THE KORG
PROFESSIONAL
PERFORMANCE
SERIES

WAVESTATION

KORG

WAVESTATION

performance control than any other available today.

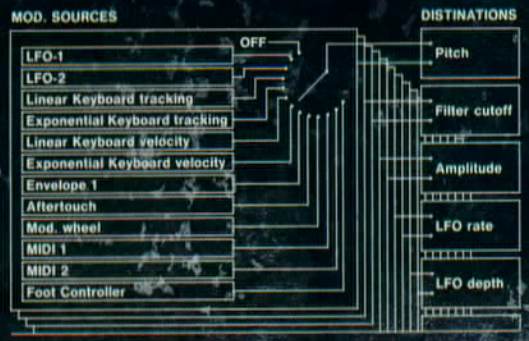


Fig-3

BUILT-IN STEREO DIGITAL MULTI-EFFECTS WITH DYNAMIC REAL TIME CONTROL

Effects, the final aspect of music production, are fully integrated into the signal processing of the Korg Wavestation with the dual stereo multi-effect section. A wide variety of professional quality effects, have been provided—46 in all—giving you complete control of the sound creation process in a single, convenient system.

Moreover, a dynamic real time control function allows you to vary effect parameters as you perform: reverb time, chorus depth, delay time and effect balance can be dynamically changed by key pressure, velocity, footswitch and note number.

Since the digital output of the synthesizer is connected directly to the digital input of the effects section, no A/D or D/A conversion sound degradation occurs, perfectly preserving the exceptionally high sound quality for clean recordings.

Chart 3 EFFECT VARIATIONS

01	SMALL HALL REVERB & EQ	13	FORWARD GATED REVERB & EQ	25	STEREO FLANGER & EQ1	37	CHORUS & STEREO DELAY & EQ
02	MEDIUM HALL REVERB & EQ	14	REVERSE GATED REVERB & EQ	26	STEREO FLANGER & EQ2	38	FLANGER & STEREO DELAY & EQ
03	LARGE HALL REVERB & EQ	15	STEREO DELAY	27	CROSSOVER FLANGER & EQ	39	DELAY → HALL
04	SMALL ROOM REVERB & EQ	16	PING-PONG DELAY	28	STEREO ENHANCER & EXCITER & EQ	40	DELAY → ROOM
05	LARGE ROOM REVERB & EQ	17	DUAL MONO DELAY	29	DISTORTION & FILTER & EQ	41	DELAY → CHORUS
06	LIVE STAGE	18	MULTI TAP DELAY & EQ1	30	OVERDRIVE & FILTER & EQ	42	DELAY → FLANGER
07	WET PLATE REVERB	19	MULTI TAP DELAY & EQ2	31	STEREO PHASER 1	43	DELAY → DISTORTION & FILTER
08	DRY PLATE REVERB	20	MULTI TAP DELAY & EQ3	32	STEREO PHASER 2	44	DELAY → OVERDRIVE & FILTER
09	SPRING REVERB	21	STEREO CHORUS & EQ1	33	STEREO ROTARY SPEAKER	45	DELAY → PHASER
10	EARLY REFLECTIONS & EQ1	22	QUADRATURE CHORUS & EQ	34	STEREO MOD & PAN & EQ	46	DELAY → ROTARY
11	EARLY REFLECTIONS & EQ2	23	CROSSOVER CHORUS & EQ	35	QUADRATURE MOD & PAN EQ		
12	EARLY REFLECTIONS & EQ3	24	STEREO HARMONIC CHORUS	36	STEREO PARAMETRIC EQ		

16-CHANNEL MULTI-TIMBRAL SOUND SOURCE

The Korg Wavestation excels not only as an ideal live performance keyboard for professional players, but also offers outstanding performance in MIDI setups using computers and sequences, all because of its built-in multi-timbral function called MULTI MODE SETUP. With the inclusion of a special newly developed 32-voice custom LSI, a maximum of 16 independent channels or parts can be controlled by MIDI simultaneously.

ADDITIONAL FUNCTIONS OF THE KORG WAVESTATION

The sound programs of the Korg Wavestation consist of two different types: one type, called Patch, is the actual sound program, while the other, called Performance, is a group of up to 8 Patches and their keyboard mapping parameters (split, layer, etc). These sound programs can be stored in each of 4 memory banks including ROM, RAM 1, RAM 2, and memory card as 50 performances, 35 Patches and 32 Wave Sequences.

The JUMP and MARK functions are included for ease in editing sound programs, and the mark points are user programmable.

The Korg Wavestation also features a full complement of MIDI transmission controls, making it an ideal master controller for even the most extensive professional MIDI setups.

REAR PANEL

❶AC Power Connector ❷POWER SW ❸Card Slot (PCM DATA) ❹Card Slot (Program DATA) ❺MIDI (IN OUT THRU) ❻CONTRAST ❼DAMPER ❽ASSIGNABLE PEDAL SW1 and 2 ❾OUTPUTS (3,4) ❿OUTPUTS (L, 2R) ⓫PHONES

SPECIFICATIONS

- System: Advanced Vector Synthesis (24-bit digital processing, 19-bit DAC)
- Wave Memory: 365 sampled and single-cycle waveforms.
- Program Memory: 1 ROM Bank, 2 RAM Banks, and 1 Card Bank
- Tone generator: 20 bits, 32 voices including individual filters, amps, LFOs, and envelopes
- Macros: Voicing templates for Pitch, Filter, Amp, Pan, Env 1 and Keyboard Modes
- Effects: 46 effects programs. Up to 6 simultaneous digital effects, with dynamic modulation.
- Performances: 150 internal, 50 in card
- Patches: 105 internal, 35 in card
- Wave Sequences: 96 internal, 32 in card
- Wave Sequence Steps: 1500 internal, 500 in card
- Multi-Mode Setups: 16 configurations of multi-timbral, 16-channel MIDI reception
- Keyboard: 61 notes, with velocity and aftertouch
- Performance Controllers: Joystick, Pitch wheel, Modulation wheel, and Master Volume
- Control inputs: Damper pedal, assignable footswitch/pedal 1 and 2
- Card slots: PCM data, PROG data
- MIDI: IN, OUT, THRU (Extensive Multi-timbral and Master Controller capability)
- Display: 64×240 pixel back-lit LCD with soft-key menu system
- Outputs: 1/L, 2/R, 3, 4, headphone
- Power consumption: 11W
- Dimensions: 100(W)×35(D)×11(H)cm
- Weight: 12.5kg

OPTIONS

- MEMORY CARD ROM

WPC Series Patch/Performance Card

WSC Series PCM & Patch/Performance Card

- MEMORY CARD RAM MCR-03
- FOOT CONTROLLER EXP-2
- DAMPER PEDAL DS-1
- PEDAL SWITCH PS-2
- CASE
- HEADPHONE KH-1000
- SYNC/MIDI CABLE

1.5m/3m/5m/1m+0.5m

● MEMORY CARD RAM MCR-03

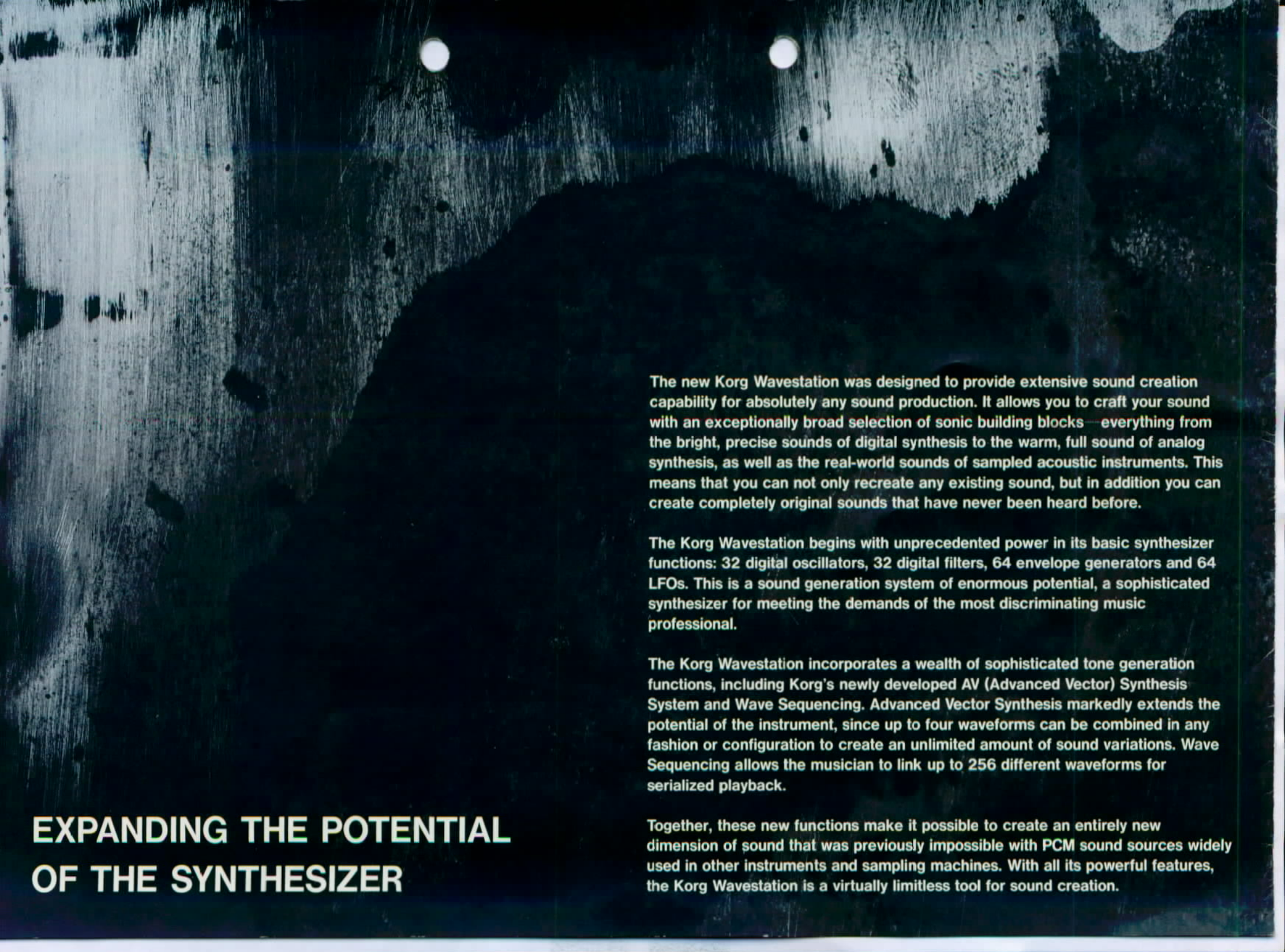
● FOOT CONTROLLER EXP-2

● DAMPER PEDAL DS-1

● HEADPHONE KH-1000

● SYNC MIDI CABLE

● PEDAL SWITCH PS-2



EXPANDING THE POTENTIAL OF THE SYNTHESIZER

The new Korg Wavestation was designed to provide extensive sound creation capability for absolutely any sound production. It allows you to craft your sound with an exceptionally broad selection of sonic building blocks—everything from the bright, precise sounds of digital synthesis to the warm, full sound of analog synthesis, as well as the real-world sounds of sampled acoustic instruments. This means that you can not only recreate any existing sound, but in addition you can create completely original sounds that have never been heard before.

The Korg Wavestation begins with unprecedented power in its basic synthesizer functions: 32 digital oscillators, 32 digital filters, 64 envelope generators and 64 LFOs. This is a sound generation system of enormous potential, a sophisticated synthesizer for meeting the demands of the most discriminating music professional.

The Korg Wavestation incorporates a wealth of sophisticated tone generation functions, including Korg's newly developed AV (Advanced Vector) Synthesis System and Wave Sequencing. Advanced Vector Synthesis markedly extends the potential of the instrument, since up to four waveforms can be combined in any fashion or configuration to create an unlimited amount of sound variations. Wave Sequencing allows the musician to link up to 256 different waveforms for serialized playback.

Together, these new functions make it possible to create an entirely new dimension of sound that was previously impossible with PCM sound sources widely used in other instruments and sampling machines. With all its powerful features, the Korg Wavestation is a virtually limitless tool for sound creation.

ADVANCED VECTOR SYNTHESIS SYSTEM

Korg's new Advanced Vector Synthesis system is the first step in the Wavestation's powerful sound creation capabilities. A total of 365 different sounds have been included in the Wavestation's PCM Sound ROM. Vector Synthesis is unique in that it lets you combine these sounds in ways previously unimaginable. Simply select up to four sounds and move the joystick among them to create a new sound program. The joystick alters the ratio or balance of the four waveforms to make an entirely new, composite waveform. Moving the joystick also makes it possible to sequence the variations while the MIX ratio changes (see Fig. 1).
Musically, this means that the Korg Wavestation provides full dimensional sound with rich textures and highly complex harmonic variations that simply were not possible to create using a conventional synthesizer system.

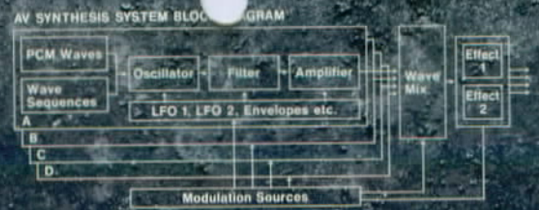
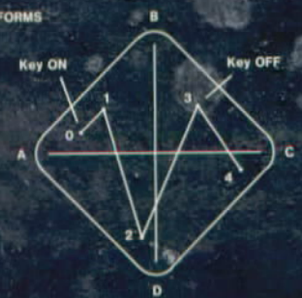


Fig-1. USING THE JOYSTICK TO SYNTHESIZE WAVEFORMS



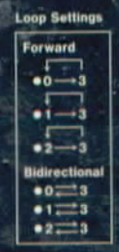


Chart 1

0:A85%	B15%	C 0%	D 0%
1:A60%	B40%	C 0%	D 0%
2:A20%	B 0%	C 0%	D80%
3:A 0%	B50%	C50%	D 0%
4:A 0%	B 0%	C70%	D30%

Begin by selecting four separate waveforms to be assigned to the four points A, B, C, and D. The MIX ratio of each waveform can be changed by moving the joystick.
As shown in the illustration, when moving the joystick from position 0 to 4, the MIX ratio will change as indicated in Chart 1.
The sound can be further altered by selecting a loop between two points of the MIX ratio envelope. For example, when the four points are set as shown in the illustration and a bi-directional loop of 1 ⇄ 3 is selected, the MIX ratio will change from 0 to 1 to 2 in order after the key is pressed. If the key is held down, the sound will loop between points 1 and 3 in the order 3 to 2 to 1 to 2 to 3, and so on. When the key is released, the MIX ratio will progress from 3 to 4, completing the sound's cycle. In other words, the timbre of the sound varies according to the movement bewteen the specified points. The attack portion of the sound envelope goes from point 1 to 2, the sustain portion moves in a bi-directional loop between 1 and 3, and the release portion goes from 3 to 4.

WAVE SEQUENCING

Wave Sequencing makes it possible, for the first time, to program your own original sound waveforms by combining any of the 365 basic waveforms, a function unavailable on conventional synthesis systems. Up to 256 waveforms can be linked to make up one wave sequence. The harmonic structure can be changed continuously, allowing you to recreate the rich timbral characteristics of analog synthesizers and the full sound of pulse width modulation. By fully utilizing the sonic advantages of sophisticated PCM technology, the AV synthesis system is capable of producing a wider range of sounds than was ever before possible.
Melody sequences and rhythm sequences can also be programmed as an integral part of the sound by setting the tuning, duration, and crossfade time of each waveform. Moreover, wave sequences can be perfectly synchronized with an external MIDI clock signal, further extending the music production capabilities of this remarkable instrument.

A total of 128 wave sequences (32 ROM preset, 64 RAM user, and 32 card) are available in memory, and can be further processed using filters, LFOs, envelopes, effects, or vector synthesis mixing.

Four waveforms are linked and the composite waveform of points 2-through 4 is looped two times.

The crossfade smoothly combines the waveforms

Fig-2. WAVE SEQUENCE EXAMPLE

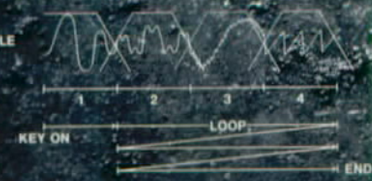
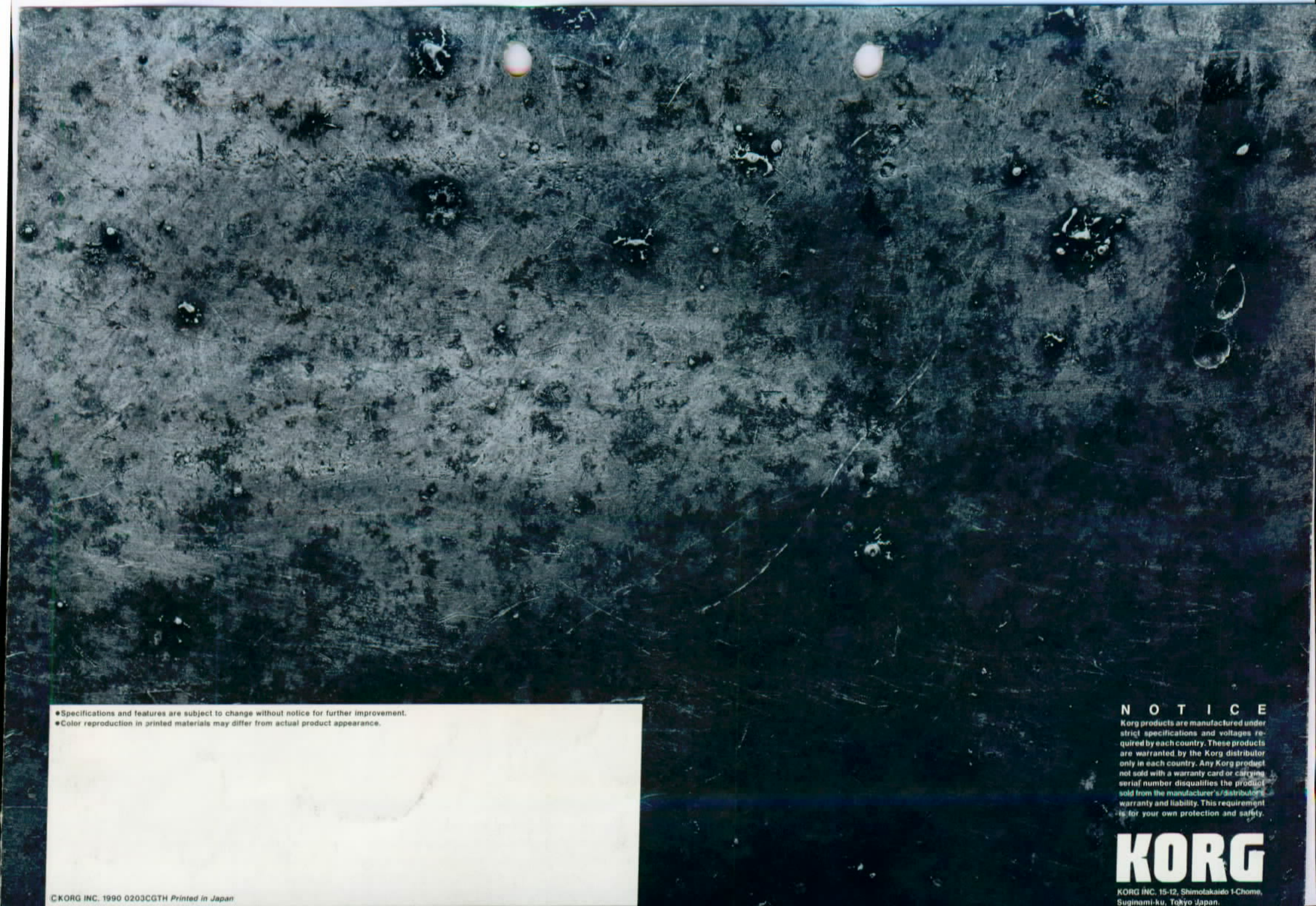


Chart 2 WAVE LIST

00 wavesequence 0	50 E. Guitar	100 Synth pad	150 Inharm 7	200 VS 72	250 VS 122	300 13-45	350 Mini-12a
01 wavesequence 1	51 Dist.Gtr	101 Birdland	151 Inharm 8	201 VS 73	251 VS 123	301 13-47	351 Mini-13a
02 wavesequence 2	52 E Guit Chime	102 Chorm Res	152 Inharm 9	202 VS 74	252 VS 124	302 13-49	352 Pres-321
03 wavesequence 3	53 Mute Gtr 1	103 Pro Sync	153 Inharm 10	203 VS 75	253 VS 125	303 13-51	353 Pres-338
04 wavesequence 4	54 Mute Gtr 2	104 Super Saw	154 Formant 1	204 VS 76	254 SAW	304 13-53	354 Pres-349
05 wavesequence 5	55 Mute Gtr 3	105 Ping Wave	155 Formant 2	205 VS 77	255 OBPUL 1	305 13-55	355 Pres-363
06 wavesequence 6	56 Koto	106 Digital 1	156 Formant 3	206 VS 78	256 OBPUL 3	306 13-57	356 Pres-377
07 wavesequence 7	57 Harmonic	107 Digital 2	157 Formant 4	207 VS 79	257 OBPUL 4	307 13-59	357 Pres-384
08 wavesequence 8	58 Stick	108 Digital 3	158 Formant 5	208 VS 80	258 OBPUL 5	308 13-61	358 Pres-391
09 wavesequence 9	59 E. Bass	109 Bell wave	159 Formant 6	209 VS 81	259 OBPUL 6	309 13-63	359 Pres-398
10 wavesequence 10	60 Synbass 1	110 Perc Wave	160 Formant 7	210 VS 82	260 OBPUL 7	310 resx-001	360 Pres-110
11 wavesequence 11	61 Synbass 2	111 Shell Drum	161 Sine	211 VS 83	261 OBRES 1	311 resx-002	361 Pres-3112
12 wavesequence 12	62 Bass Harm	112 Bd Head	162 Triangle	212 VS 84	262 OBRES 2	312 resx-003	362 Pres-3119
13 wavesequence 13	63 Vibes	113 Tambourine	163 VS 35	213 VS 85	263 OBRES 3	313 resx-004	363 Pres-3120
14 wavesequence 14	64 Hi bell	114 Cabasa	164 VS 36	214 VS 86	264 OBSAW 3	314 resx-005	364 Sax .1sec
15 wavesequence 15	65 Jar	115 Wood block	165 VS 37	215 VS 87	265 OBTRESB	315 resx-006	365 Sax 1sec
16 wavesequence 16	66 Tin Cup	116 Hit Loop	166 VS 38	216 VS 88	266 OBTRESD	316 resx-007	366 Sax 1.3sec
17 wavesequence 17	67 Agogo	117 White Noi	167 VS 39	217 VS 89	267 OBTRESF	317 resx-008	367 Sax 1.5sec
18 wavesequence 18	68 Gender	118 Spectrm 1	168 VS 40	218 VS 90	268 OBTRESH	318 resx-009	368 Sax 1.7sec
19 wavesequence 19	69 Tubular	119 Spectrm 2	169 VS 41	219 VS 91	269 OBTRESJ	319 resx-010	369 Sax 2sec
20 wavesequence 20	70 New Pole	120 Spectrm 3	170 VS 42	220 VS 92	270 OBTRESL	320 resx-011	370 Sax 2.2sec
21 wavesequence 21	71 Soft Mrmba	121 Spectrm 4	171 VS 43	221 VS 93	271 OBTRESN	321 resx-012	371 Sax 2.4sec
22 wavesequence 22	72 Thai Mrmba	122 Sonar	172 VS 44	222 VS 94	272 PPUL 2	322 resx-013	372 Sax 2.7sec
23 wavesequence 23	73 Glass Hit	123 Metal 1TR	173 VS 45	223 VS 95	273 PPUL 3	323 resx-014	373 Sax 2.9sec
24 wavesequence 24	74 Crystal	124 Metal 2TR	174 VS 46	224 VS 96	274 PPUL 4	324 resx-015	374 Sax 3sec
25 wavesequence 25	75 Flute	125 Kalimba TR	175 VS 47	225 VS 97	275 PPUL 5	325 resx-016	375 Sax 3.4sec
26 wavescquence 26	76 Flutetrans	126 Gamelon TR	176 VS 48	226 VS 98	276 PPUL 6	326 resx-017	376 Sax 3.6sec
27 wavesequence 27	77 Overblown	127 Marimba TR	177 VS 49	227 VS 99	277 PSAW 2	327 resx-018	377 Sax 4.3sec
28 wavesequence 28	78 Bottle	128 Potnoise	178 VS 50	228 VS 100	278 13-01	328 resx-019	378 Sax 4.7sec
29 wavesequence 29	79 Bssn Oboe	129 Ticker	179 VS 51	229 VS 101	279 13-03	329 resx-020	379 Sax 5sec
30 wavesequence 30	80 Clarinet	130 Vibe Hit	180 VS 52	230 VS 102	280 13-05	330 resx-021	380 Square
31 wavesequence 31	81 Bari Sax	131 Whack 1	181 VS 53	231 VS 103	281 13-07	331 resx-022	381 Pulse 02
32 Soft EP	82 Tenor Sax	132 Whack 2	182 VS 54	232 VS 104	282 13-09	332 resx-023	382 Pulse 04
33 Hard EP	83 Alto Sax	133 HDulci TR	183 VS 55	233 VS 105	283 13-11	333 resx-024	383 Pulse 06
34 EP Tine	84 Brass Ens	134 Hose Hit1	184 VS 56	234 VS 106	284 13-13	334 resx-025	384 Pulse 08
35 EP Body 1	85 Trom Trp	135 Hose Hit2	185 VS 57	235 VS 107	285 13-15	335 resx-026	385 Pulse 10
36 EP Body 2	86 Tuba & Flu	136 Synbass TR	186 VS 58	236 VS 108	286 13-17	336 resx-027	386 Pulse 12
37 EP Body 3	87 Bowing	137 A. Bass TR	187 VS 59	237 VS 109	287 13-19	337 resx-028	387 Pulse 14
38 Digi EP	88 Syn Orch	138 "ch"	188 VS 60	238 VS 110	288 13-21	338 resx-029	388 Pulse 16
39 E-Piano 3	89 PWM String	139 "hhh"	189 VS 61	239 VS 111	289 13-23	339 resx-030	389 Pulse 18
40 Clav-DSM	90 Syn String	140 "kkk"	190 VS 62	240 VS 112	290 13-25	340 resx-031	390 Pulse 20
41 Organ 1	91 Air Vox	141 "puh"	191 VS 63	241 VS 113	291 13-27	341 resx-032	391 Pulse 22
42 Organ 2	92 Voices	142 "sss"	192 VS 64	242 VS 114	292 13-29	342 Mini-01a	392 Pulse 24
43 Organ 3	93 Choir	143 "tnn"	193 VS 65	243 VS 115	293 13-31	343 Mini-02a	393 Pulse 26
44 PipeOrg 1	94 Glass Vox	144 Inharm 1	194 VS 66	244 VS 116	294 13-33	344 Mini-04a	394 Pulse 28
45 PipeOrg 2	95 "oo" Vox	145 Inharm 2	195 VS 67	245 VS 117	295 13-35	345 Mini-05a	395 Pulse 30
46 Pluck 1	96 "ah" Vox	146 Inharm 3	196 VS 68	246 VS 118	296 13-37	346 Mini-06a	396 Pulse 31
47 Pluck 2	97 MV Wave	147 Inharm 4	197 VS 69	247 VS 119	297 13-39	347 Mini-07a	
48 Pluck 3	98 FV Wave	148 Inharm 5	198 VS 70	248 VS 120	298 13-41	348 Mini-08a	
49 A. Guitar	99 DW Voice	149 Inharm 6	199 VS 71	249 VS 121	299 13-43	349 Mini-09a	

FLEXIBLE MODULATION MATRIX

The advanced sound processing of the Korg Wavestation continues with a complete set of 13 modulation sources, including two independent LFOs, after touch, modulation wheel, key velocity and keyboard tracking, among others. Moreover, simultaneous modulation by two sources can be accomplished. Modulation destinations include cutoff frequency, amplitude, LFO rate, LFO depth and oscillator pitch. The result is an advanced musical instrument that features far greater



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KORG INC. 15-12, Shimotakaido 1-Chome, Suginami-ku, Tokyo Japan.