

**Dual Input Audio Amplifier  
Model A643**



**Model A643**

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

- Sea King Helicopter

**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..... 5 oz. Maximum  
 Connector..... DE-9P

ENVIRONMENTAL..... MIL-E-5400 Class 1  
 Temperature  
 Continuous Operation..... -54° C to +55° C  
 Intermittent Operation..... +55° C to +71° C

**PERFORMANCE**

Input Impedance (each input)... 1200 ohms  
 Output Impedance..... 300 to 600 ohms  
 Isolation between inputs..... 8 dB minimum  
 Power Output..... 300 mW  
 Voltage Gain..... 43 +/-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 is a dual 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 mixing, isolation and amplification of two signals are required.

C46-5392 Rev C

## INTERFACE DESCRIPTION

Audio Amplifiers

- A643

Unit Connector

- DE-9P, 9 Pins

<u>Pin</u>	<u>Name</u>	<u>Description / Comments</u>
1	Audio Input 1	<ul style="list-style-type: none"><li>• Input Audio, 0.01 Vrms to 0.12 Vrms</li><li>• Input Impedance is 1200 Ohm (Between pins 1, 8)</li></ul>
2	Unused	
3	Audio Input 2	<ul style="list-style-type: none"><li>• Input Audio, 0.01 Vrms to 0.12 Vrms</li><li>• Input Impedance is 1200 Ohm (Between pins 3, 8)</li></ul>
4	Unused	
5	Audio Output	<ul style="list-style-type: none"><li>• Output Audio, Output Power 300 mW@1 KHz</li><li>• Rated Output 13.5 Vrms to 600 Ohm Load</li><li>• Output Impedance 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	