**KORG M50 MUSIC WORKSTATION**

The Korg M50 ---a brilliant new synthesizer distilling the sonic essence and functionality of the M3 series into a seriously portable and affordable new instrument.

Main features of the M50
- Rich and vivid sound using the same "EDS" (Enhanced Definition Synthesis) tone generator found on the upper-end M3
- An enormous 256 MB of PCM data*, provides 608 programs and 384 combinations featuring Korg's acclaimed voicing expertise.
- The 61-key M50-61 and 73-key M50-73 use a new semi-weighted Natural Touch keyboard, while the 88 key M50-88 features the top-of-the-line Real Weighted Hammer Action 3 (RH3) graded action keyboard,
- The Drum Track gives you 671 patterns to stimulate and support your realtime performance and song production.
- The Polyphonic Arpeggiator delivers from simple phrases up to complex rhythmic gestures, and lets you use two patterns simultaneously in Combination mode or Sequencer mode to create complete ensemble backing.
- The highly intuitive sequencer provides 16 MIDI + 1 master tracks with all the tools needed to capture and easily shape your musical ideas into polished productions.
- The large TouchView graphical user interface makes it easy to select sounds, adjust parameters and create your music easily.
- An SD card slot provides easy and affordable management of your sounds and songs.
- Included M50 Editor and M50 Plug-In Editor software lets you edit the sounds using your computer, and allows you to use the M50 as a plug-in instrument in your favorite DAW software (VST, Audio Units, and RTAS are supported).
- The M50-61 features a stylishly retro light-weight and compact design, and the M50-88 is the lightest weight 88-key keyboard Korg has ever made.

* when calculated as 16-bit linear data
Portable and packed with the best sounds
Korg’s over twenty years of design expertise in workstations has enabled us to make the M50 the perfect writing and performing keyboard for all musicians. The M50 is packed with the latest sounds and functionality that Korg has developed in its many years of producing synthesizers and music workstations.

It features a light-weight compact design that makes it ideal for live performance, band practice, and especially easy transportation. The 88-note M50-88 uses the grand piano feeling RH3 keyboard, making it an ideal choice for a stage piano.

Korg's best sound engine
The M50 uses Korg's latest "EDS" (Enhanced Definition Synthesis) sound generation system, the technology used on the M3, delivering exactly the same stunning sounds and effects!
Each voice contains a powerful oscillator section that can use up to eight stereo multisamples per voice (two oscillators, each with four-stage velocity switching/crossfading/layering), as well as up to four filters (two filters each with four modes and four routings), two amps, five LFOs, and five EGs.

The abundant 256 Mbytes of ROM (when calculated as 16-bit linear) provides a total of 1,077 multisamples (including seven stereo multisamples) sampled at 48 kHz as well as 1,609 drum samples (including 116 stereo drum samples). These PCM sources were sampled using the best recording equipment and edited with expert care to deliver an incredible palette to create sounds with.

The filter section lets you use two filters for each oscillator. These filter types include low pass, high pass, band pass, and band reject modes, and they can be routed individually, in series or in parallel, and even includes a superb 24 dB mode.

The amp section provides a driver circuit that can bring a harder edge to your sound, and a low boost to add big bottom when needed.

An advanced key tracking generator can be used to adjust filter and amp behavior according to ranges of the keyboard, giving sounds a level of nuanced control across the whole range of the keyboard.
The EG (Envelope Generators) produce time-variant change from the beginning to the end of the sound, and allow you to tweak the curve at each stage (attack, decay, slope, release) in eleven steps, and unprecedented amount of control. This enables the M50 to create simulations of acoustic sounds where the tone and volume undergo complex time-variant changes, as well as highly detailed re-creations of vintage synthesizer sounds. There are eighteen LFO waveforms available for you to select from. These can be further shaped to produce the perfect modulation by adjusting parameters such as the waveform starting phase and amplitude shift.

The AMS (Alternate Modulation Source) function gives you a wealth of modulation possibilities; with a total of fifty modulation sources, you can be sure to find what you need, or use the AMS mixer to apply multiple modulation sources to a single parameter, or even process the modulation source itself to obtain precise control over your sound design.

There's an independent three-band EQ available for each program, the drum track, and each of the sixteen timbres/tracks, so you can make separate and detailed tonal adjustments to achieve the perfect mix without having to use effects. The effect section which adds the final coloration and space to the overall sound contains five insert effects, two master effects, and one total effect. In addition to delay and reverb, you can use modulation-type effects such as chorus, phaser, and flanger, dynamic-type effects such as a compressor and limiter, and amp modeling effects driven by Korg's proprietary "REMS" modeling technology, giving you a total of 170 high-quality effects. There are also two common LFOs that can be used between different modulation effects. For example you can use a single LFO to synchronize the phaser and flanger used by different timbres. The effect dynamic modulation function (Dmod) gives you precise and wide-ranging realtime control over tonal changes and effects.

**Perfectly shaped sounds**

The M50 contains 608 programs, 384 combinations each consisting of up to sixteen programs, and 32 drum kits used as oscillators for drum programs. From real acoustic instrument to vintages synths and imaginative textures the M50 delivers the wide range of great sounds you expect from a Korg keyboard.

For the all-important piano sounds, three-stage velocity-switched stereo samples are programmed in conjunction with samples of the damper resonance, producing the most natural sound ever heard from a synthesizer. There are also mono piano programs for use on stage, as well as programs using the
waveform memory of the classic Korg SG-1 Sampling Grand, which is still acclaimed by artists around the world.

New PCM memory includes numerous vintage electric piano and clav sounds. The vintage E-piano sound features multiple velocity switching, and effects powered by Korg's REMS amp modeling technology to recreate the full vocabulary of tones you want. The clavi includes all the classic settings as well as loud and soft (two-stage velocity) samples for each tone, giving you a highly expressive sound that’s fun to play. Also included are strings and flute sounds from the legendary tape playback instruments, still used in rock, pop and a wide variety of musical styles.

Each multi-part combination delivers sophisticated blends and splits for live performance, along with drum grooves and arpeggio parts that are fun to jam along with and are sure to inspire countless new song ideas.

There are also 256 programs and 9 drum programs that comply with the GM Level 2 sound map. User-edited data can also be saved into the internal memory, with space for 640 programs, 512 combinations, and 48 drum kits.

**Drummer included**

The drum track provides an always-ready partner to jam along with. You can easily choose from over 670 patterns that are built into the M50 as well as your own user-created patterns. These patterns can be started from any desired region of the keyboard or by playing a note that's stronger than a specified velocity. Whether you're capturing your musical ideas, producing a song, or performing live, the drum track will help you get your groove on.

**Sequencing powerhouse**

As the core of your music production system, the sequencer provides 16 MIDI tracks, up to 128 songs, and lets you record 210,000 notes. With a high resolution of 1/480, it can capture every detail of your expressive performance. Record in realtime or enter notes in step time, and you can loop each track individually so you can get a drum groove going and then play varying parts over that to create the perfect loop. Build your Song up from sections using the Cue List function to assemble the parts into the perfect arrangement. The RPPR (Realtime Pattern Play/Recording) function lets you assign phrases (patterns) to the keyboard and trigger them in real time by playing a single note of the keyboard. You can
use this to trigger different patterns from each key or perform on another region of the keyboard while the triggered patterns play, giving you very sophisticated possibilities for real time performance. 671 patterns are built-in.

When you start playing a program or combination and like what you’re doing, simply use the Auto Song Setup function to copy the setup into the sequencer and start recording, instantly, producing the basic tracks that will become the core of your new song.

**Dual polyphonic arpeggiators**

In addition to a standard arpeggiator with five preset patterns (UP, DOWN, ALT1, ALT2, RANDOM), the M50 provides a polyphonic arpeggiator that can generate a variety of chord progressions and phrases based on the pitch and timing of the keys you play. This lets you produce a broad range of patterns, ranging from drums (using the "Fixed Note Mode"), bass phrases, or even guitar or keyboard backing phrases. The arpeggiator can also operate as part of the sound-creating functionality to create pads, synth sounds, or sound effects that include a subtle sense of movement. The M50 contains a total of 1,028 user arpeggio patterns, including 900 preloaded patterns created by our expert programmer/musicians.

In addition, Combination mode and Sequencer mode allow you to take advantage of the dual arpeggiator functionality that generates two phrases simultaneously. This allows for many powerful possibilities such as applying different arpeggio patterns to drums and bass programs, or using splits or velocity to switch between arpeggio patterns.

**TouchView interface**

The M50 features the same TouchView display that's found on Korg's high-end music workstations. The 320x240 pixel clear display ensures excellent visibility and operability, giving you easy access to an enormous amount of parameter information. No other keyboard in its class has as beautiful and intuitive of an interface!

**Three keyboard models**

The M50 is available as three models with different keybeds: the 61-key M50-61, the 73-key M50-73, and the 88-key M50-88. Both have been designed with careful attention to keyboard feel. The M50-61 and M50-73 use a new semi-weighted Natural-Touch keyboard that allows expressive performance on a fast, synth-action feel. The M50-88 uses Korg’s RH3 (Real Weighted Hammer Action 3) keyboard
acclaimed for its graded-action grand piano-like touch, making it the ideal choice for a stage piano as well.

**Editor and plug-in editor software included**

The M50 Editor is a stand-alone software application that lets you perform even more detailed editing from your PC. By using the M50 Plug-In Editor, you can use the M50 as a plug-in instrument from within any host application, expanding your DAW production system without putting any resource drain on your computer (VST, Audio Units, and RTAS formats are supported).

**SD card storage**

The M50's SD card slot lets you save programs, combinations, and sequences, and it also allows for easy data management. By using this common form of memory you are assured of getting your media for the lowest price, anywhere you shop.

**M50 Specifications**

- **Keyboard**
  
  M50-88: 88 key Real Weighted Hammer Action (RH3) (velocity only)
  * The key weight of the RH3 keyboard differs in four stages across the pitch range (with low notes being heavier, and high notes being lighter), delivering a playing feel similar to that of a grand piano.
  
  M50-61/M50-73: Natural Touch Keyboard (velocity only)

- **System**

  EDS (Enhanced Definition Synthesis)

- **Sound Engine**

  Maximum Polyphony: 80 voices max, single mode/40 voices max, double mode
  * The actual maximum polyphony will vary depending on oscillator settings such as stereo multisamples and velocity crossfading.
  
  Preset PCM: 256 Mbytes (when calculated as 16-bit linear data)/1,077 multisamples (including seven stereo), 1,609 drum samples (including 116 stereo)

  Programs:
  - Oscillator: OSC1 (Single), OSC1+2 (Double): Stereo multisamples are supported/ 4 velocity zones per oscillator, with switching, crossfades and layers.
  - Filters: Four types of filter routing (single, serial, parallel, 24 dB), Two multi-mode filters per voice (low pass, high
-Driver: Per-voice nonlinear driver and low boost.

-EQ: Three bands, with sweepable mid.

-Modulation: For each voice, two envelope generators (Filter & Amp), two LFOs, two key tracking generators (Filter & Amp), and two AMS mixers. In addition, pitch EG, common LFO, and two common key tracking generators.

Combinations:

-16Timbres: Up to sixteen timbres, keyboard and velocity split/layer/crossfade, and modifications to the program setting via the Tone Adjust function.

-Master Keyboard functionality: Allows you to control external MIDI devices.

Drum Kits: Stereo and mono drumsamples. 4-way velocity switches with crossfades and adjustable crossfade shapes (Linear, Power, Layer).

User Combinations: 512 Combinations/384 Preload
User Programs: 640 Programs/608 Preload
User Drum Kits: 48 Drum Kits/32 Preload
Preset Programs: 256 GM2 Programs + 9 GM2 Drum Programs

-Effects

5 Insert Effects (In-line processing; stereo in - stereo out.), 2 Master Effects (Two effects; sends stereo in - stereo out.), 1 Total Effect (For overall processing on the main outputs, such as compression, limiting, and EQ; stereo in - stereo out.), 3-band Track EQ (High, low, and sweepable mid band. Per Program in Program Mode, per Timbre in Combination mode (16 total), and per Track in Sequencer mode (16 total)).

Effects types: 170 types Usable for insert, master, or total effects. Note: double-size effects cannot be used as the total effect.

Modulation: Dynamic Modulation, two common LFOs

Effects Control Bus: Stereo side-chaining for limiter, gate, vocoder, etc.

Effects Presets: Up to 32 per Effect

-Dual polyphonic arpeggiators

Program mode: one arpeggiator available. Combination and Sequencer modes: two arpeggiators available. 5 preset arpeggio patterns, 1028 user arpeggio patterns (900 preload)

-Drum Track

Preset patterns: 671 patterns (Held in common with sequencer preset patterns.)

User patterns: 1,000 patterns. Patterns created in Sequencer mode can be converted to drum track user patterns.

Trigger Mode / Sync / Zone settings can be specified
-**Sequencer**

16 MIDI Tracks & 1 Master Track, 128 Songs, Resolution: 480 ppq (parts per quarter-note), Tempo: 40.00–300.00 bpm (1/100 bpm resolution), Up to 210,000 MIDI events, 16 preset/16 user template songs, Cue List function: 20 Cue Lists. Songs can be arranged consecutively or repeatedly in up to 99 steps. A Cue List can be converted back into a song. Patterns/RPPR: 671 preset /100 user patterns (per Song), RPPR (Realtime Pattern Play/Recording): 1 set per Song. Format: Korg (M50) format, SMF (formats 0 and 1) supported

-**Media**

Load, Save, Utility

Data Filer functionality (Save and Load MIDI System Exclusive Data)

-**Controllers**

Joystick, SW1, 2

Chord trigger switches: Chord trigger switches 1–4 (non velocity sensitive), CHORD ASSIGN switch

Control Surface: -CONTROL ASSIGN Switches (REALTIME CONTROL, EXTERNAL, ARP) -RESET

CONTROLS Switch – 4 knobs (REALTIME CONTROL: Realtime modulation, EXTERNAL: External mode.

External MIDI control, Arpeggio control)* In External mode, the four knobs and four chord trigger switches can be used as MIDI controllers. 128 setups can be stored. (102 are preloaded. These allow you to control software synthesizers or DAW software.)

Drum Track: ON/OFF

Arpeggiator: ON/OFF

-**User Interface**

Display: TouchView grey-scale graphical user interface, 320 x 240 pixel display

MODE: Switches = COMBI, PROG SEQ, GLOBAL, MEDIA

Value Controllers: Switches = Up/Down, 10-key numeric keypad, - , ( ), ENTER, COMPARE, VALUE Slider, VALUE Dial

BANK: Switches = A…GM (used for Combination A, B, C, D)

SEQUENCER: Switches = PAUSE, REW, FF, LOCATE, REC/WRITE, START/STOP

TEMPO: Switches = TAP TEMPO, TEMPO Knob

Other: Switches = PAGE SELECT, EXIT, VOLUME Slider, display contrast

-**Audio Outputs (Analog)**

AUDIO OUTPUT, L/MONO, R:

1/4" TS (Mono), unbalanced, Volume slider controls only L/Mono and R

Output Impedance = 1.1kΩ stereo; 550Ω mono (L/Mono only), Maximum Level = +16.0 dBu , Load Impedance = 10 kΩ or greater
Headphone output:
1/4" TRS (Stereo), Volume slider
Output Impedance = 33Ω, Maximum Level = 32+ 32 mW @33Ω

-Control Inputs
DAMPER (Supports piano-style half-damper pedals as well as standard foot switches), ASSIGNABLE SWITCH, ASSIGNABLE PEDAL

-MIDI
IN, OUT

-USB
1 USB (TYPE B), MIDI interface

-SD-Card slot
Capacity recognized: FAT32: 2 Gigabytes (GB). SDHC memory cards are not supported.

-Power
AC adapter power supply connector (DC 12V 3500mA), POWER On/Off switch

-Dimensions (W × D × H)
M50-61: 1,027 × 294 × 106 (mm)/40.43" × 7.47" × 4.17"
M50-73: 1,191 × 294 × 106 (mm)/46.90" × 7.47" × 4.17"
M50-88: 1,409 × 328 ×151 (mm)/55.47" × 12.91" × 5.94"

-Weight
M50-73: 8.2 kg/18.08 lbs.(tentative, it will be confirmed in the end of September.)
M50-88: 20.8 kg /45.86 lbs.

-Power Consumption
35W

-Accessories
AC adapter, Owner’s Manual, CD-ROM (M50 Parameter Guide (PDF), Installation Guide (PDF), External Setups PDF, KORG USB-MIDI driver, M50 Editor/Plug-In Editor etc.)

M50 Options
XVP-10: Expression/Volume Pedal
EXP-2: Foot Controller
DS-1H: Damper Pedal
PS-1: Pedal Switch
Operating requirements

-KORG USB-MIDI driver

Windows
Computer: USB port required (a USB host controller made by Intel is recommended)
Operating system: Microsoft Windows XP Home Edition/Professional/x64 Edition Service Pack 2 or later (the MIDI driver for the x64 Edition is a Beta version), All editions of Microsoft Windows Vista Service Pack 1 or later (the MIDI driver for the 64-bit Edition is a Beta version)

Macintosh
Computer: USB port required
Operating system: Mac OS X 10.3.9 or later

-M50 Editor and M50 Plug-In Editor

Windows:
• Computer
  CPU: Intel Pentium III / 1 GHz or better, Pentium D or Core Duo or better is recommended
  Memory: 512 MB or more (1 GB or more is recommended)
  Monitor: 1,024 x 768 pixels, 16-bit color or better
  A computer that satisfies the operating requirements of Windows XP or Windows Vista, and has a USB port
• Operating system
  Microsoft Windows XP Home Edition/Professional Edition Service Pack 2, Windows Vista Service Pack 1 and all later editions (64-bit versions excepted)

Macintosh:
• Computer
  CPU: Apple G4 800 MHz or better (Intel Mac is supported), G5 or Core Duo or better is recommended
  Memory: 512 MB or more (1 GB or more is recommended)
  Monitor: 1,024 x 768 pixels, 32,000 colors or better
  An Apple Macintosh computer that satisfies the operating requirements of Mac OS X and has a USB port
• Operating system
  Mac OS X version 10.4.11 or later

*Formats supported by M50 Plug-In Editor

Windows: VST, RTAS
Macintosh: VST, Audio Unit, RTAS
* M50 Plug-In Editor must also satisfy the operating requirements of the host application.

* You cannot run multiple instances of the M50 Editor and M50 Plug-In Editor in the operating system. This means that you can’t use this editor to edit two or more M50 units simultaneously.

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