PRIME ENTITY

MASTERING CLIPPER

FOLVKlip

USER MANUAL

Clip harder. Keep the punch. Choose the character. Loudness without the flattening, and a ceiling that holds whatever you do above it.

VST3 · AUDIO UNIT · STANDALONE · MACOS AND WINDOWS

WWW.PRIME-ENTITY.NL

WHY IT EXISTS

A limiter buys you loudness by holding the peaks down. Do that far enough and the record stops moving: the kick has no front, the snare has no crack, and the whole thing sounds like it is being pressed against glass.

WHAT A LIMITER DOES

It sees a peak coming and turns everything down around it. That works, and it is transparent at a decibel or two. Past that the gain is moving all the time, the dynamics between the hits go with it, and what you gained in level you paid for in life.

WHAT A CLIPPER DOES

It takes the top off the peak itself and leaves everything else alone. No gain riding, no pumping. The cost is distortion on the peak, which is inaudible when it is short and unmistakable when it is not — so the whole craft is in the shape of that cut.

FOUR THINGS THAT ARE OURS

Character Morph sweeps the shape of the cut through four voices instead of switching between them. **Punch Memory** looks at what was there before the clip and hands a measured part of it back. **Clip Target** aims for an amount of clipping rather than an amount of drive, so a quiet verse and a loud chorus get the same treatment. **Controlled Chaos** is the creative end, and it is off until you ask for it.

> **TWO WAYS IN**
>
> **Easy** shows four controls: Input, Character, Punch and Ceiling. **Advanced** opens every panel. Switching between them changes nothing about the sound — Easy hides controls, it does not reset them.

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INSTALL AND ACTIVATE

INSTALLING

01 **Open the installer.** On macOS it places the VST3, the Audio Unit and the standalone application; on Windows the VST3 and the standalone application. The factory presets come with it either way.

02 **Rescan in your DAW** if it does not pick the plug-in up straight away.

03 **Load FOLVKlip last** on your master bus, after everything else. It is the stage that decides what leaves.

THE WARNING THE FIRST TIME

The installer is not signed with a developer certificate yet, so both systems question it once. After that they stay quiet.

macOS calls it an unidentified developer. Right-click the installer and choose Open rather than double-clicking it, then confirm. If you copy the plug-ins in by hand instead, clear the quarantine flag with `xattr -cr` on the copied bundles.

Windows shows a blue SmartScreen panel saying the publisher is unknown. Choose More info, then Run anyway.

ACTIVATING

01 **Buy a licence.** You get an email to choose a password.

02 **Open FOLVKlip and sign in** with that email address and password.

03 **Done.** The plug-in stores a signed licence and never contacts the server again.

The bottom right then reads **Licensed to** and your name.

WITHOUT A LICENCE

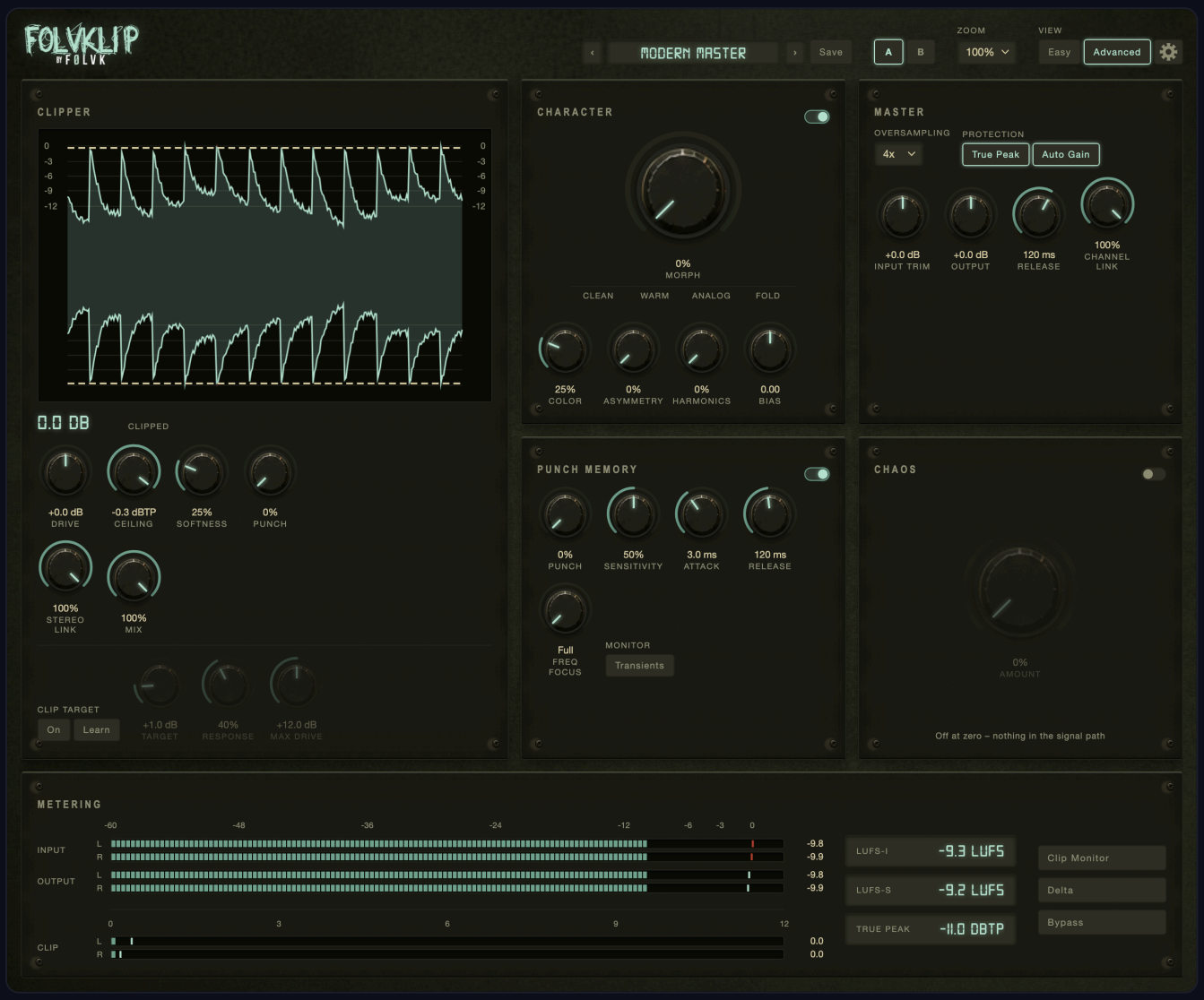
Every feature is unlocked, oversampling and the presets included. The only difference is that the audio mutes for five seconds once every twenty, dry signal included, with a short fade so it does not read as a crash. There is no time limit.

MOVING TO ANOTHER COMPUTER

The licence is active on one computer at a time, Mac or Windows. Open your account, release the machine you are leaving, then sign in on the next one. That also covers a laptop that was stolen, wiped or died: you release it from the website, not from the machine.

THE WINDOW

Advanced view puts every panel on screen at once. Character, Punch Memory and Chaos each have their own switch beside the name, and switching a section off keeps its settings.



ADVANCED VIEW

> **WORKING WITH CONTROLS**
>
> Drag a knob to change it, hold shift for fine adjustment, double-click to reset. Click the number underneath to type a value. A control that is greyed out does not apply to the current setting and cannot be moved — the Clip Target knobs while Clip Target is off, for instance.

TOP BAR



Preset	Arrows step through the list. The name in the middle opens the browser. Save stores the current settings under a name of your own.
A / B	Two complete settings side by side. Press the other letter to compare. The window turns a cooler shade in B, so you can hear which one you are on without looking.
Zoom	70% to 120% in steps of ten. 100% to begin with.
View	Easy or Advanced.
Settings	The gear: update notifications on or off, and releasing this computer from your licence.

EASY VIEW

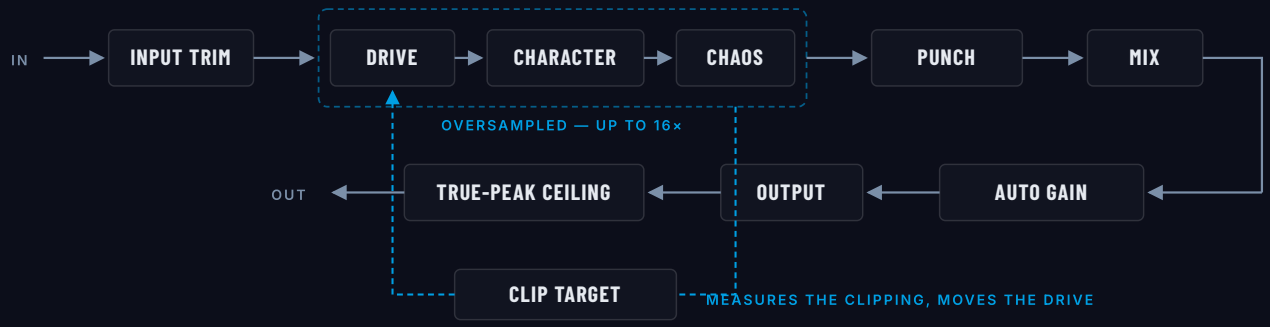
Four controls, for when the sound matters more than the settings. Everything the advanced panels expose keeps whatever it was set to.

CONTROL	RANGE	DEFAULT	
Input	−24 – +24 dB	**0 dB**	How hard the signal is pushed into the clipper. The same control as Drive in the Clipper panel.
Character	0 – 100%	**0%**	The sweep from Clean through Warm and Analog to Fold. The four names underneath light up as you pass them, and clicking one takes the knob there.
Punch	0 – 100%	**0%**	How much of the impact the clipper removed is handed back. The same control as Punch in the Punch Memory panel.
Ceiling	−12 – 0 dBTP	**−0.3 dBTP**	The true-peak level nothing leaves above. This is the figure you deliver.

> **WHAT EASY SHOWS YOU**
>
> The waveform across the top draws the driven signal as a filled body and what is leaving as a line over it, with everything above the ceiling picked out in red — that red band is exactly what is about to come off. Underneath, two meters and three numbers: how much is being clipped, the integrated loudness, and the true peak.

SIGNAL FLOW

One path, in order. The clipping itself happens inside the oversampled section; everything before and after it runs at the session rate. Auto Gain and the ceiling come last on purpose, so that nothing above them can break the figure the plug-in promises.



WHY OVERSAMPLED

A clipper makes harmonics above the band it is given. At the session rate those fold back down and sit in the mix as a metallic ring. Four times the rate puts most of them where the filter can throw them away.

WHY THE CEILING IS LAST

Punch is allowed to ask for more than there is room for, and Output is allowed to be turned up. Neither gets the final say: the true-peak stage is what holds the figure, so it comes after both.

WHY MIX IS BEFORE IT

Blending unclipped signal back in would put peaks back over the edge. Mixing before the ceiling means the parallel trick is available and the promise still holds.

THREE STARTING POINTS

TRANSPARENT, A DECIBEL

Drive 1 dB, Softness around 20%, Character on Clean, Punch off. Ceiling at −1 dBTP for anything going to a streaming service. You should not be able to hear it working, only that the peaks stopped getting in the way.

LOUD, STILL MOVING

Drive 4 to 6 dB, Punch around 60% with Attack near 2 ms and Freq Focus around 100 Hz so it answers to the kick. Character just into Warm. Watch the CLIP meter rather than the output, which will read the ceiling either way.

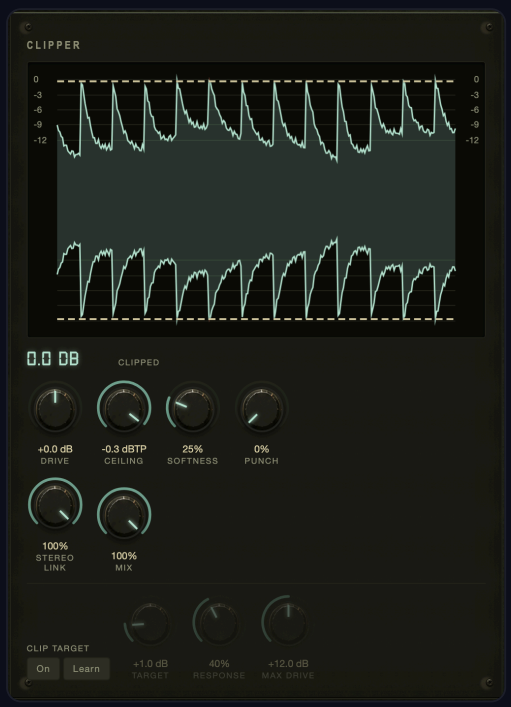
DELIBERATELY DIRTY

Character past Analog, Harmonics up, Mix at 60 to 70% so the clean signal is still underneath, and Chaos somewhere between 20 and 50%. This is a sound, not a master.

> **LATENCY**
>
> Oversampling and the true-peak stage both need a moment to see ahead, so the plug-in runs a few milliseconds behind and reports exactly how many to the host, which lines everything back up. Turning True Peak off does not change the figure: a plug-in whose latency moves while the transport is rolling makes the host re-align every track feeding it.

CLIPPER

Drive decides how much goes in, Ceiling decides where it stops, and the distance between the two is how much you are clipping.



THE WAVEFORM

The filled body is the driven signal — what the clipper is actually being handed, so it grows as you turn Drive up. The line over it is what is leaving, and the dashed line near the top is the ceiling. Everything above that line is drawn in red: that band is the clipping, and it is easier to judge by eye here than on any meter.

CLIPPED

The number under the display is how many decibels came off the loudest peak just now. It is the one figure worth watching while you set Drive: the output meter will read the ceiling whatever you do, so it cannot tell you how hard you are working.

CONTROL	RANGE	DEFAULT	
Drive	−24 – +24 dB	**0 dB**	How hard the signal is pushed into the clipper. Everything else on this page reacts to what this sends it.
Ceiling	−12 – 0 dBTP	**−0.3 dBTP**	The true-peak level nothing leaves above. Not a target but a limit: it is enforced at the end of the chain, so no setting anywhere else can push past it.
Softness	0 – 100%	**25%**	The shape of the corner, from a square cut to a long bend.
Punch	0 – 100%	**0%**	The same control as Punch in the Punch Memory panel, repeated here because it belongs to the decision you are making at this knob.
Stereo Link	0 – 100%	**100%**	How much the two channels are cut by the same amount. Fully linked keeps the stereo picture exactly where it is. Lower lets each side clip on its own, which is louder and wider and moves the image about while it works.
Mix	0 – 100%	**100%**	Blends the clipped signal back against the unclipped one. Below 100% this is parallel clipping: heavy distortion underneath, the original on top.

> **READING THE CLIP METER**
>
> It has its own scale, from 0 to 12 dB, and it shows depth — how far the loudest peak was pushed down. It does not show how *often* that is happening, and the two are different sounds: one snare clipped 6 dB a bar is transparent, half a decibel across a third of the record is not. To hear the difference, use **Clip Monitor**.

CLIP TARGET

Aim for an amount of clipping instead of an amount of drive, and the verse and the chorus get the same treatment.

A record does not keep one level. Set Drive by hand in the loudest section and the quiet ones are barely touched; set it for the quiet ones and the loud ones are mangled. Clip Target measures how much is actually being clipped and moves the drive to keep that figure where you asked for it.

It is deliberately slow. The measurement is an average over a second, the correction moves in a straight line at a limited number of decibels per second, and inside a quarter of a decibel it does nothing at all. That last part matters: without it the drive creeps up and down forever chasing a number it can never sit exactly on, and that creep is audible on a sustained passage as breathing.

CONTROL	RANGE	DEFAULT	
On	—	**Off**	While this is on, Drive is being set for you and its knob is greyed out. Switching it off walks the correction back to nothing rather than dropping it, so the level does not step.
Target	0.1 – 6 dB	**1.0 dB**	How much clipping to aim for. Half a decibel is peak control; three is a decision about the sound.
Response	0 – 100%	**40%**	How fast it is allowed to correct, from half a decibel per second to six. Slow is almost always right; fast is for material that changes level in steps rather than gradually.
Max Drive	0 – 24 dB	**12 dB**	The ceiling on the automatic correction. Without it a near-silent intro would be pushed as hard as it takes to reach the target, which is how a fade-in ends up louder than the song.
Learn	—	—	Listens for four seconds and then offers a starting point.

USING LEARN

Start the transport somewhere representative — not the intro — and press Learn. It listens for four seconds, works out how much drive would have produced your target over what it heard, and shows the figure.

Nothing is applied until you say so. A control that moves itself while you are judging the sound is one you stop trusting, so Learn offers and waits.

WHEN IT DOES NOTHING

If the passage was already clipping more than the target, the honest answer is to add no drive at all, and that is what comes back. Turn the target up, or accept that the material is already there.

CLIP TARGET AND AUTO GAIN

They solve different halves of the same problem. Clip Target keeps the amount of clipping steady; Auto Gain keeps the loudness steady while you change your mind about it. Leave both on while you are working and switch Auto Gain off to hear what you have gained.

CHARACTER

Four voices on one knob, and everything in between is a real blend rather than the nearest of the four.



THE MORPH

Clean, Warm, Analog and Fold are four named points along one sweep. At no position does a different piece of code take over — the two neighbouring shapes are crossfaded, which is why the knob can be turned while something is playing without a click.

The four names under the knob light up as you pass them, and clicking one takes the knob there. That is a shortcut to a position, not a switch: it lands smoothly.

VOICE	POSITION	
Clean	0%	A square cut with the corner rounded by Softness. Below the ceiling nothing is touched at all, so at small amounts this is the most transparent of the four.
Warm	33%	The curve bends well before the ceiling, so the sound thickens instead of being sliced.
Analog	67%	Asymmetric: the two halves of the wave are shaped differently, which is where the even harmonics of a real circuit come from.
Fold	100%	Past the ceiling the wave turns back on itself instead of flattening. An effect, not a mastering setting.

CONTROL	RANGE	DEFAULT	
Morph	0 – 100%	**0%**	The position along the sweep.
Color	0 – 100%	**25%**	Extra push into the shaper without moving the ceiling, so it buys harmonics rather than level.
Asymmetry	0 – 100%	**0%**	Shapes the two halves of the wave by different amounts, which produces even harmonics.
Harmonics	0 – 100%	**0%**	Second and third order added to the shaped signal, as a blend, so turning it does not also change the level.
Bias	−1.00 – +1.00	**0.00**	Which half of the wave meets the ceiling first. Another route to even harmonics, and the one with the most character in it.

> **ASYMMETRY, BIAS AND DC**
>
> Both work by making the shaper see a wave that is not centred — that is where their even harmonics come from, and it also leaves a DC offset behind. The plug-in takes that out again before the ceiling. Wind both fully open and the output still measures dead centre.

PUNCH MEMORY

It knows what the transient was before you clipped it, because it looked.



NOT A TRANSIENT SHAPER

A transient shaper after a clipper only sees what is left and guesses at the rest. This watches both sides: the signal going into the clipper and the signal coming out. The difference between the two envelopes is exactly how much impact was removed — no guessing — and a measured part of that is handed back.

ONLY ON TRANSIENTS

Anything steady is left completely alone. That is what keeps a sustained passage from being pumped: the gain only moves where something just started.

TRANSIENT MONITOR

Hands over only what Punch is adding, so you can judge it on its own instead of guessing at it underneath the programme.

CONTROL	RANGE	DEFAULT	
Punch	0 – 100%	**0%**	How much of the removed impact is handed back. It only ever adds, never subtracts, and never more than 12 dB however the numbers fall.
Sensitivity	0 – 100%	**50%**	How much of a jump counts as a transient. Higher lets smaller events through; lower keeps it to the obvious hits.
Attack	0.1 – 50 ms	**3.0 ms**	How quickly the gain arrives. Short is a click on the very front of the hit; longer is a swell into it.
Release	10 – 500 ms	**120 ms**	How quickly it lets go again. It should be gone before the next hit, or the two run together and the result is a level rise rather than punch.
Freq Focus	Full, 20 Hz – 20 kHz	**Full**	What the detector listens to. Around 100 Hz it answers to the kick; up at 2 kHz to the snare. Fully anticlockwise it reads the whole spectrum and the readout says Full.
Transients	—	**Off**	Monitor what Punch is adding, on its own.

> **WHY THE FILTER IS ON THE DETECTOR AND NOT THE AUDIO**
>
> Freq Focus changes what Punch *listens* to, not what gets processed. Splitting the audio into bands and putting it back together is how a punch control ends up with phase problems, and phase problems on a master are not worth any amount of punch.

MASTER

The stage that decides what actually leaves, and the one place where a setting is about correctness rather than taste.



OVERSAMPLING

A clipper makes harmonics above the band it is handed. At the session rate those fold back down and sit in the mix as a metallic ring that no amount of taste removes. Four times is the sensible default; eight and sixteen cost processing for a difference that is hard to hear.

Off is a real setting, not the absence of one: at 44.1 or 48 kHz a clipper that does not oversample is harder and more aggressive, and some people want exactly that.

TRUE PEAK

Measures the peak on a four-times upsampled copy, which is what catches the level a converter or a lossy encoder reconstructs *between* your samples. Leave it on for anything being delivered.

CONTROL	RANGE	DEFAULT	
Oversampling	Off, 2× … 16×	**4×**	How much headroom the shaper is given to make its harmonics in.
True Peak	—	**On**	Whether the ceiling is held against inter-sample peaks or only against the samples themselves.
Auto Gain	—	**On**	Matches the loudness back to what it was before the drive, so turning Drive lets you hear the character change rather than just a level rise. It only ever turns down.
Input Trim	−24 – +24 dB	**0 dB**	Level into the whole plug-in, before anything else. For matching a source rather than for driving the clipper — that is what Drive is for.
Output	−24 – +24 dB	**0 dB**	The last gain before the ceiling. Turning it up does not break the ceiling; it just gives the true-peak stage more to do.
Release	1 – 500 ms	**120 ms**	How quickly the true-peak stage lets go after a peak has passed. Too fast modulates the level at the rate of the programme, which is heard as distortion; too slow lets one transient duck a whole bar.
Channel Link	0 – 100%	**100%**	How much the two channels share one gain at the ceiling. Fully linked keeps the stereo image where it was; unlinked is louder and wider and moves the picture about.

> **JUDGING WHAT YOU GAINED**
>
> With Auto Gain on, the level stays put while you turn Drive, so what you hear is the character changing. That is the right way to *choose* a setting. Switch it off afterwards to hear what the setting actually bought you in loudness, and then decide whether it was worth it.

CONTROLLED CHAOS

The creative end. Off until you ask for it, off means off, and the knob is really two controls in a row.



BOUNDED AND SLOW ON PURPOSE

Every offset has a hard limit and there is no feedback path, so nothing can run away. The fastest modulator runs at a couple of hertz — fast modulation of a waveshaper is not creative, it is a ring modulator, and it sounds like a fault.

THE LOWER HALF: MODULATION

Below halfway it adds no signal of its own. It moves the clipper's own controls around — drive, asymmetry, how far the wave folds — slowly, by a bounded amount, and slightly differently in each channel: a clipper never quite doing the same thing twice, which is what a circuit made of components does.

THE UPPER HALF: A BITCRUSHER

Past halfway a bitcrusher fades in on top of that, climbing cubically from a sixteen-bit hair at the halfway mark to roughly three bits at the top — so the first part of the sweep is a graininess you have to listen for and the last part is the sound coming apart. Its depth wobbles with the same modulator as everything else, because a bitcrusher at one fixed resolution is a setting and this control is meant to be weather.

AMOUNT	
0%	Nothing. Not almost nothing — the chaos path is not entered at all, and the output is identical to the same setting with the section switched out.
1 – 20%	Modulation only. A subtle analogue liveliness, still usable on a master, where it reads as the clipper not being quite so machine-like.
20 – 50%	Modulation only, clearly audible. More harmonics, more movement, and a stereo picture that breathes a little. A creative decision now, not a finishing touch.
50 – 100%	The bitcrusher joins in on top of the modulation, from a sixteen-bit hair to about three bits. Aggressive and experimental: for sound design, and for records that want to sound broken on purpose.

USING IT ON A MASTER

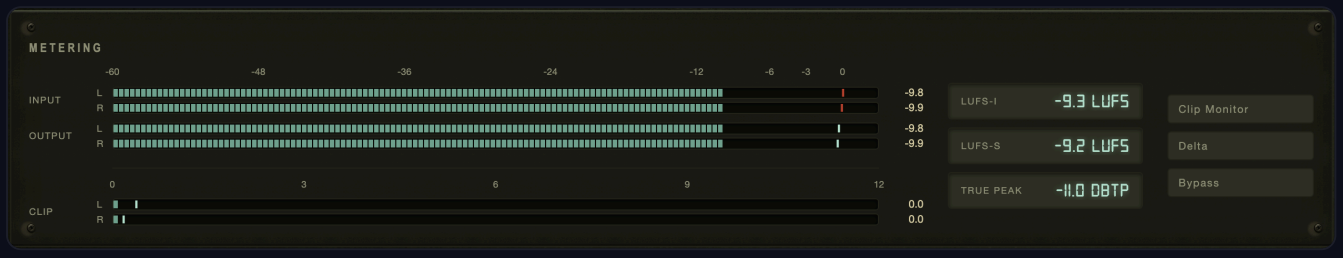
Keep it under 20%, switch the section on and off while listening, and if you cannot tell which state you are in then it is doing its job. The whole lower half of the knob is free of the bitcrusher, so adding one cost none of the range that was usable here.

TWO PROMISES, BOTH TESTED

At zero, every release build renders the same audio twice — once with Chaos never used, once wound to full and returned to zero — and refuses to ship unless the two are identical to the bit. And the quantising happens before the ceiling, not after, so the ceiling holds at 100% too. The release script will not build if either stops being true.

METERING

Three meters, three numbers and three ways of listening.



METER

Input L/R	What arrives, before anything.
Output L/R	What leaves. On a clipper this sits on the ceiling most of the time, which is why it cannot tell you how hard you are working.
Clip L/R	How many decibels came off the loudest peak, on its own scale from 0 to 12 dB. Above 6 dB it turns to the warning colour — not because that is wrong, but because it is a decision rather than peak control.

> **WHY CLIP IS A SEPARATE SCALE**
>
> Clipping is an amount of reduction, not a level. Drawn on the same −60 dB scale as the other two, half a decibel of clipping would sit three quarters of the way along the bar. Its own scale is the only way the reading means anything.

READING

LUFS-I	Integrated loudness to ITU-R BS.1770, gated, over everything played since the plug-in was loaded. The figure to compare against a reference.
LUFS-S	The last three seconds, ungated. This one follows the programme, so it is the one to watch while a section plays.
True Peak	The highest inter-sample peak seen. It turns red if it ever passes the ceiling — which, with True Peak on, it should not.

MONITOR

Clip Monitor	Hands over what the clipper removed, on its own. This is how you tell occasional peak-shaving from constant distortion: if what you hear has pitch and rhythm, you are clipping the music rather than the peaks.
Delta	Hands over the difference the whole plug-in is making, Character, Punch and Chaos included.
Bypass	Straight through, still delayed by the same amount, so switching it does not shift the signal in time against the rest of the session.

The three are one choice, not three switches: turning one on lets the other two go. They stay three separate parameters so a host can automate each one, but nothing useful was ever heard from two of them at once.

PRESETS, A/B AND SETTINGS

PRESETS

The arrows step through the list; the name in the middle opens the browser, where the factory presets are grouped by category. Save stores the current settings under a name of your own.

The categories run from the most transparent setting to the most extreme — Clean Mastering, Loud Mastering, Warm, Analog, Punch, Creative, Chaos, Experimental — so the order of the list is itself a description of what the plug-in does.

Your presets live in a folder under Documents. The plug-in can open it for you, so they are yours to copy, back up or pass on.

A AND B

Two complete settings, side by side. Press the other letter to compare; each keeps its own controls and its own preset name. The whole window turns a cooler shade in B, so you can tell which one you are hearing while you are listening rather than looking.

Both are stored in your session and come back with the project. It always opens on A.

SETTINGS

The gear beside Easy and Advanced.

Updates	Whether the plug-in checks for a newer version and tells you when there is one. Off means nothing is asked.
Licence	Releases this computer, so you can activate on another. It needs your password, and the slot is freed on the server before the licence is removed here.

WORKING OFFLINE

After activation the plug-in holds a signed licence on your own machine and checks it locally. An offline studio, a plane or a website that is down changes nothing about a session that is already running. The account is how the licence reaches you, not a second lock on it.

AUTOMATION

Every control is a real parameter, section switches included, so which parts are running is part of the sound and can be automated and saved with the project.

WHERE IT BELONGS

Last on the master bus. It is the stage that decides what leaves, and anything after it can undo the ceiling it just held.

SPECIFICATIONS

FORMATS	macOS: VST3, Audio Unit, Standalone Windows: VST3, Standalone
SYSTEM	macOS 11 Big Sur or later Windows 10 or later, 64-bit
PROCESSOR	macOS: Apple Silicon and Intel, universal Windows: 64-bit Intel or AMD
CHANNELS	Stereo, and mono in to mono out
OVERSAMPLING	Off, 2×, 4×, 8×, 16×
LOUDNESS	ITU-R BS.1770-4, integrated and short-term
TRUE PEAK	Measured at 4×, enforced at the output
LATENCY	A few milliseconds, reported to the host. It does not change while you work.
LICENCE	One computer at a time, moved from your account

IF SOMETHING IS WRONG

SYMPTOM	
The audio drops out for five seconds, over and over	That is demo mode. The plug-in is not activated. Sign in and it stops.
The system warns about an unidentified developer or an unknown publisher	Expected for now. On macOS, right-click the installer and choose Open, then confirm. On Windows, choose More info, then Run anyway.
On Windows the plug-in loads but the window stays empty	The Microsoft Edge WebView2 runtime draws the interface and is missing. Install it from Microsoft; Windows 11 already has it.
Turning Drive up does not make it louder	Auto Gain is on, which is what it is for: it holds the loudness so you can hear the character change instead of a level rise. Switch it off to hear what the setting bought you.
The Drive knob is greyed out and will not move	Clip Target is on and is setting it for you. Switch Clip Target off to take it back.
It sounds harsh at settings that used to be fine	Check Oversampling. At Off the harmonics the clipper makes fold back down into the mix. Four times is the sensible default.
The stereo image moves while it works	Stereo Link or Channel Link is below 100%. Fully linked, both channels are treated as one and the picture stays where it is.
Punch is doing nothing	It only acts on transients, and only where the clipper actually removed something. With Drive at zero there is nothing to give back.
Sign-in says the licence is on another computer	It is active elsewhere. Open your account, release that machine, then sign in again. It takes seconds and does not involve us.
I forgot my password	Use the forgot-password link on the sign-in page. The link works once and expires after a day. Your purchase lives on your account, not in a file you have to keep safe.

CLIP HARDER.
KEEP THE PUNCH.

Prime Entity is an audio production studio. Ghost production, mastering, sound design and recording, and tools built in-house for the same sessions.

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