ADA-26S

STEREO AUDIO
DISTRIBUTION AMPLIFIER
INSTRUCTION MANUAL

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ADA-26S STEREO AUDIO DISTRIBUTION AMPLIFIER

GENERAL:

The ADA-26S Stereo Audio Distribution Amplifier is designed to operate in two different modes. The first mode provides three (3) dual-channel outputs from a stereo audio signal source. The other mode provides six (6) single-channel outputs from a monaural audio signal source. The desired mode can be selected from the front panel.

In either mode, the module is compatible with either balanced or unbalanced audio signals on the input and outputs. Outputs can be mixed between balanced and unbalanced configuration dependent on the requirement of the destination equipment.

POWER:

The ADA-26S operates from an AC power source of 120VAC or 230 VAC at line frequencies of 60 Hz or 50 Hz. The unit is supplied with an IEC 320 power inlet on the rear panel and a cordset with either a NEMA5-15P or CEE7/7 plug.

Internally the unit has bus voltages of +15Vdc and -15Vdc supplied by regulators U01 and U02 respectively. An LED on the circuit board illuminates the front panel when both supplies are operating properly.

Circuit protection is provided by the externally accessible fuse on the rear panel. Refer to the specification section for proper fuse value.

FRAMES:

The ADA-26S module is mounted within a stand-alone box. The all-metal enclosure provides desirable shielding to external EMI/RFI noise sources.

Rack-mounting requires the RMK-26 rack-mount kit. One RMK-26 rack-mount kit holds up to three of the 26 series units. Sigma provides various distribution amplifiers, signal generators and transcoding products in the 26 series.

CONNECTIONS:

Wiring to the module is performed via detachable screw terminal connectors (Figure 1).

INPUT: There are dual-channel inputs on the rear panel of the unit; the first and last connectors (Figure 2). The Right channel is on the left and the Left channel is on the right as seen from the rear of the unit. When the unit is configured to provide six (6) outputs from a single input, the “Left Input” is disabled (the input on the right).

Both inputs are a high impedance configuration. This allows the audio signals to be bridged to other units. To ensure proper impedance matching it may be necessary to terminate the outputs with a 600Ω load. It is recommended that, if termination is necessary, use a 600Ω, 1/2 watt resistor across the (+) and (-) outputs. When multiple units have inputs bridged to the same source, only apply the 600Ω resistor to the last unit in the line.

OUTPUT: There are three (3) outputs on the rear panel of the unit for each channel . Each output is designed to drive a 600Ω load. Since each output on a channel is identical, the numbering is only provided for the operator’s convenience. When the unit is configured to provide six (6) outputs from a single input, both the right and left outputs will provide the same signal.

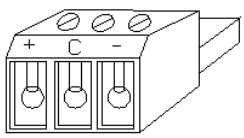

Figure 1
AUDIO CONNECTOR

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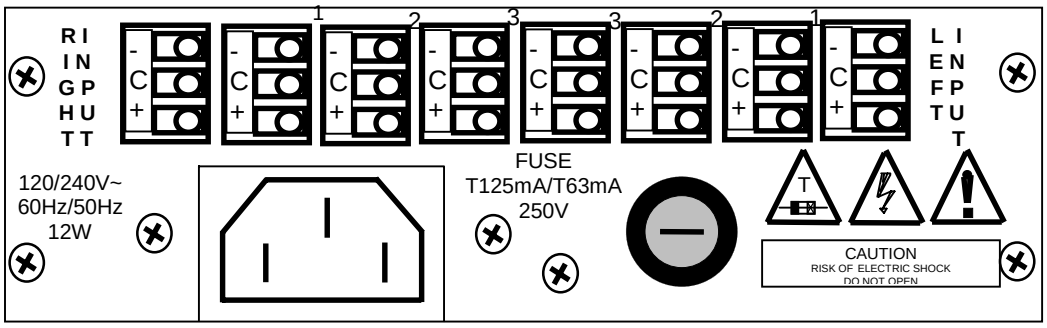
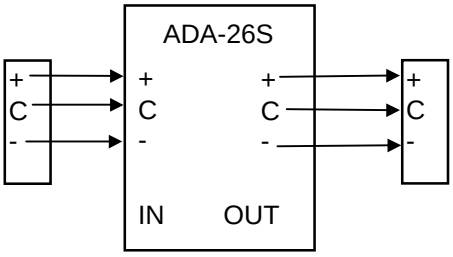


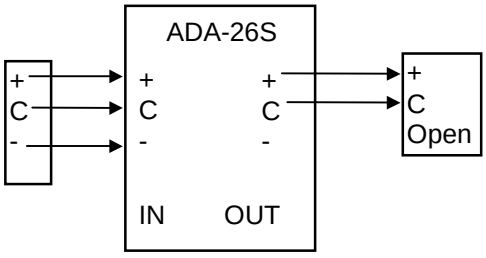
REAR PANEL CONNECTIONS
Figure 2

AUDIO CONFIGURATIONS:

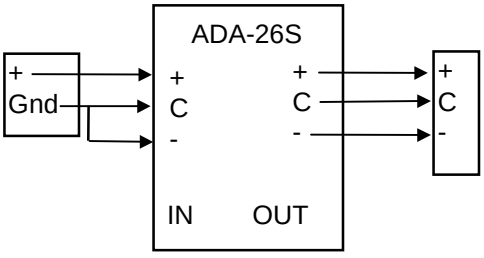
The source and destination audio equipment must be evaluated to determine if they are Balanced or Unbalanced. After determination is made, refer to the drawings provided to select the proper audio configuration. The outputs can be any combination of balanced or unbalanced.



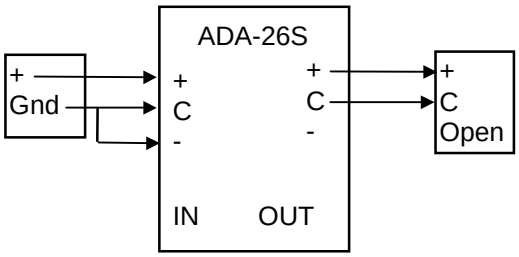
Balanced In to Balanced Out
Vout = Vin



Balanced In to Unbalanced Out
Vout = 0.5 Vin



Unbalanced In to Balanced Out
(-) Input Grounded; Vout = Vin
(-) Input Floating: Vout = 0.75 Vin



Unbalanced In to Unbalanced Out
Vout = 0.5 Vin

The input to output level comparison provided in the figures above, assumes the outputs are terminated into a 600Ω load.

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FRONT PANEL:

The adjustments and indicators on the front panel (Figure 3) can be accessed through the slots provided in the ADA-26S frame. Factory settings of the module provide unity gain, maximum common mode rejection, and a bandwidth of 100 kHz.

Gain Control - Gain control for the right channel is achieved by adjustments to S01and R012. Gain control for the left channel is achieved by adjustments to S901and R912. S01 and S901 provide gain adjustment in increments of 6dB, while R012 and R912 provide fine adjustments of +/- 3dB. The positions of S01 and S901 make the following adjustments to the gain level of the circuit -● = OFF, 1= -6dB, 2= 0dB, 3= +6dB, 4= +12dB, 5= +18dBand 6= +24dB.

Mode Selection – To select the three (3) output stereo mode, set the mode select switch, S02, to the left position. This will activate the Left gain controls and Left Input on the rear panel. To select the single input, six (6) output mode, set the mode select switch, S02, to the right position. This will deactivate the Left gain controls and input on the rear panel.

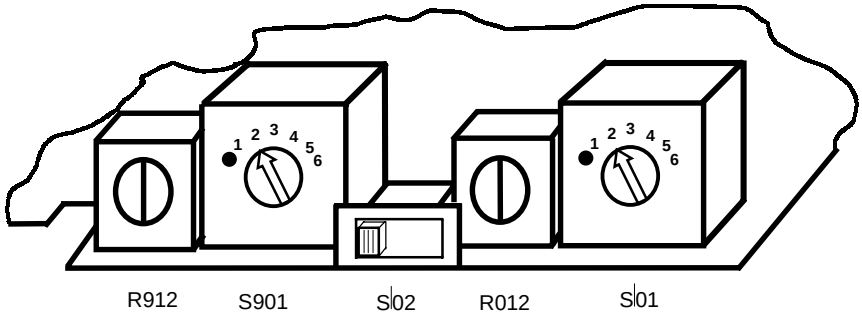

Figure 3: Front Panel Gain Adjustment

ADJUSTMENTS:

The ADA-26S has no adjustments other than the front panel gain control and mode selection.

SPECIFICATIONS:

INPUT:	Dual channel, Balanced, +24 dBm Maximum
INPUT IMPEDANCE:	30 kΩ Balanced, DC coupled
OUTPUT:	+24 dBm Maximum
OUTPUT IMPEDANCE:	100Ω Balanced, DC coupled
LEFT/RIGHT SEPARATION:	All outputs driven into 600Ω, unused input terminated.
	Greater than 80 dB, 20 Hz to 20 KHz
HUM and NOISE:	less than -80 dBm at Unity Gain, 22Hz to 22Khz filter
	less than -65 dBm at +27 dB Gain, 22Hz to 22Khz filter
THD+N:	Into 600Ω, 22Hz to 22Khz filter, 0dBm to +24 dBm
	less than 0.05% 20 Hz to 20KHz)
IND (SMPTE 4:1 60Hz/7KhZ):	same conditions as THD+N, less than 0.02%
GAIN RANGE:	(-6) to +24 dB in 6dB steps,±3dB vernier when terminated into 600Ω.
GAIN VARIATION:	±0.3 dB
CMR:	Greater than 70 dB at 60 Hz, 60 dB at 20 KHz
	0dBm to +24dBm
RESPONSE:	Into 600Ω, ±0.2 dB, 20 Hz to30 KHz

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TECHNICAL MANUAL:

A manual including schematics, circuit description, parts list and setup guide is available upon request. This information is intended for the service of the module. Modules should be serviced by Qualified Personnel only ! Sigma Electronics, Inc. recommends service to be performed by our Factory Service Center.

NOTES:

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