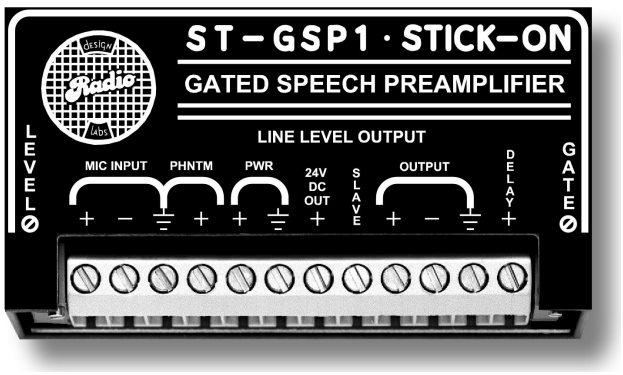
RDL® *Radio Design Labs®*

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

STICK-ON® SERIES

Model ST-GSP1
Gated Speech Preamplifier



ANYWHERE YOU NEED...

- A Gated Mic-to-Line Preamplifier
- Speech Activated Gating
- Fast, Silent Audio Switching
- Integral Single-ended Noise Reduction
- Adjustable Gain and Threshold
- Balanced or Unbalanced Input / Output
- Phantom Power Provision
- Open-Collector Logic Output

You Need The ST-GSP1!

The ST-GSP1 is part of a group of products in the STICK-ON series from Radio Design Labs. The durable adhesives provided with the ST-GSP1 permit permanent or removable mounting. Numerous available mounting accessories, brackets and rack-mount chassis are optionally available to facilitate any system design. The ST-GSP1 offers the ultimate in totally solid-state automatic mic switching, with a big *plus*, you can put it right where you need it!

APPLICATION: The ST-GSP1 is a gated-speech preamplifier designed to be used in a variety of situations where it is desired to produce an automatically switched line-level signal from a microphone. This module may be used in conjunction with other RDL modules to configure automatic mixing systems or may be used alone as a voice-operated module. The open-collector output may be used to trigger other equipment or RDL modules. The versatility of ST-GSP1 applications range from complete automatic mixing system design to the addition of automatic mic gating to the inputs of conventional mixers or amplifiers.

The mic input may be wired for balanced or unbalanced operation. A phantom voltage terminal is provided for use with condenser microphones. The phantom inputs accept dc voltages up to 48 Vdc and are internally filtered. Most microphones may run from the same 24 Vdc supply as the ST-GSP1. The audio output may also be wired balanced or unbalanced. Two LED indicators are provided for adjustment. One LED indicates the correct gain setting. The second indicator shows when the module is switched ON. Gain and threshold levels are adjusted using 25-turn trimming potentiometer.

The mic input gain adjustment has sufficient range to accommodate a wide assortment of microphones, from low-output dynamic to higher-output condenser microphones. The threshold adjustment permits setting the audio level at which the preamplifier output turns ON. Internal switching is solid-state and uses a soft-switch transition that sounds instantaneous without annoying clicks or edge transitions. The module will mute 2 seconds after the audio level drops below the preset threshold level. In circumstances where a longer delay time is desired, an external capacitor may be connected to extend the delay.

A proprietary RDL circuit provides noise reduction whenever the mic is active. This circuit suppresses ambient noise that permits higher audio levels before feedback and minimizes the audible open-mic effect during the 2 second off delay.

Wherever a gated speech preamplifier is needed, the ST-GSP1 is the ideal choice. Use the ST-GSP1 in combination with other RDL RACK-UP®, STICK-ON®, TX™, or FLAT-PAK™ series products as part of a complete audio/video system.

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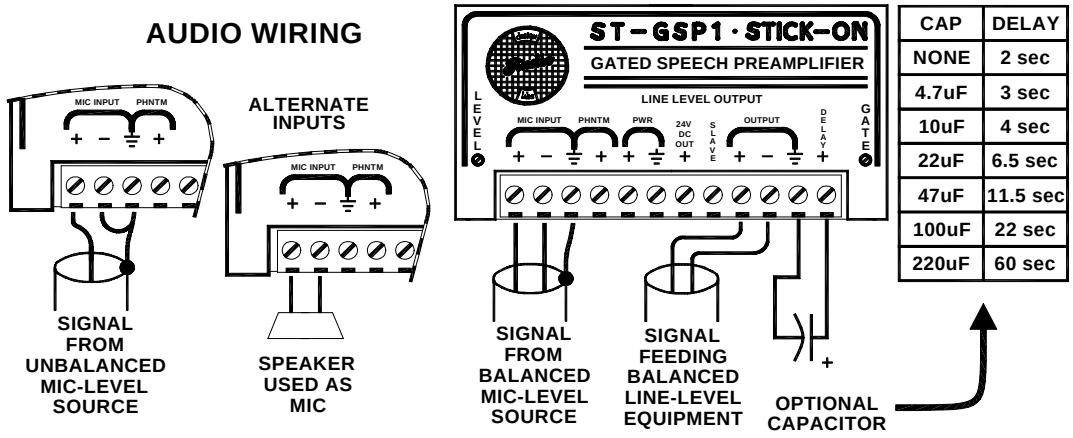
Gated Speech Preamplifier

Installation/Operation

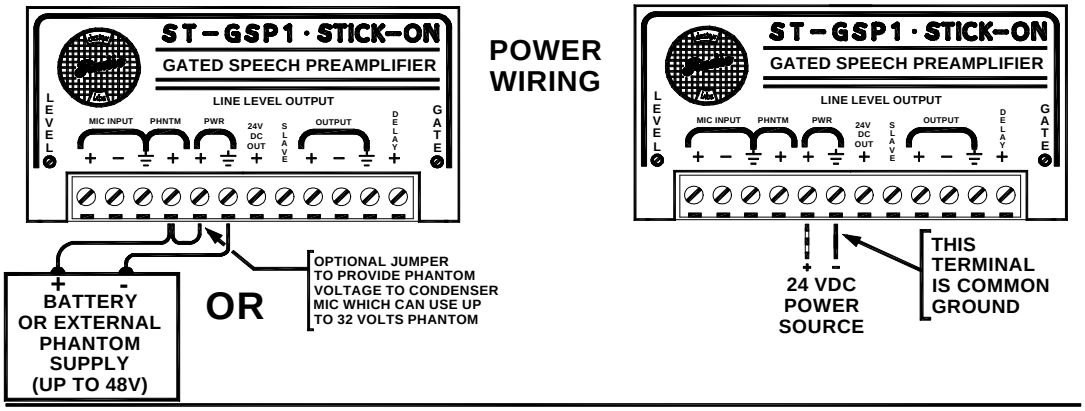
EN55103-1 E1-E5; EN55103-2 E1-E4
Typical Performance reflects product at publication time exclusive of EMC data, if any, supplied with product. Specifications are subject to change without notice.

AUDIO WIRING

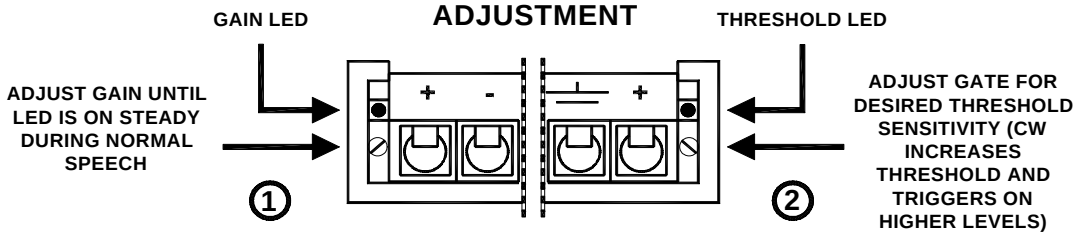


CAP	DELAY
NONE	2 sec
4.7uF	3 sec
10uF	4 sec
22uF	6.5 sec
47uF	11.5 sec
100uF	22 sec
220uF	60 sec

POWER WIRING



ADJUSTMENT



TYPICAL PERFORMANCE

Input Impedance:	150 to 600 Ω balanced, 5 kΩ unbalanced
Switching Time:	10 ms
Off delay:	2 sec. nominal (may be extended using external capacitor)
Control Signal:	Open-Collector @ 50 mA
Headroom:	> 18 dB (above +4 dBu)
THD+N:	< 0.030% (1 kHz)
CMRR:	> 45 dB
Freq. Response:	15 Hz to 20 kHz (+/- 0.5 dB into 10 kΩ bridging input)
Residual Noise:	< -80 dB (below +4 dBu unweighted, preamp muted)
ON Gain:	45 to 65 dB (adjustable)
Power:	24 to 33 Vdc @ 75 mA, Ground referenced

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