

# Vx Aviation ASX-2A

Stereo Headphone Music Amplifier

## Installation Guide

VXD-0804002 A3

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# ASX-2A

## Stereo Headphone Music Amplifier

### Description

The ASX-2A device is a stereo headphone music amplifier for aircraft applications. It connects to portable music players or panel-mounted music sources and adds high-fidelity stereo music to existing monophonic audio installations. Using advanced BiCMOS amplifier technology, it provides better frequency response, lower noise and lower distortion than the common 1970's vintage bipolar amplifier designs commonly used.

Music is automatically muted to a low level when communications audio is detected. This allows normal radio communications, alarms and intercom audio to be heard normally without interference from the music source.

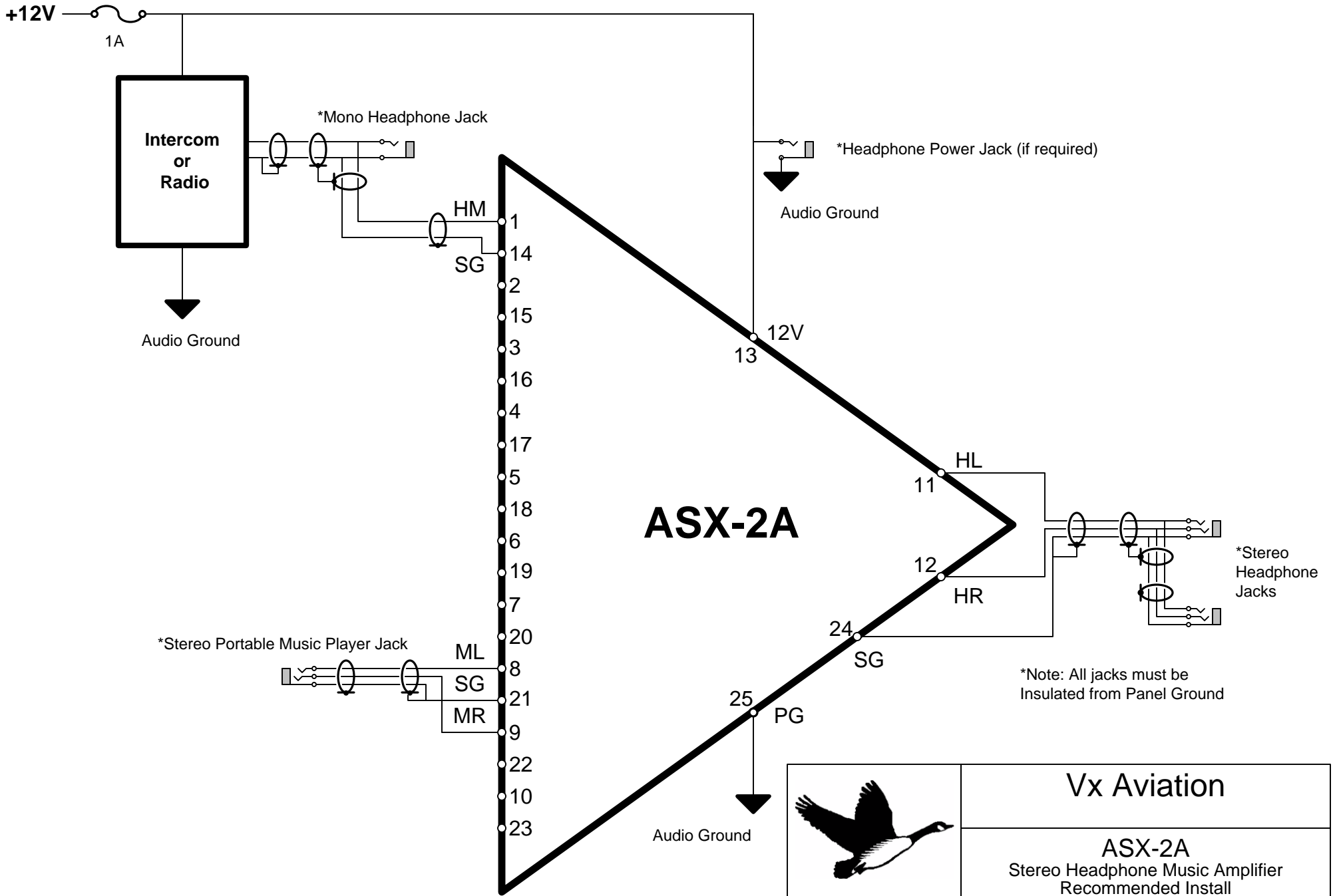
The ASX-2A device is contained in a small 25-pin D-subminiature connector shell that takes no valuable panel space and is adaptable to portable use. It is powered from the aircraft electrical system, and provides about double the power of 9 volt battery powered amplifiers.

The device will drive headphones with a minimum of 32  $\Omega$  impedance, making it compatible with portable music player headphones as well as standard 300  $\Omega$  aircraft headphones.

The amplifier has a nominal gain of 2 for the mono inputs and a nominal gain of 5 for the stereo music inputs. When connected to 300  $\Omega$  impedance loads, the amplifier provides rated power over the entire audio frequency range.

### Technical Summary

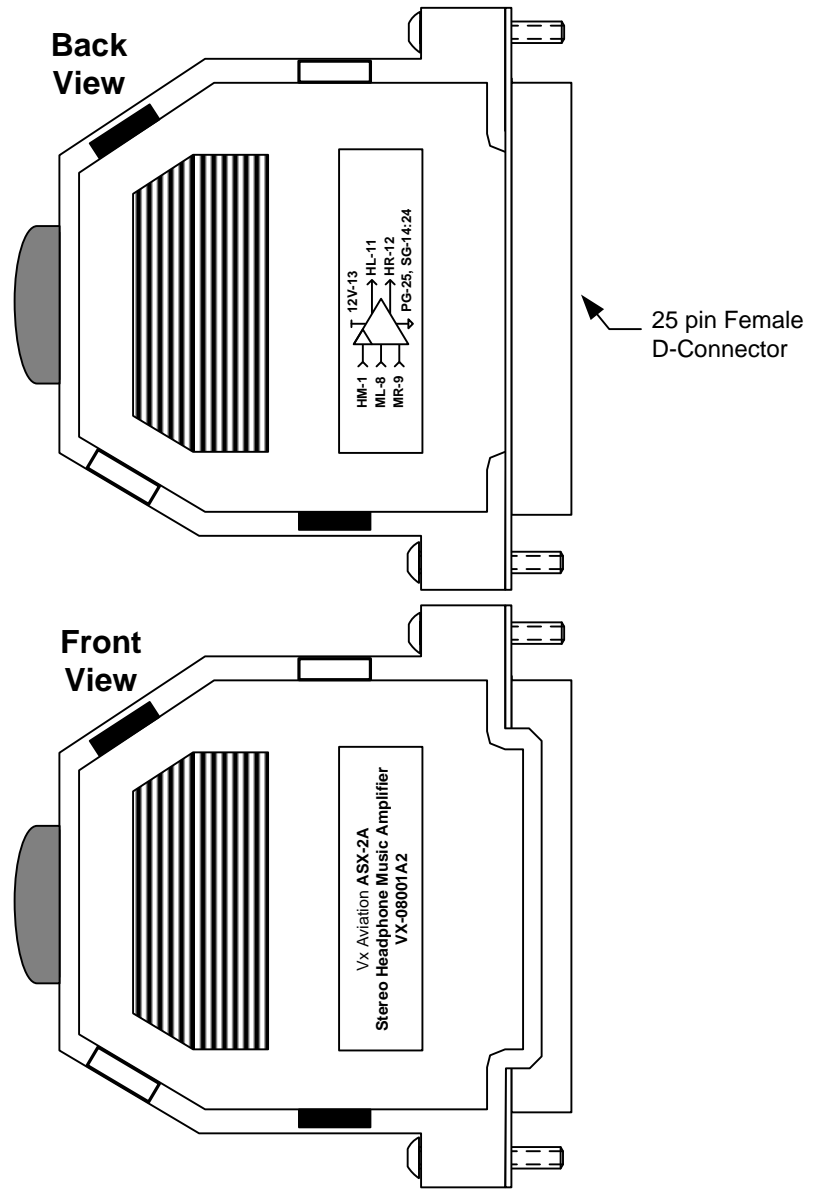
- ❑ Stereo Music Inputs:
  - ❑ 200 K $\Omega$  input impedance
  - ❑ Fixed voltage gain of 5
- ❑ Monophonic Input:
  - ❑ 560  $\Omega$  input impedance
  - ❑ Fixed voltage gain of 2
- ❑ Audio outputs capable of driving 50 mW x 2 into 150  $\Omega$  or 40 mW x 2 into 300  $\Omega$  loads (14.2 volt supply)
- ❑ Wide frequency range 40 Hz to 15 KHz (-3dB) into 300  $\Omega$  loads.
- ❑ Less than 100 mA current drain, 10 to 16 volt operation
- ❑ Available Options: Portability Connector Kit, Panel Mount Kit and Power Extension Cable.



**Typical Application**  
**ASX-2A With Aircraft Intercom and Portable Music Player Input**

		<b>Vx Aviation</b>		
		<b>ASX-2A</b> Stereo Headphone Music Amplifier Recommended Install		
Drawn	V. Little	VX-08001	DWG NO	REV
Date	2009.11.14		VXD-0804002	A5
SCALE	None	SHEET	3 OF 4	

ASX-2A Stereo Headphone Music Amplifier Pin Description			
DB 25F Pin	Pin Name	Function	Connect To
1	HM	Mono Headphone Bus Input. 560 $\Omega$ nominal input impedance.	Monophonic headphone bus. 560 $\Omega$ input impedance is compatible with most certified avionics sources.
2-7		Reserved	No connection.
8	ML	Left and Right Music Inputs. 200 K $\Omega$ nominal input impedance.	Music input Jack left and right channels. Connect ML and MR using shielded wire pair, with shield connected to <b>SG</b> , ASX-2A end only. Some music players may require additional loading resistors connected between the inputs and Signal Ground (32 $\Omega$ -600 $\Omega$ ) for proper operation.
9	MR		
10		Reserved	No connection.
11	HL	Left and Right Headphone Audio Outputs.	Stereo headphone jack left and right channels. Connect using shielded wire pair, with shield connected to <b>SG</b> , ASX-2A end only.
12	HR		
13	12V	Power Input.	10-14 volt power. <b>DO NOT EXCEED 16 Volts.</b>
14-24	SG	Signal Ground.	Shield and Audio grounds.
25	PG	Power Ground.	Power Ground. Internally connected to SG.



Electrical Specifications Over Ambient Temperature Range						
Parameter	Function	Min	Typ	Max	Units	Notes
$T_A$	Ambient Operating Temperature	-40	25	50	Degrees Celcius	Non-condensing
$V_{CC}$	Operating Voltage on 12V input	10	14.2	16	Volts DC	Protect $V_{CC}$ with 1 Amp Fuse or Breaker
$I_{CC}$	Current Drain		10	100	mA DC	
$a_v$	Voltage Gain (per input)		6-mono 14-music		dBV	Outputs unloaded
$P_{OUT}$	Power Output		40		mW x 2	300 $\Omega$ output load.
$f_c$	Frequency Response		40-15,000		Hz	-3 dB, 300 $\Omega$ output load.

	<b>Vx Aviation</b>		
	<b>ASX-2A</b> Pin Description and Specifications		
Drawn V. Little	VX-08001	DWG NO VXD-0804002	REV A5
Date 2009.11.14	SCALE None	SHEET 4 OF 4	