

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.

OPTIONS

FC5

Foot Switch



SPX2000

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	Less than 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	10kΩ	600Ω Lines	+4dBu	+24dBu	XLR-3-31 type TRS phone jack (Balanced)
	-10dBu			-10dBu	+10dBu	
OUTPUT[L,R]	+4dBu	150Ω	600Ω 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

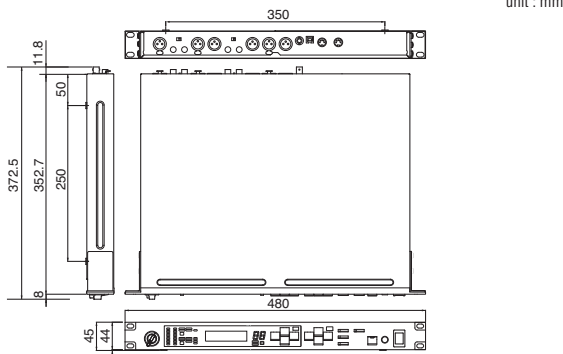
Terminal	Format	Data Length	Level	Connector
AES/EBU (IN)	AES/EBU	24bit	RS422	XLR-3-31 type (Balanced)
AES/EBU (OUT)	AES/EBU	24bit	RS422	XLR-3-32 type (Balanced)

*1 XLR-3-31 and 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/75Ω	BNC Connector

DIMENSIONS



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	PLATE	CYAN	61	SYMPHONIC			MODULATION	MAGENTA		
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			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	ROOM	CYAN	71	ROTARY SPEAKER	FILTER	YELLOW				
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			77	DYNA PHASER						
28	REV-X WOOD ROOM			78	DYNA FILTER						
29	REV-X WARM ROOM			79	M. BAND DYNA						
30	REV-X LARGE ROOM			80	MULTI FILTER						
31	REV-X MED ROOM	GATE REVERB	WHITE	81	FILTERED VOICE	DISTORTION	YELLOW				
32	REV-X SMALL ROOM			82	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						
37	REFLECTIONS			87	REV+FLANGE						
38	STONE ROOM			88	REV → SYMPHONIC						
39	CONCRETE ROOM			89	REV → PAN						
40	REVERSE PURPLE			DRUM MACHINE REVERB	WHITE			90	DELAY+ER1	COMBINATION	YELLOW
41	FULL METAL GATE	91	DELAY+ER2								
42	REVERSE GATE	92	DELAY → ER1								
43	DRUM MACH. AMB S	93	DELAY → ER2								
44	DRUM MACH. AMB L	94	DELAY+REV								
45	ELECT. SNR PLAT	95	DELAY → REV								
46	MONO DELAY	96	RESO DRONE			SAMPLING					
47	120 BPM MONO DDL	97	FREEZE								
48	120 BPM X-DDL	DELAYS	WHITE								
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				