PROFESSIONAL
MIXING CONSOLE

SONOSAX
SX-ST / SX-VT

Specifications

SONOSAX SAS S.A.

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SONOSAX SX-ST and SX-VT Specifications

General and notes

All specifications mentioned hereafter apply to standard models only.

SONOSAX SAS SA reserves the right to modify these characteristics at any time without prior notice.

For measurements and/or settings the reference is: 0dBu = 0.775V (eg. +6dBu = 1.55V / +4dBu = 1.23V)

Summary of characteristics

Frequency response:	10Hz to 200kHz ± 0.5dB *30Hz to 200kHz ± 0.1dB*
Equivalent input noise:	-128dBu (22Hz to 22kHz - 150Ω source @ 60dB gain)
Input gain Fixed Steps:	60dB 48dB 36dB 24dB 12dB 0dB
Input gain Fine:	±20dB from CAL Position (40dB end to end)
Fader gain:	selectable +12dB or +24dB
Overall gain range:	fader @ 0dB - 20dB to +80dB fader @ +12dB - 8dB to +92dB fader @ +24dB +4dB to +104dB
Overall dynamic range:	128dB
Input headroom:	24 dB (when gain potentiometer is at CAL position)
Crosstalk between 2 channels:	better than 100dB 10Hz to 1kHz better than 90dB 10Hz to 20kHz
Overall harmonic distortion THD+N:	< 0.01 %
Main Level meters:	moving coil Peak Meters IEC-268-10 type 1 (factory default) internally selectable to IEC-268-10 type 2 or absolute Peak large level scale from -32dB to +12dB reading 0dB at nominal level switchable to Level and Phase Correlation meter battery level indication
LED's Level indicators:	Red +6dB Yellow 0dB Nominal level Green - 10dB Green - 20dB Green - 40dB
Overload indication:	turns all leds ON 6dB before clipping
Led level reading accuracy:	±0.1dB for 0dB
Nominal output level:	+6dBu or +4dBu (internally selectable) 0dB reading on all Peak level meters reflect the nominal level An internal jumper sets the global nominal level of the entire mixer. It automatically affects the setting of all peak-meters, output levels, the internal 1kHz ref tone, the 0 setting of the limiter

Mic/Line inputs

Input type:	electronically balanced
Input impédance:	6.8kΩ , linear from 10 Hz to 200 kHz
Filtres RF:	standards
Microphone power:	+48V (phantom power)

GAIN :	60dB	48dB	36dB	24dB	12dB	0dB
Nominal level:	-54dBu	-42dBu	-30dBu	-18dBu	-6dBu	+6dBu
Maximum input level::	-30dBu	-18dBu	-6dBu	+6dBu	+18dBu	+25dBu
CMRR @ 1kHz:	>100dB	>100dB	>100dB	>90dB	>65dB	>60dB
CMRR 22Hz - 22kHz:	>100dB	>100dB	>100dB	>90dB	>65dB	>60dB
Noise LIN 22Hz - 22kHz:	-68dBu	-79.8dBu	-90.4dBu	-96.9dBu	-98.5dBu	-100.3dBu
Equivalent Input noise *:	-128dB	-127.8dB	-126.4dB	-120.9dB	-110.5dB	-100.3dB

* *Equivalent input noise with a 150* Ω *load source*

THD** (Fader version) : < 0.005 %
THD** (VCA version) : < 0.015 %

** de 22Hz à 22KHz at nominal level

Low frequency Filter (LF Cut):	18dB/octave, from 15Hz to 400Hz
Low frequencies Equaliser:	4 dB/octave, ±12dB at 80Hz, ±15dB at 40 Hz
High frequencies Equaliser:	4 dB/octave, ±12dB at 8kHz, ±15dB at 16 kHz
Mid semi parametric Equaliser:	6 dB/octave, ±11dB from 200Hz to 8 kHz
Direct Output Level:	internally selectable Pre EQ, Pre Fade or Post Fader +6dBu ou +4dBu *depending on global nominal level setting* electronically balanced, output impedance <50Ω
Insert Output Level (optional):	0dBu unbalanced, output impedance <50
Insert Return Level (optional):	0dBu unbalanced, output impedance < 10kΩ
Limiter:	from infinite to -30dB below internal nominal level Attack time: ~500µs, release time: 300ms
Compressor (VCA version) :	attack time : ~200µs, release : 500ms compression ratio: from 1:1 to infinite:1

Main outputs

Output type:	electronically balanced
Output impedance:	< 50Ω
Nominal output level:	+6dBu or +4dBu *depending on global nominal level setting*
Maximum output level:	+25dBu (+22.5dBm with 600Ω z-load)
Output Noise:	unweighted from 22Hz to 22KHz
Master faders closed:	-103dBu
Master faders at max:	- 96dBu
One input ch. assigned:	- 92dBu (at unity gain)
Frequency response:	10Hz to 200kHz ± 0.5dB
Distortion THD+N :	0.03% to 10 Hz / 0.005% 100Hz to 22kHz
Cross Talk (stereo pair):	100dB 10Hz to 1kHz / 90dB at 22kHz

Auxiliary outputs

Output type:	electronically balanced
Output impedance:	< 50 Ω
Nominal output level:	+6dBu or +4dBu *depending on global nominal level setting*
Maximum output level:	+25dBu (+22.5dBm with 600Ω z-loag
Output Noise:	unweighted from 22Hz to 22KHz
Master faders closed:	-103dBu
Master faders at max:	- 86dBu
One input ch. assigned:	- 82dBu (at unity gain)
Frequency response:	10Hz at 200kHz ± 0.5dB
Distortion THD+N:	0.03% at 10 Hz / 0.005% 100Hz at 22kHz
Cross Talk:	86dB 10Hz at 1kHz / 80dB at 22kHz

Monitor outputs

Output type:	stereo, unbalanced, transformer-less
Output impedance:	> 4Ω
Maximum output level:	+20dBu
Load impedance :	30Ω minimum for each monitor output

Return's inputs

Input type:	electronically balanced
Input impedance:	6.8kΩ, linear de 10 Hz à 200 kHz
Nominal input level:	+6dBu or +4dBu

Oscillator

Frequency:	1kHz
Level:	nominal level , *depends on global nominal level setting*
Distortion THD+N:	lower than 2%

Micro Tbk/Slate

Input type:	electronically balanced
Input gain:	70dB max. (automatic gain control)
Mic powering:	selectable 6Vdc for Electrets or 48V phantom for Condenser microphone

Digital outputs

Output type:	AES 31, electronically balanced with transformer, 3Vpp
Sampling frequencies:	44,1kHz to 192kHz
Accuracy:	+/- 10 ppm standalone or +/- 10 ppm with integrated recorder
Connector:	Sub-D 25pin
Digital output level:	-18dBFS at "0" peak-meter for a nominal level of +6dBu -20dBFS at "0" peak-meter for a nominal level of +4dBu
Note:	on request the digital can be set at -9dBFS
Overall dynamic range:	linear: 117 dB / weighted Asa A: 120dB

Connexion synchronisation

Sync Input

Connector:	SMA

(Word Clock)

Mode:	square wave signal
Input format:	44.1, 48, 88.2, 96, 176.4 et 192kHz ± 0.2%
Impedance:	75Ω
Electrical level:	0.3 – 7Vpp

(Video)

Mode:	Tri-level & bi-level sync-compatible
Input format:	PAL/25, NTSC/29.97, 1080/23.97, 1080/24, 1080/25, 1080/29.97, 1080/30, 720p/24, 720p/25, 720p/29.97, 20p/30 720p/50, 720p/59.94, 720p/60, 295M-P/25

Word Clock Output

Mode:	square wave signal
Impedance:	75Ω
Connector:	Lemo 5 pin (on TC connector)
Electrical level:	3Vpp

Connexion TimeCode

Entrée TC:

Mode:	SMPTE unbalanced, JAM sync, no JAM and Internal
Format:	Auto, 24, 25 and 29.97, 30 drop and non drop
Impedance:	2kΩ
Connector:	LEMO 5 pin Aaton compatible
Electrical level:	0.3 – 7Vpp

Sortie TC:

Mode:	SMPTE unbalanced
Format:	24, 25 et 29.97, 30 drop et no drop
Impedance:	100Ω
Connector:	LEMO 5 pin Aaton compatible
Electrical level:	3Vpp

Time Code:

Mode:	Free run, Record run and Set from time
Note:	the real time clock is maintained with an internal battery Its accuracy is ±1ppm at 25°C, and ± 2ppm from 0°C to 40°c

Connexion USB

Mode:	USB 2.0 HI-SPEED (slave mode only)
Connector:	USB mini B

Recording media

Internal hard disk:	60Gb, ATA interface, 4200 t/min, FAT32 or SSD 64Gb
CompactFlash:	CF type I and II, FAT32

System

Sampling frequencies:	44.1, 48, 88.2, 96, 176.4 and 192kHz
Sampling correction FS:	UP & DOWN 0.1% *for NTSC corrections*
Internal clock accuracy:	< 0.2 ppm at 20°C and ± 1.5ppm from –20°C to +70°C
ADC and DAC Resolution's:	24bits, 16bits and 16bits dithering
DSP Resolution:	40bits

Power requirements

Internal powering:	18V nominal with 12 batteries alkaline LR20 (D) standards 1,5V 14.4V nominal with 12 rechargeable NiCd ou NiMH LR20 (D) 1.2V
Running time on batteries:	approx. 3h with 12 batteries alkaline LR20 (D) standards approx. 3.5h with 12 rechargeable NiCd approx. 7h with 12 rechargeable NiMh
External power supply:	10,5V to 20V DC , 5A peak, 2,2 A average at 12VDC
Power consumption:	16 watts typical maximum 24 watts, all channel On with nominal level modulation and all Led's Meters and Meters backlight at maximum intensity

Operating temperature: from -25°C (-13°F) to 70°C (158°F)

Dimensions and weight

"Standard" version with battery holder:

SONOSAX SX-ST8D (l*p*h) :	409 mm x 437 mm x 74 mm (16.10'' x 17.20'' x 2.91'')
Net weight (without batteries):	7,930 kg (17.5 lbs)
Total weight with batteries** :	9,400 kg (20.7 lbs) with 12x batteries type D (LR20)
SONOSAX SX-ST10 (l*p*h) :	445 mm x 437 mm x 74 mm (17.36'' x 17.20'' x 2.91'')
Net weight (without batteries):	..... kg (..... lbs)
Total weight with batteries**:	..... kg (..... lbs) avec 12x LR20 (D)

** indicative values only, battery weights depend on type and manufacturer.

"Compact" version with battery holder:

SONOSAX SX-ST8D-C (l*p*h) :	409 mm x 376 mm x 74 mm (16.10" x 14.80'' x 2.91'')
Net weight:	7,180 kg (17.5 lbs)
SONOSAX SX-ST10-C (l*p*h) :	445 mm x 376 mm x 74 mm (17.36" x 14.80'' x 2.91'')
Net weight:	…… kg (lbs)
SONOSAX SX-ST12-C (l*p*h) :	518 mm x 376 mm x 74 mm (20.39" x 14.80'' x 2.91'')
Net weight:	approx 10 kg (22 lbs)

SONOSAX SX-VT 10 :	width	441mm (17.36")	weight: approx 9,0 kg (20 lbs)
SONOSAX SX-VT 12 :	width	513mm (20.20")	weight: approx 10.6 kg (23.5 lbs)
SONOSAX SX-VT 16 :	width	657mm (25.87")	
SONOSAX SX-VT 24 :	width	945mm (37.68")	
SONOSAX SX-VT 32 :	width	1233mm (48.54")	
SONOSAX SX-VT 40 :	width	1521mm (59.88")	

Depth and Height are standard: L: 437mm (17.20'') x H: 74mm (2.91'')
Mentioned weight are approximate only and depend on mixing console's configuration.

Other version can be made according to user specifications

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