DRIFTWOOD

BY LESSONS IN LIVE · USER MANUAL

Driftwood is a warm, hands-on subtractive synth made for Ableton Live: four oscillators with FM and unison, one fat filter with four characters, three LFOs, chords, a 16-step sequencer, six effects, a master EQ with a live spectrum, and 105 presets. It comes as a VST3 plug-in (Mac and Windows), an Audio Unit for Logic Pro and GarageBand (Mac), and a standalone app.



THANK YOU

Thank you for getting Driftwood and for supporting Lessons in Live. I built this synth for making house music, and I hope it finds its way into your tracks. Your feedback will shape what comes next.

Lessons in Live is my school for electronic music production and Ableton Live. Find courses, sample packs and Ableton templates at lessonsinlive.com.

— Camiel Daamen, Lessons in Live

INSTALLING

Mac (macOS 11 or later, Apple Silicon and Intel): quit Live (or Logic), then open `Driftwood-<version>-Installer.pkg`. The installer is signed by Lessons in Live and checked (notarized) by Apple, so it opens straight away. It installs the VST3 plug-in into `/Library/Audio/Plug-Ins/VST3`, the Audio Unit for Logic Pro and GarageBand into `/Library/Audio/Plug-Ins/Components`, plus the standalone app if you want it (untick any of the last two under **Customize**).

Windows (64-bit Windows 10 or 11): quit Live, unzip `Driftwood-<version>-Windows-Installer.zip` and run the installer inside. If Windows shows "Windows protected your PC", click **More info › Run anyway**. It installs the VST3 plug-in into `C:\Program Files\Common Files\VST3`, plus the standalone app if you want it.

In Live on a Mac: Live can list Driftwood twice, as a VST3 and as an Audio Unit. Use the VST3, so your sets also open on Windows. If you only use Live, untick the Audio Unit when you install. If it's already installed, delete `Driftwood.component` from `/Library/Audio/Plug-Ins/Components` and rescan; but a set where you already used the Audio Unit copy needs it to open with Driftwood. (Switching off **Use Audio Units v2** in Live's Settings › Plug-Ins also hides it, together with every other Audio Unit.)

In Logic Pro: create a Software Instrument track, click its **Instrument** slot and choose **AU Instruments › Lessons in Live Instruments › Driftwood › Stereo**. If it isn't there, open **Logic Pro › Settings › Plug-in Manager**, select Driftwood under Lessons in Live Instruments and click **Reset & Rescan Selection** (if it isn't listed at all, quit and reopen Logic). Everything in this manual works the same in Logic: where it says Live's tempo, transport or clips, read Logic's.

In GarageBand: create a Software Instrument track, press **B** to open Smart Controls, click the **Inspector** button (i), then click the **Instrument** slot under **Plug-ins** and choose **AU Instruments › Lessons in Live Instruments › Driftwood › Stereo**. If Audio Units aren't in the list, turn on **Enable Audio Units** in GarageBand › Settings › Audio/MIDI and restart GarageBand.

TRIAL AND ACTIVATION

Driftwood starts with a **30-day trial**: everything works, nothing is held back. The days left show in small gold letters above the preset bar.

When you buy Driftwood in the Lessons in Live shop (lessonsinlive.com), the order e-mail contains your **serial number**, and the downloads include both the Mac and the Windows installer. To activate:

1. Click the gold **TRIAL ... ACTIVATE** text above the preset bar (or choose **Activate Driftwood** in the gear menu).
2. Paste your serial number and click **Activate**. This needs an internet connection once; after that Driftwood works offline.

One serial works on **up to 3 computers**, Mac and Windows mixed. Moving to a new computer? Choose **Deactivate this computer** in the gear menu on the old one first, so the activation is free again.

When the trial ends without a serial, Driftwood switches to **demo mode** (the text above the presets turns red): everything still works and your Live sets still load and play, but there's about 2 seconds of silence every minute. Activating removes it straight away.

QUICK START

1. Start Live and drag **Driftwood** onto a MIDI track. (If you don't see it: Live › Settings › Plug-Ins, switch on *Use VST3 Plug-In System Folders*, and click **Rescan**.) In Logic or GarageBand, load it on a Software Instrument track (see *Installing*).
2. Play. Driftwood opens with **Breathing Unison Pad**, a wide, slowly moving pad.
3. Browse sounds with the ‹ › arrows or the preset menu at the top right. Choose **Init** for a blank patch to build your own.
4. The **gear** at the top right holds the skins, the CPU mode, activation and a link to lessonsinlive.com.

Tip: hover over any control to see what it does. If a note ever gets stuck, the **PANIC** button under the master output stops everything.

HOW DRIFTWOOD WORKS

Driftwood is a subtractive synth: it starts with harmonically rich waveforms and then shapes them, mostly by taking things away with a filter. Every note you play gets its own **voice**, a complete little synth with its own oscillators, filter and envelopes. Driftwood has 16 voices, so up to 16 notes can sound at once, including the tails of notes you've already released.

This is the path a note takes, and the order of the chapters below:

1. **Notes come in** from your MIDI keyboard, Live's clips, the on-screen keyboard or the step sequencer.
2. **Chords** (optional) turn each note into a chord.
3. In each voice, **four oscillators** make the raw tone. FM, unison, pan and drift shape it per oscillator.
4. **FAT** drives the mix of the oscillators into the **filter**, which carves the tone in one of four characters (Clean, Ladder, Acid or Vintage SVF). The **filter envelope** moves the filter over the course of the note.
5. The **amp envelope** shapes the volume of the note, from the first moment to the end of its release.
6. The **LFOs**, the mod wheel and pitch bend move things inside every voice while you play.

7. All voices are mixed and go through the **effects**: Reverb, Delay, Chorus, Flanger, Phaser and Drive, in that order.
8. The **master EQ** shapes the overall tone and the **master output** sets the final level.

OSCILLATORS

The oscillators are where every sound starts. Driftwood has four, one per row. Each row starts with a **power button** and a **waveform** menu, followed by seven knobs. Every oscillator has its own colour, which you'll find back on its knobs.

WAVEFORMS

- **Sine:** a pure tone with no harmonics. Soft and round, perfect for sub bass, flutes and as an FM source of bells and electric pianos.
- **Square:** only odd harmonics, so it sounds hollow and woody. Great for organs, clavs, chiptune leads and garage basses.
- **Saw:** all harmonics, the brightest and buzziest wave. The classic starting point for pads, strings, leads and acid lines. Driftwood's saw and square are band-limited, so they stay clean in the high notes.
- **White noise:** random signal with no pitch. Use it for risers, wind, breath on a flute, or a bit of air under a pad.

TUNING: OCT, SEMI, DET

- **OCT** shifts the oscillator by whole octaves (–3 to +3). An oscillator one octave down adds weight; one up adds shimmer.
- **SEMI** shifts by semitones (–12 to +12). A fifth (+7) or a fourth (+5) on a second oscillator gives classic power-chord and organ sounds.
- **DET** fine-tunes by up to ±100 cents (one semitone). A few cents between two oscillators makes them beat against each other: the classic thick, chorused analog sound. Small values (3–10 cents) sound warm, larger ones sound sour or wide.

MIXING: LEVEL AND PAN

- **LEVEL** sets how loud the oscillator is in the mix (–60 to +6 dB). Driftwood keeps the overall level steady: switching on more oscillators blends them rather than making the sound louder, so use LEVEL to set the balance between them.
- **PAN** places the oscillator in the stereo field, from 100L to 100R. With PAN centred the oscillator plays in both speakers at full level; turning it to one side turns down the other side. Spreading two detuned oscillators left and right gives an instant wide sound. Double-click to centre.

FM

FM (frequency modulation) adds harmonics by letting a hidden sine wave, tuned to the oscillator's own pitch, bend the oscillator's waveform back and forth. Because the hidden sine always follows the oscillator's pitch, the sound stays in tune at any setting.

- Low settings (10–30 %) add bite and brightness: a sine starts to sound like an electric piano, a saw gets a sharper edge.
- Middle settings (30–60 %) give the woody, nasal "bark" of DX-style basses and clavs.

- High settings (60–100 %) get metallic and bell-like.

FM has no effect on white noise. Combine it with a short amp envelope for plucks and bells, or move it with an LFO (see the LFO chapter) for tones that keep changing. Double-click to switch it off.

UNI (UNISON)

UNI makes one oscillator sound like many. Turning it up fades in six extra copies of the oscillator, each slightly detuned and spread across the stereo field: three to the left, three to the right. The further you turn it, the further they detune (up to ±25 cents) and the wider they spread (up to hard left and right). The level stays about the same, so you can turn it up without the sound jumping out.

- 20–40 %: a gentle thickening, nice on keys and plucks.
- 50–70 %: the big, wide sound of supersaw pads and leads.
- 100 %: maximum width and detune, a full stereo wall.

Unison works on every waveform. Because every copy is a full extra oscillator, it's also the part of Driftwood that uses the most CPU (see CPU friendly mode). Double-click to switch it off.

SCOPE

The scope shows the waveform of what you're playing, so you can *see* what the knobs do. It shows the sound *before* the effects, so reverb and delay don't blur the picture.

It locks onto two cycles of the lowest note you play, taking the lowest oscillator's octave and semitone into account, so a steady sound stands still on the screen. It also zooms automatically, so quiet sounds still fill the screen. The line at the bottom shows the note and its frequency (Live's naming, where middle C is C3).

Things to watch: turn up FM on a sine and see the wave fold; close the filter on a saw and see the sharp edges round off; turn up UNI and see the wave start to shimmer. With chords or a lot of unison the picture keeps moving, because the combined wave never repeats exactly. That's normal.

CHORDS

Chords turns every note you play into a chord. Switch it on with the power button in the top right of the panel and choose a type from the menu:

Major, Minor, Sus2, Sus4, Dim, Aug, Major 6, Minor 6, Dom 7, Major 7, Minor 7, Minor 9, Minor 11, Power.

The chord keyboard below shows the shape over one octave. The first key, marked **R** (root), is the note you play, whatever note that is. The lit keys sound with it, labelled by their interval: **b3** and **3** are the minor and major third, **5** the fifth, **b7** and **7** the minor and major seventh, and so on. Click keys to make your own shape: click a lit key to remove it, an unlit one to add it, and the type switches to **Custom**.

How it plays:

- Every note becomes the same shape, so one finger plays a whole chord progression. That's the classic house and garage stab technique: play a melody, hear chords.
- It also works on the step sequencer, so every step becomes a chord.
- Notes that two chords share keep sounding until you release both keys, so overlapping chords never cut each other off.

- Each chord note takes a voice. A 4-note chord with a long release can use many voices quickly; Driftwood's 16 voices cover normal playing comfortably.

FILTER & AMP

This section shapes the tone and the volume of every note.

THE FILTER

The filter removes part of the frequency range. Choose its character and type with the menu in the title row.

The menu is grouped by **character**, the "personality" of the filter:

- **Clean:** the original Driftwood filter. Precise and neutral. In the menu its types read simply HP / LP / BP.
- **Ladder:** warm and round, modelled on the classic transistor ladder. As you turn up the resonance the low end thins out, and at full resonance it whistles on its own (self-oscillation), so you can play it as a sine.
- **Acid:** rubbery and squelchy, in the style of a diode ladder (think 303). The resonance doesn't steal the bass, so basslines stay heavy while they squelch. It also self-oscillates at full resonance.
- **Vintage SVF:** smooth and saturating, like the state-variable filters of the SEM and Juno era. The resonance rounds off and sings instead of getting sharp. Lovely on pads, strings and band-pass sounds.

All four have the same types and roughly the same loudness, so you can switch character on a running sound and just hear the difference in colour. Ladder, Acid and Vintage show their name in the menu (for example "Ladder LP 24").

The types:

- **High Cut** (low-pass) removes the highs above the cutoff. This is the classic synth filter: closing it makes a sound darker, warmer and further away.
- **Low Cut** (high-pass) removes the lows below the cutoff. Use it to thin out pads and keep them out of the way of the bass and kick.
- **Band Pass** keeps a band around the cutoff and removes both lows and highs: nasal, telephone-like, great for stabs and effects.

Each type comes in **12 dB** (gentle, smooth) or **24 dB** per octave (steep, stronger and more resonant: the classic acid and house filter). In the menu HP is Low Cut, LP is High Cut and BP is Band Pass.

- **CUTOFF** sets where the filter works, from 20 Hz to 20 kHz.
- **RES** (resonance) boosts the frequencies right at the cutoff. Low values sound smooth; high values give a sharp, whistling peak, the squelch of acid lines. Around 0.71 is neutral.
- **ENV** sets how far the filter envelope moves the cutoff, in semitones (±48). +12 opens the filter one octave above the cutoff at the peak of the envelope, +36 three octaves. Negative values close the filter instead.
- **FAT** drives the voice into the filter with soft saturation. The loudest parts keep their level and the quieter parts are pushed up, so the sound thickens, compresses and gets more harmonics, like pushing an analog filter hard. It fades in gently over the first quarter of the knob. Great on basses and acid lines; a little goes a long way on pads.
- **KEY** (key tracking) makes the cutoff follow the keys: higher notes open the filter, lower notes close it. At 100 % the cutoff moves exactly with the pitch (around C3), so every note has the same brightness; at 0 % (the default) every note uses the same cutoff, so high notes sound darker. Around 30–50 % feels natural for basses and leads.

- **VEL** (velocity) makes softer notes darker: at 100 % a very soft note sits up to three octaves below the cutoff, while a note at full velocity always sounds as set. Play harder for a brighter sound, like a real instrument.

FAT and the filter run at twice the sample rate inside every voice, so even hard driving and high resonance stay clean at the top of the keyboard (no harsh, out-of-tune "aliasing"). Turning CUTOFF and RES, by hand or with automation, glides smoothly without steps.

The **power button** switches the filter (and FAT) off, so you hear the oscillators directly.

THE ENVELOPES

An envelope is a shape that plays once for every note. Both envelopes have the same four stages:

- **A** (attack): the time to rise from zero to full, after you press a key. Short for plucks and stabs, long for pads that swell in.
- **D** (decay): the time to fall from full to the sustain level.
- **S** (sustain): the level the envelope holds for as long as you hold the key.
- **R** (release): the time to fade out after you let go of the key.

Times run from 1 ms to 10 s; sustain from 0 to 1.

Each envelope has an **ANALOG** switch at the right of its heading:

- **Off** (default): straight lines, the original Driftwood envelope. Even, predictable and precise.
- **On:** curves like a hardware analog envelope. The attack shoots up fast and rounds off at the top, and the decay and release fall quickly at first and then trail away naturally. Plucks and basses get snappier, and releases sound smoother. With ANALOG on, the decay and release times are the time to fall to about 1 % (–40 dB).

The switch takes effect on the next note you play, so flipping it never makes a held note jump.

- The **filter envelope** moves the cutoff, by the amount set with ENV. A short decay with low sustain and ENV turned up gives the classic "pew" of plucks and acid; a slow attack with ENV up makes the sound open up over time.
- The **amp envelope** shapes the volume. Sustain at 0 makes a sound that dies away even when you hold the key (plucks, piano-like keys, stabs); sustain at full with a long release makes a pad.

How hard you play sets the volume of each note (and, with VEL, the brightness).

When more than 16 notes are needed at once, Driftwood reuses the voice of an older note; that note fades out in about 1.5 ms instead of being cut off, so there's no click.

LFO

An LFO (low-frequency oscillator) is a slow, repeating wave that moves another control up and down by itself, so the sound keeps moving while you hold a note. Driftwood has three LFOs. Each one has:

- A **power button**.
- A **waveform**: **Sine** (smooth up and down), **Triangle** (straight up and down), **Saw** (a ramp that rises and then jumps back) or **Square** (jumps between two values: trills and gated effects).
- **RATE**: the speed, from 0.05 Hz (one cycle every 20 seconds) to 20 Hz (a fast buzz).
- **DEPTH**: how far it moves the destination. Depth works in both directions: negative depth turns the movement upside down.

- A **destination**, the one thing it moves:

Destination	What it moves	Depth at 100 %
Filter Cutoff	the cutoff: wah, wobble, slow filter sweeps	±48 semitones
Filter Res	the resonance	±5
Filter Env	the filter envelope amount	±48 semitones
OSC 1–4 Detune	that oscillator's pitch: vibrato, sirens, laser effects	±1 octave
OSC 1–4 FM	that oscillator's FM amount: tones that keep evolving	the whole FM range
OSC 1–4 Unison	that oscillator's UNI amount: stereo width that breathes	the whole UNI range
OSC 1–4 Pan	that oscillator's position: autopan	hard left to hard right

The LFO adds its movement on top of the knob you've set, and the result stays within that knob's range.

Every note starts its LFOs from the beginning of the wave, so each note you play gets the same movement. The LFO rates are free (in Hz), not synced to Live's tempo.

Ideas:

- **Vibrato:** a sine at 5–6 Hz on OSC 1 Detune with a very small depth (about 1 %).
- **Breathing pad:** a slow triangle on OSC 1 Unison and another at a slightly different speed on OSC 2 Unison.
- **Circling stereo:** two LFOs at the same rate, one on OSC 1 Pan with positive depth and one on OSC 2 Pan with negative depth.
- **Evolving FM:** a very slow sine on an oscillator's FM.

PERFORMANCE

These controls are about playing the synth.

- **Drift** adds the slow, random pitch wander of analog oscillators. Each oscillator drifts on its own, gliding to a new random tuning every fraction of a second, up to ±8 cents at 100 %. Every note also starts at a slightly different tuning, so repeated notes never sound exactly the same. It's subtle by design: it makes a sound feel alive rather than out of tune. Switch it on with its button and set the amount with the knob.
- **Pitch bend** sets how far the pitch wheel bends, from 0 to 24 semitones (default 2). The bend affects every note that's playing, including notes from the sequencer.
- **Mod wheel** chooses what the mod wheel does: **Vibrato** (up to ±1 semitone at 5.5 Hz), **Filter Cutoff** (opens the filter up to 48 semitones) or **Off**. The knob sets how far the wheel goes at its top position.

- **Glide** makes notes slide in pitch from one to the next (also called portamento). The knob sets the glide time, from 0 (off) to 2 seconds: the time a note takes to reach its pitch, the same for small and large intervals. Double-click it to switch glide off. The menu chooses how Driftwood plays:
  - **Poly** (the default): chords as usual. With glide turned up, every new note slides in from the last note you played.
  - **Mono**: one note at a time. Every note glides from the pitch that's sounding and restarts the envelopes, so each note gets its own attack: classic monosynth portamento for basslines and leads.
  - **Legato**: one note at a time. Notes you play *while another key is held* glide without restarting the envelopes, so the line flows like one long note; a note played after letting go of all keys starts fresh, without glide. Let go of a key while others are held and Driftwood slides back to the last one still down. This is the classic 303 acid technique: overlap notes to slide, play them apart to retrigger.

In Mono and Legato, Chords and multiple held keys play one note at a time (the last one you pressed).

EFFECTS

Six effects in series, top to bottom. Every effect has its own power button, so you can switch it in or out without losing its settings; it fades in or out in a few milliseconds, so switching never clicks, even while notes are playing. **WET** on each effect is the balance between the original sound and the effect.

REVERB

Puts the sound in a space. Choose **Room** (small and close), **Hall** (big and smooth) or **Plate** (bright and dense, the classic vocal and snare reverb). **SIZE** sets how big the space is, **DECAY** how long the tail rings out (0.1 to 10 seconds).

DELAY

Repeats the sound in time with Live's tempo. Choose the note value from 1/1 down to 1/16 triplet, including dotted and triplet values (1/8 dotted is the classic dub and house delay). **FEED** (feedback) sets how many repeats you hear: low for one or two echoes, high for long trails. Changing the note value (or Live's tempo) while repeats are sounding crossfades smoothly to the new time.

PING PONG moves the repeats across the stereo field. At 0, each side repeats on itself. Turned all the way up, the sound starts on the left and every repeat crosses to the other side. In between you get a blend of both.

CHORUS

Copies the sound and slowly moves the copy's timing, which thickens and widens it, like a classic Juno or a chorus pedal. **RATE** is the speed of the movement (0.1 to 5 Hz): slow for gentle shimmer, fast for a warbly, vibrato-like sound. **AMOUNT** is how far it moves.

FLANGER

A very short, sweeping delay that gives the "jet plane" whoosh. **RATE** and **DEPTH** set the speed and range of the sweep. **FEED** makes it more intense and metallic; negative values sound more hollow. The left and right sides sweep slightly out of step, for width.

PHASER

Sweeps notches through the sound for a swirling, liquid movement, the classic disco-string and electric-piano effect. **RATE**, **DEPTH** and **FEED** work like on the flanger.

DRIVE

Adds saturation and distortion. Choose the character:

- **Tape:** smooth and warm, glues a sound together.
- **Tube:** warm and rich, with even harmonics.
- **Diode:** a firmer, edgier crunch.
- **Fuzz:** hard and buzzy.

DRIVE sets how hard it pushes, **TONE** is a filter after the drive that tames harsh highs (1 to 20 kHz), and WET blends the driven sound with the clean one: 50 % keeps the punch of the original with the colour of the drive.

The Drive runs at eight times the sample rate, so even Fuzz on high notes stays free of out-of-tune aliasing.

The Drive at the end of the chain colours everything, including the reverb and delay; FAT in the filter section drives each voice on its own, before the effects.

SEQUENCER

The step sequencer plays Driftwood by itself, in time with Live. It runs while Live's transport is playing and follows Live's tempo and position, so it always stays locked to your track. Your own playing works at the same time.

SETTINGS (TOP ROW)

- **Power** switches the sequencer on.
- **LEN** sets the number of steps, from 1 to 16. Odd lengths make patterns that shift against the beat.
- **DIR** sets the playing order: **Forward**, **Reverse**, **Ping-Pong** (forward, then back) or **Random**.
- **RATE** sets the step length: 1/4, 1/8, 1/16, 1/8 triplet, 1/16 triplet or 1/8 dotted.
- **KEY** and **SCALE** set the musical key: Chromatic, Major, Minor, Dorian, Mixolydian, Major Pentatonic, Minor Pentatonic or Blues. The sequence plays from the key note around middle C.
- **SWING** delays every second step, up to a third of a step at 100 % (a triplet feel), for a shuffled groove. The little steps above the fader show the groove: the off-beats (in colour) slide to the right as you add swing. Double-click the fader for straight timing.

STEPS

Each of the 16 columns is one step:

- **STEP** (the numbered button): switch the step on or off. An off step is a rest.
- **PITCH**: the scale degree, 1 to 12. 1 is the key note, 2 the next note of the scale, and so on. Degrees beyond the notes of the scale continue in the next octave: in Major, degree 8 is the key note an octave up. Because the pitches follow the scale, every pattern stays in key when you change KEY or SCALE.
- **OCT**: shifts the step by up to two octaves down or up.
- **VEL**: the velocity of the step, 1 to 127, which sets its volume. Accents on a few steps bring a pattern to life.

- **GATE**: how long the note lasts, from 5 % of the step (short and staccato) to 100 % (held until the next step, so notes flow into each other). With the play mode on **Legato** (Performance panel), a step at 100 % is tied to the next one, so the next note slides into place with the GLIDE time instead of restarting: the classic 303 slide. Steps shorter than 100 % start fresh, and the same note twice in a row is played again.

DICE

The **big dice** in the top row randomizes the whole pattern: which steps play, their pitch, octave, velocity and length. Each row has its own dice on the right, to randomize just that row. Keep rolling until something grabs you, then fine-tune by hand.

Tips: switch on **Chords** and the sequencer plays chord patterns; give a few steps a lower velocity and a shorter gate for a bouncing groove.

MASTER EQ

A four-band EQ for the overall tone: **low cut**, **low bell**, **high bell** and **high cut**. Each band has a handle on the graph:

- Drag the **cut** handles (squares) left and right to set where the low cut and high cut start.
- Drag the **bell** handles (circles) left and right for the frequency, and up and down to boost or cut by up to 18 dB.
- Double-click a handle to reset that band.
- The knobs below show the same values.
- Every move glides smoothly, so you can sweep the EQ while you play, or automate it, without clicks.

Behind the curve, a **live spectrum** shows the output of Driftwood as you play, *after* the EQ, so you can see what your EQ moves do. It's tilted by 4.5 dB per octave (like many mixing EQs), so a balanced sound reads roughly flat instead of falling towards the highs.

MASTER OUTPUT

The final level of Driftwood (−60 to +6 dB), with a level meter. When the output reaches full scale, the **top of the meter lights up red** and stays lit for a moment, so you notice it: turn the output down a little when it does.

Under the knob is the **PANIC** button. If a note ever keeps sounding when it shouldn't (for example a stuck key or a sustain pedal that stayed down), click it: every note stops at once, without a click, and the held keys and sustain pedal are reset. Reverb and delay tails ring out as usual.

KEYBOARD AND WINDOW SIZE

The fold-out tray at the bottom (**HIDE / SHOW KEYBOARD**) holds:

- An **on-screen keyboard** of five octaves. The arrows shift the octaves. Click lower on a key to play harder. Notes coming in from Live light up, so you can see what's playing.
- **Pitch and mod wheels** on the left. The pitch wheel springs back to the centre. Both wheels also follow your hardware controller.
- **SIZE** scales the whole window to 70, 80 (default), 90 or 100 %.

You can also size the window freely: **drag the bottom-right corner** (or the window's edge in Live) to make Driftwood anywhere from 60 to 150 %. The panel scales as a whole, so nothing stretches, and SIZE then shows the exact size. The window size and whether the keyboard is open are saved with your Live set.

PRESETS

Driftwood comes with **105 presets**, 15 in each category: **Bass, Chords, Keys, Pads, Sequences, Leads** and **Effects**, plus **Other** for your own sounds.

- The **preset menu** is organised in folders: one per category (**Bass ›**, **Chords ›**, …), and under **PRESET PACKS** one per installed pack, with that pack's categories inside (**Dub Techno › Bass ›**). Hover over a folder to open it.
- ‹ › step through all presets in menu order, including the presets of your installed packs. You can browse while a clip or the sequencer plays: notes that are sounding crossfade into the new preset instead of clicking.
- **Favourites:** click the **star** next to the preset name to make the loaded preset a favourite (it lights up); click it again to remove it. Your favourites appear in a **FAVORITES** section at the very top of the preset menu, so they're one click away. They're shared by every Driftwood you open, presets from packs can be favourites too, and a favourite you change and save stays a favourite.
- **Init** at the top of the menu resets every control to its starting value: four sine oscillators, the filter wide open, and gentle reverb, delay and chorus. The starting point for building a sound from scratch.
- **SAVE** saves your changes into the selected preset; if none is selected, it asks for a name. **SAVE AS** saves a new preset: give it a name and choose a category.
- The name of the loaded preset is saved with your Live set, so you always know where a sound came from.

Presets are files in your preset folder, so you can back them up and share them with other Driftwood users: drop a `.dwpreset` file into the matching category folder.

- **Mac:** `~/Library/Lessons In Live/Driftwood/Presets/<Category>/`
- **Windows:** `%APPDATA%\Lessons In Live\Driftwood\Presets\<Category>\`

The factory presets are copied there the first time you open Driftwood. After that they're yours: edit, rename or delete them freely. **Open Preset Folder** in the gear menu takes you straight there.

PRESET PACKS

Preset packs are extra collections of sounds, available from the Lessons in Live shop:

- **Dub Techno** (105 presets): deep, subby basses, minor 7th, 9th and 11th dub chords with long delays and reverbs, and noisy ambient pads and textures.
- **Chicago House** (175 presets): solid, rubber, organ, FM and 303 acid basses; happy and soulful 7th and 9th chords, organs and pianos; warm strings and pads; house leads and whistles; and DJ effects such as risers, downlifters, sub drops and sirens.

Most chord presets use Driftwood's **Chords** section, so one key plays the whole chord. In both packs (version 1.1) the basses play one note at a time (**Mono**), and the acid lines, rolling basses and melodic leads slide in **Legato**: overlap the notes you want to glide. The slides need Driftwood 1.0.4 or newer; on older versions the presets play as before, without glide. A pack comes as a single file ending in **.dwpack**. To install one:

1. Download the `.dwpack` file.

2. In Driftwood, click the **gear** › **Install Preset Pack…** and choose the file. Or simply **drag the `.dwpack` file onto the Driftwood window**.
3. Driftwood confirms how many presets it installed. Open the preset menu: the pack is at the bottom, under **PRESET PACKS**.

Installing works the same on Mac and Windows, and you only do it once: the pack stays installed for every Driftwood you open, in every Live set. Installing a pack again (for example an updated version) replaces its presets with the new ones; your other presets aren't touched.

Pack presets work like any other preset: **SAVE** stores your changes in the pack, **SAVE AS** saves a copy among your own presets. Installed packs live in the **Packs** folder inside your preset folder; to remove a pack, open the preset folder (gear › **Open Preset Folder**) and delete the pack's folder inside **Packs**.

SETTINGS: SKINS, CPU MODE AND LICENSE

The **gear** at the right end of the top bar opens the settings menu.

Presets has **Install Preset Pack…** and **Open Preset Folder** (see *Presets*).

Skin changes the colours of Driftwood. The wood stays; the colour of the knobs, buttons, lights and graphs changes. Choose **Walnut** (the original gold), **Blue**, **Pink**, **Red**, **Amber** (the default), **Purple** or **Green**. Your choice applies to every Driftwood you open and is remembered.

CPU chooses between two modes:

- **Full quality:** 16 voices and the full unison with six copies per oscillator.
- **CPU friendly:** 8 voices and unison with two copies per oscillator. Unison stays just as wide and loud, only slightly less dense. A heavy patch uses about a third of the CPU.

The CPU mode is set per Driftwood and saved with the Live set, so in a big project you can switch just the heaviest instances. Most patches are light either way; unison on several oscillators with many notes held at once is what uses the most.

License shows whether Driftwood is activated, and has **Activate Driftwood** or **Deactivate this computer** (see *Trial and activation*).

Updates: when a new version of Driftwood is out, a bar appears at the top of the keyboard tray: *Driftwood x.y.z is available*. **DOWNLOAD** opens the installer for your computer in your browser, **WHAT'S NEW** opens the Driftwood page on lessonsinlive.com, and **×** hides the bar for that version. Updates are free: install the new version over the old one, and your serial stays activated. Driftwood looks for updates at most once a day, a few seconds after you open its window, and sends no personal information (no serial, no computer ID). **Check for updates now** asks right away; untick **Check for updates automatically** to switch the daily check off.

The menu also links to **lessonsinlive.com** and shows the version number.

SOUND DESIGN TIPS

- **Instant width:** two saws, OSC 1 a few cents down and OSC 2 a few cents up, UNI at 40–70 % on both.
- **Breathing pad:** an LFO (triangle, about 0.1 Hz) on OSC 1 Unison and another at a slightly different speed on OSC 2 Unison, a slow amp attack and a big Hall.
- **Electric piano:** a sine with FM around 30 %, short decay, low sustain, a little chorus.
- **Bells:** a sine one octave up, FM 60–80 %, long release, Plate reverb, a touch of ping-pong delay.

- **Acid line:** one saw, the **Acid LP 24** filter, high resonance, a short filter envelope with ENV around +36, VEL around 50 %, and FAT at 60 % or more. Program it in the sequencer with a few accents (higher step velocities) and the accented steps open up.
- **Moog-style bass:** one or two saws, **Ladder LP 24**, cutoff low, a little resonance, a short filter envelope, ANALOG on both envelopes and KEY around 40 %.
- **House stab:** two detuned saws, Chords on Minor 7, a short pluck envelope, Delay at 1/8 dotted with PING PONG up.
- **Sub bass:** a sine with OCT −1, the filter closed to around 800 Hz, Drift off, a touch of Tape drive.
- **Glue:** Tape drive at 50 % wet on pads and keys warms everything up.

IF LIVE WON'T START ON WINDOWS

If Live suddenly won't open, or says **libusb-1.0.dll was not found**, Microsoft Defender has most likely taken that file out of Live's Program folder. libusb-1.0.dll belongs to Ableton Live (Live uses it for USB controllers such as Push), and Defender sometimes mistakes it for a threat; Driftwood only installs its own files. To get Live back:

1. Open **Windows Security › Virus & threat protection › Protection history** and click the libusb-1.0.dll entry.
2. If it says *Quarantined*, choose **Actions › Restore**. If it says *Removed*, choose **Allow** and reinstall Live from your Ableton account (your sets, Packs and User Library stay where they are).
3. Start Live again.

Don't download libusb-1.0.dll from a "DLL download" website: the file from Live's own installer is the right one.