

Doepfer — A-151 Quad Sequential Switch

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[Doepfer A-151 Quad Sequential Switch Manual \(PDF\)](#)

Doepfer A-151 Quad Sequential Switch — Sound Design Ideas

The **Doepfer A-151** is a **4-step sequential switch**. Every trigger advances the connection from the common jack to the next of four I/O jacks. That sounds simple, but in a modular patch it becomes a **rhythm router, waveform scanner, modulation sequencer, pattern breaker, and timbral animator**.

A few key things from the manual that matter musically:

- It is **bi-directional**:
 - **4 inputs → 1 output**
 - or **1 input → 4 outputs**
 - It advances on the **rising edge** of a trigger at **Trig In**
 - A pulse to **Reset In** returns it immediately to **step 1**
 - **Version 2** adds a **2 / 3 / 4 step switch**
 - Early versions handle about **-8V to +8V**
 - Later versions handle the full **A-100 range: -12V to +12V**
 - Very fast triggering can create **audio-rate switching effects**, which is where things get especially wild
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What the A-151 is best at

Think of the A-151 as a way to make one thing become many things over time:

- one oscillator becomes a rotating set of waveforms
- one envelope becomes a rotating set of destinations
- one audio path becomes a rotating set of distortions
- one clock becomes evolving phrasing through reset tricks
- one sustained sound becomes a shifting pad through stepped timbre changes

Because it is a **hard switch**, not a crossfader, the sonic results can be: - abrupt - glitchy - percussive - formant-like - aggressive - rhythmically complex

That makes it especially good for: - **distorted percussion** - **dubstep** / **DnB bass movement** - **haunted evolving atmospheres**

General modulation strategies

1. Trigger it at musically meaningful rates

Use different trigger sources into **Trig In**:

- **Clock divider** for rhythmic pattern switching
- **Gate from sequencer** for note-by-note changes
- **LFO square** for slower movement
- **Envelope end-of-cycle / trigger out** for self-evolving patches
- **VCO square wave** for audio-rate timbral destruction

This one choice massively changes the character: - **slow triggers** = structural variation - **medium triggers** = rhythmic articulation - **audio-rate triggers** = new composite timbres / digital tearing / harshness

2. Use Reset In for pattern control

Reset is one of the most important creative features.

If you clock the A-151 in 4-step mode but send a reset every 3 clocks, you get: - **1** → **2** → **3** → **reset** instead of - **1** → **2** → **3** → **4**

That means: - uneven phrasing - accents that feel “broken” - loop lengths that don't match the main clock - pseudo-polyrhythms

For bass music, this is gold.

Try: - reset every **5th**, **7th**, or **irregular** pulse - reset from a **probability gate** - reset from a **manual gate button** during performance

3. Use the 2/3/4 step switch musically

If your version has the step switch:

- **2-step** = alternating A/B behavior, great for kick/snare, wobble/open-close
- **3-step** = asymmetry, instantly more interesting
- **4-step** = full cycle variation

A strong performance trick: - patch a 4-source timbre chain - switch between **2-step** and **3-step** during playback - the whole groove shifts without changing pitch sequencing

4. Remember it is bi-directional

This is huge.

4 inputs → 1 output

Use when you want to **select between sound sources** or modulation sources.

1 input → 4 outputs

Use when you want one source to **strike different destinations in sequence**.

For example: - one trigger routed to 4 different envelopes - one envelope routed sequentially to 4 modulation targets - one audio source routed to 4 different processing chains

This is where patches become animated and “composed.”

Patch ideas for distorted percussive sounds

1. Rotating drum voice architecture

Use one trigger sequence to advance the A-151 while one noise/oscillator source feeds the common input.

Patch

- Put a sound source into **O/I**
- white noise
- sine or triangle oscillator
- short FM blip source
- Patch **I/O 1–4** to four different processing chains:
- LPG or VCA with short decay
- wavefolder or distortion
- bandpass filter with high resonance
- ring mod or FM input path
- Use the outputs of those chains to your mixer or combine downstream depending on routing scheme

Alternative approach: - send **4 sound sources** into **I/O 1–4** - take **O/I** as the selected output

Result

Each hit rotates to a different timbre: - kick-ish thud - metallic crack - tearing snare - noisy zap

Make it more brutal

- Trigger A-151 with the same rhythm driving your percussion envelope
- Use a reset every 3 or 5 triggers
- Add distortion after the A-151 output so the abrupt switching creates transients that get exaggerated

This can create really strong **industrial percussion** and **broken beat textures**.

2. Sequential transient designer

Route one trigger source to different envelope generators or decay shapes.

Patch

- Put a trigger stream into **O/I**
- Route **I/O 1-4** to:
 - short snappy envelope
 - medium decay envelope
 - ultra-short click envelope
 - envelope with attack for reverse-like swell
- Each envelope controls either:
 - VCA amplitude
 - filter cutoff
 - FM index
 - distortion amount

Result

Each note has a different contour. Even a simple oscillator becomes: - punch - slap - bite - smear

For distorted percussion this matters a lot, because distortion responds differently to different envelope shapes.

3. Audio-rate switched noise percussion

The manual specifically notes very fast trigger rates can create audio-frequency modulation.

Patch

- Send **noise** or a harmonically rich oscillator into **O/I**
- Put 4 different filtered versions of the sound on **I/O 1–4**, or vice versa
- Trigger **Trig In** with:
 - fast square LFO
 - audio-rate VCO square output

Result

You get: - tearing digital-like edges - zippering textures - metallic alias-style percussion - strange formant bursts

Add: - short VCA envelope after the switch - hard clipping - resonant HPF/BPF

This produces fantastic: - snare layers - glitch hats - neuro percussive stabs

4. Rotating feedback percussion

If your system supports careful feedback patching:

Patch

- Source oscillator/noise into A-151
- Each stage feeds a different effect:
- clean
- overdrive
- filter feedback loop
- wavefolder
- Mix some output back into the input path

Result

The A-151 changes the topology of the feedback path on each hit. This can yield: - unstable clanks - explosive hits - screaming transients - “machine breaking” sounds

Keep levels under control. This can get loud fast.

Patch ideas for dubstep / drum & bass basslines

1. Waveform scanner bass

This is directly suggested by the manual: switch between VCO waveforms.

Patch

- Patch one oscillator's **saw, pulse, triangle, sub** into I/O 1–4
- Take **O/I** to filter → VCA → distortion
- Trigger **Trig In** from:
- sequencer gate
- clock division of the note rhythm
- fast LFO for rolling movement

Why it works

Each waveform hits the downstream distortion and filter differently: - saw = bright/aggressive - pulse = nasal/hollow - triangle = smoother body - sub = weight

Bass music trick

Run the switched waveform into: - wavefolder - aggressive lowpass with resonance - parallel clean sub underneath

The A-151 becomes a **hard-stepped wavetable selector**.

2. Sequential modulation-source selector for wobble bass

Instead of switching audio, switch **control voltages**.

Patch

Send 4 modulation sources into **I/O 1–4**: 1. slow triangle LFO 2. envelope with snappy attack 3. stepped random 4. inverted envelope or slewed random

Take **O/I** to: - filter cutoff CV - wavetable position CV - FM amount CV - VCA CV amount - distortion CV if available

Trigger the A-151 from the bass rhythm.

Result

Every note or every beat has a different movement pattern: - wobble - stab - glitch - growl

This is one of the best uses of the module for **neuro / reese / dubstep** style design.

3. Sequential distortion topology

Use the A-151 to select different pre- or post-distortion paths.

Patch

Bass source into **O/I**, then switch among 4 different routes: 1. direct to overdrive 2. filtered before distortion 3. wavefolded before distortion 4. ring mod or FM sidechain before distortion

Or reverse: - 4 different parallel processing outputs into **I/O 1-4** - **O/I** to final VCA/mix bus

Result

One bassline becomes many basslines: - guttural - nasal - crunchy - ripped apart

Performance note

Resetting at odd intervals creates those “mutating but still looped” bass phrases common in DnB.

4. 3-step bass phrasing against 4/4 drums

If your version has the **3-step mode**, use it constantly.

Patch

- Sequence a normal 16-step bassline
- Advance the A-151 every quarter note or every note gate
- Put 3 different modulation or audio variants on steps 1-3

Result

Because the timbre cycle is 3 while the bar is 4, the phrase drifts: - bars feel less repetitive - accents move - bass seems to “evolve” without changing notes

This is excellent for: - rolling DnB - halftime dubstep - broken neuro phrases

5. Audio-rate trigger for monstrous bass grit

This is one of the most extreme uses.

Patch

- Bass oscillator waveforms into the A-151
- Trigger **Trig In** from another VCO square wave
- Tune the trigger VCO to harmonic or inharmonic relationships

Result

The switching itself becomes part of the spectrum: - harsh digital edge - phasey tearing - vocal-like movement - unstable upper harmonics

Then run through: - lowpass filter with envelope - heavy saturation - sub oscillator in parallel

This can produce **devastating reese-style textures**.

Patch ideas for haunting atmospheric pads

The A-151 is often thought of as rhythmic, but it can be excellent for pads if you use it more slowly and structurally.

1. Rotating filter character pad

The manual gives an example of switching filter outputs. This is perfect for atmospheres.

Patch

- Send one rich drone or chord source into a multimode filter
- Patch several filter outputs into **I/O 1–4**
- lowpass
- bandpass
- highpass
- notch or second filter output
- Take **O/I** to reverb and delay
- Trigger A-151 slowly:
- very slow clock
- manual gate
- sparse random pulse

Result

The pad shifts between spectral personalities: - warm - hollow - distant - ghostly

With enough reverb, the hard switching becomes a dramatic timbral scene change rather than a click.

2. Sequential envelope-to-modulation routing

Use one modulation source and send it to different destinations in sequence.

Patch

- Put a slow envelope or LFO into **O/I**
- Send **I/O 1–4** to:

- filter cutoff
- oscillator PWM
- FM depth
- effect send or reverb CV

Trigger the switch very slowly.

Result

The same movement migrates through the patch: - first brightness rises - then pulse width drifts - then FM bloom appears - then the reverb tail swells

This makes a patch feel **alive and intentional**, not just “LFO on everything.”

3. Chord or oscillator layer selector

If you have multiple sound sources or chord voicings:

Patch

- Put 4 different related timbres into **I/O 1–4**
- detuned saw layer
- sine + fifth
- filtered noise layer
- FM bell-ish layer
- Take **O/I** into a shared ambience chain
- Trigger occasionally or from sparse random

Result

The pad morphs between identities while staying in one harmonic world.

For haunting sounds, keep the source relationships close: - same root - octave/fifth clusters - slight detuning differences

4. Reset for phrase-based ambience

Use reset as a “return to memory.”

Patch

- Advance slowly through 4 timbral stages
- Send a reset at the start of every 8 or 16 bars

Result

The atmosphere wanders, then returns to a recognizable opening state.
This creates: - narrative motion - tension and release - cinematic structure

5. Unstable spectral shimmer with audio-rate switching

For darker ambient or horror textures:

Patch

- Feed four slightly different versions of a drone into **I/O 1–4**
- one filtered
- one ring modded
- one wavefolded lightly
- one with feedback delay coloration
- Trigger A-151 at medium to high rate with a square LFO or oscillator
- Put the output through long reverb

Result

You get: - spectral flutter - metallic shimmer - broken choir textures - uncanny digital halo

Use attenuation if needed, especially if working with older A-151 voltage limits.

Best modulation sources to pair with the A-151

For percussion

- clock dividers
- trigger sequencers
- burst generators
- random gates
- envelope triggers
- audio-rate square VCOs

For bass

- note gates from sequencer
- swung clocks
- reset patterns from logic
- stepped random CV sources
- envelopes and function generators
- synced LFOs

For pads

- very slow square LFO
 - manual gate/button
 - Bernoulli/probability gate
 - end-of-rise/end-of-cycle triggers
 - sparse generative clocks
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Important sonic behaviors to exploit

Hard switching clicks can be useful

Because the A-151 is switching abruptly, transitions may click depending on the material.

Usually that's a problem, but for your goals it can be an advantage: - added attack on percussion - nasty transient on bass - haunted artifact in ambient patches

If you want cleaner results: - switch at envelope zero-crossing moments - place a VCA after the switch - filter after switching - use slower or masked transitions with reverb/delay

Switching modulation is often more powerful than switching audio

A lot of people first use sequential switches for audio selection, but for complex music, CV switching is often deeper.

Examples: - different envelopes to one filter - different LFOs to one wavetable position - one envelope routed to changing destinations - different sequencer rows selected per note

This gives movement without needing four totally separate voices.

Audio-rate triggering is a signature trick

The manual explicitly points out that very fast trigger repetition can create audio-frequency effects.

This is one of the A-151's secret weapons: - pseudo-waveshaping - digital-sounding aggression - composite waveform generation - metallic timbral breakup

For bass music and experimental percussion, this is one of the most valuable techniques in the module.

Three full patch recipes

1. Distorted neuro snare machine

Goal: metallic, crushed, changing snare hits

- Noise + sine osc mixed together
- Into A-151 common I/O
- Four destinations:
 - bandpass filter
 - wavefolder
 - hard clipper
 - ring mod input chain
- Trigger A-151 from 16th-note clock
- Envelope/VCA after switch with short decay
- Heavy compression or saturation after VCA
- Reset every 3 or 5 hits

Result: rotating snare identities with aggressive transient differences

2. Dubstep bass mutator

Goal: filthy evolving bassline

- VCO waveforms to A-151 inputs:
 - saw
 - pulse
 - sub

- FM output or second detuned VCO
- A-151 output to lowpass filter → distortion → VCA
- Trigger from note gate or divided clock
- Send another A-151 or modulation source to switch between filter-envelope shapes
- Use 3-step mode for drift
- Reset at phrase boundaries

Result: constantly shifting bass timbre with coherent musical repetition

3. Haunted pad engine

Goal: dark evolving cinematic texture

- Rich oscillator or chord source into multimode filter
- Filter outputs into A-151
- A-151 output into chorus/delay/reverb
- Advance switch every few seconds with slow square LFO
- Route reset from sparse random or bar-start pulse
- Add a second slow modulation source to detune or FM depth

Result: spectral scene changes that feel ghostly and alive

Practical warnings from the manual

- If you have an **older version**, watch signal range:
 - roughly **-8V to +8V**
 - **Version 2** can handle **-12V to +12V**
 - If something behaves strangely, excessive voltage may be the cause
 - Fast switching can be intentionally dirty, but also unpredictable depending on source material and downstream gain staging
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Final creative advice

The A-151 is most exciting when you stop thinking of it as just a utility and start treating it like a **compositional timbre sequencer**.

For your goals:

- **Distorted percussion:** switch audio paths and envelope shapes per hit
- **Dubstep / DnB bass:** switch waveforms, modulation sources, and distortion chains with resets for phrase control
- **Haunting pads:** switch filter outputs and slowly migrate modulation destinations

If you want, I can also give you: 1. a set of **10 specific patch recipes** using common Eurorack modules, or

2. a **genre-focused patch sheet** for **dubstep, drum & bass, or dark ambient** built around the A-151.

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