

2hp – Swarm

- [Manual PDF](#)
-

[Manual PDF](#)

2hp Swarm: using it for melodic parts

Based on the manual, **2hp Swarm** is a **hyper oscillator / supersaw-style voice source** designed to generate thick, animated pitched tones from a very small footprint. On its own, it is primarily an oscillator, but the manual also points to a few ideal companion modules for turning it into a complete **melodic voice**:

- **Swarm**: pitched sound source
- **EG**: envelope for note articulation
- **VCA**: amplitude control
- **MMF**: tone shaping / filtering
- **Lo-Fi**: coloration and character

What Swarm does well musically

Swarm is built for **stacked oscillator textures**:

- **Freq** sets the main pitch and tracks **1V/oct**
- **Voices** changes how many oscillators are active
- **Detune** spreads those oscillators apart for width and motion
- **Wave toggle** switches between:
 - **Saw**: classic supersaw / trance / lead / pad character
 - **Pulse**: narrower, more hollow, reed-like or aggressive tone

Voice count behavior

The manual gives useful detail here:

- fully CCW on **Voices** = **1 oscillator**
- center = **20 oscillators**
- fully CW = **dozens**
- up to **88 oscillators for Saw**
- up to **55 oscillators for Pulse**

That means Swarm can move from:

- a relatively simple mono oscillator
- to a very dense unison lead
- to a huge swarm pad/drone source

This makes it especially strong for **melodic hooks, trance leads, hardstyle stabs, lush harmonies, and animated basses.**

Core melodic patch: Swarm as a playable synth voice

The most straightforward use is to build a standard subtractive-style monosynth voice.

Patch

1. Send a **sequencer or keyboard 1V/oct CV** to **Swarm Freq input**
2. Send **Swarm OUT** to **VCA IN**
3. Send **EG OUT** to **VCA CV**
4. Send **gate/trigger** from your sequencer to **EG TRIG**
5. Send **VCA OUT** to your mixer/output

Result

This gives you:

- pitch from your sequencer

- note starts/stops from the EG and VCA
- a playable melodic line with Swarm's unison texture

Good starting settings

- **Voices:** around 9–11 o'clock for a focused unison lead
- **Detune:** low to moderate, around 9–12 o'clock
- **Wave:**
- **Saw** for trance, EDM, anthemic lines
- **Pulse** for sharper, chiptune-ish, nasal, or edgy melodies

This is the minimum patch for **riffs, basslines, arpeggios, and lead melodies**.

Better melodic patch: add MMF for classic synth movement

The manual strongly suggests **MMF** with Swarm, and musically that makes a lot of sense. Swarm is harmonically rich, especially in saw mode, so a filter gives you dynamic control over brightness.

Patch

1. **Swarm OUT** → **MMF INPUT**
2. Choose one MMF output:
3. **LP** for smoother leads and basses
4. **HP** for thinner trance leads
5. **BP** for focused, vocal-like tones
6. **MMF output** → **VCA IN**
7. **EG OUT** → **VCA CV**
8. Optional: mult the same envelope or use another modulation source to **MMF FREQ CV** if available in your system

Musical uses

- **Low-pass:** warm basslines, classic synth leads, pads

- **High-pass:** uplifting trance leads that sit above a mix
- **Band-pass:** more cutting melodic hooks

Why this works

Swarm produces a lot of harmonic content. Filtering lets you: - tame the density - create build-ups and transitions - animate repeated melodic phrases - make different registers feel distinct

A simple 8-note sequence through Swarm can become much more expressive just by sweeping the filter.

Expressive note shapes with EG

The manual describes **EG** as useful for shaping “super-saw stabs,” and that’s exactly one of Swarm’s strongest applications.

Fast pluck / stab

Use: - fast attack - short decay - moderate amplitude

This is great for: - trance chords - gated melodic stabs - hard dance riffs - percussive bass sequences

Longer envelope

Use: - medium attack - longer decay

This is better for: - legato melodies - pad-like phrases - swelling harmonic lines

Because Swarm can sound very big very quickly, even modest envelope shaping gives strong rhythmic definition.

Using Voices as a musical performance control

One of the most interesting melodic uses of Swarm is that **Voices** acts like a macro density control.

Practical musical applications

1. Verse to chorus expansion

- keep **Voices** lower during sparse sections
- raise it for choruses or climaxes

This makes the same melody feel like it “opens up” without changing the notes.

2. Bass to lead morph

- lower voices for bassline passages
- increase voices and detune for lead sections

3. Accent selected notes

If you can modulate **Voices CV**, you can increase oscillator count on certain steps to emphasize accents in a sequence.

Important tonal effect

As you add voices: - the sound gets wider - harmonics and beating increase - pitch perception becomes more “ensemble-like”

This is excellent for emotionally larger melodic gestures.

Using Detune musically

The manual notes:

- first half of the knob = **tasteful detune**

- second half = **chaotic detune**

That suggests two broad melodic zones.

Low to moderate detune

Best for: - melodic clarity - basslines - chord-like intervals implied by the swarm - stable leads

Use this when the notes need to remain clearly defined.

High detune

Best for: - euphoric leads - noisy risers - unstable drones - huge transitions

At extreme settings, pitch center becomes less precise, so it's often better for: - sustained notes - breakdown textures - dramatic fills

Sequencing tip

A small amount of modulation to **Detune CV** can bring life to repeated phrases: - slightly more detune on longer notes - detune opening during phrase endings - subtle LFO for constant motion

Saw vs Pulse for melodic writing

The waveform switch is a major compositional choice.

Saw mode

Best for: - supersaw leads - lush arps - chordal illusions - trance/hard dance hooks - wide melodic pads

Because saw waves are bright and harmonically dense, this is likely the most iconic Swarm sound.

Use saw when you want:

- width
- richness
- emotional “anthem” energy
- strong filter interaction

Pulse mode

Best for: - tighter basses - more hollow melodies - retro/electro tones - sharper riffs

Pulse can cut differently in a mix and can feel more focused than saw despite still being stacked.

Use pulse when you want:

- cleaner separation
- more nasal or woody tone
- less wash than saw
- strong rhythmic articulation

Swarm for basslines

Even though Swarm looks like a lead machine, it should be excellent for **melodic bass content**.

Bass patch

1. **Pulse** or **Saw** depending on brightness needed
2. Keep **Voices** lower to moderate
3. Use **Detune** lightly
4. Send through **MMF low-pass**
5. Shape with **EG + VCA**

Result

You can get: - rolling techno bass - wide trance bass - distorted rave bass if followed by Lo-Fi - squelchy bass when MMF resonance is used creatively

For bass, less is often more: - too many voices can blur the low end - too much detune can weaken pitch definition

Swarm for leads

This is where the module likely shines most.

Lead patch recipe

- **Saw mode**
- **Voices** at medium-high
- **Detune** at low-medium
- **MMF high-pass or low-pass depending arrangement**
- **EG** set for fast attack and medium decay
- optional **Lo-Fi** after the VCA or filter

Why it works

You get: - width without needing multiple oscillators - instant “produced” sound - a large stereo-like psychoacoustic feel even in mono contexts due to beating and density

This is ideal for: - trance melodies - festival lead lines - octave riffs - arpeggiated hooks

Swarm for chord-like melodic textures

Swarm does not appear to be a chord generator in the strict sense, but because of the stacked oscillators and detune spread, it can create **chord-adjacent massed harmony textures**.

Ways to use it

- sustain single notes for lush pseudo-chord presence
- sequence simple melodies and let the swarm create harmonic thickness
- layer two Swarm takes or two separate melodic lines for very dense arrangements

This is especially useful if you want: - big harmonic impact from minimal sequencing - cinematic monophonic melodies - thick drone-based tonal centers

Adding Lo-Fi for character melodies

The manual recommends **Lo-Fi** as a companion and gives two broad directions:

- **digital mode** for crunch
- **analog mode** for wobble/vintage character

Melodic uses

Digital mode

Good for: - aggressive leads - bit-crushed arps - harsh rave melodies - modern distorted hooks

This can help Swarm cut in a dense track.

Analog mode

Good for: - woozy synth lines - nostalgic melodies - unstable tape-ish phrases - warped ambient leads

This is a great pairing when you want the swarm sound to feel less pristine and more emotional or haunted.

A few practical melodic patch examples

1. Trance supersaw lead

Patch - Sequencer 1V/oct → Swarm Freq - Gate → EG TRIG - Swarm OUT
→ MMF INPUT - MMF HP or LP → VCA IN - EG OUT → VCA CV - VCA OUT
→ mixer

Settings - Wave: **Saw** - Voices: medium-high - Detune: low-medium - EG:
fast attack, medium decay - MMF: slightly bright, maybe some movement

Result Classic soaring lead for arps or main melody.

2. Hard dance stab

Patch Same as above

Settings - Wave: **Saw** - Voices: medium - Detune: moderate - EG: very fast
attack, short decay - MMF: brighter cutoff - Optional Lo-Fi after VCA

Result Punchy rhythmic stabs with lots of mass.

3. Animated bassline

Patch - Sequencer → Swarm Freq - Swarm → MMF LP - MMF → VCA - EG
→ VCA CV

Settings - Wave: **Pulse** - Voices: low-medium - Detune: low - MMF cutoff:
moderate to low - resonance to taste

Result A more controlled, musical bass where Swarm adds body without
becoming too smeared.

4. Nostalgic warbly melody

Patch - Swarm → VCA → Lo-Fi or - Swarm → MMF → VCA → Lo-Fi

Settings - Wave: Pulse or Saw - Voices: medium - Detune: gentle - Lo-Fi in analog mode

Result A melodic line with movement and imperfection, useful for ambient, synthwave, or indie electronic styles.

5. Expanding sequence

Use a repeating melodic sequence and manually perform: - **Voices** - **Detune** - filter cutoff on MMF

Start with: - low voices - low detune - darker filter

Then build toward: - more voices - more detune - brighter filter

Result A full arrangement arc from a single simple melodic pattern.

Best role of each module in a melodic system

Swarm

Primary pitch source. Best for: - leads - basses - drones - thick arps - melodic unison textures

EG

Makes notes articulate musically. Best for: - stabs - plucks - envelopes for melodic phrasing

VCA

Essential for turning Swarm into an actual sequenced voice.

MMF

Shapes brightness and movement; helps fit Swarm into a mix.

Lo-Fi

Adds identity and vibe; useful when the clean supersaw sound feels too straightforward.

Most complete melodic chain from the manual's suggestions

A very strong full voice using only the pairings mentioned would be:

Pitch CV / Gate source → **Swarm** → **MMF** → **VCA** → **Lo-Fi** → **output**
with
Gate → **EG** → **VCA CV**

This gives you:

- pitch tracking
- note articulation
- subtractive tone shaping
- character processing

That is a complete melodic signal path for: - basslines - hooks - arpeggios - stabs - soaring leads

Summary

From the manual, **2hp Swarm** is best understood as a **compact supersaw / hyper-oscillator for melodic synthesis**. Its strength is not just in making a single waveform, but in giving you a **macro-controlled stack of many oscillators** that can range from focused and playable to huge and chaotic.

Used together with the modules suggested in the manual:

- **Swarm** provides the pitch and harmonic density
- **EG + VCA** turn it into a properly articulated melodic voice
- **MMF** sculpts it into basses, leads, and transitions
- **Lo-Fi** adds color, grit, or vintage instability

If your goal is melodic electronic music, this set is especially well suited for:

- trance leads
- supersaw riffs
- rave stabs
- wide mono basses
- animated arpeggios
- lush sustained hooks

[Generated With Eurorack Processor](#)