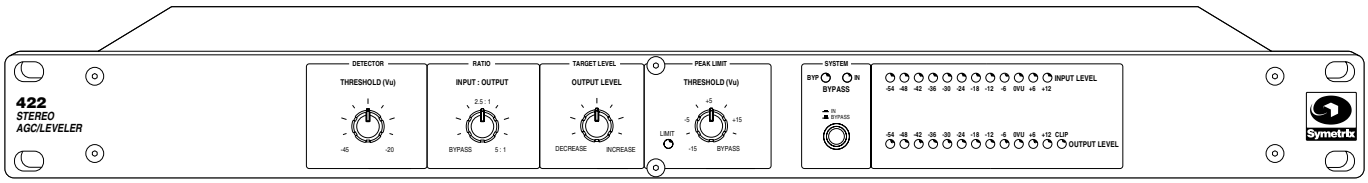

HAVE YOU EVER NOTICED HOW AUDIO COMES IN ALL SHAPES AND SIZES? There's loud audio. There's quiet audio. There's pretty audio. There's ugly audio. There's music. There's speech. There are CD's mastered at drastically different levels. There are movie sound tracks where the effects are too loud and the dialog so soft you can't understand the words.

Have you ever been on an airplane trying to watch the movie and found yourself repetitively turning the volume up and down and up and down again? The background noise is high and the movie sound track is either uncomfortably loud or buried in the background noise. And you ask yourself, why in this age of really hi-tech audio systems can't I enjoy the audio track for this movie I'm trying to watch?

Well – back on earth if you want to free yourself from the ups and downs of unpredictable audio program levels then you need a Symetrix 422 Stereo AGC/Leveler. It's easy medicine. The 422's controls are simple and intuitive, making setup a nonevent. But the real payback is in the sound – the 422 converts "all over the map" signal levels into smooth, intelligible, constant level audio.

Why can't I use a compressor/limiter to do the same thing? When it comes to maintaining constant output levels, a compressor/limiter can only do half the job, at best. Sure, when things get too loud the comp/limiter kicks in, but what about when things get too soft? A comp/limiter is a top down device – it pushes down from the top, preventing overload and distortion in subsequent stages. But what about the bottom up part of the deal? What about the low level signals that contribute so much to the intelligibility of speech and the enjoyment of music?

The 422 Stereo AGC-Leveler solves the problem. The 422 does it all. It makes the loud sounds quieter and the quiet sounds louder. And it does it with finesse. You'll be amazed. The 422 works without the side effects audio professionals have been conditioned to expect from compressors and limiters. Noise, pumping, and modulation are not part of the 422's vocabulary. Bringing the volume to where *you* want it and keeping it there is what the 422 is designed to do.

The 422 may be used in virtually any type of sound system for processing just about any kind of audio. Insert the 422 at a convenient patch point where you have line level audio. We don't hassle you with annoying -10, +4 level matching switches – just give the 422 a basic line (not mic level) signal and you're ready to go.

The 422 is easy to use. There are basically only four controls. The first and most important is the target level control. As the name implies, this control sets the volume where you want it. The 422's unique input over output parallel VU meters simultaneously show you the unmodified input signal on top and the result of your target level setting just below it. The detector control increases the sensitivity of the AGC. As you turn it counterclockwise the 422 gently reaches down for the lower volume audio and brings it up. Set the target level and detector, then use the ratio control to increase or decrease the amount of leveling. At high ratios the program density increase results in a more "present" or "up front" sound. At low ratios the 422 performs subtle, yet effective, automatic gain riding. Lastly, adjust the peak limit control to create an absolute ceiling level. This is an especially handy feature for protecting amps and speakers in discos where DJ's often succumb to a disease known as "volume creep" as the evening wears on.

The 422 Stereo AGC-Leveler is a remarkably sophisticated volume controller that is amazingly easy to use and brought to you by a company with almost twenty years experience in the design of dynamic range controllers. •

APPLICATIONS

Radio, Television

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Music Mixdown

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Satellite, Cable Video

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Discos

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Theaters

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Bars, Restaurants

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Tape Duplication

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Foreground/Background Music

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FEATURES

Target Level control makes setup simple and quick

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Peak Limiter prevents sound system overload or tape distortion

▪

Parallel input/output LED meters show exactly what's happening

▪

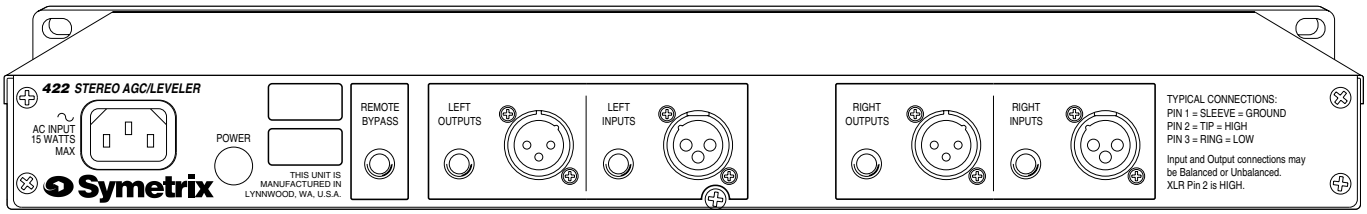
Remote bypass port

▪

422

422 Stereo AGC/Leveler

Symetrix



SPECIFICATIONS

Specifications subject to change without notice.

Input/Output	
Inputs	Stereo, Balanced Bridging or Unbalanced
Outputs	Stereo, Balanced or Unbalanced
Input Connectors	¼" TRS and XLR
Output Connectors	¼" TRS and XLR
Polarity	Input: tip is high, ring is low, sleeve is ground Output: tip is high, ring is low, sleeve is ground
Maximum Input Level	+24 dBu
Maximum Output Level	+22 dBu into 600 Ohms

Performance Data	
Frequency Response	0 dB ±1 dB, 20 Hz - 20 kHz
THD+Noise	.05%, 0 dBu in, 10 dB gain reduction, 1 kHz
Dynamic Range	>110 dB
Crosstalk	-60 dB, +20 dBu in, 20 Hz - 20 kHz
AGC Detector Range	-40 dBu to +24 dBu
Ratio	1:1 to 5:1
Target Level Range	30 dB
Limiter Threshold	-15 dBu to +25 dBu
Limiter Ratio	>15:1
Input Common Mode Rejection	40 dB @ 1 kHz
Output Noise	-90 dBu, broadband

Physical	
Size (hwd)	1.72 x 19 x 5.5 inches, 4.37 x 48.26 x 13.97 centimeters
Shipping Weight	7 lbs (3.2kg)

Electrical	
Power Requirements	115V AC, 60Hz, 12 watts 230V AC, 50 – 60Hz, 12 watts

422 ARCHITECTS AND ENGINEERS SPECIFICATIONS

The Automatic Gain Controller (AGC/Leveler) shall be a stereo model that reduces the dynamic range of wide range, wideband audio signals and provides peak limiting. The AGC shall occupy one rack space (1U).

The AGC/Leveler shall be capable of controlling audio signals ranging from -40dBu to +24dBu and reducing their range by an input/output ratio of from 1:1 to 5:1. A target output level control shall be provided to shift the level of the output signal over a nominal ±15dB range. The release time of the AGC shall be controlled by the presence and nature of input signals.

The AGC/Leveler shall also contain an integral peak limiter having at least a 15:1 ratio and adjustable threshold level. A green LED indicator shall be provided to indicate peak limiter activity. The peak limiter threshold shall determine the absolute maximum output amplitude of the AGC/Leveler regardless of other conditions.

The AGC/Leveler shall provide identical peak responding input and output level meters. These meters shall be capable of responding to signals ranging from -48VU to +12VU (-50dBu to +16dBu). An output clipping indicator shall be provided.

The inputs shall be active balanced bridging designs terminated with 3-pin XLR (AES/IEC standard wiring) female and ¼" (tip-ring-sleeve) jacks.

The outputs shall be active balanced designs terminated with 3-pin XLR (AES/IEC standard wiring) male and ¼"(tip-ring-sleeve) jacks.

Overall frequency response shall be 20Hz to 20kHz, ±1dB, measured at +4dBv output. There shall be no more than 0.02% harmonic distortion measured under the following conditions: +4dBu input, +4dBm output, BYPASS switch out, 1000Hz test frequency. Residual noise output shall be no greater than -90dBu measured in a 20kHz noise bandwidth with an rms responding meter.

When the unit is inoperative (either by loss of power, or via the BYPASS switch), the inputs and outputs shall be wired together. A REMOTE BYPASS facility shall be provided whereby an external contact closure shall force the AGC/Leveler into BYPASS mode.

The AGC/Leveler shall be capable of operating by means of its own built-in power supply connected to 115V AC, 60Hz and 230V AC, 50 – 60Hz. The AGC/Leveler shall be listed by Underwriters Laboratories, Inc. (UL) .

The AGC/Leveler shall be a Symetrix, Incorporated model 422 Stereo AGC/Leveler.

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