Buchla and Tiptop Audio — 281t Quad Function Generator

- [Manual PDF](#)

[Manual PDF - Buchla Tiptop 281t Quad Function Generator](#)

Buchla Tiptop Audio 281t Quad Function Generator (Eurorack)

Cheat Sheet - Quick Reference

Core Overview

- **4 function generators** (A, B, C, D), arranged in two linkable pairs (A+B, C+D).
- Modes per generator: **Transient, Sustained, Cyclic**.
- Can generate AD, ASR, or looping envelopes, or be paired for complex shapes or quadrature operation.

Inputs / Outputs

Function	Jack Type	Location	Voltage Range & Notes
IN	Input	Per generator	Gate or trigger; any voltage above ≈2V is treated as high.

Function	Jack Type	Location	Voltage Range & Notes
CYCLE JACK	Input	Per generator	Trigger or gate to enable cycling via external signal.
CV ATTACK	Input	Per generator	Unipolar; 0–10V CV controls attack segment rate.
CV DECAY	Input	Per generator	Unipolar; 0–10V CV controls decay segment rate.
OUT	Output	Per generator	Envelope output; 0 to +10V range.
END OUT (Pulse)	Output	Per generator	Triggers at end of decay; 10V logic pulse.

Controls

Control	Type	Per-Gen?	Description
Attack	Knob	Yes	Sets rise time (0.001–10s).
Decay	Knob	Yes	Sets fall time (0.001–10s).
Mode	Toggle Switch	Yes	Sets mode: **Transient** (trig = AR), **Sustained** (gate = ASR), **Cyclic** (looping AD).
Trigger	Push Button	Yes	Manually fires the function generator.
	Jack	Yes	

Control	Type	Per-Gen?	Description
Cycle Input			Accepts external gate/trigger to enable cycling.

Global/Paired Controls

Control	Type	Location	Description
Quadrature Switch	Toggle	Between each pair (A+B, C+D)	Pair generators; envelope of B (or D) is 90° out of phase to A (or C).

Operation Summary

- **Transient:** Envelope rises on any valid pulse (trigger), falls immediately after reaching 10V.
- **Sustained:** Envelope rises and holds at 10V while input is high (gate); falls when input goes low.
- **Cyclic:** Envelope self-cycles (LFO or looping envelope) as long as cycle is enabled (via switch or jack).
- **Quad (Quadrature) Mode:** Link pairs (A+B or C+D); B (or D) starts its cycle at peak of A (or C).

Voltage Ranges

- **Envelope OUT:** 0V (min) to +10V (max)
- **CV Inputs (Attack/Decay):** 0–10V
- **Pulse Outputs:** 10V logic pulse

Physical Specs

- **Width:** 28HP
- **Depth:** 32mm
- **Power:** +12V 160mA / -12V 55mA

Generated With Eurorack Processor