

# Tiptop Audio – MISO

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- [Manual PDF](#)

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[Tiptop Audio MISO Manual PDF](#)

## Tiptop Audio MISO – using it to create melodic components in a Eurorack system

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MISO is a **CV and signal utility** built around four core functions:

- **Mix**
- **Invert**
- **Scale**
- **Offset**

From the manual, the module contains:

- **Top section:** channels **1** and **2**
- **Bottom section:** channels **A** and **B**
- Each channel has:
  - **Input**
  - **Scale/Invert knob**
  - **Offset knob**
  - **Output**
- Each pair has a **mix output**
- **1+2**
- **A+B**
- The center section is a **voltage-controlled crossfader**
- Crossfades between **1+2** and **A+B**
- Final output is the  **$\Sigma$  (sigma) output**

This makes MISO extremely useful for melody building, because melodic CV in Eurorack is often just a combination of:

- pitch source
  - transposition
  - attenuation/scaling
  - inversion
  - offsetting into a musically useful range
  - mixing multiple modulation sources into one destination
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## What MISO does musically

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MISO does **not generate quantized notes by itself**, but it is excellent for shaping control voltage into melodic behavior.

You can use it to:

- combine two or more pitch-related CVs
- make a sequence narrower or wider in interval range
- invert a sequence around a center point
- add manual transposition
- fade between two different melodic contours
- create related counter-melodies from one source
- mix slow modulation into pitch for evolving phrases
- prepare CV before sending it to a quantizer or oscillator 1V/oct input

If you have sequencers, LFOs, sample & hold, random voltage, or envelopes in your system, MISO can turn them into much more musical pitch material.

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# Core melodic uses

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## 1. Manual transposition of a melody

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The most immediate melodic use is **offset as transposition**.

### Patch

- Sequencer pitch CV → **IN 1**
- **OUT 1** → oscillator **1V/Oct**
- Use channel 1 **Scale/Invert** to set pitch amount
- Use channel 1 **Offset** to shift the whole melody up or down

### Result

- The original melody stays intact
- Offset acts like a **transpose control**
- Great for moving a riff between verse/chorus ranges

If your sequencer output is already at a proper 1V/oct level, keep scale near unity and use offset carefully.

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## 2. Tightening or widening interval range

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Scale control is excellent for changing how wide a melody moves.

### Patch

- Pitch sequence CV → **IN 1**
- **OUT 1** → quantizer or oscillator pitch input

### Use

- Turn **Scale/Invert** right:
- wider melodic leaps

- more dramatic interval motion
- Turn toward center:
- smaller note movement
- more repetitive or hook-like phrases
- Turn left:
- interval pattern is inverted

## Musical effect

A rising melody can become:

- compressed into a narrow motif
- expanded into wide leaps
- mirrored into a descending contour

This is one of the best uses of MISO for composition.

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## 3. Inverting a melody into a counter-line

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Because the scale knob is bipolar, MISO can create an **inverted contour**.

### Patch

- Melody CV → **IN 1**
- **OUT 1** → second oscillator or second quantizer channel
- Turn Scale/Invert negative

### Result

You get a melodic line that moves opposite the original: - when the original goes up, the new one goes down - when the original goes down, the new one rises

Add offset afterward to place the inverted line into a useful register.

This is very effective for: - bassline vs lead relationships - pseudo-counterpoint - mirrored arpeggios

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## 4. Mixing two melodic CV sources

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The pair mixer outputs (**1+2, A+B**) are ideal for building composite melodies.

### Patch

- Sequencer A pitch CV → **IN 1**
- Slow random or second sequencer → **IN 2**
- Take **1+2 OUT** to quantizer or oscillator pitch

### Result

You get a pitch line that is the sum of: - the main melody - a secondary motion source

### Good combinations

- steady sequence + slow triangle LFO
- sequencer + sample-and-hold
- arpeggio + envelope
- bassline + manual offset voltage

### Musical use

This can create: - phrase variation - evolving transposition - melodic drift - ornamentation

If the result is too wild, reduce one source with its Scale/Invert knob.

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## 5. Creating call-and-response melodies with the crossfader

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The center crossfader is one of MISO's strongest compositional features.

It crossfades between:

- **1+2**
- **A+B**

## **Patch**

**Top section** - Main sequence CV → **IN 1** - Slow transposition source → **IN 2**

**Bottom section** - Alternate sequence or inverted version → **IN A** - Another modulation source → **IN B**

Then: - Take  **$\Sigma$  output** to quantizer or oscillator pitch - Use the center crossfader manually or with CV

## **Result**

You can move between two melodic worlds:

- section one: stable phrase
- section two: variation, inversion, or alternate pattern

## **Musical effect**

This works beautifully for: - verse/chorus transitions - A/B phrase morphing - switching between root-position and transposed patterns - evolving melodic scenes in generative patches

If you modulate the crossfader with a slow CV, the melody can gradually morph over time.

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# Best ways to use MISO with common melodic modules

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## With a sequencer

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MISO can sit between sequencer and oscillator/quantizer.

Use it to: - transpose - invert - compress note range - mix another CV with the sequence - create a second related line

### Example

- Sequencer pitch → IN 1
- Manual offset on channel 1 = key change
- LFO into IN 2
- 1+2 out → quantizer → oscillator

This gives a stable sequence with controlled movement.

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## With a quantizer

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This is one of the best combinations.

MISO is especially powerful **before** a quantizer.

### Why

MISO can generate continuously variable CV combinations, and the quantizer turns them into notes in a scale.

### Patch

- Random CV / LFO / sequence / mixed sources → MISO
- **Σ output** → quantizer input
- Quantizer output → oscillator 1V/oct

## Result

MISO shapes raw pitch behavior, while the quantizer makes it musical.

This setup is ideal for: - generative melodies - transposable motifs - harmonically safe experimentation

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## With oscillators

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You can use MISO as a pitch processor directly.

### Single oscillator

- Process pitch CV before oscillator 1V/oct input

### Dual oscillator

- Same source split into two MISO channels
- One normal, one inverted/scaled/offset
- Send each to a different oscillator

This gives: - harmonized motion - contrary motion - octave shifts - bass/lead relationships

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## With LFOs and envelopes as melody sources

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The manual explicitly shows MISO being used with LFOs into filter CV, but the exact same idea works for pitch.

### Example

- Saw LFO → IN 1
- Sine LFO → IN 2
- 1+2 out → quantizer → oscillator

Now MISO mixes two cyclic voltages into repeating melodic shapes.

Change: - one scale amount - one offset - one polarity

and the pattern changes dramatically.

This is a powerful way to make: - pseudo-sequences without a sequencer - looping melodic phrases - shifting arpeggio-like structures

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## Practical melodic patch ideas

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### Patch 1: Simple transposable melody

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#### Goal

Basic lead or bassline with hands-on transposition

#### Patch

- Sequencer pitch CV → **IN 1**
- **OUT 1** → oscillator **1V/oct**
- Gate from sequencer → envelope/VCA as usual

#### Play it

- Use **Offset 1** to transpose
- Use **Scale/Invert 1** to reduce or exaggerate interval motion

#### Best for

- basslines
  - live performance tweaking
  - moving a pattern between sections
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## Patch 2: Inverted counter-melody

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### Goal

Create a second melodic voice from the first

### Patch

- Mult original pitch CV
- Copy 1 → oscillator A
- Copy 2 → **IN 1** on MISO
- **OUT 1** → oscillator B
- Set Scale/Invert negative
- Adjust Offset to place oscillator B in a good range

### Result

A mirrored melodic relationship between two voices.

### Best for

- duophonic lines
- ambient counterpoint
- techno bass + lead interplay

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## Patch 3: Sequence plus controlled randomness

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### Goal

Add variation without losing musicality

### Patch

- Main sequence CV → **IN 1**

- Random stepped CV → **IN 2**
- **1+2 OUT** → quantizer → oscillator

## Tune it

- Keep channel 1 fairly strong
- Keep channel 2 subtle
- Use Offset to center the notes around the right register

## Result

You preserve motif identity while adding melodic surprise.

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# Patch 4: Morphing between two melodies

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## Goal

Continuous A/B melodic movement

## Patch

- Sequence A → **IN 1**
- Supporting CV for A phrase → **IN 2**
- Sequence B → **IN A**
- Supporting CV for B phrase → **IN B**
- **Σ output** → quantizer → oscillator
- Slow LFO → **crossfade CV**

## Result

The melody drifts between two distinct phrase structures.

## Best for

- generative music
- soundtrack work

- slowly evolving minimalism
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## Patch 5: Four-source melodic generator

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### Goal

Build a complex note stream from several simple voltages

### Patch

- Slow triangle LFO → IN 1
- Fast sample & hold → IN 2
- Envelope → IN A
- Sequencer row or keyboard CV → IN B
- $\Sigma$  out → quantizer → oscillator

### Use

- Tune each scale amount carefully
- Use offsets to bias each side
- Move the crossfader to emphasize different phrase families

### Result

A rich melodic source with macro-level control.

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## How to think about MISO for melody

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A useful way to think about MISO is:

# It is a pitch-composition utility

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It lets you sculpt melodic voltage before that voltage becomes notes.

Each function corresponds to a musical idea:

- **Scale** = interval size
- **Invert** = reverse contour
- **Offset** = transpose/register shift
- **Mix** = combine motifs or influences
- **Crossfade** = move between phrase identities

That is exactly the kind of processing that makes melodies feel written rather than merely generated.

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## Important cautions for pitch use

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From the manual:

- input range: **±10V**
- output range: **±10V**
- max offset: **±10V**
- crossfade CV range: **±10V**

## Practical considerations

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### 1. Watch 1V/oct precision

MISO is a utility processor, not specifically described in the manual as a precision adder.

So for pitch CV:

- use your ears
- test tracking over several octaves
- it may be perfect for musical use, but don't assume laboratory precision over huge ranges

For most melodic and transposition tasks in a practical patch, it should still be very useful.

## 2. Quantizer helps a lot

If you're mixing LFOs/random voltages for melody, patch MISO into a quantizer to keep things scale-locked.

## 3. Offset can push pitch too far

Because offset range is large, small knob moves can significantly shift register. This is great for performance, but easy to overdo.

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# Best musical roles for MISO in a melodic rack

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MISO is especially good as:

- a **pre-quantizer CV composer**
- a **manual transposer**
- an **inversion and interval shaper**
- a **dual melody morpher**
- a **source of related pitch lines**
- a **performance macro control for melodic variation**

It is less a "melody generator" by itself and more a **melody transformer and organizer**.

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# Summary

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From the manual, MISO gives you four processed channels, two submixes, and a voltage-controlled crossfader. In melodic patching, that means you can:

- scale a melody's interval range
- invert melodic contour
- offset/transposition-shift pitch CV
- mix multiple CV sources into one note stream
- build two separate melodic layers and fade between them
- derive basslines, harmonies, and variations from one source

In real musical use, MISO shines when placed:

- **between CV sources and oscillators**
- **before a quantizer**
- **between one sequencer and multiple voices**
- **as a performance control surface for melodic morphing**

If you want, I can also turn this into: 1. a **set of concrete patch recipes** for techno / ambient / generative styles, or

2. a **signal-flow diagram** showing exactly how to patch MISO with sequencers, quantizers, and oscillators for melody.

[Generated With Eurorack Processor](#)