



JUPITER AVIONICS
CORPORATION

JA55-015

Dzus Panel Speaker - 4 Ohm - 15 Watt



Installation Manual

Rev A

Jupiter Avionics Corporation
1959 Kirschner Road
Kelowna BC
Canada V1Y 4N7
Tel: +1 778 478 2232
Toll-Free: 1 855 478 2232
www.jupiteravionics.com



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SECTION 1 - DESCRIPTION

1.1 System Overview

The JA55-015 Speaker Panel - 4 Ohm - 15 Watt allows PA audio to be heard in the aircraft cabin.

The JA55-015 operates using the audio provide from a speaker amplifier and requires no other external power.

1.2 Features Overview

The JA55-015 uses a metal enclosure to shield the components from Radio Frequency Interference.

The JA55-015 mounts in a standard Dzus width rail with four 1/4 turn fasteners.

1.3 Inputs and Outputs

Refer to the JA55-015 [connector maps](#) for the mating connector designators and pin assignments for the input and output signals.

1.3.1 Inputs

Name	Qty	Type
SPEAKER INPUT HI/LO	1	Speaker Audio input

1.3.2 Outputs

N/A

1.3.3 Grounds

Name	Qty	Type
CHASSIS GROUND	1	Ground Connector

1.3.4 Spares

Name	Qty	Type
SPARES	6	Spares

1.4 Specifications

1.4.1 Electrical Specifications

Power Input N/A

1.4.1.1 Audio Performance

Rated Input Level

Speaker input level 7.75 Vrms ±10%

Rated Output Power

Phone rated output level N/A



Audio Frequency Response

Speaker output audio frequency response $\leq 3\text{dB}$ from 300 to 6000 Hz

Distortion Characteristics

Audio output distortion at rated power $\leq 10\%$

Audio output distortion at 10% of rated power $\leq 3\%$

Input Impedance

Speaker input Impedance $4 \Omega \pm 10\%$

System Polarity

Input to output polarity maintained

Listening Test

Adequate for communication

1.4.2 Mechanical Specifications

Height 3.00 in [76.2 mm] max

Depth (not including connectors) 2.07 in [52.6 mm] max

Faceplate width 5.75 in [146 mm]max

Behind panel width 4.92 in [125.0 mm]max

Weight 0.98 lb [0.44 kg] max

Material 5052-H32 brushed aluminum with black anodized coating

Connector One 9-pin D-Sub male, V5 Locking

Mounting 4 Dzus fasteners

Bonding $\leq 2.5 \text{ m}\Omega$

Installation kit part number INST-JA55



SECTION 2 – INSTALLATION

2.1 Introduction

This section contains unpacking and inspection procedures, installation information, and post-installation checks.

2.2 Continued Airworthiness

Maintenance of the JA55-015 is on condition only. Scheduled inspection and/or periodic maintenance of this unit is not required.

2.3 Unpacking and Inspecting Equipment

Unpack the equipment carefully. Check for shipping damage and report any problems to the relevant carrier. Confirm that the Authorized Release Certificate or Certificate of Conformance is included. Complete the on-line warranty card from the Jupiter Avionics Corporation (JAC) website - www.jupiteravionics.com/warranty

2.3.1 Warranty

This product manufactured by JAC is warranted to be free of defects in workmanship or performance for 2 years from the date of installation by an approved JAC dealer or agency. This warranty covers the cost of all materials and labour to repair or replace the unit, but does not include the cost of transporting the defective unit to and from JAC or its designated warranty repair centre, or of removing and replacing the defective unit in the aircraft. This warranty does not cover failures due to abuse, misuse, accident, or unauthorized alteration or repairs.

THIS WARRANTY IS VOID IF THE PRODUCT IS NOT INSTALLED BY AN AUTHORIZED JAC DEALER. If the on-line warranty card is not completed, the product will be warranted from the date of manufacture.

Contact JAC for return authorization, and for any questions regarding this warranty and how it applies to your unit(s). JAC is the final arbiter concerning warranty issues.

2.4 Installation Procedures

2.4.1 Installation Limitations

Those installing the JA55-015, on or in a specific type or class of aircraft, must determine that the aircraft installation conditions meet standards. The JA55-015 may be installed only by following the applicable airworthiness requirements.

2.4.2 Cabling and Wiring

All wire shall be selected in accordance with the original aircraft manufacturer's maintenance instructions, or AC43.13-1B Change 1, Paragraphs 11-76 through 11-78. Unshielded wire types shall qualify to MIL-W-22759 as specified in AC43.13-1B Change 1, Paragraphs 11-85, 11-86, and listed in Table 11-11. For shielded wire applications, use Tefzel MIL-C-27500 shielded wire with tag ring or equivalent (for shield terminations) to make the most compact and easily terminated interconnect. Follow the Connector Map in Appendix A of this manual.

Allow 3" from the end of the shielded wiring to the shield termination to allow the connector hood to be easily installed. Refer to the Interconnect drawing in Appendix A of this manual for shield termination details. Note that this unit has a 'clamshell' hood that is installed after the wiring is complete.

Maintain wire segregation and route wiring in accordance with the original aircraft manufacturer's maintenance instructions.



Unless otherwise noted, all wiring shall be a minimum of 20 AWG, except power and ground lines, which shall be a minimum of 22 AWG. Refer to the Interconnect drawing for additional specifications. Check that the ground connection is clean and well secured, and that it shares no path with any electrically noisy aircraft accessories such as blowers, turn-and-bank instruments, or similar loads.

2.4.3 Mechanical Installation

The JA55-015 can be mounted in any attitude and location with adequate space for the front panel and sufficient clearance for the connector and wiring harness. It requires no direct cooling.

2.4.4 System Operation

The JA55-015 speaker input is routed to the speaker.

2.4.5 Post Installation Checks

2.4.5.1 Voltage/Resistance checks.

Do not attach this unit until the following conditions are met:

- a) Check P1 pin 7 for continuity to ground (less than 0.5 Ω).
- b) Check all pins for shorts to ground or adjacent pins.

2.4.5.2 Power on Checks.

Power up the aircraft's systems and confirm normal operation of all functions of the JA55-015.

When all performance checks are satisfied, complete the necessary regulatory documentation before releasing the aircraft for service. Refer to [Appendix B](#).

2.5 Installation Kit

The kit required to install this unit is not included with the unit.

The installation kit (Part # INST-JA55) consists of the following:

<u>Quantity</u>	<u>Description</u>	<u>JA55-015</u>
1	D-Sub 9-pin Connector Assembly	CON-3420-0009 1

2.5.1 Recommended Crimp Tools

<u>Standard D-Sub Crimp Tool Chart</u>			
<u>Tool Type</u>	<u>Hand crimping tool</u>	<u>Positioner</u>	<u>Insertion/extractor tool</u>
POSITRONIC	9507-0-0-0	9502-5-0-0	4711-2-0-0
DANIELS	AFM 8	K13-1	91067-2
MIL-SPEC	M22520/2-01	M22520/2-08	M81969/1-02

2.6 Installation Drawings

The drawings and documents required for Installation can be found in [Appendix A](#) of this manual.



Installation and Operating Manual

Appendix A - Installation Drawings

A1 **Introduction**

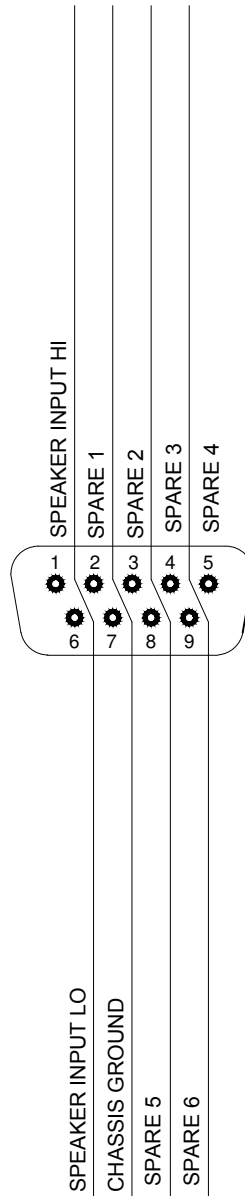
The drawings necessary for installation and troubleshooting of the JA55-015 Dzus Panel Speaker - 4 Ohm - 15 Watt are in this Appendix, as listed below.

A2 **Installation Drawings**

DOCUMENT	Rev
JA55-015 Connector Map	A
JA55-015 Interconnect	A
JA55-015 Mechanical Installation	B

MAIN CONNECTOR

P1
 9 PIN FEMALE DMIN
 MATING CONNECTOR



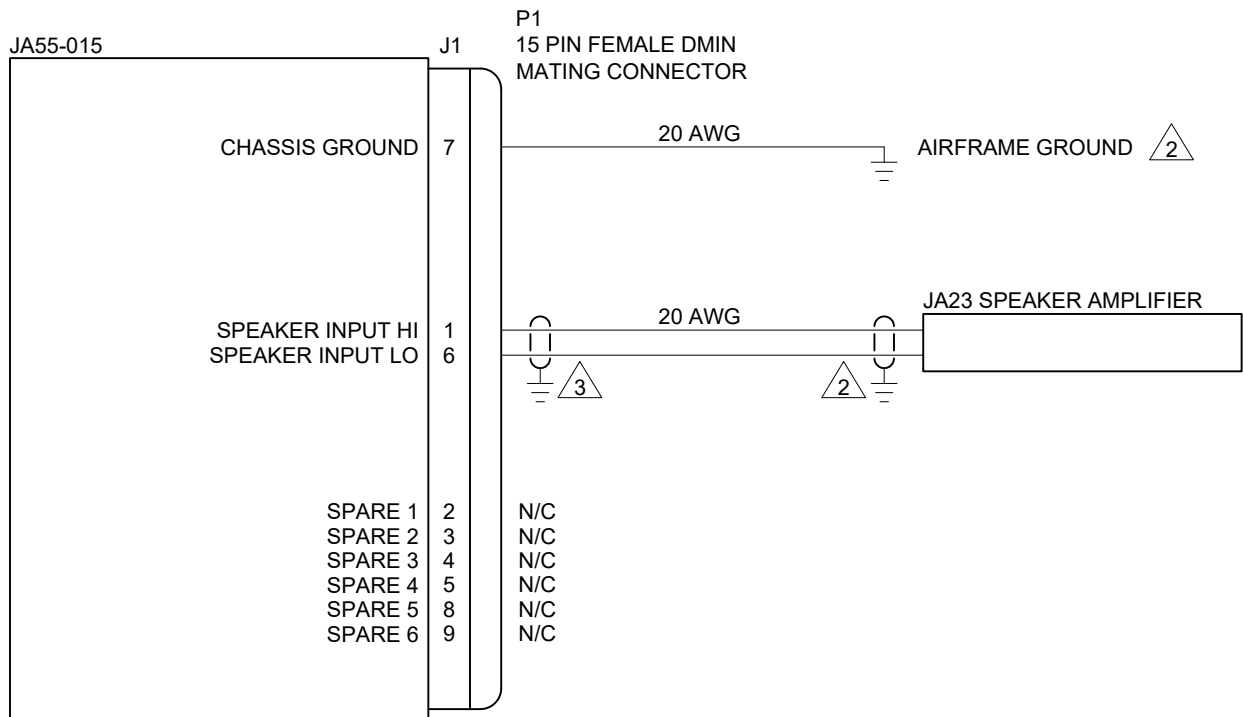
VIEW IS FROM REAR OF MATING CONNECTOR




PREPARED	KV	JUPITER AVIONICS <small>CORPORATION</small>		
CHECKED		TITLE Dzus Panel Speaker - 4 Ohm - 15 Watt P1 - Main Connector		
APPROVED		NCAGE CODE L00N3	PART NO. JA55-015	SHEET 1/1
CONFIDENTIAL & PROPRIETARY TO JUPITER AVIONICS CORP.		DOC NO. JA55-015 Connector Map Rev A		

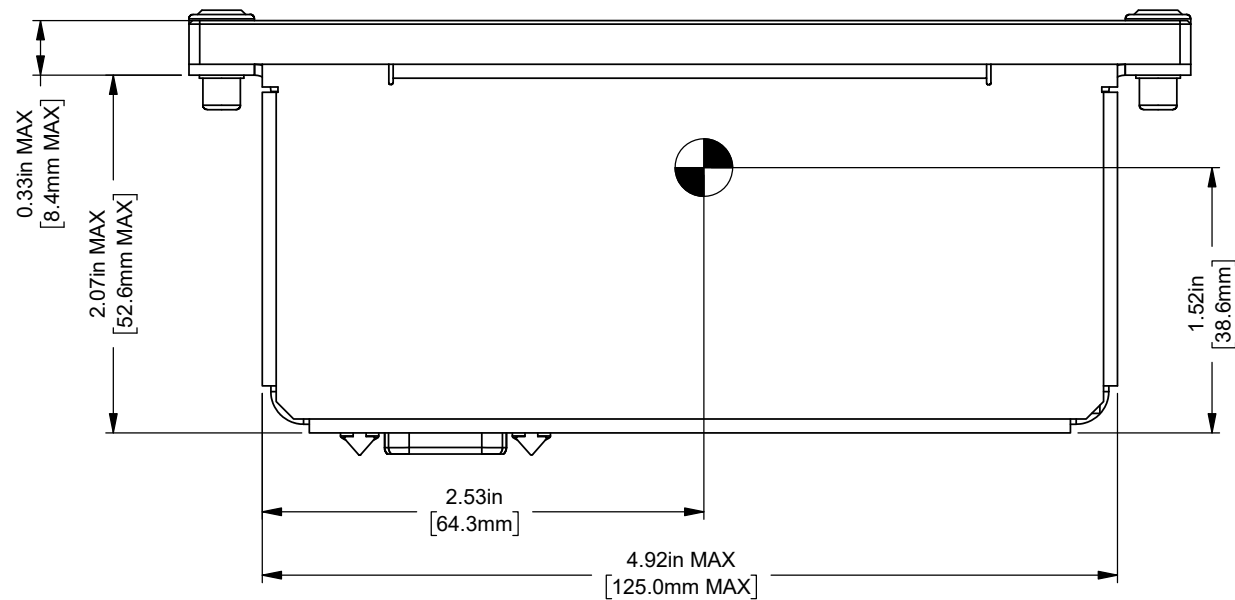
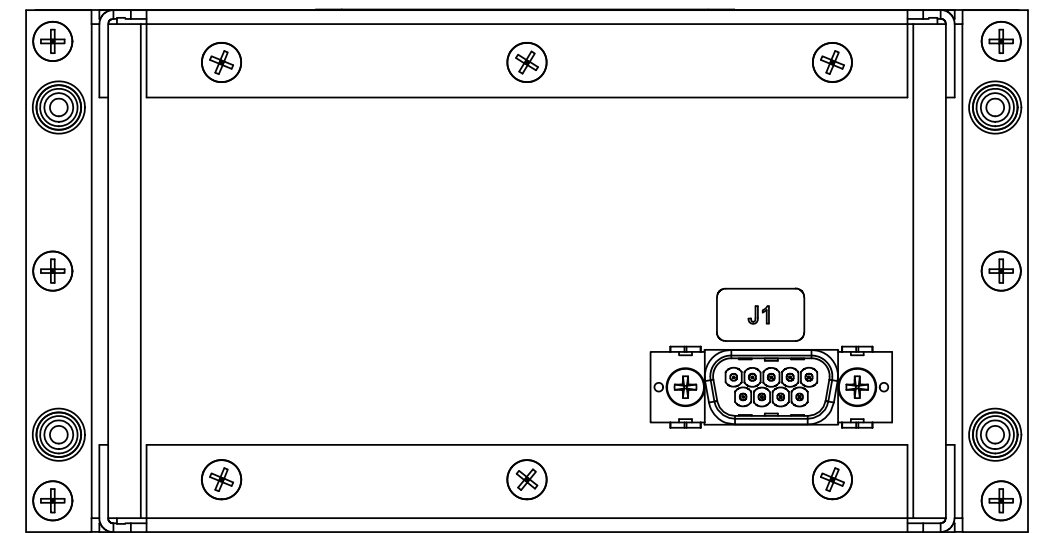
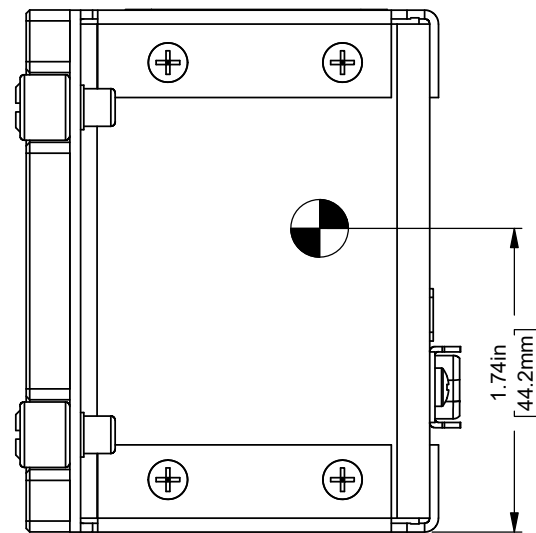
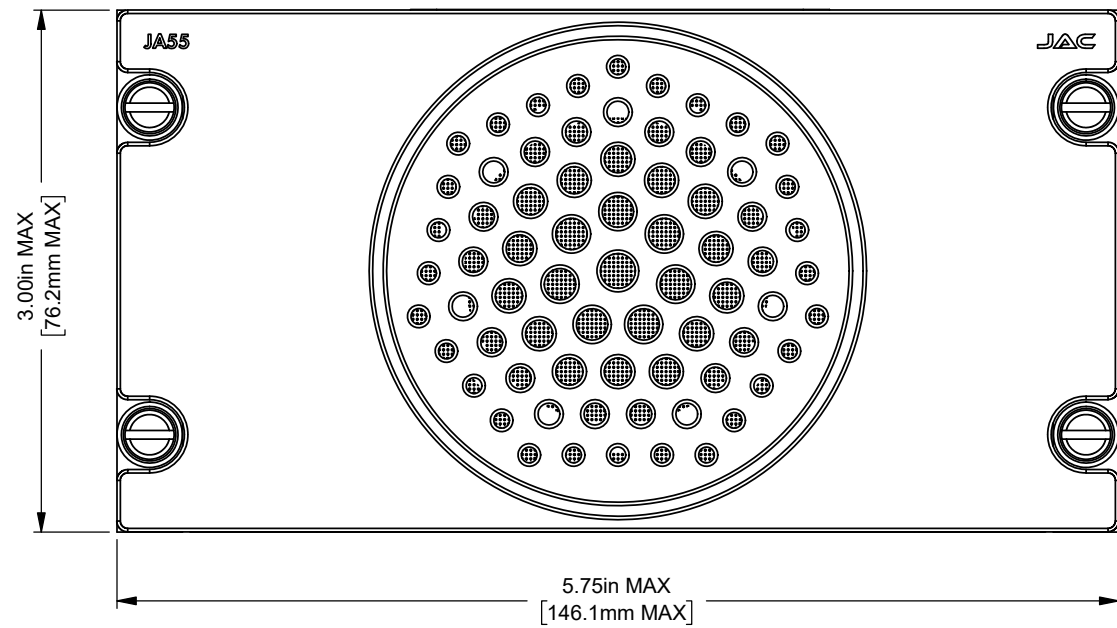
JA55-015 INTERCONNECT WIRING NOTES


NOTES

1. ALL WIRE SIZE SHOULD BE 20 AWG MIN UNLESS OTHERWISE SPECIFIED. UNSHIELDED WIRE SHOULD BE SELECTED PER FAA AC43.13-1B CHANGE 1 PARA 11-76 TO 11-78. WIRE TYPES SHOULD BE IN ACCORDANCE WITH MIL-W-22759 AS DESCRIBED IN FAA AC43.13-1B CHANGE 1 PARA 11-85 AND 11-86 AND LISTED IN TABLE 11-11 OR 11-12. ALL SHIELDED CABLE SHOULD BE IN ACCORDANCE WITH MIL-DTL-27500 (REVISION H OR LATER).
2. CONNECTION TO AIRFRAME GROUND SHOULD BE MADE WITH 20 AWG WIRE. LENGTH NOT TO EXCEED 3 FT (0.91 M).
3. CABLE SHIELDS AT THE JA55 CONNECTOR END SHOULD BE TERMINATED TO AIRFRAME GROUND.

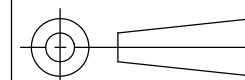


PREPARED	TAT	 JUPITER AVIONICS CORPORATION		
CHECKED				
APPROVED		Speaker Panel - 4 Ohm - 15 Watt J1 Interconnect		
CONFIDENTIAL & PROPRIETARY TO JUPITER AVIONICS CORP.		NCAGE CODE L00N3	PART NO. JA55-015	DOC NO. JA55-015 Interconnect Rev A.dwg




 CENTER OF GRAVITY
 ±0.03in [0.8mm]
 WEIGHT: 0.98 lbs [0.44 kg] MAX.

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 ANGLES ARE IN DEGREES
 TOLERANCES:
 1 DEC PLACE: ± 0.1
 2 DEC PLACE: ± 0.01
 3 DEC PLACE: ± 0.005
 ANGLES: ± 0.5 DEG



MATERIAL: N/A
 FINISH: N/A

PREPARED	TAT
CHECKED	JAC 03-13-25 TAT
APPROVED	JAC 03-13-25 KDV
CONFIDENTIAL & PROPRIETARY TO JUPITER AVIONICS CORP. DRAWING NOT TO SCALE	

		TITLE	
		Dzus Panel Speaker - 4 Ohm - 15 Watt	
NCAGE CODE	PART NO.	SHEET	
L00N3	JA55-015	1/1	
DOC. NO.		JA55-015 Mechanical Installation Rev B.SLDDRW	



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Appendix B - Certification Documents



B1 Airworthiness Approval

Airworthiness approval of the JA55-015 may require completion of a TCCA Major Modification Report per CAR STD (AWM) 571 Appendix L, or a FAA Form 337. The sample wording for a description of the work is provided to assist the Installing Agency in preparing Instructions for Continued Airworthiness (ICA) when replacing an existing speaker with a Jupiter Avionics JA55-015 Dzus Panel Speaker - 4 Ohm - 15 Watt. This sample may be modified appropriately for new installations. It is the installer's responsibility to determine the applicability of the method used. Installations performed outside Canada must follow the applicable aviation authority's regulations.

Sample Wording:

Removed the existing [model] audio panel and replaced with a Jupiter Avionics JA55-015 Dzus Panel Speaker - 4 Ohm - 15 Watt in [aircraft location].

Installed in accordance with the JA55-015 Installation Manual, Revision [], and AC 43.13-2, Chapters 2, and 3.

The JA55-015 interfaces with existing aircraft systems per the Installation Manual instructions.

The JA55-015 Installation Manual provides detailed installation instructions and wiring diagrams (Section 2, and Appendices A and B).

Power is supplied to the JA55-015 through an existing []-Amp circuit breaker that was previously used by the original speaker. The net electrical load is unchanged.

Aircraft equipment list, weights and balance amended. Compass compensation checked and found to conform to applicable regulations.

B2 Instructions for Continued Airworthiness

Maintenance of the JA55-015 Dzus Panel Speaker - 4 Ohm - 15 Watt is "on condition" only. Refer to the JA55-015 Maintenance Manual. Periodic maintenance of the JA55-015 is not required.

The following sample Instructions for Continued Airworthiness (ICA) provides assistance in preparing ICA for the Jupiter Avionics JA55-015 unit installation as part of a Type Certificate (TC) or Supplemental Type Certificate (STC) project to comply with CAR STD (AWM) 523/527/525/529.1529 or FAR 23/25/27/29.1529 "Instructions for Continued Airworthiness".

Items that may vary by aircraft make and model are shown in brackets ("[]") and should be filled in as appropriate. Some of the checklist items do not apply, in which case they should be marked "N/A" (Not Applicable).

Instructions for Continued Airworthiness, Jupiter Avionics JA55-015 Dzus Panel Speaker - 4 Ohm - 15 Watt in an [Aircraft Make and Model]

1. Introduction

[Aircraft that has been altered: Registration number, Make, Model and Serial Number]

Content, Scope, Purpose and Arrangement: This document identifies the Instructions for Continued Airworthiness for a Jupiter Avionics JA55-015 installed in an [aircraft make and model].

Applicability: Applies to a Jupiter Avionics JA55-015 installed in an [aircraft make and model].

Definitions/Abbreviations: None, N/A.

Precautions: None, N/A.

Units of Measurement: None, N/A.

Referenced Publications: JA55-015 Installation Manual
JA55-015 Maintenance Manual
STC/TC # [applicable STC/TC number for the specific aircraft installation]

Distribution: This document should be a permanent aircraft record.



2. Description of the System/Alteration

Jupiter Avionics JA55-015 Dzus Panel Speaker - 4 Ohm - 15 Watt with interface to external transceivers and [include other equipment/systems as appropriate]. Refer to Appendix A of this manual for interconnect information. Refer to aircraft manufacturer approved interconnect for actual installation.

3. Control, Operation Information

N/A

4. Servicing Information

N/A

5. Maintenance Instructions

Maintenance of the JA55-015 is 'on condition' only. Periodic maintenance is not required. Refer to the JA55-015 Maintenance Manual.

6. Troubleshooting Information

Refer to the JA55-015 Maintenance Manual.

7. Removal and Replacement Information

Refer to Section 2 of this manual - the JA55-015 Installation Manual. If the unit is removed and reinstalled, a functional check of the equipment should be conducted.

8. Diagrams

Refer to Appendix A of this manual - the JA55-015 Installation Manual - for installation drawings and interconnect examples.

9. Special Inspection Requirements

N/A

10. Application of Protective Treatments

N/A

11. Data: Relative to Structural Fasteners

JA55-015 and appropriate mounting hardware installation, removal and replacement should be in accordance with applicable provisions of AC 43.13-1B and AC 43.13-2A.

12. Special Tools

N/A

13. This Section is for Commuter Category Aircraft Only

A. **Electrical loads:** Refer to Section 1 of the JA55-015 Installation Manual.

B. **Methods of balancing flight controls:** N/A.

C. **Identification of primary and secondary structures:** N/A.

D. **Special repair methods applicable to the airplane:** N/A.

14. Overhaul Period

No additional overhaul time limitations.

15. Airworthiness Limitation Section

N/A