Synthesis Technology — E340 Cloud Generator

- [Manual PDF](#)

E340 Cloud Generator Manual (PDF)

E340 Cloud Generator (Synthesis Technology) Cheat Sheet

OVERVIEW

- **Dual-output VCO** with up to 8 stacked "cloud" VCOs, each with detune and chaos modulation.
- Outputs super-saw and super-sine oscillations for fat, swarm-like timbres.
- No built-in CV attenuators—CVs should be attenuated externally if needed.
- CVs: -5V to +5V range for all modulation inputs.

Panel Controls & Jacks Reference

KNOBS & SWITCHES

Control	Function
COARSE	Main frequency, spans 8 octaves.

Control	Function
FINE	Fine frequency, spans ~0.5 octave.
FM AMT	Attenuates FM CV input.
SPREAD	Detunes cloud VCOs relative to base pitch (exponential spread, center position = off).
CHAOS	Adds filtered noise (FM) to detuning, making each VCO "wiggle."
CHAOS BW	Sets bandwidth (speed) of chaos-noise in 6 steps (left = slow, right = fast).
DENSITY	Toggles active VCO count: **2, 4, or 8** VCOs. More VCOs = reduced amplitude to avoid clipping.

INPUT JACKS

Jack	Voltage Range	Function
1V/OCT CV	-5V to +5V	Pitch control for all VCOs (use for standard keyboard/gate CV).
FM IN	-5V to +5V	Frequency modulation, mod depth set by FM AMT knob.
SYNC	>+0.25V	Hard sync input. Resets all VCOs to -5V.
SPREAD CV	-5V to +5V	Modulates SPREAD detune, added to knob value.
CHAOS CV	-5V to +5V	Modulates CHAOS depth, added to knob value.
	-5V to +5V	

Jack	Voltage Range	Function
CHAOS BW CV		Modulates CHAOS BW (speed), added to knob value.

OUTPUT JACKS

Jack	Voltage Range	Function
SAW OUT	-5V to +5V	Sum of detuned saw waves (DC-coupled).
SINE OUT	-5V to +5V	Sum of detuned sine waves (DC-coupled).

QUICK START

1. **Patch 1V/OCT** to sequencer/keyboard CV.
2. **OUT to VCA/Mixer:** Choose **Saw Out** or **Sine Out**.
3. **Tune** with coarse/fine knobs.
4. **Set DENSITY:** Choose 2, 4, or 8 VCOs.
5. **SPREAD:** Turn up for "cloud" detune effect; patch external CV to sweep amount.
6. **CHAOS/CHAOS BW:** Add and shape random "wiggle" for extra thickness.
7. **Sync:** For hard-edge tones, patch clock/square LFO to SYNC.
8. **FM:** Patch external CV source/noise/LFO/another VCO for classic FM effects. Use FM AMT for depth.

POWER

- **Eurorack:** +12V @ 55mA, -12V @ 25mA.

- **MOTM:** +15V @ 45mA, -15V @ 15mA.
- **All panel CV inputs:** -5V to +5V nominal, DC to 8kHz.

TIPS

- Overdriving inputs can shift pitch—keep input levels within -5V/ +5V if possible.
- Each control voltage input is summed with associated knob for total effect.
- Use external attenuators if finer CV control is needed.

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