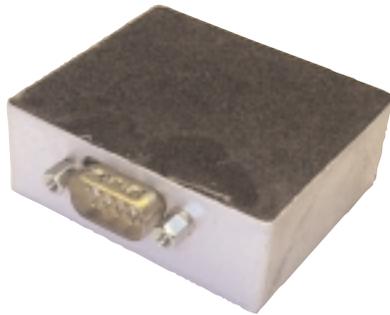


**Single Input Audio Amplifier  
Model A643-U2A**



**Model A643-U2A**

**THIS UNIT IS USED ON THE  
FOLLOWING AIRCRAFT:**

- Lockheed Martin U2

**GENERAL CHARACTERISTICS**

Input Power..... 16 to 29 VDC, 100 mA DC max.  
 Size..... 2 5/16" L x 7/8" H x 2 3/16" D  
 over connector  
 Weight..... 6 oz. Maximum  
 Connector..... DE-9P with Jackscrew Retention  
 Hardware (4-40 thread)

ENVIRONMENTAL..... MILE-5400 Class 2  
 Temperature  
 Continuous Operation..... -54° C to +71° C  
 Intermittent Operation..... +71° C to +95° C  
 Storage..... -65° C to +125° C

**PERFORMANCE**

Input Impedance..... 8 Kohms minimum @ 1kHz  
 Output Impedance..... 300 ohms  
 Output Level Max..... 22 Vrms @ 0.7 Vrms input  
 Output Load Impedance..... 10 Kohm to 100K recommended  
 Power Output..... 48 mW into 10K load @ 1KHz  
 250 mV into 830 Ohm load @ 1 KHz  
 Voltage Gain..... 30 +/-2 dB  
 Frequency Response..... +/-2 dB, 300 to 6000 Hz  
 Distortion..... 10% 300 to 6000 Hz  
 Stable and protected against  
 open or short circuits.

**DESCRIPTION AND USE**

The A643-U2A is a single input audio amplifier for use in intercommunication systems. It is a miniature, encapsulated, solid-state unit of high reliability. It is intended for use in any audio system where isolation and amplification of an audio signal is required.

C46-5408 Rev D

## INTERFACE DESCRIPTION

Audio Amplifier

- A643-U2A

Unit Connector

- DE-9P, 9 Pins

<u>Pin</u>	<u>Name</u>	<u>Description / Comments</u>
1	Audio Input High	<ul style="list-style-type: none"><li>• Input Audio, 0.01 Vrms to 0.7 Vrms</li><li>• Input Impedance is 8 kOhm (Between pins 1, 8) minimum @ 1 kHz. Nominal 10.7 kOhms @ 1 kHz; 12 kOhms @ DC</li></ul>
2	Unused	
3	Unused	
4	Unused	
5	Audio Output	<ul style="list-style-type: none"><li>• Rated Output 22 Vrms with a 10 K to 100 kOhm Load</li><li>• Output Power 48 mW into 10K Ohm Load @ 1 kHz</li><li>• Max. Output Power 250 mW into 830 Ohm Load @1 kHz</li><li>• Unit Output Impedance &lt; 300 Ohm</li><li>• The Output is transformer isolated</li></ul>
6	27.5 VDC Power Input	<ul style="list-style-type: none"><li>• Normal Input Range 16 to 29 VDC</li><li>• Input Current maximum 100 mA</li></ul>
7	Unused	
8	Battery Ground	<ul style="list-style-type: none"><li>• DC Power Return</li><li>• Input Audio Low</li><li>• Output Audio Low</li></ul>
9	Unused	