



LSC22-103N Loudspeaker Controller ASM-LSC22 Installation and Operation Manual Supplement

This supplement contains installation and operation information that is unique to the LSC22-103N Loudspeaker Controller. Installation and operation information common to the LSC22-001 base unit can be found in the ASM-LSC22 Installation and Operation Manual.

<p>Prepared By: Duane Stewart Designer 27-Nov-2024</p>	<p>Checked By: Tony Pearson Designer 28-Nov-2024</p>	<p>Approved By: Nathan Meade TSS Manger 28-NOV-2024</p>
---	---	--

Section 1.0 Description

The LSC22-103N Loudspeaker Controller is identical to the LSC22-001 with the following exceptions:

- a) Changes to the faceplate text can be found by comparing Figure 1 to Figure 2.



Figure 1: LSC22-001



Figure 2: LSC22-103N

- b) The LSC22-103N has NVIS Green A compliant backlighting.
- c) The MIC input circuitry is more sensitive to low level signals. A side switch setting (labeled “COMP”) is provided to select two different sensitivity settings for the MIC input. Reference Section 2.1 of this supplement for more information.
- d) The SIREN and EXT PA side setting adjustments are set to maximum from the factory (factory set fully clockwise).
- e) A new discrete output EXT/INT outputs a ground when front panel EXT PA is selected.

Ext/Int Discrete	(EXT/INT)
Quantity:	1
Rated Level:	Gnd (active low)
Output Active:	≤ 1 Vdc
Sink Current:	250 mA maximum



LSC22-103N Loudspeaker Controller ASM-LSC22 Installation and Operation Manual Supplement

- f) The INT PA speaker level output is replaced by a mic level CABIN PA MIC output.

Cabin PA Mic Output	(CABIN PA MIC)
Quantity:	1
Circuit Type:	Single-Ended
Rated Level:	250 mVrms \pm 10%
Rate Load Impedance:	600 Ohms \pm 10%
Output Impedance:	\leq 75 Ohms
Frequency Response:	\leq 3 dB from 200 Hz to 6 kHz
Distortion:	\leq 10% @ rated output
Audio Noise Level:	\geq -60 dB from rated output

- g) Power switch function on the front panel is removed. When power is applied to the LSC22-103N, the unit is powered on without any other action.

Section 2.0 Installation

For installation information and drawings, see ASM-LSC22 Section 2.0. Select the appropriate revision of the drawing for the serial number of the unit. The drawings specific to this derivative are listed below and can be found at the end of this supplement.

2.1 Adjustments and Connections

As referenced by the red arrow in Figure 3, the LSC22-103N Loudspeaker Controller has a user-accessible switch setting on the left side of the unit (labeled "COMP") that selects between two different MIC sensitivities (shown on next page).

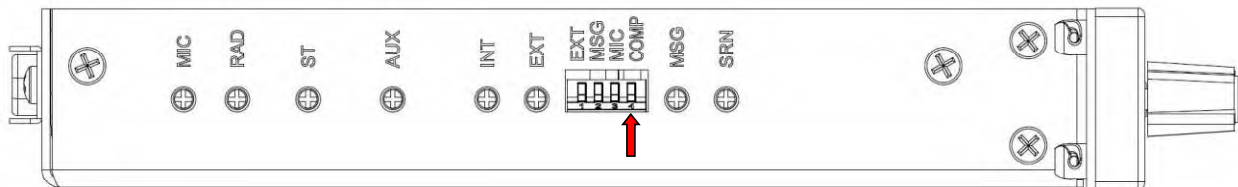


Figure 3 – LSC22-103N COMP MIC Sensitivity



LSC22-103N Loudspeaker Controller ASM-LSC22 Installation and Operation Manual Supplement

The MIC Input of the LSC22-103N is most sensitive when the COMP switch is in the UP position (COMP-1) and less sensitive in the DOWN position (COMP-2). Figure 4 provides an example of these sensitivity levels through the EXT PA Output compared to the LSC22-001. This increased MIC Input sensitivity is applied to all LSC22-103N outputs.

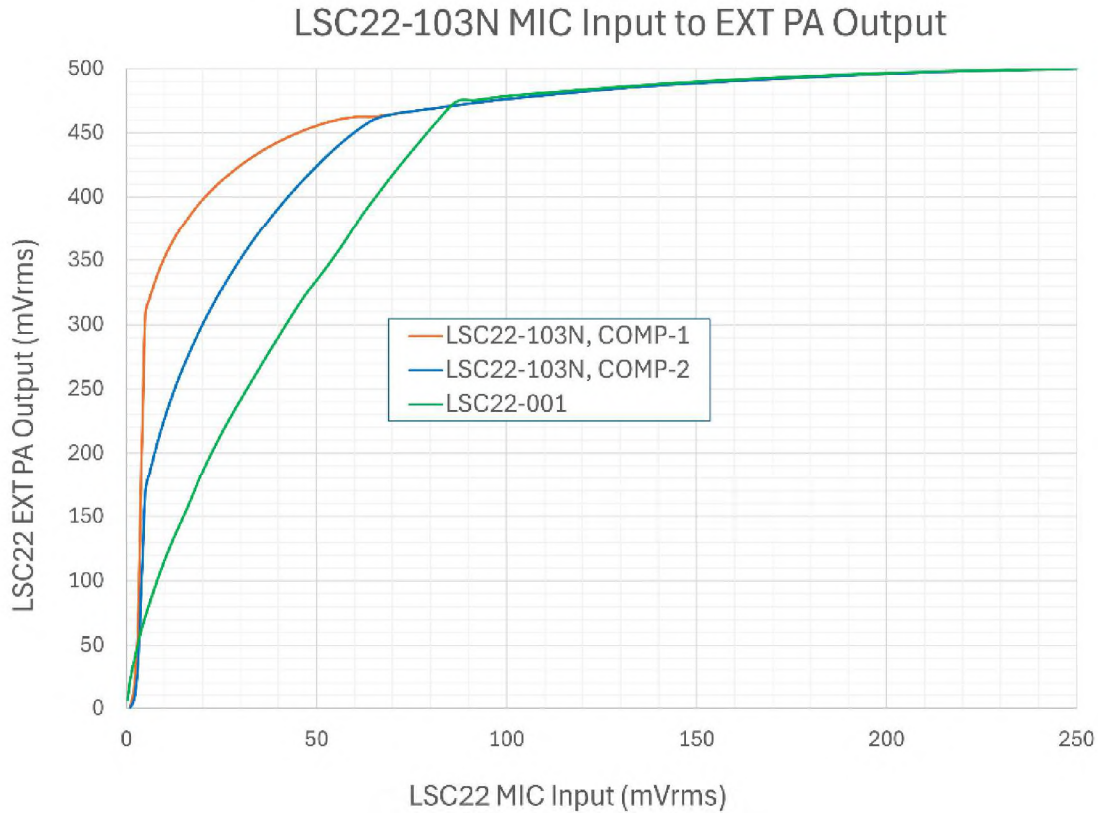


Figure 4 – LSC22-103N COMP-1 and COMP-2 MIC Sensitivity Comparison to LSC22-001

2.2 Installation Drawings

DOCUMENT NO.	REV.	DESCRIPTION	TYPE	SERIAL NO.
LSC22-103N-403-0	1.01	Loudspeaker Controller	Interconnect	111863 and up
LSC22-103N-405-0	1.00	Loudspeaker Controller	Connector Map	111863 and up
LSC22-103N-922-0	1.00	Loudspeaker Controller	Mechanical Installation	111863 and up



LSC22-103N Loudspeaker Controller ASM-LSC22 Installation and Operation Manual Supplement

Section 3.0 Operation

For operation information, see ASM-LSC22 Section 3.0 with the following exceptions:

- a) References to INT PA are now referenced as CABIN PA MIC.
- b) When the EXT PA/INT PA Front Panel Switch is set to the EXT PA position, a ground is activated on output EXT/INT (J101, Pin 12).
- c) There is no front panel On/Off control in the detent position, unit is always on with power applied. However, the physical detent position on the control still exists.

Audio output remains at a minimum whether the volume knob is set ccw to the detent or fully ccw into the detent position.



Message 3 and Siren audio programming now require the power input to the LSC22 be removed and is not dependent on the VOL knob position.

End of Supplement

REVISIONS

REV	DESCRIPTION	DATE	BY
1.01	ECO1224: CHANGED EQUIP. DESC. FOR RADIO HI/LO INPUT (SHEET 2)	27-NOV-2024	AMP




LSC22-103N INSTALLATION NOTES

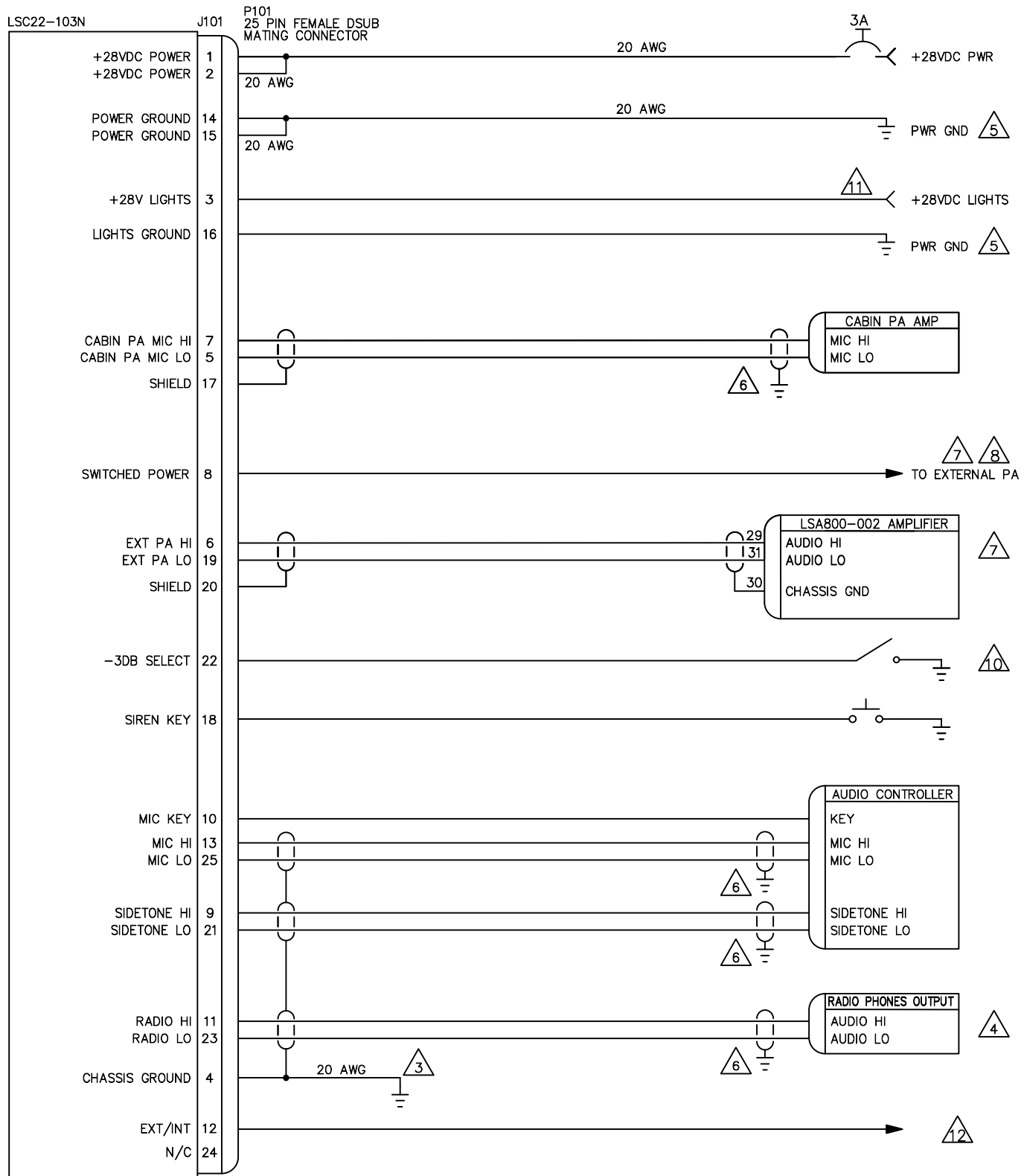
NOTES:

1. ALL WIRES SHOULD BE 22 AWG UNLESS OTHERWISE SPECIFIED. ALL UNSHIELDED WIRE SHALL BE SELECTED IN ACCORDANCE WITH AC43.13-1B CHANGE 1, PARAGRAPHS 11-76 THROUGH 11-78. WIRE TYPES SHOULD BE TO MIL-W-22759 AS SPECIFIED IN AC43.13-1B CHANGE 1, PARAGRAPHS 11-85, 11-86 AND LISTED IN TABLE 11-11. ALL SHIELDED WIRE/CABLE SHOULD BE IN ACCORDANCE WITH MIL-C-27500.
2. CABLE LENGTH NOT TO EXCEED 30 FT [9.14 M], UNLESS OTHERWISE SPECIFIED.
3. CABLE LENGTH NOT TO EXCEED 1 FT [0.3 M].
4. SYSTEM CROSSTALK MAY BE EFFECTED BY TYPE AND LEVEL OF RADIO PHONES OUTPUT. CHECK SPECIFICATIONS AND SYSTEM REQUIREMENTS BEFORE SELECTING AND INSTALLING.
5. CABLE LENGTH NOT TO EXCEED 3.3 FT [1.0 M].
6. SHIELDS SHOULD BE GROUNDED TO LOCAL AIRFRAME GROUND, UNLESS OTHERWISE SPECIFIED. SHIELD TERMINATION LENGTH NOT TO EXCEED 1 FT [0.3 M].
7. REFERENCE LSA800-002-403-0 INTERCONNECT FOR AMPLIFIER WIRING CONFIGURATIONS.
8. +26.5VDC SUPPLIED AT 0.4 AMPS MAX.
9. REFER TO LSC22 INSTALLATION & OPERATION MANUAL FOR OUTPUT LEVEL CONFIG SWITCH SETTING.
10. APPLY GROUND TO REDUCE SPEAKER & EXT PA OUTPUTS BY 3DB.
11. ONLY +28VDC LIGHTS OR +5VDC LIGHTS MAY BE USED AT ONE TIME.
12. PROVIDES GROUND IN EXT PA FRONT PANEL SWITCH POSITION.

DEFINITIONS:

- N/C: NO CONNECTION. THE PIN IS NOT CONNECTED TO ANYTHING INTERNALLY, AND THEREFORE SHALL HAVE NO CONNECTION EXTERNALLY.
- N/C SPARE: NO CONNECTION INTERNALLY, BUT A SPARE WIRE SHALL BE INSTALLED IN THE WIRE HARNESS.
- RESERVED: MAY BE CONNECTED AND USED IN THE FUTURE. THE CIRCUITRY MAY BE PRESENT OR ADDED TO ACTIVATE THE FUNCTION. THE PIN MAY BE USED FOR TEST PURPOSES. THERE IS NO EXTERNAL CONNECTION.
- RESERVED SPARE: RESERVED, BUT INSTRUCTIONS SHALL BE FOLLOWED TO ACTIVATE (RSV SP) THE CIRCUITRY. A SPARE WIRE SHALL BE INSTALLED IN THE WIRE HARNESS.

NAME		DATE	UNLESS OTHERWISE SPECIFIED:			KELOWNA BC CANADA (250)-763-1088 WWW.AEM-CORP.COM	
DRAWN	LAC	18-Jan-2024	DIMENSIONS ARE IN INCHES [MM] TOLERANCES: FRACTIONAL _____ ±0.0625" ANGULAR _____ ±0.5° TWO DECIMAL PLACE _____ ±0.010" THREE DECIMAL PLACE _____ ±0.005"			TITLE: LOUDSPEAKER CONTROLLER INTERCONNECT	
CHECKED		27-Nov-2024	MATERIAL: N/A	PAPER SIZE: A	CAGE CODE: L9015	PART No.: LSC22-103N	REVISION: 1.01
APPROVED		27-Nov-2024	FINISH: N/A	SCALE: DO NOT SCALE DRAWING		DRAWING No.: 403-0	SHEET: 1 of 3
<p>CONFIDENTIAL AND PROPRIETARY THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ANODYNE ELECTRONICS MANUFACTURING. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ANODYNE ELECTRONICS MANUFACTURING IS PROHIBITED.</p>							



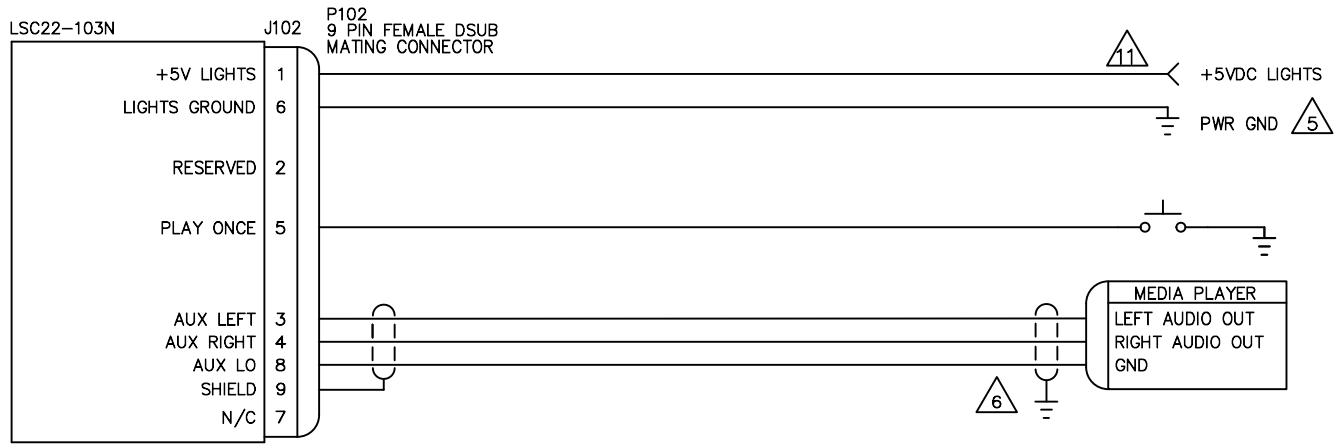
	NAME	DATE	UNLESS OTHERWISE SPECIFIED:
DRAWN	LAC	18-Jan-2024	DIMENSIONS ARE IN INCHES [MM] TOLERANCES:
CHECKED	<i>[Signature]</i>	27-Nov-2024	FRACTIONAL _____ ±0.0625"
APPROVED	<i>[Signature]</i>	27-Nov-2024	ANGULAR _____ ±0.5°
			TWO DECIMAL PLACE _____ ±0.010"
			THREE DECIMAL PLACE _____ ±0.005"
CONFIDENTIAL AND PROPRIETARY THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ANODYNE ELECTRONICS MANUFACTURING. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ANODYNE ELECTRONICS MANUFACTURING IS PROHIBITED.			MATERIAL: N/A FINISH: N/A N/A






ANODYNE ELECTRONICS MANUFACTURING CORP.

KELOWNA BC CANADA
(250)-763-1088
WWW.AEM-CORP.COM

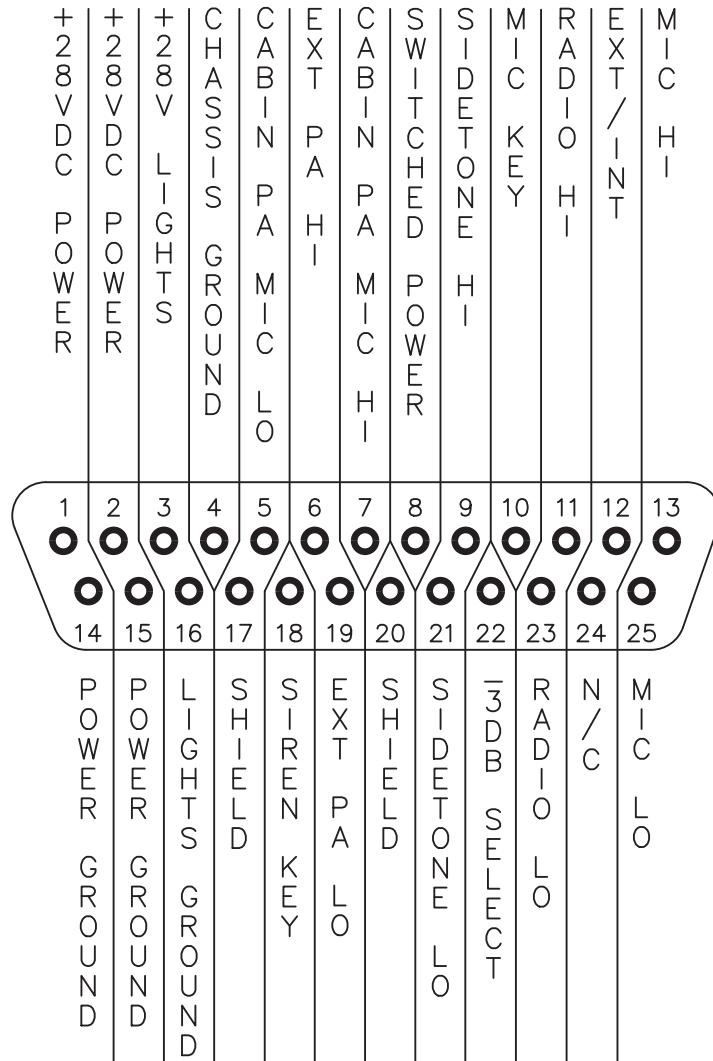
TITLE: LOUDSPEAKER CONTROLLER INTERCONNECT			
PAPER SIZE: A	CAGE CODE: L9015	PART No.: LSC22-103N	REVISION: 1.01
SCALE: DO NOT SCALE DRAWING	DRAWING No.: 403-1		SHEET: 2 of 3






	NAME	DATE	UNLESS OTHERWISE SPECIFIED:			KELOWNA BC CANADA (250)-763-1088 WWW.AEM-CORP.COM		
DRAWN	LAC	18-Jan-2024	DIMENSIONS ARE IN INCHES [MM] TOLERANCES:					
CHECKED		27-Nov-2024	FRACTIONAL _____ ±0.0625" ANGULAR _____ ±0.5°	TITLE: LOUDSPEAKER CONTROLLER INTERCONNECT				
APPROVED		27-Nov-2024	TWO DECIMAL PLACE _____ ±0.010" THREE DECIMAL PLACE _____ ±0.005"					
CONFIDENTIAL AND PROPRIETARY THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ANODYNE ELECTRONICS MANUFACTURING. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ANODYNE ELECTRONICS MANUFACTURING IS PROHIBITED.			MATERIAL:	PAPER SIZE:		CAGE CODE	PART No.:	REVISION
			N/A	A		L9015	LSC22-103N	1.01
			FINISH:	SCALE:		DO NOT SCALE DRAWING		DRAWING No.: 403-2
			N/A N/A					SHEET: 3 of 3

P101

25 PIN D-MIN SOCKET
MATING CONNECTOR

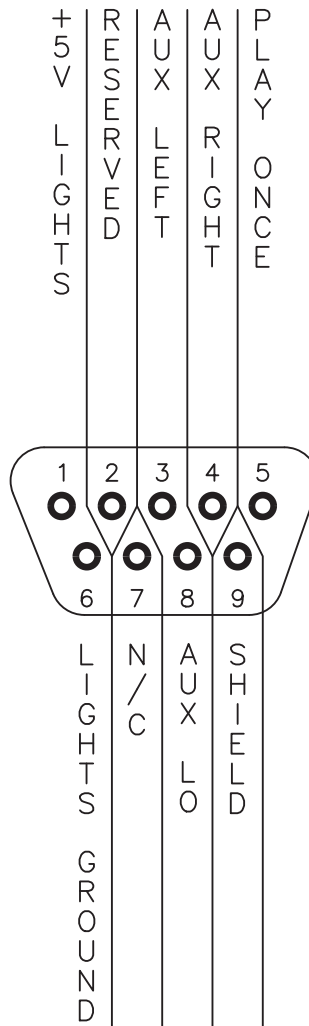


VIEW IS FROM REAR OF AIRFRAME CONNECTOR




	NAME	DATE	UNLESS OTHERWISE SPECIFIED:	 ANODYNE ELECTRONICS MANUFACTURING CORP.			KELOWNA BC CANADA (250)-763-1088 WWW.AEM-CORP.COM	
DRAWN	LAC	18-Jan-2024	DIMENSIONS ARE IN INCHES [MM]					
CHECKED		19-Jan-2024	TOLERANCES:	TITLE: LOUDSPEAKER CONTROLLER CONNECTOR MAP				
APPROVED		16-Apr-2024	FRACTIONAL _____ ±0.0625" ANGULAR _____ ±0.5° TWO DECIMAL PLACE _____ ±0.010" THREE DECIMAL PLACE _____ ±0.005"					
CONFIDENTIAL AND PROPRIETARY THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ANODYNE ELECTRONICS MANUFACTURING. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ANODYNE ELECTRONICS MANUFACTURING IS PROHIBITED.			MATERIAL:	PAPER SIZE:		CAGE CODE	PART No.:	REVISION
			N/A	A	L9015	LSC22-103N	1.00	
			FINISH:	SCALE:		DRAWING No.:		SHEET:
			N/A N/A	DO NOT SCALE DRAWING		405-0		1 of 2

P102



9 PIN D-MIN SOCKET
MATING CONNECTOR

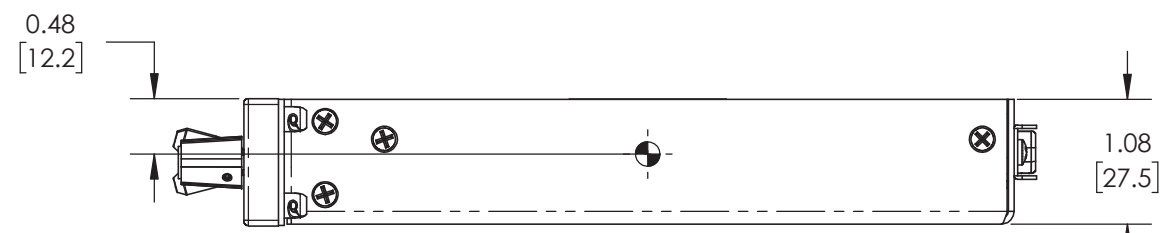
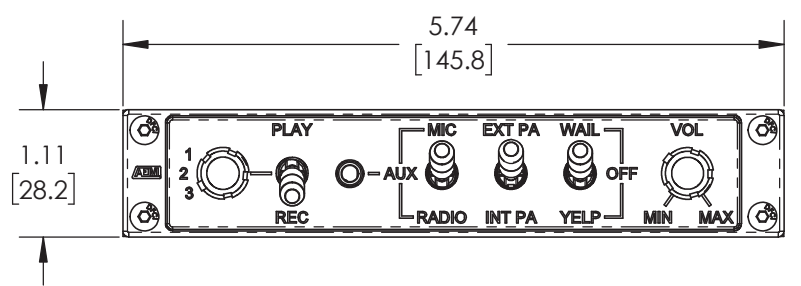
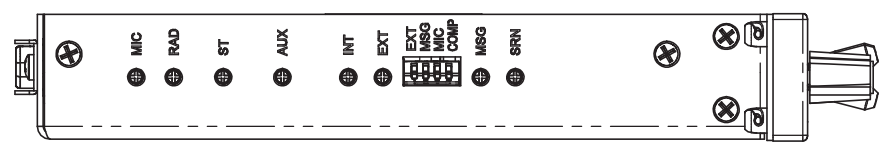
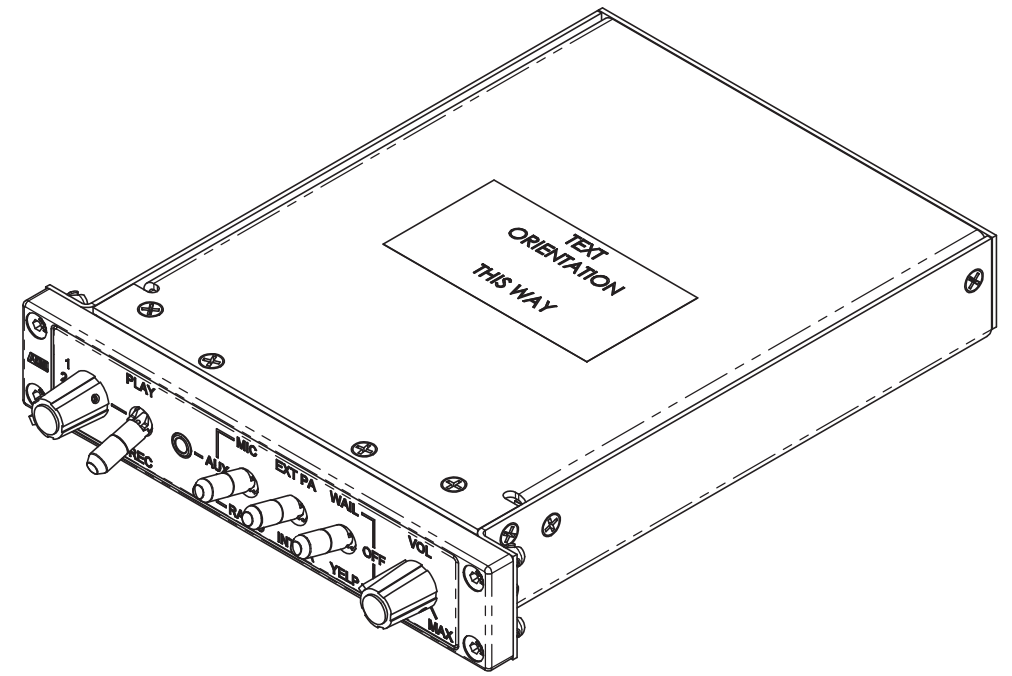
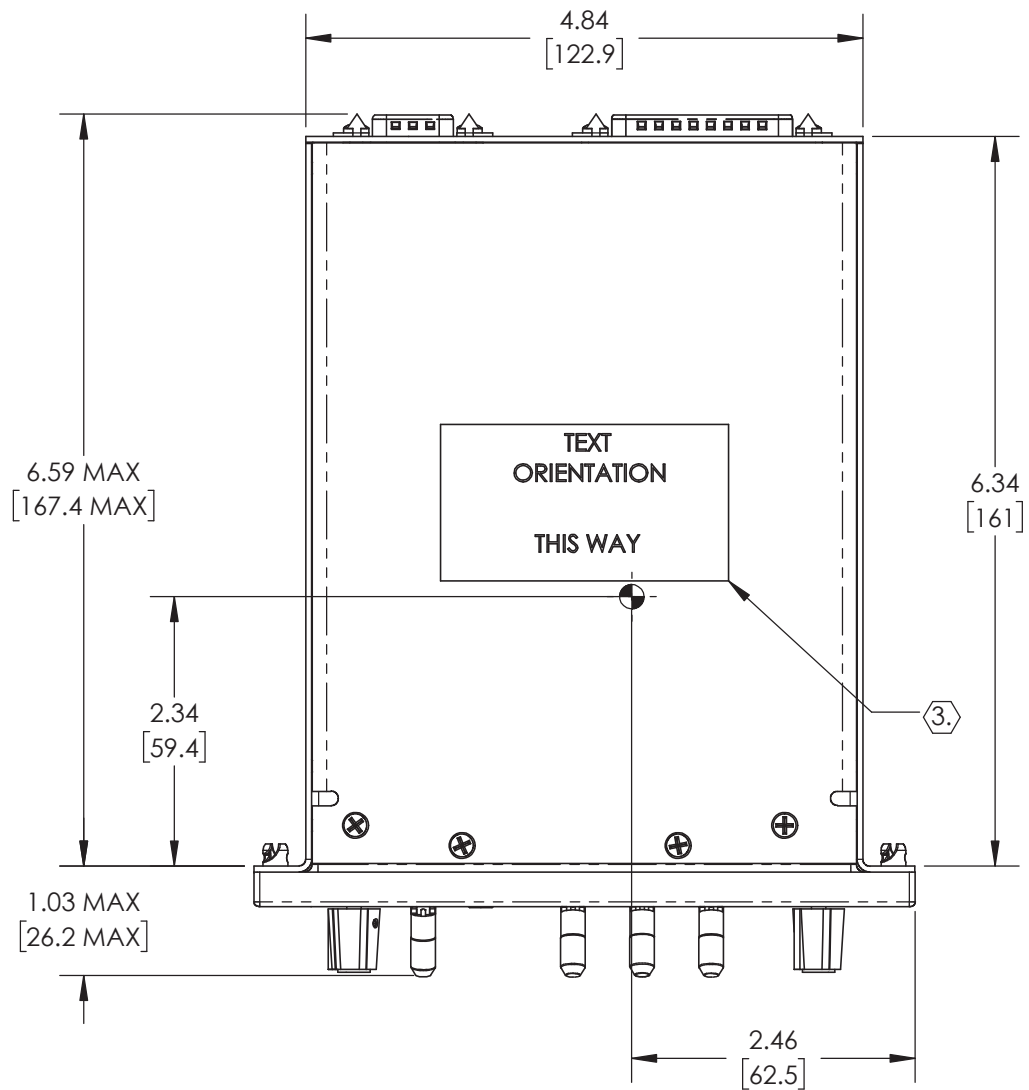


VIEW IS FROM REAR OF AIRFRAME CONNECTOR

	NAME	DATE	UNLESS OTHERWISE SPECIFIED:	 ANODYNE ELECTRONICS MANUFACTURING CORP.		KELOWNA BC CANADA (250)-763-1088 WWW.AEM-CORP.COM					
DRAWN	LAC	18-Jan-2024	DIMENSIONS ARE IN INCHES [MM]								
CHECKED		19-Jan-2024	TOLERANCES:	TITLE: LOUDSPEAKER CONTROLLER CONNECTOR MAP							
APPROVED		16-Apr-2024	FRACTIONAL _____ ±0.0625"								
			ANGULAR _____ ±0.5°								
			TWO DECIMAL PLACE _____ ±0.010"	PAPER SIZE: A		CAGE CODE L9015		PART No.: LSC22-103N		REVISION 1.00	
			THREE DECIMAL PLACE _____ ±0.005"	SCALE: DO NOT SCALE DRAWING		DRAWING No.: 405-0		SHEET: 2 of 2			
CONFIDENTIAL AND PROPRIETARY THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ANODYNE ELECTRONICS MANUFACTURING. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ANODYNE ELECTRONICS MANUFACTURING IS PROHIBITED.			MATERIAL: N/A								
			FINISH: N/A								
			N/A								

NOTES:

1. MASS: 1.3 lb [0.6 kg] MAX.
2.  APPROXIMATE CENTER OF GRAVITY.
3.  PRODUCT LABEL.



<p>100-966 Crowley Ave. KELOWNA, BC V1Y 0L1 (250)-763-1088 WWW.AEM-CORP.COM</p>	<p>AEM ANODYNE ELECTRONICS MANUFACTURING CORP.</p>		<p>TITLE: LOUDSPEAKER CONTROLLER MECHANICAL INSTALLATION</p>	
<p>UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES [MM] TOLERANCES: ANGULAR: ±0.5° FRACTIONAL: ±0.0625" ONE DECIMAL PLACE: ±0.100" TWO DECIMAL PLACE: ±0.010" THREE DECIMAL PLACE: ±0.005"</p>	<p>CONFIDENTIAL AND PROPRIETARY THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ANODYNE ELECTRONICS MANUFACTURING. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ANODYNE ELECTRONICS MANUFACTURING IS PROHIBITED.</p>	<p>MATERIAL: N/A</p>	<p>FINISH: N/A</p>	<p>PAPER SIZE: B CAGE CODE: L9015 PART No.: LSC22-103N REVISION: 1.00</p>
<p>DRAWN: LAC CHECKED: [Signature] APPROVED: [Signature]</p>	<p>NAME: LAC DATE: 18-Jan-2024 19-Jan-2024 18-Apr-2024</p>	<p>SCALE: 3:5 DO NOT SCALE DRAWING</p>	<p>DRAWING No.: 922-0</p>	<p>SHEET: 1 OF 1</p>