

Centreville – PlusMix

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centrevillage PlusMix – melodic use analysis

The attached manual describes **PlusMix**, a **2HP unity mixer with gate-controlled switching**.

It is small, but very useful for building **melodic variation, transposition, phrase selection, and pitch recombination** in a Eurorack system.

What the module does

Inputs and outputs

- **Inputs**
 - `BASE`
 - `PLS1`
 - `PLS2`
 - `SW1` gate input
 - `SW2` gate input
- **Output**
 - `MIX`

Core behavior

- `BASE` is **always present** at the output.

- PLS1 is added to the mix only when its gate logic condition is true.
- PLS2 is added to the mix only when its gate logic condition is true.

Gate logic

Each switched layer has: - a gate input (SW1 , SW2) - a polarity switch (SW1PL , SW2PL)

A PLS signal is mixed when: - the corresponding gate is **HIGH** and the polarity switch is set to **H**, or - the corresponding gate is **LOW** and the polarity switch is set to **L**

So each added signal can be made active on: - gate high - or gate low

Normalization

- SW1 is normalized to **+5V**
- SW2 is normalized to **SW1**

This means: - with nothing patched to SW1 or SW2 , the polarity switches act like **manual on/off selectors** - with a gate patched only to SW1 , both PLS1 and PLS2 can follow that gate unless SW2 is separately patched

Why this is musically important for melody

Because PlusMix is a **precision CV mixer**, it is especially useful for **pitch CV**.

That means you can combine voltages representing notes, intervals, or transpositions without the slop that would make melodies go out of tune.

In practice, that makes PlusMix great for:

- **adding intervals to a base melody**
- **switching transpositions in and out**
- **creating A/B melodic variants**
- **building call-and-response phrases**

- adding octave jumps conditionally
 - making rhythmic melodic accents from gates
 - recombining multiple pitch sources into one melodic line
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Best melodic roles for PlusMix

1. Conditional transposition mixer

Use **BASE** for your main pitch sequence, and use **PLS1** / **PLS2** for interval offsets.

Example: - **BASE** = main sequencer pitch - **PLS1** = +1V octave transpose
- **PLS2** = +0.583V approximate perfect fifth if your source can generate exact interval CV - **MIX** → oscillator 1V/oct

Then use gates into **SW1** and **SW2** to decide when those intervals are added.

Result: - melody plays normally sometimes - jumps up an octave on selected steps - adds another interval on other steps - can combine both for larger jumps

This is one of the most direct ways to create **melodic contour variation** from a static sequence.

2. Phrase variation from gate patterns

Feed the same melodic base into **BASE**, then patch offset voltages or alternate melodic fragments into **PLS1** and **PLS2**.

Example: - **BASE** = 8-step sequence - **PLS1** = small offset, like +2 semitones - **PLS2** = another offset, like -3 semitones - **SW1** = gate pattern from a trigger sequencer - **SW2** = slower gate or clock division

Result: - certain notes are pushed upward - certain notes are pulled downward - repeated patterns become evolving phrases

This creates **motivic development** without needing a second full sequencer.

3. Manual performance transposer

Because of the normalization, if no gates are patched: - SW1PL and SW2PL become manual enable/disable switches for PLS1 and PLS2

Example: - BASE = running melody - PLS1 = +12 semitones - PLS2 = +7 semitones

Now the two switches become immediate performance controls: - enable octave - enable fifth - enable both for a larger harmonic lift

This is excellent for: - live arrangement - moving between verse/chorus - introducing fills - changing melodic register on the fly

4. Gate-defined note accents

Use a rhythmic gate source to add pitch only on selected steps.

Example: - BASE = root note sequence - PLS1 = +2 semitones - SW1 = snare-related trigger pattern or Euclidean rhythm

Result: - the melody “leans” into accented notes only when the gate is present

This is useful for: - syncopated hooks - acid-style step accents - dynamic lead lines with repeating structure

5. Recombining quantized pitch sources

PlusMix can combine several pre-shaped CV sources into one line.

Example: - BASE = slow quantized melody - PLS1 = stepped random voltages scaled to chord tones - PLS2 = manual offset from a precision adder, keyboard, or fixed voltage source

Use gate inputs to bring these layers in and out.

Result: - one coherent melodic output with controlled variation - a hybrid between sequencing and performance patching

How to use it with other modules to build melodic components

The manual only covers PlusMix, but in a normal Eurorack melodic patch it pairs especially well with the following module types:

With a sequencer

Use the sequencer as the main pitch source.

Patch: - sequencer pitch → **BASE** - fixed voltage / second sequencer row / transpose CV → **PLS1** - another offset or phrase row → **PLS2** - sequencer gates / trigger track → **SW1** , **SW2** - **MIX** → quantizer or directly to oscillator

Musical result: - one sequence becomes multiple melodic variants - you can derive several phrases from one pitch lane

If exact tuning matters, it is often best to: - either feed quantized offsets into PlusMix - or send **MIX** into a **quantizer** afterward

With a quantizer

This is one of the strongest pairings.

Patch: - melodic CV and interval offsets into **BASE/PLS1/PLS2** - **MIX** → quantizer → oscillator

Why: - PlusMix creates combinations of voltages - the quantizer snaps the result to a scale

Musical result: - controlled melodic branching - gate-switched note changes that remain in key - easy creation of arpeggio-like and modal patterns

This setup turns PlusMix into a kind of **melody decision matrix**.

With clock dividers or logic modules

Since the PLS inputs are controlled by gates, any module producing related rhythms can drive melodic structure.

Patch: - divided clock to SW1 - inverted or offset rhythm to SW2

Result: - one transposition happens every 2 bars - another happens every offbeat or every fourth note - melody develops in longer cycles

This is very effective for: - generative melodies - evolving minimalism - polyrhythmic transposition

With sequential switches or gate sequencers

A gate sequencer can decide exactly which notes get altered.

Patch: - gate sequencer channels → SW1 , SW2 - offsets at PLS1 , PLS2

Result: - deterministic melodic editing on a per-step basis - very efficient for creating: - passing tones - octave pickups - phrase-end lifts - recurring motifs

With envelopes and VCAs in parallel

Use PlusMix for pitch variation while related gates also trigger articulation changes.

Example: - SW1 gate adds +12 semitones to pitch - same gate also opens a brighter VCA/filter envelope

Result: - when melody jumps, timbre also changes - leads sound more intentional and expressive

That is a strong compositional trick: **pitch accents aligned with timbral accents.**

With sample & hold or random voltage

Patch a stable melody into **BASE** and use random or semi-random voltages as occasional additions.

Patch: - **BASE** = core melody - **PLS1** = sample & hold voltage attenuated to a small interval range - **SW1** = sparse random gate

Result: - occasional melodic decorations - controlled unpredictability - very useful for ambient, IDM, and generative patches

For tonal music, a quantizer after **MIX** is especially recommended.

Practical melodic patch ideas

Patch 1: Two-level transposing lead

Goal: create a lead that changes shape over time.

Patch: - sequencer pitch → **BASE** - fixed +1V → **PLS1** - fixed +0.167V or +0.333V style interval source → **PLS2** - slower gate pattern → **SW1** - faster accent gate → **SW2** - **MIX** → quantizer → oscillator

What happens: - the base melody is always present - some notes jump an octave - others are nudged into another interval - some notes combine both offsets

Use: - techno leads - modular arpeggios - melodic electro sequences

Patch 2: Verse/chorus melody switcher

Goal: create structural change from one melodic line.

Patch: - main melody CV → **BASE** - chorus transpose amount → **PLS1** - ending phrase lift → **PLS2** - manual or arranged gate → **SW1** - phrase-end gate → **SW2**

What happens: - verse plays dry - chorus activates a transposition layer - phrase endings gain an extra lift

This works very well in live performance because the module is immediate and compact.

Patch 3: Generative melodic mutation

Goal: one melody that evolves without losing identity.

Patch: - quantized sequencer → **BASE** - random stepped CV, attenuated → **PLS1** - fixed interval → **PLS2** - Euclidean rhythm → **SW1** - clock divider → **SW2** - **MIX** → quantizer → oscillator

What happens: - most notes follow the original melody - some are altered by random decoration - some receive predictable structural transposition - the line stays coherent but never static

Patch 4: Manual harmonic lift for live sets

Goal: hands-on melodic arrangement.

Patch: - sequence → **BASE** - +7 semitone equivalent CV → **PLS1** - +12 semitone CV → **PLS2** - leave **SW1** and **SW2** unpatched - use **SW1PL** and **SW2PL** manually

What happens: - switch 1 adds harmonic lift - switch 2 adds octave lift - both together create a stronger section change

This is simple but highly playable.

Strengths of the module for melody

Very compact

At **2HP**, it adds melodic decision-making without eating valuable space.

Good for pitch CV

The manual specifically notes **high-precision CV mixing**, which is critical for melodic use.

Gate-controlled variation

Instead of just mixing everything all the time, you can make melodic additions happen only on chosen steps.

Manual + patch programmable

It works both as: - a hands-on performance tool - and a fully patch-controlled melodic utility

Limitations to keep in mind

It is a unity mixer, not an attenuating mixer

The manual describes it as a **unity mixer**, so the incoming levels are summed as given.

That means interval sizes must already be correct before entering `PLS1` or `PLS2` .

If you want exact semitone intervals, use: - precision voltage sources - quantized pitch rows - precision offset generators - or a quantizer after the mix

Only two switchable add layers

You get: - one always-on base - two conditional additions

That is powerful, but still intentionally simple.

No built-in quantization

For melodic tonal work, a quantizer after the output may be the best companion.

Bottom line

PlusMix is a small but extremely musical utility for pitch-CV composition.

Its best melodic use is to take a stable pitch line at **BASE** and then use **PLS1** and **PLS2** as **conditional interval or phrase additions**, controlled by gates.

Used with sequencers, quantizers, gate sequencers, logic, and fixed-voltage sources, it can create:

- transposed note accents
- alternate phrase shapes
- octave jumps
- evolving generative melodies
- manual arrangement changes
- precise pitch remixing

In a melodic Eurorack patch, think of it as a **gate-addressed pitch recombiner**:

a way to turn one melody into several related melodies without losing coherence.

Generated With Eurorack Processor