OFX—2 User Manual

Version 1.0.0

Organismi Instruments

What OFX—2 is

OFX—2 is a stereo algorithmic delay from Organismi Instruments. Pick an algorithm and the echoes become a musical part, playable in real time, that never clicks, never runs away and never drops out.

The face has one hero knob, **Time**, surrounded by the familiar delay controls: **Repeats**, **Decay**, **Color**, **Modulation**, **Character** and **Feedback**. What sets OFX—2 apart is **Algo**, a stepped disc with six algorithms that decide what the repeats do: Tape, Pattern, ARP, Harmony, Chaos and Polyrhythm. Each algorithm has its own Modes, chosen with the mode chip under the Time knob, and two knobs, **FX 1** and **FX 2**, whose meaning follows the Mode. Two LFOs can be dragged onto any knob to move it, the **Freeze**, **Temp** and **Random** pills in the header are there for playing live, and a wireframe terrain shows where the echoes are.

Install

macOS 12 or later (Apple silicon and Intel, one universal installer). Open the installer package. It installs every format; there is no per-format choice.

What	Where it installs
Audio Unit	`/Library/Audio/Plug-Ins/Components/OFX-2.component`
VST3	`/Library/Audio/Plug-Ins/VST3/OFX-2.vst3`
CLAP	`/Library/Audio/Plug-Ins/CLAP/OFX-2.clap`
Standalone app	`/Applications/OFX-2.app`
This manual	`/Library/Application Support/Organismi Instruments/OFX-2/Documentation/OFX-2-Manual.pdf`

Your presets live in `~/Library/Audio/Presets/Organismi Instruments/OFX-2`. The installer never touches that folder, and removing OFX—2 never touches it either.

Removing OFX—2. There is no uninstaller. Delete exactly these five items, then restart your host:

- `/Library/Audio/Plug-Ins/Components/OFX-2.component`
- `/Library/Audio/Plug-Ins/VST3/OFX-2.vst3`
- `/Library/Audio/Plug-Ins/CLAP/OFX-2.clap`
- `/Applications/OFX-2.app`
- `/Library/Application Support/Organismi Instruments/OFX-2/Documentation`

Never delete the parent folders (Components, VST3, CLAP, Applications, Application Support): other software keeps its files there. Your own presets stay where they are.

iPadOS 16 or later. Install the OFX—2 app from the App Store. It carries the Audio Unit extension (AUv3), which then appears in your AUv3 host apps. Open the app once after installing so the system registers the extension. To remove OFX—2 from an iPad, delete the app; the extension goes with it.

The face

Every control name below is the name printed on the face and shown by your host.

Control	Range	Default
Time (hero knob)	1 ms to 10 s, or a note division when synced	375 ms
Repeats	0 to 100 %	40 %
Decay	0 to 100 %	20 %
Color	−100 to +100 %	0 %
Modulation	0 to 100 %	0 %
Character	0 to 100 %	50 %
Feedback	0 to 100 %	0 %
FX 1	0 to 100 %, read by the current Mode	50 %
FX 2	0 to 100 %, read by the current Mode	50 %
Algo	Tape, Pattern, ARP, Harmony, Chaos, Polyrhythm	Tape
Wet	0 to 100 %	35 %

The header holds, from left to right, the **Patch** pill, the three Perform pills, the **Algo** disc with the current algorithm's name, and the **Wet** disc. On the face the algorithm names are shortened to Tape, Ptrn, ARP, Harm, Chaos and Poly. The other knobs sit in an arc around Time; the labels of **FX 1** and **FX 2** change with the Mode. The mode chip sits under the Time knob, the terrain runs across the top, and each LFO has its own cluster of controls.

Drag a knob to turn it. Double-click a knob (double-tap on iPad) to return it to its default. Scroll the mouse wheel over a knob to nudge it. Right-click or Ctrl-click a control on the Mac, or long-press it on iPad, to open its menu, which holds the MIDI items described under MIDI and, on Time, **Sync Time to tempo**.

The terrain. The terrain is a picture of the echoes as they sound. Each repeat is a pulse that jumps up at the left and slides across to the right, so the delay's rhythm reads as a pattern on a moving line, and every algorithm draws its own rhythm. The spacing fits itself to the pattern. Bright repeats look spiky and dark ones look smooth. In silence the line keeps a slow, gentle drift, and while Freeze is on everything stops and holds what it shows.

Light and Dark. Click the OFX—2 wordmark at the top left (tap it on iPad) to switch the face between the light theme and a dark one. Click it again to switch back. Nothing about the sound changes. OFX—2 remembers your choice per Mac and per iPad; inside a sandboxed host it is remembered for that host. The theme is not stored in presets or in your host session, so loading either never changes it.

Time, Repeats and Feedback

Time sets how far behind the dry sound each echo lands, from 1 ms to 10 s. Its readout shows tenths of a millisecond below 100 ms (for example "12.5 ms"), whole milliseconds up to a second ("375 ms") and seconds with two decimals above that ("1.25 s").

Moving Time never clicks. In Tape, a smooth move glides like a tape machine changing speed, so the echoes bend in pitch on the way; Echo's **Inertia** sets how much. In the other algorithms, and for any large jump, the old and new times crossfade, so the pitch stays put.

Sync Time to tempo. Open the Time knob's menu and choose **Sync Time to tempo**; the row shows a dot while it is on. Time then steps through 21 note divisions instead of milliseconds, and its readout shows the division:

- 1/64, 1/32, 1/16, 1/8, 1/4, 1/2 and 1/1 (one bar of four beats);
- each straight, triplet (T) or dotted (D), for example 1/8T or 1/4D.

The default division is 1/4. When a slow tempo makes a long division longer than 10 s, it is halved until it fits. Choose the row again to return to free Time.

Automating Time while synced. Your host shows Time (in milliseconds) and Division as two parameters. While Time is synced, whichever of the two moved last sets the division: automate or move the host's Time and the echoes snap to the division nearest that time at the current tempo (crossfaded, so it never clicks), and the Time knob shows that division; move Division, or turn the Time knob, and the Division plays again. Loading a preset, Program Change, reopening a project and Temp all play the Division they stored.

Where the tempo comes from. In a plug-in, synced Time follows the host tempo. If the host sends no tempo, or one outside 20 to 999 BPM, OFX—2 uses 120 BPM. In the Standalone app on the Mac, the tempo comes from a running MIDI clock, otherwise from Tap (see The Standalone app), otherwise 120 BPM.

Repeats sets how long the echo train lasts: how many echoes you hear before they fade to silence. At 0 you hear one echo. As you turn it up the train grows longer, and at 100 % it lasts a long time while still dying away.

Feedback is a second, separate path back into the delay. In most algorithms it crosses the echoes between the left and right channels; in Polyrhythm it feeds the lines into each other in a ring. Turned up, it reaches toward self-oscillation, but it is always bounded: Repeats and Feedback share one limit, and when their sum would run away both are scaled down together, so the balance you set is kept. At 0 there is no cross path.

Character, Decay, Color and Modulation

Character is how much of the current algorithm's flavour you hear. At 0, every algorithm is a plain, clean delay. Over the first 20 % the algorithm's structure fades in, and above that Character becomes the algorithm's own flavour:

- **Tape:** wear. Wow and flutter on the tape, saturation, high-frequency loss and occasional dropouts.
- **Pattern:** accent. The first hit of each cycle stays full and the others grow quieter.
- **ARP:** accent. The first step of each cycle stays full and the others shade down. The pitches never change.
- **Harmony:** the level of the pitched voices. At 20 % they sit quietly beside the plain repeat; at 100 % the plain repeat is gone.
- **Chaos:** the share of repeats that are transformed, up to every repeat at 100 %. In Drift it is the overall depth.
- **Polyrhythm:** the level of the extra lines against the base pulse. At 100 % every line plays at full level.

Decay is the tone lost on each repeat. Every echo that comes round again passes through a gentle low-pass and high-pass, so each one comes back darker and thinner than the last. The first echo is untouched. At 0 the repeats keep their tone exactly. Decay only ever takes away, so it can never add level.

Color tilts the tone of everything you hear from the delay, from dark at −100 % to bright at +100 %, about 6 dB either way around 800 Hz. At 0 % the tone is flat. Color sits after the delay, never inside it, so it changes how the echoes sound without changing how long they last.

Modulation adds a built-in wow and chorus to the echoes by moving their delay time slowly. At 0 the echoes are still. It is separate from the two LFOs and always stays within the delay's safety limit.

Algo and its Modes

Algo chooses what the repeats do. Drag the dark Algo disc up or down, or scroll over it, to step through the six algorithms: Tape, Pattern, ARP, Harmony, Chaos and Polyrhythm. The disc has six hard detents and never stops between them. A click or tap on it does nothing, so you cannot change it by accident.

- **Tape** is a tape echo: warm repeats, several playback heads, or reversed splices.
- **Pattern** turns one delay into a rhythm of taps: a bank of grooves, Euclidean patterns, or taps that speed up or slow down like a bouncing ball.
- **ARP** pitches each successive repeat through a chord, so the echoes climb an arpeggio. The chord comes from FX 1 or from the keys you hold.
- **Harmony** layers pitch-shifted repeats: at a fixed interval, in a spiral that climbs or falls further on every pass, or as a strummed chord.
- **Chaos** makes the repeats unpredictable but repeatable: scattered in time, glitched in pitch or direction, drifting, or sliced and scrambled. Each Mode has a fixed built-in random sequence, so a preset sounds the same each time.
- **Polyrhythm** runs two or three delay lines at different lengths that drift in and out of phase with each other.

The mode chip under the Time knob shows the current Mode. Click or tap it to move to the next Mode; after the last it wraps to the first. Each algorithm remembers its own Mode, so when you come back to an algorithm the chip shows the Mode you left it on.

Changing without clicks. Changing Algo, Mode or preset crossfades. The repeats already sounding carry on, so you can switch live, automate the switch or drive it from MIDI. When you leave Polyrhythm, its extra lines ring out for up to about 2 seconds and then fade.

FX 1 and FX 2 each keep one value whatever the Mode; the Mode decides what that value means. Their labels on the face follow the Mode. A host always lists them as “FX 1” and “FX 2”, and their value text names the meaning, for example “Interval +5th” or “Swing 40 %”.

Algo	Mode	FX 1	FX 2
Tape	Echo	**Inertia**: how Time moves, from a clean crossfade through a glide to a tape swoop	**Spread**: delays the right channel by up to a quarter of Time
Tape	Multi-head	**Heads**: which of three heads play: 1, 2, 3, 1+2, 1+3, 2+3 or 1+2+3	**Spacing**: from even 1 : 2 : 3 spacing to heads drawn closer to the start
Tape	Reverse	**Splice**: how softly each reversed segment joins the next	**Alternate**: from every repeat reversed to repeats that alternate reversed and forward
Pattern	Rhythm	**Pattern**: one of twelve grooves: Quarters, Eighths, Dotted, Tresillo, Cinquillo, Son clave, Rumba clave, Bossa, Gallop, Offbeat, Shuffle, Bembé	**Swing**: delays every second step
Pattern	Euclid	**Hits**: how many of the steps sound, from 1 to all of them	**Rotate**: moves the pattern round the cycle, a step at a time
Pattern	Gravity	**Curve**: −100 % bunches the taps toward the end like a bouncing ball, +100 % toward the start	**Spread**: pans the taps from left to right across the cycle
ARP	Up	**Chord**: one of twelve chords (below), or Keys while you hold notes	**Range**: the span in octaves, −3 to +3; negative runs downward
ARP	Up-Down	**Chord**: as in Up	**Range**: as in Up
ARP	Random	**Chord**: as in Up	**Range**: as in Up
Harmony	Pitch shifted	**Interval**: the pitch of the layered repeat, from an octave down to an octave up	**Detune**: parts the left and right channels by up to 25 cents each way
Harmony	Spiral	**Interval**: how far each pass climbs or falls	**Smear**: from separate climbing echoes to a continuous wash
Harmony	Chord	**Chord**: the chord the repeats are voiced as	**Strum**: spreads the chord's notes from together to 80 ms apart, low to high
Polyrhythm	Chaos	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]

The lists. A stepped FX meaning steps through a fixed list. A small turn moves to the next entry, and an LFO on it walks the list.

- **Chord** (ARP and Harmony Chord): Octave, 5th, Major, Minor, Sus2, Sus4, Maj7, Min7, Dom7, Add9, Min9, Quartal. A name means the same chord in both algorithms; Harmony Chord uses the chord's first three or four notes.
- **Interval** (Pitch shifted and Spiral): −oct, −5th, −4th, −2nd, +2nd, +4th, +5th, +oct. There is no unison.
- **Range** (ARP): −3, −2, −1, 0, +1, +2, +3 octaves.

Tape. In Echo, Inertia at its middle is a plain glide, and the swoop at the top bends the pitch as the tape catches up. Multi-head's three heads sit across the stereo field: left of centre, centre and right of centre. Reverse plays segments of the line backwards; with Alternate up, the reversed repeats go round again and flip direction on each pass.

Pattern. The step length is Time, and a cycle is several steps long. Repeats sets how many times each cycle comes round. In Euclid, Repeats also sets how many steps the cycle has, from 2 to 16, and Hits spreads that many beats as evenly as possible across them.

ARP. Each repeat steps to the next note of the chord, in the direction the Mode names. Repeats sets how many steps one cycle has, from 1 to 8; a chord with fewer notes than steps wraps round. Range sets how many octaves the run covers: at +1 it plays the chord as it is, at +2 it adds the chord an octave up, and a negative Range runs the same notes downward. At Range 0 the chord's notes are folded into one octave. Feedback repeats the same cycle unshifted, quieter each time, so the arpeggio never drifts off the chord.

Harmony. In Pitch shifted and Chord, the plain repeat goes round the loop and the pitched voices are added on the way out, so nothing compounds. Spiral is the one Mode that shifts inside the loop: each pass is shifted again by the Interval, so the sound climbs (or falls) like a shimmer. It always stays bounded, and with Freeze on the climb stops and the shimmer holds at its pitch.

Chaos. Discrete events (a jump, a glitch, a new slice order) happen at most once per repeat, at the moment the repeat begins, and every change crossfades. With Time synced, events land on subdivisions of the beat; with Time free, on subdivisions of Time. The transformation is applied to each echo on its way out and never compounds. The random sequence restarts from its start when the host transport starts, when you enter Chaos or change its Mode, and when the host loops or jumps while playing, so a looped section sounds the same each time.

Polyrhythm. Time is the base pulse: line 1 sits at Time. A ratio set counts pulses: with 3:2, line 2 plays two pulses while line 1 plays three, so it sits at one and a half times Time, and both lines meet again every three pulses. A two-number set runs two lines and a three-number set runs three. Phase and Orbit always run two lines. Sweeping Orbit's Ratio never bends the pitch: a fast sweep sounds as stepped jumps and a slow one is seamless. When the lines land together, the level is kept to that of one line. With Time synced and the host playing, the lines re-align to the bar after every loop or jump; with the transport stopped they run freely.

Playing ARP from a keyboard

ARP is fully musical without any MIDI: it plays FX 1′s chord. When MIDI notes arrive, the keys you hold replace that chord.

- The lowest held note is the unshifted echo; the other held notes become intervals above it. The notes step from low to high, whatever order you pressed them in, and the Mode sets the direction as it does for a built-in chord.
- **Range** adds octaves exactly as for a built-in chord. A single held note at Range 0 is unison, and with several held notes at Range 0 the run plays their intervals within one octave.

- While keys are held, the **FX 1** label reads **Keys** and its knob dims. The knob stays draggable, and its own value and automation are kept, so the chord comes back when you let go.
- The sustain pedal (CC 64) holds the keys, on the channel it arrives on.
- When you release the keys, the next repeat uses FX 1′s chord again. Repeats already sounding keep their pitch, so nothing jumps.
- Repeats sets the number of steps in a cycle, from 1 to 8, with or without held keys.
- OFX—2 listens to notes on every MIDI channel. Held notes are cleared by All Notes Off and the other channel-mode messages, by the host stopping or jumping, by a Program Change, by a reset, by loading a session and by bypass, so a note never hangs.

Notes never bind in MIDI Learn: while a control is waiting to learn, playing a note still plays ARP and leaves the Learn waiting.

Logic Pro. OFX—2′s Audio Unit is a MIDI-controlled effect. Insert it in the instrument slot of a software instrument track, choose the audio you want to process in its Side Chain menu, and play or record notes on that track.

Freeze, Temp and Random

The three pills sit in the header. Their labels never change.

Freeze holds the current repeats indefinitely. New sound you play layers on top of the held echoes, and the level stays bounded: the held sound can sustain, but it can never grow without limit. Freeze works in every algorithm; in Harmony Spiral it also stops the climb. Click the pill to switch Freeze on or off. It can also be moved by host automation or by a MIDI control, either as a toggle or as a momentary switch that holds only while pressed. A saved session or a preset never starts with Freeze on, and loading a preset leaves a held Freeze held. While Freeze is on, OFX—2 tells your host its tail is endless, so an offline bounce keeps rendering for as long as the sound sustains.

Temp is audition and return.

- Press it once to remember the nine face knobs, Algo, the current Mode and Wet. The pill lights.
- Change anything you like, then press Temp again. Everything glides back to the remembered sound over half a second with no click; Algo and Mode switch at the start of the glide through their crossfade.
- Pressing Temp during the glide lands everything on the remembered sound at once. Grabbing a knob during the glide stops that knob where it is.
- Loading a preset, or pressing Random, never clears the remembered sound, so Temp also brings you back from a preset or a roll.
- Temp does not remember Freeze, the LFOs, the host-only parameters or MIDI, and the remembered sound is never saved.

Random rolls a new variation inside the current algorithm. It draws new values for the nine face knobs, including FX 1 and FX 2, and a new Mode within the current Algo, and fades to them over a quarter of a second.

- It never changes the Algo, Sync, Ping-Pong, Width, Duck, Wet, Freeze, the LFO settings or the LFO mappings.
- Each knob lands inside a musical window. With Time synced, Time lands on a division between 1/16 and 1/1; with Time free, it lands near the current time.
- A stepped FX meaning lands on an entry of its list.
- Feedback stays at 45 % or below, so Random never starts a runaway, and the output level stays safe.

The two LFOs

Each LFO has a wave icon, a **Rate** knob, a **Shape** knob and a **Free/Sync** pill. A fresh OFX—2 has both LFOs unmapped, so they do nothing until you drag one onto a knob.

- **Rate** runs from 0.01 to 10 Hz in Free mode (default 0.1 Hz). In Sync mode the same knob steps through twelve note divisions and follows the tempo: 8/1, 4/1, 2/1, 1/1, 1/2, 1/4, 1/8, 1/16, 1/2 dotted, 1/4 dotted, 1/2 triplet and 1/4 triplet. A synced LFO is locked to the song position, so a given bar always sounds the same; with the transport stopped it runs freely.
- **Shape** steps through Sine, Triangle, Ramp Up, Ramp Down and Smooth Random.

Drag to map. Press a wave icon and drag it onto a knob. The nine knobs that accept an LFO are Time, Repeats, Decay, Color, Modulation, Character, Feedback, FX 1 and FX 2; the one under the card shows a ring. Drop it, and a ring appears around the knob at a depth of +25 %. Algo, the Mode and Wet cannot be modulated.

Depth. Drag the ring around the knob up or down to set the depth, from −100 % to +100 %; a negative depth runs the LFO upside down. The knob itself still sets the centre value, and the ring shows the range the LFO sweeps. A dot on the ring shows where the LFO is now. Both LFOs can map the same knob; each gets its own ring and both stay draggable.

On Time, an LFO gives a tape-style pitch wobble in every algorithm. On synced Time it wobbles around the division, which itself never changes. **On a stepped FX meaning,** such as a chord or an interval, the LFO walks the list one entry at a time.

Unmap. Double-click (double-tap on iPad) the ring, or drag it to 0. Zero depth and no mapping are the same thing.

Showing one LFO. On the Mac, hover over a wave icon to dim every ring except that LFO's. On iPad, press and hold a wave icon for half a second.

Every LFO setting and every depth is also a host parameter, named for example "LFO 1 Rate" or "LFO 2 Feedback Depth", so a host can automate them.

Presets

The **Patch** pill at the left of the header shows the loaded preset. It reads **Init** when nothing has been loaded, and adds a star after the name once you change a control, to show the sound has moved away from the preset. Click it to open the Presets panel.

- The panel lists the presets in sections: Tape, Pattern, ARP, Harmony, Chaos, Polyrhythm and User. It opens at the section of the loaded preset, or of the current algorithm.
- OFX—2 comes with 38 factory presets, at least two for every Mode.
- Click a preset to load it. The panel closes and the Patch pill shows its name. A preset sets every parameter except Wet, including the LFO settings and mappings. It never switches Freeze on, a held Freeze stays held, and your MIDI bindings are never changed.
- To keep a sound, type a name in the **Name this preset** field at the bottom of the panel and press **Save Preset**. Names are plain ASCII, up to 64 characters. If the name already exists, OFX—2 asks first: **Overwrite** replaces it and **Keep Existing** keeps it.
- Press **Edit** to delete your own presets; each gets a small cross, and a cross deletes its preset at once, with no undo. Press **Done editing** to leave that mode. Factory presets cannot be deleted.
- To close the panel without loading, click outside it, press Escape or click the Patch pill again.

Where presets live. On the Mac, your presets are files with the extension `.ofx2preset` in `~/Library/Audio/Presets/Organismi Instruments/OFX-2`. They are small text files you can copy between computers. On iPad, your presets live inside the OFX—2 app and are shared between the app and the Audio Unit extension; they do not appear in the Files app.

After you reopen a project, the Patch pill reads **Init**. The sound itself is restored exactly as you left it; only the preset name is not stored with the project.

MIDI

OFX—2 starts with no MIDI bindings. Nothing moves from MIDI until you learn it. Bindings are saved with your host session, and loading a preset or a Program Change never changes them.

MIDI Learn. Right-click or Ctrl-click a control on the Mac, or long-press it on iPad, and choose **MIDI Learn**. The control shows **Learning…** until you move a hardware control; the parameter then follows it at once (there is no pickup) and the control shows its source, for example "CC 20", for as long as it stays bound. Every face control can be learned: the nine knobs, Wet, Algo, the mode chip, the Freeze, Temp and Random pills, and each LFO's Rate, Shape and Free/Sync.

- A control change (CC 1 to 127, except CC 6 and the sustain pedal CC 64), pitch bend, channel pressure or polyphonic aftertouch can be learned. Notes never bind.
- **Learn 14-bit CC** binds a high and low pair on a continuous control: the high part on CC 1 to 31 and the low part on the CC 32 higher, together reaching the full range exactly. Pitch bend can also be learned as a 14-bit source.
- While a control is waiting, **Abort MIDI Learn** in its menu, Escape, a click elsewhere or opening the Presets panel cancels.
- **Clear MIDI Learn** removes that control's binding. **Clear all MIDI bindings**, always the last row, asks once more before it removes every binding.

What a bound control does.

Control	What the MIDI control does
Knobs, Wet, LFO Rate	follows the controller across the whole range
Algo, LFO Shape, synced Time and synced LFO Rate	steps through the detents across the controller's travel
Mode chip	each time the controller rises past the middle (64), moves to the next Mode of the current Algo
Freeze	choose **Learn (toggle)**: each rise past 64 switches it; or **Learn (momentary)**: on while at 64 or above
Temp, Random	each rise past 64 is one press
LFO Free/Sync, Time sync	on at 64 or above, off below

Extra rows. Some menus also learn parameters that have no control of their own: the Time menu learns the division (or free Time), Time sync and the two LFO depths on Time; each knob's menu learns its two LFO depths; the Wet menu learns Width, Ping-Pong and Duck; the LFO Rate menu learns Sync and the division. A bound row reads "Clear" with its source.

On iPad, the pills act on a tap, so their Learn rows live on a neighbour: long-press the word **Perform** above the pills to learn Freeze, Temp and Random, and long-press an LFO's Rate knob to learn its Free/Sync pill. On the Mac, right-click the pill itself.

Which formats receive MIDI.

Format	Receives MIDI	MIDI Learn
Audio Unit (Mac)	yes; in Logic Pro, from its software instrument track (see Playing ARP from a keyboard)	yes
VST3	yes, except Program Change	yes
CLAP	yes	yes
Standalone app (Mac)	yes, once you enable the input under I/O	yes
AUv3 (iPad)	yes, as your host routes it	yes
OFX—2 app (iPad)	yes, it opens MIDI inputs by itself	yes

Standalone. The Standalone app on the Mac does not open MIDI inputs by itself. Click **I/O** in the Monitor column to open the audio and MIDI settings, then enable the MIDI input you want.

Program Change

A Program Change message loads a preset. Program Change n, on any channel, loads entry n of one list: the 38 factory presets first, in the order below, then your own presets in alphabetical order. The Presets panel shows exactly this order, so the list you see is the Program Change map. A Program Change past the end of the list does nothing.

A Program Change load behaves exactly like loading from the panel: Wet is kept, Freeze never switches on, the LFOs load with the preset, a remembered Temp sound is kept and MIDI bindings are untouched. It works in every format except VST3 (see Known gaps).

PC	Name	Algo / Mode
0	Warm Spool	Tape / Echo
1	Night Dub	Tape / Echo
2	Space Bus	Tape / Multi-head
3	Iron Wheels	Tape / Multi-head
4	Backwash	Tape / Reverse
5	Mirror Lake	Tape / Reverse
6	Clave Rain	Pattern / Rhythm
7	Island Pulse	Pattern / Rhythm
8	Five in Eight	Pattern / Euclid
9	Seven Stars	Pattern / Euclid
10	Falling Leaves	Pattern / Gravity
11	Bounce Back	Pattern / Gravity
12	First Steps	ARP / Up
13	Glass Ladder	ARP / Up
14	Tide Pool	ARP / Up-Down
15	Pendulum	ARP / Up-Down
16	Wind Chimes	ARP / Random
17	Firefly	ARP / Random
18	Fifth Ghost	Harmony / Pitch shifted
19	Low Shadow	Harmony / Pitch shifted
20	Ascent	Harmony / Spiral
21	Sinking Stone	Harmony / Spiral
22	Choir Loft	Harmony / Chord
23	Dusk Bloom	Harmony / Chord
24	Shattered	Chaos / Scatter
25	Dust Motes	Chaos / Scatter
26	Circuit Bent	Chaos / Glitch
27	Tin Robot	Chaos / Glitch
28	Lorenz Haze	Chaos / Drift
29	Weather Front	Chaos / Drift
30	Cut Paper	Chaos / Scramble
31	Moth Wings	Chaos / Scramble
32	Hemiola	Polyrhythm / Ratios
33	Gamelan	Polyrhythm / Ratios
34	Slow Clocks	Polyrhythm / Phase
35	Metal Ticks	Polyrhythm / Phase

Your own presets start at Program Change 38.

The Standalone app

The Monitor column exists only in the Standalone app on the Mac and in the OFX—2 app on iPad. It is never part of a plug-in. It sits at the top right of the terrain: the **Monitor** switch, the **I/O** button and the **Rec** pill, with the input meter as a thin bar beside them. On the Mac, two more rows follow: the tempo readout and the **Tap** pill.

Monitor. The switch reads **Monitor On** or **Monitor Off**. It is Off at every launch. With Monitor On, the processed sound reaches your speakers or headphones. With Monitor Off, nothing is sent to the output. If a microphone and speakers share a room, use headphones: Freeze and Feedback can sustain a howl.

I/O. On the Mac, I/O opens the audio and MIDI settings. On iPad, it opens the Audio panel, where you choose the output and the input, then press Done. The panel's **Open the manual** button opens the Organismi Instruments support page in your browser, where this manual can be downloaded.

The input meter shows the level of the incoming signal. It keeps moving while Monitor is Off.

Rec. Click Rec to start a take and click again to stop it. While recording, the pill is dark and shows the elapsed time. A take records what OFX—2 outputs, before the Monitor switch, so a take works with Monitor Off. It is a 24-bit WAV file at the sample rate of your audio device.

- A take stops by itself after 30 minutes.
- Changing the audio device or its settings, an iPad interruption, sending the iPad app to the background, or quitting the app ends the take and keeps the file.
- A take never overwrites another. A second take in the same minute gets a number.

Where takes go. Takes are named `OFX-2 Take YYYY-MM-DD HH.MM.wav`.

- **Mac:** `~/Music/OFX-2/`. Hold Option and click Rec to show the last take in Finder; no recording starts.
- **iPad:** Files > On My iPad > OFX-2. The folder may appear only after the first take.

Tempo and Tap (Mac only). The tempo readout shows the tempo synced Time and synced LFOs follow, for example "120 BPM".

- Click **Tap**, or press the spacebar, in time with the music. The tempo follows from the second tap and settles over the last few taps. A pause longer than 3 seconds starts a new count, so tempos down to 20 BPM can be tapped. A Tap trigger can also be learned in Tap's menu.
- While a MIDI clock is running into the app, the clock sets the tempo: the readout shows, for example, "Clock 121 BPM", the Tap pill dims and taps are ignored. When the clock stops, the last tapped tempo applies again, or 120 BPM if you never tapped. Clock start, stop and song position set the tempo and the synced LFOs' position only.
- Plug-ins have no Tap: they follow the host tempo.

The OFX—2 app on iPad has no Tap pill and no tempo readout: without a MIDI clock, its synced Time and LFOs run at 120 BPM.

iPad notices. On iPad, a band at the top of the app names any audio problem and the tap that fixes it: the microphone not yet allowed or denied, an interruption, audio not running, a Bluetooth microphone's lower quality, or Monitor muted while sound plays through the built-in speaker.

Host-only parameters

These parameters are not printed on the face. They are available for automation in your host and are saved with the project:

Parameter	Range	Default
Sync	off or on (the Time menu's Sync Time to tempo)	off
Division	1/64 to 1/1, each triplet (T), straight or dotted (D): 21 divisions	1/4
Ping-Pong	0 to 100 %	0 %
Width	0 to 150 %	100 %
Duck	0 to 100 %	0 %
Tape Mode	Echo, Multi-head, Reverse	Echo
Pattern Mode	Rhythm, Euclid, Gravity	Rhythm
ARP Mode	Up, Up-Down, Random	Up
Harmony Mode	Pitch shifted, Spiral, Chord	Pitch shifted
Chaos Mode	Scatter, Glitch, Drift, Scramble	Scatter
Polyrhythm Mode	Ratios, Phase, Orbit	Ratios

- **Ping-Pong** feeds more of the input, as a mono sum, into the left channel only as you turn it up; with Feedback up, the echoes then bounce from side to side. At 0 each side feeds its own channel.
- **Width** sets the stereo width of the echoes. At 100 % the image is untouched; 0 % is mono and 150 % is wider.
- **Duck** lowers the echoes while you play and lets them swell back when you stop. At 0 there is no ducking.
- The **Mode** parameters hold each algorithm's Mode; the mode chip moves the current algorithm's one. Host lists also show "Reserved" entries for Algo and each Mode; they are kept for future versions and play the plain delay.

Tested hosts

OFX—2 1.0.0 was tested in these hosts:

Host	Platform	Format	What was tested
Logic Pro	Mac	Audio Unit	the instrument slot with Side Chain and held notes for ARP, Program Change, automation, reopening a project
Ableton Live	Mac	VST3 and Audio Unit	playing, automation, reopening a project
AUM	iPad	AUv3	playing, MIDI
The OFX—2 app	iPad	Standalone	playing through the microphone or an audio interface, Monitor, Rec
CLAP	Mac	CLAP	checked with clap-validator 0.4.1, not yet tested in a host

Not yet verified: GarageBand (Mac and iPad), Reaper, Bitwig and Loopy Pro. OFX—2 is expected to work in any host that loads its format, but these have not been tested for this release.

Known gaps

- Program Change does not reach OFX—2 in VST3. Use the Audio Unit, CLAP or the Standalone app to change presets by Program Change.
- Tap tempo (the Tap pill, the spacebar and a learned Tap trigger) is in the Mac Standalone app only. The OFX—2 app on iPad has no Tap and no tempo readout.
- Plug-ins follow the host tempo. MIDI clock is followed only by the Standalone app.
- GarageBand (Mac and iPad), Reaper, Bitwig and Loopy Pro have not been tested yet, and CLAP has been checked with a validator but not yet in a host.

Safety

OFX—2 is built never to run away. Repeats, Feedback, Freeze and every algorithm, including the pitch-shifting and chaotic ones and everything the LFOs, MIDI, Temp and Random can do to them, are bounded for every combination of settings: the echoes can sustain, but they cannot grow without limit, and the output stays under its ceiling. Changing Time, Algo, Mode or preset never clicks, and a host's Play and Stop never cut off echoes that are still sounding. While Freeze is on, OFX—2 reports an endless tail to your host, so an offline bounce keeps rendering for as long as the sound sustains.

A delay with Feedback and Freeze can produce sustained sound: set your monitoring level with care. Use headphones when a microphone and speakers share a room.

Third-party software

OFX—2 contains the following third-party components, each used under its own licence. Their copyright holders keep their rights.

JUCE 8.0.17 (Raw Material Software Limited). The plug-in wrapper. Used under the JUCE 8 End User Licence Agreement: https://juce.com/legal/juce-8-licence/

Skia (Google LLC). 2D graphics. BSD-3-Clause licence.

Copyright (c) 2011 Google Inc. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Google Sans Flex (Google LLC). The interface typeface. SIL Open Font License, Version 1.1.

Copyright 2015 Google LLC. All Rights Reserved.

This Font Software is licensed under the SIL Open Font License, Version 1.1. This license is also available with a FAQ at scripts.sil.org/OFL

SIL OPEN FONT LICENSE Version 1.1 - 26 February 2007

PREAMBLE. The goals of the Open Font License (OFL) are to stimulate worldwide development of collaborative font projects, to support the font creation efforts of academic and linguistic communities, and to provide a free and open framework in which fonts may be shared and improved in partnership with others.

The OFL allows the licensed fonts to be used, studied, modified and redistributed freely as long as they are not sold by themselves. The fonts, including any derivative works, can be bundled, embedded, redistributed and/or sold with any software provided that any reserved names are not used by derivative works. The fonts and derivatives, however, cannot be released under any other type of license. The requirement for fonts to remain under this license does not apply to any document created using the fonts or their derivatives.

DEFINITIONS. "Font Software" refers to the set of files released by the Copyright Holder(s) under this license and clearly marked as such. This may include source files, build scripts and documentation. "Reserved Font Name" refers to any names specified as such after the copyright statement(s). "Original Version" refers to the collection of Font Software components as distributed by the Copyright Holder(s). "Modified Version" refers to any derivative made by adding to, deleting, or substituting – in part or in whole – any of the components of the Original Version, by changing formats or by porting the Font Software to a new environment. "Author" refers to any designer, engineer, programmer, technical writer or other person who contributed to the Font Software.

PERMISSION & CONDITIONS. Permission is hereby granted, free of charge, to any person obtaining a copy of the Font Software, to use, study, copy, merge, embed, modify, redistribute, and sell modified and unmodified copies of the Font Software, subject to the following conditions:

(1) Neither the Font Software nor any of its individual components, in Original or Modified Versions, may be sold by itself.

(2) Original or Modified Versions of the Font Software may be bundled, redistributed and/or sold with any software, provided that each copy contains the above copyright notice and this license. These can be included either as stand-alone text files, human-readable headers or in the appropriate machine-readable metadata fields within text or binary files as long as those fields can be easily viewed by the user.

(3) No Modified Version of the Font Software may use the Reserved Font Name(s) unless explicit written permission is granted by the corresponding Copyright Holder. This restriction only applies to the primary font name as presented to the users.

(4) The name(s) of the Copyright Holder(s) or the Author(s) of the Font Software shall not be used to promote, endorse or advertise any Modified Version, except to acknowledge the contribution(s) of the Copyright Holder(s) and the Author(s) or with their explicit written permission.

(5) The Font Software, modified or unmodified, in part or in whole, must be distributed entirely under this license, and must not be distributed under any other license. The requirement for fonts to remain under this license does not apply to any document created using the Font Software.

TERMINATION. This license becomes null and void if any of the above conditions are not met.

DISCLAIMER. THE FONT SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF COPYRIGHT, PATENT, TRADEMARK, OR OTHER RIGHT. IN NO EVENT SHALL THE COPYRIGHT HOLDER BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, INCLUDING ANY GENERAL, SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF THE USE OR INABILITY TO USE THE FONT SOFTWARE OR FROM OTHER DEALINGS IN THE FONT SOFTWARE.

clap-juce-extensions (Paul Walker and contributors), the CLAP plug-in format wrapper; **CLAP** (Alexandre Bique and contributors), the CLAP plug-in format headers; **farbot** (Fabian Renn), real-time-safe containers; and the **VST3 SDK** (Steinberg Media Technologies GmbH), the VST3 plug-in format. All four are used under the MIT licence:

Copyright 2019-2020, Paul Walker (clap-juce-extensions)

Copyright (c) 2021 Alexandre BIQUE (CLAP)

Copyright (c) 2019 Fabian Renn (farbot)

Copyright (c) 2025, Steinberg Media Technologies GmbH (VST3 SDK)

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED “AS IS”, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

The pitch-shifter design follows Mutable Instruments’ Clouds (MIT licence).