Xaoc Devices — Batumi

- Manual PDF

Xaoc Devices Batumi II & Poti II Manual (PDF)

Xaoc Devices BATUMI II + POTI II

Quad LFO/OSC & Expander
Concise Cheat Sheet (2024/2.0, "Models of 1974")

Panel Reference

Sliders (x4, illuminated)

- **A (top):** Always controls Channel A Frequency (0.01Hz–100Hz unpatched; up to 5kHz w/ CV).
- **B, C, D:** Control Frequency, Phase, Divide, or Multiply depending on Global Mode.

Buttons

- **MODE:** Cycles through main modes:
- **RED Free** – 4 indep. LFOs/VCOs
- **YELLOW Phase** – B, C, D follow A freq, w/ phase offset
- **BLUE Divide** – B, C, D = A's freq divided by integer
- **TURQUOISE Mult** – B, C, D = A's freq multiplied by integer
- **WAVE:** Cycles asgn waveform:
- Red: Triangle
- Yellow: Down Saw
- Orange: Up Saw

- Green: Trapezoid
- Blue: Stepped Random
- Turquoise: Smooth Random
- **MODE+WAVE (hold one, tap other):** Toggles **SYNC/RESET** for sync inputs.

Inputs & Outputs (per channel)

JACK	TYPE	VOLTAGE	DESCRIPTION
FRQ•PH•RTO	CV IN	-10V/ +10V	Controls freq, phase, div/mult (V/oct in Free, ±5 cycles in Phase)
RESET•SYNC	Sync Trigger In	5V gate/ trig	Resets or syncs the phase/ freq; toggle mode per channel
SINE	Output	±5V	Anti-aliased sine wave output
ASGN	Output	±5V	Assignable wave (see above)
RECT	Output	±5V	Anti-aliased pulse/square output (fixed width in most modes)

All outputs are bipolar ±5V.

Modes Overview

1. **Free (indep. LFOs/VCOs, 1V/oct)**
2. All channels independent.
3. Sine, Rect, Asgn outputs.
4. Use CV and sliders for full frequency sweep.
5. Random asgn are truly independent.

6. **Phase (B-D = A freq, variable phase)**

7. Channels B-D are phase-shifted copies of A.
8. CV modulates phase ±5 cycles per input.

9. Random waves: same sequence delayed.

10. **Divide (B-D = A freq divided by 1/2/3/4/5/8/16/32)**

11. Division set by sliders & CV.
12. Random: Downsampled sequence from A.

13. Max cycle: up to 37.9 days at min freq/CV!

14. **Mult (B-D = A freq multiplied by 1/2/3/4/5/8/16/32)**

15. Integer multiples of A's cycle set by sliders/CV.
16. Limited to 5 kHz max channel freq.
17. Random: Upsampled sequence from A.

Tempo Sync

- **RESET:** Incoming trig/gate resets phase to 0.
- **SYNC:** Follows tempo of external source, quantized frequency division after sync (as in Divide).
- **NOTE:** All 4 channels can sync in Free; only A syncs in other modes.

Poti II (Expander, 4HP) Controls

Knobs (per channel, selected by button/LED)

- **FRQ•PH•RTO CV:** Input CV Attenuation (per channel, ALL mode also)
- **SINE OUT:** Sine output attenuation (per channel, ALL mode also)
- **ASGN OUT:** Asgn output attenuation (per channel, ALL mode also)

Rect outputs cannot be attenuated.

Channel Button

- **Cycles between A/B/C/D/All** (LED color changes). Stores settings per channel.
- **Unplugging resets to default (no atten).**

Wave CV Inputs and Switches

- **SHAPE (CV IN, ±5V):**
- **SINE:** Wavefold (with amp comp)
- **ASGN:** Morphs through assignable waveforms
- **RECT:** Modulates pulse width
- **Switch:** Selects which output is modulated by CV for the selected channel.

Quick Reference

Control	Function
Sliders (x4)	A: frequency; B/C/D: freq/phase/div/mult by mode
Mode Button	Mode (Free/Phase/Divide/Mult)
Wave Button	Sets (or morphs, with Poti II) asgn waveform
Mode+Wave	Toggles Sync/Reset (per channel, LED feedback)
FRQ•PH•RTO CV IN	Voltage (-10V/+10V), 1V/oct in Free, phase, or div/mult
RESET•SYNC	Gate/Trigger for phase/freq reset/sync
Sine/Asgn/Rect	Outputs, ±5V

Control	Function
Poti II Knobs	CV/sine/asgn attenuation, per channel, switchable
Shape CV + Switch	Choose and modulate sine/asgn/rect per channel

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Voltage Ranges

- **Outputs:** ±5V
- **Input CV:** −10V to +10V (FRQ•PH•RTO inputs)
- **Shape CV:** ±5V

Useful Tips

- **1V/oct tracking in Free mode only!** (use as quad VCO)
- **External Sync** disables continuous freq control (slider/CV = division factor).
- With **Poti II**, set attenuation per channel & modulate wave shapes.
- **Reset/Sync jacks on each channel:** get polyrhythms/LFO sync tricks!

Physical Installation

- **Batumi II:** 10hp, 45mm deep, 90mA/+12V, 50mA/-12V
- **Poti II:** 4hp, 32mm, 10mA/+12V (powered only via Batumi II)
- **DO NOT CONNECT Poti II TO BUS BOARD!** Use supplied ribbon cable.
