

1 Introduction

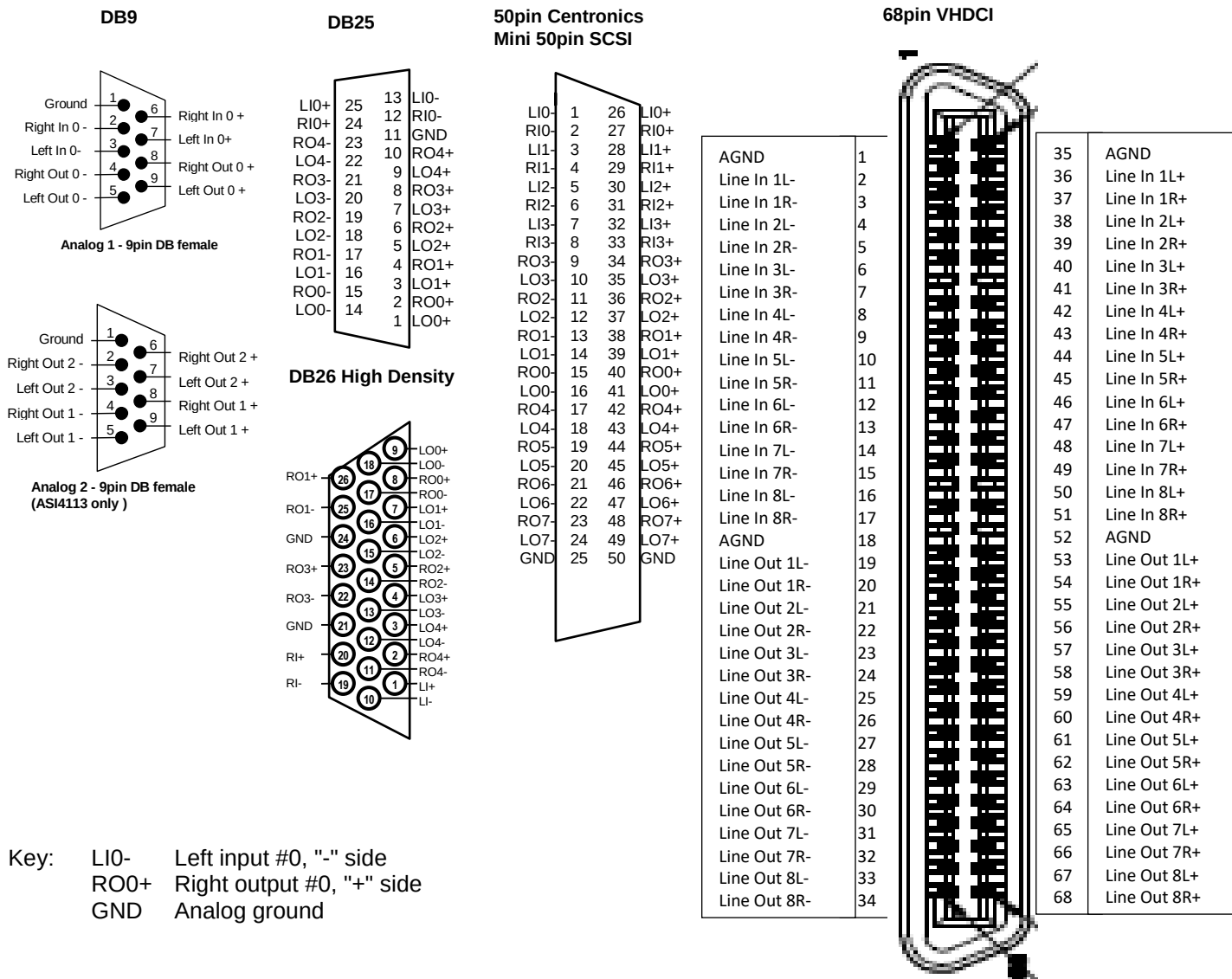
This application note details how to wire AudioScience audio adapter analog and digital connectors. Both balanced and unbalanced options are discussed.

2 Analog Connectors

There are 6 different types of connectors used for analog audio I/O:

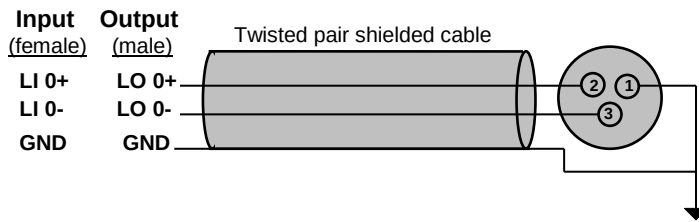
DB9	ASI41xx series, ASI5111/5211
DB25	ASI450x series (OEM only)
DB26 (High Density)	ASI4215
50pin Centronics	ASI43xx series, CBL1004
High Density 50pin	ASI500x, ASI504x, ASI5x20, ASI554x, ASI564x, ASI6xxx, ASI65xx, and ASI66xx series, CBL1044, CBL1004
VHDCI	ASI57xx, ASI67xx, BOB1038

Analog signals are balanced and consist of a "+" and "-". The actual signal is the difference between the + and -.



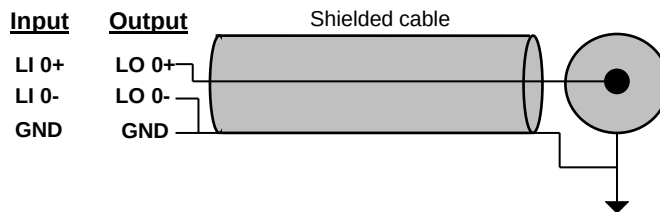
2.1 Balanced Operation

For a balanced output, the following connections are made to an XLR connector (using Left input/output #0 as an example):



2.2 Unbalanced Operation

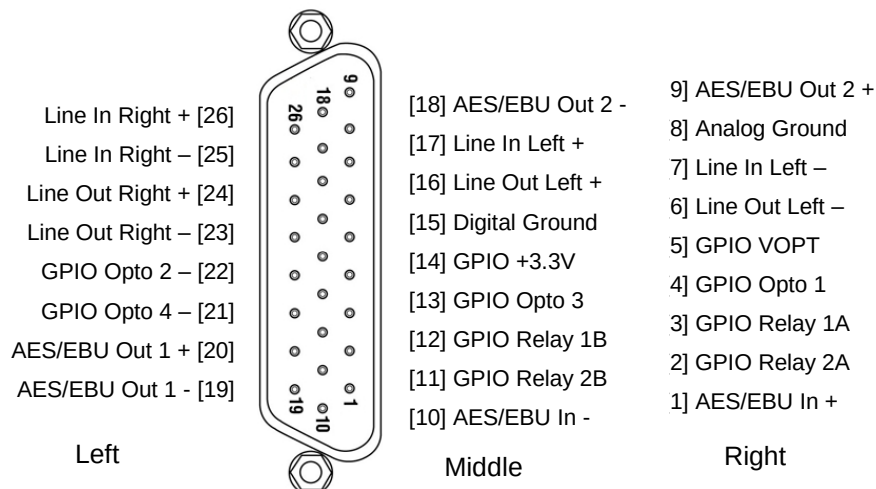
For unbalanced operation, connect the "-" side of the signal to ground. The "+" side becomes the signal. This applies to both an input and an output. You will not damage the output driver of the adapter by connecting the "-" signal to ground; the driver is designed to operate in this fashion (however, if you connect both + and - to ground then you may cause damage).



3 Combination connectors

ASI5810, ASI5811 and ASI5812 cards use a single DB-26HD connector for analog, AES/EBU and GPIO connections.

DB-26HD

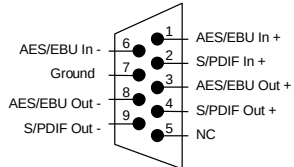


4 Digital (AES/EBU - S/PDIF) connectors

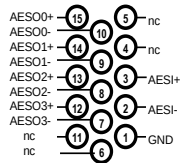
There are 5 types of digital connectors:

DB9	ASI41xx, ASI45xx series, ASI5111/5211
DB15 (High Density)	ASI4215
50pin Centronics	CBL1101, CBL1144
High Density 26pin	ASI5002, ASI504x, ASI564x, ASI6xxx, ASI65xx, ASI66xxseries, CBL1101
VHDCI	ASI57xx, ASI67xx, BOB1038

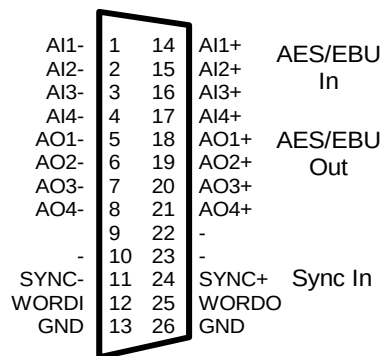
DB-9



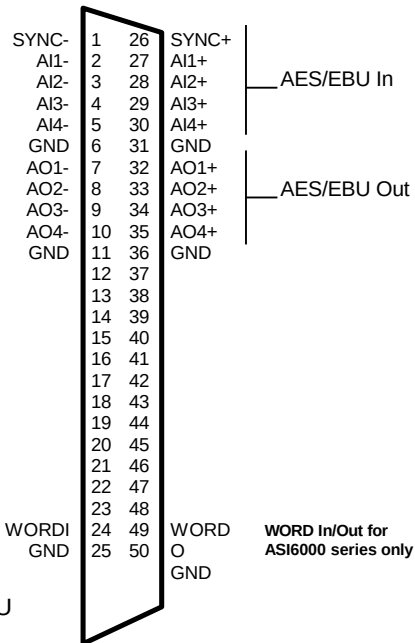
DB15 High Density



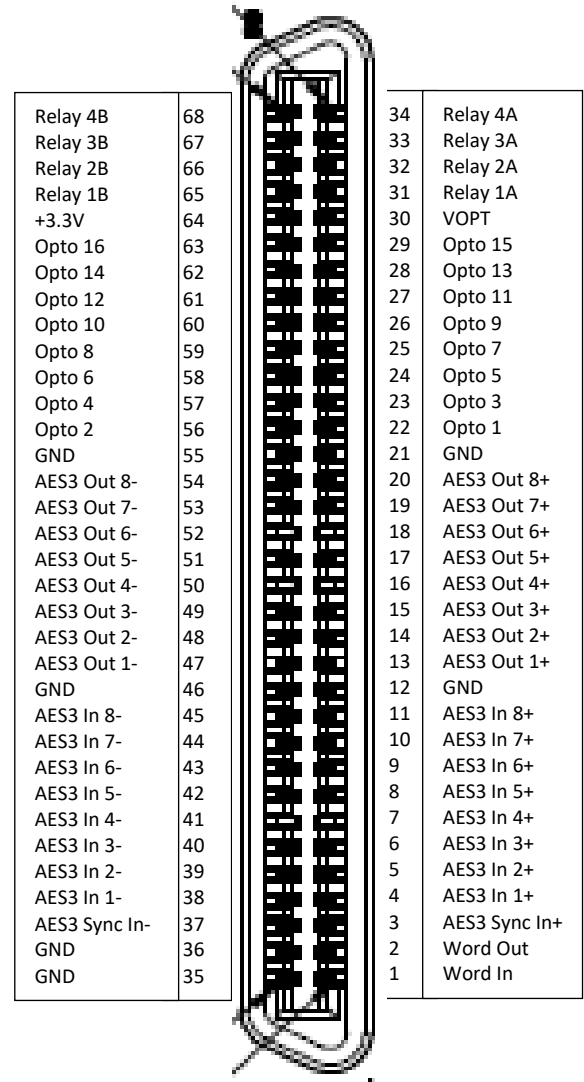
High Density 26pin



50pin Centronics

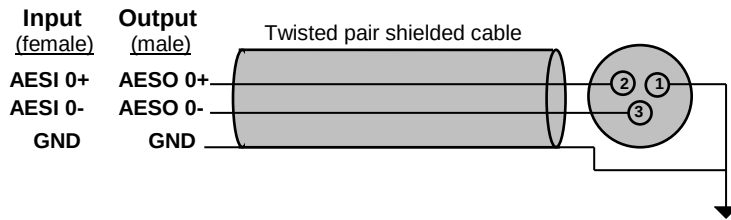


68pin VHDCI



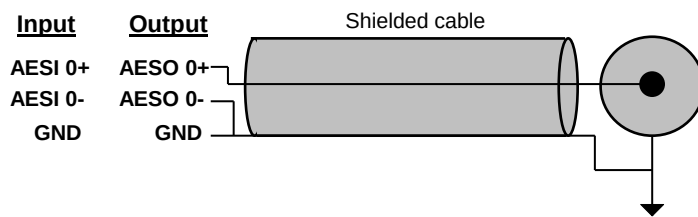
4.1 AES/EBU Balanced Operation

For a AES/EBU input or output, the following connections are made to an XLR connector (using AES input/output #0 as an example):



3.2 S/PDIF Unbalanced Operation

For S/PDIF operation, connect the "-" side of the signal to ground. The "+" side becomes the signal. This applies to both an input and an output. You will not damage the output driver of the adapter by connecting the "-" signal to ground; the driver is designed to operate in this fashion (however, if you connect both + and - to ground then you may cause damage).

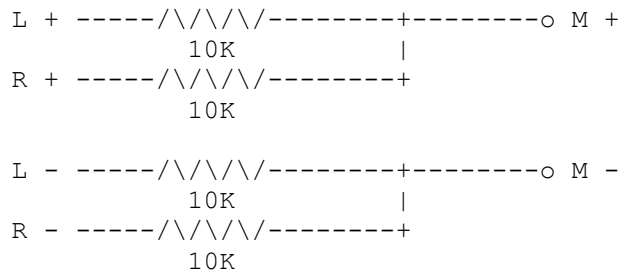


4. RJ-45 connector for BOB1025

RJ-45 Pin Number	Color Pair	Channel
1	White/Orange	L+ / AES+
2	Orange/White	L- / AES-
3	White/Green	R+
4	Blue/White	GND
5	White/Blue	nc
6	Green/White	R-
7	White/Brown	15V-
8	Brown/White	15V+

5. Combining Left and Right channels with resistors to create a single, mono channel.

Join left and right using 10K resistors:



Tech Support

If at any point you need help with this information please contact our Technical Support department at 585-271-8870 between the hours of 9AM and 5PM EST or by email at support@audioscience.com

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