

SPX2000

Digital Multi-effect Processor



SPX2000



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.

OPTION

FC5
Foot Switch



GENERAL SPECIFICATIONS

Memory bank	PRESET: 97, USER: 99, CLASSIC: 27
Sampling frequency rate	Internal : 44.1kHz, 48kHz, 88.2kHz, 96kHz External: Normal rate: 44.1kHz (-10%) to 48kHz (+6%) Double rate: 88.2kHz (-10%) to 96kHz (+6%)
Signal delay	Less than 426µs INPUT to OUTPUT (@fs=96kHz)
Total harmonic distortion**1	Less than 0.05%, 20Hz to 20kHz @+14dBu into 600Ω (@fs=48kHz) Less than 0.05%, 20Hz to 40kHz @+14dBu into 600Ω (@fs=96kHz)
Frequency response	20Hz - 20kHz, +1, -3dB, @+4dBu into 600Ω (@fs=48kHz) 20Hz - 40kHz, +1, -3dB, @+4dBu into 600Ω (@fs=96kHz)
Dynamic range	106dB typ. AD+DA
Hum & noise level (20Hz to 20kHz), Rs=150Ω	-80dBu residual noise
Crosstalk (@1kHz)	-80dB input to output
Power requirements	Japan: AC100V 50/60Hz, 25W North America: AC120V, 60Hz, 25W Other Areas: AC230V, 50/60Hz, 25W
Power consumption	25W
Dimensions (W x H x D)	480W x 45H x 372.5Dmm
Weight	4.0kg

*1 Total harmonic distortion is measured with a 18dB/Oct filter @80kHz.

*2 Hum & noise level is measured with a 6dB/oct filter @12.7kHz; equivalent to 20kHz filter with infinite dB/Oct attenuation.

ANALOG INPUT AND OUTPUT SPECIFICATIONS

Terminal	Level SW	Input Level VR.	Impedance	For use with nominal	Level		Connector
					Nominal	Max. before clip	
INPUT [L, R]	+4dBu	Nominal: 0dB	10kΩ	600Ω Lines	+4dBu	+24dBu	XLR3-31 type* TRS Phone Jack*
	-10dBu	Max: +10dB			-10dBu	+10dBu	
OUTPUT [L, R]	+4dBu	-	75Ω	600Ω Lines	+4dBu	+24dBu	XLR3-32 type* TRS Phone Jack*
	-10dBu				-10dBu	+10dBu	

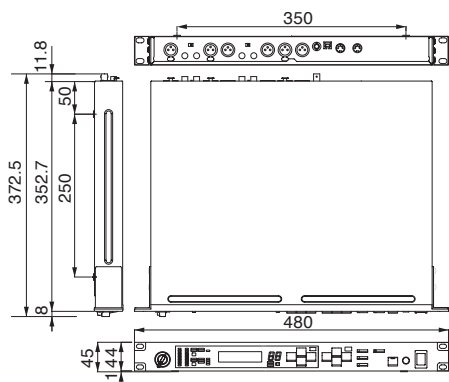
DIGITAL INPUT AND OUTPUT SPECIFICATIONS

Terminal	Format	Data Length	Level	Connector
AES/EBU (IN)	AES/EBU	24bit	RS422	XLR3-31 type
AES/EBU (OUT)	AES/EBU	24bit	RS422	XLR3-32 type

CONTROL I/O SPECIFICATIONS

Terminal		Format	Level	Connector
TO HOST	USB	USB 1.1 0	-3.3V	B Type USB Connector
MIDI	IN	MIDI	-	DIN Connector 5P
	OUT - THRU			DIN Connector 5P
WORD CLOCK	IN	-	TTL/75Ω	BNC Connector
FOOT SW	-	-	-	Phone Jack* *

DIMENSIONS



unit : mm

EFFECT PROGRAM NO. LIST

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

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 LCR		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				