JA72-408

Glove Box with USB-A and USB-C Charger - 8 Dzus

Installation and Operating Manual

Rev. A

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IMPORTANT:

Information in this document is subject to change without notice.

To confirm the current revision status of this manual, visit the JAC website:

www.jupiteravionics.com

RECORD OF REVISIONS			
Revision	**Rev Date**	**Description**	**ECR**
A	Feb 2024	Initial release, Serial number 1001 and higher.	9238

Prepared:	Checked:	Approved:
MPB	JAC 02-16-24 MB	JAC 02-20-24 KDV

Table of Contents

JA72-408 Glove Box with USB-A and USB-C Charger - 8 Dzus

SECTION 1 - DESCRIPTION

1.1 System Overview

The JA72-408 Glove Box with USB-A and USB-C Charger - 8 Dzus allows the aircraft owner/operator to utilise an unused portion of the instrument panel for storage. The interior of the glove box has a black anodized finish to minimize scratches.

The JA72-408 uses an 8 Dzus high aperture.

1.2 Features Overview

One USB 2.0 Type A receptacle is provided to supply 5 Vdc power up to 2.1 Amps.
One USB 2.0 Type C receptacle is provided to supply various voltages and currents up to 45 Watts.

1.3 Inputs and Outputs

Refer to the JA72-408 connector map for the mating connector designators and contact assignments for the input and bi-directional signals.

1.3.1 Inputs

Name	Qty	Type
POWER INPUT	1	Power
CC1	1	CC1 input
CC2	1	CC2 input

1.3.2 Output

Name	Qty	Type
+5VDC	1	USB power output
V BUS	4	USB power output

1.3.3 Bi-Directional

Name	Qty	Type
D+	1	Charge sense
D-	1	Charge sense
D+	3	Data
D-	3	Data

1.3.4 Grounds/Spares

Name	Qty	Type
POWER GROUND	1	Power ground
GROUND RETURN	4	Ground return
CHASSIS GROUND	1	Chassis ground
SPARE	3	Spares (Main connector)
SPARE	10	Spares (USB-C connector)

1.4 Specifications

1.4.1 Electrical Specifications

Power Input

Primary nominal voltage	28.0 Vdc
Maximum voltage	32.2 Vdc
Minimum voltage	22.0 Vdc
Emergency voltage	18.0 Vdc
Power Input - Off	≤ 15 Vdc
Input current at 28 Vdc	≤ 3.2 A

1.4.1.1 USB-A Output Performance

Output rated current	≤ 2.1 A
Output rated voltage	+5 Vdc ± 10 %
Ripple	≤ 5 mVpp
Short circuit	≥ 1 min

1.4.1.2 USB-C Output Performance

Output rated current	2.25 A for +20 V output 3.00 A for all other voltages
Output rated voltage	+5 Vdc ± 5 % +9 Vdc ± 5 % +12 Vdc ± 5 % +15 Vdc ± 5 % +20 Vdc ± 5 %
Ripple	≤ 5 mVpp for +5 V output ≤ 9 mVpp for +9 V output ≤ 12 mVpp for +12 V output ≤ 15 mVpp for +15 V output ≤ 20 mVpp for +20 V output
Short circuit	≥ 1 min for all voltages

1.4.2 Mechanical Specifications

Height		3.00 in [76.2 mm] maximum
Behind panel depth (not including connectors)		5.52 in [140.2 mm] maximum
Width		5.75 in [146.1 mm] maximum
Weight		1.31 lb [0.60 kg] maximum
Enclosure:		5052-H32 aluminum; brushed texture and black anodized
Faceplate		6061-T651 Aluminum with flat black urethane paint; white legends
Connectors (3):	J1 Main J2 USB C J3 USB A	One 9-pin D-Sub male, V5 locking One USB Type C Female One USB Type A Female
Mounting		4 Dzus fasteners
Bonding		≤ 2.5 mΩ
Installation kit part number		INST-JA72

1.4.3 Flammability of Materials

The JA72-408 complies with the requirements of RTCA/DO-160G Sec 26.3.3 "Flammability", through equivalent flammability testing of materials and the Small Parts Exemption.

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 JA72-408 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

All products manufactured by JAC are 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

CAUTION: The power input circuitry of the unit may be damaged if the installation does not conform to the wiring instructions in this manual.

2.4.1 Installation Limitations

Those installing the JA72, on or in a specific type or class of aircraft, must determine that the aircraft installation conditions meet standards. The JA72 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. Follow the Connector Map in Appendix A of this manual.

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. Refer to the Interconnect drawing for additional specifications.

2.4.3 Mechanical Installation

The JA72-408 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.

2.4.6 Post Installation Checks

2.4.6.1 Voltage/Resistance checks

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

a) Check P1 pin **1** for +28 Vdc relative to ground.
b) Check P1 pin **6** (power ground) for continuity to ground (less than 0.5 Ω).
c) Check P1 pin **7** (chassis ground) for continuity to ground (less than 0.5 Ω).
d) Check all pins for shorts to ground or adjacent pins.

2.4.6.2 Power on Checks

Power up the aircraft's systems and confirm normal operation of all functions of the JA72. Refer to Section 3 (Operation) for specific operational details.

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-JA72) consists of the following:

Quantity	Description	JAC Part #
1	D-Sub 9-pin connector, hood and 9 crimp pins	CON-3420-0009
1	JA72 Assembly Notes, Installation Kit	DOC-INST-JA72

2.5.1 Recommended Crimp tools

Standard D-Sub Crimp Tool Chart			
Tool Type	**Hand crimping tool**	**Positioner**	**Insertion/extractor tool**
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.

SECTION 3 – OPERATION

3.1 Introduction

This section contains the operating instructions for the JA72-408.

The JA72-408 provides a useful storage space with the added benefits of storing and charging two phones or other devices.

The JA72-408 uses an 8 Dzus high panel height.

3.2 Front Panel Connectors

The JA72-408 has one front panel USB-A Power output connector and one front panel USB-C Power output connector.

3.2.1 USB-C Power Output

This Power Output is a USB Type C connector.

This connector has a USB PD Type C receptacle with an auto-adjustable supply which can deliver +5 Vdc @ 3 A, +9 Vdc @ 3 A, +12 Vdc @ 3 A, +15 Vdc @ 3 A, or +20 Vdc @ 2.25 A for charging cell phones and similar devices.

3.2.2 USB-A Power Output

Note: USB-A port is not designed to be used for data transfer.

This Power Output is a USB Type A connector.

This connector is provided to supply +5 Vdc up to 2.1 Amps for charging cell phones and similar devices.

3.3 Compatibility

CAUTION: Attempting to connect an incompatible plug or device could damage the JA72, the attached device, or both.

If in doubt regarding compatibility of a specific item, contact Jupiter Avionics (www.jupiteravionics.com).

Installation and Operating Manual
Appendix A - Installation Drawings

A1 Introduction

The drawings necessary for installation and troubleshooting of the JA72-408 Glove Box with USB-A and USB-C Charger - 8 Dzus are in this Appendix, as listed below.

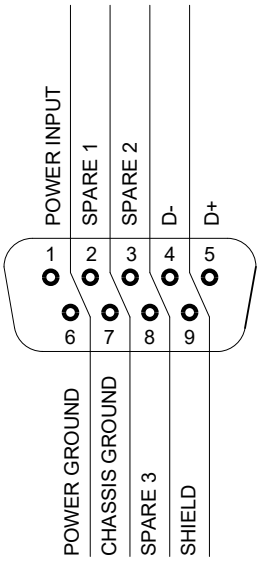
A2 Installation Drawings

DOCUMENT	Rev
JA72-408 Connector Map	A
JA72-408 Interconnect	A
JA72-408 Mechanical Installation	A

Main Connector

P1

9 PIN FEMALE DMIN
MATING CONNECTOR

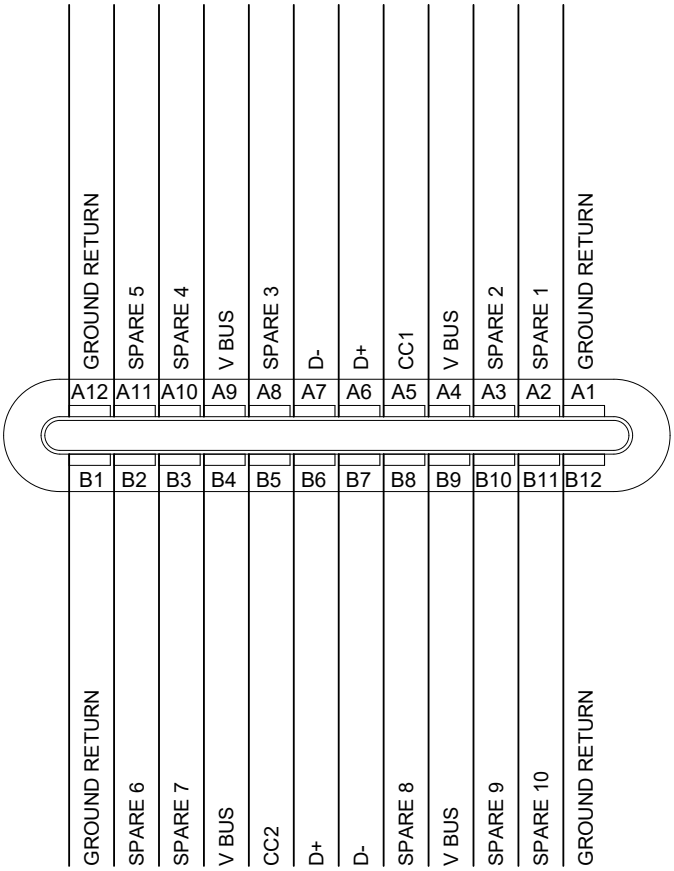


VIEW IS FROM REAR OF MATING CONNECTOR

USB C Connector

P2

USB TYPE C MALE
MATING CONNECTOR

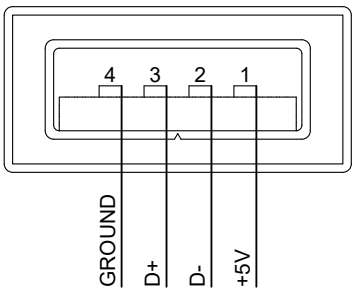


View is from front of mating connector

USB A Connector

P3

USB TYPE A MALE
MATING CONNECTOR



View is from front of mating connector

PREPARED	TAT	JUPITER AVIONICS CORPORATION	
CHECKED	JAC 11-16-23 AH	TITLE: Glove Box with USB-A and USB-C Charger - 8 Dzus Connector Map	
APPROVED	JAC 11-16-23 KDV	NCAGE CODE: L00N3	PART NO.: JA72-408 / SHEET: 1/1
CONFIDENTIAL & PROPRIETARY TO JUPITER AVIONICS CORP.		DOC NO.: JA72-408 Connector Map Rev A.dwg	

JA72-408 INTERCONNECT WIRING NOTES

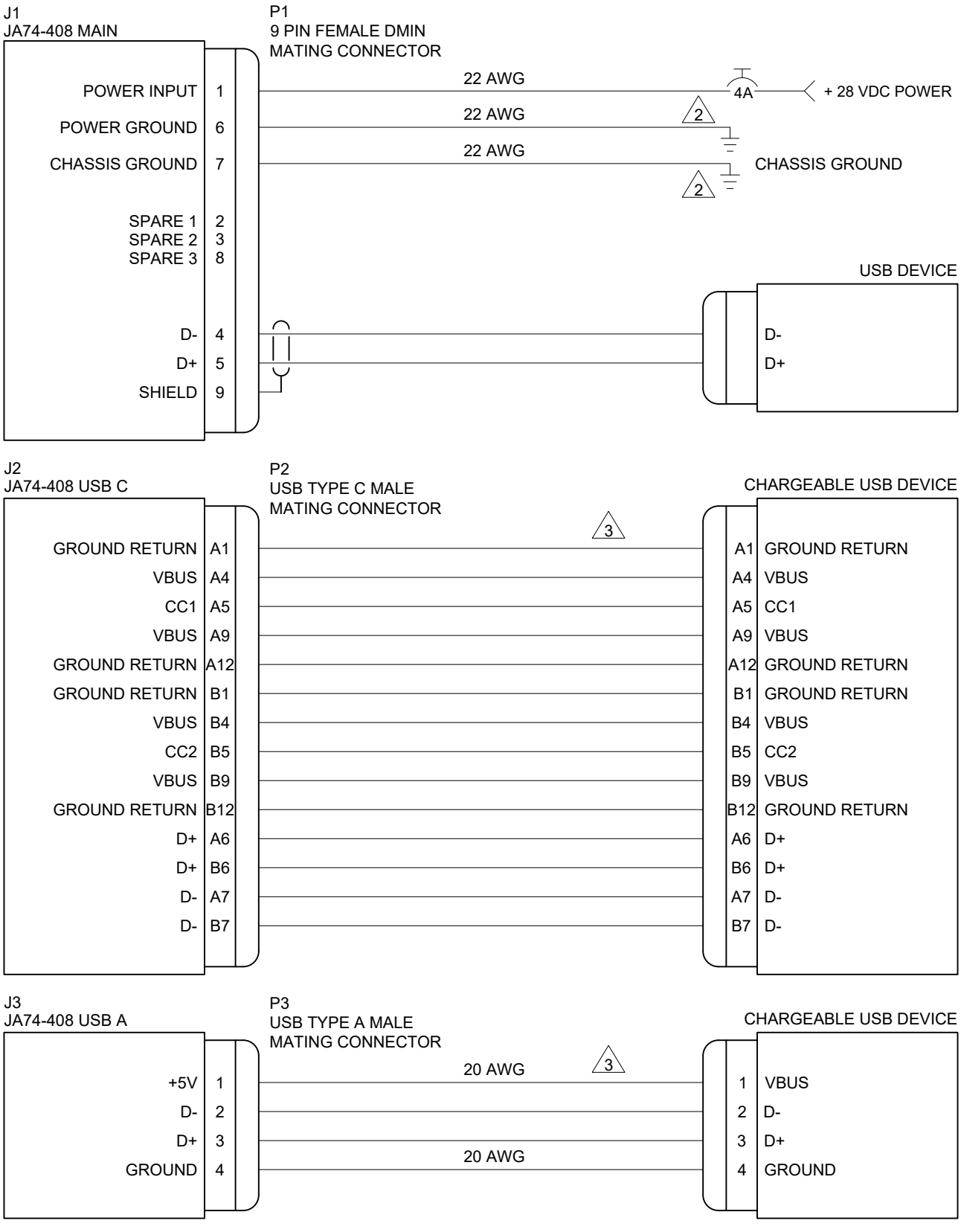
NOTES

1. ALL WIRE SIZE SHOULD BE 22 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 22 AWG WIRE. LENGTH NOT TO EXCEED 3 FT (0.91 M).

△3 CABLE LENGTH NOT TO EXCEED 6 FT (1.82 M).

PREPARED	TAT	JUPITER AVIONICS CORPORATION		
CHECKED	JAC 02-15-24 MB	TITLE: Glove Box with USB-A and USB-C Charger - 8 Dzus		
APPROVED	JAC 02-15-24 KDV	NCAGE CODE: L00N3	PART NO.: JA72-408	SHEET: 1/2
CONFIDENTIAL & PROPRIETARY TO JUPITER AVIONICS CORP.		DOC NO.: JA72-408 Interconnect Rev A.dwg		



PREPARED	TAT	JUPITER AVIONICS CORPORATION	
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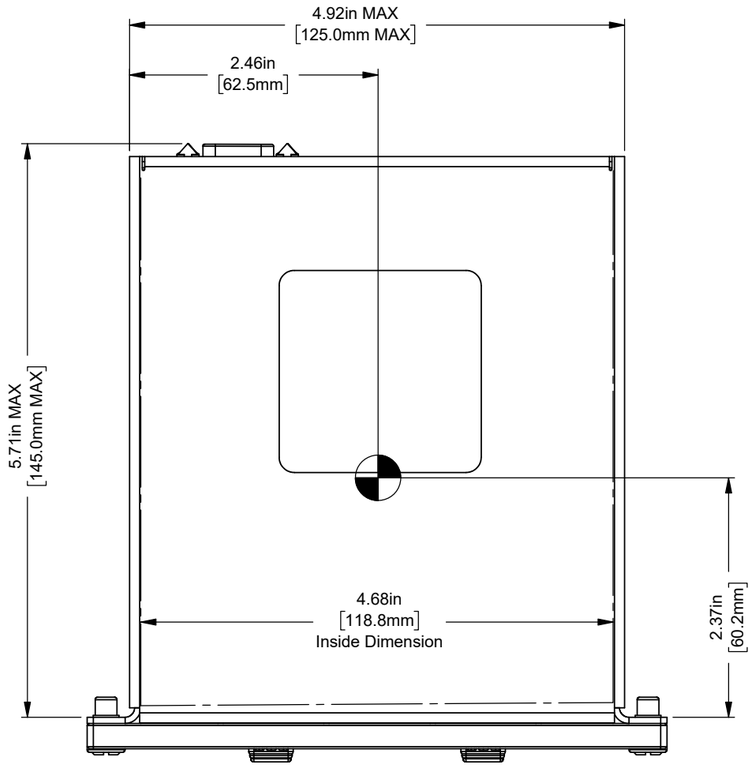
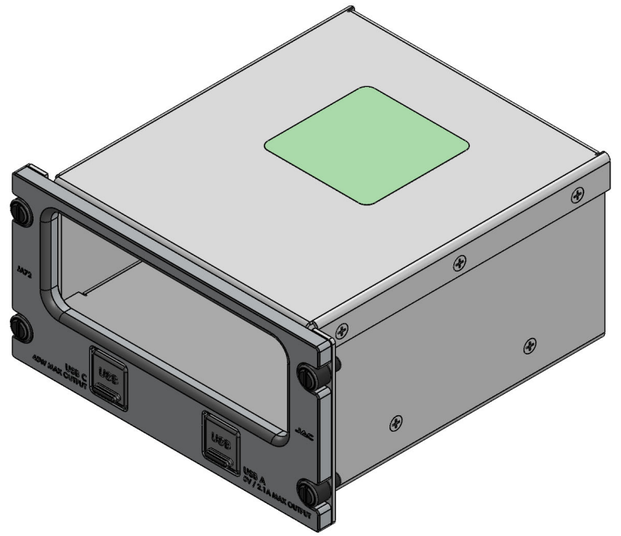
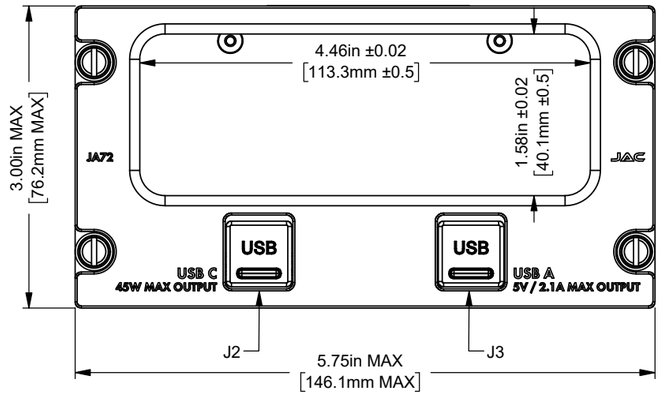
CONFIDENTIAL & PROPRIETARY TO JUPITER AVIONICS CORP.		DOC NO.: JA72-408 Interconnect Rev A.dwg	

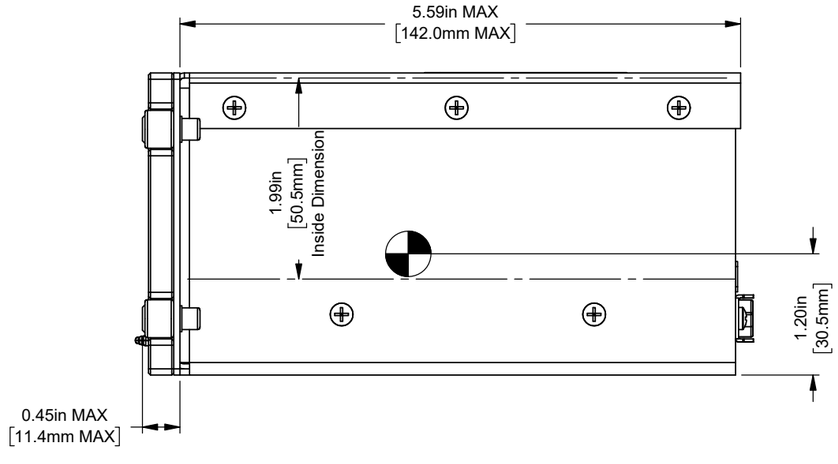


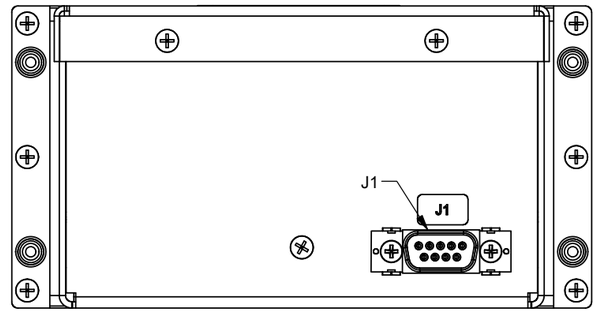
CENTER OF GRAVITY
±0.03in [0.8mm]

WEIGHT: 1.31 lbs [0.60 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	PREPARED	TAT
	CHECKED	JAC 02-06-24 TAT
	APPROVED	JAC 02-07-24 KDV
MATERIAL: N/A	CONFIDENTIAL & PROPRIETARY TO JUPITER AVIONICS CORP.	
FINISH: N/A	DRAWING NOT TO SCALE	

JUPITER AVIONICS CORPORATION

TITLE: Glove Box with USB-A and USB-C Charger - 8 Dzus

NCAGE CODE	PART NO.	SHEET
L00N3	JA72-408	1/1

DOC. NO.
JA72-408 Mechanical Installation Rev A.SLDDRW

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Appendix B - Installation Documents

B1 Airworthiness

Airworthiness approval of the JA72-408 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 installing a Jupiter Avionics JA72-408 Glove Box with USB-A and USB-C Charger - 8 Dzus. 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:

Installed the Jupiter Avionics JA72-408 Glove Box with USB-A and USB-C Charger - 8 Dzus in [aircraft location].

Installed in accordance with the JA72-408 Installation Manual, Revision [ ], and AC 43.13-2, Chapters 2, and 3.

The JA72-408 Installation Manual provides detailed installation instructions and wiring diagrams (Section 2, and Appendices A and B).

Power is supplied to the JA72-408 through a 2-Amp circuit breaker.

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 JA72-408 Glove Box with USB-A and USB-C Charger - 8 Dzus is "on condition" only. Refer to the JA72-408 Maintenance Manual. Periodic maintenance of the JA72-408 is not required.

The following sample Instructions for Continued Airworthiness (ICA) provides assistance in preparing ICA for the Jupiter Avionics JA72-408 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 JA72-408 Glove Box with USB-A and USB-C Charger - 8 Dzus 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 JA72-408 installed in an [aircraft make and model].

Applicability: Applies to a Jupiter Avionics JA72-408 installed in an [aircraft make and model].

Definitions/Abbreviations: None, N/A.

Precautions: None, N/A.

Units of Measurement: None, N/A.

Referenced Publications: JA72-408 Installation and Operating Manual

JA72-408 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 JA72-408 Glove Box with USB-A and USB-C Charger - 8 Dzus. Refer to Appendix A of this manual for interconnect information. Refer to aircraft manufacturer approved interconnect for actual installation.

3. Control, Operation Information
Refer to section 3 of this manual.

4. Servicing Information
N/A

5. Maintenance Instructions
Maintenance of the JA72-408 is 'on condition' only. Periodic maintenance is not required. Refer to the JA72-408 Maintenance Manual.

6. Troubleshooting Information
Refer to the JA72-408 Maintenance Manual.

7. Removal and Replacement Information
Refer to Section 2 of this manual - the JA72-408 Installation and Operating 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 JA72-408 Installation and Operating 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
JA72-408 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 JA72-408 Installation and Operating 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