



ALD - 1

P/N: 907-005-0008

User Manual

Document #: 050-015-0053

Revision: 00

May 2009

TASC Systems Inc. • Langley, BC • Canada

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Document Number 050-015-0053R00

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PREFACE

This document describes the installation, configuration and operation of TASC Systems' ALD-1 (*P/N: 907-005-0008*).

Hardware described in this document is subject to ongoing development and improvement. Consequently there may be minor discrepancies between the information in this document and the performance and design of the hardware.



Before connecting any equipment to the ALD-1 the user is advised to read this document in its entirety. Application of voltages in excess of the built-in protection could seriously damage the ALD-1 and/or the equipment it is connected to.

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REVISION HISTORY

Revision	Date	Changes
R00	May 2009	<ul style="list-style-type: none"><li data-bbox="802 478 1094 508">• Original Document

1. PRODUCT OVERVIEW

The TASC ALD-1 Audio Line Driver provides signal conditioning and combining for a variety of audio sources for voice recording and other general audio applications.

The ALD-1 input and output gain stages can accommodate a wide range of signal levels. This circuit design ensures flexibility and the ability to normalize output signals into downstream circuits.

Signal combining circuits make it possible for independent Receive (RX) and Transmit (TX) signals from a radio to be combined or summed into a single 2-Wire interface for recording or other purposes.



Figure 1 – ALD-1

2. PINOUTS AND ADJUSTMENTS

The ALM-1 was designed to sum two (2) unbalanced high impedance audio sources into one output with sufficient drive to produce 0dBm into a balanced 600 ohm load. The ALM-1 may also be used as an unbalanced, high impedance interface to a balanced 600 ohm interface converter/line driver. In this case, only one audio input will be used while the other may be left unconnected.

Installation specifics are subject to individual applications. However, the following pinouts and adjustments are provided as a guide to qualified technical personnel to facilitate the installation.

Connector	Pin #	Function	Instruction
P1	1	+DC IN	Connect to a clean DC voltage between +11.5 and +16 volts referenced to system ground.
	2	Ground	Connect to audio system ground.
	3	Audio Input 1	This is an unbalanced Hi-Z input. Connect to an appropriate audio source.
	4	Audio Ground 1	Connect to System Ground.
	5	Audio Input 2	This is an unbalanced Hi-Z input. Connect to an appropriate audio source.
	6	Audio Ground 2	Connect to System Ground.
J1	3	Output	This is a balanced 600ohm transformer output with a maximum output drive of +4dBm before distortion. This output is the resultant sum of Audio Input 1 and Audio input 2.
	4	Output	

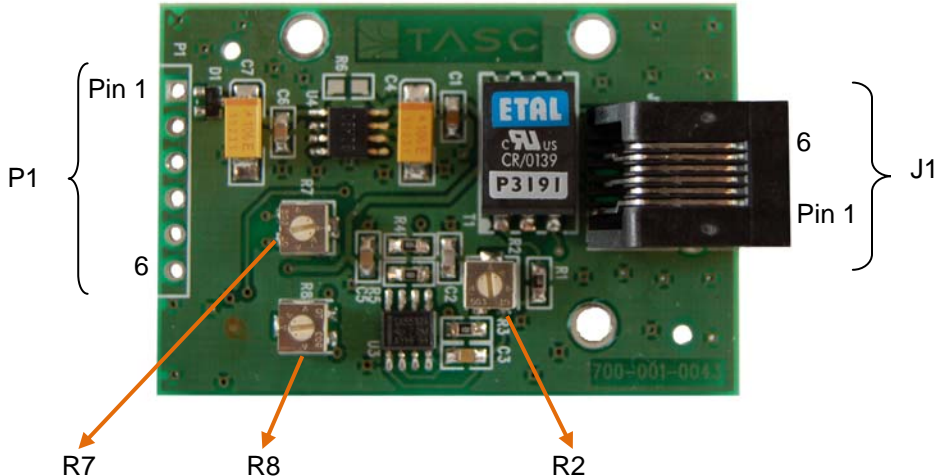


Figure 2 – ALD-1

Adjustment	Function	Instruction
R7	Audio Input 1 Level	Adjust input level for adequate dynamic range at the output and to equalize relative to Audio Input 2.
R8	Audio Input 2 Level	Adjust input level for adequate dynamic range at the output and to equalize relative to Audio Input 1.
R2	Summed Audio Output Level	Adjust output level for desired dynamic range and required output into a 600 ohm load.

3. SPECIFICATIONS

Model (Part number):	Audio Line Driver ALD-1 (907-005-0008)
Input Voltage:	+11.5 to +16.0 VDC
Current Consumption:	120mA maximum
Operating Temperature:	-40 to +65°C
Input Level:	210mV pk-pk minimum to produce a 0dBm output
Input Impedance:	>50K ohms unbalanced referenced to ground
Maximum Audio Output Before Distortion:	+4dBm
Output Dynamic Range:	+66dBm
Output Impedance:	600 ohm balanced
Enclosure Size:	2.6"W x 2.6"L x 1.0"H (66mm x 66mm x 26mm)
Module PCB Size:	1.5"W x 2.2"L (38mm x 56mm)