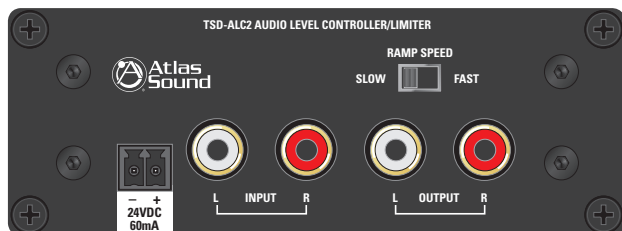
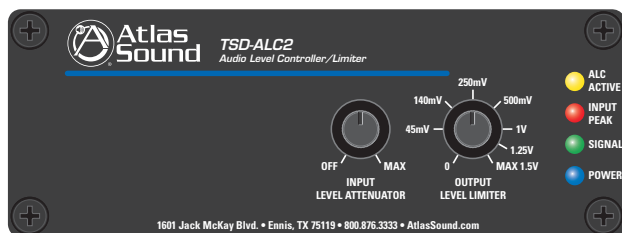




TSD-ALC2

Audio Level Controller/Limiter



TSD-ALC2

Atlas Time Saving Devices

New Atlas Sound Time Saving Devices are designed to solve some of the common audio system problems in the easiest and in the most efficient and cost-effective way. Utilizing the highest quality components and inspired by real world installation issues, the Atlas Sound TSDs include mixers, amplifiers, preamps, and other distribution and control devices to simplify your connections, provide specific application needs, and add flexibility in expansion and changes that prevent expensive system overhauls.

The Time Saving Devices are loaded with features making it versatile and user friendly. The TSD design mandate was to make the installation quick and reliable, saving you valuable time and money. Each model is housed in a compact 1.5" x 4" x 2.75" footprint that allows for placement almost anywhere. Common features include removable individual I/O connectors for quick and precise wiring, separate ground terminals for all I/Os assuring secured connections, and removable level controls that can be replaced with a tamper-resistant security cover.

Description

The Atlas Sound TSD-ALC2 is an automatic 2-channel audio level controller/limiter that allows designers and installers the ability to set predetermined maximum source levels. The TSD-ALC2 is great for installations with multiple program sources including satellite receivers, mp3 players, etc. that typically have vast output level irregularities. With the TSD-ALC2 inserted in line with these sources, the audience will not be distracted during high volume commercial breaks or when different inputs are selected. Retail stores, restaurants, sports bars, hotels, event centers, and other facilities can all benefit from improved sound when the TSD-ALC2 is integrated.

Features include stereo RCA input and output connectors, threshold level, ramp speed selection, and output gain adjustments. The TSD-ALC2 also works well when used in conjunction with Atlas Strategy Series Mixer Amplifiers. For level control and passive combining of stereo sources with Atlas amps, specify (1) AA-YSUM input cable in conjunction with (1) TSD-ALC2 for each source input.

The TSD-ALC2 is highly efficient and meets most energy standards as one 24V DC power supply (available separately) can power multiple Atlas Time Saving Devices.

Installation

- Restaurants
- Sports Bars
- Schools
- Residential
- Playback Systems
- House of Worship

Features

- Stereo Auto Level Control
- Unbalanced RCA Input and Output
- Threshold Level Adjustment
- Ramp Speed Selection
- Output Gain Control
- Security Covers Included for All Front Panel Controls
- Meets Most Energy Standards
- Compact Chassis Design

Audio Applications

- Satellite Feeds
- iPod®
- CD Players
- MP3 Players

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Understanding an Audio Auto Leveler

Variable audio levels between songs or TV programs and commercials can be very aggravating in a home or commercial environment. Because the audio content varies drastically, Auto Level Controllers (ALCs) require unique settings to maximize the audio auto level performance for the specific application. Most Audio Auto levelers on the market claim to seamless transition between sources or material, however no ALC can perfectly auto-level audio. No ALC has perfect seamless audio auto leveling. In fact, many bad designs that utilize old technologies or are incorrectly used have given ALCs a bad name. The TSD-ALC2 is designed with the latest technology and optimizes adjustments and settings for each unique installation.

Determining a signal's sample rate is important for an ALC to detect when the source material audio level is actually changing or if it is just dynamic changes within the song. A fast reaction time is necessary to quickly adjust the level but if it is set too fast, an audible pumping effect will occur when music content with a lot of drums goes to a piano, for example. Too slow of a reaction time can also be annoying during transitions between tracks or to commercial breaks. Another issue ALCs must overcome is the level of variation between input signals. If it is too large, the compensation creates an abrupt level change that is noticeable to the listener. If the level adjustment is too small, the song or commercial can be well into its content before the level adjustment occurs. Either way, the overall listening experience is disrupted.

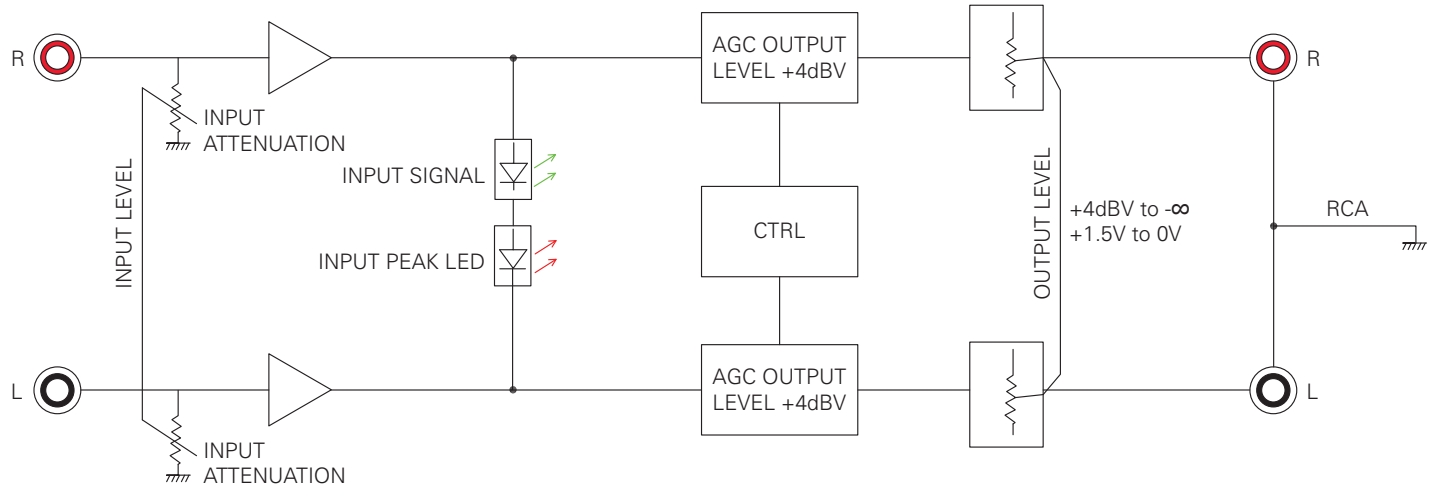
The TSD-ALC2 solves these signal level issues without the need to of a computer and measurement tools to tailor the settings to the job. The TSD-ALC2 uses 42 audio samples per measurement, averages out the signal levels, and makes an adjustment every 20 milliseconds if required. This has been determined as the ideal sample rate to detect the audio dynamic content and make adjustments in most applications. The TSD-ALC2 also allows you to select how much the level can be adjusted, at either 1dB or 2dB increments. The TSD-ALC2 also incorporates an adjustable hard limiter so the maximum level in an audio system cannot be overdriven. The Output Level Limiter can be adjusted from 100mv to 1.5V.

The TSD-ALC2 provides a smooth transition between music or audio source selections. Auto level changes depend on how drastic the level needs to be adjusted but, in most situations, auto leveling isn't noticeable and will greatly improve the listening experience. Secondly, the output limiter feature prevents users from turning up the gain too loud and damaging your speakers - an invaluable feature that alone makes the TSD-ALC2 worth adding to any system.

Specifications

Description	Two Channel Audio Level Controller/Limiter
Chassis Color	Black
Chassis Material	Aluminum
Inputs	
Type	Qty 2, Unbalanced
Connection	RCA Left and Right
Impedance	10K Ω
Outputs	
Type	Qty 2, Unbalanced
Connection	RCA Left and Right
Impedance	150 Ω Unbalanced
Output Level	Adjustable from 0V to 1.5V, Hard Limit
Controls	
Input Level Attenuator	Qty 1, Removable Knob with Security Cover
Output Level Limiter	Qty 1, Removable Knob with Security Cover
Indicators	
Input Signal	Green, 25mV On Threshold
Input Peak	Red, -3dB Before Clip
ALC Active	Yellow, Onset of Input Level Reduction, 25mV Threshold
Power	Blue
Electrical	
Frequency Response	20Hz - 20kHz (\pm 1dB)
Auto Level Threshold Range	25mV - 3V
THD	.5% & 1kHz
Signal to Noise	80dBV
Output Level Limiter Range	0V - 1.5V
Sample Rate	42 per Adjustment
Delay Time	20ms Between Adjustment
Level Adjustment Increment	1dB or 2dB Selectable
Mounting	
Velcro	Industrial-Grade, Included
Brackets	Qty 2, Included
TSD-RMK	Optional 1 RU Rack Mount Panel (Supports 4 TSD Units)
Cable Retainer	Qty 2, Included
Power Requirements	
Voltage	24VDC
Power Consumption	60mA
Power Consumption	1.4W
Dimensions	H 1.5" (39mm) x W 4" (101mm) x D 2.75" (70mm)
Weight	6oz, .165kg
Accessories	
TSD 24VDC Power Supplies	
TSD-RMK 1 RU Rack Panel	
Safety and Certifications	
External Power Supply	cUL, CE, RoHS, TUV

Block Diagram



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