DOTMATRIX / LIGHTWEIGHT AUDIO PLUGINS

BRUTE

A harmonic decimator: a crusher and a four-band saturator built into one hardware-style unit.



Brute by Dotmatrix

USER GUIDE | VERSION 2.2.0 | AU | VST3 | CLAP | macOS 10.14+ | INTEL + APPLE SILICON

Clip, fold and wrap. Gliding bit depth and sample rate. Four saturation bands. 4x oversampling.

DOTMATRIX

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— ABOUT BRUTE

Brute is a harmonic decimator from Dotmatrix: a crusher and a multiband saturator built into one hardware-style unit. The first section wears the sound down, driving it into a clip, fold or wrap stage and then reducing its bit depth and sample rate, with every dial gliding smoothly instead of stepping, so you can sweep from subtle grit to collapsing 1-bit noise while a live scope and transfer curve show exactly what's happening. The second section splits the signal into four bands at crossovers you drag on a live spectrum, and gives each band its own flavour of saturation (tube, warmth, fuzz or industrial) with its own drive, volume, mix and pan. A master section adds input and output gain, a dry/wet mix, a three-band EQ, a 30 Hz low cut, a switch to put the saturation first, a transparent output ceiling and 4x oversampling for cleaner, alias-free distortion. Drive and clip change the tone rather than the volume, so it stays easy to compare. Twenty factory presets and your own saved presets get you started, and Brute runs as an AU, VST3 and CLAP plug-in, universal for Apple Silicon and Intel Macs on macOS 10.14 or later.

— QUICK FACTS

Type	Distortion: a bit crusher and sample-rate reducer followed by a four-band saturator. An audio effect for any track or bus.
Formats	Audio Unit, VST3 and CLAP effects. Universal: Apple Silicon and Intel, macOS 10.14 Mojave or later on Intel, macOS 11 or later on Apple Silicon.
Sections	Wave Degradation (clip, fold or wrap, then bit depth and sample rate), Harmonic Saturation (four bands) and a master section.
Level	Drive and Clip Level change the tone, not the volume, so you can compare by ear.
Presets	20 factory presets, and your own, saved in ~/Music/Brute Presets.
Identity	Manufacturer Dotmatrix (Dtmx). AU code: Brt1.

SECTION 01

Getting started

Put Brute on a track, pick a preset, then turn it up.

— NEW IN VERSION 2.2

Light mode	The new LIGHT key switches to a light panel with light grey dials and keys, and back. Every window of the plug-in remembers your choice.
Darker panel	A deeper charcoal chassis with crisper outlines, and stronger, more saturated colour on the LEDs, dials, scope and band graph.
Same sound	Only the look has changed: Brute sounds exactly as before, and your sessions and presets load unchanged.
Since 2.1	A 4X OS key for alias-free distortion, the Dotmatrix hardware panel, and CLAP.

— INSTALLING

Copy each plug-in from the download's **Plug-Ins** folder into its folder: **~/Library/Audio/Plug-Ins/Components** (Audio Unit), **~/Library/Audio/Plug-Ins/VST3** and **~/Library/Audio/Plug-Ins/CLAP**. The release is not yet signed through Apple's developer program, so macOS needs one Terminal line before it will load it; **READ ME FIRST.txt** in the download has the exact steps. Logic Pro checks new Audio Units the first time it starts; Brute appears under **AU Effects › Dotmatrix**.

— FIRST STEPS

1	**Insert it**	Put Brute on a drum bus, a bass, a synth or a vocal (in Logic: Audio FX > Dotmatrix > Brute).
2	**Pick a preset**	Click the preset name for the 20 factory presets and your own, or step with the arrows.
3	**Crush**	In WAVE DEGRADATION, lower RESOLUTION for bit-crushing and raise DOWNSAMPLING for metallic aliasing. Push DRIVE into the CLIP LEVEL for distortion.
4	**Saturate**	In HARMONIC SATURATION, drag the dividers on the graph to set the four bands, then give each its own type, drive and mix.
5	**Finish**	Use MASTER MIX for parallel processing, the EQ to tidy up, and OUTPUT to match the level. Save it with SAVE.

— BASIC HANDLING

Dials	Drag up or down. Double-click to reset to the default.
Keys	Lit keys are on. CLIP, FOLD and WRAP pick one of three.
Band graph	Drag a divider left or right to move a crossover; drag a band's top handle up or down for its volume. Double-click a handle to reset it.
Help line	Hover over any control and the strip at the bottom of the panel says what it does.

SECTION 02

The panel

Two sections side by side, the master section along the bottom.



Header	The preset name with previous and next arrows, SAVE, and the LCD.
Wave Degradation	Its on key, CLIP / FOLD / WRAP, the scope and transfer curve, and the DRIVE, RESOLUTION, DOWNSAMPLING, CLIP LEVEL and MIX dials.
Harmonic Saturation	Its on key, the band graph with the live spectrum, and a strip of type, drive, volume, mix and pan for each band.
Master	INPUT, OUTPUT, MIX and PAN; EQ with LOW, MID and HIGH; 30HZ CUT, SAT FIRST, CEILING and 4X OS.

SECTION 03

Wave Degradation

Wears the sound down: a distortion stage, then bit depth and sample rate.

— DISTORTION

DRIVE pushes the signal into the CLIP LEVEL; what happens to everything beyond it depends on the mode. The scope shows the wave going in (grey) and coming out (magenta); the transfer curve shows the shape and the bit steps.

CONTROL	RANGE	DEFAULT	WHAT IT DOES
Degradation	on / off	on	Switches the whole section.
Clip / Fold / Wrap	one of three	Clip	Clip cuts the peaks off flat, the classic hard digital clip. Fold folds them back down for a richer, more harmonic texture. Wrap wraps them round to the other side for a lighter, buzzy edge.
Drive	0 to 36 dB	0 dB	Gain before the crushing stage. Level is kept in check, so Drive changes the tone, not the volume.
Clip Level	-36 to 0 dB	0 dB	Where clipping, folding or wrapping starts. Lower it for more distortion; the result is scaled to stay at full level.

— CRUSHER

CONTROL	RANGE	DEFAULT	WHAT IT DOES
Resolution	24 to 1 bit	12 bit	Bit depth. It glides through every value, including between whole bits, with no stepping.
Downsampling	1x to 40x	2x	Sample-rate reduction. It glides smoothly through every ratio, sweeping the metallic aliasing from the highest to the lowest frequencies.
Mix	0 to 100 %	100 %	Blend between the clean and the crushed sound, for parallel processing that keeps the body clean.

TIP Automate DOWNSAMPLING for a sweep: because it glides instead of stepping, a slow move sounds like a filter made of aliasing.

SECTION 04

Harmonic Saturation

Four bands, each with its own kind of saturation.

— BANDS

Three crossovers split the sound into Low, Low-Mid, High-Mid and High. Drag the dividers on the graph, which shows the live spectrum, to move them.

CONTROL	RANGE	DEFAULT	WHAT IT DOES
Saturation	on / off	on	Switches the whole section.
Crossover 1	30 Hz to 8 kHz	120 Hz	Between Low and Low-Mid.
Crossover 2	60 Hz to 14 kHz	900 Hz	Between Low-Mid and High-Mid.
Crossover 3	120 Hz to 19 kHz	5 kHz	Between High-Mid and High.

— EACH BAND

Every band has the same five controls. These are the Low band's; Low-Mid, High-Mid and High work the same way.

CONTROL	RANGE	DEFAULT	WHAT IT DOES
Low Type	Tube, Warmth, Fuzz, Industrial	Tube	The kind of saturation: Tube is warm and round, Warmth gentle, Fuzz gritty, Industrial super intense.
Low Drive	0 to 36 dB	6 dB	How hard the band is driven into its saturation.
Low Volume	-36 to +12 dB	0 dB	The band's level; the same control as its handle on the graph. All the way down mutes it.
Low Mix	0 to 100 %	40 %	How much of the band is saturated, against its clean sound.
Low Pan	100 L to 100 R	centre	Places the band left or right.

TIP Fuzz on the High-Mid band with its MIX around 30 % adds bite to a bass without touching its low end.

SECTION 05

Master section

The whole plug-in's input, output and safety.

— LEVEL AND MIX

CONTROL	RANGE	DEFAULT	WHAT IT DOES
Input	-24 to +24 dB	0 dB	Gain into the whole plug-in, before anything else.
Output	-24 to +12 dB	0 dB	Master volume of the plug-in's output.
Mix	0 to 100 %	100 %	Blend of the processed sound with the clean input.
Pan	100 L to 100 R	centre	Pans the whole output.

— EQ AND OPTIONS

CONTROL	RANGE	DEFAULT	WHAT IT DOES
EQ	on / off	on	Switches the three-band master EQ. Your settings are kept either way.
Low	-12 to +12 dB	0 dB	Low shelf at 120 Hz.
Mid	-12 to +12 dB	0 dB	Bell centred on 1 kHz.
High	-12 to +12 dB	0 dB	High shelf at 6.5 kHz.
30 Hz Cut	on / off	off	A steep 30 Hz low cut that clears sub-bass rumble. Works with the EQ on or off.
Sat First	on / off	off	Off: Wave Degradation comes first. On: saturate first, so the crusher decimates the new harmonics.
Ceiling	on / off	on	A transparent safety ceiling: untouched until about -1 dB, then rounds off so the output never goes over 0 dB.
4X OS	on / off	off	Runs the whole chain at four times the sample rate, so clipping, folding and saturation alias far less. Uses more CPU and adds a little latency, which Brute reports to the host.

WHEN TO USE 4X OS Switch it on for clean, smooth distortion on bright sources. Leave it off when you want the aliasing, as in the Lo-Fi and 8-bit presets: the crusher's character comes from it.

SECTION 06

Presets

Twenty factory presets cover clean polish, lo-fi crush, the three distortion modes and the four saturation types. SAVE stores your own in ~/Music/Brute Presets; they appear in the menu under User presets, and you can copy them to another Mac.

CATEGORY	21 PRESETS
Factory	Init, Clean Sheen, Vintage 12-Bit, 8-Bit Console, SP Crunch, Lo-Fi Radio, Telephone, Aliasing Metal, Digital Destruction, Fold Machine, Wrap Buzz, Hard Clip Punch, Tube Glow, Warm Tape, Fuzz Face, Industrial Hell, Bass Grit, Hi-Fi Sizzle, Mid Growl, Parallel Destroyer
Yours	Every preset you save, listed under User presets

— RECIPES

01	**Drum bus glue**	**Tube Glow** on the drum bus, MASTER MIX around 40 %.
02	**Sampler grit**	**SP Crunch** or **Vintage 12-Bit** on a break; raise DOWNSAMPLING to taste.
03	**Bass that cuts**	**Bass Grit**, with the Low band clean (MIX 0 %) and the upper bands driven.
04	**Total destruction**	**Digital Destruction** or **Parallel Destroyer**, then bring MASTER MIX back until the source shows through.

SECTION 07

Reference and troubleshooting

— TECHNICAL NOTES

Signal flow	Input, then Wave Degradation and Harmonic Saturation (in either order), the master mix, the EQ and 30 Hz cut, pan, output and the ceiling.
Latency	One sample normally; with 4X OS on, the oversampling filters add a few more. Brute reports it to the host, which compensates.
Sessions	A project stores every parameter. Presets are small XML files.
Compatibility	Universal (Apple Silicon and Intel). VST2 is not available: Steinberg no longer licenses it. CLAP is built with the open-source clap-juce-extensions.

— TROUBLESHOOTING

It gets much louder	Check INPUT and the band VOLUMES; Drive itself keeps the level in check. CEILING keeps the output under 0 dB.
Harsh, whistling top end	That is aliasing. Switch on 4X OS, or lower DOWNSAMPLING.
A band is silent	Its VOLUME is all the way down, which mutes it. Double-click the handle to reset it.
It does not appear in Logic	Run the Terminal lines in READ ME FIRST.txt, then restart Logic. In Logic > Settings > Plug-in Manager, select it and click Reset & Rescan Selection.
My presets are missing	They live in ~/Music/Brute Presets. Copy the .xml files there on another Mac.



Brute by Dotmatrix

Lightweight audio plugins. Documentation for version 2.2.0.