THE KORG
PROFESSIONAL
PERFORMANCE
SERIES

M1

MUSIC WORKSTATION

KORG
MUSIC POWER

OSC Balance

PIANO
L+00 K+00 V+00 A+00 R+00 E+00

CURSOR POSITION

PAGE +
PAGE −

BANK HOLD
COMPARE
REC

ai

AI Synthesis System

Advanced Integrated Synthesis System

**WHAT MAKES THE M1 SOUND BETTER THAN ANYTHING ELSE ON THE MARKET?**

AI synthesis starts with the M1's impressive 2 megaward of 16 bit ROM. Samples of acoustic instruments, digital waveforms, drum sounds and computer analyzed attack transients are all permanently stored in the M1's wave memory which means you never have to worry about erasing sounds or waiting endlessly for them to load. They're always there, immediately accessible.

All these sounds can be processed by newly designed multi-stage envelopes for pitch, filter and amplitude allowing you to create sounds that before you only dreamed about. Yet although highly flexible you don't have to learn a "new" method of synth programming. Editing is always quick and intuitive.

The next step in AI synthesis allows you to add 2 completely programmable multi digital effects to each patch. Reverb and exciter! Chorus and autopanning! Studio Quality effects at your fingertips. And because the M1 stores and processes the sound all in the 16 bit digital domain, it ensures the highest quality sound fidelity.

PROCESSING CHART

The M1's synthesis system is divided into four main sections: Sound Data, VDF, VDA and Digital Effects.
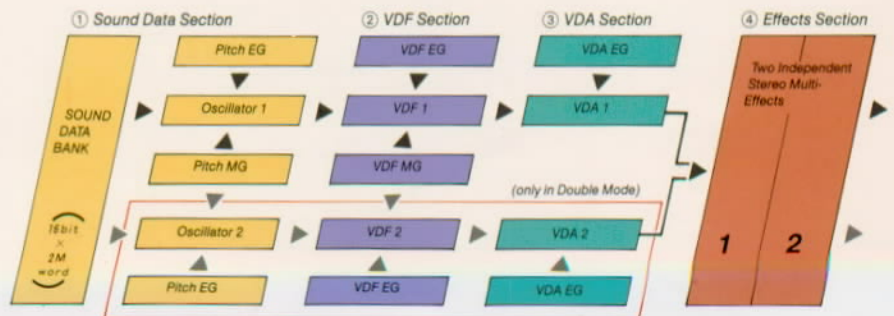
Samples, Digital Waveforms, Attack Transients, and Drums are stored in memory and can be assigned to Oscillators 1 and 2.

In the multi-effects section, independent effects can be assigned to function together in either serial or parallel operation.

The New Standard of Excellence

Occasionally a musical instrument is introduced with technological advances so far ahead of it's time that it actually shapes the way music is made. These instruments have possibilities and sounds that other instruments can only strive for. They become a standard against which all others are judged. And they become an integral part of the professional music scene. The M1 is such an instrument-the new standard of excellence.

Finally, you can use these sounds with the M1's built-in sequencer to create entire musical compositions in the M1 without the need for any external devices.

Of course the M1 has many performance features as well. Extensive routing to it's 61 note velocity and pressure sensitive keyboard make the M1 not only a powerful synthesis tool but a truly expressive musical instrument. Alternate and user programmable tuning and assignable pedals ensure every performance situation is covered.

AI synthesis integrates all the aspects of music production into one flexible and comprehensive system bringing you one step closer to your music.

HOW THE M1 INTEGRATES IT'S SYNTHESIS FUNCTIONS

① Sound Data

There are four types of sound data: Samples, Digital Waveforms, Attack Transients and Drums. There 3 different ways to assign this data in a program. Single (16 voices) Double (8 voices with independent VDA and VDF settings for each Oscillator) and Drums (the Drum Mode allows individual sound panning, tuning and decay).

② VDF (Variable Digital Filter)

The VDF section lets you control the brightness of any sound with incredible ease. You can contour the sound precisely to your taste.

③ VDA (Variable Digital Amplifier)

You use the VDA to control the volume of the sound over time. Velocity routings give expanded performance control.

④ Digital Multi-Effects Sections

The M1 enables you to create customs effects for your program, Combination or Sequence. You can have up 4 different effects for each program, combination, or sequence from a selection of 33 stereo or mono effects.

IMPECCABLE 16 BIT SOUND FIDELITY

The heart of the M1 is it's 2 Megaword of 16 bit PCM data. Samples were collected from around the world carefully selected and edited with state of the art computer analysis techniques to ensure that every sound in the M1 would satisfy the most demanding professional. This truly impressive collection of 100 multisounds and 44 drum sounds is guaranteed to stimulate your creativity to create brilliant new sounds and entire compositions using the M1's built-in 8 track sequencer.

The 4 Sound Data Groups
① Samples
Acoustic instruments are accurately reproduced. Just take a listen to the two pianos (8″ and 16″), the trumpet, the flute, fretless bass, vocals. All the multi-sampled sounds you need IMMEDIATELY ACCESSIBLE WITH NO LOADING TIME.
② Digital Waveforms
This section gives you the best of both worlds—the unique characteristics of digital waveforms and the rich, warm colors of analog synthesis. First, acoustic instruments are sampled and then using extensive computer analysis they are transformed into digital waveforms using additive synthesis techniques. In addition there is a wide selection of analog waveforms to chose from along with complex waveforms extracted from samples of acoustic instruments.

③ Drum Sounds
This section includes 44 drum and percussion sounds all sampled with 16 bit clarity. These sounds can be used with the M1's sequencer to create rhythm tracks or combined with other instrument sounds to create unique new sound combinations.
④ Attack Transients
Attack transients are samples of various sounds that have been edited and analyzed using a newly developed computer technique. Technically speaking this process separates the frequencies that are related to the fundamental frequency from those that are unrelated to the musical pitch, Harmonically unrelated attack transients of one sound can then be recombined with pitched components of another sound.

Using Synthesizer Parameters on Sampled Data
Most samplers and even some ROM based machines give you limited synth parameters. Either there is no filter or it can only be applied to waveforms and not the actual PCM data. The M1 however lets you apply and use all the synth parameters on all the data in the M1 memory. Apply pitch EG to drum sounds, slow filter attacks to real brass samples. The M1 doesn't limit your imagination with inflexible routing.
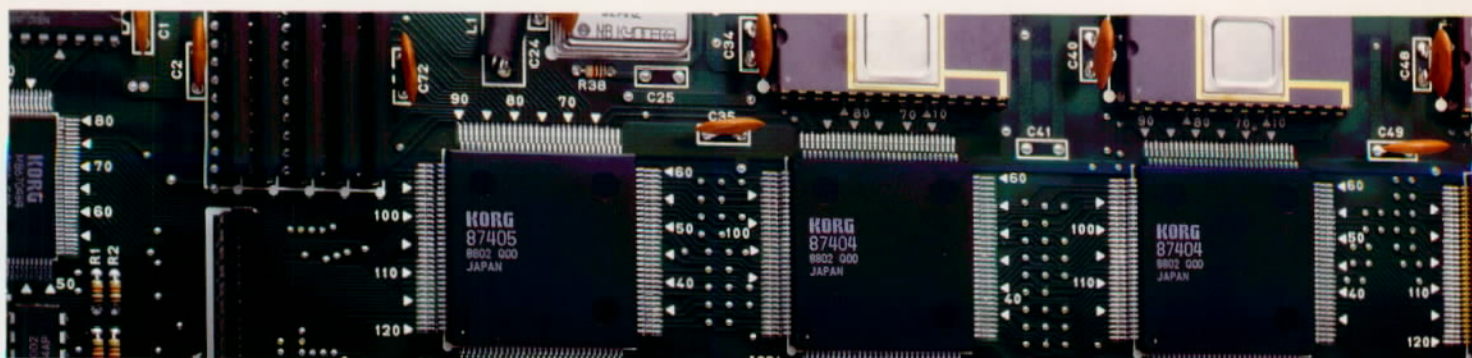
Combining Digital Waveforms and Attack Transients
One effective method for creating unique sounds is to combine digital waveforms with attack transients using the M1's Double Mode. Using the delay start function on Oscillator 2 the digital waveform can be set to begin after the attack transient has finished for a seamless graft between the attack and sustain portions of the sound.
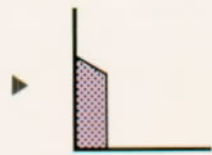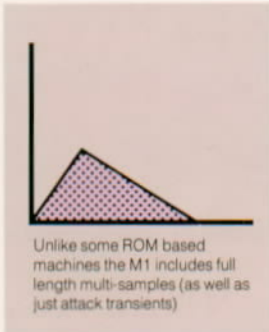
SOUND DATA LIST

Sample Data		Digital Waveform Data	Attack Transient Data	
1 Piano	32 Strings			113 Closed HH2
2 E. Piano 1	33 Brass 1	63 DWGS E.P. 1	86 Pole	114 Open HH2
3 E. Piano 2	34 Brass 2	64 DWGS E.P. 2	87 Blook	115 Crash
4 Clav	35 Tenor Sax	65 DWGS E.P. 3	88 Drop	116 Conga 1
5 Harpsicord	36 Mute TP	66 DWGS Piano	89 Breath	117 Conga 2
6 Organ 1	37 Trumpet	67 DWGS Clav	90 Pluck	118 Timbales 1
7 Organ 2	38 Tuba Flugel	68 DWGS Vibe	91 Vibe Hit	119 Timbales 2
8 Magic Organ	39 Double Reed	69 DWGS Bass 1	92 Hammer	120 Cowbell
9 Guitar 1	40 Koto Trem	70 DWGS Bass 2	93 Metal Hit	121 Claps
10 Guitar 2	41 Bamboo Trem	71 DWGS Bell 1	94 Dist	122 Tambourine
11 E. Guitar	42 Rhythm	72 DWGS Organ 1	95 Bass Thumb	123 E. Tom
12 Sitar 1	43 Lore	73 DWGS Organ 2	96 Bass Thumb 1	124 Ride
13 Sitar 2	44 Lore*	74 DWGS Voice	97 Bass Thumb 2	125 Rap
14 A. Bass	45 Flexatone	75 Square Wave	98 Voice Wave	126 Whip
15 Pick Bass	46 Wind Bells	76 Digital 1	99 Voice Wv 1	127 Shaker
16 E. Bass	47 Pole	77 Saw Wave	100 Voice Wv 2	128 Pole
17 Fretless	48 Block	78 Digital 2		129 Block
18 Synthe Bass 1	49 Finger Snap	79 25% Pulse	Drum and Percussion Data	130 Finger Snap
19 Synthe Bass 2	50 Pop	80 10% Pulse		131 Drop
20 Vibes	51 Drop	81 Digital 3	101 Kick 1	132 Vibe Hit
21 Bell	52 Breath	82 Digital 4	102 Kick 2	133 Hammer
22 Tubular	53 Pluck	83 Digital 5	103 Kick 3	134 Metal Hit
23 Bell Ring	54 Vibe Hit	84 DWGS TRI	104 Snare 1	135 Pluck
24 Karimba	55 Metal Hit	85 DWGS Sine	105 Snare 2	136 Flexa Tone
25 Karimba*	56 Pick		106 Snare 3	137 Wind Bell
26 Syn Mallet	57 Distortion		107 Snare 4	138 Tubular 1
27 Flute	58 Wire		108 Side Stick	139 Tubular 2
28 Pan Flute	59 Pan Wave		109 Tom 1	140 Tubular 3
29 Bottles	60 Ping Wave		110 Tom 2	141 Tubular 4
30 Voices	61 Fv Wave		111 Closed HH1	142 Bell Ring
31 Choir	62 Mv Wave		112 Open HH1	143 Metronome 1
				144 Metronome 2

Sounds marked with * are non-transposed.

Different ways to use the M1's sample data

Unlike some ROM based machines the M1 includes full length multi-samples (as well as just attack transients)

A short VDA envelope can be applied to create just an attack transient,

Slow attack on the VDF and VDA give a bowed piano effect,
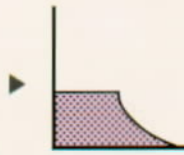
The Release portion of the envelope can be tailored to your style of playing.
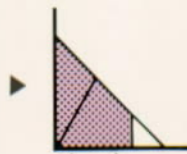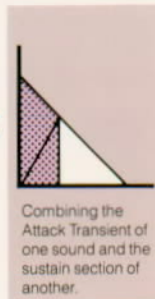
Using Attack Transients and Waveforms

A Digital Extracted Sound Of a Pick

A Digital Waveform

Combining the Attack Transient of one sound and the sustain section of another.

The delay start can be used to offset the beginning of the digital waveform.

VDA and VDF can be independently applied to both.

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ALL DIGITAL PROCESSING FOR SUPERIOR QUALITY

The M1's VDF features a unique new multi-stage envelope with positive and negative levels for each step. This allows complex filtering unavailable on previous instruments. Both VDA and VDF include extensive velocity routings so you control every aspect of the sound for more expressiveness and realism. Strings that go from legato to arco to pizz all controlled by you—the performer. Finally they both include comprehensive keyboard tracking so you can tailor synth patches to sound great over the entire range of the keyboard and easily emulate the tonal and envelope difference of acoustic instruments as they change over their natural playing range. And because these newly developed envelopes are all 16 bit they shape the sound with flexibility, accuracy and detail.

STEREO MULTI-EFFECTS ADD TEXTURE AND DEPTH

Recently in professional studios adding digital effects has become an integral part of the sound making process. But with the M1 there's no need for expensive outboard gear. Two independent programmable digital multi-effects processors are onboard—the final step in the AI system. Choose from 33 different choices—Stereo Reverbs, Delays and Choruses, Distortion, Auto Panning (Tremolo 1), Dual Effects plus brand new effects like the Exciter and Rotary Speaker.

Each effect's parameters can be independently edited so you have the ultimate flexibility in creating an uncompromised professional sound. For example within each reverb you can edit reverb time, pre-delay, early reflection level, high damp and effect-to-dry balance. And with two of these effects (routable in series or parallel the possibilities are endless.

Example ①

Organ → Distortion [EXP-2] → Rotary Speaker Effect [EXP-2]

Two effects in a serial configuration create a hard rock organ sound. One foot controller can alter the depth of the distortion and another the speed of the Rotary Effect.

Example ②

Piano Solo / Instrumental backing parts → Exciter → Reverb
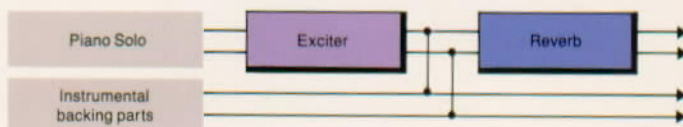
Multi-effects enhance the effectiveness of the M1's built-in eight track sequencer. Only reverb is applied to the instrumental backing parts. To make the piano sound stand out exciter and reverb are applied. The space around the sequence performance opens up adding depth and texture to the whole sound.

Example ③

All drums except snare → Reverb
Guitar solo → Delay → Pan
Snare → Early Reflection → Pan
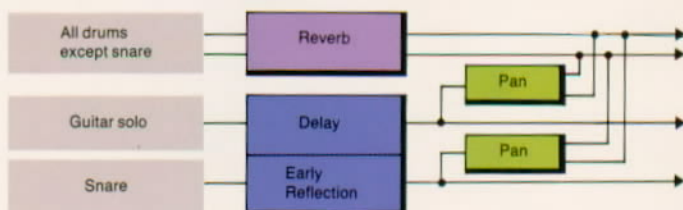
After panning the stereo reverb is applied to all the drums, except the snare. A combination delay/early reflection program is used for the second effect. The delay is applied to the guitar solo and the early reflection is applied to the snare. With combination effects like these the M1 can have 4 effects running out of 4 different outputs at the same time.

Two System Stereo Multi-effect Program

1 HALL	10 STEREO DELAY	19 STEREO TREMORO 2	28 DELAY/E. REF
2 ENSEMBLE HALL	11 CROSS DELAY	20 EQUALIZER	29 DELAY/DELAY
3 CONCERT HASS	12 STEREO CHORUS 1	21 OVER DRIVE	30 DELAY/CHORUS
4 ROOM	13 STEREO CHORUS 2	22 DISTORTION	31 DELAY/FLANGER
5 LARGE ROOM	14 STEREO FLANGER	23 EXCITER	32 DELAY/PHASER
6 LIVE STAGE	15 CROSS DELAY	24 SYMPHONIC ENS	33 DELAY/TREMORO
7 EARLY REF 1	16 PHASE SHIFTER 1	25 ROTARY SPEAKER	
8 EARLY REF 2	17 PHASE SHIFTER 2	26 DELAY/HALL	
9 EARLY REF 3	18 STEREO TREMORO 1	27 DELAY/ROOM	

Professional Performance With A Human Touch

The M1 is so feature-intensive, it's easy to forget that it's a completely programmable digital 16-voice polyphonic synthesizer equipped with a professional feeling keyboard.

Combination Mode: Eight-Way Splits, Layer, and Multiple Zoning

The M1's combination mode includes layering, splitting and multi-assigning functions for versatility in live and studio performance. Multi-Splits and Layers can include velocity switching letting you to switch through as many as eight different sounds by simply playing harder.

Performance Editing for Expressive Control

Here's how easy it is to program. Just use the front panel value slider on individual or Combination programs. Instantly, you change EG and cutoff values. And you can do it in real time while you're playing. If you like your changes, save it into the memory. This way you don't have to become a programmer. Pedals and footswitches, connected through the rear panel, can be programmed to perform a number of expressive functions.

Microtuning Alternatives

Switch between equal and pure temperament (major and minor) tunings. Create custom tunings by changing the pitch of each one of the 12 scale tones in a 50-cent range around the basic equal temperament scale. In equal temperament mode, use the pitch randomization function to reproduce the intonation errors that are an inseparable part of the sound of many acoustic instruments (oboes, soprano saxophone or acoustic bass, for instance) or when reproducing instruments whose pitch is slightly unstable. With random pitch the pitch deviates slightly each time a key is played.
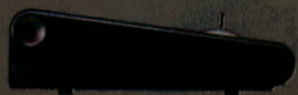
The M1: Creative Synthesizer, Digital Music Workstation

The M1 Digital Music Workstation is a total instrument for creating, producing and performing music. Its Multi-timbral capabilities let you assign a maximum of eight programs in any configuration and play them as eight separate parts using the built-in 8 track sequencer.

Built-in 8-track Sequencer

An extensive internal 8-track MIDI sequencer is a vital part of M1. Each track can play a different program assigned in Sequencer Mode. Sequencer memory capacity is 7,700 events. It has complete sequencing and editing features: step time, real time, pattern time for rhythms that can be programmed in either step or real time, song chaining. In fact, you can program up to 10 internal sequences internally through song chaining. You also have a comprehensive punch in/out feature. The easy-to-operate controls give the feel of a multi-track tape recorder. All your work can then be saved or loaded from ROM cards instantly. No more loading and waiting.

The Power of ROM: Expand The M1's Sound Data

The sounds in M1's 2 Mega word (4 Mega byte) 16 bit ROM can be supplemented with additional PCM data on optional ROM cards that are under continuous development. Unlike most ROM-based machines, the M1 has virtually unlimited new sound capabilities. Sound cards also feature "instantaneous" access ... no loading time! Less time programming, more time creating music.

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❶ POWER: Power Switch
❷ ROM DATA: Insert ROM PCM Card
❸ MIDI: MIDI THRU outputs the data received at MIDI IN
❹ CONTRAST: Adjust the brightness of the display of the front panel.
❺ DAMPER: Connect the footswitch for the damper switch
❻ ASS. PEDAL/SW (1, 2): Terminals for connecting pedals and footswitches. Their functions can be programmed as appropriate.
❼ OUTPUT (1/L, 2/R, 3, 4): Output terminals. Assignment to each terminal is set in Program or Combination modes.
❽ PHONE: Stereo headphone jack.

■ SPECIFICATIONS

● **SYSTEM:** AI Synthesis System (Advanced Integrated Synthesis System) ● **SOUND GENERATOR SECTION:** 16 Voices, 16 Oscillators (Single Mode) ● **KEYBOARD:** 61 Keys, Velocity, After Touch ● **WAVE SHAPE ROM MEMORY:** 2 MegaWords (4 Megabytes) ● **SAMPLING QUANTIZATION:** 16 bit ● **FILTER SECTION:** VDF (Variable Digital Filter) ● **AMPLIFIER SECTION:** VDA (Variable Digital Amplifier) ● **EFFECTS:** Multi-Digital Effects×2 ● **NUMBER OF PROGRAMS:** 100 ● **NUMBER OF COMBINATIONS:** 100 ● **SEQUENCER SECTION:** 10 Songs, 100 Patterns, 7,700 Notes (15,400 Notes with RAM Card), 8 Tracks, 8 Voice Dynamic Allocation ● **CONTROL INPUT:** Damper Pedal, Assignable Switch, Foot Switch 1, 2 ● **OUTPUT SECTION:** 1/L, 2/R, 3, 4, Phone Jack ● **MIDI JACKS:** IN, OUT, THRU ● **DISPLAY:** 80 Character, Backlit LCD ● **OPTIONS:** RAM Card, PCM Card, etc. ● **DIMENSION:** 1058(W)×355(D)×110(H)mm ● **WEIGHT:** 13.5kg

■ SOUND LIBRARY

MSC-1S Sound Data

(STRINGS, LOW VIOLIN, SAXOPHONE, PIANO, MARIMBA, HARP, SPRING, CHORUS)

ROM Program Card MSC-1S (2 in a set)
Each ROM card contains high-resolution 16 bit PCM sound data plus 60 combination programs with internal and 40 with external.

Program Card MPC-11
The MPC-11 supplements the M1's internal memory with 100 new programs and 100 combinations created by world class programmers. The M1 provides the complete answer for the artist who has been searching for an "all-in-one" music production and live performance tool.
For a personal demonstration, see your authorized Korg Dealer today.

■ OPTIONAL ACCESSORIES

● RAM Memory card MCR-03

● Pedal switch PS-1, PS-2

● Foot controller EXP-2

● Damper switch DS-1

● Special flight case FC-M1

● Headphone KH-1000

● SYNC/MIDI cable
1m
3m
5m
1m + 0.5m

● Specifications and features are subject to change without notice for further improvement.
● Color reproduction in printed materials may differ from actual product appearance.

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