2hp — Switch

- Manual PDF

Manual PDF

2hp Switch: using it for melodic patching

The attached manual is for the **2hp Switch**, a **4-in / 1-out voltage-controlled signal router**. It can switch **audio, CV, or gate signals**, and the active input can be chosen either by the **SEL knob** or by **SEL CV**.

What the module does

Core behavior

- **4 inputs**
- **1 output**
- Routes **one selected input** to the output
- Selection can be:
- set manually with the **SEL** knob
- changed dynamically with **SEL CV**

Important specs from the manual

- **Input level:** ±10V
- **SEL CV range:** ±5V
- **CV is added to the current knob position**
- **Very fast switching**, low noise
- Works with:

- audio
- control voltage
- gates/triggers

How Switch helps create melodic components

Even though Switch is not a pitch generator by itself, it is very useful for **melody construction**, because melodies in Eurorack are often built by choosing between: - different pitch CV sources - different rhythmic gate streams - different transpositions - different quantized sequences - different audio voices playing melodic material

Switch is basically a **decision point** in the patch. It lets you create melodies by selecting which source is currently active.

Best melodic use cases

1. Switch between multiple pitch CV sources

Patch four different pitch-related CVs into the inputs: - Input 1: a sequencer line - Input 2: a random voltage source - Input 3: a transposed copy of the sequencer - Input 4: a slow modulation source into a quantizer

Then send **OUT** to: - a quantizer input, then to oscillator 1V/oct - or directly to an oscillator if the voltages are already musical

Result

You get a melody that can jump between four different pitch behaviors.

Why this works musically

This is one of the easiest ways to create: - verse/chorus-like variation - call-and-response melodic motion - controlled unpredictability

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2. Switch between different transpositions of the same sequence

A very musical patch is to mult one melodic CV sequence into several processors: - Input 1: original sequence - Input 2: sequence + 2 semitones - Input 3: sequence + 5 semitones - Input 4: sequence + 7 semitones

Send the output to your oscillator pitch path.

Result

The same melodic contour is preserved, but the active harmony changes.

Musical effect

This gives you: - modal shifts - chord-root movement - bassline variation - instant harmonic structure from one phrase

If you clock the switching rhythmically, you can make the melody outline harmonic changes without needing a second sequencer.

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3. Switch between quantizer inputs or quantized outputs

If you have a quantizer in the system, Switch becomes especially useful.

Option A: switch unquantized sources into one quantizer

- Inputs: different modulation/pitch CV sources
- OUT → quantizer → oscillator

This makes four raw sources become one playable melodic stream.

Option B: switch between already-quantized melodies

- Inputs: four different quantized pitch lines
- OUT → oscillator 1V/oct

This is cleaner if each source already has a distinct scale or pattern.

Musical effect

You can move between: - stable melody - semi-random melody - arpeggio-like motion - transposed variations

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4. Switch gate patterns that drive melodic events

Melody is not just pitch; it is also **when notes happen**.

Patch four gate or trigger sources into Switch: - Input 1: straight clock division - Input 2: syncopated trigger pattern - Input 3: random triggers - Input 4: Euclidean rhythm

Then send **OUT** to: - envelope trigger input - sequencer advance input - sample-and-hold trigger - quantizer trigger, if applicable

Result

You can keep the same pitch source but radically change the melodic phrasing.

Why this matters

A single pitch sequence can sound like entirely different melodies when the note timing changes.

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5. Switch audio from different melodic voices

Because Switch also handles audio, you can patch: - Input 1: sine lead - Input 2: square bass voice - Input 3: filtered pluck - Input 4: FM voice

Then switch which voice reaches the output.

Result

One melodic line can jump between different timbres or instruments.

Performance use

This is great for: - live arrangement - fills - alternating lead sounds - turning one sequence into a multi-voice phrase

Because the module switches quickly, it can create abrupt, stylized phrase changes.

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6. Create stepped melodic selection with CV over SEL

The most interesting part of this module is **SEL CV**.

Since the **SEL CV is added to the knob position**, you can offset the range manually and then animate selection with another CV source.

Patch a CV source to SEL: - stepped random voltage - sequencer CV lane - LFO - sample & hold - gate-derived stepped voltage

Result

The chosen melodic source changes over time automatically.

Musical uses

- every bar, choose a different sequence

- probabilistic melody path changes
- evolving motif selection
- generative melodic arrangement

This turns Switch into a kind of **meta-sequencer**, where it sequences which sequence is active.

Example melodic patches

Patch 1: Four-part melodic phrase selector

Goal: build a melody from four phrase fragments.

Patch

- Input 1: phrase A pitch CV
- Input 2: phrase B pitch CV
- Input 3: phrase C pitch CV
- Input 4: phrase D pitch CV
- OUT → quantizer or oscillator 1V/oct
- Clocked stepped CV → SEL CV

What happens

Each incoming control step at SEL chooses a different phrase source. Instead of one linear melody, you get a modular phrase system.

Great for

- generative leads
- evolving basslines
- non-repeating motifs

Patch 2: Harmonic movement from one sequence

Goal: use one sequence to imply chord changes.

Patch

Take one sequence and create 4 versions: - Input 1: root - Input 2: +3 or +4 semitones - Input 3: +7 semitones - Input 4: +12 semitones

- OUT → oscillator pitch
- slow clocked CV or manual changes → SEL

What happens

The same melodic shape moves through harmonic positions.

Great for

- basslines
- ostinatos
- techno hooks
- arpeggiated motifs

Patch 3: Gate-switched melody articulation

Goal: change note rhythm while keeping pitch constant.

Patch

- Pitch sequencer → oscillator pitch
- Inputs 1–4: four different gate patterns
- OUT → envelope trigger

What happens

The same pitch material gets different rhythmic articulation depending on which gate stream is active.

Great for

- turning a loop into a song structure
- creating fills
- live improvisation

Patch 4: Random-but-musical note source selector

Goal: mix predictable and unpredictable melody sources.

Patch

- Input 1: sequencer
- Input 2: sequencer transposed up a fifth
- Input 3: random stepped CV
- Input 4: slow envelope or LFO into quantizer
- OUT → quantizer → oscillator
- Sample & hold or random stepped CV → SEL CV

What happens

The melodic voice alternates between stable and unstable sources.

Great for

- generative ambient
- experimental melodies
- evolving Berlin-school style patterns

Patch 5: Timbral melody switching

Goal: one melody, multiple instrumental identities.

Patch

- One pitch sequence controls several oscillators/voices
- Audio outputs of those voices → Inputs 1–4
- OUT → filter/VCA/mixer
- rhythmic CV → SEL CV

What happens

Different notes or note groups appear with different timbres.

Great for

- melodic fills
- pseudo-round-robin voicing
- choppy electro phrasing

Practical advice for melodic use

Use quantization when switching pitch CV

If the inputs contain free CV rather than tuned pitch, the output may jump to non-musical voltages. Sending **OUT** to a **quantizer** makes the result much more melodic.

Use slow or clocked CV for intentional source changes

If SEL CV moves too freely, the routing may change too often. For more musical results: - use stepped voltages - sample-and-hold - sequencer rows - clock divisions

Use the knob as a bias or range control

Because the CV is **added to the knob position**, the knob can act like a manual “center” or source preference. This is useful in performance.

Great for form and arrangement

Switch is especially strong at the **phrase level**: - choose which melody source is active this bar - choose which rhythm drives the melody - choose which transposition is active in the chorus

So it is less a note sequencer, and more a **melodic structure and variation tool**.

Strengths of this module in melodic systems

Excellent for:

- selecting between melodic CV lanes
- switching transpositions
- switching quantized sources
- changing rhythmic articulation
- routing different audio voices
- generative melody structures

Less ideal for:

- smooth crossfades between sources
- polyphony
- direct note creation without external CV/audio sources

This is a **router**, not a sequencer or quantizer. Its power comes from how you combine it with those modules.

Bottom line

The **2hp Switch** is best understood as a **melodic selector and structure tool**. It creates musical interest by choosing among: - multiple pitch sources - transposed variants - different rhythm generators - different melodic voices

In a Eurorack patch, that makes it extremely useful for: - evolving melodies - performance variation - generative composition - compact harmonic movement

If you want, I can also turn this into: 1. a **beginner-friendly patch recipe list**,
2. an **advanced generative melody guide**, or
3. a **“best modules to pair with 2hp Switch” companion chart**.