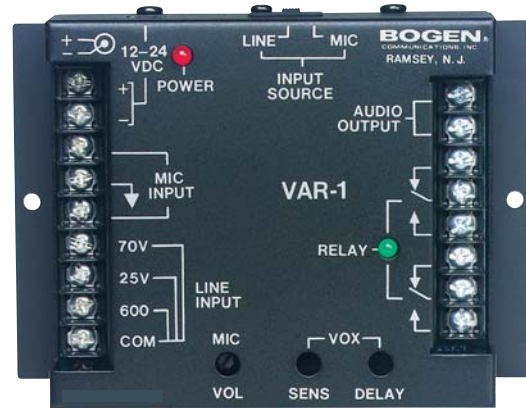


# Voice-Activated Relay

## Model VAR1



### Description

The VAR1 is a relay device that monitors audio activity over a wide range of input voltages and operates two sets of C-Form relay contacts in response to detected activity. The VAR1 can be used to detect voltages as low as signals directly from a microphone or as high as signals from 70V speaker systems. A low-level output of the detected audio, transformer-isolated from the input, is also made available for use with other equipment. The VAR1 can also be used as a balanced, low-impedance microphone pre-amp.

The VAR1 is ideally suited to provide a set of contact closures for paging ports of lower cost telephone systems that do not have a set of AUX contacts to trigger paging equipment. An adjustable release delay (up to 25 seconds) keeps the paging system from dropping out in the middle of a page.

### Features

- Monitors audio activity over a wide range of input voltages
- Two sets of C-Form (both N.O. and N. C.) relay contacts respond to audio activity
- Four levels of signals: microphone, 600-ohm line, 25V, and 70V speaker systems
- Built-in balanced, low noise, high gain microphone pre-amp
- Transformer-isolated, 600-ohm small signal level output of detected audio available
- Works with self-amplified or central-amplified paging systems
- Separate microphone pre-amp gain control
- Adjustable release delay: 0.25s to 25s
- Trigger threshold adjustment
- Relay active indicator light
- Accessories: PRS40C 12V DC Power Supply (sold separately)

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**Technical  
Specifications**

**LINE INPUT**

**Impedance:** 600 ohms  
**Frequency Response:** 100 Hz to 10 kHz  
**70V Input Impedance:** 200k ohms  
**Output Level:** 400 mVrms  
**25V Input Impedance:** 75k ohms  
**Output Level:** 420 mVrms

**MIC PRE-AMP**

**Gain:** 62 dB  
**Sensitivity:** 750 microvolts, rms for 1Vrms out  
**Distortion:** < 2%  
**Frequency Response:** 200 Hz to 10 kHz  
**Output Signal-to-Noise Ratio:** 55 dB

**GENERAL**

**VOX Sensitivity:** 20 mV to 150 mVrms @ 600 ohms Line input  
**Time Delay Range (approx.):** 0.25 to 25 sec.  
**Relay Contact Rating:** 2A/30V DC, 0.5A/120V AC  
**Power Requirements:** External 12V to 24V DC @ 100mA (sold separately)  
**Dimensions:** 5-3/8" W × 3-7/8" H × 1-3/8" D  
**Product Weight:** 2 lb.

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**Architect and  
Engineer  
Specifications**

The VAR1 Voice-Activated Relay shall be a DPDT relay device. It shall be activated when an audio signal is detected at the microphone pre-amp or at 70V, 25V, or 600-ohm line level inputs. A slide switch shall be provided to allow selection of pre-amp or the line inputs.

A VOX detect circuit shall be provided and shall include sensitivity and delay controls. The audio output shall be an isolated 600-ohm transformer. Line impedance shall be 600 ohms, with a frequency response of 100 Hz to 10 kHz. Sensitivity and delay

shall be controlled via recessed potentiometers. Time delay range shall be adjustable from approximately 0.25 to 25 seconds.

MIC Pre-amp shall provide 62 dB gain, with volume control via a recessed potentiometer. The frequency response of the MIC pre-amp shall be 200 Hz to 10 kHz. Output signal-to-noise ratio shall be 55 dB.

The VAR1 shall operate from a 12V to 24V DC power source (sold separately). Dimensions shall be 5-3/8" W × 3-7/8" H × 1-3/8" D. Weight of the unit shall not exceed 2 lb.

**BOGEN<sup>®</sup>**  
**COMMUNICATIONS, INC.**

50 Spring Street, Ramsey, NJ 07446, USA  
201-934-8500, • FAX: 201-934-9832  
www.bogen.com