

SONIFEX

Redbox RB-SD1
Silence Detect Unit

2014-15
Catalogue





RB-SD1 Silence Detection Unit



Category: Synchronisers, Delays & Silence Detectors.

Product Function: To detect silence in an analogue audio signal and switch to a second source.

Typical Applications: At a radio transmitter site, before the input to the transmitter. A local audio source will become the secondary input in case silence is detected from the studio source. At a radio studio in case of failure of broadcast playout server, it can switch in an emergency playback system.

Features: Adjustable silence detect threshold level and silence duration, passive signal path, switching of external equipment on silence detection, automatic or manual operation, mono or stereo operation, front panel LED indications of alarm status.

The RB-SD1 silence detection unit is a 1U rack-mount device used to monitor an unattended stereo studio feed and in the event of the signal going “quiet” after a given period the unit will switch through an alternative stereo audio signal. This signal could be a recorded message (e.g. “normal service will be resumed”, etc), a feed from a CD player or minidisc machine, or an alternative recorded programme. Controls are provided to start external equipment and to provide remote status indication.

It has 2 balanced stereo audio inputs with the maximum input level being +28dBu. Each input is user-defined as either the main source or auxiliary source and both sources are monitored for failure, each having a remote failure alarm. In the event of the main source dropping below a pre-set level for a pre-determined amount of time, the unit will automatically switch through to the auxiliary signal.

The silence detect level is adjustable between -60dBu and -15dBu in 3dB steps via a 16 position rotary switch on the rear panel. The silence interval can be adjusted between 2 seconds to 30 seconds in 2 second steps, or, alternatively, set to 2 minutes 5 seconds also via a 16 position rotary switch on the rear panel. The audio outputs use stereo professional balanced XLR-3 male connectors.

The unit can operate in 2 modes - automatic or manual. In both modes it will automatically switch over to the auxiliary source on detecting silence. When the main signal is again detected it will either return to the main signal automatically or manually depending on the mode chosen. The RB-SD1 has a number of remote operational features. Remote outputs provide separate relay contact closures for failure of the main and auxiliary inputs. You can also control remotely all of the front panel switches for source selection, mode selection and signal Restore. You can remotely start and stop another piece of equipment on alarm failure and main signal Restore respectively. Also, the longest silence time (2min 5sec) can be set remotely, which is useful if you are expecting to broadcast a long silence.

The unit can be configured to alarm when either the left or right channel of the main input source fails, or if the whole stereo signal fails. There are also options to set the remote start output as momentary or latched, to disable switching to the auxiliary input on alarming and to increase the gain on the auxiliary input so that an unbalanced input can be used, for example, from a domestic minidisc player.

Front panel LED indicators show individually left and right programme and alarm

conditions for both the main and auxiliary inputs. The status of the source, mode and alarm state are also shown on the front panel with LED indicators.

Additionally, the RB-SD1 can be programmed for specific applications which can be defined on power-up of the unit. Contact Sonifex for further information if you have a particular requirement. (Refer to the handbook on the website for information on current configurations).

The RB-SD1 has been designed to have a passive signal path through the main input, so if power to the unit fails, the signal input will still be routed through to the output. This is essential for applications such as installation at transmitter sites, where a power failure to the unit should not prevent the audio input signal from being output to the transmitter.



Specification For RB-SD1

Audio Specification

Maximum Input Level:	+28dBu
Maximum Output Level:	+28dBu
Frequency Response:	20Hz - 20kHz ±0.1dB
Gain:	+8dB (for unbal input B - optional)
Distortion:	As input for balanced input, <0.05% ref +8dBu output for unbalanced input
Input Impedance:	>100kΩ balanced
Output Impedance:	As input, except when using unbalanced auxiliary input where output impedance <50Ω
Noise:	<-87dB, unity gain, ref +8dBu output for unbal input

Rear Panel Connections and Controls

Inputs (Main & Auxiliary):	4 x XLR 3 pin female (balanced, auxiliary can be unbalanced)
Output:	2 x XLR 3 pin male (balanced)
Remotes:	15 way D-type plug
Alarm Threshold:	-15dBu to -60dBu in 3dB steps via rotary switch
Silence Detect Duration:	2 - 30 seconds in 2 second intervals & 125 second option via rotary switch
Detection Type:	Mono or stereo, via DIP switch
Silence Switch Defeat:	Disable/enable silence switching, via DIP switch
Remote Start:	Latched or momentary, via DIP switch
Mains Input:	Filtered IEC, switchable 110-120V, or 220-240V, fused, 9W max
Fuse Rating:	Anti-surge fuse 100mA 20 x 5mm (230VAC) Anti-surge fuse 250mA 20 x 5mm (115VAC)

Front Panel Controls and Indicators

Controls (With Indicators):	Source select, mode select and restore
Indicator:	Program and alarm indicators for left and right source for both main and auxiliary channels

Equipment Type

RB-SD1:	Silence detection unit
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Physical Specification

Dimensions (Raw):	48cm (W) x 10.8cm (D) x 4.2cm (H) (1U) 19" (W) x 4.3" (D) x 1.7" (H) (1U)
Dimensions (Boxed):	58.5cm (W) x 22.5cm (D) x 7cm (H) 23" (W) x 8.9" (D) x 2.8" (H)
Weight:	Nett: 1.4kg Gross: 2.0kg Nett: 3.1lbs Gross: 4.4lbs

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