SPX2000

Digital Multi-effect Processor

SPX2000

DIGITAL   STUDIO CONNECTIONS   REV-X   MIDI   96 AUDIO DSP   1U

Rear Panel

New-generation SPX effect unit with 24-bit 96-kHz processing and advanced REV-X reverb algorithms.

- Superb sonic quality with 24-bit/96-kHz processing throughout.
- 96-kHz DSP LSI with 32-bit internal processing (58-bit accumulator).
- 24-bit, 128-times oversampling AD and DA converters achieve 106 dB dynamic range and flat response from 20 Hz to 40 kHz at the 96-kHz sampling rate.
- REV-X reverb programs deliver the richest reverberation tone and smoothest decay available.
- In addition to a large range of ambience programs, including many that use the acclaimed REV-X reverb algorithms, the SPX2000 includes popular SPX programs such as gate reverbs, delays, pitch effects, modulation and other special effects.
- Other advanced algorithms – such as Multi-band Dynamic Processors – are inherited from the DM series Digital Production Consoles
- Professional analog and digital audio I/O and control connectors.
- SPX2000 Editor software provides a common operating environment and interface for the SPX2000 and Yamaha digital mixing consoles.

OPTIONS

FC5
Foot Switch

GENERAL SPECIFICATIONS

Sampling frequency rate	Internal: 44.1,48,88.2,96kHz
	External: Normal Rate:39.69kHz to 50.88kHz, DoubleRate:79.38kHz to 101.76kHz
Frequency response	20Hz to 20kHz (0dB+1.0,-3.0)@48kHz
	20Hz to 40kHz (0dB+1.0,-3.0)@96kHz
Dynamic range	106dB
Total harmonic distortion	″ 0.05%, (FS=48kHz:+14dBu@20Hz-20kHz, 96kHz:20Hz-40kHz)
Memory bank	PRESET: 97, USER: 99, CLASSIC: 25
Dimensions (W x H x D)	480 x 45 x 372.5mm (18.7" x 1.75" x 14.5"), 1U
Weight	4.0kg (8.8lbs)
Power requirements	Japan: AC100V 50/60Hz, 25W
	North America: AC120V, 60Hz, 25W
	Other Areas: AC230V, 50/60Hz, 25W

*1 Total Harmonic Distortion is measured with a 18 dB/octave filter @80 kHz.
*2 Hum & Noise and dynamic range are measured with a 6 dB/octave filter @12.7 kHz; equivalent to a 20 kHz filter with infinite dB/octave attenuation.
*0 dBu=0.775 Vrms.

ANALOG INPUT AND OUTPUT SPECIFICATIONS

Terminal	Level SW	Impedance	For Use With Nominal	Level		Connector
				Nominal	Max. before Clip	
INPUT[L,R]	+4dBu	10k	600 Lines	+4dBu	+24dBu	XLR-3-31 type TRS phone jack (Balanced)
	-10dBu			-10dBu	+10dBu	
OUTPUT[L,R]	+4dBu	150	600 Lines	+4dBu	+24dBu	XLR-3-32 type TRS phone jack (Balanced)
	-10dBu			-10dBu	+10dBu	

*1 XLR-3-31 and XLR-3-32 type connectors are balanced. (1=GND, 2=HOT, 3=COLD)
*2 Phone jacks are balanced. (Tip=HOT, Ring=COLD, Sleeve=GND)
*0 dBu=0.775 Vrms.
*AD/DA converter is 24-bit, 128-times oversampling @Fs=44.1, 48 kHz, 64-times oversampling @Fs=88.2, 96 kHz
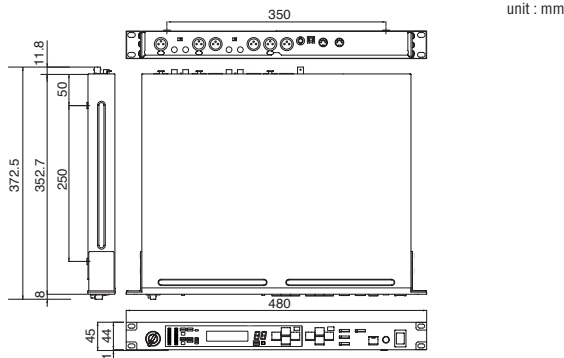
DIGITAL INPUT AND OUTPUT SPECIFICATIONS

Terminal	Format	Data Length	Level	Connector
AES/EBU (IN)	AES/EBU	24bit	RS422	XLR-3-31 type (Balanced)
AES/EBU (OUT)	AES/EBU	24bit	RS422	XLR-3-32 type (Balanced)

*1 XLR-3-31and XLR-3-32 type connectors are balanced. (1=GND, 2=HOT, 3=COLD)

CONTROL I/O SPECIFICATIONS

Terminal		Format	Level	Connector
TO HOST		USB	USB 1.1	0 to 3.3V	B type USB Connector
MIDI	IN	MIDI	-	DIN Connector 5P
	OUT/THRU	MIDI	-	DIN Connector 5P
WORD CLOCK	IN	-	TTL/75	BNC Connector

DIMENSIONS

unit : mm

EFFECT PROGRAM NO. LIST

No.	Effect Name	Classification	LCD	No.	Effect Name	Classification	LCD
1	REV-X LARGE HALL	HALL	CYAN	51	KARAOKE ECHO	DELAYS	WHITE
2	REV-X MED HALL			52	GOOD OL P.CHANGE	PITCH EFFECTS	MAGENTA
3	REV-X SMALL HALL			53	VOCAL SHIFT		
4	REV-X TINY HALL			54	STEREO PITCH		
5	REV-X WARM HALL			55	PITCH SLAP		
6	REV-X BRITE HALL			56	HALO COMB		
7	REV-X HUGE HALL			57	GRUMPY FLUTTER		
8	AMBIENCE			58	ROGER ON THE 12		
9	STEREO HALL			59	BOTTOM WHACKER		
10	VOCAL CHAMBER			60	VOICE DOUBLER		
11	BRIGHT HALL			61	SYMPHONIC	MODULATION	
12	BREATHY REVERB			62	REV+SYMPHONIC		
13	CONCERT HALL			63	DETUNE CHORUS		
14	REVERB FLANGE			64	CHORUS & REVERB		
15	REVERB STAGE			65	BASS CHORUS		
16	REV-X VOCAL PLT	PLATE		66	STEREO PHASING		
17	REV-X BRIGHT PLT			67	CLASSY GLASSY		
18	REV-X SNARE PLT			68	SILKY SWEEP		
19	VOCAL PLATE			69	UP DOWN FLANGE		
20	ECHO ROOM1			70	TREMOLO		
21	ECHO ROOM2			71	ROTARY SPEAKER		
22	PRESENCE REVERB			72	AUTO PAN		
23	ARENA			73	PHASER		
24	THIN PLATE			74	RING MODULATION		
25	OLD PLATE			75	MOD FILTER		
26	DARK PLATE			76	DYNA FLANGE		
27	REV-X CHAMBER	ROOM		77	DYNA PHASER		
28	REV-X WOOD ROOM			78	DYNA FILTER	FILTER	
29	REV-X WARM ROOM			79	M. BAND DYNA		
30	REV-X LARGE ROOM			80	MULTI FILTER		
31	REV-X MED ROOM			81	FILTERED VOICE		
32	REV-X SMALL ROOM			82	DISTORTION	DISTORTION	
33	REV-X SLAP ROOM			83	AMP SIMULATOR		
34	FAT REFLECTIONS			84	DIST → FLANGE		
35	BIG SNARE			85	DIST → DELAY		
36	BAMBOO ROOM			86	REV → CHORUS	COMBINATION	YELLOW
37	REFLECTIONS			87	REV+FLANGE		
38	STONE ROOM			88	REV → SYMPHONIC		
39	CONCRETE ROOM			89	REV → PAN		
40	REVERSE PURPLE	GATE REVERB		90	DELAY+ER1		
41	FULL METAL GATE			91	DELAY+ER2		
42	REVERSE GATE			92	DELAY → ER1		
43	DRUM MACH. AMB S	DRUM MACHINE REVERB		93	DELAY → ER2		
44	DRUM MACH. AMB L			94	DELAY+REV		
45	ELECT. SNR PLAT			95	DELAY → REV		
46	MONO DELAY	DELAYS	WHITE	96	RESO DRONE		
47	120 BPM MONO DDL			97	FREEZE	SAMPLING	
48	120 BPM X-DDL						
49	STEREO DELAY						
50	DELAY L,C,R						

CLASSIC BANK

No.	Effect Name	LCD Color	No.	Effect Name	LCD Color
1	REV1 HALL	GREEN	14	TREMOLO	GREEN
2	REV2 ROOM		15	SYMPHONIC	
3	REV3 VOCAL		16	GATE REVERB	
4	REV4 PLATE		17	REVERSE GATE	
5	EARLY REF1		18	REVERB & GATE	
6	EARLY REF2		19	PITCH CHANGE A	
7	DELAY LR		20	PITCH CHANGE B	
8	STEREO ECHO		21	PITCH CHANGE C	
9	STEREO FLANGE A		22	PITCH CHANGE D	
10	STEREO FLANGE B		23	FREEZE A	
11	CHORUS A		24	FREEZE B	
12	CHORUS B		25	PAN	
13	STEREO PHASING				