

Tiptop Audio — Fold Processor

- [Manual PDF](#)
-

[Manual PDF](#)

Tiptop Audio Fold Processor: using it for melodic parts

From the manual, this module has **two linked analog sections**:

1. **Wavefolder**
2. Audio goes in at **IN 1 / IN 2**
3. Main controls: **FOLD** and **INJECT**
4. Both can be modulated with CV via:
 - **FOLD CV** + attenuator
 - **INJECT CV** + attenuator
5. Main folded sound comes out of **OUT**
6. **Subdivider / square & divide section**
7. Fed internally from the folded output
8. Mixed output at **SUBDIV OUT**
9. Four octave-related divisions with level knobs:
 - **÷1**
 - **÷2**
 - **÷4**
 - **÷8**

The manual specifically demonstrates pairing it with: - a **Tiptop Z2040** self-oscillating filter as a sine source, or - a **Z3000** sine output, - plus optionally an **LFO** - and even **Z-DSP** delay/feedback ideas.

So if your goal is **melodic content**, the Fold Processor is best understood as a **timbre and octave-generation voice shaper**, not a pitch source by itself.

What this module contributes musically

For melody writing, the Fold Processor helps in three main ways:

1. It adds harmonic richness to simple pitched material

If you feed it a **sine or triangle** from a VCO, or a **self-oscillating filter sine**, the **FOLD** control adds upper harmonics while preserving the underlying pitch.

This is ideal for: - making a plain melody line more vivid - animating sustained notes - creating expressive lead tones - turning a basic bass sequence into something more vocal or metallic

This is classic wavefolding behavior: the pitch remains the same, but the overtone content becomes more complex.

2. It creates musically related sub-octaves

The **SUBDIV OUT** gives you divided versions of the already-processed signal, with four mixable divisions spaced by octaves.

That makes it useful for: - sub-octave bass reinforcement - adding lower octave layers under a melody - generating organ-like stacked octave textures - making a monophonic line feel fuller and more harmonically anchored

Because the divisions are mixed with separate gain knobs, you can dial in: - just a single lower octave - a thick 2-octave bass stack - a complex pulse-rich harmonic bed underneath a lead

3. It introduces movement through CV

The manual emphasizes that **FOLD** and **INJECT** are both voltage controllable.

That means a melody can evolve over time by modulating: - fold depth - offset/injection amount - the behavior of the subdivider indirectly, since it follows the folded signal

This is especially effective for: - accents - phrasing changes - timbral variation per note - dynamic bass textures - pseudo-sequenced harmonic shifts even when pitch stays fixed

Best melodic pairings from the manual

1. Z2040 + Fold Processor

The manual's first patch uses the **Z2040** in self-oscillation as a natural sine source.

Why this works melodically

A self-oscillating filter can track pitch and act like a sine oscillator. Feeding that into the Fold Processor gives you: - a clean base tone from the Z2040 - a harmonically enriched lead/bass voice from the Fold Processor - controllable timbre without losing clear pitch identity

Melodic use cases

- **Lead voice:** sequence the Z2040 pitch, send its output to Fold, and animate FOLD with slow CV
- **Bassline:** use lower notes, then blend in $\div 2$ and $\div 4$ at SUBDIV OUT

- **Plucked melodic line:** use envelope-driven modulation to FOLD CV for note-by-note brightness changes
-

2. Z3000 sine output + Fold Processor

The manual also suggests using the **Z3000 sine output** if you don't have the Z2040.

Why this is strong for melody

A stable sine VCO into a wavfolder is one of the most reliable ways to build: - articulate melodies - FM-adjacent tones - west-coast-style expressive voices

Good melodic patch ideas

- **Simple lead:** Z3000 sine → Fold IN1 → OUT
 - **Animated sequence:** sequence pitch on Z3000, patch LFO or envelope into FOLD CV
 - **Bass melody with body:** use SUBDIV OUT and mix in $\div 1 + \div 2$
-

3. LFO + Fold CV for evolving phrases

On page 3, the manual shows an **LFO patched to FOLD CV** while listening to **SUBDIV OUT**.

What this does musically

This does not change the note pitch directly, but it changes the overtone profile and how the divide circuit reacts.

For melodies, this gives: - changing articulation across sustained notes - rhythmic animation - "talking" or pulsing harmonic motion - movement in octave layers

Best applications

- sustained melodic drones
 - sequenced basslines with subtle motion
 - repeated arpeggios that need more life
 - evolving ostinatos
-

4. Z-DSP after Fold Processor

The manual suggests adding **delay from the Z-DSP**, or putting Fold in the **feedback path**.

Melodic role

This turns the Fold Processor from a simple timbre tool into a phrase-sculpting effect.

Useful for: - melodic echoes with increasingly folded harmonics - dubby sub-octave bass repeats - dense lead textures - feedback melodies that grow more unstable and expressive

How to build melodic voices with this module

Patch 1: Expressive folded lead

Goal: a playable or sequenced lead voice

Patch - VCO or self-oscillating Z2040 sine → **Fold IN1** - **Fold OUT** → VCA / filter / mixer / output - Envelope or slow CV → **FOLD CV** - Optional second modulation source → **INJECT CV**

Result - clean pitch center - harmonic complexity per note - animated lead tone without needing multiple oscillators

Tip Keep FOLD moderate for tonal melodies. High settings can become noisy or unstable.

Patch 2: Melodic bass with octave reinforcement

Goal: a bassline that stays melodic but gains weight

Patch - Sine/triangle VCO → **Fold IN1** - Use **SUBDIV OUT** - Bring up: - ÷1 for original folded core - ÷2 for one octave down - optionally ÷4 for extra depth

Result - thick, organ-like or synth-bass character - strong melodic center - richer low-end from a single source

Tip For clear bass melodies, use less folding and lower levels on the deepest divisions.

Patch 3: Evolving melody from one oscillator

Goal: make a repetitive sequence feel harmonically alive

Patch - Sequenced oscillator → **Fold IN1** - Slow LFO → **FOLD CV** - Different slow or offset CV → **INJECT CV** - Monitor **OUT** or **SUBDIV OUT**

Result - every repetition has slightly different harmonic behavior - melodic phrases breathe over time - can sound like subtle filtering, PWM, or timbral sequencing

Patch 4: Call-and-response lead and sub layer

Goal: use both outputs in a larger patch

Since the subdivider is fed from the folded output internally, you can use: - **OUT** as the brighter main melody - **SUBDIV OUT** as a lower shadow voice

Patch - Oscillator → Fold - **OUT** → main melodic chain - **SUBDIV OUT** → second VCA/mixer channel

Result - top voice and low octave support from one source - easy layered melodic phrasing - useful for techno leads, electro basses, and cinematic monosynth lines

Important musical behavior from the manual

The sound depends heavily on the input signal

The manual says results are “heavily dependent on the type of incoming signal.”

For melodic use, that means:

Best inputs

- sine
- triangle
- self-oscillating filter
- simple VCO waveforms

These preserve pitch clarity and produce the most controlled melodic results.

More aggressive inputs

- samples
- drums
- already-complex waveforms

These can work, but the Fold Processor behaves more like **analog distortion** than classic melodic wavefolding.

So for melody: - use simple waveforms when you want tonal precision - use complex material when you want broken, gritty, industrial phrases

INJECT can create “dead zones”

The manual mentions the INJECT control may create a **dead zone**, especially near edges.

Musically, this means: - not all knob positions will respond smoothly - some settings may seem to reduce activity - this is normal and part of the circuit character

In performance, use this intentionally: - dead zones can create contrast - sweeping in and out of them can give expressive transitions - they're especially dramatic on the subdivider

The subdivider can get “totally wild”

The manual warns that with Fold and Inject sweeps: - octaves move in and out - pulses get pulse-width modulated - the sound can range from sweet to destructive

For melodic work, this means the subdivider is best used in two modes:

Controlled mode

- modest FOLD
- modest INJECT
- one or two subdivision levels only

Good for: - basslines - octave doubling - tonal accompaniment

Wild mode

- stronger folding
- active modulation
- multiple divisions mixed

Good for: - aggressive hooks - experimental melodies - broken arpeggios - transitions and fills

Practical strategies for melodic composition

Use OUT when melody clarity matters

If the tune itself is the focus, the **OUT** jack is usually the better choice.

Use it for: - lead lines - melodic arps - motif definition - parts that must track pitch clearly

Use SUBDIV OUT when harmony-by-octave matters

If you want one note to sound like a stacked instrument, use **SUBDIV OUT**.

Use it for: - bass foundations - octave chorusing - drone melodies - single-note riffs that need more size

Modulate timbre, not pitch

The Fold Processor does not quantize or create scales. Its melodic role is:
- shaping harmonics - adding octave divisions - making one pitch line sound more musically complex

So pair it with: - sequencers - keyboard CV - quantized random CV - tuned self-oscillating filters or VCOs

That gives you a proper melodic source, while Fold adds expression and depth.

A few strong “musician” patch recipes

West-coast style melody voice

- Sine oscillator → Fold IN1
- OUT → LPG or VCA
- Envelope → amplitude
- Slow envelope/LFO → FOLD CV

Great for: - plucks - woody leads - animated monosynth lines

Octave bass melody

- Oscillator → Fold
- SUBDIV OUT → VCA/filter
- Raise $\div 1$ and $\div 2$, tiny bit of $\div 4$
- Sequence the source oscillator

Great for: - techno bass - electro lines - synthwave support bass

FM-adjacent melodic texture

The manual suggests patching **OUT into the FM input of a VCO**.

Try: - VCO A sine → Fold - Fold OUT → FM input of VCO B - Sequence VCO B as main melody - Use VCO A as harmonic animator

Great for: - glassy tuned leads - unstable melodic tones - metallic but musical voices

Melodic delay line

- Oscillator → Fold → Z-DSP delay
- Sequence oscillator
- Modulate FOLD slowly

Great for: - ambient melodies - dub sequences - repeating motifs that evolve harmonically

Bottom line

The **Tiptop Fold Processor** is not primarily a melody generator; it is a **melodic enhancer and octave sculptor**.

Used with modules referenced in the manual—especially a **Z2040**, **Z3000**, **LFO**, and **Z-DSP**—it can create:

- expressive folded leads
- octave-rich basslines
- animated mono melodies
- evolving arpeggios
- distorted melodic hooks
- sub-octave accompaniment from a single oscillator

For the most musical and pitch-stable results: - feed it simple, tuned waveforms - use **OUT** for clarity - use **SUBDIV OUT** for octave layering - modulate **FOLD** and **INJECT** for phrasing and movement

[Generated With Eurorack Processor](#)