

MakerPlane

AMX-4A

5 Channel Stereo Audio Mixer

Installation Guide

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AMX-4A

5-Channel Stereo Audio Mixer

Description

The AMX-4A is a 5 channel stereo audio mixer for aircraft applications. Units manufactured after 2019 are capable of high level drive, thus replacing the pre-2019 AMX-4A and AMX-4B devices with one new design, capable of driving all intercom types and headphones.

The device functions as a mini stereo audio panel for combining and amplifying various stereophonic audio sources and provides a seamless interface into common intercom systems—all in a small package that takes no valuable panel space.

System wiring is greatly simplified and the units occupy a very small footprint, with all of the circuitry contained in a standard 25-pin D-subminiature connector shell. A large number of signal ground pins are provided to simplify the connections of cable shields. All of the audio connections are made to the 25-pin connector built into the unit.

Two of the five stereo audio inputs have volume controls that are screwdriver adjustable, while the other three are fixed level for connection to instruments that have their own volume adjustment capability.

The AMX-4A is capable of driving up to 12 volts peak-to-peak with a nominal gain of 15 dB (unloaded). Direct drive of stereo headphones is also possible.

The wide bandwidth of these devices provides high quality audio. Frequency response is -3dB over the range of 30 Hz to 18 KHz. Volume control is provided for the individual left and right channels of two of the stereo input pairs. Audio balance may be controlled by adjusting the controls as required.

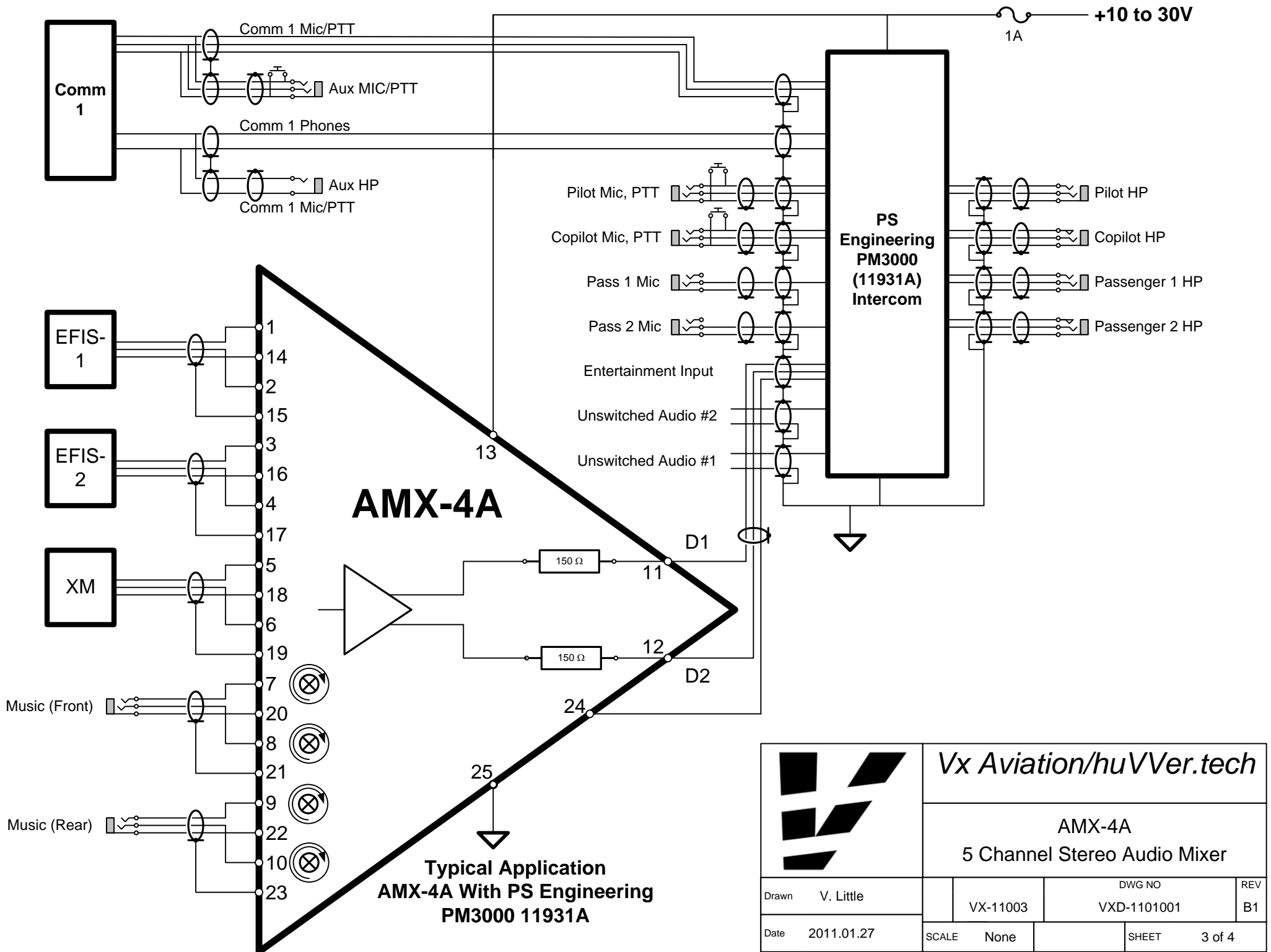
Monophonic signals may also be connected to the device. To receive audio in both ears, these signals should be connected to both the left and right inputs of the required channel.

The device may be used as a 10-channel monophonic mixer simply by connecting the two output signals (DL and DR) together. This mode provides six fixed level and four variable level channels.

Technical Summary

- ❑ 5 stereo audio input channels with 1 K Ω input impedance
 - ❑ 3 fixed-level
 - ❑ 2 variable-level
- ❑ Audio output capable of driving 32 mW into 150 ohms (14.2 volt supply), including headphones directly
- ❑ Wide frequency range 30 Hz to 18 KHz (-3dB)
- ❑ Output impedance of 150 ohms, each channel
- ❑ Less than 50 mA current drain, 10 to 30 volt operation

NOT FOR USE IN CERTIFIED AIRCRAFT



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AMX-4A
5 Channel Stereo Audio Mixer

Drawn	V. Little		DWG NO	REV
		VX-11003	VXD-1101001	B1
Date	2011.01.27	SCALE	None	SHEET
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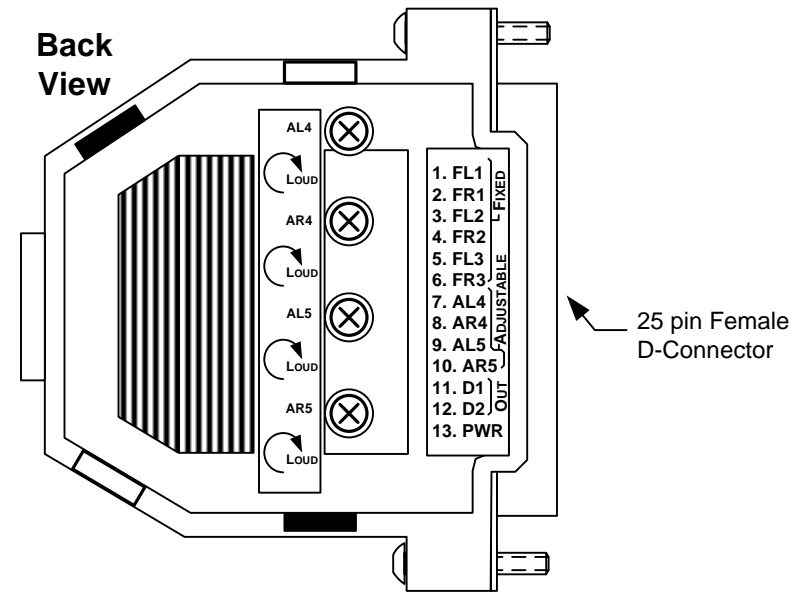
AMX-4A 5 Channel Stereo Audio Mixer Pin Description

DB 25F Pin	Pin Name	Function	Connect To
1	FL1	Fixed Level Input. 1 K Ω nominal input impedance.	Stereo audio sources that have their own volume controls. Connect using shielded wire, with shield connected to SG , AMX-4A end only.
2	FR1		
3	FL2		
4	FR2		
5	FL3		
6	FR3		
7	AL4	Adjustable Level Input. 1 K Ω nominal input impedance.	Stereo audio source that require a volume or balance control. Connect with shielded wire, with shield connected to SG , AMX-4A end only. Audio volume is screwdriver adjustable.
8	AR4		
9	AL5		
10	AR5		
11	DL	Left Audio Output. 150 Ω source impedance.	Intercom Entertainment Left input. Use shielded wire, with the shield connected to Intercom only.
12	DR	Right Audio Output. 150 Ω source impedance.	Intercom Entertainment Right input. Use shielded wire, with the shield connected to Intercom only.
13	PWR	Power Input.	10-30 volt power. 50 mA maximum current consumption.
14-24	SG	Signal Ground.	Shield and Audio grounds.
25	PG	Power Ground.	Power Ground. Internally connected to SG.

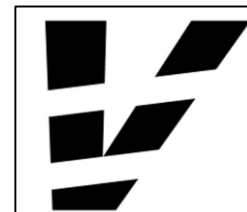
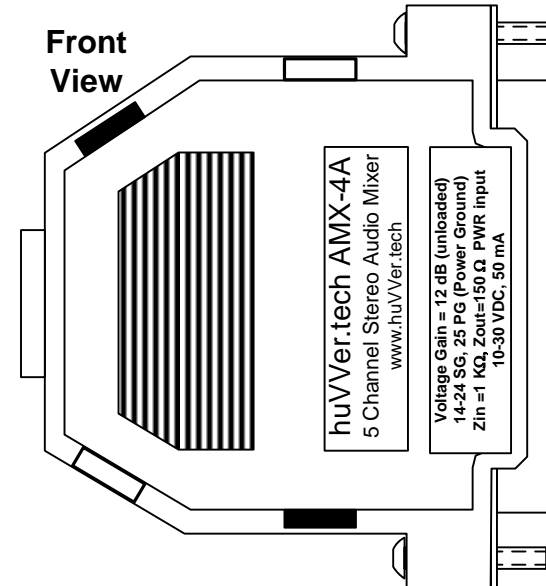
Electrical Specifications Over Ambient Temperature Range

Parameter	Function	Min	Typ	Max	Units	Notes
T _A	Ambient Operating Temperature	-40	25	50	Degrees Celcius	Non-condensing
V _{CC}	Operating Voltage on PWR input	10	14-28	30	Volts DC	Protect PWR with 1 Amp Fuse or Breaker
I _{CC}	Current Drain		20	50	mA DC	
a _v	Voltage Gain (per input)		12		dBV	Outputs unloaded
f _c	Typical Frequency Response	30		18K	Hz	-3 dB, Outputs loaded 150 Ω

Back View



Front View



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