SONIFEX

RB-TGHD(B or X)

Multi-Channel HD Tone Generator

2016

Catalogue

RB-TGHD(B or X) Multi-Channel HD Tone Generator

Category: Tone Generators.
Product Function: 8 Channel audio tone generator that provides line identification for multi-channel audio systems.

Typical Applications: It allows correct channel configuration in fold-down mixes when you need to mix several audio channels into a stereo feed, e.g. 5.1 and 7.1 surround sound.

Features:

- 8 analogue & 8 digital output channels.
- EBU R49, GLITS and BLITS tones, with channel identification.
- 2, 4, 6 and 8 channel configurations.
- Wordclock sync input.
- Optional sync boards available.
- Audio level line-up adjustable from 0dBu to +24dBu.
- Available with BNC (B) or XLR (X) digital audio outputs.
- Programmable audio tone sequences using SCi serial remote.

The RB-TGHD is an 8 channel audio tone generator that provides line identification for multi-channel audio systems, including 5.1 and 7.1 surround sound typically used in high definition television broadcasts. By using a range of widely accepted industry standard tone sequences such as the EBU R49, GLITS and BLITS tones, channel identification and associated levels can be determined easily.

Correct channel configuration in fold-down mixes can also be highlighted when a broadcaster needs to mix several audio channels into a stereo feed.

RB-TGHDB Multi-Channel HD Tone Generator.

RB-TGHDX Multi-Channel High Definition Tone Generator.

The RB-TGHD caters for 2, 4, 6 and 8 channel configurations and all of the available audio tone sequences for each channel configuration can be cycled through automatically, or selected manually, and a loop mode allows patterns of tones to be repeated. A bank of 4 pushbuttons on the front panel sets these options and the associated LEDs indicate the current setting. A set of 8 LEDs on the front panel indicate which channel is currently outputting audio with the LEDs numbered as both 1-8 and as L, R, C, LFE, Ls, Rs, Lr and Rr.

The RB-TGHD is available in two variations, each providing both analogue and digital audio outputs. The RB-TGHDX offers balanced AES/EBU digital audio outputs on 3 pin XLR connectors and the RB-TGHDB has unbalanced digital audio outputs on BNC connectors. Both types provide 8 balanced analogue outputs on 3 pin XLR connectors.

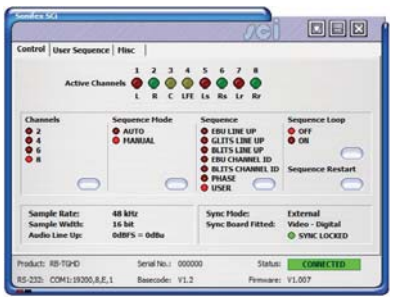
A word clock synchronising input on BNC connector allows the digital outputs to be synchronised to an external signal. Optionally, an RB-SYA, RB-SYD or RB-SYE sync board can be fitted, to synchronise the unit to either an analogue or digital video sync signal, or an AES/EBU audio input respectively. A SYNC LED on the front panel indicates when the unit is synchronised to the external signal.

The audio level line-up of the RB-TGHD can be adjusted from 0dBu to +24dBu in 1dBu steps (ref FSD) to suit different environments via the front panel mounted DIPSwitches. Changing the audio line-up does not affect the gain relationship

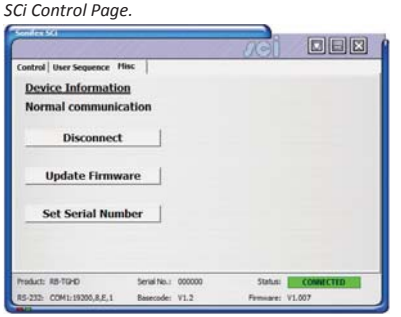
between each channel, ensuring that correct levels through the target system can be maintained. These switches also provide settings for digital sample rate which ranges from 32 kHz to 192 kHz, and digital sample width which is either 16 bit or 24 bit.

The serial port allows the RB-TGHD to be connected to a PC running SCi, the Sonifex Serial Control Interface. This allows full control of the unit and the ability to generate a user defined audio tone sequence.

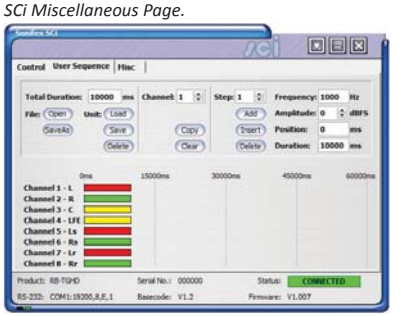
In addition, a remote port on the rear provides a simple interface to control the unit and has several outputs to indicate which tone sequence is active.



SCi Control Page.



SCi Miscellaneous Page.



SCi User Sequence Page.

Specification For RB-TGHD(B & X)

Audio Specification	
Analogue Output Impedance:	<50Ω
Digital Output Impedance:	110Ω balanced 75Ω unbalanced
Dynamic Range:	>100dB
Max Output Level:	+24dBu
Distortion & Noise:	<-85dB THD+N at 1kHz
Crosstalk:	<-110dB (20Hz to 20kHz) for analogue outputs
Front Panel Controls	
Channels:	2, 4, 6 or 8
Sequence Mode:	Auto or Manual
Sequence:	EBU R49 stereo line-up GLITS stereo line-up BLITS stereo line-up EBU R49 channel ID BLITS channel ID Phase User defined (using SCi)
Sequence Loop Mode:	On or Off (enables looping of current sequence)
Digital Sample Frequency:	32kHz, 44.1kHz, 48kHz, 88.2kHz 96kHz, 176.4kHz or 192kHz (via DIPSwitches)
Digital Sample Width:	16bit or 24bit (via DIPSwitches)
Audio Line-Up:	0dBu to +24dBu in 1dB steps ref FSD (via DIPSwitches)
Channel Identification:	LEDs indicating 1-8 and L, R, C, LFE, L_S, R_S, L_R and R_R
Rear Panel Connections	
Analogue Outputs:	8 x XLR 3 pin male (balanced)
Digital Outputs:	4 x AES/EBU XLR 3 pin male (balanced) or 4 x BNC female (un-balanced)
Digital Input:	Word clock on BNC
Remote I/O Port:	25-way 'D'-type socket
	17 inputs, 7 tally outputs
Serial Comms Port:	9-way 'D'-type socket
Mains Input:	Filtered IEC, continuously rated 85-264VAC, 47-63Hz, 60W peak, 30W average
Fuse Rating:	Anti-surge fuse 1A 20 x 5mm
Equipment Type	
RB-TGHDB:	Multi-channel HD tone generator with BNC digital outputs
RB-TGHDX:	Multi-channel HD tone generator with XLR digital outputs
Physical Specification	
Dimensions (Raw):	48cm (W) x 10.8cm (D) x 4.3cm (H) 19" (W) x 4.3" (D) x 1.7" (H) (1U)
Dimensions (Boxed):	59cm (W) x 27.5cm (D*) x 11cm (H) 23.2" (W) x 10.8" (D*) x 4.3" (H)
Weight :	Nett: 1.3kg Gross: 1.9kg Nett: 2.9lbs Gross: 4.2lbs
Accessories	
RB-SYA:	Analogue video sync board (NTSC, PAL & SECAM)
RB-SYD:	Digital video sync board (SD-SDI & HD-SDI)
RB-SYE:	AES/EBU sync board
RB-RK3:	1U Rear panel rack kit for large Redboxes

SONIFEX

www.sonifex.co.uk

UK Office:

Sonifex Ltd

61 Station Road, Irthlingborough,
Northants, NN9 5QE, UK
Tel: +44 (0) 1933 650700
Fax: +44 (0) 1933 650726
Email: sales@sonifex.co.uk

Australian Office:

Sonifex Pty Ltd

12/6 Leighton Place,
Hornsby NSW 2077, Australia
Tel: +61 (2) 9987 0499
Fax: +61 (2) 9476 4950
Email: sales@sonifex.com.au