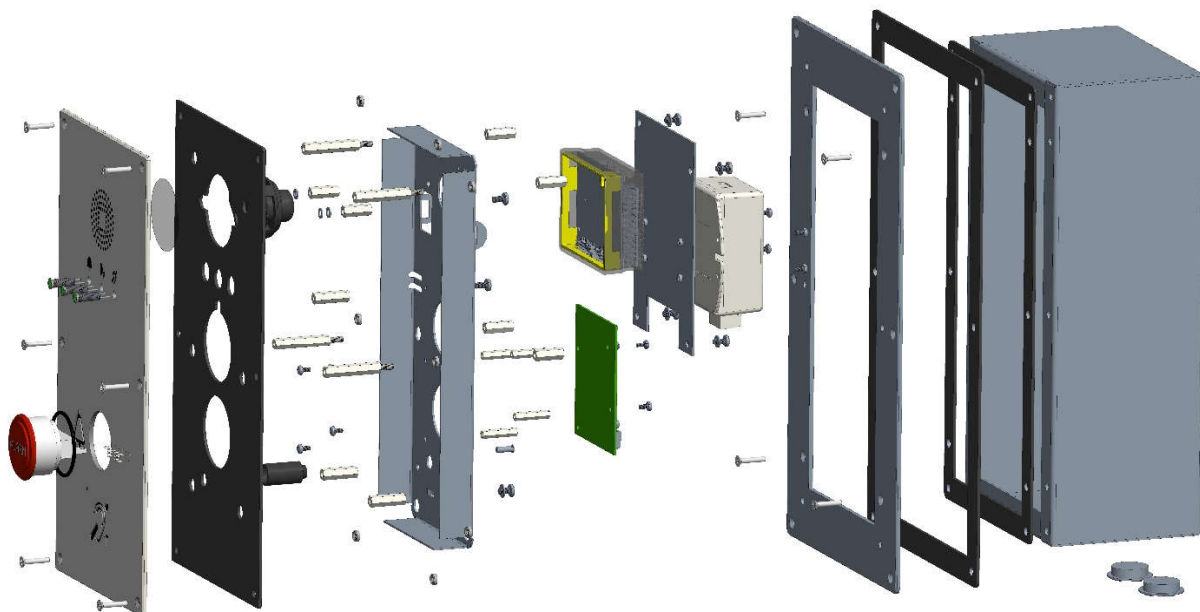
ECP-C1 package contents:

- Assembled Help Point comprising:
 - Stainless steel front plate assembly
 - Including all electronic items
 - Painted stainless steel back box assembly
 - Three cable entry blanking plugs fitted
 - Six off stainless steel tamper-resistant security screws
 - Securing the front plate assembly to the back box
 - Stainless steel flush mounting adaptor plate
 - Fitted with sealing gaskets for the flush mounting surface and back box
 - Two spare stainless steel tamper-resistant screws



The M4 * 20mm countersunk head stainless steel tamper-resistant security screws are of the type “Tricle Type A”. These screws and the matching hex screwdriver bits are commercially available if additional screws are required.

For reference, an exploded view of the ECP-C1 help point is as below.



Exploded view of the ECP-C1, with surface mounting adaptor plate

5. It is advisable to retain the original equipment packing (containers and materials) in the event that the equipment ever needs returning for service.
6. If the packing is not to be retained, the packing materials should be either recycled or disposed of according to local regulations.
7. Ensure that the name and address of the Authorised Distributor from whom you purchased the product is recorded on the “Service and Warranty” page of this document for future reference.
8. Repacking instructions are provided in Section “12 Packing for Return” on page 24.

5 Installation



Please read and observe the safety information guidelines available on the product in Section “1 Safety and Precautions” on page 4 prior to installation. Failure to follow these instructions and guidelines may cause personal injury and/or damage to the equipment.

5.1 Cable Entry and Gland Points

Multiple cable entry options are provided into the help point’s back box by means of a pair of 25mm cable gland positions in the rear of the back box, plus another pair of cable gland positions in the bottom face of the back box.

1. The help point’s Ethernet connection cable can be installed in either 25mm conduit or through a suitable cable gland which is fitted to any one of these positions.
2. Unused cable entry points should be sealed by means of the blanking plugs which are supplied with the unit.



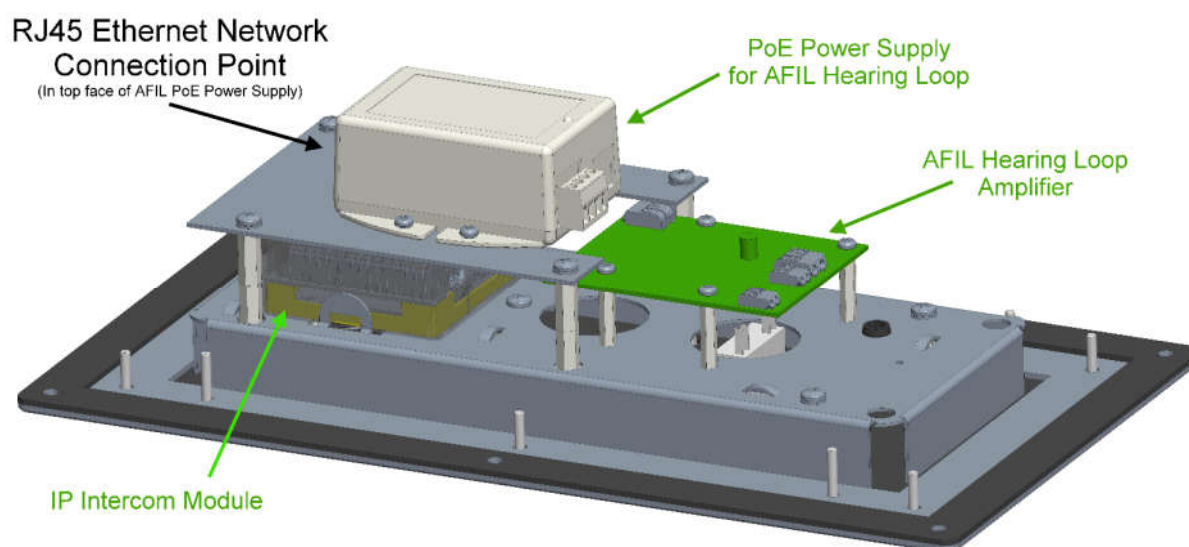
Rear view of the ECP-C1 back box, showing the rear and bottom panel cable gland points. The image also shows the four rear panel screw mounting holes, as well as showing a flush mount adaptor plate fitted to the back box.

5.2 Connectivity

1. The RJ45 connector for the Ethernet connection should be connected to the PoE splitter on the rear of the help point's front panel assembly.



The splitter provides the power supply for the built-in AFIL, plus the Ethernet data connection and PoE+ power to the internal intercom module.



Internal view of the ECP-C1 front panel assembly, showing the internal modules and the RJ45 Ethernet cable connection point.

5.3 Optional Connectivity

In addition to the standard functionality which is described in this manual, it is possible to configure additional features of the ECP-C1's Zenitel intercom module ('kit') which provides the ECP-C1's help point functionality. This could include additions such as connected "Emergency Stop" Plungers or additional buttons or switches to place calls to the Emergency response Centre.

1. See the Zenitel "Turbine" series intercom information in the Turbine IP Intercom's technical manual (A100K11194) for details of possible additional features.
2. External items such as extra buttons or switches can be connected using cables through appropriate otherwise spare cable gland positions.

5.4 Mounting

5.4.1 Surface Mounting

The ECP-C1's back box provides four off 5.5mm mounting holes in its rear, for mounting onto a surface.

1. The first stage of surface mounting the unit is to remove the front panel from the back box and to store it in a safe protected location.



Care should be taken when removing the front panel from the back box. This is because the front panel wiring including the AFIL hearing loop tape coil can be damaged if it is snagged on any part of the back box during removal.

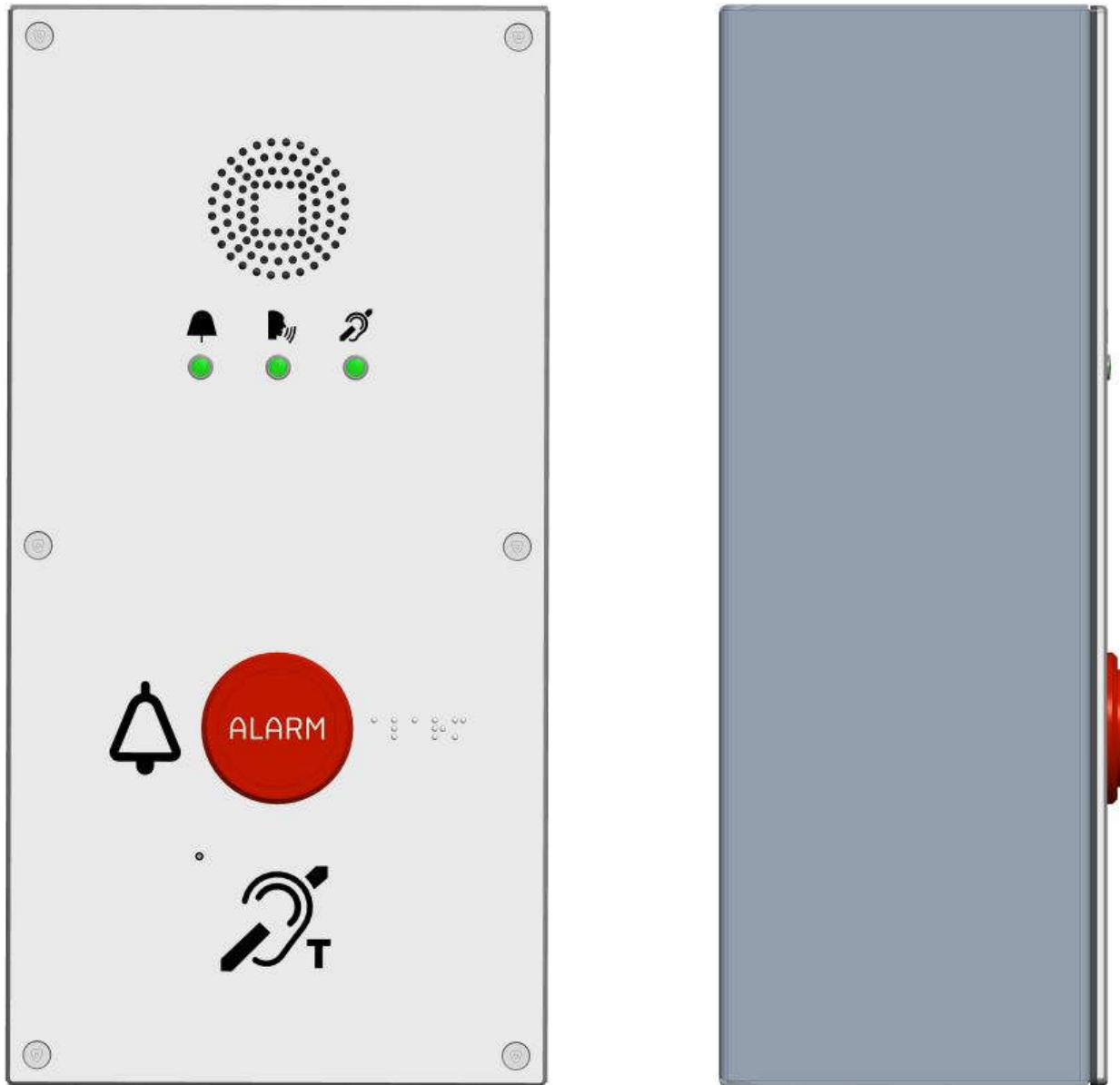
2. If there is no access to the rear of the help point once it is installed and the rear cable entry positions are being used, then the help point's connection cable or cables and any associated cable glands will need to be fitted to the back box before it is mounted.
3. Note that the RJ45 Ethernet connection cable should be flexible enough to enable the help point to be assembled without excessive strain being placed on the RJ45 input socket for the AFIL Hearing Loop's PoE power supply.
4. Once the back box is installed and cabled, then the help point front panel can be connected to the incoming Ethernet cable via its RJ45 socket, and can be fitted to the front of the back box using its six tamper-resistant screws.



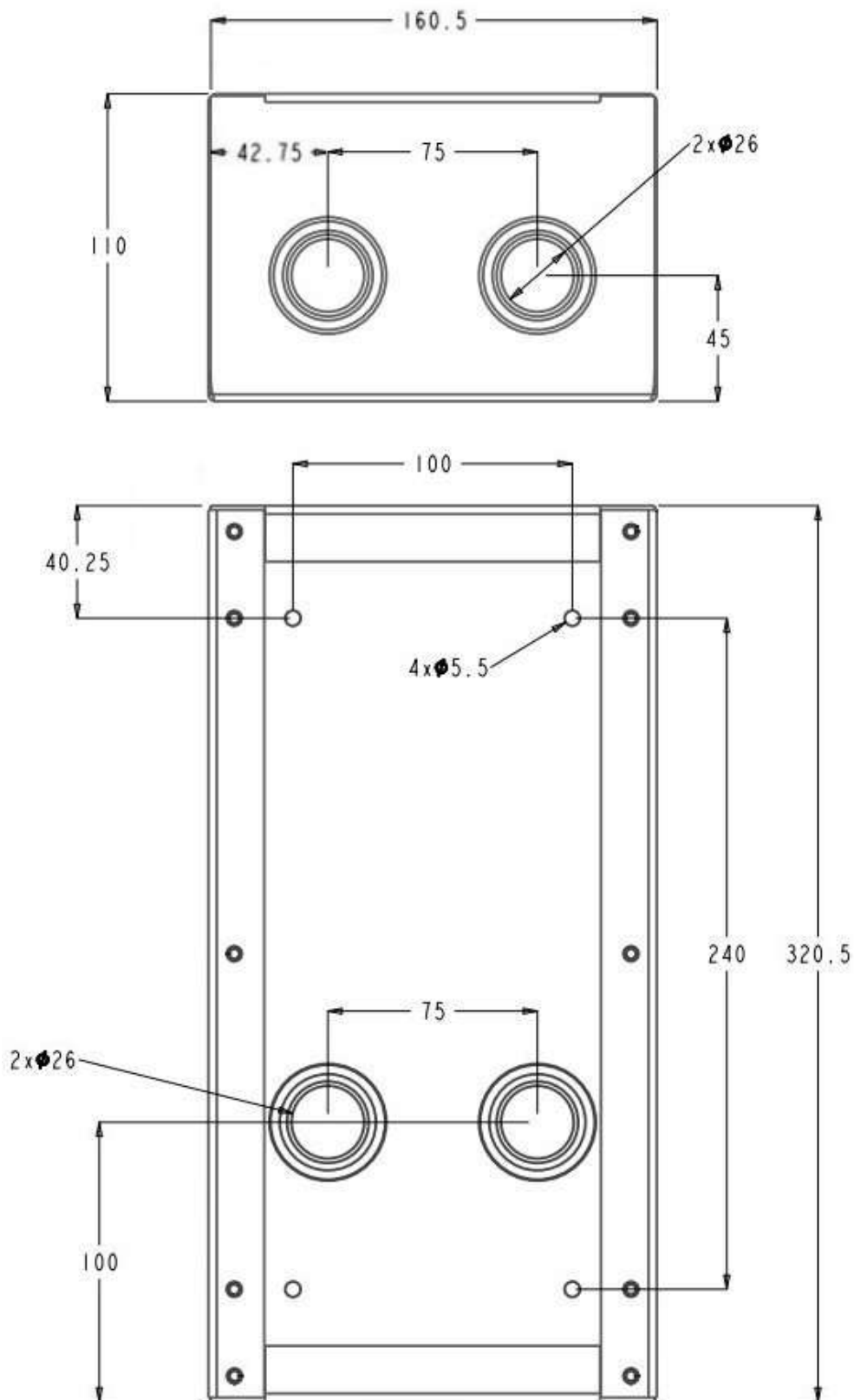
As when removing the front plate, care should be taken when refitting the front panel to the back box. This is because the front panel wiring including the AFIL hearing loop tape coil can be damaged if it is snagged on any part of the back box during refitting.



It is recommended that the front panel is not fitted into the back box until just before the help point is due to be commissioned, at the end of the site build process. The front panel should also be protected as far as is possible following installation, until all site works are complete. This will minimise the chance of the front panel being damaged during other nearby construction or commissioning works.



Front and side views of the ECP-C1 front assembly and back box,
assembled as for surface mounting.



**ECP-C1 back box dimensions showing four off 5.5mm rear mounting holes.
The image also shows the four off optional positions for fitment of 25mm cable glands or conduit.**

Unused cable entry holes to be sealed with supplied blanking plugs.

5.4.2 Flush Mounting

The supplied mounting adaptor plate can optionally be used to enable flush mounting of the help point.

1. The first stage of flush mounting the unit is to remove the front panel from the back box and to store it in a safe protected location.



Care should be taken when removing the front panel from the back box. This is because the front panel wiring including the AFIL hearing loop tape coil can be damaged if it is snagged on any part of the back box during removal.

2. Once the front panel has been safely stored, then the adaptor plate should be fitted to the back box with four of the supplied tamper-resistant screws, the same screws as are used to fit the help point front panel to the back box.
3. With a flush mounting, the help point can either be mounted from in front of or behind the mounting surface. If the help point is mounted from in front of the mounting surface, then the adaptor plate is visible, with the actual help point front panel being fitted on top of it.
4. With a front mounting, the mounting cutout in the surface for the back box should be dimensioned to suit the back box dimensions. It is recommended that the mounting hole is not less than 2mm oversize in each dimension in order to provide clearance for the back box, including an allowance for tolerances in the back box manufacture process.
5. Note that in this method of installation, with the help point back box being mounted from behind the surface, then an additional gasket may be required in order to seal the front face of the adaptor plate against the mounting surface. Provision of a flush front panel is dependent on a suitable mounting surface thickness or appropriate bevel, to match the thickness of the help point's stainless steel front plate and sealing gasket.
6. If there is no access to the rear of the help point once it is installed, then the help point's connection cable or cables and any associated cable glands will need to be fitted to the back box before it is mounted. Note that the RJ45 Ethernet connection cable should be flexible enough to enable the help point to be assembled without excessive strain being placed on the RJ45 input socket for the AFIL Hearing Loop's PoE power supply.
7. Depending on the environment behind the flush mounting surface it may also be necessary to seal the four off 5.5mm surface mounting holes located in the rear of the ECP-C1's back box,. This could be done with four suitable screws and associated sealing washers.
8. Once the back box is installed and cabled, then the help point front panel can be connected to the incoming Ethernet cable via its RJ45 socket, and can be fitted to the front of the back box using its six tamper-resistant screws.



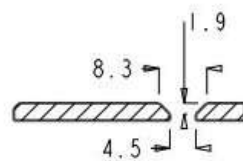
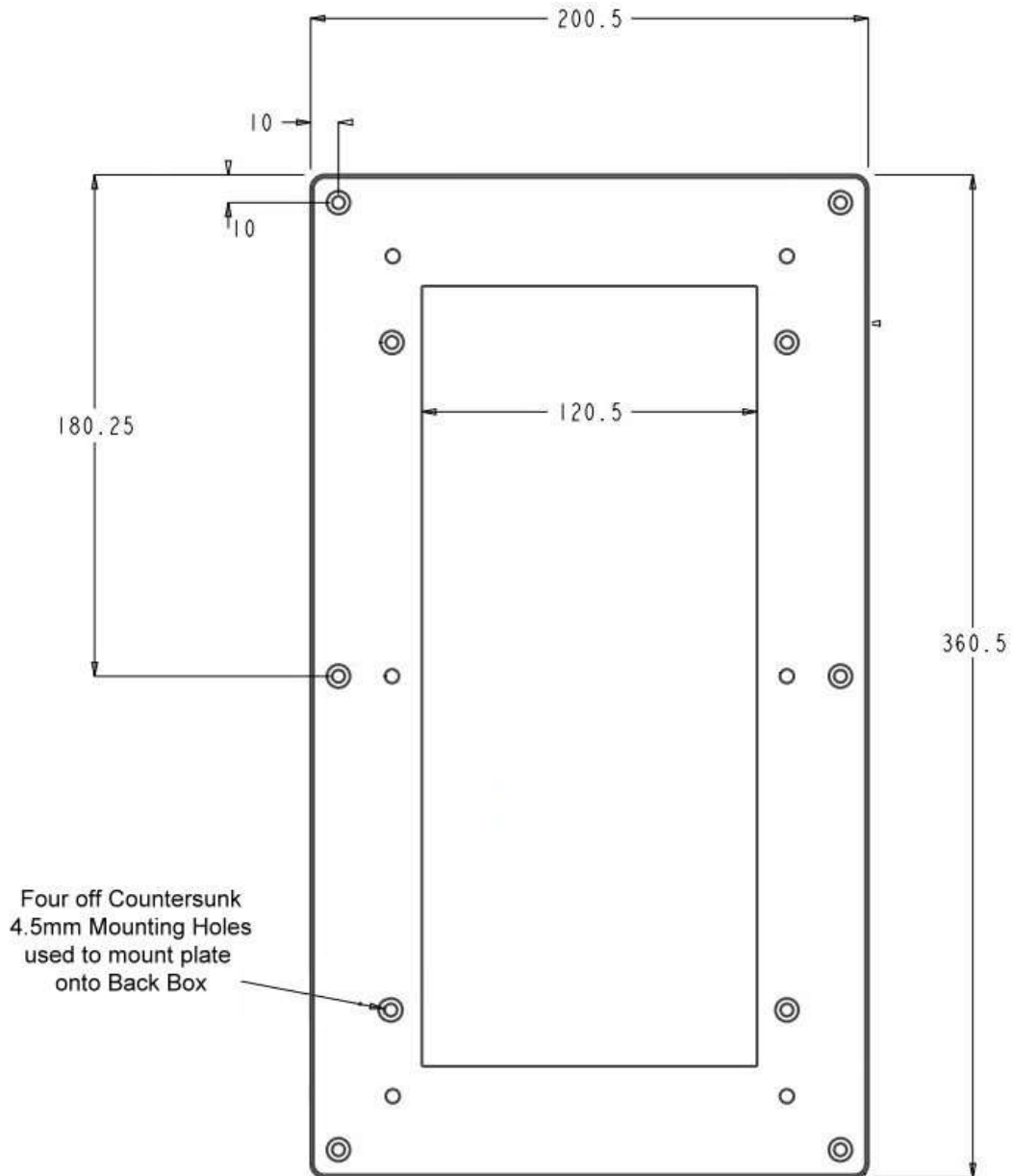
As when removing the front plate, care should be taken when refitting the front panel to the back box. This is because the front panel wiring including the AFIL hearing loop tape coil can be damaged if it is snagged on any part of the back box or the inner edge of the adaptor plate during refitting.



It is recommended that the front panel is not fitted into the back box until just before the help point is due to be commissioned, at the end of the site build process. The front panel should also be protected as far as is possible following installation, until all site works are complete. This will minimise the chance of the front panel being damaged during other nearby construction or commissioning works.



**Oblique front view of the ECP-C1 front assembly and back box
with mounting adaptor plate fitted.**



Section of six off Countersunk 4.5mm Mounting Holes
Each dimensioned 10mm from Mounting Plate edges

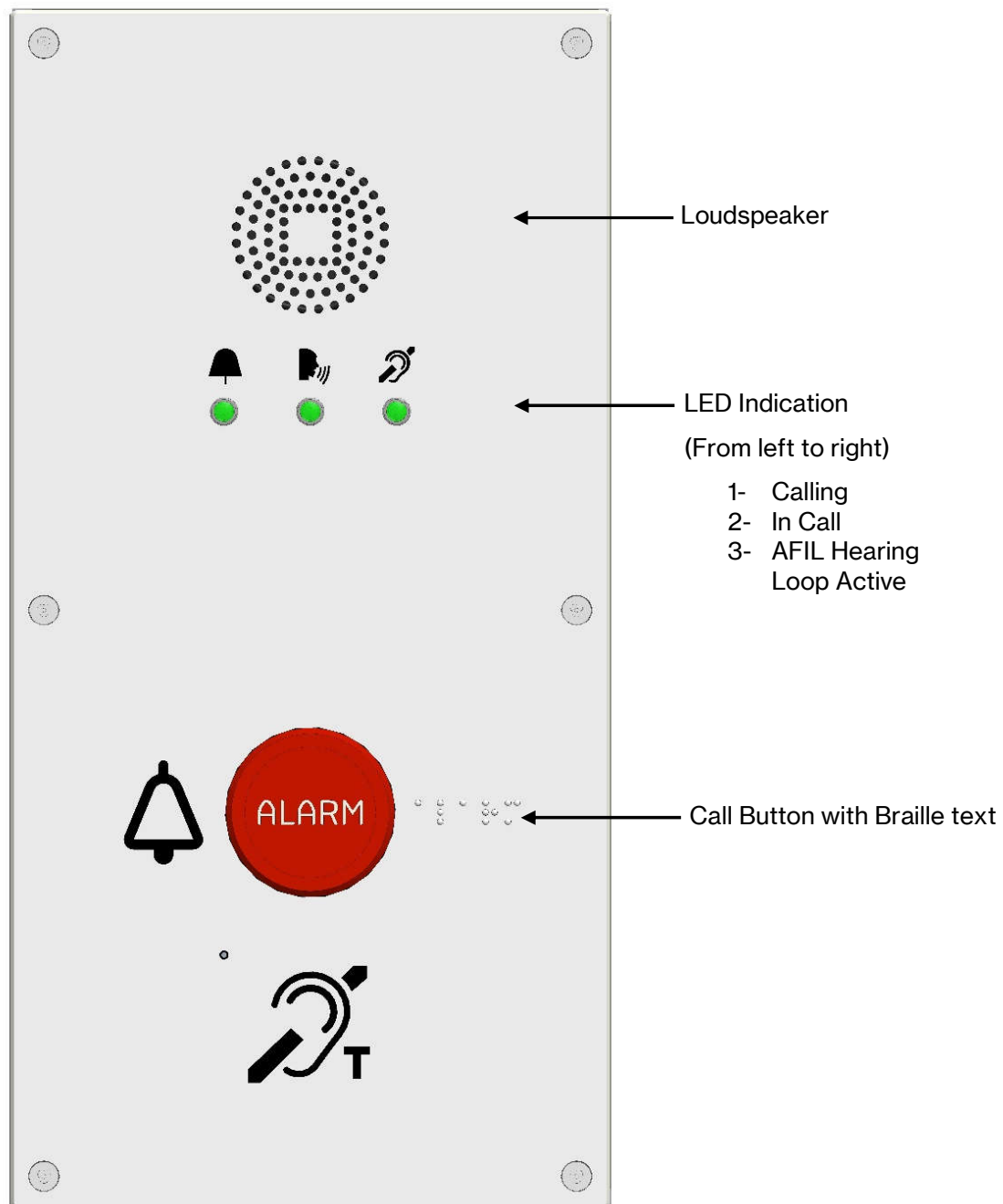
ECP-C1 flush mount adaptor plate dimensions showing the six off 4.5mm countersunk mounting holes. The image also shows the four off countersunk holes for the screws which mount the adaptor plate to the back box.

6 Configuration

See the Zenitel “Turbine” series intercom information in the Turbine IP Intercom’s technical manual (A100K11194) for configuration details.

7 Operation

7.1 Front Panel



ECP-C1 front panel.

7.2 Standard Emergency Call Mode

In its standard method of operation for emergency call use, the ECP-C1 Help point is operated to make a help call by means of its single red coloured “Alarm” call button.

To make a call

1. Press the Alarm call button
2. The “Calling” LED underneath the bell symbol will start flashing, indicating that the call is ringing at the emergency response centre.
3. A call-ringing tone will be heard from the help point’s speaker, to also indicate that the call is ringing.
4. The “Hearing Loop” LED underneath the hearing loop symbol will illuminate, indicating that the hearing loop is transmitting the call-ringing tone.

When the Emergency Response Centre operator answers the call:

1. The “In Call” LED underneath the ‘talking head’ symbol will illuminate, indicating that the caller can now talk to the answering operator.
2. The call-ringing tone will cease
3. The caller can now speak to the help point’s microphone in order to talk to the answering operator

When the Emergency Response Centre operator ends the call:

1. The help point will return to its idle state, silent and with all three LEDs unlit.

7.3 Push-To-Talk Mode

In some cases, the ECP-C1 may be configured to operate in “Push-To-Talk” mode, and this mode can also be selected by the answering Emergency Response Centre operator.

1. In this ‘single-duplex’ mode, the “Alarm” button is pressed and held down in order for the caller to talk to the operator. Releasing the button will enable the operator to reply to the caller.

7.3.1 Additional Optional Methods of Operation

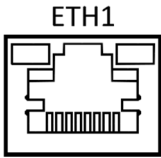
In addition to the standard functionality which is described in this manual, it is possible for the ECP-C1 help point to provide additional functions and methods of operation. For instance, external buttons or switches such as “Emergency Stop” Plungers can be connected to the help point. In addition to any other custom functions, operation of buttons or switches such as this will typically provide an alternate method of placing an Emergency Alarm call, as if the Alarm call button had been pressed.

Operation of extra features such as this will be defined in a custom project manual or other appropriate documentation.

See the Zenitel “Turbine” series intercom information in the Turbine IP Intercom’s technical manual (A100K11194) for configuration details.

8 Connections

ETH1: 100 / 1000BASE-T Ethernet Port



Cabling	
Type	Standard LAN cable CAT5e (minimum)
Power	POE+
Termination	RJ45
Suggested type	CAT5e FTP or STP

9 Technical Specification

Mechanical

Dimensions (Assembled for Surface Mounting)	320.5mm (h) x 160.5mm (w) x 115mm (d)
	Depth (d) is plus the front panel button
Dimensions (Flush Mounting Adaptor Plate)	360.5mm (h) x 200.5mm (w)
	Overall product depth (d) increased by 3mm
Material (Front Plate).....	Brushed Stainless Steel, 316
Material (Flush Mounting Adaptor Plate).....	Brushed Stainless Steel, 316
Material (Rear Enclosure)	Painted Stainless Steel, 316
Weight	5.5kg
Ingress Protection.....	IP65
IK Rating	IK 10 Limited to front plate when flush mounted
Mounting Options.....	Flush and Surface

AFIL Hearing Loop

Amplifier	Built In
Loop	Built In
Loop Max Output Current (sine).....	3.1A RMS
Loop Impedance	0.3Ω to 1Ω, 1.3Ω reactive at 1.6kHz
Loop Frequency	100Hz to 5kHz ±1.5dB
Metal Loss Correction	0dB to 3dB / octave boost

Environmental

Temperature (Operational).....	-25°C to +65°C
Temperature (Storage).....	-25°C to +70°C
Humidity (Operational & Storage)	0% to 90% non-condensing

Power Supply

Power over Ethernet	POE+ (IEEE 802.3at standard)
---------------------------	------------------------------

Audio

Audio Quality (STI).....	70 dB > 0.8
Codecs.....	G.711, G.722, G.729
Frequency Range (G.722)	Codec 200 Hz – 7000 Hz
Intercom Audio Technology....	Modes: Full open duplex, switched open duplex, Adaptive jitter filter, Local tone generator, Audio mixing - 3 channels, Sound level detection (scream alarm), Automatic gain control (microphone), Automatic volume adjustment
Speaker Amplifier	Built In 10W class D

Networking and Protocols

SIP Support	RFC 3261 (SIP base standard), RFC 3515 (SIP refer), RFC 2833 2976 (SIP info)
Advanced Supervision Functions	E.g. network test, tone test, status reports

Management and Operation) HTTP/HTTPS (Web configuration) DHCP and static IP + IC-EDGE. Remote automatic software upgrade. Centralized monitoring

LAN Control.....Network Access Control (IEEE 802.1x)

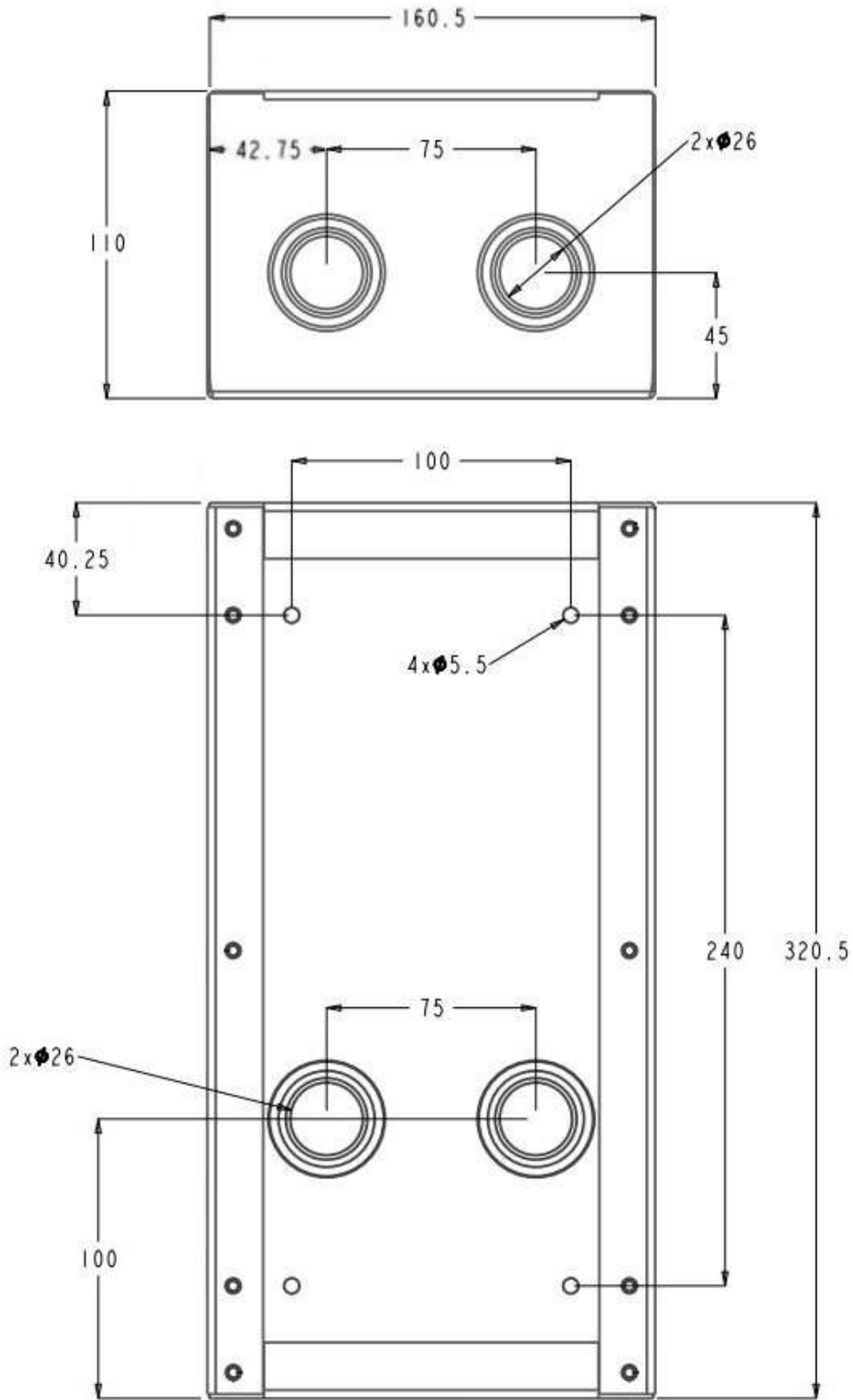
Protocols.....IPv4 (with DiffServ), SIP, TCP, UDP, HTTPS, TFTP, RTP, DHCP, SNMP, ONVIF, CCoIP® , NTP

Other

EMC.....CE and FCC Part 15

Country of Manufacture..... Denmark

10 Mechanical Dimensions – Back Box



11 Storage and Preservation

This product should be packed for storage in the original packing as described in the Section “10 Packing for Return” below and stored in the following environmental conditions:

- Away from harsh environmental conditions, such as areas that are subject to corrosive atmosphere, excessive moisture or may allow water or other liquids to come into contact with the unit or its external connections.
- In a heated and humidity-controlled storage areas where the temperature and humidity are within the equipment specification.

12 Packing for Return



This product contains static-sensitive devices. Observe ESD precautions when handling this product with the cover removed.

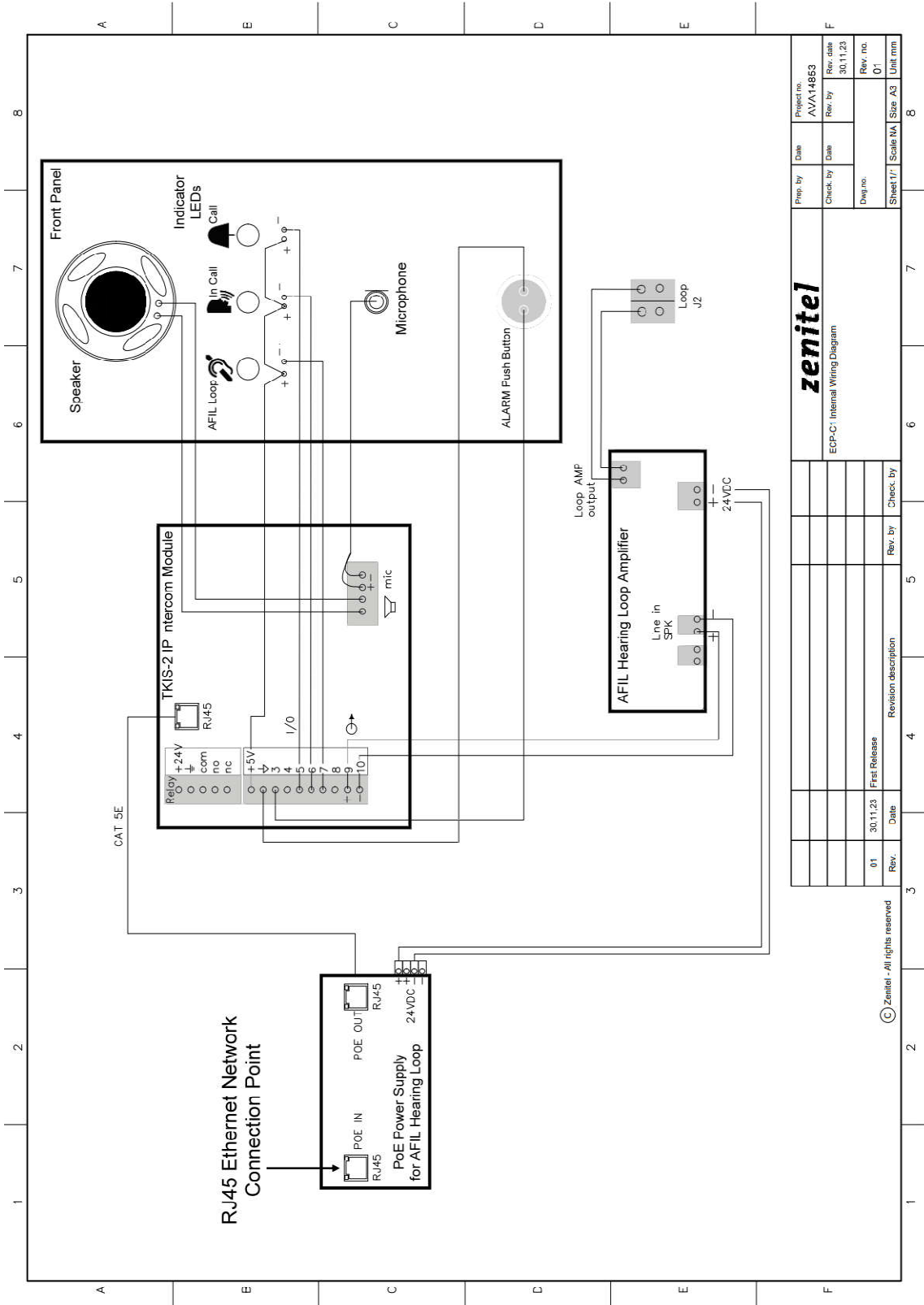
If a product is being returned for servicing, try to use the containers and materials of the original packaging. Attach a tag indicating the type of service required, return address, equipment type and full serial number.

If the original packing can no longer be used, the following general instructions should be used for repacking with commercially available materials:

- 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 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.
- Use a sturdy cardboard box that will support the weight and size of the equipment.
- Attach a tag indicating the type of service required, return address, equipment type and full serial number.
- Completely wrap the equipment in bubble wrap (all sides must be protected) and secure the wrap in place with tape.
- Place the wrapped equipment inside the box surrounded by filler material, ensuring that there is no room for movement.
- Seal the box securely with packing tape.

13 Appendix

13.1 Internal Wiring Diagram



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

Should any of the above apply, Zenitel reserves the right to raise any relevant charges to the customer.

Zenitel 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, Zenitel reserves the right to make changes to product specification without notice or liability.

