

Erica Synths — Graphic VCO

- [Manual PDF](#)
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[Erica Synths Graphic VCO User Manual \(PDF\)](#)

Erica Synths Graphic VCO

Quick Cheat Sheet / Reference

I. OVERVIEW

- Eurorack digital VCO with fully programmable/drawable waveforms and FX.
 - Morph between two waves, wavetable, and matrix wavetable modes.
 - Extensive FX: FM, Phase Distort, Ring Mod, Wavefold, Wavewrap, Bitcrush.
 - Save/recall waveforms, wavetables, FX, and full module states ("snapshots").
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II. FRONT PANEL CONTROLS

Label	Function / Usage
LCD SCREEN	Visual feedback. Shows menus, waveforms, wavetables, oscilloscope, etc.

Label	Function / Usage
Left Encoder	Main menu navigation, selects/edits left (A) wave, scrolls through menus or list, confirms by push.
Right Encoder	Secondary settings, selects/edits right (B) wave, FX parameters, oscillators, confirms by push.
BACK Button	Go back one menu up. Hold 2s to save snapshot.
TUNE Knob	Master tuning, 16Hz–4kHz (wider range with 1V/oct CV).
FX Amount Knob	Set FX depth or works as CV attenuator if CV patched (unipolar, 0–10V).
FX Param Knob	Set FX param (e.g. FM freq). Attenuates FX CV if present (bipolar, -10V–+10V).
MORPH Knob	Morph between A & B (or X in matrix), attenuates Morph CV (-10V–+10V).

III. INPUT/OUTPUT JACKS & VOLTAGE RANGES

Jack Label	Function	Voltage Range
1V/OCT	Pitch CV input	0 to +8V (8 octaves)
FX AMT CV IN	FX amount control (unipolar)	0 to +10V
FX CV IN	FX parameter (bipolar)	-10V to +10V

Jack Label	Function	Voltage Range
MORPH CV IN	Morph CV (bipolar; matrix = vertical axis)	-10V to +10V
MAIN OUT	Audio Output (main)	10Vptp
SUB/MIX OUT	Sub out or mix (configurable)	10Vptp

In matrix mode: FX CV = horizontal (X axis), Morph CV = vertical (Y axis).

IV. MAIN OPERATING MODES

1. **Morph Mode**

- Morph between two waves (A & B).
- Draw/edit waves or select from presets.
- Apply FX globally.

5. **Wavetable Mode**

- Select/play 16-wave wavetables, morph within.

7. **Wavetable Bank Matrix Mode**

- 2D matrix of wavetables (rows) and waves (cols); morph through X/Y or via CV.
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V. FX (EFFECTS)

- **Frequency Modulation (FM):** Internal OSC/Ext CV/manual; depth, freq, sync options; amount CV (unipolar: 0–10V), param CV (bipolar: -10V to +10V).
- **Ring Modulator:** Manual/internal/Ext mod; amount/param as above.
- **Phase Distortion:** Depth/amount.

- **Wavefolder/Wavewrapper:** Gain & offset for ext; select FOLD/WRAP.
 - **Bitcrush:** Reduces bit/sample rate.
 - **Overdrive:** Saturation.
 - *FX are applied globally (not suboscillator, except FM).*
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VI. WAVETABLE/WAVE DESIGN

- Select, draw, or edit waves with encoders (incl. classic waveforms, line/pencil sketch, partials edit).
 - Use morphing for in-between shapes.
 - Save waves/wavetables to user memory.
 - Manage, rename, delete waves and wavetables via the Manage menu.
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VII. SUBOSCILLATOR

- OUT2 outputs configurable suboscillator or mix.
 - Parameters: Frequency offset (up to -24 semitones), detune (+-50 cents), mix % (out1 vs out2), assignable waveform.
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VIII. SYSTEM MENUS / SNAPSHOTS

- **Snapshots:** Save/load ALL settings (hold BACK 2s to save, menu to recall/delete/rename).
 - **Oscilloscope:** Inspect wave, FX, and performance.
 - **Device Setup:** CV in gain/bias, display settings, info, firmware update (via USB & Chrome app).
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IX. QUICK VOLTAGE REFERENCE

- **1V/Oct Input:** 0 – +8V (8 octaves)
- **FX Amount CV:** 0 – +10V (unipolar)

- **FX Parameter CV:** -10V – +10V (bipolar)
 - **Morph CV:** -10V – +10V (bipolar)
 - **Audio Outputs:** 10V_{ptp}
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X. FIRMWARE UPDATE

- Requires USB mini connection, Chrome app, push both encoders while powering for bootloader.
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XI. SAFETY

- Not water resistant.
 - Operates -20° to +50°C.
 - Ship only in original packaging for support/warranty.
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For the complete manual, reference the official [Erica Synths PDF](#).

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