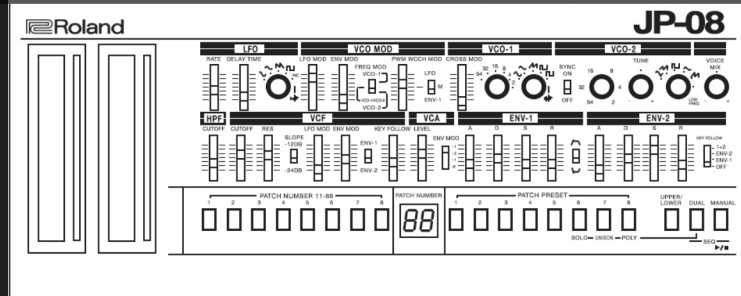# JP-08

A USER'S GUIDE TO THE ROLAND JP-08

Acknowledgements:

This manual was assembled, illustrated, and written by Sunshine Jones. All of the contents is taken from either his personal experience, existing documentation, and techniques submitted and found in the public domain. The document is intended as a companion guide for the Roland JP-08 Synthesizer Module. It is in no way offered as a criticism, or intended to be an authoritative guide to replace the official documentation which accompanies the commercial purchase of Roland Boutique, or Roland AIRA musical instruments.

Rather, this manual is intended to support the musician, the user of these and other synthesizer modules and inspire them to create music, share sounds, and fully realize the synthesizers in front of them.

In the tradition of owner's manuals, rarely are they opened until problems arise. We tell you over and over again to RTFM, but do you listen? No, no you don't. Manuals should be both tools for reference and instruction, as well as inspirational guides to possibility. An owner's manual should be equally a pre purchase discovery, meant to inspire the curious with capability and possibility, and a post purchase celebration of depth, technique, guidance, and surprises. But this is by no means the last word. So many people have read and re read a manual only to still have no idea what the manual was attempting to suggest. This owner's manual is offered free of charge to anyone curious, or frustrated by the tiny little leaflet which covers the operations of the JP-08 in several languages, as a legible alternative to the official documentation.

This manual is not associated in any way, personally or professionally with anyone connected to the Roland Corporation. The task was undertaken in a moment of fury, and assembled, proof read, and then hastily produced exclusively for love, and pleasure.

It is our hope that as the result you will begin to explore and discover layers of sound and joy which were previously overlooked. We hope and trust that you will use these PATCH and BANK worksheets to document your discoveries, and our extensive encouragement to share, and import patches of your own into a thriving community of exploration and delight.

If you wish to correspond with the author of this manual you may do so by navigating your web browser to the following destination:
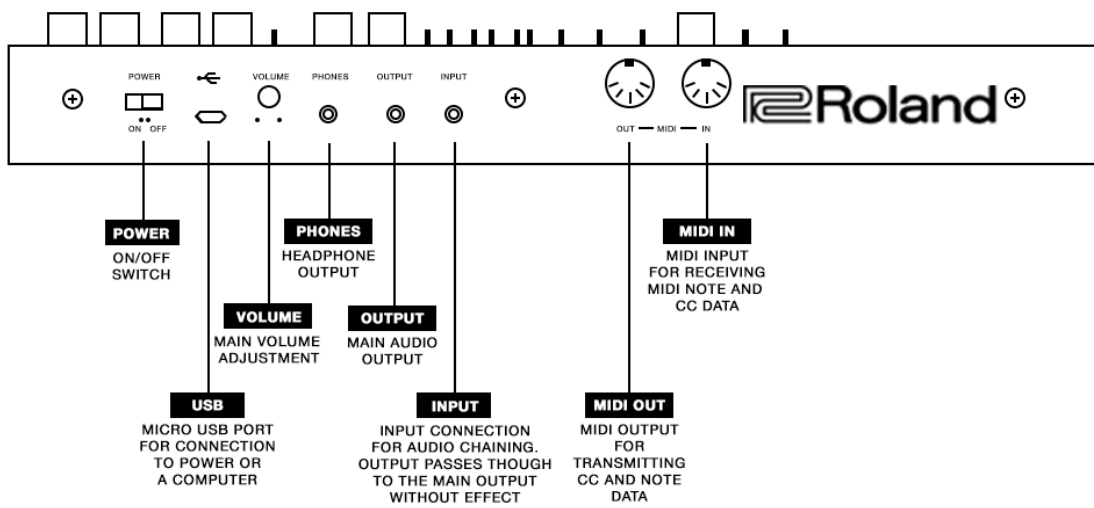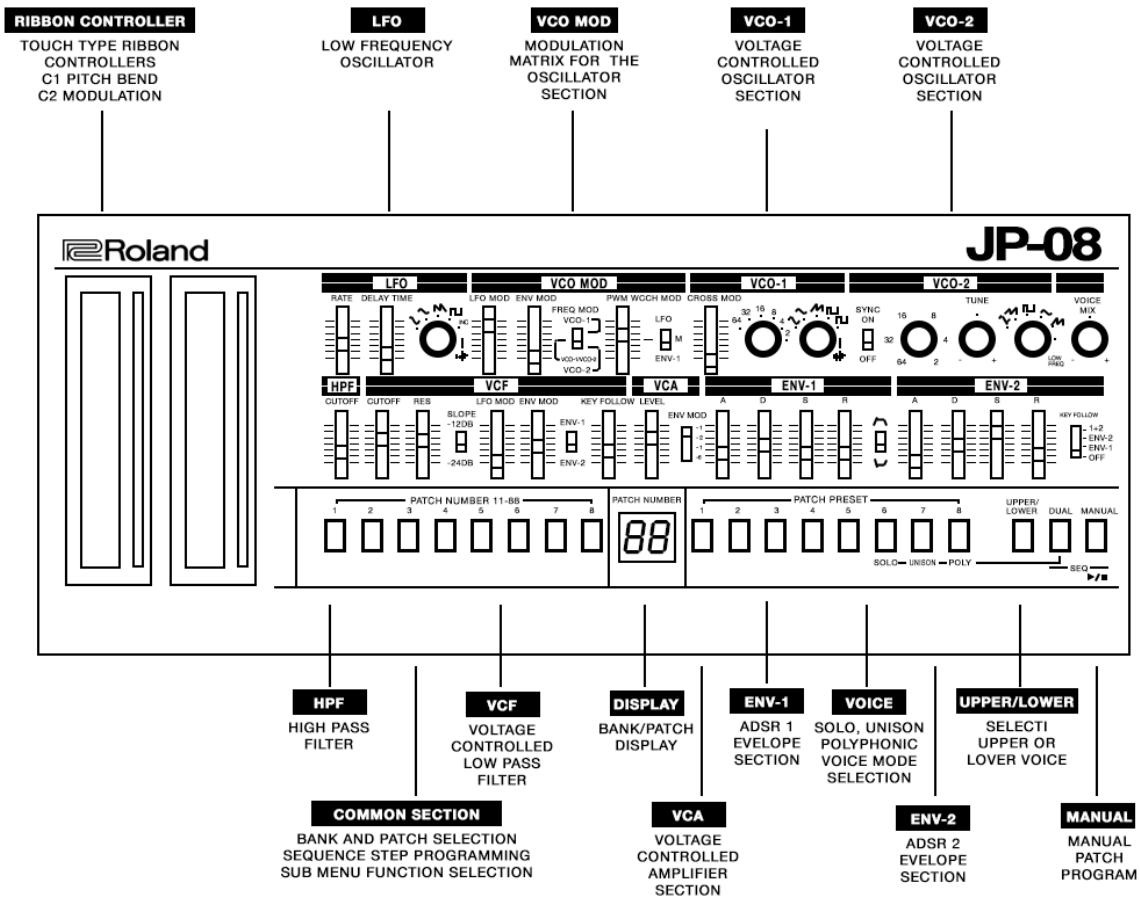http://sunshine-jones.com
The original article and a bank of patches may be found within the non-fiction section of the site.

While no rights are reserved for the copyrighted materials, nor the registered trademarks discussed or absorbed into this manual, the assemblage itself and subsequent sound examples, illustrations, and concept are offered exclusively under the Creative Commons license of share and share alike. This is and shall always be free of charge to the reader, and user of the Roland JP-08 synthesizer module, and must never be offered for sale or barter. This is freeware, and free information for all.

With **Love**

Sunshine Jones
July 2017
San Francisco, California

Version 0.01D

RIBBON CONTROLLER
TOUCH TYPE RIBBON
CONTROLLERS
C1 PITCH BEND
C2 MODULATION

LFO
LOW FREQUENCY
OSCILLATOR

VCO MOD
MODULATION
MATRIX FOR THE
OSCILLATOR
SECTION

VCO-1
VOLTAGE
CONTROLLED
OSCILLATOR
SECTION

VCO-2
VOLTAGE
CONTROLLED
OSCILLATOR
SECTION

Roland   **JP-08**

LFO | VCO MOD | VCO-1 | VCO-2

RATE DELAY TIME   LFO MOD ENV MOD   PWM WCCH MOD CROSS MOD   SYNC   TUNE   VOICE
                    FREQ MOD   ON   MIX
                    VCO-1   LFO   64 32 16 8 4 2   16 8 4 2
                    VCO-1+VCO-2 M   OFF   32   LOW
                    VCO-2   ENV-1   64   FREQ

HPF | VCF | VCA | ENV-1 | ENV-2

CUTOFF CUTOFF RES   LFO MOD ENV MOD KEY FOLLOW LEVEL   A D S R   A D S R   KEY FOLLOW
                SLOPE   ENV-1   ENV MOD   1+2
                -12DB   ENV-1   ENV-2
                                   ENV-2   ENV-1
                -24DB   OFF

PATCH NUMBER 11-88   PATCH NUMBER   PATCH PRESET   UPPER/ DUAL MANUAL
1 2 3 4 5 6 7 8   88   1 2 3 4 5 6 7 8   LOWER

                                                          SOLO UNISON POLY   SEQ
                                                                                         ▶/■

HPF
HIGH PASS
FILTER

VCF
VOLTAGE
CONTROLLED
LOW PASS
FILTER

DISPLAY
BANK/PATCH
DISPLAY

ENV-1
ADSR 1
EVELOPE
SECTION

VOICE
SOLO, UNISON
POLYPHONIC
VOICE MODE
SELECTION

UPPER/LOWER
SELECTI
UPPER OR
LOVER VOICE

COMMON SECTION
BANK AND PATCH SELECTION
SEQUENCE STEP PROGRAMMING
SUB MENU FUNCTION SELECTION

VCA
VOLTAGE
CONTROLLED
AMPLIFIER
SECTION

ENV-2
ADSR 2
EVELOPE
SECTION

MANUAL
MANUAL
PATCH
PROGRAM

POWER   VOLUME PHONES OUTPUT INPUT   **Roland**
ON OFF   OUT — MIDI — IN

POWER
ON/OFF
SWITCH

PHONES
HEADPHONE
OUTPUT

MIDI IN
MIDI INPUT
FOR RECEIVING
MIDI NOTE AND
CC DATA

VOLUME
MAIN VOLUME
ADJUSTMENT

OUTPUT
MAIN AUDIO
OUTPUT

USB
MICRO USB PORT
FOR CONNECTION
TO POWER OR
A COMPUTER

INPUT
INPUT CONNECTION
FOR AUDIO CHAINING.
OUTPUT PASSES THOUGH
TO THE MAIN OUTPUT
WITHOUT EFFECT

MIDI OUT
MIDI OUTPUT
FOR
TRANSMITTING
CC AND NOTE
DATA

Contents

Introduction

The legendary JUPITER-8 synth is back as a limited-edition module no bigger than a book. Part of the Roland Boutique series, the JP-08 is all about hands-on control and that iconic JUPITER sound. With an array of 36 knobs and sliders from the original JUPITER-8 front panel, the 4-voice JP-08 is highly programmable and encourages sonic experimentation, especially with the built-in speaker and battery operation. Using Roland's acclaimed Analog Circuit Behavior (ACB) technology the JP-08 faithfully reproduces the original JUPITER-8 sounds and adds a few new twists in the form of extra LFOs and expanded VCO range. You can even slide the JP-08 into the optional K-25m keyboard unit for a self-contained, go-anywhere synth experience.

Huge Synth. Small Package.
The JUPITER-8 was a big synth in every way; physically imposing with loads of knobs and sliders, and most importantly, a huge sound. The JP-08 retains the big sound of the JUPITER-8 but shrinks everything else – including the price – into a module measuring under 12" across.

New Sound-Shaping Options
Even though the JP-08 is an authentic recreation of the JUPITER-8, we also included a few extras. The JP-08 adds several new waveforms to the original architecture, including TRI and NOISE for the LFO and SIN for VCO-1, and both VCOs have an expanded range for even more sound shaping potential.

Hands-On Control
With such an expressive sound engine, you'll want to shape the sounds to match your mood. With 36 of the original parameters accessible from the front panel, the JP-08 is all about hands-on control, and even users of the JUPITER-8 will quickly feel at home as the user interface and programming 'feel' is highly reminiscent of the original.

Develop Your Ideas with A 16-Step Sequencer
The onboard 16-step sequencer is a sonic scratchpad that lets you try out new ideas without bringing lots of gear – it can even be used without a keyboard. And if there's no keyboard connected, the ribbon controller lets you preview the sound, making it an ideal way to program patches quickly and easily.

Optional K-25m Keyboard Unit
The JP-08 works especially well with the K-25m, an optional 25-key velocity sensitive keyboard that takes your music making to the next level. Once docked in the keyboard, the module's front panel adjusts to three positions for convenient access to the knobs and sliders.

Chain Mode
One of the killer features of the original JUPITER-8 was its ability to create huge pads, splits and layers using its 8 voices of polyphony. The JP-08 features a chain mode that allows you to connect two JP-08 modules using the MIDI ports and create one, 8-voice synthesizer, just like the original. Adding additional modules adds another 4 voices of polyphony with each module. This is especially great when controlling the JP-08 from a larger external keyboard. You can even edit the sound from the master module and control both units. Great for realtime filter sweeps and LFO effects.

Battery or USB Bus Power
Some of the best music is made away from the studio, so the Roland Boutique series runs on 4 x AA batteries, ready for when inspiration strikes. Alternatively, you can power the JP-08 via USB bus power.

USB Audio Interface for Direct Recording into Your DAW
The built-in USB port also functions as a high-quality 24bit, 44.1 kHz audio interface, for a fast, simple and reliable way of recording directly to your DAW application. You can keep your favorite patches and sequencer patterns safe too, via the USB data backup function.

Basic Connections
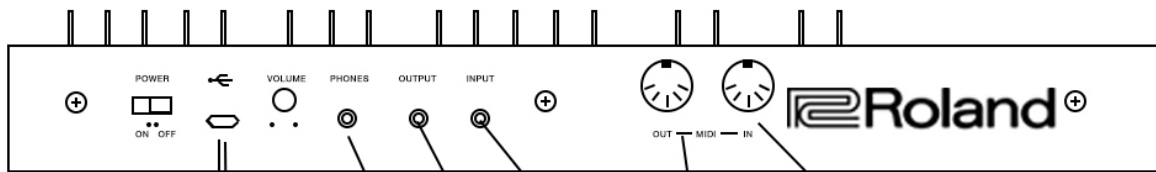
MICRO USB CONNECTION
THE MICRO USB CONNECTION PORT
CAN BE USED WITH A COMMON USB
ADAPTER TO PROVIDE AC POWER
TO THE JU-06 AS AN ALTERNATIVE
TO BATTERY POWER.

FURTHER
CONNECT THE MICRO USB CABLE
TO A USB ENABLED PERSONAL
COMPUTER TO ALSO PROVIDE BUS
POWER

COMPUTER CONNECTION ALSO ALLOWS
FOR PATCH BACKUP/RESTORE,
PATCH SHARING WITH OTHERS,
AS WELL AS SIMPLIFIED DAW
AUDIO/MIDI CONNECTION

STEREO HEADPHONE
THE HEADPHONE OUT
ALLOWS FOR THE
CONNECTION OF
A PERSONAL
MONITORING HEADSET
TO BE CONNECTED

NOTE:
THE SPEAKER OUTPUT
WILL BE INTERRUPTED
WHEN HEADPHONES ARE
CONNECTED

MAIN OUTPUT
THE MAIN OUTPUT IS
A 3.5MM JACK WHICH
CAN UTILIZE EITHER
A MONO CABLE, OR A
COMMON STEREO
MINI JACK CABLE

THIS CABLE WILL CONNECT
THE JP-08 TO YOUR MAIN
LOUDSPEAKERS OR
TO YOUR MIXING CONSOLE
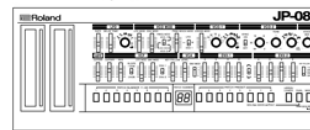
AUDIO INPUT
CONNECT THE OUTPUT
OF ANOTHER ROLAND
BOUTIQUE SYNTH AND
CHAIN THEM TOGETHER
IN COMPACT OR ON THE
GO MIXING SCENARIOS.

MIDI OUT
MIDI OUTPUT ALLOWS FOR TRANSMITING
SEQUENCER AND CC DATA INTO
A SEQUENCER OR DAW FOR RECORDING
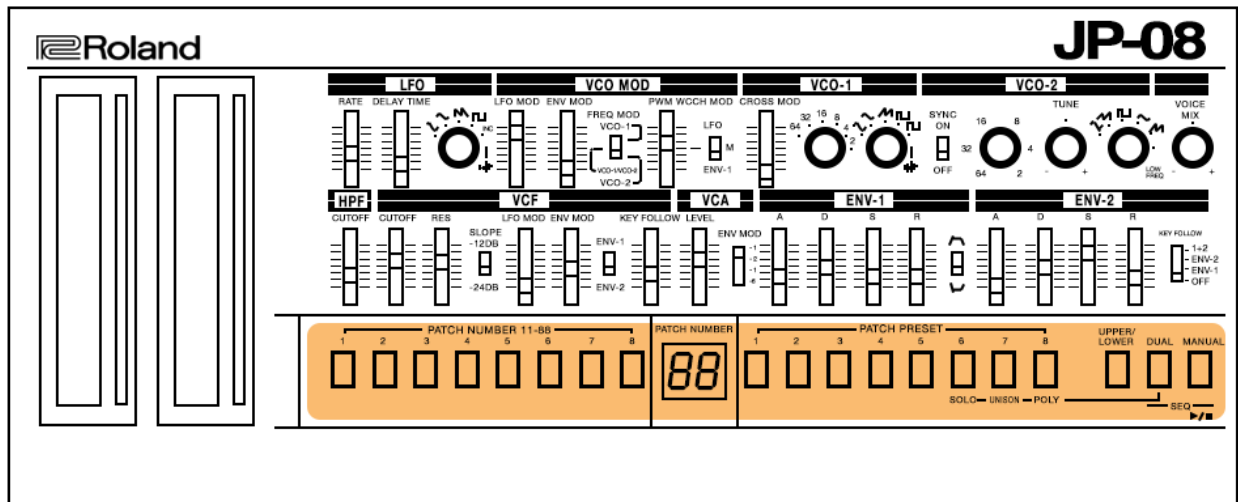OR EXTERNAL CONTROL OF ALTERNATE
MIDI DEVICES.

NOTE
CONNECT TWO JU-06 MODULES
TOGETHER TO CREATE A SINGLE SYNTH
WITH 8 NOTES OF POLIPHANY
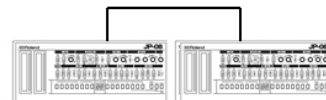
MIDI IN
CONTROL THE JP-08 REMOTELY VIA
YOUR MIDI CONTROLLER, SEQUENCER
OR OTHER MIDI DEVICE BY CONNECTING
A 5 PIN MIDI DIN CABLE TO THE
MIDI INPUT PORT.

I. General Functions

Common Section

The Common Section of the JP-08 is where bank and patch information is stored and recalled for performance.

PATCH SELECTION

The first set of buttons 1-8 are the BANK and PATCH selection buttons
The second set of buttons 1-8 are the PATCH PRESET selection buttons

To select a patch first choose the bank, and then select the patch. Think of the bank as the 10's and the patches as the 1's. For example to recall patch 43, one must depress PATCH select button 4 and then PATCH select button 3.

To store a patch is equally as straightforward.
To store a patch first double-check that you are not about to overwrite a patch you really love.
But be careful not to lose the patch your working on in order to check.
This causes a conundrum doesn't it?

To write a patch to BANK 4 PATCH 3 (43) press PATCH select 4, and then long press PATCH select 3 and hold it until you see the button flash. Once it flashes you know your patch has been stored.

ASSIGN MODE

PATCH PRESET is a section special to the JP-08 where 8 layered patches may be stored. To create your own, press the DUAL button, and select an UPPER patch, followed by a LOWER patch. When you are happy with the combination you can save your patch by selecting the PATCH PRESET 1-8 you wish to use and press with a long press. When the button flashes, your dual patch is stored.

The common section is also the location of many interesting settings for effects, the sequencer, swing, portamento, midi channel, tuning, velocity, clock source, and more features. In various modes these same buttons perform all sorts of other functions.

See system settings (page 28) for more details about everything the common section buttons can do.

USB Interface

In the past many synthesizers came equipped with various interfaces. Connection methods like CV and Gate, Din Sync, S Trigger, DCB, Tape I/O allowed synthesizers to connect to clocks, tape machines, sequencers and drum tracks. Thanks to the universal serial bus with which most personal computers are equipped today we have a number of interesting ways to handle these once complicated and tedious operations.

The USB connection port can be used to:

• Power the Synthesizer
• Both power and pass midi as well as audio data to and from a computer based DAW
• Mount the Synthesizer to the desktop of a computer and backup and/or restore and share your patches.

To connect the USB port to power:
Use an optional micro USB cable which is either the type with a wall plug on the end (like a wall wart adapter) or the type with another USB to power block on the end (like a phone charger.)
Both will work, but make sure that whichever you've chosen can provide sufficient power to run the JP-08.

If the JP-08 goes to sleep while you believe you're plugged into the wall, then your power supply is either faulty, or it isn't powerful enough to run the synth (and you're running off the batteries.)

Typically you will want to look at the tiny print on those phone chargers and ensure that it's at least 5 Volts and 1 Amp and preferably a switchable 100-240 transformer, because then (with the right plug connectors) it will work anywhere in the world.

Data Backup & Restore

One of the coolest things about the boutique line of modules is their ability to mount onto the desktop of any USB enabled computer and you can drag and drop your patches in order to save them. This is much handier than the old fashioned midi librarian software, or the ancient and rarely reliable tape backup interface (although that actually is a thrill and you might want to try it sometime.)
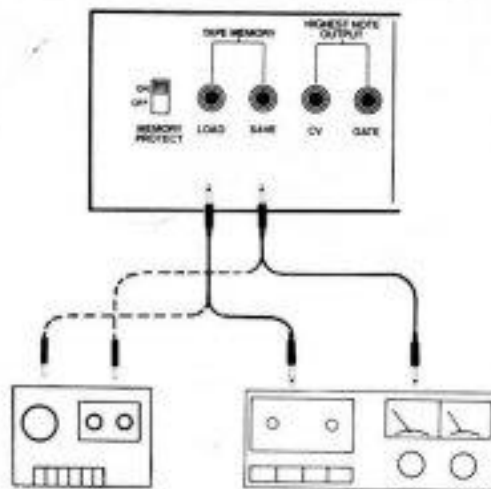
To mount the JP-08 to your desktop follow this procedure:

1. Holding down PATCH 2 button, power up the JP-08
2. Connect your computer to the JP-08 USB port via USB cable
3. Open the JP-08 drive which has mounted to your desktop

To create a backup of your patches:

1. Follow the above procedure for mounting the JP-08
2. Copy the backup files from the JP-08 drive into an appropriately named folder on your computer
3. Once you're done, eject the JP-08 drive, disconnect the USB cable and you're done.

To bring patches from your computer into the JP-08:

1. Follow the above procedure for mounting the JP-08
2. Copy the backup files, or the new patches you'd like to check out into the "RESTORE" folder on the JP-08 drive
3. When copying is completed, eject the JP-08 drive.
4. **IMPORTANT** - Before power cycling the module press the MANUAL button
5. Once the lights stop blinking you may power cycle the JP-08 and disconnect the USB cable and you're done.

What's so big about that? Any system exclusive file utility can do the same thing, why is this important?
Well, the simplicity and visual aspect of this process is so novel that really anyone with basic computer skills can do it. This makes the process of file/patch sharing very easy. It's surprising that there aren't many amazing JP-08 or other Roland Boutique patches out there for the sharing and contributing to isn't it? It's possible that this process is just so easy, and painless to do that people still believe they need to connect a cassette deck, and record the sysex audio to tapes and then ship them to friends in order to share their files. Or many people are afraid to give away their precious patches? I'm not sure, but I think it's pretty cool, and I plan to come up with a bank of patches or two and offer them up for anyone interested in them. I'd also be very keen to see how others have undertaken the JP-08 in their own situations. Can you tell I think that patch exchanges are awesome? I do. And while I rarely use patches from other sound designers, I love to explore what synthesizers are capable of, and sometimes the best way to do that is by seeing how Edgar Froese, or someone I've never heard of does it.

Restore the JP-08 to factory settings:

This is the procedure for resetting your JP-08 back to it's factory state. Remember that if you do this, all your settings and all your sounds will be overwritten with the out of the box, factory fresh programming.

1. While holding down the PATCH 1 button, turn on the power.
2. The MANUAL button will blink. If it doesn't try that again. If you change your mind and decide not to go through with the reset, just power off the JP-08 and then turn it back on.
3. To execute the rest press the MANUAL button
4. When all the buttons blink, restart the JP-08 and it'll be just the way it was the day you got it.

Auto Off

You can set the JP-08 to automatically shut off - to save batter power - after 30 minutes. You can also switch this off so that the synthesizer doesn't turn off.
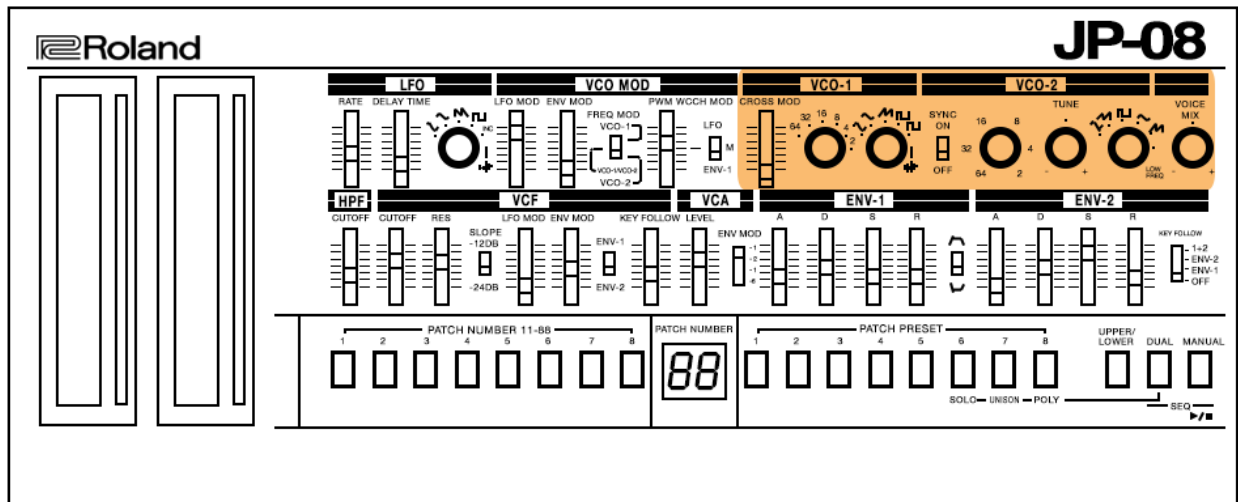
To adjust the auto off functions:
While holding down the MANAUL button, press the number 9 button.
1 - OFF - the power will not turn off
2. - 30 - the power will automatically switch off after 30 minutes.

NOTE - While in USB operation mode with a computer, auto off will not occur regardless of the settings.

II. Functions for Sound Creation

VCO-1 / VCO-2

The Voltage Controlled Oscillators (VCO) are the primary sound sources of your synthesizer. The JP-08 contains two independent VCO's per voice to add extra thickness and flexibility to your sound. These oscillators, VCO-1 and VCO-2, are located to the upper right of the JP-08 synthesizer section.
Press the MANUAL button located at the bottom right of the common section and experiment as we proceed.
Begin with the settings from the illustration above, using VCO-1.

1. CROSS MOD SLIDER
The cross modulation slider allows the pitch of VCO-1 to be changed with the output of VCO-2. With the slider at its lowest position, there is no pitch change. As the slider is raised, the pitch begins to change until it reaches the maximum effect at a setting. If VCO-2 is in its normal, audio range, cross modulation of VCO-1 will produce side bands for ring modulation style effects such as metallic sounds. If VCO-2 is set to function in its low frequency range, cross modulation of VCO-1 will produce a variety of LFO modulation effects.

2. RANGE・VCO-1 / VCO-2 Pitch Control
Specifies the octave of the oscillator from 64, 32, 16, 8. 4. and 2.

3. WAVE・VCO-1 / VCO-2 Tone Selector
Selects the waveform that is the basis of the sound: Sine wave, Triangle wave, Sawtooth wave, Asymmetrical pulse wave, Square wave, White noise, Low frequency wave.

4. SYNC
The sync switch within VCO-2 forces the pitch of that oscillator to synchronize itself to that of VCO-1. This may be used to provide simple beat-free tuning between the two oscillators. The most common use of syncing, however, modulates the intended pitch of VCO-2 sharp of VCO-1, resulting in a wide variety of tone colors and effects which are very rich in harmonics. VCO-2 may be modulated by the LFO modulator, Envelope-1 or the RC-1 Ribbon Control to produce these results.
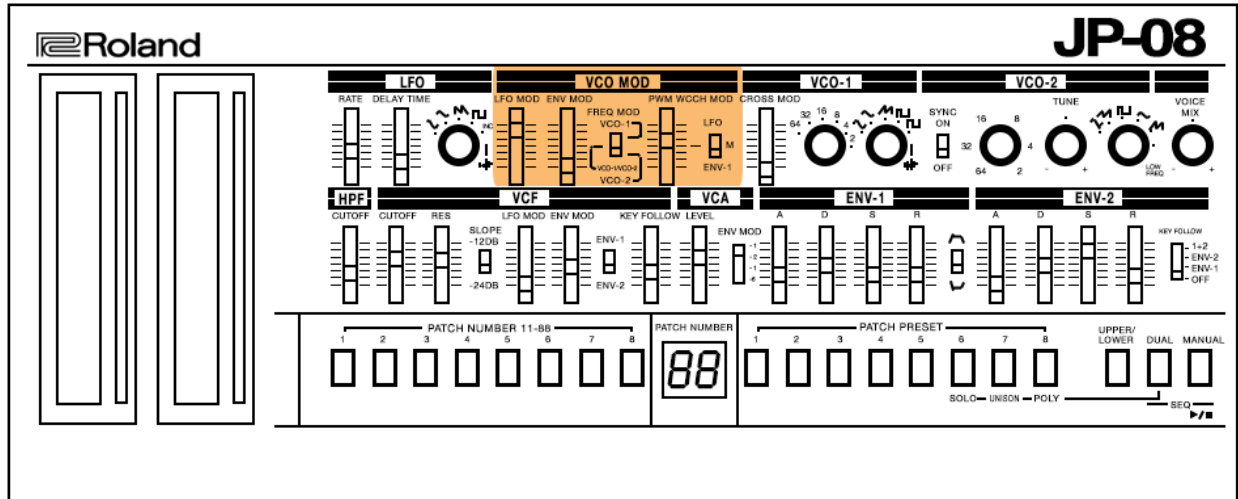
5. TUNE
Adjusts the pitch of the VCO-2.

6. VOICE MIX
Adjusts the volume balance of the VCO-1 and VCO-2.
Turning the knob to the left increases the VCO-1 volume; turning it to the right increases the VCO-2 volume.

VCO MOD

The Frequency Modulation section of the VCO Modulator applies the outputs of the LFO and Envelope-1 to control either or both VCO's. The LFO Slider introduces regular, recurring fluctuations in pitch relating to the shape, speed, and any delay set in the LFO section. With the slider set at 0 there is no modulation, which begins and increases to maximum as the slider is raised to 10.

The Envelope Modulation slider introduces a single, shaped pitch change relating to the output of Envelope-1. Again, the slider control is variable from no modulation at 0 to maximum modulation at 10.

The combined output of these two sliders may be applied to VCO-1, VCO-2, or Both. This is determined by a three position switch located directly to the right of the frequency modulation sliders.

The pulse width modulation section of the VCO Modulator controls the variable pulse waveforms of both VCO-1 and VCO-2. With its three position selector in the manual position, and the accompanying slider set at 0, it begins with a square wave. Raising that slider gradually to 10 takes the waveform through a continuously narrowing pulse wave, sounding progressively more nasal. Moving the three position selector to either its LFO or Envelope-1 position obtains a tone which is actually in motion within the spectrum of change available by moving the slider while in manual mode. Here is a voltage controlled waveform, beginning with a square wave and moving automatically through a narrower, more nasal pulse wave, and back again.

The LFO position gives a continuously sweeping smooth tone change pivoting from the basic square wave. With the pulse width mod slider at 0 there is no pulse width modulation, no tone change. As the slider is raised, the tone varies correspondingly further away as it swings away from the square wave to the extreme limit set by the slider and back again in a repeating pattern. The speed and shape of modulation are set within the LFO section itself. One common application applies an LFO sine wave at the suitable speed and depth to produce an effect similar to having a phase effect unit within the synthesizer.

The envelope-1 position gives a single, shaped change in tone moving away from and returning to the square wave position once each time the pressing of a key activates the envelope. The shape and length of this change is determined by the envelope settings and how the envelope itself is manipulated by the keyboard. The slider within the pulse width modulation section determines only how far the envelope voltage will change the tone color from its basic square wave position. The pulse width modulation controls apply in an identical fashion to either VCO-1 or VCO-2 or both, whenever their waveform selectors are in the variable pulse wave position.

LFO
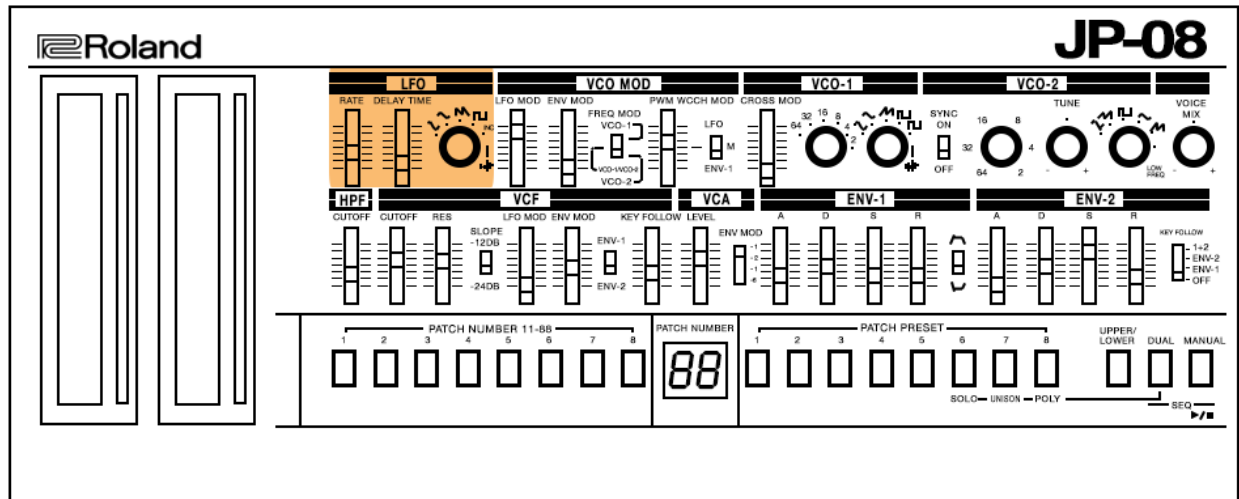
The Low Frequency Oscillator (LFO) section is used for producing regular changes in pitch and tone color such as vibrato, tremolo, trills and various effects. The LFO also includes a Sample & Hold circuit. The output of the LFO may be applied to modulate the pitch of the VCO's, the tone of the variable pulse waveforms, and tone and/or pitch within the VCF.

The rotary waveform selector determines which waveform will be used for VCO and/or VCF modulation. The five options include a Sine wave, Inverted Sawtooth wave, Sawtooth wave, Square wave, and a Random output from the Sample & Hold circuit.

The rate slider controls the frequency (speed of change) for the LFO output. Raising the control increases the frequency, which may be monitored with the associated flashing LED indicator.

When the Delay Time slider is raised, pressing a key on the keyboard will delay the introduction of the LFO output to the VCO and VCF. Raising the slider increases the delay time, lowering it fully results in a continuous output with no delay. The delay Time control effects all the waveform outputs of the LFO section.

HPF
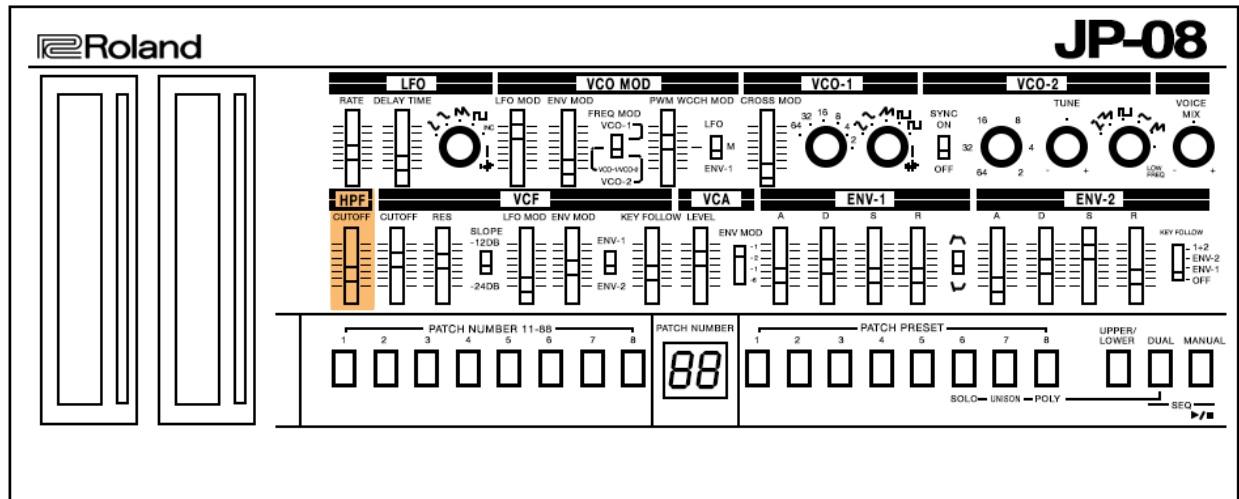
The output of the Source Mixer is routed directly through the High Pass Filter section, which may be used to alter the tone color by removing portions of the lower harmonics of that sound. The Source Mixer output is unchanged with the HPF Cutoff Frequency set at 'Low', becoming progressively less full in body of the tone color as the HPF slider is raised. This control is especially effective in making fine adjustments to patches and in pursuing imitations of acoustic instruments. The cutoff slope of the HPF is -6dB / Octave.

VCF
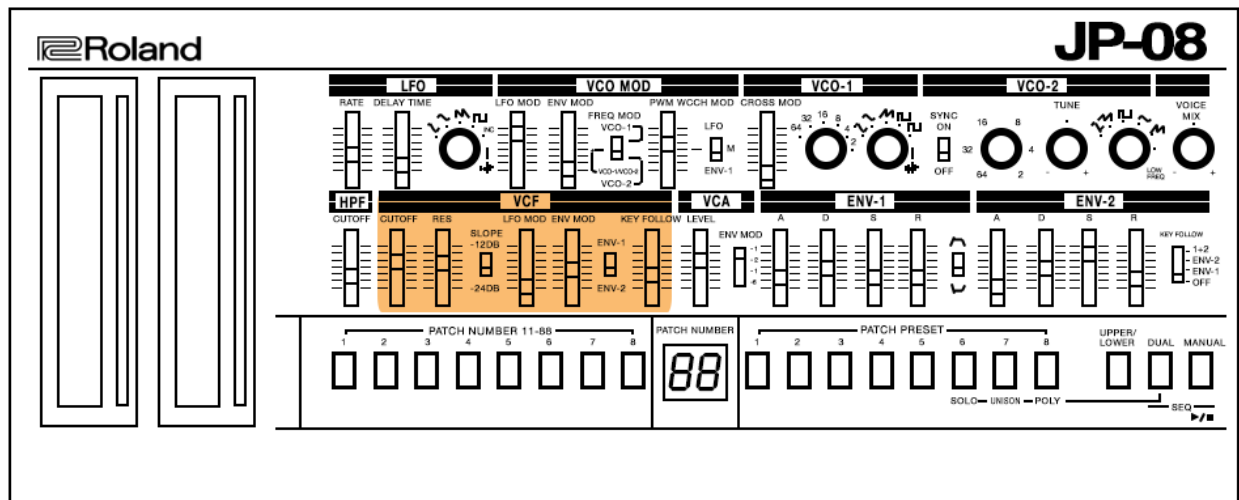
The VCF section is also used to alter the tone color of the Source Mixer output by cutting and boosting harmonics in that sound. The tone color may be altered manually or automatically through voltage control as notes are played. The VCF is a selectable slope low pass filter which passes low frequencies and blocks high frequencies.

The Cutoff Frequency determines how much of any tone color will be filtered away by the VCF, and is effected by a manual Cutoff Frequency control slider and various automatic controls. With the manual control slider in its highest position the sound will pass unchanged through the VCF. As the cutoff frequency is lowered by lowering the slider the

sound will become progressively more mellow in tone color until it is filtered away to silence at the lowest position for all other control functions within the VCF section.

The VCF Resonance control emphasizes the frequencies at the point where the Cutoff Frequency begins to filter a sound. It has a subtle effect on tone colors that are not modulated within the VCF, but is most often used to emphasize motion within the filter. Set at 0 the Resonance will have no effect.

The two position VCF Slope selector offers a choice between a rich -24dB / Octave cutoff slope and a more acoustic -12dB / Octave cutoff slope to provide increased control over the tone colors of the JP-08. The -12dB position permits more high frequencies to pass at any given cutoff point, creating a brighter tone which is helpful in creating authentic acoustic-style and string ensemble sounds. The -24dB position produces a strong, distinctive tone with more bass frequencies and fewer highs at the same cutoff points and is normally used for solid, classic synthesizer sounds.

Modulation of the VCF, changing the tone color during musical notes, is critical to many synthesizer sounds. Some synthesized sounds are based on a 'passive' filter, a fixed cutoff frequency setting with no modulation or change in tone. Others depend on the tone changing 'activity' during the length of each note, either a repeating change controlled by the output of the LFO section, or a single sweep initiated by the output of and Envelope section. The most basic demonstration would be to compare basic string and brass patches. The prime difference between these two sounds is the 'passive' filter of the string patch as contrasted to the 'active' filter of the brass patch.

The VCF Envelope Modulation control determines the depth to which either the output of Envelope-1 or Envelope-2 will modulate the VCF Cutoff point. With the slider control at 0 there is no modulation, which enters and increases gradually as the control is raised to full depth at 10. The associated two position Envelope Selector determines whether Envelope-1 or Envelope-2 will be used to modulate the VCF. It is helpful to think of these controls in terms of the Cutoff Frequency settings - the Cutoff cannot be modulated positively if already fully raised, nor negatively if fully lowered.

The LFO Modulation slider control within the VCF section allows the Cutoff Frequency/tone color to be modulated with the output of the LFO section. It determines the depth of modulation whose shape, rate and delay were selected in the LFO section. Modulation increased as the slider is raised, with no modulation when set at 0. The most common application of LFO modulation of the VCF would be to apply a delayed LFO sine wave to produce tremolo effects. Again remember to 'leave room' - if the cutoff frequency slider is in either extreme position, any tremolo would lose its smoothness as only half of its cycle (which alternates between positive and negative modulation) could have any influence on what is heard.

The Key Follow VCF control applies the Keyboard Control Voltage normally used to control the pitch of the VCO's to control the VCF Cutoff point. This allows the tone color to subtly follow pitch, the way acoustic instruments do. With the Key Follow slider at 0, the Cutoff point will not move in relation to the pitches played, allowing higher pitched notes to actually sound more mellow than notes pitched lower with the same patch. Key Follow will begin to effect the Cutoff point as the slider is raised, passing through a point where all pitches will have the same tone color, and finally arriving at 10 where the tone color actually brightens as higher pitches are played.

Also Key Follow's center point is center C of the Keyboard. Otherwise, when Key Follow slide is raised, upper end from center C will be brightened and the lower end will become more mellow.

Remember that the VCF cutoff point may also be effected by the LFO modulation controls.

VCA
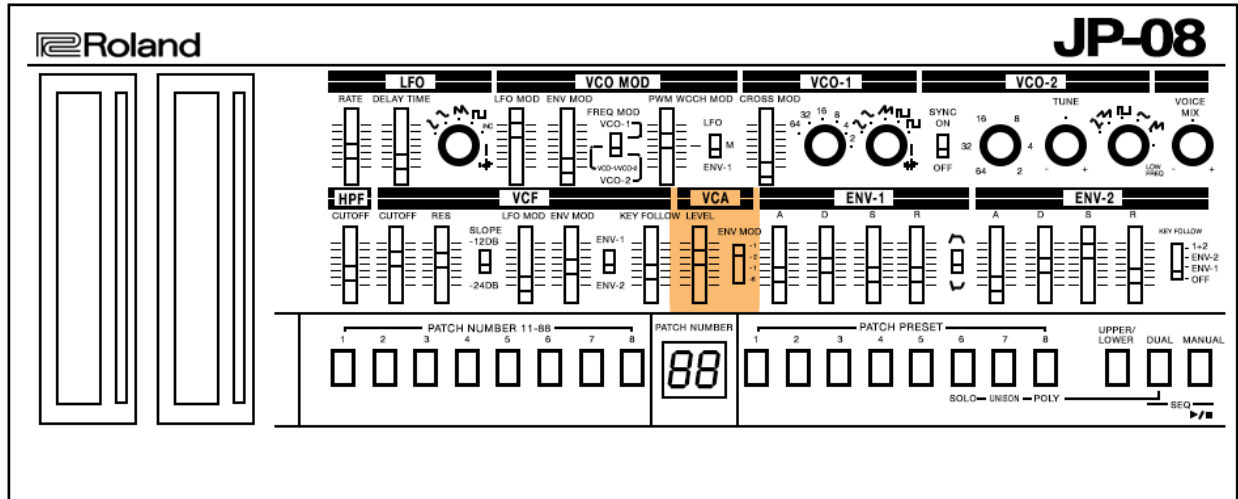
The output of the VCF Section passes through the VCA on its way to the main output on the JP-08's back panel. The VCA does not actually amplify the sound, but controls the shape of its volume. Level and LFO Modulation controls are both provided.

The VCA Level control allows the loudness contour of sounds passing through the VCA to be controlled by the output of Envelope-2. The slider determines the depth of modulation whose shape has been determined by the Envelope-2 controls and activated from the keyboard. Loudness increases as the slider control is raised, with silence when the control is lowered to 0. This control allows each patch to be programmed at a suitable volume level so that distortion can be avoided and so that programs may be selected and played without the need to hastily adjust the volume levels during performance.

The VCA LFO Modulation control is a four position switch which applies the output of the LFO section to modulate the output level to produce tremolo and other effects. There is no effect with the selector set at 0, with three progressively deeper levels of modulation appearing at switch positions 1, 2 and 3 respectively.

ENV-1 / ENV-2
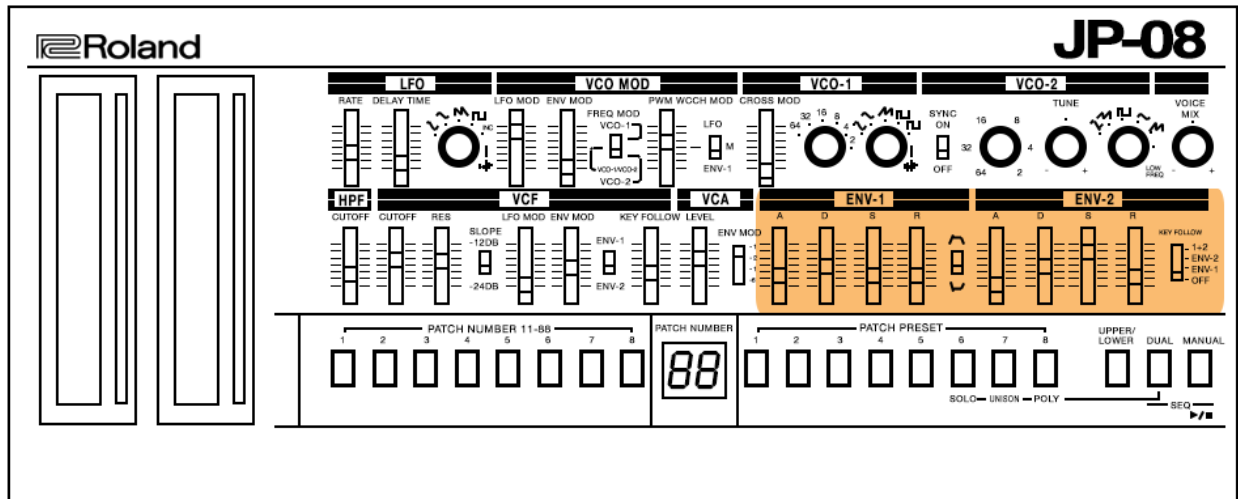
Envelope Generators
The two Envelope Generators each produce a shaped control voltage that may be used to manipulate various Voltage Controlled functions within the JP-08. They are activated simultaneously by On/Off Gate switching signals from the keyboard, or an external Arpeggio or Sequencer control source, depending upon the mode of operation. Each envelope is a complete four segment ADSR, a term made from the initial letters of the words Attack, Decay, Sustain and Release — the four slider functions within the Envelope Generators.

The Attack slider controls the amount of time required for the Envelope voltage to reach it's maximum level after a Gate signal is received. This Attack time is virtually instantaneous with the slider set at 0, lengthening as the slider is raised.

The Decay slider controls the amount of time required for the voltage to fall from it's level at the end of the Attack time to the level set by the Sustain control.

Again, Decay time is virtually instantaneous with the slider set at 0. Lengthening as the slider is raised. The Sustain control determines the level to which the voltage will fall at the end of the Decay time. Once this level is reached it will be held until the Gate Signal is removed. A Sustain level of 0 will Decay to and hold at silence, effectively canceling Sustain. A Sustain level of 10 will not Decay, but will remain at 10, effectively canceling Decay. Sustain levels between these extremes combine with the various Decay times available to subtly shape the internal contour of notes as they are held.

The Release slider determines the amount of time required for the voltage to fall to it's minimum level after the release of the Gate signal. The Release will begin at any time within the Attack, Decay or Sustain portions of the Envelope as instructed by the release of the Gate signal.

Envelope-1
Envelope-1 includes two extra controls in addition to it's ADSR sliders. Switching the exclusive Key Follow On allows the Attack, Decay and Release lengths to shorten in direct relation to the height of pitches played in a similar manner to most acoustic instruments. The two position Polarity switch allows the output of Envelope-1 to travel in it's normal positive direction, or to be inverted to follow it's own mirror image providing a sophisticated control option. Envelope-1 may be assigned to control the Pulse Width of either or both VCO's, the pitch of either or both VCO's or the VCF Cutoff point.

Envelope-2
Envelope-2 includes a Key Follow option in addition to it's ADSR slider controls, Envelope-2 may be assigned to control the VCF Cutoff point and the loudness contour of the VGA

SOLO/UNISON/POLY
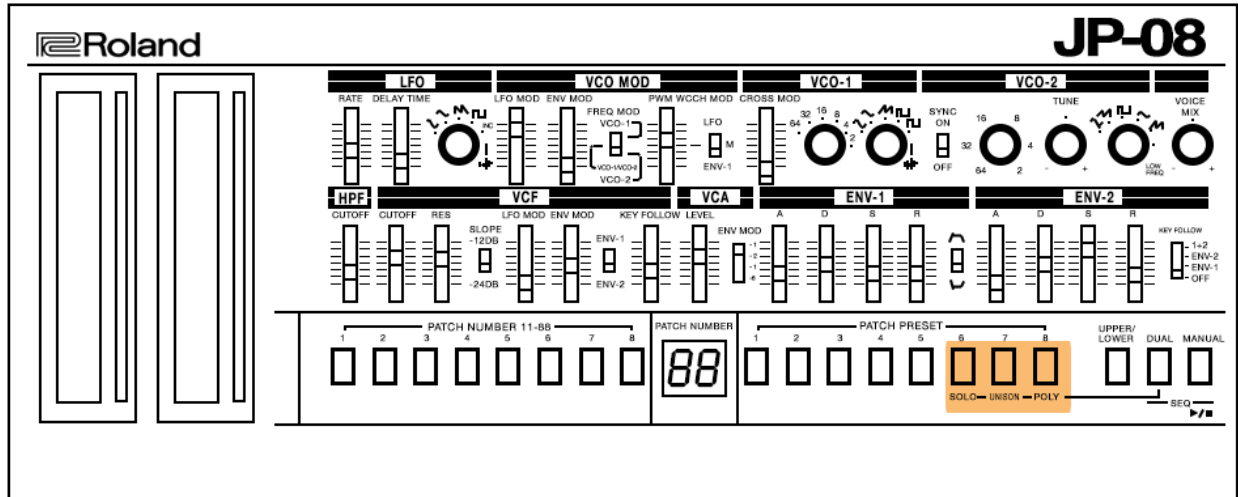
The JP-08 has three methods of voicing:

SOLO   -   Monophonic mode, where only once voice will sound at a time.
UNISON   -   All voice available will play back at the same time.
POLY   -   Four voices will be played polyphonically

To set the voice mode:
1. Press and hold DUAL + 14,15 or 16

[14] SOLO
[15] UNISON
[16] POLY

Modulation Matrix

LFO - VCO Modulation (select) - Frequency modulation
ENV-1 - VCO Modulation (select) - Frequency Modulation
VCO Modulator - Either LFO, ENV-1, or Manual
VCO-2 - VCO1 "cross mod" Modulates VCO1 pitch (select)
VCO-1 Frequency - control VCO-2 Frequency - sync (switch)
ENV-1 or ENV-2 - VCF cutoff (select)
LFO - VCF Cutoff (select)
Key pressed - VCF Cutoff (select)
ENV-2 - VCA Level
LFO - VCA level (select off,1,2,3)
Key pressed - ENV-1 speed (switch)
Key pressed - ENV-2 speed (switch)

This is in some ways a cheat sheet for the various sections described in this manual. Often a vintage synth will contain a set of graphics on its face panel, or within its manual to demonstrate the concepts of various modulation routing. A suggestion this manual offers is to try each one of these with a simple sound and explore how each modulation source changes the sound. Learning about modulation is a significant pathway toward analog synthesis understanding.

III. Functions for Performance
Ribbon Controller
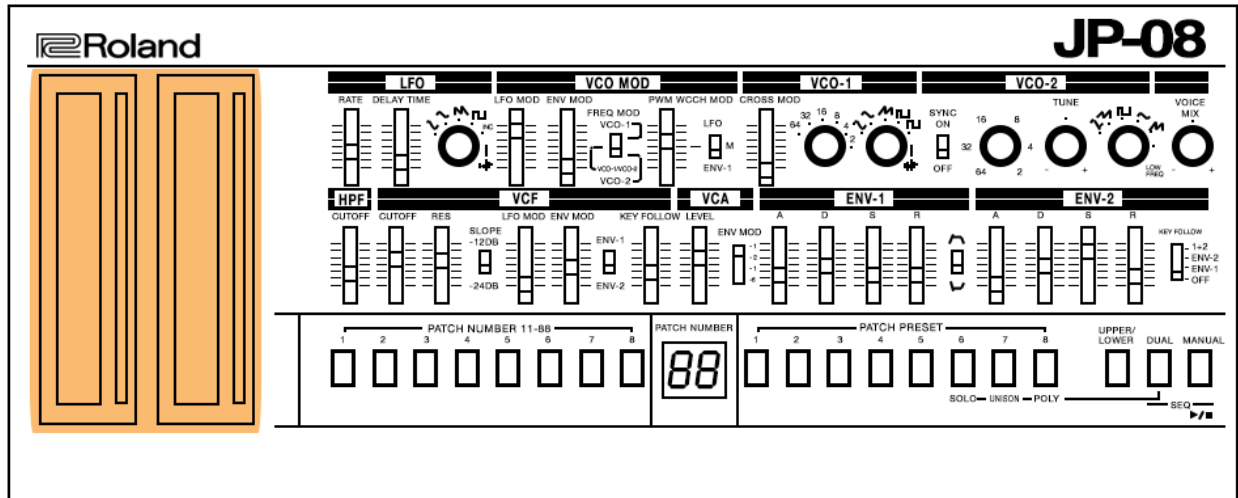
These are touch-type "light strip" ribbon controllers.
C1 (left) is pitch bend, and C2 (right) is modulation like a traditional keyboard's pico bender and modulation wheel.
These controllers transmit midi data through the midi out and can be used to capture performances when recording a midi sequence.

 When using without midi, usb or a K-25M keyboard, C1 can be used to preview notes, and also to enter sequencer note information.

To adjust the notational scale of the ribbon controller input:
Press and hold the MANUAL button and press Patch 2 (10)
Select from 1-16 on the common keys to choose which scale you would like to use for note input

1. Chromatic (default)
2. Major
3. Natural Minor
4. Harmonic Minor
5. Ascending Melodic Minor
6 Bluenote
7 Bluenote (with grace note)
8 Dorian
9 Mixolydian
10 Diminished
11 Wholetone
12 Altered
13 Hungarian Minor
14 Insenpo
15 Ryukyu
16 Persian

NOTE - In the Roland documentation often keys 1-16 are described. This refers to Bank 1-8 and Patch 1-8 combined.
So for example Seeking out key 12 would mean simply pressing Patch 4 (8 + 4 = 12)

Bender Range

The C1 ribbon controller operates as a pitch bend, and the range can be set and stored with each patch. There is not a global pitch bend range setting, so each patch can have its own range set and recalled with each patch.

To adjust the bender range:
Hold MANUAL and press Bank 5 (13)
Select from 1-16

1 - 12 (0 - 1 Octave / 1 note per incremental step)
13 - 2 Octaves
16 - OFF
The default setting is 2

NOTE - In the Roland documentation often keys 1-16 are described. This refers to Bank 1-8 and Patch 1-8 combined. So for example Seeking out key 12 would mean simply pressing Patch 4 (8 + 4 = 12)

Portamento/Glide

The ribbon controller can also be used to set the portamento (or glide) amount between played notes.

Portamento is a common feature of synthesizers, sliding from the last note played to the next. You can then change portamento timing using the right hand ribbon controller. The bottom of the ribbon controller gives you a faster slide between notes. As you go further up the ribbon controller, the synth will transition at a slower pace.

To adjust the portamento:
Hold DUAL and touch the C1 ribbon controller. The options are ON or OFF
Hold DUAL and touch the C2 ribbon controller to adjust the portamento amount.

Velocity Sensitivity

The JP-08 input via the common keys as well as the ribbon controller are not velocity sensitive, however, if you are using the K-25M keyboard or a MIDI controller which is velocity sensitive you can take advantage of it.

Adjust velocity sensitivity as follows:
Holding the MANUAL key, press BANK 5 (5)
Select from 1-3

1. Velocity sensitivity on
2. All key presses set to a velocity value of 64 (half velocity)
3. All key presses set to a velocity value of 127 (full velocity)

Adjust Velocity curve as follows:
Holding the MANUAL key, press BANK 6 (6)
Select from 1-3

1. Light
2. Medium
3. Heavy

Octave Switch

The keys available for programming sequences, and the one octave ribbon control input method is only 12 notes at a time. Further, with a K-25M keyboard attached the keys are still limited to two octaves. Sometimes in performance, or composition is it desirable to shift the octave of the keyboard up or down to access other notes which may not be readily available with the current keyboard. The available range is -4 to +5.

To shift the octave of the keyboard and ribbon control input strip in one octave steps:

1. Hold MANUAL and press Bank 1 (1)
2. Bank 4 - PATCH 5 (13)

The default setting of +/- 0 is the 8 key

Chain Mode

Although the JP-08 is four-note polyphonic, you can increase the polyphony by using a MIDI cable to connect two of more JP-08 modules together and turning chain mode on.

When using two JP-08 units together it is recommended to match their respective patch settings by using the backup and restore procedure. This way all the patches in both modules will be the same.

This allows for 8 note polyphonic performance from two JP-08 modules. When in this mode, and the same module is being used, all control of both modules will be handled by the first module in the chain. Thus, calling up patch 47 will automatically call up the same patch on the second module, and the results will be an 8 note polyphonic version of patch 47.

While increased polyphony works between the JP-08 and other Roland Boutique modules (ex: JX-03 or JU-06) the results will be slightly different. Control of the two synths will remain relative. Only the additional notes called for will be accessed by the second unit. While this is different from having all the same patch with 8 possible notes to play, it can also produce very interesting layers and at times unpredictable results. It's also possible to connect other synthesizers to the MIDI OUT port and achieve interesting results using all sorts of sound sources for the notes beyond the first 4 played.
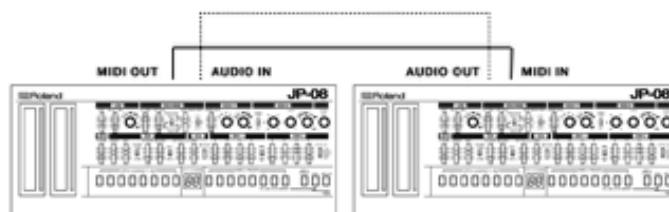
To set the JP-08 into chain mode:
1. Connect the MIDI OUT of the master module to the MIDI IN port of the secondary unit
2. Hold the MANUAL key and press Preset 1 (9)
3. Select 1-2

1. ON
2. OFF

NOTE: If chain mode is on, the 5th note will be passed through to the MIDI OUT

Layering and Split

In addition to chain mode for extended polyphony, it is also possible to connect two Boutique modules together in precisely the same way and leave chain mode off. This allows for independent operation, patch selection, but simultaneous play of each synthesizer at the same time.

If your midi controller allows for setting up note ranges you can set the modules to different midi channels and allocate key spans across your controller and separate the sounds.

While this is not exclusively a JP-08 or even a Roland Boutique technique, it is an often overlooked result of using MIDI enabled synthesizers creatively to produce pads and drones, or leads and performance combinations which go far beyond what a mono timbral synthesizer can do.

Step Sequencer
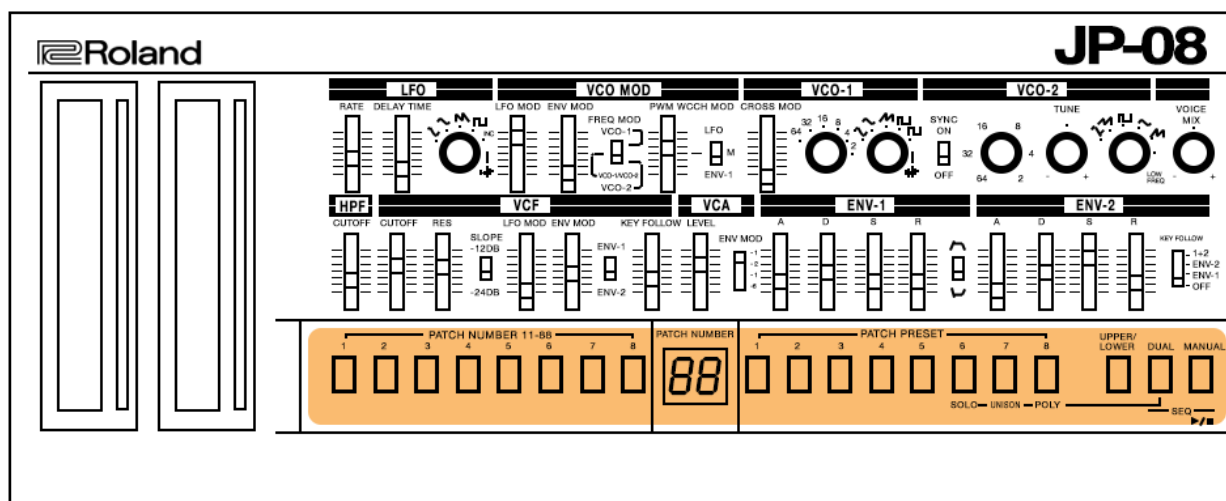
The Step Sequencer allows you to input notes in patterns of up to 16 steps and play them back as selectable loops. You can change the length of each pattern, and address the way steps are taken. 16 patterns can be stored and recalled.

To access the sequencer:
Press Chorus 2 and MANUAL keys simultaneously.
The Play / Stop button will blink

To exit the sequencer:
Press DUAL and MANUAL keys simultaneously again.
The steps in each sequence use both the PATCH NUMBER 1-8 and the PATCH PRESET 1-8 keys. These are expressed as steps 1-16.

Inputting Steps:
1. Hold down a step button (1-16) where you'd like to add or change a note.
2. While holding down the step button, either play a note on your controller keyboard, or touch the C1 ribbon controller and move your finger up and down until you have located the note you'd like to play.
3. Release the step button
4. Repeat this until you have added the notes to the steps you would like to add.
5. Press the PLAY / STOP button to listen to your pattern

6. If you have made a mistake, or don't like what you did simply hold the step and make your corrections
7. To delete a note simply turn the step off by pressing it.
8. If you love your pattern and want to keep it, don't forget to write the pattern to memory [Hold CHORUS 2, select the destination 1-16 and hold the destination button down until it flashes.]

Sequencer Mode Functions:

PLAY / STOP   -   [MANUAL + PLAY/STOP]

This starts and stops the sequencer

TEMPO   -   [DUAL + C1 RIBBON CONTROLLER]

If you aren't receiving sync externally, this button combination will allow you to set the internal tempo of the sequencer.

ON/OFF STEP   -   [1-16]

To turn notes on and off, simply press the corresponding buttons.

ENTER NOTE   -   [1-16 + C1 NOTE INPUT OR KEYBOARD]

To enter note information for each step.

TIE NOTES   -   [STEP BUTTON + NEXT STEP BUTTON ex: 1 + 3 for a 3 step tie]

In order to enter note data which plays for longer than one step, tie notes together for more expressive patterns. To un-tie notes, simply press the buttons again and the tie is gone. Associated steps illuminated from the tie must also be pressed again in order to clear them from the pattern.

GATE TIME   -   [1-16 + C2 RIBBON CONTROLLER]

This button combination allows you to set the individual gate time of each individual step.

ALL GATE TIMES   -   [DUAL + C2 RIBBON CONTROLLER]

This button combination allows you to set the gate time for the entire pattern and each of its steps.

PATTERN SELECT   -   [DUAL + 1-16]

This is the process of selecting which pattern you wish to play.

PATTERN WRITE   -   [DUAL + 1-16 LONG PRESS]

This is the button combination for saving your pattern to one of 16 destinations for recall and later playback.

PATTERN LENGTH   -   [MANUAL + 1 - SELECT 1-16]

This button combination allows you to set the length of a pattern. This can be done while the sequencer is playing for real time "last step" type of performance, or for simply setting various lengths for polymetric patterns.

SHUFFLE/SWING   -   [MANUAL + 2 - SELECT 4-12 - Default is 8]

This combination allows the user to establish a swing or shuffle feel to the pattern's playback. The default setting [8] approximates the traditional 50% swing feel (or none.)

SCALE   -   [MANUAL + 3 - SELECT 1-4 - Default is 2]
SCALE GUIDE   -   [1] - 16th Note [2] - 8th Note [3] - 16th Note Triplet [4] - 8th Note Triplet (Default is [2])

Scale is the rhythmic meter with which the sequencer plays. 32nd note is quite fast, and will cut the number of beats in half. 16th note is equal to one step per beat in a bar. Triplets are for more complex playback signatures. The default scale is [2].

STEP ORDER TYPE -   [MANUAL + 15 - SELECT 1-7]
STEP ORDER GUIDE   [1] Normal [2] Even/Odd Reverse [3] Odd Only [4] Even Only [5] Odd Only/Even Only
                                      [6] Even Only/Odd Only [7] Random

Step order is the way in which the sequence itself will play back.
[1] Normal is a typical forward loop, starting over again when the sequence comes to an end.
[2] Plays in reverse.
[3] Only plays the odd steps (1,3,5,9,11, 13 and 15.)
[4] Plays only the even steps (2,4,6,8,10,12, 14 and 16.)
[5] First plays only the odd steps, followed by only playing the even steps.
[6] First plays only the even steps, followed by only playing the odd steps.
[7] Plays the steps in a random order

OFF STEP MODE   -   [MANUAL + 16 - SELECT [1] REST - [2] SKIP

Off step mode tells the sequencer how to handle steps which you have turned off.
[REST] Treats the step as if it is actually there, but the step is intended to be silence.
[SKIP] Operates as if the step which is muted does not exist at all and the next active step will play at the next clock pulse.

NOTE - While operating the sequencer it is possible to exit sequencer mode and adjust your patch. The patch number can be changed, and the various knobs and sliders may be adjusted. To return to the sequencer simply press DUAL and MANUAL at the same time.

Remember that saving your sequence will not assign a particular patch to your sequence. The sequencer is operated, and the sequences are saved completely independently of the synthesizer section.

Further, When programming sequences there is not way to ask the sequencer to not play when a midi clock is received at the JP-08's MIDI IN port. Thus if you program a sequence and save it into pattern [1] then this pattern will begin to play every time you send a midi clock to the module (from a DAW, or a hardware sequencer.)

This may not be exactly what you'd like to have happen. So It is recommended that you reserve Pattern [1] in your sequencer to a blank pattern. This way upon power up and initial reception of MIDI clock from any source, the sequencer will not helplessly begin playing back some sequence which may not be needed. This is particularly helpful for live performances where everyone is watching, and each mistake or unwanted sounds may interfere with other musicians, or your over all serenity and confidence. It is well worth sacrificing that first sequence location in order to know for sure your Boutique synth isn't going to suddenly begin playing a pattern when you would like it to be quiet.

IV. Effects

Delay

The delay effect for the JP-08 is adjustable, and the settings are saved with each patch. There are no global delay settings for the module. Each patch must be set to your preferences and these settings are then saved with your patches respectively.

To adjust the delay settings in a patch:

DELAY VOLUME
1. Press and hold MANUAL + PATCH 6 (14)
2. Select from 1-16 (OFF = 1)

DELAY TIME
1. Press and hold MANUAL + PATCH 7 (15)
2. Select from 1-16

DELAY FEEDBACK
1. Press and hold MANUAL + PATCH 8 (16)
2. Select from 1-16

Secret Chorus

There is a hidden chorus effect in the JP-08 which is not documented in the original user's manual, not made note of in the midi implementation chart. You can apply a stereo chorus effect to any patch, and save the setting with the patch.
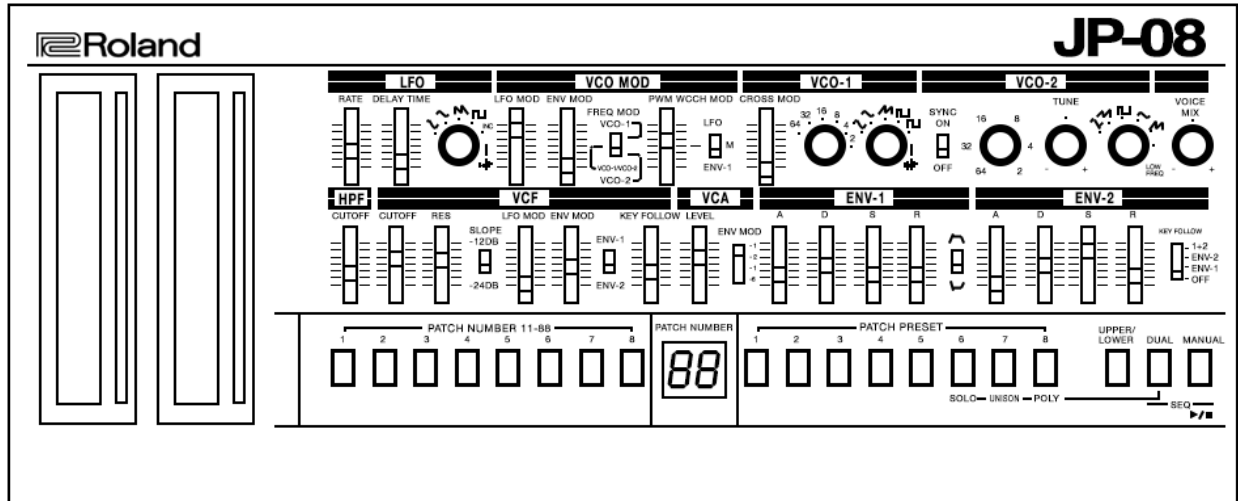
To adjust the chorus settings:

Transmit MIDI CC #93
MIDI Select [0-3]

0 - Chorus OFF
1 - Chorus 1
2 - Chorus 2
3 - Chorus 3

NOTE: You must have the firmware update 1.10 or higher to enable CC data reception and transmission.

V. System Settings

Settings Overview

Numeric Buttons [1] - [16]
in settings mode, the 16 buttons of the common section are called the [1] - [16] buttons.

SOLO/UNISON/POLY/OCTAVE SHIFT/PORTAMENTO
While holding down the **MANUAL** button, specify the value by using the numeric buttons or the C1/C2 ribbon controller to make adjustments.

SOLO	[14]	Plays Monophonically
UNISON	[15]	Plays all sounds in unison
POLY	[16]	Plays polyphonically
Octave Shift	[4] - [13]	Shifts the keyboard range in steps of one octave. Default Setting is [8]
Portamento	C1- ON/OFF	Creates a smooth change in pitch between one key and the next key played
Portamento Time	C2 - 0 - 100	Adjusts the time required for the pitch change.

SYSTEM SETTINGS
While holding down the **MANUAL** button, press one of the numeric buttons to select the parameter

MASTER TUNE	[1]	1-16	Sets the master tune of the module - 440 Hz is [8]
MIDI CHANNEL	[2]	1-16	Sets the MIDI channel for the module - 1-16
MIDI CLOCK	[3]	1-2	[1] AUTO [2] INTERNAL
TRANSPOSE	[4]	2-13	Transposes the keyboard range in semitones. 0 = [8]
KEY VELOCITY	[5]	1-3	[1] TOUCH [2] 64 [3] 127
VELOCITY CURVE	[6]	1-3	[1] Light [2] Medium [3] Heavy
AUTO OFF	[7]	1-2	[1] OFF [2] ON - Power will switch off after 30 minutes
			* Auto off does not occur when USB is connected.
LED DEMO	[8]	1-4	[1] OFF [2] 1 Minute [3] 3 Minutes [4] 10 Minutes
CHAIN MODE	[9]	1-2	[1] OFF [2] ON
NOTE SCALE	[10]	1-16	See Pg 21 for scale information

PATCH SETTINGS
While holding down the **MANUAL** button, press one of the numeric buttons to select the parameter

BEND RANGE	[13]	1-12,13,16	Specifies the pitch bend range in semitones - Default is [2] OFF is [16]
DELAY LEVEL	[14]	1-16	Adjusts the volume of delay (OFF = 1)
DELAY TIME	[15]	1-16	Adjusts the delay time
DELAY FEEDBACK	[16]	1-16	Adjusts the delay feedback

Main Specifications

MAXIMUM POLYPHONY	4 Voices
POWER SUPPLY	Rechargeable Ni-MH Battery (AA, HR6) x 4 Alkaline battery (AA, LR6) x 4, USB Power
CURRENT DRAW	500 mA (USB Bus Power)
DIMENSIONS	300 (W) x 128 (D) x 45 (H) mm l 11 13/16 (W) x 5 1/16 (D) x 1 3/4 (H) inches
WEIGHT	940 g l 2 lbs 2 oz
ACCESSORIES	Owners Manual, leaflet "using the unit safely", Alkaline battery (AA) x 4

Options
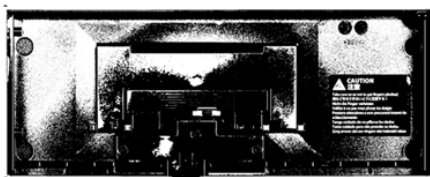
ROLAND DK-01
BOUTIQUE MODULE DOCK
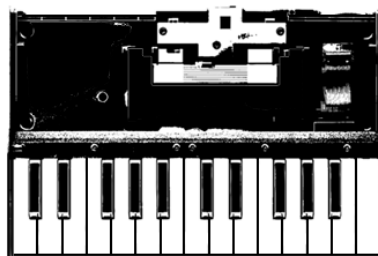
ROLAND K-25M
BOUTIQUE MODULE KEYBOARD

MICRO USB POWER SUPPLY
WALL ADAPTER UNIT FOR STAND
ALONE OPERATION

VI. MIDI

A word about MIDI
MIDI is an acronym that stands for Musical Instrument Digital Interface. It is a technical standard that describes a communications protocol, digital interface and electrical connectors and allows a wide variety of electronic musical instruments, computers and other related music and audio devices to connect and communicate with one another.

A single MIDI link can carry up to sixteen channels of information, each of which can be routed to a separate device. MIDI carries event messages that specify notation, pitch and velocity (loudness or softness), control signals for parameters such as volume, vibrato, audio panning from left to right, cues in theatre, and clock signals that set and synchronize tempo between multiple devices. These messages are sent via a MIDI cable to other devices where they control sound generation and other features. A simple example of a MIDI setup is the use of a MIDI controller such as an electronic musical keyboard to trigger sounds created by a sound module, which is in turn plugged into a keyboard amplifier and speaker. This MIDI data can also be recorded into a hardware or software device called a sequencer, which can be used to edit the data and to play it back at a later time.

Advantages of MIDI include file compactness (an entire song can be coded in a few hundred lines of code, i.e. in a few kilobytes), ease of modification and manipulation and a wide choice of electronic instruments and synthesizer or digitally-sampled sounds. Prior to the development of MIDI, electronic musical instruments from different manufacturers were generally not compatible with each other, and they could not communicate with each other. With MIDI, any MIDI-compatible keyboard (or other controller device) can be connected to any other MIDI-compatible music sequencer, sound module, drum machine, synthesizer, or computer, even if they are made by different manufacturers.

MIDI technology was standardized in 1983 by a panel of music industry representatives, and is maintained by the MIDI Manufacturers Association (MMA). All official MIDI standards are jointly developed and published by the MMA in Los Angeles, California, US, and for Japan, the MIDI Committee of the Association of Musical Electronics Industry (AMEI) in Tokyo. In 2016, the MMA established The MIDI Association (TMA) to support a global community of people who work, play, or create with MIDI, establishing the www.MIDI.org website as the central repository of information about anything related to MIDI technology, from early MIDI technology to future developments.

Roland Boutique MIDI
Starting with firmware 1.10 the boutique line of modules from Roland are capable of sending CC data. This means that all the slider and knob movements performed on the front panel of the JP-08 are cable of transmitting via MID for recording into a DAW or MIDI sequencer.

To enable transmission of MIDI CC data:
1. Hold the DUAL button and press PATCH 1 (9)
2. 2. Select 1-4
1 - OFF
2 - Output only to USB
3 - Output only to MIDI
4 - Output to USB and MIDI

MIDI Implementation Chart

JP-08 Firmware Version 1.01

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1 1–16, OFF	1 1–16, OFF	
Mode	Default Messages Altered	Mode 4 x **********	Mode 4 x **********	
Note Number :	: True Voice	o 0–127	o 0–127	
Velocity	Note On Note Off	o o	x x	
After Touch	Key's Channel's	x x	x o	
Pitch Bend		x	o	
Control Change	0 1 7 64 5, 9, 13, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 41, 47, 48, 49, 50, 51, 52, 53, 56, 57, 58, 59, 60, 61, 62, 63, 71, 73, 74, 75, 80, 81, 82, 83, 84, 85, 87, 91, 102, 103, 104, 105, 106, 107, 108, 109, 112, 113, 114, 115	x x x x o	o o o o o o	Bank select (0–3: A, B, C, User) Modulation Volume Hold pedal Patch parameters (refer to next page)
Program Change	: True Number	x **********	o 0–127	
System Exclusive		o	o	
System Common	: Song Position : Song Select : Tune Request	x x x	x x x	
System Real Time	: Clock : Start : Continue : Stop	o o x o	o o o o	
Aux Messages	: All Sound Off : Reset All Controllers : Local On/Off : All Notes Off : Omni Mode Off : Omni Mode On : Mono Mode On : Poly Mode On : Active Sensing : System Reset	o *1 o *1 x o *1 x x x x o x	o o x x o *2 o *2 o *2 o *2 o x	
Notes		*1 Transmit when MIDI offline. *2 Same process as All Note Off.		

Mode 1 : OMNI ON, POLY   Mode 2 : OMNI ON, MONO   O : Yes
Mode 3 : OMNI OFF, POLY   Mode 4 : OMNI OFF, MONO   X : No

MIDI CC List

The following is list of MIDI Control Change Data which can and can not be transmitted for reception remotely
The From Software Version 1.20 Supplementary Manual

| Synth Panel							
Dec	Hex	Control Change	PRM file variable	Range Hex	Transmitted	Recognized	Remarks
1	01	Modulation wheel		00-7F	yes	yes	
3	03	LFO rate	LFO RATE	00-7F	yes	yes	*1
9	09	LFO delay time	LFO DELAY TIME	00-7F	yes	yes	*1
12	0C	LFO wave	LFO WAVE	00: sine 01: tri 02: saw 03: pulse 04: square 05: noise	yes	yes	*1
13	0D	VCO Mod LFO Mod	OSC LFO MOD	00-7F	yes	yes	*1
14	0E	VCO Mod Env Mod	OSC ENV MOD	00-7F	yes	yes	*1
15	0F	VCO Mod Freq Mod	OSC FREQ MOD DST	00: vco2 01: vco1+2 02: vco1	yes	yes	*1
16	10	VCO Mod PWM	PWM	00-7F	yes	yes	*1
17	11	VCO Mod PWM Sel	PWM SOURCE	00: env-1 01: manual 02: lfo	yes	yes	*1
18	12	VCO-1 CrossMod	OSC1 CROSS MOD	00-7F	yes	yes	*1
19	13	VCO-1 Range	OSC1 RANGE	00: 64 01: 32 02: 16 03: 8 04: 4 05: 2	yes	yes	*1
20	14	VCO-1 Wave	OSC1 WAVE	00: sine 01: tri 02: saw 03: pulse 04: square 05: noise	yes	yes	*1
21	15	VCO-2 Sync	OSC2 SYNC	00: off 01: on	yes	yes	*1
22	16	VCO-2 Range	OSC2 RANGE	00-7F 00: 64 10: 32 30: 16 50: 8 70: 4 7F: 2	yes	yes	*1
23	17	VCO-2 Tune	OSC2 TUNE	00-7F 00: - 40: center 7F: +	yes	yes	*1
24	18	VCO-2 Wave	OSC2 WAVE	00: sine 01: saw 02: pulse 03: lo sine 04: lo saw 05: lo pulse	yes	yes	*1

Dec	Hex	Control Change		Range	Transmitted	Recognized	Remarks
25	19	Source Mix	MIX BALANCE	00-7F 00: vco1 40: vco1+2 7F: vco2	yes	yes	*1
26	1A	HPF Cutoff	HPF	00-7F	yes	yes	*1
74	4A	VCF Cutoff	CUTOFF	00-7F	yes	yes	*1
71	47	VCF Resonance	RESONANCE	00-7F	yes	yes	*1
27	1B	VCF Slope	FLT LPF SLOPE	00: -24db 01: -12db	yes	yes	*1
30	1E	VCF LFO Mod	FLT LFO MOD	00-7F	yes	yes	*1
28	1C	VCF Env Mod	FLT ENV MOD	00-7F	yes	yes	*1
29	1D	VCF Env Mod Sel	FLT ENV MOD SRC	00: env2 01: env1	yes	yes	*1
31	1F	VCF Key Follow	FLT KEY FOLLOW	00-7F	yes	yes	*1
35	23	VCA Level	AMP LEVEL	00-7F	yes	yes	*1
46	2E	VCA LFO Mod	AMP LFO MOD	00: 0 01: 1 02: 2 03: 3	yes	yes	*1
47	2F	Env-1 Attack	ENV1 ATTACK	00-7F	yes	yes	*1
52	34	Env-1 Decay	ENV1 DECAY	00-7F	yes	yes	*1
53	35	Env-1 Sustain	ENV1 SUSTAIN	00-7F	yes	yes	*1
54	36	Env-1 Release	ENV1 RELEASE	00-7F	yes	yes	*1
55	37	Env-1 Polarity	ENV1 POLARITY	00: inv 01: normal	yes	yes	*1
73	49	Env-2 Attack	ENV2 ATTACK	00-7F	yes	yes	*1
75	4B	Env-2 Decay	ENV2 DECAY	00-7F	yes	yes	*1
56	38	Env-2 Sustain	ENV2 SUSTAIN	00-7F	yes	yes	*1
72	48	Env-2 Release	ENV2 RELEASE	00-7F	yes	yes	*1
57	39	Env-2 Key Follow	ENV2 KEY FOLLOW	00: off 01: env1 02: env2 03: env1+2	yes	yes	*1

Settings

Dec	Hex	Control Change		Range	Transmitted	Recognized	Remarks
91	5B	Delay Level	DELAY LEVEL	00: off 01-0F: level (1-15)	yes	yes	
82	52	Delay Time	DELAY TIME	00-0F: time (0-15)	yes	yes	
83	53	Delay Feedback	DELAY FEEDBACK	00: off 01-0F: level (1-15)	yes	yes	
65	41	Portamento	PORTA SW	00: off 7F: on	yes	yes	
5	05	Portamento time	PORTA TIME	00-7F	yes	yes	

Dec	Hex	Control Change		Range	Transmitted	Recognized	Remarks
73	49	Env-2 Attack	ENV2 ATTACK	00-7F	yes	yes	*1
75	4B	Env-2 Decay	ENV2 DECAY	00-7F	yes	yes	*1
56	38	Env-2 Sustain	ENV2 SUSTAIN	00-7F	yes	yes	*1
72	48	Env-2 Release	ENV2 RELEASE	00-7F	yes	yes	*1
57	39	Env-2 Key Follow	ENV2 KEY FOLLOW	00: off 01: env1 02: env2 03: env1+2	yes	yes	*1

Settings							
Dec	Hex	Control Change		Range	Transmitted	Recognized	Remarks
91	5B	Delay Level	DELAY LEVEL	00: off 01-0F: level (1-15)	yes	yes	
82	52	Delay Time	DELAY TIME	00-0F: time (0-15)	yes	yes	
83	53	Delay Feedback	DELAY FEEDBACK	00: off 01-0F: level (1-15)	yes	yes	
65	41	Portamento	PORTA SW	00: off 7F: on	yes	yes	
5	05	Portamento time	PORTA TIME	00-7F	yes	yes	
87	57	Bend Range	BEND RANGE	00: off 18: 2 oct 01-0C: semitones (1-12)	yes	yes	*1
80	50	Dual switch (off sends: cc hex50: 00, cc hex51: 00)		7F: dual on	yes	yes	
81	51	Current part			yes	yes	
86	56	Assign mode: Solo/Unison/Poly	ASSIGN MODE	00: poly 02: solo 03: unison	yes	yes	
11	0B	Expression pedal		00-7F	-	yes	
64	40	Hold			-	yes	
			PATCH_NAME				

NOTE - See the Effects section on page 25 for the MIDI information regarding the undocumented Chorus effect.

Sound Synthesis Memo
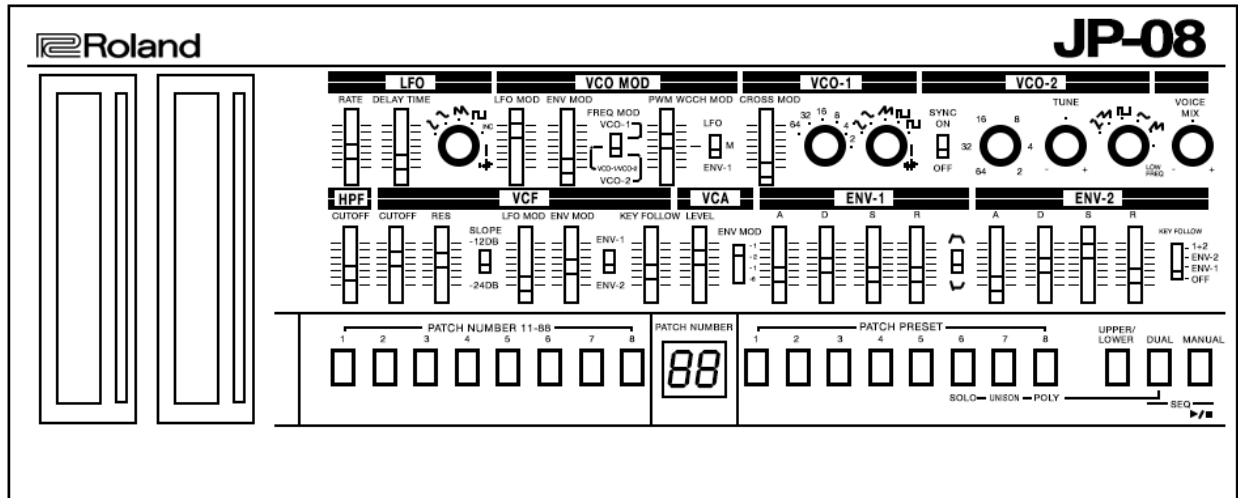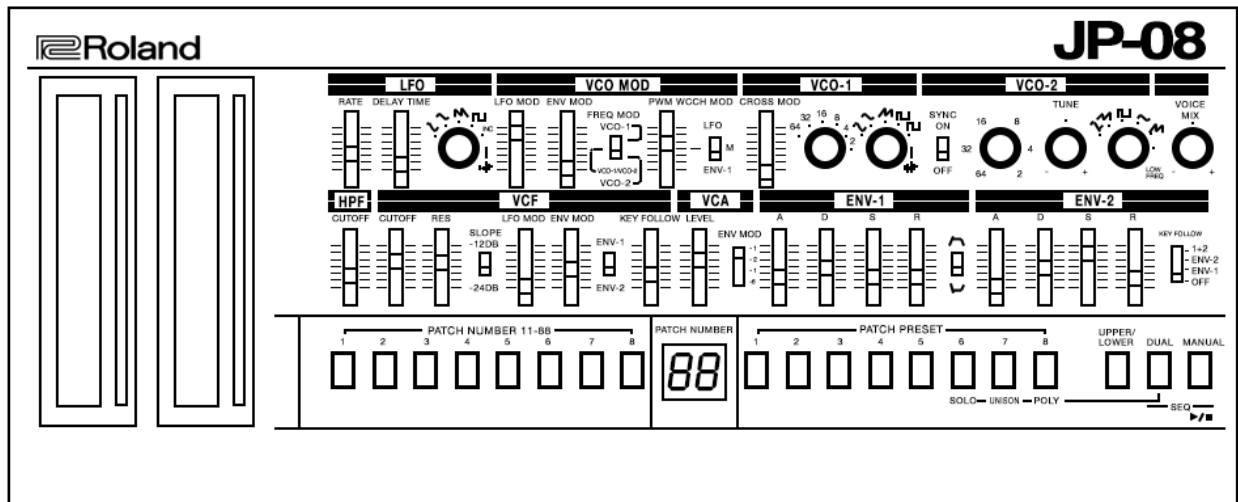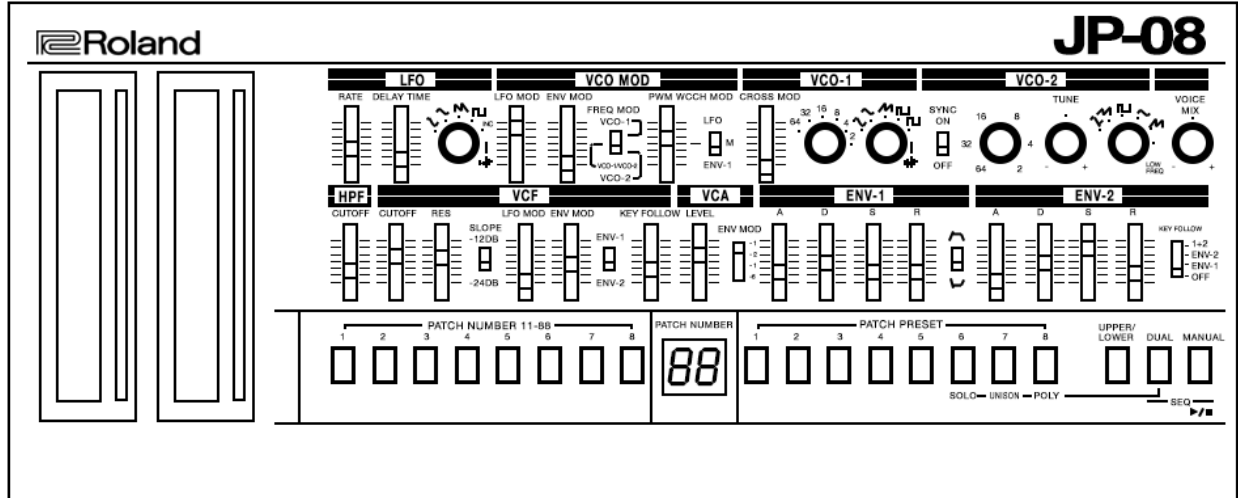
Bank Patch Memo

81	82	83	84	85	86	87	88
71	72	73	74	75	76	77	78
61	62	63	64	65	66	67	68
51	52	53	54	55	56	57	58
41	42	43	44	45	46	47	48
31	32	33	34	35	36	37	38
21	22	23	24	25	26	27	28
11	12	13	14	15	16	17	18

	A	B	C	D	E	F	G	H
Patch Presets								

Roland JP-08