Modulaire Maritime — Phosgène Wavetable FM Oscillator

- Manual PDF

Manual PDF / source page

Modulaire Maritime Phosgène — patch ideas and creative uses

Phosgène looks like a **2hp digital wavetable/FM oscillator** with a pretty unusual character:

- **60 wavetables** in **2 banks of 30**
- **Two parallel sound paths / outputs**:
- **Waveshaping / folded wavetable output**
- **FM output**
- **Shared controls** influence both paths differently
- **External CV** can push wave/folding/FM behavior further
- **100 Hz FM base** for a darker, tighter, less splashy FM spectrum
- **Tracks 1V/oct across 8 octaves**
- **Octave up/down switch**
- **Octave displace function** for shifting wavetable range lower while leaving FM range intact
- **11-bit-ish lower-resolution digital tone**, with aliasing/noise as part of the flavor
- **Saves last settings** after power cycle

This tells me Phosgène is not just a “small oscillator,” but really a **compact digital character source** that can cover: - basses - metallic tones - dirty leads - industrial percussion - dual-layered timbres from its separate outputs - CV-reactive digital textures

Below are the most interesting ways I'd use it in a Eurorack system.

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1. Treat it as a dual personality oscillator

Because it offers separate wavetable/folded and FM outputs, the first creative move is to **never think of it as one voice**.

Patch idea

- Send the **wavetable output** to a **low-pass filter**
- Send the **FM output** to a **wavefolder, LPG, or band-pass filter**
- Pan them left/right in a stereo mixer
- Modulate wave selection and FM depth with two related but different modulation sources

Why it works

You get one coherent pitch source but two very different timbral interpretations: - one side can be the "body" - the other side can be the "grit," "air," or "machine noise"

Great companions

- **Stereo mixer / panner**: Happy Nerding PanMix, Worng SoundStage, Befaco STMix
- **Dual filter**: Bastl Ikarie, Make Noise QPAS, Frap Fumana if you want spectral madness
- **LPG / dynamics**: Make Noise Optomix, Takaab LPG, Doepfer A-101-2

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2. Build a bass voice that stays dark and solid

The manual specifically mentions the FM implementation is based around **100 Hz**, making it ideal for **tight FM basses** and **deep modulation**. That

suggests Phosgène can do bass without the brittle upper-mid splash many digital FM voices get.

Patch idea

- Sequence 1V/oct into Phosgène
- Use the **FM output** as your main oscillator
- Send it into a **clean VCA**
- Add a **snappy envelope** to amplitude
- Use a **slow envelope or offset CV** to animate wave/folding controls subtly
- Layer the **wavetable output** one octave lower or with octave displacement engaged

Why it works

The FM side gives punch and harmonic focus, while the lower-displaced wavetable side can add weight.

Great companions

- **Envelope**: Intellijel Dual ADSR, Zadar, Quadrax
- **VCA**: Veils, Tallin, Quad VCA
- **Bass-friendly filter**: AJH MiniMod VCF, Doepfer SEM, Joranalogue Filter 8
- **Saturation**: Instruō tanh[3], Ritual Guillotine, Endorphin.es Golden Master for final polish

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3. Use the octave displace feature as a sound-design tool, not just pitch management

This is one of the coolest features described. It seems meant to keep the wavetable engine in a lower, more usable range while preserving full FM range.

Creative use

Instead of thinking “this just prevents harshness,” use it to create **split-register timbres**: - wavetable output stays low, thick, and dirty - FM output remains high, articulate, and bright - both are tracking the same melody

Patch idea

- Mult your pitch CV to Phosgène and another oscillator
- Use Phosgène’s **wavetable output** with octave displace on as a sub/undertone
- Use another analog VCO or the **FM output** for the top layer
- Mix to taste

Great companions

- **Analog VCO pairing**: Dixie II+, STO, Ts-L, A-110-1
- **Subharmonic enhancers**: Joranalogue Fold 6, analog saturation, resonant filter ping layer

This creates a “one module does low digital filth, another does stable top-end” hybrid voice.

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4. Exploit the 11-bit / aliasing / noisy wavetable character

The manual explicitly celebrates the “digital trash.” That means you should lean into it rather than trying to sterilize it.

Patch idea: “broken sampler” lead

- Use the wavetable output
- Add moderate wave/fold CV from a stepped random source
- Send into a **high-pass filter**
- Add **short digital delay** or **clocked delay**
- Reverb after that

Result

You get a lead that feels like: - degraded ROMpler - busted game-console synth - early sampler wavetable edge

Great companions

- **Stepped random / S&H**: Mutable Kinks, Wogglebug, Doepfer A-148, SSF Ultra-Random Analog
- **Clocked delay**: Mimeophon, Chronoblob 2, Erica Pico DSP
- **Bit/phase/digital FX**: Data Bender, FX Aid, Timiszoara, MFX

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5. Turn it into an industrial percussion source

Phosgène's harsh digital partials, noise-containing tables, and FM path make it ideal for non-traditional drum synthesis.

Patch idea: kick/metal hybrid

- Sequence very short pitches or trigger envelopes into pitch modulation
- Use the **FM output** for the body
- Use the **wavetable output** through a VCA for the attack/noise layer
- Envelope the noise layer with an extremely short decay
- Add distortion and compression

Patch idea: hi-hats / clanks

- Tune Phosgène high
- Modulate wave selection with random voltages
- Gate with a short decay envelope
- Run through band-pass filtering or LPG
- Optional: ring mod with another oscillator or noise source

Great companions

- **Percussion envelopes**: Quadrax, Pingable Envelope Generator, Delta-V
- **Distortion**: Noise Engineering Ruina series, Bastl Dark Matter, Ritual Miasma
- **Compressor**: WMD MSCL, Cosmotronic Messor, Endorphin.es Cockpit 2 sidechain tricks

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6. Pair it with a resonator or physical modeling module

The slightly crude digital tone can become very alive when used as an exciter rather than the final voice.

Patch idea

- Send one of Phosgène's outputs into:
- a resonator
- Karplus-Strong input path
- modal filter bank
- Use bursts or short envelopes instead of sustained notes
- Modulate wave selection every few triggers

Great companions

- **Resonator / physical modeling**: Mutable Rings, 2hp Pluck, Tubbutec/4ms resonant options, Schlappi Three Body used resonantly
- **Karplus tools**: delay line with short feedback, Mimeophon zones, Chronoblob, Sarajewo
- **Exciter helpers**: LPGs, burst generators, trigger sequencers

Why it works

Phosgène's edgy harmonics and aliasing give resonators a more complex excitation signal than a simple sine or noise burst.

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7. Use it as a modulator, not only an audio oscillator

Because it tracks well and has controllable digital shape changes, Phosgène can be a fantastic **audio-rate modulation source** for other modules.

Patch idea

- Use the **FM output** to frequency-modulate another oscillator
- Use the **wavetable output** to phase-modulate a digital oscillator or filter cutoff FM
- Sequence both oscillators harmonically

Excellent targets

- Through-zero FM oscillators
- Filters with good FM response
- Delay time CV
- Wavefolders
- PLL modules

Great companions

- **Oscillators for cross-mod**: Generate 3, Furthrrrr Generator, Cs-L, Brenso, Neoni
- **Filters that like audio-rate FM**: Filter 8, Belgrad, Ikarie, Three Sisters
- **PLL / logic weirdness**: Doepfer A-196, Joranalogue Compare 2, logic modules

Result

Phosgène can inject “digital chewiness” into otherwise smooth analog modules.

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8. Crossfade the two outputs for morphing articulation

Since there are two sonic interpretations available, voltage-controlled crossfading is an obvious and very musical move.

Patch idea

- Send both outputs into a **VC crossfader**
- Use:
- an envelope for plucked transitions
- an LFO for evolving drones
- velocity or aftertouch from your controller for expressive morphing

Great companions

- **VC crossfader**: Doepfer A-134-2, Happy Nerding Xfade, Joranalogue Morph 4
- **Performance control**: Tetrapad/Tête, Pressure Points, Planar 2, 0-CTRL

Why it works

You can perform between: - stable-ish wavetable tone - rougher FM articulation - or vice versa depending on the patch

It gives the voice a macro “gesture” control.

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9. Make it the center of a small 2hp/compact skiff voice

Since it’s only 2hp, it begs to be part of a very tiny but high-impact voice chain.

Minimal voice recipe

- **Phosgène**
- **Envelope/LFO**
- **VCA**
- **Filter or LPG**
- **Multi-FX**
- **Compact sequencer**

Suggested compact ecosystem

- 2hp EG / VCA / MMF / Verb / Delay
- ALM Pip Slope / Pip Filter / MFX
- Happy Nerding 3xVCA + FX Aid
- Xaoc Sewastopol or Tallin for extra gain and drive

Result

A tiny skiff with one tiny oscillator can still make: - dark techno basslines - acid-adjacent sequences - industrial bleeps - cinematic drones

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10. Use slow CV on wave selection for quasi-granular movement

Even without true wavetable interpolation details in the text, stepped or slewed modulation through wave indices can create a pseudo-scan effect.

Patch idea

- Feed a **very slow random voltage** into wave select

- Use a **slew limiter** if needed
- Keep pitch static or drone-based
- Process through reverb and stereo delay

Great companions

- **Random / chaos**: Triple Sloths, Marbles, Wogglebug, Orbit 3
- **Slew**: Doepfer A-170, Joranalogue Contour 1, Maths
- **Spatial FX**: Mimeophon, Nautilus, Desmodus Versio, Beads

Result

A living digital drone that moves between “machine hum,” “radio ghosts,” and “corroded glass harmonics.”

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11. Patch it into a wavefolder anyway

Even though it already contains waveshaping/folding behavior, external folding on digital waveforms often produces a very different result than internal shaping.

Patch idea

- Use the wavetable output into an analog wavefolder
- Modulate folder symmetry/fold amount with envelopes and audio-rate LFOs
- Compare with the FM output processed separately

Great companions

- **Wavefolders**: Intellijel Bifold, Joranalogue Fold 6, Serge-style folder, Bastl Timber
- **Mod source**: another oscillator, cycling envelope, random burst

Why it works

Digital source + analog nonlinear processing = excellent contrast. Phosgène supplies stepped/aliased complexity; the external folder adds continuous analog instability.

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12. Build a drone voice with parallel signal processing

This module seems especially strong when split into multiple processing lanes.

Patch idea

- Wavetable output → low-pass gate → spring reverb
- FM output → resonant band-pass filter → distortion → delay
- Mix both at different levels
- Modulate wave and FM depth with unrelated slow CVs

Great companions

- **Spring / character reverb**: Doepfer A-199, Knas Ekdahl Moisturizer (if external), FX Aid spring emulations
- **Band-pass filter**: Three Sisters, Ikarie, QPAS
- **Slow modulators**: Batumi, Ochd, Just Friends, Maestro

Result

Huge dark drones with an “engine room / submarine / abandoned factory” character.

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13. Pair it with sequenced CV offsets and precision utilities

Because the manual emphasizes octave range management and careful timbral positioning, precision utilities will be especially rewarding.

Patch idea

- Use a **precision adder** for octave jumps
- Use a **CV offset/attenuator** to place the wave/FM sweet spot exactly
- Trigger switches to jump between banks or octave settings in performance

Great companions

- **Precision / utility**: Ornament & Crime, Doepfer A-185-2, Frap 321, Happy Nerding 3xMIA
- **Sequential switching**: Doepfer A-151, Vice Virga, Switch 4

Why it matters

Digital oscillators with lots of sweet spots benefit massively from: - attenuating modulation - offsetting it into “musical” zones - recalling repeatable intervals

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14. Clocked sample-and-hold on timbre controls for machine speech / robotic melody

Digital wavetable modules often sound amazing when timbre changes are rhythmically quantized.

Patch idea

- Send a synced clock to sample-and-hold
- Feed S&H with noise, random, or another slow oscillator

- Patch that into wave selection or modulation depth
- Sequence pitch normally

Great companions

- **S&H**: A-148, Kinks, Select 2, Sapèl
- **Clock source**: Pam's Pro Workout, Tempi, Workout-style modules
- **Quantizer for melodic certainty**: Scales, O_C, Bard Quartet

Result

Every note can have a different "phoneme," producing robotic lines that feel speech-like.

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15. Process it through formant or spectral modules

Phosgène's bright, irregular harmonics are ideal fodder for spectral animation.

Patch idea

- Wavetable output into a **formant filter** or **fixed filter bank**
- FM output direct or through VCA
- Animate filter bands with envelopes or LFOs
- Tune oscillator low and let filtering define the apparent motion

Great companions

- **Filter banks / spectral**: Bark Filter, Fumana, fixed filter banks, Serge Resonant EQ
- **Formant processing**: Rossum Morpheus, Xaoc Koszalin for weird enhancement, spectral EQ modules

Result

Industrial choir, radio voices, dystopian pads.

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16. Use it as a dirty clockable texture source for granular or looper modules

Instead of “playing” it conventionally, record snippets and repitch/process them elsewhere.

Patch idea

- Run Phosgène through changing CV states
- Sample short phrases into:
- granular processor
- looping delay
- sampler
- Then repitch, reverse, freeze, and resequence

Great companions

- **Granular / buffer**: Arbhar, Beads, Morphagene, Nebulae
- **Sampler**: Assimil8or, Bitbox, Radio Music-style playback tools
- **Looper**: Lubadh, Magneto, Morphagene

Why it works

Its tone is already rich and unstable, so even tiny captured fragments remain interesting after transformation.

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17. Pair it with comparators, logic, and envelope followers for control extraction

A digital oscillator with sharp transitions can be useful as a source of control logic too.

Patch idea

- Send an audio output into a **comparator**
- Derive gates based on waveform crossings
- Use those gates to trigger envelopes elsewhere
- Or use an **envelope follower** on one output to animate processing on the other

Great companions

- **Comparator / logic**: Joranalogue Compare 2, Doepfer logic modules, Klavis Two Bits
- **Envelope follower**: Sewastopol, Detect-Rx, Mutable Ears, A-119

Result

Self-derived rhythms and feedback ecosystems where Phosgène partly controls its own processing.

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18. Patch ideas by genre

Dark techno

- FM output as bass voice
- Wavetable output layered quietly for grit
- Saturation + low-pass filter
- Modulate wave select every 8 or 16 bars with stepped random
- Add sidechain compression from kick

Industrial / EBM

- High-register wavetable output into distortion
- FM output for metallic transient layer
- Triggered sample-and-hold on timbre
- Band-pass filtering and mono delay

Ambient / sci-fi

- Slow random on wave select
- Octave-displaced wavetable for lower drone bed
- FM output through resonator and long reverb
- Manual crossfading between paths

Electro / IDM

- Use Phosgène for percussion and bass alternately
- Audio-rate modulate filter cutoff
- Sample slices into a sampler
- Sequence octave jumps with precision adder

A few especially strong pairing recommendations

If you want it to sound bigger

- **Filter:** Bastl Ikarie or Joranalogue Filter 8
- **VCA/mixer:** Veils or Happy Nerding 3xVCA
- **FX:** FX Aid XL or Mimeophon

If you want industrial destruction

- **Distortion:** Noise Engineering Ruina Versio / Terci Ruina
- **Dynamics:** Messor or MSCL
- **Random:** Ultra-Random Analog or Wogglebug

If you want experimental timbre motion

- **Modulation:** Batumi, Ochd, Triple Sloths
- **Crossfader:** Morph 4 or Planar 2
- **Resonator:** Rings or a resonant filter bank

If you want a tiny but serious voice

- **Envelope:** Pip Slope / Zadar
- **VCA:** Tallin / 2hp VCA
- **Filter:** 2hp MMF / Ikarie
- **FX:** MFX / FX Aid

Best practical advice for patching Phosgène

1. **Use both outputs whenever possible**
   That's where a lot of its uniqueness probably lives.

2. **Attenuate CV heavily**
   Small digital modules often have narrow sweet spots.

3. **Use octave displacement musically**
   It's not just a corrective feature; it's a voicing feature.

4. **Let aliasing be part of the patch**
   Don't over-filter too early.

5. **Try it as a modulation source**
   Especially into filters and analog oscillators.

6. **Pair it with analog processors**
   Filters, VCAs, wavefolders, LPGs, and saturation can make the digital core feel much larger and more dimensional.

Quick starter patch recipes

1. Brutal bass

- Pitch seq → Phosgène
- FM out → VCA → LPF
- Env → VCA
- Slow LFO → wave/mod input
- Wavetable out mixed quietly underneath

2. Machine drone

- Static pitch or very slow sequence
- Wavetable out → LPG → reverb
- FM out → distortion → delay
- Two unsynced slow LFOs on wave/fold controls

3. Metallic percussion

- Trigger envelope to VCA
- FM out → band-pass filter
- Fast decay envelope to pitch for transient
- Random stepped CV to wave select

4. Glitch lead

- Wavetable out → HPF → delay → reverb
- Clocked sample-and-hold to wave select
- Short envelope to VCA
- Manual crossfade with FM out for accents
