# 2hp — Rout

- Manual PDF

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# Manual PDF

Based on the attached manual, the module shown is **Rout**, a **2hp voltage-controlled gate router/switch**. It does **not generate pitch directly**, but it can be very useful in building **melodic structures** by routing rhythmic gate information to different destinations in a patch.

## What Rout does

Rout takes **one gate/trigger input** and sends it to **one of four outputs**.

### Key functions

- **INPUT**: incoming gate/trigger
- **SEL CV**: voltage control for selecting which output is active
- **SEL knob**: manual selection of output 1–4
- **OUT 1–4**: the selected output passes the input gate
- **LEDs**: show which output currently has voltage

### Specs relevant to patching

- **Input threshold**: 2.5V
- **Output range**: 0–5V gate/trigger
- **SEL CV range**: 0–5V

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# How Rout can help create melodic components

Since Rout is a **gate distributor under CV control**, its melodic use comes from deciding **which sequencer, envelope, voice, or modulation path gets triggered** at a given moment.

# 1. One rhythm, multiple pitched voices

Patch: - Master clocked gate pattern → **Rout INPUT** - **OUT 1–4** → trigger inputs of **four different voices** or **four different envelopes** controlling four oscillators

Result: - A single rhythm gets sent to different voices over time - If each voice is tuned to a different note, chord tone, or register, Rout turns one trigger pattern into a **melodic line with timbral or harmonic movement**

Example: - OUT 1 → bass voice - OUT 2 → root note lead - OUT 3 → fifth - OUT 4 → octave accent

Use **SEL CV** from an LFO, stepped random, or sequencer row to choose which note/voice is active.

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# 2. Route one trigger stream to different sequencers

Patch: - Gate pattern → **Rout INPUT** - Each **Rout output** → clock/advance input of a different pitch sequencer

Result: - Only one sequencer advances at a time - You can effectively switch between different melodic phrases depending on the selected output

This is a strong way to create: - verse / chorus variations - call-and-response melodies - fills and alternate note orders

For instance: - OUT 1 → sequencer with bass motif - OUT 2 → sequencer with higher inversion - OUT 3 → sequencer with sparse phrase - OUT 4 → sequencer with dense ornamentation

The melody changes because different pitch sources are being stepped.

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## 3. Route triggers to different envelope shapes for one oscillator

Patch: - One VCO provides the audio pitch - Several envelopes or function generators shape the VCA/filter differently - Trigger source → **Rout INPUT** - **OUT 1–4** → different envelope generators

Result: - Same oscillator pitch sequence, but each note articulation changes depending on routed gate destination - This creates perceived melodic phrasing: - plucked notes - long sustained notes - accented filter pops - ghost notes

Even if pitch stays the same, articulation can make the line feel much more melodic.

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## 4. Create melody by switching quantizer/ sample-and-hold triggers

Patch: - Random or stepped CV → quantizer input - Gate stream → **Rout INPUT** - **OUT 1–4** → different sample-and-hold or quantizer trigger paths, or different track-and-hold stages

Result: - Rout determines **when** and **where** new pitch values are captured - This can create alternating melodic behavior: - one output grabs notes frequently - another only occasionally - another triggers transpositions - another updates a harmony line

This is especially useful for semi-generative melodic systems.

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## 5. Use Rout as a phrase selector for transposition events

Patch: - Main melodic sequencer runs continuously - Trigger pattern into **Rout INPUT** - Each Rout output sends a trigger to a different transpose event, precision adder gate, sequential switch, or CV preset recall

Result: - The same melody can jump between harmonic contexts - You can use outputs to trigger: - root position - minor third transpose - fifth transpose - octave jump

That makes Rout a **harmonic phrase router**, even though it only routes gates.

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## 6. Send one trigger stream to different percussion-like pitched voices

If your system includes tuned percussion modules or pinged filters: - INPUT = regular trigger pattern - OUT 1–4 = different tuned resonant voices

Result: - One trigger source becomes a melody by striking different tuned modules - Great for: - marimba-style lines - West Coast bongo melodies - pseudo-sequenced modal percussion

Because the selection can be under CV control, the melodic order can be static or animated.

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## 7. Controlled melodic variation with SEL CV

The biggest musical feature is **voltage control over output selection**.

Feed **SEL CV** with: - **Stepped random** for generative melodic routing - **Sequencer CV row** for repeatable phrase switching - **Slow triangle/sine LFO** for cyclical movement across destinations - **Manual CV controller** for live performance fills and transitions

Because SEL CV expects **0–5V**, it pairs well with many Eurorack modulation and sequencer sources.

### Musical outcomes

- Repeatable output order = structured melody
- Randomized output order = generative melody
- Slowly changing selector = evolving phrase orchestration
- Fast CV changes = glitchy ratcheting destination shifts

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# Practical melodic patch ideas

# Patch 1: Four-note melodic distributor

- Clock divider or trigger sequencer → Rout INPUT
- OUT 1–4 → four envelope generators
- Each envelope controls a different VCA for four tuned oscillators

Tune oscillators to: - C - E - G - B

Now Rout turns one rhythm into an arpeggiated chord spread across four voices.

Control: - SEL knob manually for fixed note choice - SEL CV from a sequence for melodic order

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# Patch 2: Phrase switching lead

- Gate sequencer → Rout INPUT
- OUT 1–4 → clock inputs on four pitch sequencers
- Outputs of pitch sequencers mixed or switched into one voice path

Each sequencer contains a different phrase. Rout determines which phrase advances, creating larger melodic form from small patterns.

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## Patch 3: Bassline with accents and octave jumps

- Main gate pattern → Rout INPUT
- OUT 1 → standard bass envelope
- OUT 2 → same bass voice plus octave transpose trigger
- OUT 3 → accent envelope
- OUT 4 → fill/reset event

This creates a bassline with evolving melodic contour from one simple gate stream.

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## Patch 4: Generative melody hub

- Master trigger source → Rout INPUT
- SEL CV from stepped random
- OUT 1 → trigger main sequencer advance
- OUT 2 → trigger sample-and-hold for new pitch
- OUT 3 → trigger transpose event
- OUT 4 → trigger second voice harmony envelope

This makes Rout the central decision-maker for melodic behavior.

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## Strengths of Rout in melodic patching

- Very compact at **2hp**
- Excellent for **reusing one trigger source** across many melodic destinations
- Adds **variation and structure** without needing a second trigger sequencer
- CV control makes it easy to fold into generative or performative systems
- Useful in both **polyphonic** and **single-voice evolving** patches

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## Limitation to keep in mind

Rout is a **gate router**, not a pitch router or CV switch for melodic voltages. So by itself, it does not create notes. Its melodic value comes from routing **events** that affect: - when notes happen - which voice plays - which phrase advances - which articulation/transposition is triggered

In other words, Rout is best thought of as a **melody structure tool**, not a melody source.

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## Summary

**Rout** is ideal for creating melodic components by: - distributing one rhythm to different tuned voices - selecting which sequencer or phrase advances - varying articulation across notes - triggering transposition or harmony events - adding CV-controlled variation to otherwise static melodic material

If you upload the other module manuals too, I can analyze **how they work together as a complete melodic system** and suggest specific multi-module patches.

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