Roland

ROLAND KEYBOARDS
VOL.6

Roland

JX-8P
preset programmable 6-voice polyphonic synthesizer
MIDI MUSICAL INSTRUMENT DIGITAL INTERFACE

The JX-8P is velocity- and pressure-sensitive. Velocity information is used to control the DCO pitch, the mix balance between the DCO-1 and DCO-2, the VCF cutoff frequency, and the VCA level. Three levels of velocity-sensitivity can be selected. Pressure information is used to control the vibrato depth, the brilliance, or the volume. Even the slightest change in touch is reflected in the sound.

Two DCOs and, for the first time in this price range, two Envelope Generators are used to produce each voice. Other synthesizer elements, extensive modulation controls, and dynamics capability allow the JX-8P to produce more impressive sounds than ever before—from crystal-clear sounds to screaming sounds.

The JX-8P offers 64 preset patches including extremely thick string sounds, cross-modulated metallic sounds, a variety of special effect sounds, and many more. It can also store 32 programmable patches. In addition, the optional M-16C memory cartridge provides 32 programmable patches. A total of 128 patches can be instantly recalled even during a performance. The Edit function allows all patch parameters to be delicately controlled so as to modify a preset patch or to create a new patch. The optional PG-800 programmer can be used to facilitate editing.

The JX-8P offers yet one more amazing function: you can name the patch you created and store it in the JX-8P memory. When the patch is recalled, a newly developed FIP display spells out the patch name. The display also spells out the parameter name when it is edited. You can easily select the desired patch and recall the desired parameter even on a dark stage.

A new Patch Chain function allows the JX-8P to memorize up to 8 combinations of patch, key mode, whether the pressure information is activated or not, bend range, whether the portamento is activated or not, portamento time, LFO modulation depth, and whether the Unison Detune function is activated or not. These combinations can be recalled instantly. This function is especially effective for live performance.

In addition to these exciting features, the JX-8P offers full MIDI compatibility. It can be used as a mother keyboard for any MIDI set-up and brings out the best in all connected MIDI instruments.

Despite its tremendous capabilities and attractive features, the JX-8P weighs only 11.5 kilograms.

SPECIFICATIONS
- Keyboard: 61 keys (5 octaves, C scale)
- Memories: 64 preset patches, 32 internal programmable patches, 32 external programmable patches (M-16C)
- Edit: Patch parameters, Patch Name, MIDI function, Master tune
- Touch Pads: Patch Select (1 to 32), Bank Select (Preset, Internal, Cartridge), Patch Chain (Enter, ◀, ▶), Key Mode (Poly, Unison, Solo), After Touch (Vibrato, Brilliance, Volume), Copy (Cartridge to Memory, Memory to Cartridge)
- Controls: Volume, After Touch, Edit, Bend Range Select, Pitch Bend/LFO Lever, Portamento Time, Portamento On/Off
- Display: 16-digit FIP display
- Memory Cartridge Holder: 1
- Jacks: Phone Output × 2 (Stereo, Mono, 7.5kΩ), Headphones (8Ω stereo), Hold Pedal (DP-2), MIDI (In, Out, Thru, 5-pin DIN), Programmer In (6-pin DIN)
- Switches: Output Level (L/M/H), Memory Protect (Off/On/Off)
- Dimensions: 977(W) × 92(H) × 375(D)mm (38.5″ × 3.6″ × 14.8″)
- Weight: 11.5 kg (25.3 lb.)
- Accessory: Connection cord × 2

PG-800 programmer
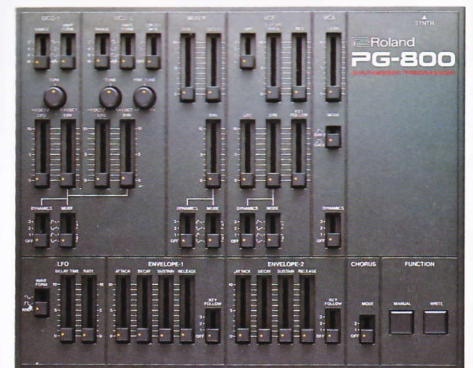
The PG-800 is a programmer designed exclusively for use with the JX-8P. It facilitates creation of new patches and modification of preset patches. All JX-8P parameters can be controlled by the PG-800's sliding controls.

Light and compact, the PG-800 neatly fits on top of the JX-8P and is held in place by a magnetic seat. It also comes complete with a carrying case.

SPECIFICATIONS
- DCO-1: Range (2′, 4′, 8′, 16′), Waveform (⎺⎺, ⊓, ⊓⊓, Noise), Tune (±1 oct), Frequency Modulation (LFO, ENV), Dynamics Select (Off/1/2/3), Envelope Mode (⌒, ⌄)
- DCO-2: Same as the DCO-1 plus Cross Modulation (Off/1/2/3) and Fine Tune
- Mixer: Level (DCO-1, DCO-2), Envelope Modulation, Dynamics Select (Off/1/2/3), Envelope Mode (⌒, ⌄)
- HPF: 0/1/2/3
- VCF: Cutoff Frequency, Resonance, LFO Modulation, Envelope Modulation, Key Follow, Dynamics Select (Off/1/2/3), Envelope Mode (⌒, ⌄)
- VCA: Mode (ENV-2, Gate ⊓), Level, Dynamics Select (Off/1/2/3)
- ENV-1: Attack Time, Decay Time, Sustain Level, Release Time, Key Follow (Off/1/2/3)
- ENV-2: Same as the ENV-1
- LFO: Waveform (⌒, ⊓, Random), Delay Time, Rate
- Chorus: Mode Select (Off/1/2)
- Function: Manual, Write
- Jack: 6-pin DIN
- Dimensions: 265(W) × 27(H) × 215(D)mm (10.4″ × 1.1″ × 8.5″)
- Weight: 680 g (1.5 lb)
- Accessories: 6-pin DIN cable, Carrying case

REAR PANEL
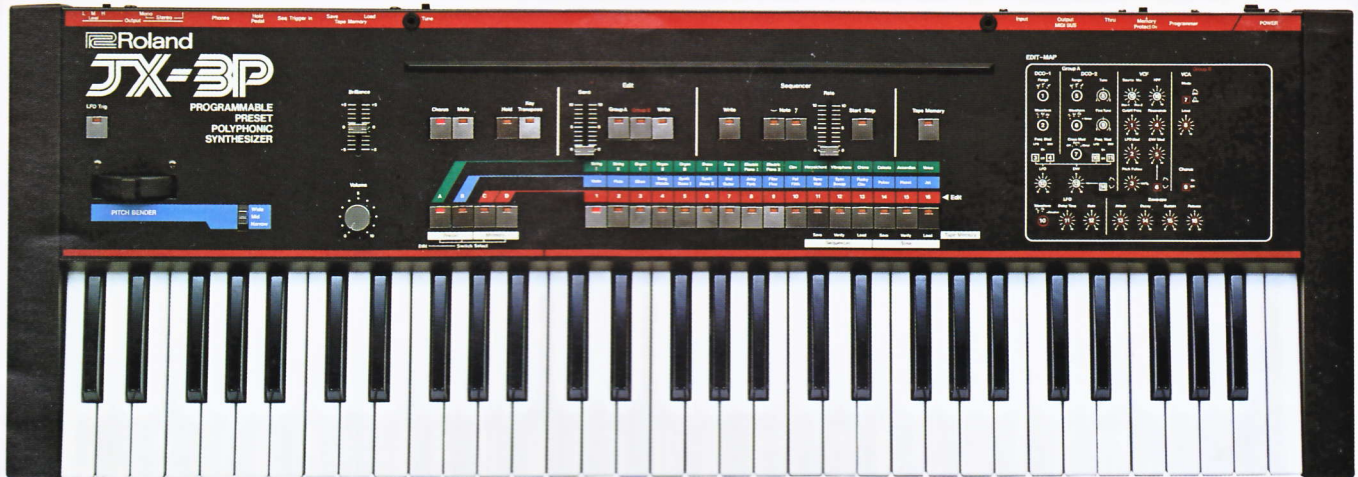
A sleek space age instrument, the JX-3P is an exciting mix of sophistication and simplicity. The latest interface technology (MIDI), a Polyphonic Sequencer with Tape Storage, Twelve Digitally Controlled Oscillators, and Sixty-four Patch Memories are only some of the features available on the JX-3P. The JX-3P is so simple to operate that most of its sound parameters can be changed by the same two controls in the Edit section.

Programmable, Preset, and Polyphonic (the three P's) the JX-3P is all these things and more. Combining the versatility of a programmable synthesizer (32 patch memories) and the convenience of a preset (also 32 patch memories), the JX-3P is a six voice polyphonic synthesizer that uses twelve DCO's to achieve the big sound that is so popular.

The Preset section offers a broad vocabulary of musical sounds including the most sought after simulation patches (Strings, Brass, and other acoustic instruments) found in banks A and B of the JX-3P.

Cross Modulation, which is used to create metallic sounds and Ring Modulator effects, is included on the JX-3P.

Six VCF's, Six VCA's, six Envelopes are combined with the extensive Modulation controls to give the JX-3P user all the tools necessary to create that "perfect patch."

Stereo Chorus, External Trigger for the Sequencer, Hold pedal connection, and Key Transpose add professional features to the JX-3P. A superlative performance control section that includes an extra large Bender with three different modes of operation and a separate LFO Trigger Pad are the finishing touches on a versatile performer.

SPECIFICATIONS

●Keyboard: 61 keys (5 octaves, C scale) ●Buttons & Indicators: Bank (A to D), Number (1 to 16), LFO Trig, Chorus, Mute, Hold, Key Transpose, Tape Memory ●Controls: Pitch Bender, Volume, Brilliance ●Switch: Bender range select (Wide/Mid/Narrow) ●Preset voices: Bank A (1 to 16) String I, String II, Organ I, Organ II, Organ III, Brass I, Brass II, Electric Piano I, Electric Piano II, Clavi, Harpsichord, Vibraphone, Chime, Celesta, Accordion, Voice, Bank B (1 to 16) Violin, Flute, Oboe, Song Whistle, Synth Brass I, Synth Brass II, Dist Guitar, Juicy Funk, Filter Flow, Fat Fifth, Sync Wah, Sync Sweep, Funky Clavi, Pulser, Planet, Jet ●Memory: 32 Patch programmable (battery back-up), Bank C (1 to 16), Bank D (1 to 16) ■Edit section (32 elements, Group A: 1 to 16, Group B: 1 to 16). ●Buttons & Indicators: Group A, Group B, Write ●Control: Sense ■Sequencer section. ●Buttons & Indicators: Write, Tie, Rest, Start Stop ●Control: Rate ●Memory capacity: 128 steps (6-voice polyphonic, battery back-up) ■Tape memory. ●Sequencer: Save, Verify, Load ●Tone Save, Verify, Load ■Rear panel ●DIN jacks Programmer in — 6-pin, MIDI (in, out, through) ●Phone jacks: Output (mono, stereo), Phones, Hold pedal, Seq Trigger in, Tape Memory (save, load) ●Switches output level (H: 0dBm/M· −15dBm/L −30dBm), External instruments select (MIDI BUS, Memory Protect on, Programmer), Power on/off ●Control Tune (±50 cent) ●Dimensions 912(W) × 115(H) × 325(D)mm (35.9″ × 4.53″ × 12.8″) ●Weight 9 8 kg (21.6 lb) ●Accessories: Music rest, Connection cable × 2

●Options: KS-2 stand, FV-200 foot volume, CB-JX leatherette case, RH-10 headphones, DP-2 pedal switch

The optional PG-200 Programmer is a modular unit that can be used with more than one JX-3P or with other synthesizer products Roland will produce in the near future. The Programmer gives the user simultaneous control over nearly every parameter of sound. Complete with features like Cross Modulation and Programmable Chorus, the PG-200 can be used with the JX-3P to create new sounds for the programmable banks (C and D) and edit the preset banks (A and B).

SPECIFICATIONS

●DCO-1 ●DCO-2 ●VCF ●VCA ●Chorus ●LFO ●Envelope ●Buttons & Indicators Manual, Write ●Connecter (6P DIN) ●Dimensions: 244(W) × 45(H) × 172(D)mm (9 6″ × 1.8″ × 6.8″) ●Weight 1 4 kg (3 08 lb.) ●Accessory 6P DIN cable

REAR PANEL

In the brief time since its introduction the Jupiter 8 has become the most popular polyphonic synthesizer among session players and recording groups. The Jupiter owes this popularity to an outstanding array of features, a reputation for durability under arduous conditions, and most of all because it delivers unsurpassed sound.

The key to the JP-8's unsurpassed performance ability is an advanced computer assigned keyboard which allows more flexibility and control than ever before. The five octave keyboard can be used in three different Key Modes, Whole, Dual, and Split. Whole mode gives the whole keyboard a single patch sound across all eight voices. Dual provides a layered sound with two patches sounding with every key depression. Split mode can give one side of the keyboard one patch sound, while the other side has another sound. On newer JP-8's this split can be moved to any location on the keyboard and retained in the synthesizer's patch preset memory.

The Jupiter 8 gives the user Four Assign Modes including; Solo, Unison, Poly 1, and Poly 2. Solo stacks all sixteen oscillators on a single key depression which makes the keyboard monophonic but very "thick" sounding. Unison places as many oscillators as are available to a single key depression while retaining polyphonic sound. Poly 1 and Poly 2 differ only in the length of release time of the last note played.

The Jupiter 8 keyboard computer also provides an Arpeggio section which can be used for sequencer like lines on either the whole keyboard or the lower half only, leaving the upper section free. The Arpeggio can be controlled by means of an External Trigger.

Sixty-four patches can be stored in the Jupiter's memory and eight Preset Pairs can also be stored. Stereo Outputs, both high and low impedance, guarantee the Jupiter's sound will be faithfully reproduced on stage or in the studio. DCB Digital Interface allows connection of the Jupiter to products like the MC-4 Micro Composer and the CMU-800 CompuMusic. The MD-8 MIDI-DCB interface enables the connection of MIDI instruments to the Jupiter.

SPECIFICATIONS
• Keyboard: 61 keys (5 octaves, C-scale) • VCO modulation: LFO MOD, ENV MOD, MOD switch (VCO-1/both/VCO-2), PWM, PWM mode switch (LFO/manual/ENV-1) • VCO-1: Cross MOD, Range (16′/8′/4′/2′), Waveform ($\sim$, $\wedge$, $\sqcap\!\sqcup$, $\sqcap\!\sqcup$) • VCO-2: SYNC switch (on/off), FREQ range switch (normal/low/FREQ), Range (16′~2′ chromatic), Fine tune (±50 cent), Waveform ($\sim$, $\wedge$, $\sqcap\!\sqcup$, noise) • Mixer: Source mix (VCO-1 mix VCO-2) • HPF: Cutoff FREQ • VCF: Cutoff FREQ, Resonance, Slope switch (−12dB/−24dB), ENV MOD, ENV selector (ENV-1/ENV-2), LFO MOD, Key follow (0~120%) • VCA: Level, LFO MOD (0/1/2/3) • ENV-1: Attack time (1.5ms~6s), Decay time (1.5ms~12s), Sustain level, Release time (1.5ms~12s), Key follow (on/off), Polarity ($\sim$/$\smile$) • ENV-2: Same as the ENV-1 except the Polarity switch • LFO: Rate (0.05Hz~40Hz), Delay time (0~4s), Waveform ($\sim$/$\sqcap\!\sqcup$/$\wedge$/random), Rate indicator • Arpeggio: Rate (1Hz~25Hz), Switch (INT/EXT), Range (1, 2, 3, 4), Mode (up, down, U & D, random) • Volume • Balance • Tune: (±50 cent) • Patch memory: Patch number button (64 memories), Manual button, Patch preset

button (8 presets), Write button, Memory protect indicator • Tape memory: Dump button, Verify button, Load button, Data check indicator • Patch number display • Assign mode: Solo, Unison, Poly-1, Poly-2 • Hold: Lower hold (on/off), Upper hold (on/off) • Key mode: Dual, Split, Whole • Panel mode: Lower, Upper • Portamento: Time, Mode (upper only/off/on) • LFO MOD: On/off button, Rise time, Sensitivity controls (VCO, VCF), MOD switches (VCO, VCF) • Bender: Lever, Sensitivity controls (VCO, VCF), Bend switches (VCO-1, VCO-2, VCF)
■ Rear panel. • Audio output: Cannon jacks (upper, lower, 0dBm), Phone jacks (upper, mix, lower), Level select switch (0dB/−20dB), Phones jack, Phones level select switch (H/M/L) • EXT controls: Hold, Portamento, VCF, VCA • Arpeggio clock: Inputs (DIN, phone), Beat select switch ($\flat$, $\sqcap\!\sqcup$, $\sqcap\!\sqcup\!\sqcup$) • Highest note output: CV (0~5V), Gate (0~15V) • Tape memory: Save, Load • Memory protect switch: On/off • DCB connector • Dimensions: 1063(W) × 120(H) × 485(D)mm (41.9″ × 4.72″ × 19.1″) • Weight: 21.5 kg (47.3 lb)
• Options: KS-20 stand (KSA-20: Adapter to allow use of KS-20 with JUPITER-8), FV-200 foot volume, DP-2 pedal switch, TB-8 aluminum case
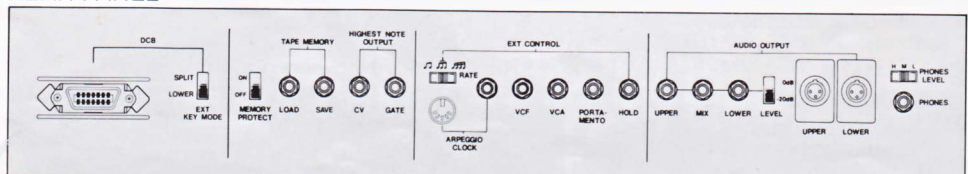
REAR PANEL

Designed for the musician who demands the utmost in performance and reliability, the JUPITER synthesizers from Roland are the finest performance oriented polyphonic synthesizers available at any price.

The now legendary Jupiter 8 is joined by the Jupiter 6 to give consumers a choice of features and price bracket. The Jupiter 6 provides two powerful VCO's per voice as well as a depth of control and performance features normally found only on elaborate modular systems.

Benefiting from the ground breaking technology of the Jupiter 8, the Jupiter 6 is more than the little brother of this industry standard. Combinable Waveforms, 32 Patch Preset Pairs, MIDI, and greater control of Modulation parameters make the Jupiter 6 a unique and special instrument.

48 Patch Memories with Cassette Storage (load and dump) insure that the right sound is only a button away. 32 Patch Preset Pairs give the Jupiter 6 user more combinations of split keyboard sounds and these pairs can be changed by means of a DP-2 foot pedal. Should power be interrupted for any reason, a built in battery preserves the data in memory. Cassette interface data is transmitted at around 3,200 bauds so an entire program can be completely recorded in approximately 15 seconds.

A variety of Split Keyboard Modes allow either two voices left and four voices right or four voices left and two right. Four Keyboard Assign Modes including; Poly 1, Poly 2, Unison Solo, and Solo/Unison insure the performer the flexibility to match the style and mood of music that is being played.

Highly reliable digital LFO, ADSR, and Portamento give the user unprecedented accuracy and flexibility in these vital functions.

Auto-Tune insures that all twelve oscillators can be precisely tuned in an instant. A Detune key in the Solo/Unison mode allows up to six different VCO pitches to be detuned for impressive ensemble effects.

The Arpeggio can be used over up to four octaves and in either up, down, or up and down patterns. The Arpeggio can be externally gated for sequencer like lines. Key Follow in the Envelope section is continuously variable giving the user the capability of creating both amazingly real piano sounds and impressive synthesizer effects.

SPECIFICATIONS

•Keyboard: 61 keys (5 octaves, C-scale) •VCO MOD: LFO (10 oct.), ENV-1 (5 oct.), VCO-1 (on/off), VCO-2 (on/off) •PWM: PW (50%~100%), PWM (LFO ±48% from PW level, ENV-1 same as LFO) •VCO-1: Range (32'~2' in chromatic), Waveform ($\sim$, $\diagup$, $\sqcap\sqcup$, $\sqcap\sqcap$), Cross MOD (ENV-1, manual) •VCO-2: Range (32'~2' in chromatic)—Special range (high 2'~5', low 1.5Hz~50Hz), Waveform ($\sim$, $\diagup$, $\sqcap\sqcup$, noise), Tune (±50 cent) •SYNC: VCO-1 to VCO-2 on/off, VCO-2 to VCO-1 on/off •Mixer: VCO-1 mix VCO-2 •VCF: Mode (LPF 24dB/ oct., BPF 12dB/oct., HPF 24dB/oct.), Cutoff FREQ (5Hz~30kHz), Resonance (Peak gain 15dB), ENV (10 oct., ENV-1/ENV-2 select), LFO (10 oct.), KYBD follow (0%~120%) •VCA: Dynamic range 60dB, ENV-2 level, LFO •ENV-1: Attack time (0~18s), Decay time (0~20s), Sustain level (0~100%), Release time (0~20s), Key follow (0~120%), Polarity ($\frown$, $\smile$) •ENV-2: Same as the ENV-1 except the Polarity switch •LFO· Rate (0.04Hz~ 100Hz), Delay time (0~2s), Waveform ($\sim$, $\diagdown$,

$\sqcap\sqcup$, random), Random special high frequency (400Hz) •Glide Portamento or glissando, Time (0~ 1 6s/oct.) •Arpeggio Rate (1~25Hz), Range (1~ 4 oct), Mode (up, down, up & down, down & up) •Assign Solo, Solo unison, Unison detune ±50 cent, Poly-1, Poly-2 •Hold (upper, lower) •Key mode Split 4-2, Split 2-4, Whole •Panel mode (upper or lower) •Memory section Bank (A~F, 6 banks), Number (1~8, 6 × 8 48 memories), Patch preset (4 banks × 8 32 presets), manual, write •Tape memory Load, Verify, Save •Master tune ±50 cent, Compu tune time (0 3s) •Bender Lever, On/off buttons (VCO-1, VCO-2), Bend width (3 oct fixed), VCO SENS (1 oct variable), VCF SENS (5 oct variable) •LFO-2 On/off button, VCO SENS (±100 cent), VCF SENS (±4 oct), Rate (1~10Hz), Rise time (50ms~1 s) •Output Volume (master volume), Balance (lower, upper), Cannon (IMP 600Ω), Level attenuator (0dB/−15dB/ −30dB), Phones •EXT controls Arpeggio clock in, Patch shift, Pedal hold, VCA control (0~−20dB), VCF control (−6~+2 oct) •Others Memory protect switch (on/off/on), Load input Save output, MIDI (In, Out, Thru, 5-pin DIN) •Dimensions 1063(W) × 120(H) × 434(D)mm (41 9″ × 4 72″ × 17 1″) •Weight 16 kg (35 2 lb)

•Options KS-20 stand (KSA-20 Adapter to allow use of KS-20 with JUPITER-6), FV-200 foot volume, DP-2 pedal switch, TB-8 aluminum case
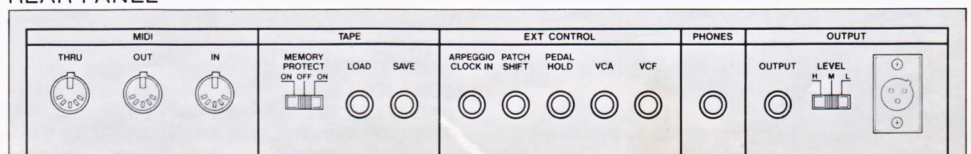
REAR PANEL

MIDI

The JUNO-106 is a completely new polyphonic synthesizer that accepts all MIDI information. The JUNO-106 features three MIDI jacks on the rear panel —In, Out, and Through— as well as a Function switch used to select the send and receive mode for I KYBD, II KYBD + BENDER + PGM CHANGE, or III ALL. The settings of all front panel controls (LFO, DCO, HPF, VCF, VCA, ENV, and Chorus) can be sent and received using the Exclusive Message in the ALL mode.

There are sixteen MIDI channel select buttons on the front panel. Thanks to these superb functions, you can connect the JUNO-106 with any MIDI-equipped synthesizer or sequencer. Several MIDI devices can then be simultaneously controlled using the MIDI Through jack. All instrumental parts of a composition can also be performed using the data stored in a computer.

ELEMENTAL PARTS

The JUNO-106, 61-key, 6-voice polyphonic synthesizer is easy to operate and packed with exciting functions.

The JUNO-106 features a highly stable DCO, the same kind as used in Roland's famous JX-3P.

There are 2 groups (A and B) with 8 banks stored in each group. Each bank stores 8 patches for a total of 128 patch memories. All the LFO, DCO, HPF, VCF, VCA, ENV, and Chorus settings can be memorized.

A cassette interface is provided to allow all program data to be stored on a cassette tape. Since the program data of groups A and B are saved and loaded idependently, it can be combined or rearranged as you like. A memory protect switch is provided to prevent the program data from being accidentally erased.

PROGRAM MEMORY

The DCO's waveforms and ranges are selected by touch pads and the PWM, Sub-Oscillator, Noise and LFO controls are adjusted by sliding controls. The tone color is tailored at will by both VCF and HPF. And the VCA has a level slider and ENV/Gate select switch. A Chorus effect is provided to reproduce realistic string or organ sounds. And for the first time in this price class, the JUNO-106 features a portamento function that is effective for both live performances and multi-track recording

REAR PANEL

SPECIFICATIONS

- Keyboard: 61 keys (5 octaves, C-scale) •DCO: Waveforms (⊓⊔ , ⫽), Range (16'/8'/4'), PWM, PWM mode (LFO/Manual), LFO modulation, Sub-OSC level, Noise level •HPF: Cutoff frequency (0/1/2/3) •VCF: Cutoff frequency, Resonance, Key follow (0~100%), ENV modulation, ENV polarity (⌒, ⌄), LFO modulation •VCA: Control signal (⌒/⊓⌐), VCA level •ENV: Attack time (1.5ms~3s), Decay time (1.5ms~12s), Sustain level (0~100%), Release time (1.5ms~12s) •LFO: Rate (0.1~30Hz), Delay (0~3s) •Chorus buttons: Off, I, II •Others: Key transpose, Assign mode (Poly-1/Poly-2), MIDI channel (1~16) •Controllers: Portamento time, Portamento (on/off), Volume, Bender lever, Bender sens (DCO), Bender sens (VCF), LFO trig sens (DCO) •Memory buttons: Patch number (1~8), Bank number (1~8), Group select (A, B), Manual, Write, Save, Verify, Load •Multi-Purpose Indicator: 7-segment LED × 2 •Jacks· Outputs (phone × 2), Headphones, Pedal hold (DP-2), Patch shift (DP-2), Save, Load, MIDI input, MIDI output, MIDI through •Switches on the rear panel: MIDI function (1/2/3), Memory protect •Control: Tune (±50 cent) •Dimensions: 992(W) × 120(H) × 320(D)mm (39.1" × 4.72" × 12.6")
- Weight: 10.0 kg (22.0 lb.)
- Accessory: 2.5m connection cord × 1
- Option: AB-1 resin-molded case
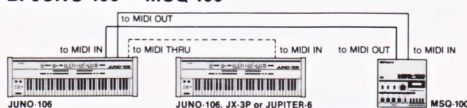
Typical set-ups using MIDI

A. JUNO-106 + Other MIDI Keyboards

The JUNO-106 can control another MIDI keyboard. By connecting with its MIDI THRU jacks, the JUNO-106 can also control more than one MIDI keyboards simultaneously.

If the keyboards are then set to produce string sounds, a full-bodied sound similar to that of a full orchestra can be obtained.

B. JUNO-106 + MSQ-100

When the JUNO-106 is connected with the MSQ-100 MIDI/DCB MULTI-TRACK DIGITAL KEYBOARD RECORDER, the MSQ-100 can memorize the JUNO-106's performance data. If two JUNO-106 units are assigned different MIDI channels when writing performance data into the MSQ-100, the two JUNO-106 units can simultaneously perform two different instrumental parts.

C. JUNO-106 + MPU-401 + Computer
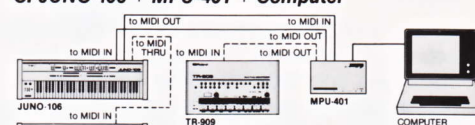
The Roland DG's MPU-401 MIDI PROCESSING UNIT allows the JUNO-106 to be connected with a computer to dramatically expand your music potential. For example, you can perform all instrumentation parts automatically using the data stored in the computer

The SH-101 Monophonic Synthesizer has brought sophisticated synthesizer features, mobility, and the excitement of color together in a cost effective durable package.

A built-in Digital Sequencer allows automatic playing of up to 100 steps. In addition to the sequencer, the SH-101 can play automated lines with its Arpeggio unit.

The Source Mix is capable of mixing VCO waveforms with Suboscillator and Noise Generator for sound creation beyond the scope of most monophonic synthesizers.

Key Transpose lets the user transpose to any key, so the range of performance is expanded. Octave Transpose can shift the instrument's range one octave up or down.

In addition to the conventional Portamento, an Automatic Portamento is provided which operates only during legato passages.

There are CV/Gate Input/Output jacks and an External Clock Input to facilitate a wide variety of interface possibilities.

Two way power supply enables the SH-101 to go anywhere and the optional MGS-1 Modulation Grip gives the performing musician mobility on stage.

SPECIFICATIONS

• Keyboard: 32 keys (F-scale) • VCO: Range (16'/8'/ 4'/2'), Pulse width modulation (50%~min), PWM mode switch (ENV/MANUAL/LFO), Modulation depth control, Tune (±50 cents) • Source mixer: Level controls (⊓⌐, ⟋, Sub-oscillator, Noise), Sub-oscillator waveforms (1 oct. down ⊓⌐/2 oct. down ⊓⌐/2 oct down ⊓⌐) • VCF: Cut-off frequency (10Hz~20kHz), Resonance (0~self-oscillation), ENV depth, MOD depth, Key follow (0~100%) • VCA: Control signal select switch (ENV ⌒ /GATE ⊓) • ENV· Attack (1.5ms~4s), Decay (2ms~10s), Sustain (0~ 100%), Release (2ms~10s), Gate trigger select switch (GATE + TRIG/GATE/LFO) • Modulator· LFO/ CLK rate (0.1Hz~30Hz), LFO/CLK rate indicator, Waveforms (⌒ /⊓⌐/random/noise) • Controllers: Volume, Portamento (Time: 0~3s, Mode switch: Auto/off/on), Octave transpose (L/M/H), Bender sensitivity (VCO, VCF), LFO MOD depth, Bender lever (LFO MOD switch) • Sequencer (100 steps max): Buttons & indicators (Load, Play) • Arpeggio: Buttons & indicators (Up, U & D, Down) • Others: Buttons & indicators (Hold, Key transpose), Switch (Power on/ off), Indicator (Power) • Jacks: Output (0dBm max), Headphones (Stereo 8Ω~150Ω), CV output (1V/oct , 0.415V~5V), Gate output (Off· 0V, On: 12V), CV input (1V/oct., 0~7V), Gate input (On at +2.5V over), Hold, External clock input (Step at more than +2.5V pulse), DC input (9V~12V), Modulation grip in • Power supply: DC 9V (UM-2 × 6 or PSA series adapter) • Dimensions: 570(W) × 80(H) × 311(D)mm (22.4″ × 3.15″ × 12.2″) • Weight: 4.1 kg (9.02 lb.) without batteries • Accessories: 2.5m connection cord, BR-2 × 6

• Options: PSA series AC adapter, BR-2 (UM-2) drycell batteries, PCS-4 (miniplug↔standard plug) cord, SC-101 soft case

PSA series AC adapter

MGS-1 *modulation grip set*

The MGS-1 allows the keyboardist have the same mobility on stage that guitarist and other instrumentalists have enjoyed. When the MGS-1 is used, the Bender and LFO functions can be controlled at a single touch.

The Bender is used in the same way a guitarist bends a string and only functions in the upward direction. The degree of pitch bend is controlled by the Bender Sensitivity switch. The Bender on the SH-101 can be used in conjunction with that of the MGS-1.

When the LFO button is pressed, LFO waveform modulation of the VCO and VCF occurs. This produces a choking and vibrato effect.

• Contents: MG-1 (Modulation Grip) × 1, Strap × 1, Strap pins × 2

The MC-202 MicroComposer is a Two Channel Digital Sequencer equipped with a mono-phonic synthesizer. The innovative technology used to develop the MC-4 is used in the refinement of the MC-202.

Capable of storing up to 2600 notes of music in two channels, the MC-202 can reproduce approximately 160 measures in one channel.

Newly developed keyboard style switches are used to write pitch data or for real time writing just as if it were an ordinary keyboard.

The Step Key writing mode and Real Time writing with a built-in metronome are firsts for a digital sequencer and give the MC-202 the ability to write much more sophisticated music. It is also possible to write with the numerical keyboard just like the MC-4.

A variety of performance commands can also be memorized by the MC-202 including, Portamento and Accent.

An LCD readout will display the remaining memory capacity as well as pitch, rhythm, and performance data.

The Power Save function cuts the power supply except for that necessary for memory protection. No saving and loading of data is required until the data is completed when the Power Save is used.

A Cassette Tape Interface is provided for nearly unlimited data storage on an ordinary tape recorder.

The built-in synthesizer has similar controls to the SH-101 and allows the user to hear with headphones the music as it is being composed.

When another 1 Volt/octave synthesizer like the SH-101 is connected to the MC-202, two channel performance is possible. The MC-202 may also be loaded from the keyboard of the external synthesizer.

Three DIN jacks are provided for synchronized performance with an additional MC-202, or a TR-606 Drumatix and TB-303 Bassline.

The Tape Sync function enables the MC-202 to play a synchronized performance with previously recorded music. The MC-202 is capable of producing a signal that is recorded on one track of the tape recorder. The MC-202 can then read its signal and syn-chronize its performance to it.

The MC-202 is expandable in a wide variety of ways. The CV and Gate outputs can be used for assigning one channel to control melody and control volume with the other channel when used in conjunction with synthesizers such as the Roland System 100M.

The MC-202 is small in size and light in weight. It easily slips into a briefcase or instrument case.

SPECIFICATIONS
•Memory capacity: Approx. 2,600 notes •Input mode: Manual input, Real Time input, Tap input

SYNTHESIZER MODULE
•LFO: Rate (0.2Hz∼10Hz), Delay (0∼1s) •VCO: LFO modulation, Range (16'∼2'), Pulse Width Modulation (LFO, ENV) •Mixer: ⎍, ⁄, SUB OSC (1 oct. ⎍, 2 oct. ⎍, 2 oct. ⎍) •VCF: Cut-off frequency, Resonance, ENV MOD, LFO MOD, Key follow (0∼100%) •VCA: ENV, Gate •ENV: Attack time (2ms∼1.5s), Delay time (2ms∼5s), Sustain level (0∼100%), Release time (2ms∼5s) •Controls: Portamento, Accent •Tuning: ±50 cent •Tempo: ♩=40∼300 •Rear panel: AC adapter jack (PSA series), Output, Phones, EXT SYNTH CV out, EXT SYNTH gate out, Built-in SYNTH CV out, Built-in SYNTH gate out, EXT KYBD CV in, EXT KYBD gate in, Load/tape SYNC in, Save/tape SYNC out, Calibration, SYNC out × 2, SYNC in •Dimensions: 343(W) × 55(H) × 204(D)mm (13.5″ × 2.17″ × 8.03″) •Weight: 1.35 kg (2.97 lb.) •Accessories: Connection cord (PJ-1) × 1, Demonstration tape × 1, Battery (BR-2) × 6

The MC-4 is a synthesizer controller designed to expand the range of any synthesizer and take the work out of complex composition.

A digital sequencer, the MC-4 will accept data entered either from its numerical keyboard or from the CV signals from a keyboard synthesizer in real time.

Real time input is possible using either CV plus gate or data may be entered separately by loading the pitch information first and using the Gate Rewrite function to later enter the rhythm. It is possible to listen to previously inputted data while entering new information.

Each channel has two independent CV outputs. These outputs are available for the control of nearly any control voltage function on a synthesizer. When the note values (Gates) remain the same, one channel may be used to voice two note chords.

A Multiplexing function is also included on each channel. This can be used to control portamento, vibrato, or similar synthesizer functions.

A wide variety of editing functions simplify composition on the MC-4 including; Copy, Insert, Delete, Forward Step, and Back Step.

Repeat commands can be used on each channel to specify repeat times and can also be used for easier data entry and for more economical use of memory.

CV and other data can be transposed on each channel. Data can also be copied with transposition. These functions are very helpful when inputting arpeggio and bass patterns.

Step and gate time data can be preset. Once frequently used step and gate time values are preset, data can be entered simply by modifying other values.

Tempo can be entered by using a corresponding numerical value. The Tempo is then variable by −50% to a +100%.

Total playing time can be displayed and tempo can be accurately set to any predetermined playing time by adjusting the Tempo Control while monitoring the time value.

Remaining memory capacity can be indicated on the display as a percentage.

Data can be stored on cassette tapes. A data number is assigned when information is stored on tape and the data number is then used during loading, search and read procedures. Whenever a data number is not used during loading, the cued data is used in its place.

Input and output synchronization jacks using an FSK code allow tape synchronization with a multi-track tape recorder. Synchronized input and output pulses can be used for parallel playing of the MC-4.

Sync In/Out DIN jacks are also provided and can be used to synchronize the performance of rhythm machines and other machines. They can also be used to synchronize two or more MC-4's.

The Tempo CV input controls tempo by means of an external voltage. Tempo can also be changed via CV data by connecting a CV input with any CV output. By doing this, total playing time can be determined by the controlling tempo.

The EXT START and EXT STOP/CONT PLAY jacks allow the user to control the start/stop performance of the MC-4 by means of an external foot pedal or an external voltage.

SPECIFICATIONS

• Memory capacity: 11,500 notes (48 K byte) •Output: 4 channels (CV-1: 0∼10.42V, 125 steps 83.3mV/step, CV-2: same as the CV-1, Gate: Off = 0V, On = 12V, MPX: Off = 0V, On = 12V) × 4 •Keys: Numeric (0∼9), Enter/start, Measure end/ stop/continue, Back step/total time/+, Forward step/ step error/−, shift, Insert, Delete, Copy (transpose), Repeat, Cursor (←, →) •EXT input: CV (0∼10.42V), Gate (threshold +2.5V), Calibration knob •Shift map: 0/available memory (%), 1/CV-1, 2/step time, 3/gate time, 4/CV-2, 5/MPX, 7/CV-1 + gate, 8/gate rewrite, 9/tune •Mode: Selector (edit/play/CMT) •Total tune: Control knob (±100 cents) •Tempo: Tempo knob (−50%∼+100%), Tempo CV input (0∼10.42V) •Cycle switch •SYNC: select switch (DIN/INT/tape, EXT) •DIN SYNC: DIN jack, Select switch (input/ output) •EXT SYNC: Input (threshold +2.5V), Output (0∼5V) •CMT/tape SYNC: Input, Output •EXT control: Start, Stop •Dimensions: 471(W) × 124(H) × 348(D)mm (18.6″ × 13.7″ × 4.9″) •Weight: 6.3 kg (13.9 lb.) •Accessory: MTR-100 connection cord

MTR-100 *digital cassette recorder*

When connected with the MC-4, the MTR-100 allows you to transfer data in both directions between the two units, with operation controlled by the MC-4 keys.

• Memory capacity: 250 K byte •Dimensions: 218(W) × 118(H) × 348(D)mm (8.6″ × 4.65″ × 13.7″) •Weight: 3.4 kg (7.48 lb.)

The System-100M is a flexible modular system for today's creative musician. The units are sold individually, thus making the system unique to each person's needs. The voltage controlled synthesizer is a musical instrument that contains elements which can be interconnected to build or create almost any sound imaginable. All major control and audio inputs for each module have their own input mixers which greatly simplifies patches where multiple inputs are needed. This also means that all patch cord signal levels are high for a much better signal-to-noise ratio. All module inputs and outputs are compatible so that any output may be connected with any other and with most equipment found in the recording studio. Keyboard control voltage, gate and trigger are internally connected so that patch cords are not needed for these. All modules are the same size: 104(W) × 230(H) × 199(D) mm (4.1″ × 9.1″ × 7.8″).

The keyboards (181, 180) include 6 connector cords for power, internal CV, GATE, and TRIGGER connections to the system.
The racks (190 and 191J) contain the power supply, power switch, and voltage regulators for the modules and keyboards.
The mounting screws and the PCS-2 connector cord sets are included.

SYSTEM RACKS

190 *3 module system rack*

Rear panel: 8-pin DIN connectors to supply power to modules; 6-pin DIN plug for expanding the system so that one keyboard may be used to control any number of additional rack systems. Available for 100V, 117V, 220V, 240V, @50/60Hz. Simulated wood ends.

• Dimensions 349(W) × 314(H) × 192(D) mm (13.7″ × 12.4″ × 7.56″) • Weight 5.6 kg (12 3 lb) without modules • 190B Base for 190 is also available.

191J *5 module system rack*
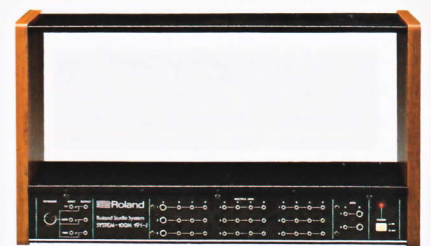
This handsome sturdy rack is capable of holding five modules and is equipped with 33 jacks for easy, fast patching. Except for its added width and weight, this rack is exactly the same as the Model 190.

• Dimensions 558(W) × 314(H) × 192(D) mm (22 0″ × 12 4″ × 7.56″) • Weight 6.9 kg (15 2 lb) without modules

184 4 CV compuphonic keyboard controller

Polyphonic keyboard with independent 4 CV and 4 GATE control.

By adding the 184 to the SYSTEM 100M or SYSTEM 700 system synthesizer, polyphonic music with an extremely rich timbre can be easily reproduced. The 184 is a 4-voice keyboard controller with 4 CV's, 4 GATEs, and 49 keys (C-scale). It also has an auto arpeggio function and selectable assign mode (monophonic/polyphonic). Parallel connection is easy with standard jacks and mini-jacks on the rear panel. A convenient bender lever is provided for easy control of polyphonic portamento.

• Keyboard: 49 keys (C-scale) • Dimensions: 938(W) × 108(H) × 263(D)mm (36.9″ × 4.3″ × 10.4″) • Weight: 8.5 kg (18.7 lb.)

181 49-key keyboard controller

Added features on this expanded version of the 180 are a portamento on/off switch and a bender lever. Also included are a mini-jack and a standard phone jack output so that the bender may be used for controlling other functions.

• Dimensions: 846(W) × 100(H) × 236(D)mm (33.3″ × 3.94″ × 9.29″) • Weight: 6.5 kg (14.3 lb.)
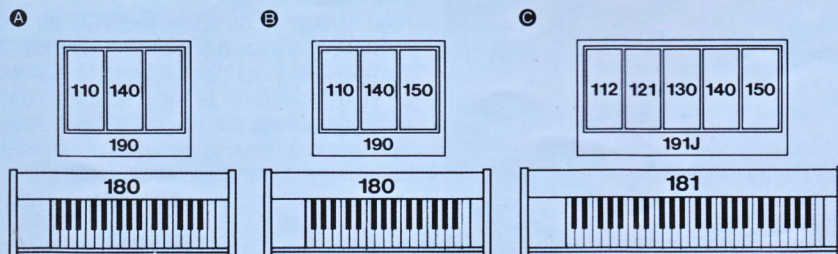
180 32-key keyboard controller

A 1V/oct. low key priority keyboard with three sets of outputs for easing the compatibility with other synthesizer systems: Mini-jacks, standard phone jacks and a 6-pin DIN plug. Outputs include control voltage, gate, and trigger. The control panel on the left contains a TUNING control, a three position TRANSPOSE switch, and a PORTAMENTO control. The ends are simulated wood to match System 100M racks.

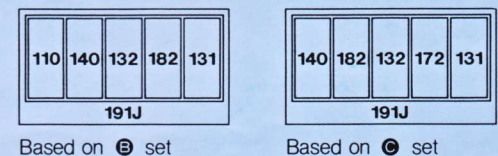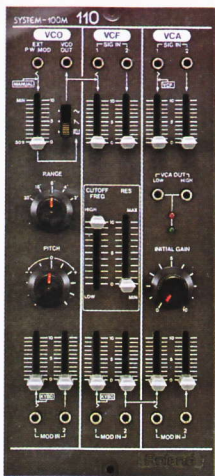• Dimensions: 589(W) × 100(H) × 236(D)mm (23.2″ × 3.94″ × 9.29″) • Weight: 4.7 kg (10.3 lb.)

Typical module combinations

Basic combinations

A

110	140
190	

180

B

110	140	150
190		

180

C

112	121	130	140	150
191J				

181

Expanded combinations

110	140	132	182	131
191J				

Based on **B** set

| 140	182	132	172	131
191J				

Based on **C** set

SYNTHESIZER MODULES

110 VCO-VCF-VCA

This module contains the three main synthesizer elements, and when combined with a Model 140 module, provides all that is needed for the production of one synthesizer voice. This arrangement is particularly convenient in a computer controlled system where the generation of each voice in a composition can be assigned primarily to one module. The connections for signal flow from the VCO, through the VCF to the VCA are made internally to save patching time. Another internal connection allows a single envelope generator input to control both the VCF and VCA. All internal connections are made with switching jacks so that they can be broken, if desired.

112 2VCO

This module consists of two independent Voltage Controlled Oscillators. A variety of external controls are possible with this unit including, Pulse Width Modulation and strong and weak sync mode for phase locking. Simultaneous Manual Pulse Width Modulation is also possible.
Each VCO has five different range settings from 32′ to 2′ as well as a Tuning control. Three different waveforms are available on each including, Triangle, Sawtooth, and Pulse.
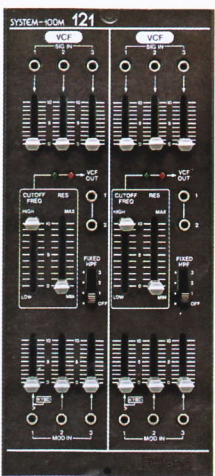
121 2VCF

Two independent VCF's are part of this package. Each VCF includes the added feature of a built-in fixed high pass filter with a switch for turning the high pass function off or selecting one of three cutoff points. Each VCF also includes three audio and three control inputs, and LED's for following signal flow. The green LED's light when a signal appears at the outputs, the red LED's light for overdrive (distort) condition.
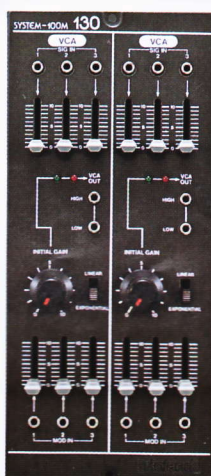
130 2VCA

Two independent Voltage Controlled Amplifiers are included in this single package. Each VCA provides three audio inputs with continually variable level controls. Three VCA Modulation inputs are also included, each having its own level control.
The outputs of each VCA have a low and high output jack with LED's to monitor output levels. An initial gain control that is continuously variable is included on each VCA and the user is allowed to choose between an exponential or linear response.

131 output mixer

This four-channel stereo mixer has panning on each channel. The mixer can be used in four track recording or to coordinate multiple synthesizer outputs. Also included are a stereo headphone output with completely independent level control and a convenient tuning oscillator with separate level control: 220Hz, 440Hz, 880Hz. Mixer program outputs include left and right stereo outputs and separate mono output. Program outputs include both mini-jacks and 1/4″ phone jacks for convenient connection to other parts of the synthesizer or to other studio equipment. Each program output also includes a red LED to show overload (distort) condition.
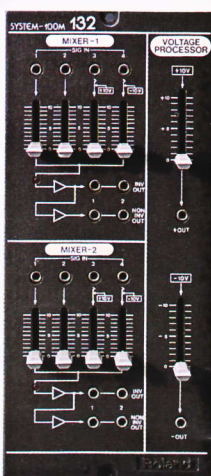
132 2CV/audio mixer-voltage processor

Each mixer is a four-channel mixer with simultaneous inverted and non-inverted outputs. They can be used for summing control voltages and/or for mixing audio signals. Both include built-in positive and negative voltage sources. A red LED indicates an overload condition. The module also includes a separate variable positive voltage source and a separate variable negative voltage source.

140 2ENV-LFO

The 140 module and the 110 module provide the minimum basic elements necessary to produce a single synthesizer voice. Two voices can be provided with the added use of modules 112, 121, and 130. ADSR's can be triggered from the keyboard's gate or gate + trigger, from an external gate, or manually with the front panel pushbutton. Both envelope generators provide inverted and normal outputs. Voltage controlled low frequency oscillator (LFO) has a built-in delay for delayed vibrato effects. KYBD TRIG switch allows phase locking of LFO output to keyboard trigger pulse.
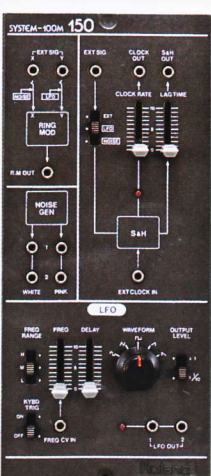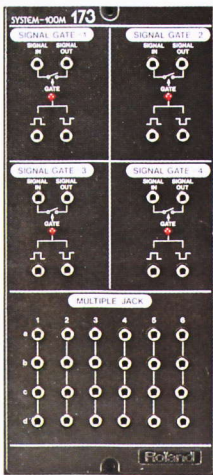
150 ring-noise-S/H LFO

The most common function of the ring modulator is to combine two VCO outputs to produce metallic, bell clanging sounds. The Sample and Hold can be used for sampling an input waveform or for producing control voltage patterns based on that waveform. The musical result is patterns of notes such as arpeggios, random notes, etc.
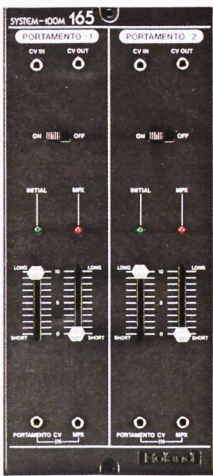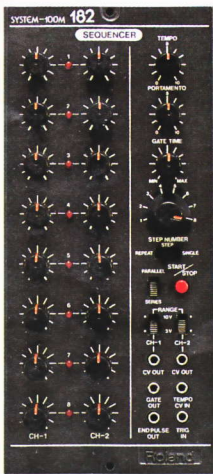
165 *2 portamento controller*

Two independent portamento controllers are included in one module. Because the portamento time can be controlled by an external control voltage, you can be more expressive in the musical melody. When connected with the MC-4, you can program portamento full of variety, and it is also possible to get an initial portamento even when the MPX signal of the MC-4 is off.

172 *phase shifter-audio delay-gate delay*

The phase shifter and audio delay can be used for producing spatial effects. Both include convenient effect on/off switches and can be controlled from an external control voltage source so that two units may be used together for stereo effects, or may be used as a part of the sound synthesis process itself. The built-in control LFO has both normal and inverted outputs. The gate delay can be used where it is desirable to provide a delayed output from a pulse source, or it can be used as a pulse shaper. The gate delay also has a built-in high gain amplifier with a THRESHOLD control so that low level pulses recorded on tape can be amplified and shaped into a form which will trigger synthesizer functions.

173 *4 signal gate-multiple jack*

Four signal gates and six multiple-jack channels are in this one module. Rapid and easy operation of source mix or complex patch work is possible in a home recording situation. The DC signal can be turned on and off so that the CV signal can be operated. Six channels with four jacks are in each channel, convenient for complex patch work and system expansion.

174 *parametric equalizer*

This module has a four-band parametric equalizer. Each center frequency can be set exactly within the range of 20Hz to 20kHz, using four control knobs with overlapping effective ranges. Each frequency level can be set individually within the range of 0.9 to 9. As an equalizer this module can be used to create various tone colors, and as an effector by exaggerating the setting of each parameter.
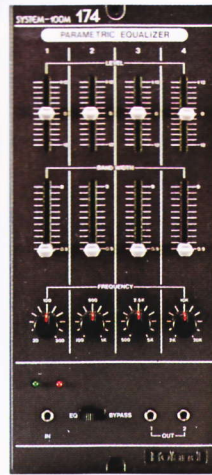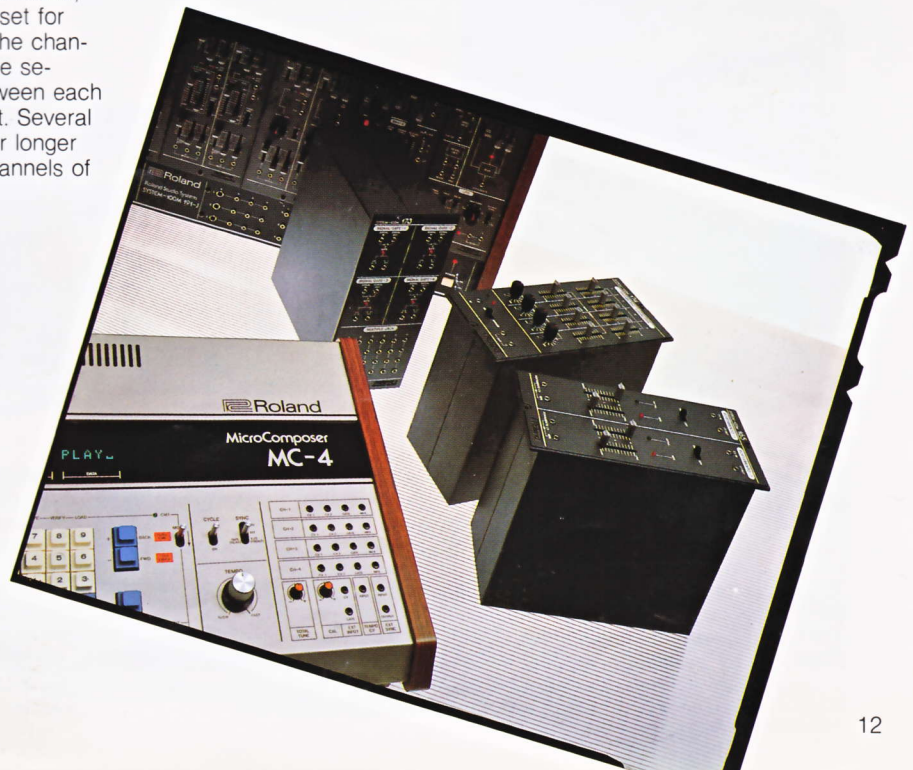
182 *analog sequencer*

This two channel, eight step analog sequencer is used for producing control voltage changes in sequence to produce such things as melodic patterns, patterned tone color changes, etc. In series mode, voltage sequences of up to 16 steps may be programmed. In parallel mode, two independent voltages can be preset for each of up to eight steps, or one of the channel outputs can be used to control the sequencer clock so that the timing between each step in the sequence can be different. Several sequencers may be used in series for longer sequences, or in parallel for more channels of simultaneous output.

- All modules have the same dimensions
- Dimensions 104(W) × 230(H) × 199(D)mm (4 1″ × 9.1″ × 7.8″)

12

OP-8M CV-MIDI interface

The OP-8M Interface converts CV/Gate signals into MIDI or DCB signals to allow connection of a CV device and a MIDI, or DCB device.

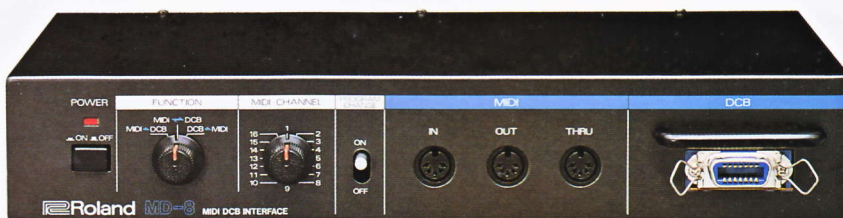- Dimensions: 218(W) × 124(H) × 348(D)mm (8.58″ × 4.88″ × 13.7″) • Weight: 3.2 kg (7.04 lb.)
- Accessories: MIDI cable (343-135), DCB cable (348-139)

MD-8 MIDI-DCB interface

The MD-8 is an interface for connecting a MIDI synthesizer (for example, the JX-3P or JUPITER-6) with a DCB synthesizer (the JUPITER-8). It is possible to change the patch memories of the JX-3P or the patch preset pairs of the JUPITER-6 or JUPITER-8 by MIDI or DCB information. The MIDI THRU jack also enables one more MIDI synthesizers to be connected.

- Function switch: DCB→MIDI, MIDI→DCB, MIDI↔DCB • MIDI channel selector: 1 to 16
- Program change switch: ON/OFF • MIDI connectors: 3 (IN, OUT, THRU) • DCB connector: 1 (IN—OUT) • Dimensions: 355(W) × 75(H) × 195(D)mm (14.0″ × 2.95″ × 7.68″) • Weight: 2.5 kg (5.5 lb.) • Accessories: Power cable, MIDI cable (5p DIN) 3m × 2, DCB cable 3m

MM-4 MIDI thru box

The MM-4 is a parallel connection box for MIDI devices. It enables one MIDI device to control up to four other MIDI devices. The MIDI data indicator allows you to check all MIDI data. It's easy to connect and allows you to accurately control several MIDI devices simultaneously.

- MIDI IN jack: 1 • MIDI OUT jacks: 4 • MIDI data indicator (green): 1 • Power indicator (red): 1 • Power: DC 9V (BOSS AC Adapter PSA series) • Dimensions: 138(W) × 37(H) × 72(D)mm (5.43″ × 1.46″ × 2.83″)
- Weight: 300 g (10.6 oz.)

keyboard amplifiers

CUBE-60 KEYBOARD (CK-60)

The CK-60 with 60 watts of power reproduces the extremely broad frequency range of most keyboards with absolute fidelity.

The CK-60 features a two way speaker system with a 12″ woofer and horn tweeter. Two input channels are provided with attenuation controls on each that allow the amp to receive signals from a wide variety of sources.

Reverb can be switched on and off in each amplifier channel and record out jacks on the back provide a reliable send to tape machine or PA console. The CK-60 provides jacks for Effect Send/Return, Headphone, and External Speaker.

- Output 60W (rms) • Speakers 30cm × 1, Horn tweeter × 1 • Dimensions 370(W) × 465(H) × 300(D)mm (14 6″ × 18 3″ × 11 8″) • Weight 16 5 kg (36 3 lb)
- Accessory Vinyl cover

CUBE-40 KEYBOARD (CK-40)

The CK-40 is a forty watt amplifier with many of the same features as the CK-60. Designed specifically for keyboard amplification the unit has two channels each with input attenuation. This allows the amp to accept signals from a wide variety of sources.

A ten inch dual-cone speaker reproduces a broad frequency range with tremendous clarity. A Reverb system is included along with 5 very useful jacks located on the back including: Effect Send/Return, Two Record Outs, and Headphone.

- Output 40W (rms) • Speaker 25cm double cone × 1 • Dimensions 310(W) × 368(H) × 205(D)mm (12 2″ × 14 5″ × 8 1″) • Weight 11 kg (24 2 lb)
- Accessory Vinyl cover

KEYBOARD STANDS & ACCESSORIES

keyboard stands

KS-2

An optional stand for the JUNO-106, or JX-3P

KS-5

The JUNO-106, JX-3P, JX-8P, MKB-300, and almost all other keyboards can be mounted on the KS-5 Its width can be freely adjusted between 710 and 982 millimeters and its height can be set at one of five positions between 660 and 820 millimeters

KS-20

An optional stand for the JUPITER-8 or 6 (KSA-20 metal adapter is required for mounting)

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pedal switch — DP-2

Used for synthesizers and pianos

foot switches — FS-1/2/3

FS-1 On/Off foot switch

FS-2 On/Off control of two functions

FS-3 On/Off control of three functions

stereo headphones — RH-10

Ideal for monitoring

memory cartridges — M-16C/64C

M-16C For use with the MKS-30, JX-8P, or GR-700

M-64C For use with the MKS-80, TR-707, or TR-909

batteries — BR-2/3

BR-2 (UM-2 × 2) UM-2 Dry cell batteries

BR-3 (UM-3 × 4) UM-3 Dry cell batteries

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carrying cases

CB series (leatherette case)

Model No.	Keyboard
CB-JX (holds a PG-200 programmer)	JX-3P

SC series (soft case)

Model No.	Keyboard
SC-101	SH-101
SC-202	MC-202

TB series (aluminum case)

Model No.	Keyboard
TB-6A	JUPITER-6
TB-8	JUPITER-8
TB-2U, 7U, 12U	for Roland Rack series units or other rack-mountable units

AB series (resin-molded case)

Model No.	Keyboard
AB-1	JUNO-106
AB-2	JX-8P

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connection cords

PCS CORDS

Mini plug ←→ Phone plug		
PCS-4A	1 6m × 2	Green × 1, Brown × 1

Phone plug ←→ Phone plug		
PCS-5A	40cm × 2	Gray × 1, Green × 1
PCS-6A	75cm × 2	Gray × 1, Green × 1
PCS-7A	1 5m × 2	Brown × 1, Green × 1

Mini plug ←→ Mini plug		
PCS-10A	20cm × 2	Black × 1, Red × 1
	40cm × 4	Black × 2, Red × 2
	60cm × 2	Gray × 2
PCS-14A	1 0m × 3	Gray × 1, Black × 1, Red × 1

8-pin DIN plug ←→ 8-pin DIN plug		
PCS-15A	30cm × 1	Black

6-pin DIN plug ←→ 6-pin DIN plug		
PCS-16A	1.0m × 1	Black

5-pin DIN plug ←→ 5-pin DIN plug		
PCS-17	1 5m × 1	Black

Angle phone plug ←→ Angle Phone plug		
PCS-18	10cm × 5	Black × 5
PCS-19	70cm × 1	Black

8-pin parallel cord (for AC adapter)		
PCS-20	1.0m × 1	Black

MIDI/SYNC CABLES

5-pin DIN plug ←→ 5-pin DIN plug			
MSC-15/15R/15Y	1 5m × 1	Black/Red/Yellow	These 5-pin DIN cables for connection between MIDI jacks or Sync jacks come with identification labels for input and output
MSC-25/25B/25G	2 5m × 1	Black/Brown/Green	
MSC-50/50B/50G	5 0m × 1	Black/Brown/Green	

PIN JACK CORD

Angle phone plug ←→ Pin plug + Phone plug			
PJ-1	2 5m × 1	Black	The PJ-1 is an angle phone-to-pin cord with a pin-to-phone adapter.

Roland
WE DESIGN THE FUTURE