

Doepfer — A-140

- [Manual PDF](#)
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[Doepfer A-140 ADSR Manual PDF](#)

Doepfer A-140 ADSR — using it to create melodic components

From the attached manual, the module here is the **Doepfer A-140 ADSR**, an envelope generator for the A-100 system. By itself, it does **not generate pitch or audio**, but it is extremely useful for shaping the melodic behavior of other modules in a patch.

What the A-140 does

The A-140 outputs a time-varying control voltage with the classic four stages:

- **Attack**
- **Decay**
- **Sustain**
- **Release**

It has:

- **Gate input**
- **Retrig input**
- **2 normal envelope outputs**
- **1 inverted envelope output**
- **LED envelope indicator**
- **3-position time range switch**
- **H = very slow, up to minutes**

- **M** = medium
- **L** = very fast, down to very short times

The manual notes that it can modulate:

- **VCA**
- **VCF**
- **VCO pulse width**
- **VCO frequency**
- **phase processors**
- **voltage-controlled LFOs**

That means its role in melody is mostly about **articulation, timbre movement, accenting, and pitch contour**.

How it helps create melodic parts

A melodic patch usually needs a few layers working together:

1. **Pitch source** – sequencer, keyboard CV, quantizer, random source
2. **Sound source** – VCO
3. **Tone shaping** – VCF
4. **Amplitude shaping** – VCA
5. **Timing/control** – gate/trigger source
6. **Envelope modulation** – the A-140

The **A-140** turns **static notes into playable phrases**. Even a simple pitch sequence becomes musical once the ADSR shapes loudness, brightness, and motion.

Best musical uses of the A-140 in melodic patches

1. Classic note articulation: ADSR -> VCA

This is the most important melodic use.

Patch

- **Pitch CV** -> VCO 1V/Oct
- **VCO audio out** -> VCF or directly to VCA
- **A-140 Output** -> VCA CV input
- **Gate/keyboard/sequencer gate** -> A-140 Gate

Result

Each note gets a contour:

- **Short attack, short decay, low sustain, medium release** = plucky sequence
- **Fast attack, medium decay, medium sustain, short release** = synth lead
- **Slow attack, high sustain, long release** = pads or swelling melodic lines

Why this matters melodically

The envelope defines whether the melody feels:

- percussive
- legato
- soft
- aggressive
- sustained
- expressive

Even the same pitch sequence can sound like bass, lead, pluck, or pad just by changing the ADSR.

2. Brightness contour: ADSR -> VCF cutoff

This is the second major melodic use.

Patch

- VCO -> VCF audio in
- VCF out -> VCA
- A-140 Output -> VCF CV input
- Same gate source -> A-140 Gate

Result

Each note opens the filter differently over time.

Good settings

- Fast attack
- Short/medium decay
- Lower sustain
- Short release

This gives a note a bright front edge, then a darker body – very useful for melodic phrasing.

Musical effect

This adds:

- note definition
- expressiveness
- dynamic emphasis
- “speaking” synth timbre

For melodic lines, this helps notes feel shaped instead of flat.

3. Simultaneous melodic shaping: one ADSR to both VCA and VCF

The A-140 provides **two identical normal outputs**, so you can split the same envelope without a mult.

Patch

- **Output 1** -> VCA CV
- **Output 2** -> VCF CV
- **Gate source** -> A-140 Gate

Result

One note event controls both: - loudness - brightness

This is one of the most useful “together” functions described by the panel layout.

Why it's good

With one envelope, your melody gets cohesive articulation. The attack of the volume and the attack of the filter rise together, which feels natural and musical.

4. Pitch envelope for melodic attack: ADSR -> VCO FM / pitch CV

The manual specifically mentions **ADSR -> VCO (FM)**.

Patch

- **A-140 Output** -> attenuator or FM input on VCO

- Gate source -> A-140 Gate

Result

The note pitch moves during the envelope.

Musical uses

- Tiny amount: subtle “analog” attack bend
- Medium amount: synth brass or punchy bass transient
- Large amount: dramatic swoops or unstable melodic effects

Best settings

- **Very fast attack**
- **Short decay**
- **Zero or low sustain**
- **Short release**

This creates a pitch blip at note onset.

Important note

Use a **small modulation amount** if you want stable melody. Too much envelope-to-pitch makes notes sound out of tune.

5. PWM movement tied to each note: ADSR -> VCO pulse width

The manual also suggests **ADSR -> VCO (PWM)**.

Patch

- Use a square/pulse wave VCO output
- **A-140 Output** -> PWM CV input
- Gate source -> A-140 Gate

Result

The harmonic content shifts with each note.

Musical effect

This is great for: - animated lead sounds - expressive bass - more vocal-sounding melodic timbres

Why it helps melody

Instead of every note having the same spectral shape, each note has internal motion. That makes repetitive sequences sound more alive.

6. Inverse contour for counter-motion: Inverse Output

One special feature of the A-140 is its **inverted envelope output**.

Patch idea

- **Normal Output** -> VCA CV or VCF CV
- **Inverse Output** -> second modulation destination

Examples

- Normal out -> open filter
- Inverse out -> reduce another parameter at the same time

Or:

- Normal out -> one oscillator's FM depth rises
- Inverse out -> another oscillator's PWM falls

Musical value

This creates **complementary motion**, which is excellent for more complex melodic voices. As one parameter rises, another falls.

That can make a melody feel more animated and intentional.

7. Re-triggered envelopes for rhythmic melodic animation

The **Retrig input** is especially useful.

The manual states that while the gate remains open, pulses arriving at **Retrig** restart the envelope.

Patch

- Long gate or held keyboard note -> **A-140 Gate**
- LFO square, clock, trigger sequencer, or rhythmic pulse -> **Retrig**
- Envelope output -> VCF, VCA, PWM, or pitch amount

Result

A sustained note can contain repeated internal articulations.

Melodic applications

- Held drone with pulsing brightness
- Sustained lead note with repeating attack accents
- Trills or tremolo-like shape when routed to VCA
- Repeated filter pecks on a long note

Why this is musically powerful

You can make **one pitch behave like a phrase** instead of a static sustained note.

This is excellent for: - Berlin-school sequences - pulsing leads - ratcheting-style melodic textures - expressive sustained solos

Practical melodic patch recipes

Patch 1: Simple monosynth melody

Connections

- Sequencer pitch CV -> VCO 1V/Oct
- Sequencer gate -> A-140 Gate
- VCO saw -> VCF in
- VCF out -> VCA in
- A-140 Output 1 -> VCA CV
- A-140 Output 2 -> VCF CV

Suggested ADSR

- Attack: low
- Decay: medium
- Sustain: medium-low
- Release: short-medium
- Time Range: M

Sound

A classic articulate melodic line with punch and contour.

Patch 2: Plucky sequence

Connections

Same as above

Suggested ADSR

- Attack: 0
- Decay: short
- Sustain: 0 or very low
- Release: short
- Time Range: M or L

Sound

Short plucked notes, ideal for arpeggios and sequenced melodies.

Patch 3: Expressive lead

Connections

- Keyboard/sequencer gate -> A-140 Gate
- A-140 Output 1 -> VCA CV
- A-140 Output 2 -> VCF CV
- Optional: small amount of envelope -> VCO FM

Suggested ADSR

- Attack: very short
- Decay: medium
- Sustain: medium-high
- Release: medium
- Time Range: M

Sound

Lead voice with a touch of filter movement and optional pitch attack for expression.

Patch 4: Long evolving melody

Connections

- Pitch sequence -> VCO
- Gate -> A-140 Gate
- A-140 -> VCF and/or VCA
- Time Range -> H

Suggested ADSR

- Attack: long
- Decay: long
- Sustain: medium
- Release: long

Sound

Slow melodic swells and evolving phrase lines, useful for ambient or cinematic music.

Patch 5: Pulsing sustained note with retrigger

Connections

- Held gate -> A-140 Gate
- Clock or LFO pulse -> Retrigger
- Envelope output -> VCF CV

Suggested ADSR

- Attack: fast
- Decay: medium
- Sustain: low
- Release: short

Sound

A sustained pitch with repeated note-like accents in tone.

This is very effective when a melody note needs internal rhythm.

Patch 6: Accent programming with envelope-to-pitch

Connections

- Sequence CV -> VCO 1V/Oct
- Gate -> A-140 Gate
- A-140 Output -> attenuated VCO FM input

Suggested ADSR

- Attack: 0
- Decay: short
- Sustain: 0
- Release: short
- Time Range: L or M

Sound

Each note has a small pitch kick at the start, great for punchy bass melodies.

How the time range switch changes musical behavior

The **Time Range** switch is very important for melodic use.

L (low)

Very fast envelopes.

Best for: - clicks - plucks - percussive bass - sharp filter attacks - tight sequencer lines

M (medium)

General-purpose melodic work.

Best for: - leads - basses - normal keyboard articulation - standard synth phrasing

H (high)

Very slow envelopes.

Best for: - swelling notes - ambient melody - slow filter sweeps tied to note events - long releases between phrases

How to think about the inverted output musically

The inverted output is easy to overlook, but it can be very useful in melodic design.

Example uses

- Normal out -> VCA, inverse out -> negative filter modulation
- Normal out -> oscillator pitch rise, inverse out -> second oscillator pitch fall
- Normal out -> open one VCA, inverse out -> close another VCA

Melodic result

This allows: - timbral crossfades - push-pull movement - note-dependent contrast - more complex phrase articulation

It's especially good when building a melody voice from multiple oscillators or parallel signal paths.

Limitations to keep in mind

From the manual, the A-140 is an **envelope generator only**. So to create full melodic components, you still need other modules such as:

- **VCO** for pitch/audio generation
- **VCA** for amplitude control
- **VCF** for tone shaping
- **Sequencer / keyboard / MIDI-CV** for pitch and gate

So the A-140 is not the melody source, but rather the module that makes a melody **musical, shaped, and expressive**.

Best “used together” roles in a melodic system

If you are combining this module with standard Eurorack voice modules, the strongest pairings are:

A-140 + VCA

For note articulation and dynamics

A-140 + VCF

For brightness contour and expressive phrasing

A-140 + VCO PWM

For animated timbre per note

A-140 + VCO pitch/FM

For pitch attack and synth-style transient shaping

A-140 + clock/LFO via Retrigger

For repeated articulation inside sustained melodic notes

A-140 normal + inverse outputs together

For complex counter-moving modulations in a melody voice

Bottom line

The **Doepfer A-140 ADSR** is one of the core modules for turning a raw pitch sequence into an actual melodic performance.

Its biggest strengths for melodic patching are:

- shaping **volume** with a VCA
- shaping **brightness** with a VCF
- adding **pitch attack** to a VCO
- animating **PWM**
- using **retriggering** for rhythmic internal motion
- using **normal and inverted outputs** for richer note behavior

If you patch it into both the **VCA and VCF** of a voice, you already have the foundation of a very playable melodic synthesizer voice. Add a sequencer or keyboard CV, and the A-140 becomes the articulation engine that gives your melodies life.

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