

# **Phase 3**

by Videoquip Research

## **SD-2**

### **Silence Detector**

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## Introduction

The Phase 3 SD-2 silence detector is a professional audio level monitoring device, specifically designed to detect silence, or the absence of audio.

Two completely independent channels of detection monitor the two balanced audio inputs. Each channel has an indicator for the presence of active audio, an adjustable silence level, and an adjustable delay before silence notification occurs. Gold relay contacts for each channel allow external devices to be controlled, or may be used to route active audio for emergency backup audio switching.

The balanced audio connectors are of the XLR type, and the relay connectors are screw clamp terminal blocks. The SD-2/R rackmount version contains either 1 or 2 SD-2 modules. These modules are identical to the SD-2 version, which is described throughout this manual.

## Installation

The SD-2 consists of 2 completely independent monitoring networks.

Each of the 2 channels provides a female XLR connector for balanced audio input, and screw clamp terminal blocks for the relay outputs.

### Audio Inputs

The audio sources to be monitored are connected to the SD-2 input channels (A,B). Connect balanced signals as shown in Table 1.

Pin #	Function
1	Ground
2	+
3	-

**Table 1. XLR Input Connector Pinout**

For unbalanced signals, connect the signal to pin 2 (+), and the shield to ground. It is not necessary to ground pin 3 (-) when using unbalanced signals.

### Relay Outputs

Any external devices or audio signals to be controlled by the relays are connected to the terminal blocks. Two full form-C gold relay contacts are available for each channel, allowing balanced stereo signals to be controlled. The connections for each relay (from left to right) are Common, Normally Open (N.O.), and Normally Closed (N.C.). These are clearly silkscreened on the rear panel.

The normally closed (N.C.) and normally open (N.O.) relay conditions for each channel exist when audio is present at the channel input (the green signal LED is lit), and during the adjustable transition delay before a silence alarm occurs (no LEDs lit). The contacts switch when silence is indicated by the red silence LED for corresponding channel.

Make connections to the relays between either N.O. and Common or N.C. and Common, depending on the equipment being connected.

## **Installation (cont'd.)**

### **Audible Alarm**

The audible alarm sounds with the occurrence of each new silence condition, regardless of which channel it occurs on. The audible alarm may be silenced after each occurrence using the front panel Mute Alarm switch, or may be permanently disabled by unplugging and opening the unit, and moving the Alarm jumper to the OFF position.

### **Adjustment**

The front panel Level and Delay controls determine the reference audio levels for silence detection and the delay times before the silence alarms are activated.

The SD-2 is adjusted before leaving the factory for silence levels of -20 dBm, and the minimum delay time (1 second). The silence threshold levels may be adjusted between -40 and 0 dBm, and the delay times from 1 second to 50 seconds using the front panel controls.

## SD-2 Specifications

Power Requirements 115 VAC, 60 Hz or 230 VAC, 50 Hz; 6 W

### Audio Inputs

Number of Inputs 1 per channel, 2 channels total  
Input Impedance 40 kohms balanced  
Input Connectors XLR, female  
Common Mode Rejection -85 dB @ 60 Hz

### Silence Detection

Silence Level -40 dBm to 0 dBm  
Detection Delay 1 second to 50 seconds  
Silence Indicator LED, red  
Silence Alarm Piezo, 4 kHz  
Relay Contacts Gold, form-C, 2 per channel  
Relay Connectors Screw clamp terminal blocks  
Audio Signal Indicator LED, green

### Physical Dimensions (Inches)

SD-2 8.1 W x 1.9 H x 5.1 D  
SD-2/R 19 W x 1.75 H x 5.0 D

## Warranty

Videoquip Research Limited (VRL) warrants the Phase 3 SD-2 for a period of 2 (two) years from the date of shipment from the factory, to be free of defects in workmanship and material under normal use and service. This warranty is void if failure is due to abnormal use or modification, or if serial numbers have been tampered with. VRL's liability is limited to the repair or replacement of this unit, or to a sales credit, and the warranty action taken is at the discretion of VRL. Any warranty claims must be received in writing by VRL before the expiration of the two year period. Warranty coverage does not include shipping costs. This warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities of Videoquip Research Limited.