

Desert Moon Audio

MEAT SHOP

MS - 10

Sub Weight / Tube Fattener



Every bass chain ends the same way: everything is right except the part you feel. The note is there, the tone is there, and the chest-punch is not. Meat Shop is the last box on that chain. It puts weight at 50 Hz — or wherever you tune it — and then runs exactly those frequencies into a Class-A triode that answers with their even harmonics, which is the thing small speakers translate as size. Bass. Beef. Girth.

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A NOTE ON THE MODEL

Meat Shop is an original design informed by how tube and transformer circuits physically behave — a single-ended triode with supply sag and bias drift, and flux-based core saturation that distorts in the bass and stays clean on top. It is not a sample-matched copy of any particular unit, and Desert Moon Audio is not affiliated with or endorsed by any hardware manufacturer.

1.1 What Gets Installed

FORMAT	LOCATION
Audio Unit	~/Library/Audio/Plug-Ins/Components/Meat Shop.component
VST3	~/Library/Audio/Plug-Ins/VST3/Meat Shop.vst3
AAX	/Library/Application Support/Avid/Audio/Plug-Ins/Meat Shop.aaxplugin

After installing, restart your DAW or rescan its plug-in list. Meat Shop appears under **Desert Moon Audio**. Mono and stereo tracks are both supported; on stereo tracks the two channels are processed by matched independent engines.

2.1 Five Minutes In

Put Meat Shop *last* on the bass chain — after your compression, after your EQ. Load the factory preset **50 Cycle Gut**. Play the chorus.

What you should feel: the fundamental gains weight, and the note reads bigger even on speakers that cannot reproduce 50 Hz — that is the triode manufacturing even harmonics of exactly the band you boosted. Now hold a note and listen for the push-then-bloom: the tube's power supply sagging a few dB and recovering. That is the part you feel in the chest.

Then calibrate to taste: **GUT** is how much weight, **FREQ** is where it sits, **HEAT** is how hard the tube works. HEAT is level-compensated — it changes the meat, not the volume — so make the A/B honest by matching levels with **OUTPUT** and judging with your ears, not the fader.

2.2 Resizing

Drag the window's corner. The panel keeps its shape and every control scales together; the size is remembered per session.

DEFAULTS

Double-click any knob to return it to its resting position — except FREQ, where double-clicking opens the Hz entry instead (typing 50 is the reset). The host's own bypass control and the BYP button on the panel drive the same parameter, so neither fights the other.



- | | |
|---|--|
| <p>1 Preset bar — step, pick, save, revert, A/B, undo, redo</p> <p>2 VU meter — 0 VU = -18 dBFS, latched clip lamp in the corner</p> <p>3 GUT — weight at the tuned frequency</p> <p>4 MEAT — the send trick: parallel vari-mu on the tuned band</p> <p>5 OUTPUT — level, unity at 7</p> | <p>6 FREQ — 35–80 Hz; double-click to type it exactly</p> <p>7 HEAT — tube drive, level-compensated</p> <p>8 FLOOR — SUB / TIGHT high-pass under everything</p> <p>9 MIX — parallel blend, phase-aligned</p> <p>10 TUBE — the jewel; glows as the triode works</p> <p>11 BYP — true bypass; also puts the meter lamp out</p> |
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3.1 How the Signal Runs

FLOOR clears whatever lives below the music. The GUT bell then boosts the tuned frequency — *before* the tube, so the frequencies you asked for more of are exactly what drives it. The signal splits at 180 Hz: the low band runs hot into the triode, everything above takes the same curve at a fraction of the drive, and both recombine into the output iron, whose core saturation lands only on the bass. OUTPUT trims, MIX blends against a delay-aligned dry path. Everything nonlinear runs 4× oversampled.

4.1 The Bell Before the Tube

GUT is a wide, resonance-free bell — weight, not a whistle — and its position in the chain is the design. Boost *after* a saturator and you get louder bass. Boost *before* it and the saturator receives more of exactly the band you chose, so it answers with the second and third harmonics *of that band*. A 50 Hz fundamental arrives with new energy at 100 and 150 Hz — frequencies laptop speakers and earbuds can actually reproduce. That is why the low end reads bigger everywhere, not just on a subwoofer.

4.2 The Triode

The low band runs into a single-ended Class-A stage with three behaviours that make it a tube and not a waveshaper:

Asymmetric transfer. Grid conduction folds the top of the swing early; cutoff lets the bottom run further. Even harmonics arrive first — the warmth — and the higher orders only fold in as HEAT rises.

Bias drift. Sustained level walks the operating point away from rest, so the *shape* of the curve changes with your playing. The distortion breathes; a static curve never does.

Supply sag. The envelope of what the stage is passing pulls its gain down — up to about 3.5 dB at full HEAT, attack in milliseconds, recovery in a tenth of a second. On a held bass note that is a push, then a bloom. It is program-dependent compression you feel rather than hear.

4.3 The Iron

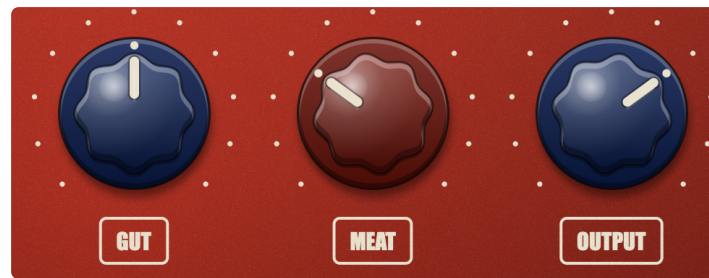
Both bands recombine into an output transformer modelled at the core: saturation acts on *flux*, and flux is the running integral of voltage, so low frequencies build far more of it than highs. The transformer thickens the bass and leaves the top alone — not because a filter says so, but because that is what iron does.

4.4 MEAT — the Send Trick

The classic console move for deep bass: send the bass to a vari-mu compressor, lean on it, and tuck the squashed return under the dry signal — the fundamental comes forward, contained, without the mix getting muddier. MEAT is that whole routing in one knob. Its compressor hears *only* a band-pass at the tuned frequency: the sidechain and the audio path are the same narrow band, so nothing at 200–400 Hz — where mud lives — is ever touched. The gain law is genuinely vari-mu: ratio grows with drive, no knee anywhere, 20 ms attack so the note's front edge passes, 250 ms release so it breathes. One knob drives the tube and rides the return together.

WHY THE MIDS STAY CLEAN

The 180 Hz split is two-pole, so at 1 kHz only a few percent of the signal ever reaches the driven triode. The upper band takes the same curve at a whisper of the drive — enough to stay part of one circuit, never enough to blur a mix.



GUT

0 – 10 · 0 to +14 dB at the bell

Weight at the tuned frequency. Because the bell sits before the tube, more GUT is more fundamental *and* more harmonics of it — the knob gets audibly bigger, not just louder, as it comes up.

FREQ

35 – 80 Hz · 0.1 Hz steps

Where the weight sits. 50 is the number on the box; 40–45 favours 808s and subs, 55–60 favours kick fundamentals and P-bass. The preset readout shows the frequency while you turn; double-click to type it exactly.

HEAT

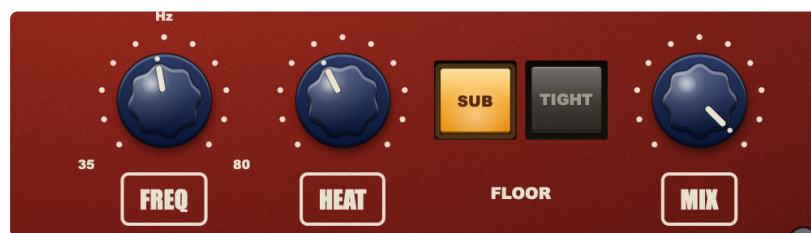
0 – 10 · 0 to +30 dB drive

How hard the triode works: second harmonic first, bloom later, sag deepest at the top. Level-compensated by construction, so the knob changes texture and density while OUTPUT stays in charge of level.

MEAT

0 – 10 · 0 to +22 dB into the vari-mu

The send trick in one knob. Up from zero, the tuned band's compressed copy rises under the dry signal — sustain and density first, then real leveling as the vari-mu's ratio climbs. Because the return is makeup-ridden inside, the knob adds forwardness, not just volume.



FLOOR

SUB 18 Hz / TIGHT 30 Hz

The high-pass under everything. **SUB** keeps the chain open down to club-system depth. **TIGHT** clears the octave of mud below the note so the boost punches instead of blooming — the usual choice inside a dense mix, and the safe one before a limiter.

MIX

0 – 100%

Parallel blend. The dry path is delayed to exactly match the processed path, so any blend is phase-clean — no comb filtering at 50%, ever. Blends around 40–60% put the weight under the original attack.

OUTPUT

0 – 10 · unity at 7

Level, after everything. A passive pot's taper: usable trim either side of unity at 7, off at 0. Level-match your bypass comparisons here — an honest A/B is a matched one.

6.1 The VU

A proper VU movement, not a bar pretending: 300 ms ballistics, a face laid out linear-in-voltage the way real movements are, and **0 VU calibrated to -18 dBFS**. A healthy bass bus rides around 0 with peaks kissing the red. The red block from 0 to +3 is where the tube leans in hardest.

The fly at the hot end is the shop's advice: leave the needle in the red too long and the meat draws flies.



Driven hard: the needle in the red block, the backlight warm.

6.2 The Clip Lamp

In the bezel's corner, and it **latches** — a clip is a thing that happened, not a thing that is happening. Click anywhere on the meter to clear it.



The jewel and BYP. Under sustained drive the jewel breathes with the sag.

6.3 The Backlight

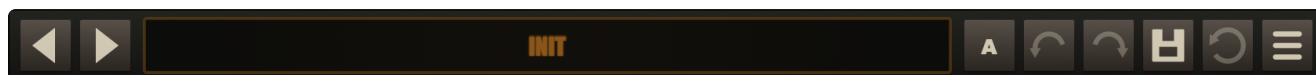
The face is lit by a lamp behind the glass, and the lamp dies with the power: hit **BYP** and the movement falls into shadow while the glass keeps its room reflection. If the meter is dark, the unit is out of the circuit — you can see bypass from across the room.

6.4 The Tube Jewel

The red jewel idles at a deep ember, blooms as the triode works, and breathes with the supply sag — hold a note at high HEAT and watch it swell and recover in time with what you feel. Dark jewel, coasting circuit: turn HEAT up.

6.5 BYP

True bypass, ramped over 30 ms so it never clicks, time-aligned so the signal does not jump, linked to the host's own bypass parameter, and deliberately left out of presets: loading a preset must never switch the unit off.



The bar across the top carries the whole preset system. Arrows step through the list; the glowing readout names what is loaded, with a dot when you have edited it; click the readout for the full menu. The keys on the right: **A/B** flips between two scratch settings — tweak one, flip, and hear them against each other; they start as twins and diverge as you edit, and neither is saved anywhere. **Undo** and **redo** walk the edit history — a knob drag is a few steps, not hundreds, and a preset load is one. The disk saves under a name; the ring puts back the loaded preset, discarding edits; the stacked bars open the menu.

Your saved presets live in ~/Library/Application Support/Desert Moon Audio/Meat Shop/Presets as .mspreset files — plain XML, safe to share, visible from every session and every host.

7.1 The Factory Bank

Front Panel

Everything at rest: moderate 50 Hz weight, the tube warm but not working hard.

GUT 5 · 50 HZ · HEAT 4 · MEAT 3 · SUB

50 Cycle Gut

The reason this box exists. Bass bus, last in the chain, 50 in the chest.

GUT 7 · 50 HZ · HEAT 5.5 · MEAT 5 · SUB

Bass Finisher

The everyday move: a little less weight, floor tightened to sit in a full mix.

GUT 5.5 · 50 HZ · HEAT 4.5 · MEAT 4 · TIGHT

808 Prime Cut

808s and subs: the bell down at 45, driven hard, trimmed back.

GUT 8 · 45 HZ · HEAT 6 · MEAT 5 · SUB

Kick Hammer

The bell on the beater's fundamental, floor tight so it punches.

GUT 6 · 55 HZ · HEAT 5 · MEAT 3 · TIGHT

Butcher's Glue

Mix-bus weight at 60, blended under the dry signal.

GUT 3 · 60 HZ · HEAT 3 · MEAT 2 · MIX 55

Smoke House

Heat as the point: dark, saturated, the sag doing the pumping.

GUT 4 · 42 HZ · HEAT 7.5 · MEAT 3.5 · SUB

Thin Slice

Mastering-grade restraint: barely-there weight, tube just glowing.

GUT 2 · 50 HZ · HEAT 1.5 · MEAT 1.5 · TIGHT

8.1 Finishing a Bass Bus

Last in the chain, after compression. Start from **Bass Finisher**. Set **FREQ** to the track's fundamental — double-click and type it if you know it. Bring **GUT** up until the weight is right on big monitors, then check small speakers: if the bass got bigger there too, the harmonics are doing their job. Trim **OUTPUT** until bypass comparisons sit at the same loudness.

8.2 808s That Translate

808 Prime Cut, **FREQ** tuned to the 808's root. The tube's even harmonics are what carry an 808 onto a phone speaker; **HEAT** is the translation knob. If the tail gets too thick, **TIGHT** the floor or pull **MIX** to 70%.

8.3 Weight Under a Kick

Kick Hammer, **FREQ** at the drum's fundamental (usually 50–60). Keep **FLOOR** on **TIGHT** so the boost punches instead of blooming. On a kick that shares the low octave with a bass line, blend with **MIX** around 50% so the attack stays untouched.

8.4 A Whole Mix, Gently

Thin Slice: two of **GUT**, a whisper of **HEAT**, **TIGHT** floor. The transformer and the sheen path do most of the talking at these settings — it reads as expensive rather than processed.

9 Specifications

ITEM	DETAIL
Formats	AU, VST3, AAX — macOS 10.15+, universal binary (Apple silicon + Intel)
Channels	Mono or stereo; matched independent engines per channel
Oversampling	4× polyphase IIR around every nonlinearity
Latency	The oversampler's few samples, reported to the host; dry path aligned
GUT bell	TPT state-variable, 35–80 Hz in 0.1 Hz steps, up to +14 dB
Tube stage	Class-A triode model: asymmetric transfer, bias drift, up to ~3.5 dB supply sag
MEAT	Parallel vari-mu on the tuned band: growing ratio, 20 ms / 250 ms, makeup-ridden return
Metering	VU, 300 ms ballistics, 0 VU = −18 dBFS, latched clip
Automation	Every control; click-free bypass; sample-accurate smoothing

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Sub Weight / Tube Fattener · User Manual, version 1.0