Buchla and Tiptop Audio — 266t Source of Uncertainty

- Manual PDF

Download the Manual PDF (Source of Uncertainty - Model 266t)

Buchla/TIPTOP Source of Uncertainty 266t – Cheat Sheet

Overview

The **266t Source of Uncertainty** is a classic random voltage generator with multiple independent sections, ideal for generative and experimental patches. It features several types of noise, fluctuating and quantized random voltages, sample & hold, integrator (slew), and elaborate stepped random voltage generators.

Panel Sections, Jacks & Controls

1. Noise Source

- **Outputs (3)**
- **Blue Noise:** -3dB/oct, low-frequency biased
- **Pink Noise:** Flat (equal across frequency)
- **White Noise:** +3dB/oct, high-frequency biased

2. Fluctuating Random Voltages

- **Inputs**
- **CV In:** 0–10V, controls rate of fluctuation
- **Outputs**
- **CV Out:** 0–10V fluctuating random voltage (LED shows rate)
- **Knob**
- **Rate:** 0.05 Hz (slowest) to 50 Hz (fastest), sets probable voltage change rate

3. Sample and Hold

- **Inputs**
- **Pulse In:** External clock or trigger (2–10V typical Euro signals)
- **CV In:** Voltage source to sample (±5V recommended for full range)
- **Outputs**
- **CV Out:** Sampled/held voltage
- **Alt:** Alternates sampling to two outputs (ping-pong effect)
- **Notes:** Pulse “Alt” divides incoming clock to alternate outputs

4. Integrator (Slew Limiter)

- **Inputs**
- **In:** Voltage to smooth (stepped or discrete)
- **CV In:** 0–10V, controls amount of smoothing
- **Output**
- **Out:** Slewed/smoothed voltage
- **Knob**
- **Slew Rate:** 0.01 (none) to 10 (max glide)
- **Trim**
- **TR1:** (rear trimmer, sets overall smoothing range)

5. Quantized Random Voltage

- **Inputs**
- **Pulse In:** External clock or trigger
- **CV In:** 0–10V, controls number of steps

- **Outputs**
- **n+1 Out:** 5V range, locally scaled (sparser quantization)
- **2^n Out:** 10V range, evenly distributed
- **Knob**
- **Steps:** Sets number of voltage steps (1–6)

6. Stored Random Voltage

- **Inputs**
- **Pulse In:** External clock or trigger
- **CV In:** 0–10V, controls right output distribution skew
- **Outputs**
- **Left Out (Linear):** Evenly distributed random 0–10V
- **Right Out (Skew):** Skewed distribution based on knob/CV
- **Knob**
- **Distribution Curve:** CCW = low skew, Middle = bell, CW = high skew

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Voltage Ranges & General Notes

Section	Input Voltage	Output Voltage
CV Inputs	0–10V typical	
Noise Out		±5V
Fluctuating	0–10V (CV in)	0–10V
Sample & Hold	2–10V (Trig in)	±5V
Integrator	0–10V (CV in)	0–10V
QRV/SRV Outputs		0–10V

- **Pulses:** Any typical 5V–10V Euro triggers/clocks.
- **CV Inputs:** Respond to unipolar 0–10V (Euro standard).
- **Outputs:** Most outputs are 0–10V, except noise (bipolar).

What Each Section Does

- **Noise:** Raw random voltages, for audio or sample sources.
- **Fluctuating:** Smoothly morphing random voltages.
- **Sample & Hold:** “Freeze frame” sampled value at pulse input.
- **Integrator:** Slew/portamento for incoming steps.
- **Quantized Random:** Stepped random voltages (adjust step count).
- **Stored Random:** Stepped random with variable statistical distribution.

Physical Specs

- **Size:** 24 HP
- **Depth:** 25mm
- **Power:** +12V/150mA, -12V/100mA

Useful Patch Ideas

- **Self-generating/random melodies:** S&H/Quantized/Stored sections into pitch or filter cutoff.
- **Generative clocks:** Quantized/Stored into tempo division/multipliers.
- **Automated parameter movement:** Fluctuating random into panning, reverb, etc.
- **Slew beats:** Integrator for smoothed parameter automation.
