



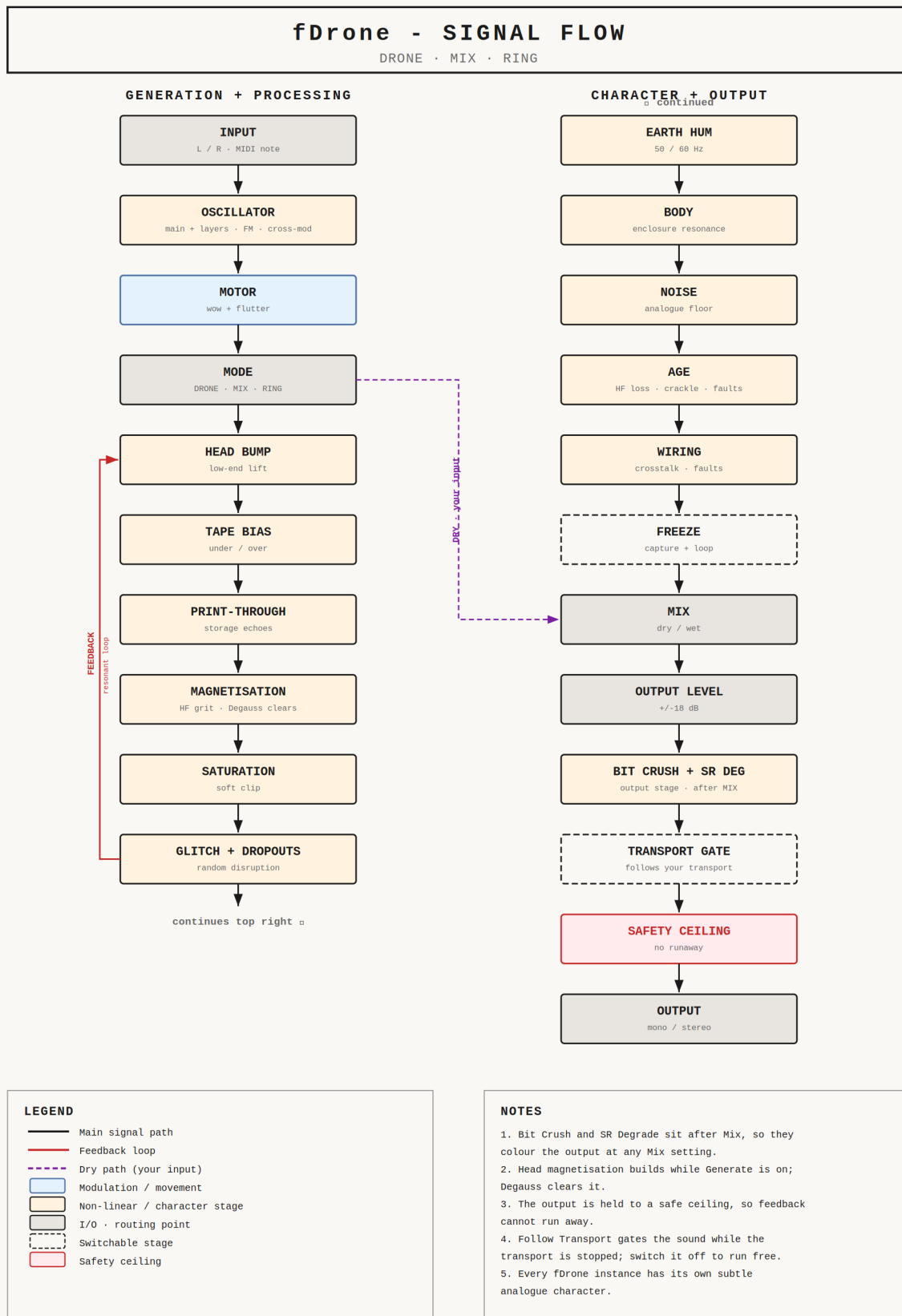
fDrone

Analogue Drone Generator & Signal Mangler
Plugin

Product Manual

Build 1.0

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What fBox Is

fBox is a complete analogue mixing ecosystem - individual plugins, a universal rack processor, and a full 32-channel mixing console with built-in tape machine - built around a single idea: every piece of hardware that ever left a factory floor had its own personality, and your plugins should too.

Most plugin companies model hardware. They pick one unit, capture it as accurately as they can, and sell that one model to everyone. Your copy is identical to mine. The compressor on your kick is the same compressor on your vocal. It has always worked this way - and it is the reason in-the-box mixes sound in the box.

fBox is built on the opposite principle. Every plugin instance carries a unique serial-seeded analogue character, generated the moment it is created. Load three fComps in one session and you have three different compressors, each with its own voice. That serial is fixed to the instance forever - it never resets, and it travels with the session.

The choice is yours. Open a fresh instance whenever you like and it is a different unit with its own voice - or find one you love and keep it. Save it, recall it, and mix through it for as long as you like: the same character, every time. Learn how it sounds and it becomes an instrument you know. And a unit you keep is yours alone - its serial exists on no one else's machine, the same way a piece of hardware you buy is one specific unit and no other. Bought once, owned permanently, no subscription.

This is not emulation. This is character at the instance level.

What fDrone Is

fDrone is three instruments in one box: a drone synthesiser, an analogue-style signal mangler, and a ring modulator. It generates continuous, evolving tones from nothing, runs your own audio through a chain of broken-studio character and damage, and can ring-modulate any signal with its internal oscillators. It is built for drone, ambient, noise, sound design, and anything that wants to sound like it came off a machine that has seen better days.

fDrone is not a static effect. It models a machine with a history. It warms up over the first minute as its oscillators drift and settle. Its tape head slowly magnetises while it runs, so the sound grows a little grittier the longer it plays. Turn up Age and it develops intermittent faults, like a dodgy connection that comes and goes. Every instance is its own unit, with its own analogue character baked in from birth. No two are quite alike, and the one you are using now will not sound identical to the next one you open - unless you keep it, which you can (see Units and Patch Cards).

fDrone registers as both an effect and an instrument. Load it in your DAW on an audio track to process incoming sound, or on an instrument track to play the drone from a MIDI keyboard. It accepts mono or stereo input, can run with no input at all as a pure generator, and outputs mono or stereo to match your track.

fDrone works everywhere the rest of the fBox suite does. Use it in a DAW, as an insert in the fBox Console (the plugin or the dawless Console Standalone), or in a slot of the fBox Rack. Its unit and everything you set are saved with whichever session you are in - it sounds and behaves the same in all of them.

Getting Started

Make a drone from nothing

1. Set Mode to DRONE. 2. Press Generate (it lights red). 3. Press Play. You should hear a steady tone around 80 Hz. You do not need a clip on the track - fDrone makes the sound itself - but it does follow your transport, so it sounds while you are rolling and fades away when you stop. That is the Transport button in the header, on as it ships; turn it off and the drone runs whether the transport is rolling or not (see Follow Transport). That tone is your canvas.

From there, add Layers (2 or 3), Detune (about 3) and Layer Amp (about 5) for a thicker, beating sound. Add Drift (about 3) and Wander (about 2) for movement. Try Saturate at 2 or 3 for warmth, and Earth at 2 or 3 to ground it in a room. Use your ears, not your eyes - small moves add up.

Run your own audio through fDrone

Set Mode to MIX and leave Generate off. Your input now passes through the whole character and damage chain with no drone on top - this is fDrone as a pure character effect. Turn Generate on to lay a drone over the top. Set Mode to RING instead to ring-modulate your input with the oscillator, for metallic, bell-like, inharmonic tones.

Note: Some DAWs (Ableton, Cubase, FL Studio) stop running an effect when the track has no audio on it. If a drone goes silent, put a long silent clip on the track, or load fDrone on an instrument track instead. Capturing the sound to audio is a separate step - see *Recording fDrone In Your DAW*.

Tip: New here? Start in DRONE with everything at default, press Generate, and turn one knob at a time so you learn what each does. Mode is the big fork: DRONE makes sound from nothing, MIX runs your audio through the box, RING is the wild metallic one. Nothing you do here changes your audio file - it is all live.

Recording fDrone In Your DAW

fDrone loads two ways: as an effect on an audio track, or as an instrument on a MIDI or instrument track. On an instrument track you can play the drone's pitch from a MIDI keyboard or a MIDI clip - each note you play sets the Base Frequency, and the Freq knob follows it (see Osc A). Either way, fDrone makes the sound itself, so you never need a clip on the track. As it ships it follows your transport, so press Generate and then Play (see Follow Transport).

Capturing that sound to audio is a separate step, and it catches people out, because most DAWs record an input by default and a generator has no input to record. You have two routes: record the track's output in real time, or render or bounce it offline. Both work in any VST3 host.

Reaper

1. Put fDrone on a track and dial in your sound. 2. Right-click the track's record-arm button and choose Record: output, then Record: output (stereo). 3. Arm the track, then press the transport Record button. Reaper records fDrone's output to a new audio item; stop when you are done. Or render straight to a file with File > Render.

Any other VST3 host

In Cubase, Studio One, Bitwig, FL Studio, Ableton Live and the rest the same two ideas apply under different names. Freeze or bounce the track (a DAW feature that renders a track to audio) - this is the simplest capture. Or route fDrone's output to an audio track's input and record-arm that track. Or use the DAW's offline export or render, then re-import the file if you want it back as a clip.

Tip: To capture movement, automate fDrone's controls (Speed, Freeze, Mode, the Damage knobs) and record the output live rather than bouncing a static setting. To get the same random detail on every take, turn on Render Safe (see Automation).

Follow Transport

fDrone makes sound from nothing. That is the point of it, but it also means that, left alone, it carries on droning while your transport is stopped and you are trying to work. Follow Transport is the switch that decides whether it does.

Transport sits in the header, next to Unit. It is on by default, shown in the same green as the buttons around it. With it on, fDrone only sounds while your transport is rolling: press play and the drone comes in, press stop and it fades away. Nothing to automate, nothing to remember. The drone behaves like every other part of your song.

Switch it off - the button turns bronze - and fDrone runs free. It sounds whether the transport is rolling or not, the way a real oscillator hums away on the bench whether or not the tape is turning. That is the older behaviour, and it is there for sound design, for auditioning, and for anyone who wants the machine simply left on.

The fade is a few thousandths of a second: fast enough to feel immediate, gentle enough that a full-scale oscillator never clicks off.

Follow Transport is saved with your patch cards and your session, and it follows the transport of whatever is hosting fDrone - your DAW, the fBox Console, or the Console Standalone.

Tip: *Learn the two halves and you have a workflow rather than a switch. Turn Follow Transport off while you are building a sound: the drone keeps running with everything stopped, so you can sit inside it, turn one knob at a time and really listen, with no transport rolling and no clip playing. Then turn it back on and the same drone falls into place with the song, starting and stopping where you do. Dial it in stopped, play it in time.*

Follow Transport and Reaper

With Follow Transport off, starting playback in Reaper while the drone is already sounding can produce a brief click. This is Reaper switching its own monitoring path as the transport starts, not something fDrone does - the same happens with any plugin that makes sound while stopped, and it does not occur in other hosts or in the fBox Console Standalone. It is monitoring only: the click is never recorded and never appears in a bounce or offline render, so nothing reaches your finished work. Leave Follow Transport on, as it ships, and you will not meet it at all.

Interface

The window opens at its standard size. A resize button in the bottom-right corner offers two sizes: Small (75%) and Medium (100%). Double-click a knob to return it to its default; Input and Output return to 0 dB.

Header

Control	What it does
Serial number	The unit's serial, shown at the far left. This is the identity of the analogue character you are hearing (see Analogue Character).
Unit	Opens the unit menu - roll a new unit, save or recall one, and pin a default (see Units and Patch Cards).
Transport	Follow Transport, next to Unit. On as it ships (green): the drone sounds only while your transport is rolling. Off (bronze): it runs whether the transport is rolling or not. See Follow Transport.
fDrone title	Centre of the header.
Quality	Eco, Studio or Master (see Quality).
Reset Engine	Clears any fault and resets the internal DSP. Controls are left as they are.
Help	Opens the built-in help window.
Fault	A red indicator that appears only if invalid audio is detected. Click Reset Engine to clear it.

Panel sections

The controls are grouped into labelled sections: GLOBAL (bypass, input, I/O link, mix, mode, generate, memory), OSC A (freq, osc amt, osc rate), OSC B (layers, detune, layer amp, harmonics, fm rate, cross mod), MOTION (drift, wander, motor, speed, freeze), DAMAGE (saturate, bit crush, dropouts, glitch ch, glitch amt, sr degrade, feedback, bias, noise), CHARACTER (age, earth, hz, body, wiring, sens, symp, storage, decay), OUTPUT (output level) and ACTIONS (reset, save patch, load patch, degauss).

Meters

Input meters sit on the far left, Output meters on the far right, each as an L/R pair. Click a meter to switch it between Peak and RMS (see Meters). In DRONE mode the input is unused, so on a silent track the input meters read silence.

Signal Flow

Understanding the order of stages helps explain why some control combinations interact the way they do. Earlier stages feed later ones, so a change up top changes how everything below it behaves.

#	Stage	Notes
1	Input	Mono or stereo accepted, or none at all in DRONE. Input trim is applied first, before anything else.
2	Oscillators A + B	Base tone plus layers, detune, cross-mod, drift and wander. Warms up and settles over the first minute.
3	Motor wow / flutter	Mechanical pitch modulation, unique per unit.
4	Mode routing	DRONE, MIX or RING - decides what is drone, what is your input, and how they combine.
5	Feedback loop	A resonant path back into the signal, coloured uniquely per unit.
6	Head bump	A low-frequency lift that shifts with Speed.
7	Tape bias	Under- or over-bias colour.
8	Print-through	Ghost echoes from tape storage (Storage).
9	Head magnetisation	HF grit that builds while the drone generates; Degauss clears it.
10	Saturation	Analogue soft-clipping, per-unit character.
11	Glitch + dropouts	Random signal disruption.
12	Earth hum	Mains hum with unique harmonics.
13	Body resonance	Physical-enclosure colour.
14	Noise floor	Per-unit noise; rises with Age.
15	Age	HF rolloff, contact crackle and intermittent faults.
16	Wiring	Stereo bleed and occasional polarity flips or dropouts.
17	Freeze / thaw	Captures and loops the sound; releases back to the live drone.
18	Mix	Blends your clean input against the drone-and-character output.
19	Output level	Final gain control.

#	Stage	Notes
2 0	Bit crush + SR degrade	A final output stage, applied after Mix (see note).
2 1	Transport gate	Fades the sound out while the transport is stopped, unless Follow Transport is off.

Note: *Bit Crush and SR Degrade act like a worn converter on the way out of the box, so they sit after the Mix control. In MIX and RING they grind whatever leaves fDrone at any Mix setting, not only at full wet; in DRONE there is nothing to grind until the drone sounds. To dial them back, use their own knobs. The feedback loop reads the processed signal and returns it to the front, which is why Feedback and Saturate together can tip into self-oscillation.*

Controls - Global

Mode

DRONE - Pure drone generation. Press Generate to start. Input is ignored entirely.

MIX - The drone is added on top of your input, and the pair runs through the character and damage chain. With Generate off there is no drone, so your input alone is processed and fDrone becomes a character effect. The Mix knob balances the processed signal against your clean input.

RING - Ring-modulates your input with the internal oscillator, for inharmonic, metallic, bell-like tones. It needs input to make sound. The oscillator is always the carrier here, so Generate has no effect in RING.

Bypass

Silences the drone and the whole character and damage chain and passes your input through. The Input trim still applies to the bypassed signal; the Output trim does not. For a completely untouched signal, use your host's own bypass.

Generate

Starts and stops the drone; lights red when active. It has no effect in RING mode, where the oscillator is always the carrier.

Input

-18 to +18 dB in 0.5 dB steps. Sets the level of incoming audio before processing. No effect in DRONE, where input is unused. In MIX and RING it sets how hard the input drives the chain. Double-click to reset to 0 dB.

I/O Link

Links Input and Output trims inversely: turn the input up and the output comes down by the same amount, so overall level stays roughly constant while you drive the processing harder. Ignored in DRONE mode.

Mix

0 to 100%. In MIX and RING this balances your clean input against fDrone's drone-and-character output. It is not a plain dry/wet control: in MIX your input is part of the wet side too - the drone is added to your input and the pair runs through the chain - so turning Mix down fades toward your clean input rather than lifting the effect off one source. In DRONE mode there is no input, so Mix simply sets the drone level.

Important: *Bit Crush and SR Degrade sit after the Mix control (see Signal Flow), so in MIX and RING they still act on the output at any Mix setting. Use their own knobs to set how much of each you want, not the Mix knob.*

Output

-18 to +18 dB in 0.5 dB steps. Final volume before the signal leaves fDrone.
Double-click to reset to 0 dB.

Memory

0 to 10. Affects how patch cards are loaded, not the live sound. At 0, patches recall exactly. Higher values smudge the loaded settings, as if recreated from scribbled notes - the same unit smudges the same patch the same way every time (see Units and Patch Cards).

Osc A

Freq

20 Hz to 20 kHz. The fundamental pitch of the drone. Low (20 to 200 Hz) is rumbling bass; mid (200 Hz to 2 kHz) is hum and buzz; high (2 kHz and up) is whistles and whines. Start at 80 Hz for a deep drone. On an instrument track, a played MIDI note sets this knob to the note's pitch, and the knob visibly follows your playing.

Osc Amt

0 to 10. A slow pitch wobble. At 0 the pitch is steady; higher values sway it back and forth. Osc Rate sets the speed of that wobble (Low / Med / High).

The oscillators are not perfect sines - they carry subtle harmonic colour and this unit's own calibration. On startup they warm up over roughly a minute, drifting slightly before they settle, so a fresh instance sounds a touch different in its first seconds than it will once it has been running.

Tip: Start at 80 Hz with Osc Amt at 0. Get your layers and character dialled in before adding pitch movement - a little Osc Amt goes a long way.

Osc B (Layers)

Layers

1 to 5. How many oscillator voices sound together. Layers beat against each other for thickness.

Detune

0 to 10. How far the layers are spread in pitch. Small amounts (1 to 3) give warm thickening; larger amounts give dissonant shimmer.

Layer Amp

0 to 10. Level of the extra layers against the main oscillator.

Harmonics

Low / Med / High. The pitch relationship between layers. Low leans to octaves (consonant); Med to fifths and fourths (richer); High to non-integer ratios (metallic, clangorous). Low is safest; High is for when you want things strange.

FM Rate

Low / Med / High. Speed of per-layer frequency modulation. Low gives slow timbral shifts; High gives buzzy, complex tones.

Cross Mod

0 to 10. Each layer modulates the next, a cascading FM. At 0 the layers are independent. High values with several layers build dense, evolving timbres.

Tip: *Layers 3, Detune 3, Layer Amp 5 is a great starting point. Add Cross Mod at 2 to 4 for evolving complexity. The Harmonics switch is the biggest timbral leap - try all three positions.*

Motion

Drift

0 to 10. Slow, one-directional pitch drift that builds up over time, like an oscillator that never quite holds its tuning.

Wander

0 to 10. A random, filtered pitch walk: the pitch meanders unpredictably around the centre. In your host's automation list this control is named Random Drift.

Motor

0 to 10. Tape-motor wow and flutter. Each unit has its own motor character - its own speed, depth and regularity.

Speed

0 to 10. Tape transport speed. 5 is normal. Below 5 the pitch drops and the modulations slow; above 5 everything speeds up. Automate it for tape-stop and tape-start effects.

Freeze

Off / Hold. Captures up to about 750 ms of the drone and loops it. Oscillator movement stops while held. Releasing returns to the live drone; the length of that return is set by Decay in the Character section.

Tip: Drift at 2 to 3 and Wander at 1 to 2 give gentle, organic movement. Motor adds tape-like wobble, and every unit's motor has its own character. Automate Speed for dramatic tape-stop transitions, and Freeze for rhythmic stutter effects.

Damage

Saturate

0 to 10. Analogue-style saturation (soft clipping). Low (1 to 3) adds warmth and body; high (7 to 10) is aggressive. At Studio and Master quality the saturation is cleaner and smoother.

Bit Crush

A ten-step ladder: Off, Subtle, Warm, Grit, Edge, Lo-Fi, Crush, Harsh, Smash, Destroy. Progressive digital coarsening from barely-there to total destruction.

Dropouts

0 to 10. Random momentary signal losses, like worn tape or a loose connection.

Glitch Ch / Glitch Amt

Glitch Ch (0 to 10) is the chance a glitch happens - at 0 never, at 10 constantly. Glitch Amt (0 to 10) is how severe each glitch is, and has no effect if Glitch Ch is 0.

SR Degrade

0 to 10. Reduces the effective sample rate for harsh, gritty, aliased artefacts.

Feedback

0 to 10. Feeds output back through a resonant path whose colour is unique to this unit. Low (1 to 3) adds body and resonance; high, with Saturate up, can tip into self-oscillation. fDrone holds a safety ceiling on the generated signal, so a feedback runaway cannot blow up your monitors - but it can still get very loud, so use it with care.

Bias

0 to 10. Tape bias. 5 is neutral. Below 5 (under-biased) is thinner, grittier, harder in the highs. Above 5 (over-biased) is fatter and darker, losing top end. For vintage warmth try 6 to 7; for harsh lo-fi try 2 to 3.

Noise

0 to 10. Analogue noise floor, with a colour set by this unit's serial. Age raises it further.

Note: *Bit Crush, SR Degrade, Dropouts and Glitch sound the same at every quality tier. Their harshness is the point, so they are left raw. Bit Crush and SR Degrade are also a final output stage, applied after Mix (see Signal Flow and the Mix control).*

Tip: *Saturate at 2 to 3 is the secret weapon for warmth. Feedback at 5 to 7 with Saturate at 4 to 5 gives self-oscillating, screaming feedback - pull Output down before you explore it. Bias below 5 for gritty lo-fi, above 5 for dark warmth.*

Character

Age

0 to 10. Progressive wear. High frequencies roll off, the noise floor rises, and the unit develops intermittent faults: brief volume dips like a dodgy connection, and occasional contact crackle. Each unit ages differently. At 10 you are listening to a machine from a damp shed.

Earth / Hz

Earth (0 to 10) is mains hum, with a harmonic signature and phase unique to each unit. Low settings (1 to 3) ground the drone in a room; higher settings make the hum plain. Hz picks the mains frequency, 50 or 60 - whichever matches the part of the world your imaginary hardware lives in.

Body

0 to 10. The resonance of an enclosure - the box or chassis the electronics sit in. Four resonant frequencies, unique to each unit.

Wiring

0 to 10. Stereo wiring faults: channel bleed, and at higher settings occasional polarity flips and brief channel dropouts. No audible effect on a mono track.

Sens

0 to 10. Lets input level drive the damage harder - quiet passages stay cleaner, loud passages push more. Most useful in MIX and RING.

Symp

0 to 10. Sympathetic coupling: the input level gently nudges the drone's pitch and level, as if the source and the drone were physically coupled. Most useful in MIX and RING.

Storage

0 to 10. Print-through: a ghost of the signal bleeding between tape layers in storage. Low is freshly recorded; high is a reel that has sat in a box for years.

Decay

0 to 10. Two jobs. While the drone runs, higher layers gradually fade, thinning the sound over time (turn Decay back to 0 and they recover). It also sets how long Freeze takes to return to the live drone on release: low is a near-instant snap, high is a slow dissolve up to about 2 seconds.

Tip: *Age 10 + Wiring 5 + Earth 3 is broken vintage hardware. Body at 3 to 5 grounds the drone in a physical space, and every unit's resonant body is different. Storage at 4 to 6 adds haunted, ghostly echoes.*

Actions and Header Controls

Reset

Returns every control to its default and clears the unit's internal state - oscillator drift, head magnetisation, warm-up and the rest. The unit's serial (its character) is kept.

Save Patch / Load Patch

Save Patch writes the whole unit - every control, plus the quality tier and the serial - to a patch card file. Load Patch reads one back in and, if the card carries a serial, asks whether to recall that whole unit or just apply its settings (see Units and Patch Cards). Memory smudges the loaded settings in either case.

Degauss

Clears the head magnetisation that builds up while the drone runs. As a unit generates, the head slowly magnetises, adding HF grit; Degauss resets it. If the sound has crept harsher after running a while, this is why. Magnetisation only builds while Generate is on, so in RING, or in MIX with Generate off, there is nothing to clear.

Header controls

Quality selects Eco, Studio or Master (see Quality). Reset Engine clears any fault and resets the DSP without changing your control values. The Fault indicator appears only on invalid audio; click Reset Engine to clear it. Help opens the built-in help window. The Unit button and the serial sit at the far left (see Units and Patch Cards).

Meters

Stereo input meters sit on the left (IL, IR) and stereo output meters on the right (OL, OR), showing the levels in real time. Click a meter to switch it between Peak and RMS - the label reads PK or RMS to show which mode it is in. Each meter toggles on its own.

Peak follows the instantaneous highest sample level, so it jumps with every transient and shows the true maximum the signal reaches. RMS shows the average energy over a short window, so it sits steadier and reads much closer to how loud the signal actually sounds - the classic VU-style reading.

Tip: Use Peak to watch headroom and make sure nothing is clipping. Use RMS to judge loudness and to balance one part against another by how loud they actually sound. Peak for safety, RMS for balance. In DRONE the input is unused, so on a silent track the input meters read silence.

Automation

Every on-screen control is exposed to your DAW and can be written and read through its automation lanes like any other parameter, including the Mode selector itself. In MIX and RING that means automating Speed for tape-stop and tape-start sweeps, Freeze for stutters, and Mode to switch behaviour mid-track. Memory is automatable but only affects patch loading, not the live sound. The unit's whole state, including the serial, is saved with your session.

Render Safe

Render Safe is an automation-only switch with no knob on the panel; you reach it from your host's parameter or automation list. With it on, fDrone's random elements - drift, noise, glitches, dropouts, crackle - are tied to the position in your song, so a given point renders the same way on every offline bounce. Leave it off for normal use so the character breathes; turn it on when you need bit-for-bit repeatable renders. It is saved with patches and sessions.

Headroom

fDrone keeps a safety ceiling on its output so a runaway - from feedback, heavy saturation and many layers at once - cannot blow up your monitors. The generated signal is held a few dB above 0 dBFS, and the plugin's final output is hard-capped a little higher still. It can still get very loud inside that ceiling, so it is possible to exceed 0 dBFS: watch the output meter and use Output to manage your headroom.

Recipes

Starting points, not rules. Every unit is a little different, so trust your ears and move from here. Settings are knob values (0 to 10) unless noted.

Each recipe starts from defaults: hit Reset in the Actions section first, then set only the controls listed - everything else stays where it is. For any recipe that makes a drone (the DRONE ones, and MIX or RING with a drone), press Generate to start it. Layers stay silent until Layer Amp is up, so a layered recipe always lists it.

Deep evolving bass drone (DRONE)

Freq 80, Layers 3, Detune 3, Layer Amp 5, Drift 2, Wander 1. A slow, moving sub-bed for ambient and film. Add Motor 2 for a gentle wobble.

Warm tape pad (DRONE)

Layers 4, Layer Amp 5, Detune 2, Harmonics Low, Motor 3, Bias 7, Saturate 3, Storage 4. A soft, tape-warm chord that never quite holds still. Automate Freq for slow chord changes.

Broken vintage box (DRONE)

Age 8, Wiring 5, Earth 3, Noise 4, Bias 3. A drone from a machine pulled out of a damp shed - hum, crackle and dropouts and all. Let it run a while and it grows grittier on its own; Degauss resets that.

Metallic clangour (DRONE)

Harmonics High, Layers 5, Layer Amp 6, Detune 6, Cross Mod 6, FM Rate High. Inharmonic, bell-like and dissonant. Good under tension and horror.

fDrone as a character effect (MIX, Generate off)

Run a clip through with Saturate 3, Bias 6, Noise 2, Age 3, Storage 3, Mix around 60%. Broken-studio grime on drums, synths or a whole bus, with no drone on top. Push Sens up to let louder hits pull more damage.

Alien voice (RING)

Feed a vocal, Freq 60 to 120, Layers 2, Layer Amp 5, Cross Mod high. Ring modulation turns speech metallic and robotic. Small Freq moves change the whole character - automate it.

Tape-stop / tape-start (any mode)

Automate Speed from 5 down to 0 across a bar for a tape-stop wind-down; 0 up to 5 for a tape-start spin-up.

Frozen swell (DRONE)

On a running layered drone, engage Freeze to hold it, then release with Decay 8 for a slow dissolve back toward the live drone. Decay also thins the layers while it is up, so bring it back to 0 after the release to let them fill back to the full drone.

Self-oscillating scream (MIX or DRONE)

Feedback 7 to 8, Saturate 5. Needs a drone (Generate on) or input to feed on. Tips into howling resonance. fDrone's safety ceiling stops it destroying your monitors, but pull Output down before you explore this one.

Total destruction (extreme)

On a drone (Generate on) or an input: Bit Crush Destroy, SR Degrade 8, Dropouts 6, Glitch Ch 6, Glitch Amt 8. Digital carnage - best automated in short bursts rather than left on.

Stereo drone field

Two fDrone instances, panned hard left and right, with the same settings. Each unit's own character makes the two sides differ, for a wide, alive bed no single instance can make.

Breathing texture (MIX, Generate on)

On a sustained source: Symp 5, Sens 5. The input nudges the drone's pitch and level and drives the damage harder on loud passages, so the whole effect breathes with the part.

Units and Patch Cards

fDrone's character lives in its serial number. There are two ways to keep and move your work: units (the character) and patch cards (the whole setup).

The unit menu

A unit is fDrone's character on its own - its serial and the analogue voice that serial produces, with no settings attached. The Unit button by the serial opens the menu:

Menu item	What it does
New Unit	Roll a fresh unit with a new serial and a new voice. Your settings stay put; only the personality changes.
Save Unit...	Save the current unit so you can recall it later. Saved units live in Documents/fBox Units/fDrone.
Load saved unit	Recall a unit you saved, or browse for a unit file.
Recall my pinned unit	Jump back to your pinned default - handy if you rolled a new one by mistake, or after unpinning.
Pin this unit as my default	Make this unit the one every new instance opens with. This is how you keep one unit for good.
Use a new unit each time	Go back to a fresh unit on each new instance. Your pinned unit is not deleted, just set aside.

Patch cards

A patch card is a portable copy of the whole unit - its serial and every setting across every section - written to a single file. Your unit is also saved with your session; a patch card is for carrying a unit between instances and projects. Save Patch writes the current unit to a patch card, a file you choose the home for. Load Patch reads one back in: if the card was saved on a different unit, it asks how to bring it in:

Option	What it does
Recall Unit	Bring back the exact unit the card was saved on - its character and all its settings, the box as it was saved.
Apply Settings Only	Keep your current unit and drop the saved settings on top. Same knobs, your machine.

Either way, if Memory is above 0 the loaded settings are smudged a little on the way in. A patch card carries its identity, so a card saved for a different fBox product is refused with a note.

Important: *In one line: a unit is the character; a patch card is the character plus every setting on top of it. Both save the serial, so the exact voice comes back with them.*

Quality

The Quality selector trades CPU against fidelity on the analogue path:

Tier	Use
Eco	Full analogue character at the lowest CPU. Great for sound design, sketching and live use.
Studio	Higher-fidelity processing throughout - saturation and print-through are smoother. The default, and the sweet spot for most work.
Master	The highest quality, and the most CPU. For final renders.

Bit Crush, SR Degrade, Dropouts and Glitch are deliberately left raw at every tier - their grit is the sound you want, so it does not change with the quality setting.

Tip: *Studio for normal work, Eco if your machine is struggling, Master for the final print.*

Performance and CPU

The quality of the analogue stages costs CPU. fDrone gives you the same Eco / Studio / Master control the rest of the range uses, so you can mix light and render heavy. Mix at Studio, or drop to Eco if your machine struggles - the sound still plays, just at lighter quality - then switch to Master when you render.

Because fDrone is a generator, it makes sound from nothing, so a host's silent-track optimisations will not switch it off: an fDrone that is generating always processes, even over silence. Close editor windows you are not using, and freeze or bounce the track (a DAW feature that temporarily renders a track to audio to save CPU) when you want the heavy processing to run offline.

What fDrone Writes To Your Computer

For transparency, here is everything fDrone writes and where. It writes nowhere else, and sends nothing anywhere unless you choose to.

Folder	Contents
Documents/fBox/Diagnostics	Plain-text diagnostic logs, a folder per product, kept so a crash can be worked out afterwards. Loaded inside the Console or the Rack, fDrone logs alongside that host.
Documents/fBox Units/fDrone	Your saved units, so you can find, back up and share them.
AppData/Roaming/fBoxAudio (Windows)	Your licence, and a small settings file recording which unit you have pinned.

Patch cards go wherever you save them. The unit's own state lives in your session, not in a file of its own. Nothing is filed away somewhere you did not pick, and nothing is written to your Desktop.

When something goes wrong

Diagnostics are written automatically as fDrone runs and survive a crash or freeze. If you hit a problem, zip the whole Documents/fBox/Diagnostics folder and email it to support@fboxaudio.com - send the entire folder, since what else was running alongside fDrone often explains the problem. Tell us what you were doing, what you expected, and what happened. The logs are plain text; you are welcome to read them, but you do not need to.

Analogue Character

Every instance of fDrone generates a unique serial number, shown at the far left of the header. It defines the unit's hardware character throughout the whole instrument.

On real analogue hardware, no two units off the same line sound identical. One unit's oscillators calibrate a hair sharper. Another's motor wows with its own depth and timing. The noise floor takes a different colour; the enclosure rings at its own frequencies; the mains hum carries its own signature; the feedback path has its own voice; and the two channels never perfectly match.

fDrone models these variations across the whole instrument. No single one is obvious in isolation. The cumulative effect is what gives each unit its voice - the same serial always produces the same unit, different serials produce different units, and the serial is saved with your session (DAW, Console, Standalone or Rack) and with any unit or patch card you keep.

Tip: *You cannot dial a unit's character to order any more than you can a real one - but you can learn it, and you can keep it. Find one you love, pin it, and it is the fDrone you open every time. If you want two identical units, save a patch card from one and load it on the other with Recall Unit - the serial and all its character transfer with the card. Two instances panned apart make a wide field, each side its own machine.*

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