

20 Zone Emergency and Paging Microphone Consoles

Type Nos. ZEC20 / ZPC20

Product Description



The ZEC20 and ZPC20 robust desk consoles are designed to work with the VAR range of DSP Router/System Controllers in PA/VA systems and are typically used for emergency (ZEC20) and general paging (ZPC20) applications.

Microphone audio is provided as a balanced 0dBu (nominal) analogue signal. Both units feature an in-built signal limiter.

An outgoing 20Hz surveillance tone is generated to enable the audio cabling to the router to be monitored.

A multi-pole connector provides field connections.

For further details please refer to the DSP Router/System Controller Handbook.

The ZEC20 console has the facility to act as a 'Fire Microphone' and activate the VAR Router's bypass mode as required by BS5839 Pt 8.

CE Declaration



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

EMC	EN 50121-4
Safety	EN 60065

Failure to use the equipment in the manner described in the product literature will invalidate the conformity. A 'Declaration of Conformity' statement to the above standards and a list of auxiliary equipment used for compliance verification is available on request.

Safety and Precautions

ELECTRICAL SAFETY

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

ENVIRONMENTAL PRECAUTIONS

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, excessive moisture or may allow water or other liquids to come into contact with the unit or its external connections. In the close proximity of some radio frequency transmitters, the signal to noise ratio of this product may be reduced. If this occurs, re-location of the equipment or the signal cables is recommended.

ESD PRECAUTIONS

This product contains static-sensitive devices. Observe ESD precautions when working on the equipment with the cover removed.

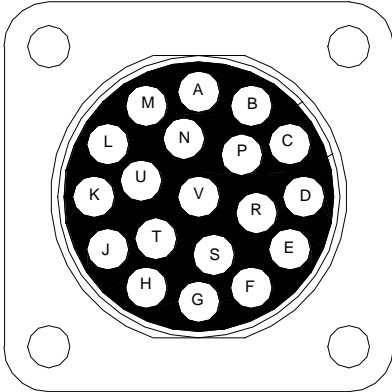
To install this product you will need;

- The ZEC20 or ZPC20 unit with mating connector kit.
- A 2mm Allen key or driver.
- Suitable wire cutters and strippers
- Suitable crimp tool (ITT Cannon 112108-0014 or R.S. 450-4411)

Recommended installation procedure

- Prepare a flying lead assembly using the supplied connector kit.
- Position the unit on the desk surface.
- Plug the lead assembly into the circular connector to the rear of the unit.
- Connect the flying lead assembly to a marshalling box (which is cabled to the central equipment rack)

Connections



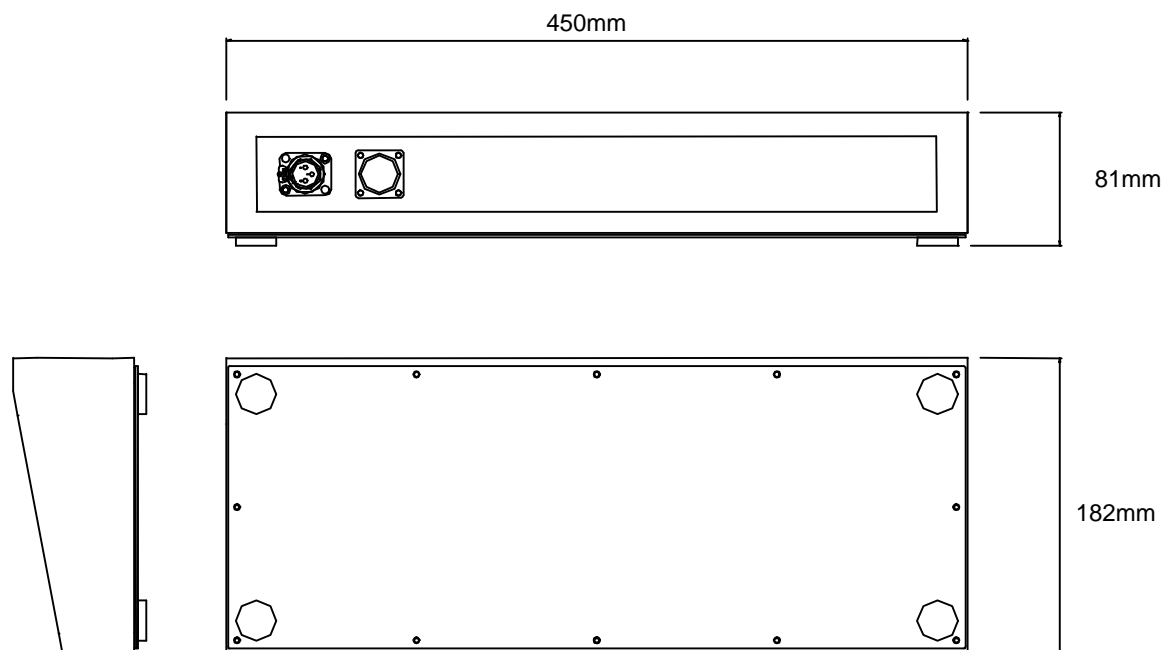
Multipole, to central rack via marshalling box: (shown left)

Signal	Pin	Notes
Screen	Bonded to shell	
Audio Out+	A	
Audio Out-	B	
0V Supply	L	
+V Supply	M	
DXP	D	
DXN	E	
PTT+	G	ZEC20 only
PTT-	F	ZEC20 only
SPEAK NOW LED-	J	ZEC20 only
ALL CALL-ONLY LED-	H	ZEC20 only
FAULT LED-	K	

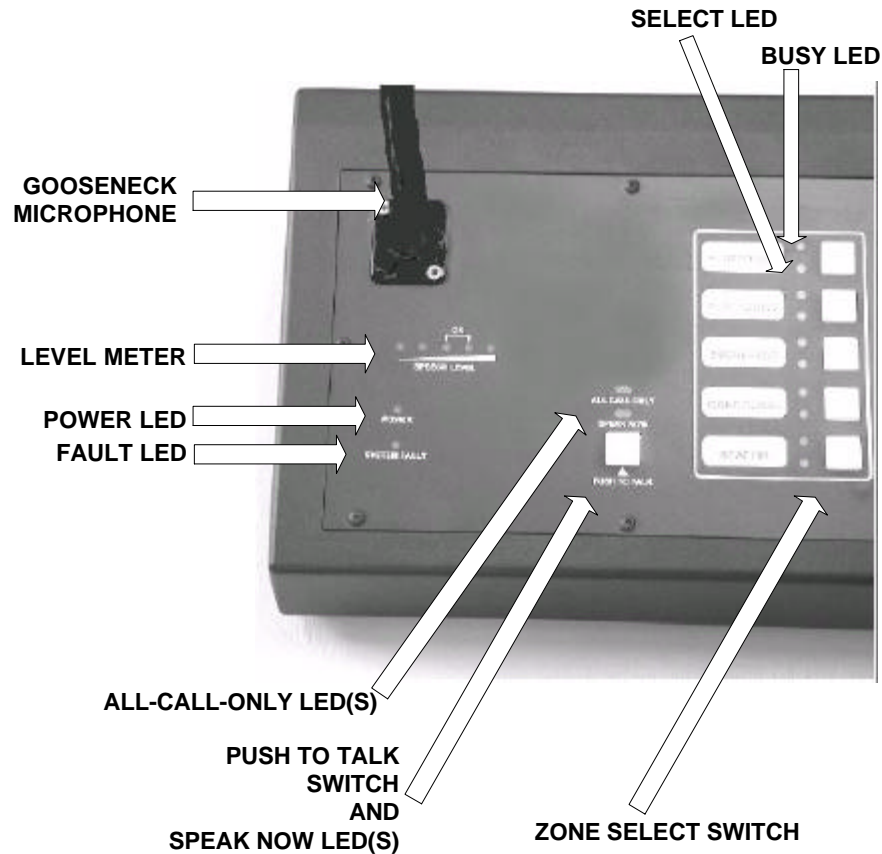
Connector Type: ITT NEPTUNE TNM 0S16-0019P1L fitted with T2P24MC1LT contacts.

Mating Part: ITT NEPTUNE TNM 6S16-00191L fitted with TNM 0S16-0019P1L contacts and TNA16CCSE00L end bell

Key Mechanical Dimensions



Controls and Indicators



Zone Select Switch	<p>Selects which zone(s) will receive the paging announcement from this microphone unit.</p> <p>If pressed a second time, the zone will be de-selected.</p> <p>Zone Select buttons can be configured at the VAR DSP Router/System Control Unit to control a single zone, a group of zones or all zones.</p>
Busy LED	<p>When lit, indicates the zone (or one or more of the group of zones controlled by this button) is already in use by another input. This microphone unit can only select the zone if the other input is of a lower priority.</p> <p>If a higher priority input selects the zone during a paging announcement, the zone will be deselected and the Busy LED will be lit. Announcements will continue to other zones.</p>
Select LED	<p>When flashing, it indicates the zone is successfully selected and is ready for use by this microphone station. This LED will be steady once the PTT button is pressed (as long as a higher priority input has not selected the same zone).</p> <p>If a higher priority input selects the zone during a paging announcement, the zone will be deselected and the Select LED will go out. Announcements will continue to other zones.</p>
Push To Talk Switch	<p>When pressed, it activates the zone selection, opens the microphone channel and triggers the pre-announcement chime (if selected at the VAR DSP Router/System Controller) ready for the paging announcement. When released, the microphone channel is closed and the zone selections cancelled.</p>
Speak Now LED	<p>When the Press To Talk button is pressed, and the chime (if any) has finished, this LED is lit to indicate that the announcement can be made.</p>
Level Meter	<p>Illuminates according to sound pressure received at microphone, annotated to indicate correct speaking level.</p> <p>The meter operates continuously to allow the operator to 'practice' achieving the correct level before broadcast.</p>
Power LED	<p>Illuminates to indicate that unit is receiving DC power.</p>
Fault LED	<p>Illuminates if any fault is present on the PA/VA system</p>
All-Call-Only LED	<p>Illuminates if processor or comms failure occurs. Pressing the PTT in this mode causes a broadcast to all zones. This is functional on the ZEC20 version only.</p>

For full information about interfacing the ZEC20 or ZPC20 consoles to the VAR routers, please refer to the DSP Router Handbook.

Cabling Requirements

From rack to marshalling box:

Signals	Cable Description	Suggested Type for ZEC20 applications
Mic Audio:	1 x 2 core, twisted, screened 1.0mm	Fire Rated. MICC, Pirelli FP200 or equivalent.
Data:	1 x 2 core, twisted, screened 1.0mm	Fire Rated. MICC, Pirelli FP200 or equivalent.
ZEC20 Other Signals:	1 x 7 core, screened 1.0mm	Fire Rated. MICC, Pirelli FP200 or equivalent.
ZPC20 Other Signals:	1 x 3 core, screened 1.0mm	

For a given installation ASL can offer advice regarding maximum cable lengths.

From marshalling box to console

An overall screened cable to be used compatible with connector specified above

Signals	Cable Description	Suggested Type
Mic Audio:	1 twisted pair	Multi-pair cable with overall foil screen. Overall diameter compatible with ITT NEPTUNE TNM 6S16-00191L (typically 8mm -16mm OD).
Data:	1 twisted pair	
ZEC20 Other Signals	7 cores using any available pairs	
ZPC20 Other Signals:	3 cores using any available pairs	

Specifications

Supply voltage range	18-40V DC
Current consumption (max. all LEDs on)	250mA @ 24V DC supply.
Audio output	0dBu balanced. 66Ω Output Impedance
Control data	EIA RS485. 19200 Baud
Dimensions (H x W x D) excluding gooseneck microphone and connectors.	81mm x 450mm x 182mm
Colour	Black with silver annotation
Weight	3.7 kg
Environmental	IP55
Temperature range (storage and operating)	-5°C to +50°C
Humidity range	0% to 93% Non-condensing
EMC EN 61000-4-3. 80MHz to 1GHz EN61000-4-6, 0.15MHz to 80MHz	ITU/R 562-3 impairment level 3. In the close proximity to some radio frequency transmitters, the signal to noise ratio of this system may be reduced. If this occurs, ensure adequate system RF earthing or re-locate the equipment or signal cables. <i>Full performance information available on request.</i>

Manufacturer

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This equipment is designed and manufactured in the UK by Application Solutions Ltd to a quality system certified to the internationally recognised quality standard: BS EN ISO 9001: 1994

Certificate number: 96-LON-AQ-041

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