



# BongioviAviation

## Speaker-less Audio

Private and Business aircraft owners demand high fidelity state of the art audio performance in a noisy cabin environment.

### Solution

Interior panels *become* the speakers.

Speakerless Audio with patented Bongiovi DPS signal processing technology coupled with transducers attached to the backside of aircraft interior panels.



### Technology Benefits

- Immersive.** High Fidelity state of the art audio resulting in a uniform **immersive audio experience** throughout the entire cabin.
- Aesthetic.** Customized **interior theme** is maintained without the disruption of installed commodity speakers and speaker grills.
- Efficient.** Package space is improved by the **elimination of speakers** and subwoofers.
- Appropriate.** Lighter materials used resulting in **system weight reduction**.

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# Bongiovi Aviation

## Speaker-less Audio Hardware

### Custom Designed Optimized Transducers

Proprietary design optimizes the performance of the aircraft panels

- High Power
- Low Distortion
- Optimized for aircraft applications
- Low profile (0.9 Inches)
- Light Weight (0.2 lbs.)



Bongiovi Transducer  
(BAV-TRA-1-A001)

### 6 Channel Bongiovi Digital Power Station (DPS) Class D Amplifier

- 6 Channels x 100W / Channel
- 1.9 LBS
- Patented audio processing algorithm that re-masters audio in real time.
- Custom profile is created for your aircraft panels.
- Provides superior sound quality and clarity in high noise environments of aircraft.



Bongiovi 6 Channel Amplifier  
(BAV-AMP-420-C001)

### Bongiovi Digital Power Station (DPS) Headphone Module

- Integrated audio processor that re-masters audio in real time.
- 4 user selectable custom profiles
- Provides superior sound quality and clarity in high noise environments of aircraft.



Bongiovi Headphone Module  
(BAV-HPM-4-C001)



## Bongiovi 6 Channel Amplifier

BAV-AMP-420-C001

The BAV-AMP-420-C001 is a high powered amplifier for the aircraft cabin environment. The amplifier has 6 channels, each capable of delivering 100W. Loads ranging from 3 ohms to 9 ohms are supported. The BAV-AMP-420-C001 supports 3 stereo audio inputs in either line level or high level input. There is also a single line level mono input that has a ground input to automatically switch to the channel. A built in audio mixing circuit allows up to 4 headphone line level outputs to be connected to the amplifier. Each headphone output has independent control over the source that is heard. The amplifier is designed utilizing the proprietary Bongiovi Digital Power Station™ (DPS) algorithm. The amplifier is designed specifically to drive the BAV-TRA-1-C001 transducers and provide a rich and immersive audio experience in the aircraft environment.



### Features

- 6 Channels x 100W / Channel
- 3 Independent stereo inputs + 1 mono input
- 4 Independently selectable line level headphone outputs
- Patented audio processing algorithm that re-masters audio in real time
- Custom profile is created for your aircraft
- RS485 CMS controlled
- ARINC 429 flight mode adaptable
- PA Override
- Provides superior sound quality and clarity in high noise environments of aircraft.
- TSO-C139a Certified



## Specifications

### Performance

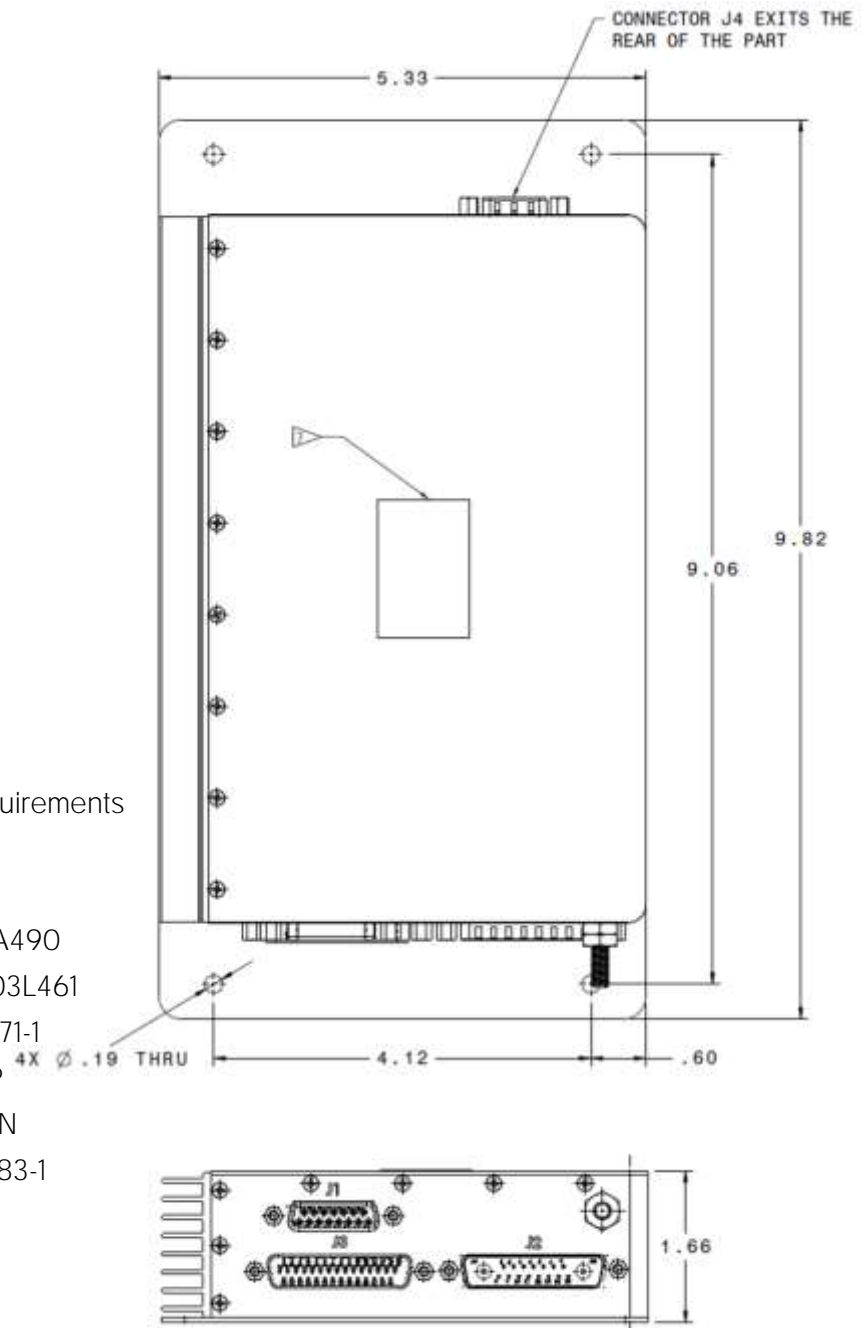
- Input Voltage: 18 to 32VDC
- Current Rating:
  - Quiescent: 400 milliamps
  - Nominal: 3 Amps
  - Maximum: 15 Amps
- Power Rating: 600 Watts Maximum
- Frequency Response: 20 Hz – 20 kHz
- Distortion: < 0.1% THD
- Output Load: 3 – 9 Ohms

### Physical Specifications

- Size: 5.3" x 9.8" x 1.7"
- Weight: < 1.9 lbs.
- Cooling: No special cooling requirements

### Other Specifications

- Connector J1: Amphenol FCE17A15SA490
- Connector J2: Norcomp 684M17W2103L461
- Connector J3: TE Connectivity 5749771-1
- Mating Connector J1: ITT Cannon DAMA-15P
- Mating Connector J2: Amphenol DBM17W2SN
- Mating Connector J3: TE Connectivity 1658683-1





## Bongiovi Transducer Assembly

BAV-TRA-1-C001

The BAV-TRA-1-C001 is a powerful, light-weight transducer designed to deliver premium audio while meeting the stringent requirements of the aviation industry. When grouped into an array, the transducer comprised of a 1 inch (25 mm) exciter and a flame retardant bracket, is designed to excite the interior shell panels of aircraft producing a full range sound stage. The BAV-TRA-1-C001 when integrated with the BAV-AMP-420-C001 audio amplifier provides a rich and immersive audio experience in the aircraft environment.



### Features

- 25W Max
- Weighs less than 1/5 lb
- Patented custom design
- When coupled with BAV-AMP-420-C001 custom profile is created for your aircraft
- Provides superior sound quality and clarity in high noise environments of aircraft.
- TSO-C139a Certified



## Specifications

### Performance

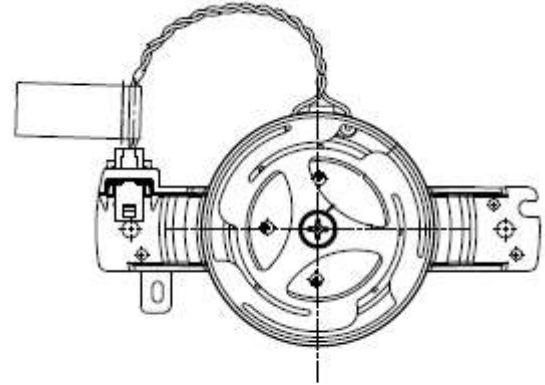
- Power Rating: 25 watts Maximum
- Impedance (ea): 3 Ohms

### Physical Specifications

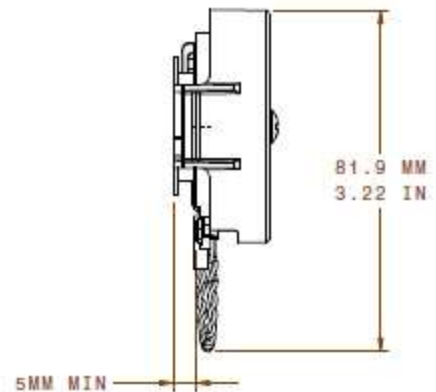
- Size: 4.18" diameter x .99" Height
- Weight: < 0.2 lb
- Cooling: No special cooling requirements

### Other Specifications

- Connector J1: Molex 43045-1000
- Mating Connector: Molex 43025-1000 or equivalent
- Mating Connector Pins: Molex 43030-0001 or equivalent
- Hand Crimp Tool: Molex 63819-0000 or equivalent
- Applicator: Molex 63901-4500 or equivalent



Rear view



Right view



## Bongiovi Headphone Module Assembly

BAV-HPM-4-A001

The BAV-HPM-4-A001 is a powered headphone panel with capacitive touch controls. The line level audio input provides analog audio to a DSP programmed with the Bongiovi DPS algorithm. The headphone panel is equipped with four capacitive touch buttons for volume up, volume down, audio select, and profile select. The volume up and volume down button controls the audio DSP and changes the volume based upon the input. The audio select button enables a momentary ground output. The profile select “B” button selects from 4 audio profiles optimized for high noise environments and to enhance the performance of commonly used headphones. Profiles can be customized upon request. Each push rotates through the four profiles from 1 to 4. The switch has a soft blue backlighting that increases intensity when the button is activated.



### Features

- Self powered headphone amplification from line level source
- Standard 3-conductor 3.5mm headphone jack
- Ground selectable source selection
- Provides superior sound quality and clarity in high noise environments of aircraft.
- Weighs 0.2 lbs
- TSO-C139a Certified



## Specifications

### Performance

- Input Voltage: 22 to 32.2VDC
- Current Rating:
  - Quiescent: 80 milliamps
  - Maximum: 1.5 Amps
- Frequency Response: 20 Hz – 20 KHz

### Physical Specifications

- Size: 3.6" x 2.9" x .9"
- Weight: 0.2 lb
- Cooling: No special cooling requirements

### Other Specifications

- Connector J1: Molex 43045-1000
- Mating Connector J1: Molex 43025-1000 or equivalent

