

# Audio Damage ADM14 Boomschak

---



Our goal with this product was to make a no-compromises, versatile drum voice with a 100% analog signal path, and that made us happy. The first part was relatively simple. The "happy" part took a while. But after over a year of R&D and many, many iterations, we're pleased to present ADM14 Boomschak, a drum voice that we're proud to call ours.

The left side of the unit comprises a triangle core oscillator, a VCA, two envelopes, and a waveshaper, and the right side is a noise source, multi-mode resonant filter, VCA, and one envelope. With a logical layout and versatile voice topology, Boomschak is capable of face-melting kick drums and snares, and more strange percussion and sound FX than you can shake a (drum) stick at. The oscillator bottoms out at 5 Hz (!!!), and can track 1V/Oct over nearly seven octaves, so you can also use Boomschak as a synth voice, for paint-peeling sub bass or a mallet-style melodic source higher up.

The trigger and choke allow full control over the enveloping, while a velocity CV input allows dynamic control. These, plus control voltage inputs over pertinent values make Boomschak incredibly expressive. All in all, it is one of the most versatile and potent drum voices available for the Eurorack platform.

Check out [this YouTube video](#) and [these audio demos](#) to find out more!

## Features

- PITCH sets the frequency of the VCO
- BEND DEPTH controls how much the pitch-bend envelope generator changes

the frequency of the VCO. This is a bidirectional control; at its center position, the EG has no effect on the VCO.

- BEND DECAY sets the decay time of the pitch-bend EG.
- BEND SHAPE varies the shape of the pitch-bend EG from a sharp exponential curve to a linear ramp.
- AMP DECAY sets the decay time of the envelope generator which controls the VCA for the VCO, and hence how long the VCO tone is heard.
- AMP SHAPE varies the shape of the VCO amplitude EG from a sharp exponential curve to a linear ramp.
- WAVE SWITCH switches the VCO output between a triangle wave and a quasi sine wave.
- KLIK TONE changes the brightness of a short click added to the beginning of the sound.
- WAVESHAPER controls a simple wave-folder which changes the shape of the VCO's signal.
- FILTER FREQ sets the frequency of the multi-mode filter for the noise source.
- FILTER Q sets the resonance of the filter.
- MOD SOURCE Switch choose the source of modulation for the filter frequency. There are three options: the amplitude envelope generator for the noise source, the pitch bend oscillator for the VCO, and the VCO's signal.
- MOD DEPTH controls how much the modulation signal selected with the MOD SOURCE switch changes the filter frequency. This is a bidirectional control; at its center position, the filter frequency will not be changed by the modulation signal.
- FILTER MODE Switch chooses one of three filter response modes: low pass, band pass, or high pass.
- AMP DECAY sets the decay time of the envelope generator which controls the VCA for the noise source, and hence how long the noise is heard.
- AMP SHAPE varies the shape of the noise amplitude EG from a sharp exponential curve to a linear ramp.
- MIX varies the relative loudness of the VCO and the noise source. At its center position, the noise source and VCO have roughly equal loudness. Rotate the knob counter-clockwise to hear more of the VCO, rotate it clockwise to hear more noise.
- LEVEL sets the overall output level of the module.
- MANUAL Button - Press this to trigger the module manually. Use it while setting BoomTschak's knobs or for live improvisation.
- TRIGGER INPUT – Apply a positive-going rectangular wave to this jack to trigger the module. A +5V signal is best but the module will trigger at lower voltages.
- VELOCITY – A control-voltage input for varying the loudness of the module. Positive voltages increase the loudness; negative voltages decrease it.
- CHOKE – A positive-going rectangular pulse applied to this input will cut off

(choke) the output of the module.

- FILTER INPUT – Plugging a signal into this jack will bypass the module's noise source, passing the signal through the filter.
- CV INPUTS – There are five control-voltage jacks associated with some of the knobs. Applying a positive voltage to these jacks has the same effect as turning the associated knob clockwise; applying a negative voltage has the opposite effect.
- Boomschak is 24HP wide, and has a depth of 16mm; it will fit in any skiff.