

# SONIFEX

Manufacturers of Audio & Video  
Products For Radio & TV Broadcasters

## S0 Radio Broadcast Mixer November 2011



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## S0 MIXING CONSOLE

### S0 Mixing Console

## S0 Radio Broadcasting Mixer

### A simple radio mixer for novice and professional users...

The S0 is a high quality yet simple to operate radio broadcast mixer ideally suited to community radio stations, for educational purposes and for internet radio. Easy to understand, the S0 includes a telephone hybrid for making and recording telephone calls and a 3.5mm stereo jack for plugging in an mp3 player.

The addition of a USB port allows for recording to a PC and for playing a PC automation system directly through the mixer. The headphone outputs have a built in limiter to offer hearing protection and the studio speakers mute when a microphone fader is open, with automatic mic live sign switching. The S0 allows presenters and DJs to be up and running quickly with a fully featured radio studio mixer.

The Sonifex S0 mixer is a compact, low cost, fixed format broadcast mixing console designed for on-air radio use. It uses the same high quality circuitry and components as the Sonifex S2 and S1 mixers to provide an audio experience second to none. The S0 can be fitted flush into a desk-top or can be rack mounted directly using the front panel mounting holes.



S0 Radio Broadcast Mixer Iso View

The uncomplicated and intuitive front panel layout ensures that the unit appeals to novices and broadcast professionals alike, whilst a range of user configurable options allows for flexible operation.

The console consists of nine input channels:

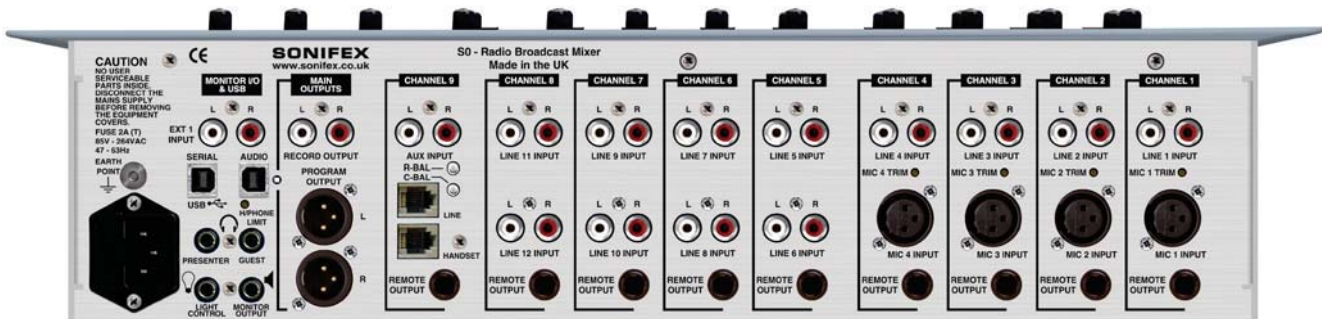
- 4 x mono balanced XLR mic/stereo unbalanced RCA phono line inputs.
- 4 x dual stereo unbalanced RCA phono line inputs.
- 1 x telephone balance unit (with line and handset ports)/stereo unbalanced RCA phono auxiliary input with a parallel 3.5mm stereo jack input on the front panel.

Providing in total 4 mic, 12 stereo line, 1 TBU & 1 stereo auxiliary inputs which you can switch between.

#### Input Channels

Input source buttons at the top of each channel strip are used to select the required mono or stereo source. The mixer has two main stereo buses, PGM (Program) and REC (Record), so each channel also has PGM and REC buttons to independently select which mixer bus the selected input is routed to.

The XLR microphone inputs on channels 1 to 4 have individually selectable +48V



S0 Radio Broadcast Mixer Rear.

## S0 Mixing Console

phantom power and a gain calibration potentiometer providing up to 65dB of gain for the pre-amp. Input channel 1 also serves as the microphone input for a dedicated talkback channel.

The stereo RCA phono line inputs on channels 1 to 8 have 10dB of gain at the input to compensate for unbalanced consumer inputs.

Input channel 9 is a TBU and stereo auxiliary input channel. The TBU allows direct connection to a telephone line and allows calls to be made and received through the mixer using the handset connection. The auxiliary channel can switch between 2 independent inputs, one on the rear panel and one on the front panel.

Any channel which has the fader up is routed to the selected output, either PGM or REC or both.

Gain for each channel is trimmed by the front panel TRIM control providing  $\pm 15$ dB of gain. A PAN/BAL(ance) control is available to facilitate stereo imaging.

The use of VCAs controlled by the ALPS long throw 100mm faders gives a smooth, repeatable response and ensures tight stereo tracking while eliminating mechanical and electronic noise.

### USB Audio for Playback and Recording

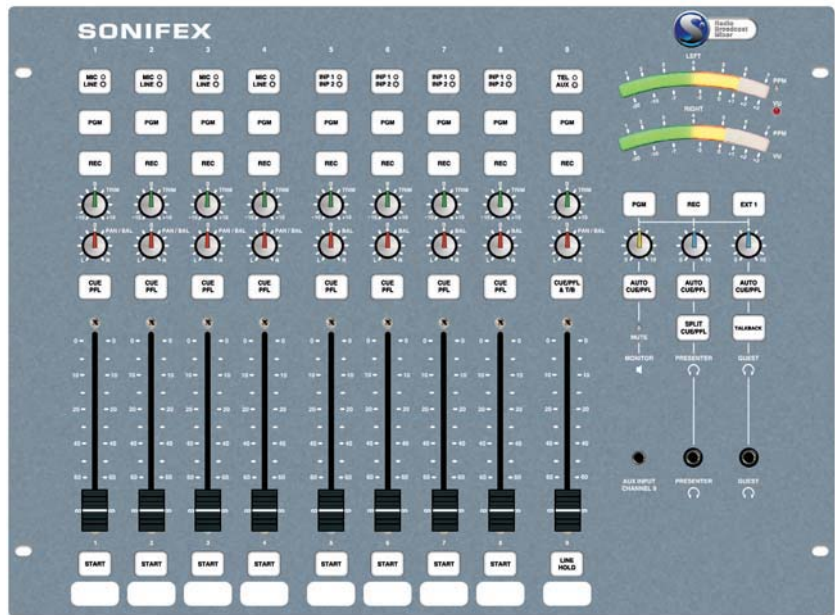
The S0 has the option to send and receive audio over USB. This allows the audio on the REC bus to be sent to a PC for recording or monitoring purposes. Also, the S0 can receive a USB audio stream from a PC and route it to the auxiliary inputs on channel 8. Alternatively, this signal can be routed to channels 5, 6 or 7 if required.

### Output Channels

The S0 has separate stereo PGM and REC bus outputs. The PGM bus is output on balanced stereo XLRs and the REC bus is output on unbalanced stereo RCA phono connectors. There are monitor outputs for presenter headphones, guest headphones and loudspeakers.

### Monitoring & Headphone Limiter

The monitor loudspeakers, presenter headphones and guest headphones are on 6.35mm stereo jack sockets and the headphones can be plugged in to the front and rear of the mixer. The monitor



S0 Radio Broadcast Mixer Top View

loudspeaker and headphone levels are independently variable between 0 (cut off) and 10 (max).

With the concerns over listening levels being too high in headphones, the addition of an adjustable limit level potentiometer on the rear panel of the mixer is a great idea which limits the maximum level of the audio routed to the presenter and guest headphone outputs. An illuminated MUTE LED shows when a live microphone channel has muted the loudspeakers and there is a MUTE contact output available to illuminate a 'MIC LIVE' light via a 6.35mm stereo jack socket on the rear panel.

A three way electronically interlocking illuminated switch bank selects the source routed to the loudspeaker and headphone outputs from either PGM, REC or from an additional unbalanced stereo RCA phono input EXT 1. This external input can be used for monitoring an off air signal or studio output.

Green illuminated AUTO CUE/PFL (pre fade listen) buttons adjacent to each level control allow the automatic monitoring of any channel that has been selected to pre-fade, either to the monitors or headphones.

For the presenter headphones, SPLIT CUE/PFL can be selected which places the

- User friendly broadcast mixer.
- Clear, simple layout with no jargon.
- Designed for school & community radio.
- Nine multi-function channel mixer.
- Built in telephone interface.
- Built in headphone volume limiter.
- Large, simple LED volume display.
- Remote output for fader starts.
- Speaker muting when 'Mics' are on.
- External mic-light switching output.
- 'Programme' and 'record' outputs.
- 'Aux' input for iPod or MP3 players.
- Four microphone/line channels.
- Four stereo line channels.
- Switchable telephone/AUX channel.
- Stereo USB audio to and from a PC.
- Guest headphone 'talkback'.
- Reliable, low cost mixing solution.
- Rack or flush mountable.
- Integrated AC power supply.

selected source in mono in the left ear, and pre-fade in mono in the right ear.

### Metering

A pair of bright 21 segment LED meters can be configured to show either VU or PPM metering. The meters follow the selection of the presenter headphones including any pre-fade or split pre-fade function.



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### Talkback

A separate TALKBACK button is provided to allow the presenter to talk to a guest on the guest headphones. The S0 uses input channel 1 as the talkback source.

### Channel Remotes

The remote outputs for each channel

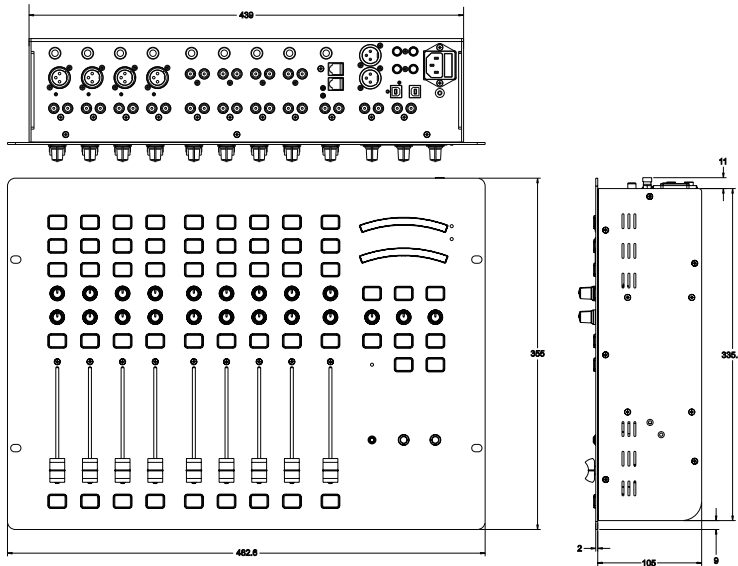
are highly configurable providing a comprehensive range of options to interface external equipment to the mixer. Each channel input has its own START and STOP remote controls which can be triggered when the channel is routed to the PGM or REC bus and the fader is opened or closed. The remotes can be set-up to be either

pulsed or continuous latched outputs, and if in pulsed mode the START button has the capability to produce repeated start pulses.

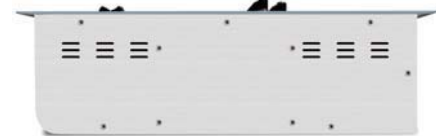
### Configuration Settings

The S0 has a range of software configurable options which can be used to customize the operation of the mixer. It is possible to enable or disable specific inputs, enable phantom power for the microphone channels and limit which buses each channel can be routed to. Other settings control auto cancelling of PRE FADE when the channel fader is opened and all the remote output configurations.

The S0 has an integral universal switch mode power supply, which uses an IEC mains inlet.



S0 Radio Broadcast Mixer Dimensions



S0 Radio Broadcast Mixer Side View

## Technical Specification for S0

<b>Input / Output Impedances</b>		<b>Range</b>		Remote Outputs: 9 x 6.35mm (1/4") stereo jack sockets (one per channel) 1 x 6.35mm (1/4") stereo jack socket for light control	
Mic Input:	> 1k $\Omega$ electronically balanced	Pan Range:	Off/-3dB Centre/Off	Telephone:	2 x RJ11 6/4 (1 x line, 1 x handset)
Stereo Line Inputs:	> 20k $\Omega$ electronically unbalanced	Balance Range:	$\pm$ 6dB	USB Audio:	1 x Type-B receptacle
PGM Output:	< 50 $\Omega$ electronically balanced	<b>Common Mode Rejection Ratio</b>		USB Serial:	1 x Type-B receptacle
REC Output:	< 75 $\Omega$ unbalanced	Mic Input:	> 60dB typically	Mains Input:	Filtered IEC, continuously rated 85-264VAC, 47-63Hz, 45W nominal, >50W peak
Monitor Output:	< 75 $\Omega$ unbalanced	<b>Output</b>		Fuse Rating:	Anti-surge fuse 2A 20 x 5mm
<b>Input / Output Gain Range</b>		Maximum PGM Output:	+26dBu balanced	<b>Equipment Type</b>	
Mic Input:	Preset pot +24dB to +67dB ref -50dBu, TRIM pot $\pm$ 15dB	Maximum REC Output:	+16dBu unbalanced	S0: 50 radio broadcast mixer	
Line Input:	+10dB ref 0dBu at PGM output, TRIM pot $\pm$ 15dB	Headphone Output Load:	> 16 $\Omega$ , recommended 250 $\Omega$	<b>Physical Specification</b>	
<b>Frequency Response</b>		<b>Input &amp; Output Connections</b>		Dimensions (Raw):	48.3cm (W) x 35.6cm (D) x 12.5cm (H) 19" (W) x 14" (D) x 4.9" (H)
Mic Input:	40Hz to 20kHz -1dB, +0dB	<b>Audio Inputs:</b>	4 x Microphone XLR-3 pin sockets 12 x Pair stereo line RCA phono sockets 1 x Pair stereo aux RCA phono sockets 1 x Stereo aux 3.5mm jack socket	Dimensions (Boxed):	67cm (W) x 44cm (D) x 25cm (H) 26.4" (W) x 17.3" (D) x 9.84" (H)
Line Input:	20Hz to 20kHz -0.5dB, +0dB	<b>Audio Outputs:</b>	PGM: 2 x XLR-3 pin plug (balanced) REC: 1 x Stereo pair RCA phono sockets Monitor Inputs: 1 x Stereo pair RCA phono sockets Monitor Outputs: 5 x 6.35mm (1/4") stereo jack sockets (2 x presenter, 2 x guest, 1 x loudspeaker)	Cut-Out Dimensions:	44cm (W) x 34.7cm (D) 17.32" (W) x 13.66" (D)
<b>Noise (20Hz to 20kHz)</b>				Weight:	Nett: 8.5kg Gross: 10.12kg Nett: 18.7lb Gross: 22.26lb
Mic Input E.I.N.:	-130dB with 150 $\Omega$ source.				
Stereo Inputs:	-92dBu ref 0dB (fader down, no routing)				
<b>Distortion</b>					
Total Harmonic Distortion:	0.015% at 1kHz, 0.015% at 10kHz ref +8dBu				

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