



**RDL**<sup>®</sup>  
Radio Design Labs

SPECIALISTS IN PRACTICAL PRECISION ENGINEERING™

## STICK-ON<sup>®</sup> SERIES

### Model ST-VOX1

### Voice Activated Relay

#### ANYWHERE YOU NEED...

- Control Switching from Voice Signal
- Audio Switching Precisely Tailored for Stable, yet Fast Switching from Voice Sources
- Switching from Mic or Line Level Signals
- Precise Threshold Adjustment
- DPDT Switching Contacts
- Open-Collector **Slave** Output



#### *You Need The ST-VOX1!*

APPLICATION: The ST-VOX1 is an audio controlled relay in the group of STICK-ON series products by Radio Design Labs. These products are designed for quick, convenient installation and reliable operation in a variety of control applications. The ST-VOX1 is specifically designed to switch reliably on voice signals.

When used in intercom or talk-back applications, the ST-VOX1 may be triggered directly from an unbalanced microphone. In many such installations, the microphone or other audio source must be preamplified, making the ST-VOX1 an ideal mate to work with RDL's STM-1 preamp. The unbalanced output from the STM-1 can be used to trigger the ST-VOX1, while the STM-1 balanced output is used for the audio feed.

The ST-VOX1 releases very quickly, but holds on through very short pauses in syllables common to speech. These time constants allow the design of a communications system yielding comfortable two-way conversation.

- High-impedance inputs connect across any unbalanced audio line
- Multi-turn sensitivity adjustment permits precise threshold setting
- Multi-turn **DELAY** control adjusts relay release delay
- Tight bandpass filtering yields triggering on voice frequencies
- **Slave** open-collector terminal allows additional relays to be added for more contacts (RDL's ST-LCR1)
- **Slave** terminal may be used with remote switch to manually override the control circuit and turn on the relay

Wherever a voice activated relay is needed, the ST-VOX1 is the ideal choice. Use the ST-VOX1 combined with other RDL RACK-UP<sup>®</sup>, STICK-ON, TX<sup>™</sup>, or FLAT-PAK<sup>™</sup> series products as part of a complete audio/video system.

# STICK-ON<sup>®</sup> SERIES

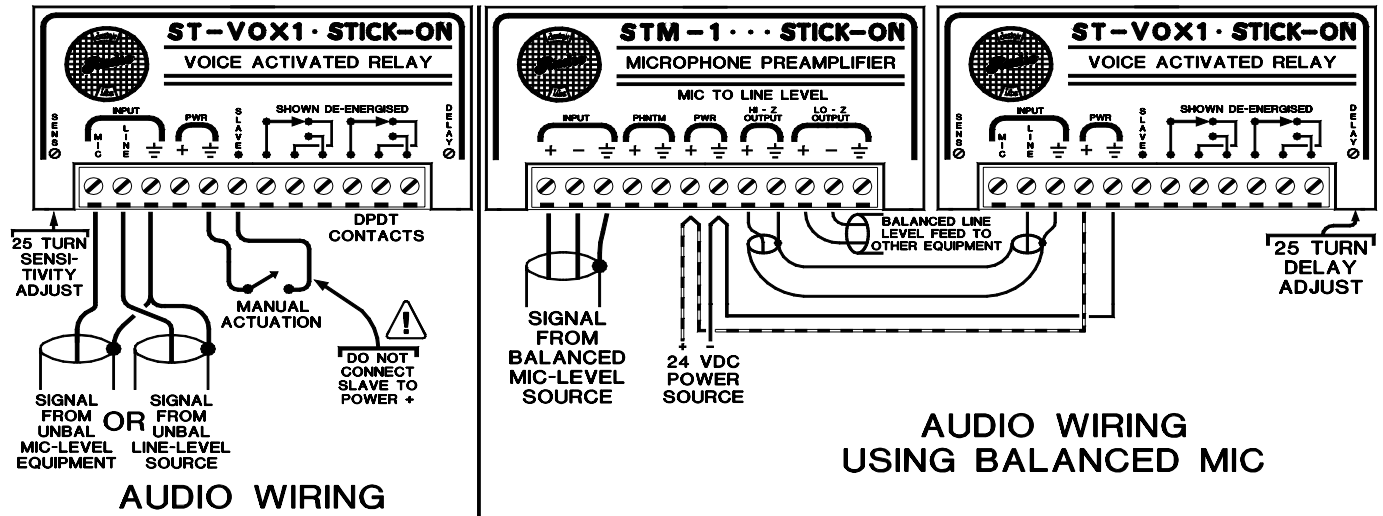
## Model ST-VOX1

### Voice Activated Relay

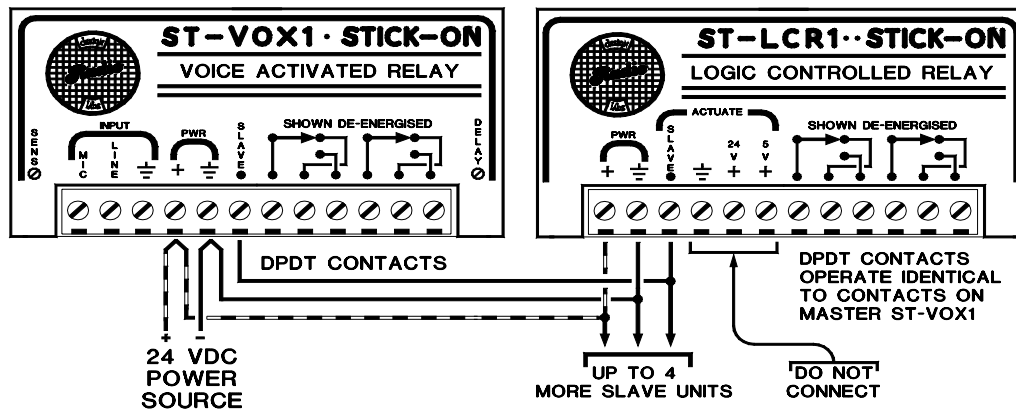
## Installation/Operation



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.



## ADDING ADDITIONAL CONTACTS



**ADJUSTMENT PROCEDURE**  
1. ADJUST THE SENS POT FOR RELIABLE TRIGGERING. MAXIMUM SENSITIVITY IS ACHIEVED WITH THE POT TURNED FULLY CLOCKWISE.

2. NOW THE DELAY CAN BE ADJUSTED. IF THE ST-VOX1 IS DROPPING OUT BETWEEN WORDS OR SYLLABLES, INCREASE DELAY BY TURNING THE DELAY POT CLOCKWISE.

## TYPICAL PERFORMANCE

Mic Input:	5 kΩ unbalanced line
Line Input:	200 kΩ unbalanced
Control Outputs:	Open-collector @ 100 mA, Suitable to drive indicators or "slave" LCR
Relay Contacts:	Double-Pole, Double-Throw
Maximum Switching Power:	60W (220 Vdc, 125 Vac, 2A)
Mic Input Sensitivity:	Adjustable -80 dBv to -50 dBv
Line Input Sensitivity:	Adjustable -45 dBv to -15 dBv
Release Delay Time Adjustment Range:	
Relay Contacts*:	70 to 260 ms
Slave (open collector output):	15 to 260 ms
Activation Response Time:	
Relay Contacts*:	5 ms
Slave (open collector output)	3 ms
Power Requirement:	24 to 33 Vdc @ 50 mA, Ground-referenced

\* Time required for normally open contacts to switch