

FOLD DEVICES

Hexamorph User Manual

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1. Introduction

Hexamorph is a sampler and a drum machine in one plugin. You load sounds (samples), place them on a grid of steps and get a beat or a whole track. Then you change the sound as it plays: with filters, effects and a crossfader that moves smoothly from one sound to another.

The plugin runs inside your music software (a DAW: Ableton Live, Logic, Reaper and others) or as a standalone app. It is made by Fold Devices. This manual describes the beta: some things may still change before version 1.0.

What Hexamorph does

- **16 tracks.** A track is one instrument: a kick, a bass, a pad, a vocal phrase. Each has its own filters, effects and part to play.
- **A step sequencer.** Each track is a row of cells (up to 128). Turn a cell on and a note plays at that moment.
- **Settings on every step.** Any knob can be stored on one particular step: for example, every fourth hit plays higher or with a different sample.
- **Scenes and a crossfader.** Store two states of the sound and move smoothly from one to the other in a single gesture.
- **Sample tools.** Slicing, time-stretching to the tempo, recording and re-recording audio while you play.
- **Effects.** 18 effects: filters, delays, reverbs, compressors and more.

System requirements

- A computer with macOS 11 or later (Apple Silicon or Intel), Windows or Linux.
- A DAW that loads VST3 plugins (AU on a Mac as well). Without a DAW you can run the standalone Hexamorph app.
- No internet connection needed: the licence key is checked offline.

Installation

1. Open the downloaded file `Hexamorph-<version>.pkg`. If macOS says it cannot open it, go to System Settings → Privacy & Security and click Open Anyway.
2. Go through the installer. The plugins go to `/Library/Audio/Plug-Ins`, the app to `/Applications`.
3. Restart your DAW. Hexamorph appears in the list of instruments under Fold Devices.
4. Add Hexamorph to a MIDI or instrument track, like any synthesizer.
5. In the top right corner of the plugin click the menu button  → Enter licence key... and paste the key from your email. It starts with `HEXA-`.

Windows and Linux. The VST3 plugin goes into the standard VST3 folder:

`C:\Program Files\Common Files\VST3` on Windows, `~/Vst3` on Linux. Then follow steps 3–5. There is no AU format on these systems.

Without a key the plugin works, but every 30–45 seconds a soft wave of noise rises and fades over 6–8 seconds. Each beta build works for 45 days, after that you need a new one.

How to read this manual

- If you are just starting, read sections 2–4 and do the exercises in section 4. Read the rest as you need it.
- **This font** marks what you see on screen: button names (**SAVE**), pages (**FLTR**) and knobs (**PTCH**).
- Key combinations are written for all systems at once. Cmd/Ctrl is Cmd (⌘) on a Mac and Ctrl on Windows and Linux. Alt is Option (⌥) on a Mac and Alt on Windows and Linux. Shift (⇧) is the same everywhere.
- A "right-click" on a trackpad is a two-finger click (on a Mac also Ctrl+click).
- Hover the mouse over any button and the plugin tells you what it does. The same goes for knobs: hover over any knob at the bottom of a page, and the hint line at the very bottom of the window says what it does.
- Almost any action can be undone with Cmd/Ctrl+Z, so feel free to experiment.

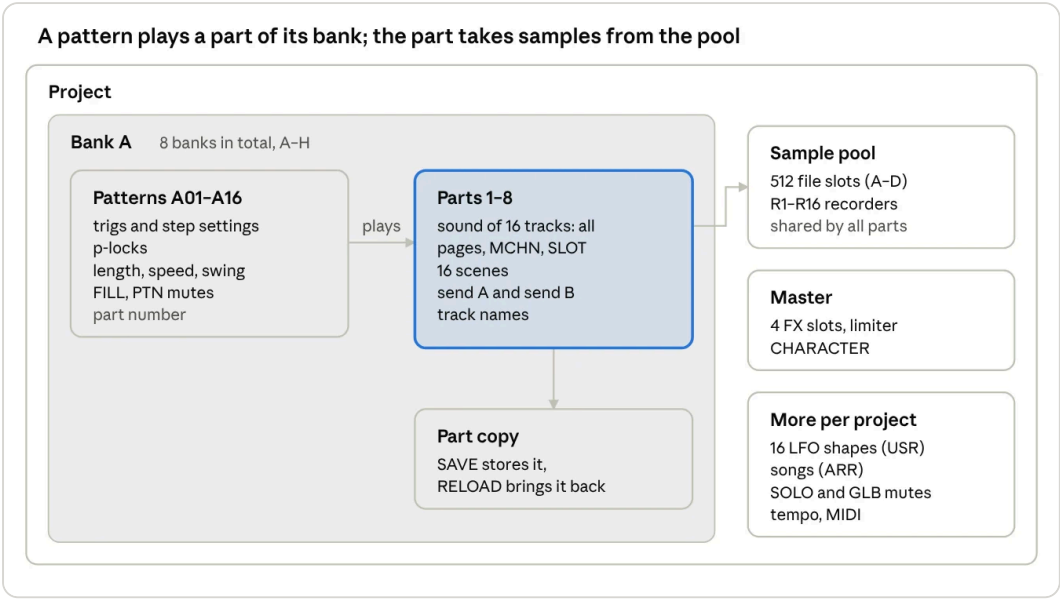
2. Basic concepts

In Hexamorph, "what to play" and "what it sounds like" are stored separately. Notes live in a **pattern**, sound lives in a **part**. Read this section once and the rest will make more sense.

A first-day glossary

WORD	WHAT IT MEANS
Sample	an audio file: a kick drum hit, a loop, a chord, a voice
Slot	a numbered cell a sample is loaded into. A project has 512 of them: four pages A-D of 128
Track	one instrument. A track plays a sample from some slot and runs it through its own filters and effects. There are 16 tracks
Step	one cell of the grid at the bottom. By default 16 steps = one bar, four steps = one beat
Trig	a mark on a step that says "play a note here"
Pattern	the trigs of all 16 tracks together: a verse, a chorus, a break. A project has 128 patterns: 8 banks (A-H) of 16
Part	the sound of all 16 tracks: which samples, how the filters, effects and levels are set. Each bank has 8 parts
Scene	a stored variation of the sound for the crossfader: "filter closed, more reverb". Each part has 16 scenes
Lock	a knob value stored on one step. It applies on that step and not on the others

How it fits together



PROJECT STRUCTURE · PATTERNS, PARTS AND THE SAMPLE POOL

Each pattern plays one of the parts of its bank. Several patterns can play the same part.

Example. You made a verse (pattern A01) and a chorus (A02), and both play part 1. If you make the kick louder in the verse, it gets louder in the chorus too, because they share the sound. If the bridge needs a completely different set of sounds, pattern A03 can play part 2.

Samples are not tied to tracks. They live in a shared list of slots, and a track simply says "I play slot A012". That is why several tracks can play one sample, and a single step can play a different slot.

What is stored where

WHAT	WHERE
Trigs, locks, track length and speed, swing	in the pattern
Track settings (sample, filters, effects, levels), scenes, track names	in the part
Sample slots, the master section, arrangements, tempo	in the project, one for everything

Where a knob's final value comes from

The same knob can be moved from several places at once. The plugin always combines them in the same order:

1. The value from the **part** — where the knob normally sits.
2. A **lock** on a step replaces it on that step.
3. A **scene** under the crossfader replaces that too.
4. An **LFO** (a knob moved automatically) adds movement on top.

Next to the knob you can see where a lock, a scene or an LFO has taken it (see section 3).

Saving a project

You don't need to do anything: the project is saved with your DAW session. To save it as a separate file (`.hexm`), open  → Save as... — the plugin creates a folder named after the project.

Audio files are not copied into the project; the plugin only remembers where they are. Before moving to another computer choose  → Collect samples and save: all samples are copied into the project folder.

A new instance of the plugin (and the standalone app) opens the BROKEN demo project right away: press PLAY and listen. The demo is installed with the plugin. To start from a blank page, choose  → New project: it is completely empty. You can't spoil the demo: the first save asks for a new project name.

How your data is stored

Everything you change takes effect immediately and lives in the plugin's memory. It reaches the disk in two ways: when you save the DAW session, or when you choose  → Save. (A project that has never been saved has no file yet, so Save is greyed out: use Save as... the first time.) Here is what goes where:

WHAT	DAW SESSION	 → SAVE (<code>.HEXM</code> FILE)
Patterns, parts, scenes, arrangements, master	yes	yes
A part's SAVE restore point	yes	yes
Samples from files	only the file path	only the path; Collect samples and save copies the files themselves

WHAT	DAW SESSION	≡ → SAVE (.HEXM FILE)
Recordings R1–R16	no	yes, into the recordings folder
Samples made from a recording (TO SLOT)	no	yes, into the samples folder
LEARN mappings, MIDI notes mode, recorder length	yes	yes

The main point of this table: **if you recorded something with a recorder, save the project with ≡ → Save (Save as... the first time)**. The DAW session does not keep the recordings themselves. It remembers where the .hexm file is and loads the recordings from its folder when it opens.

The DAW session and the .hexm file keep samples only as links to files. The plugin usually finds a renamed or moved file by itself, and copies the DAW's temporary files to its own folder (section 5, "Files from a DAW"). But if a file was deleted before you saved with ≡ → Save, the sound is lost from the DAW session.

This is what the project folder looks like after Save:

- **ProjectName.hexm** — the project itself;
- **samples** — samples that had no file of their own, and copies of files after Collect samples and save;
- **recordings** — recorder takes (R01.wav ... R16.wav).

Undo. Cmd/Ctrl+Z remembers the last 200 actions. Loading another project clears the history.

Global settings (sample library folder, window size, hints, licence) are not tied to a project. They are stored separately and apply to every project (see Appendix H, "Maintenance").

3. The plugin window

Read the window from top to bottom: transport, 16 tracks, page tabs, knobs and the step grid at the bottom. Everything you see on the page and in the grid belongs to the selected track.



THE HEXAMORPH MAIN WINDOW

What is where

AREA	WHAT IT HOLDS
Top bar	PLAY , STOP , the red note-record button; tempo BPM ; pattern selector PATTERN ; undo and redo (arrows); the ≡ menu on the right
Tracks	16 buttons T1 – T16 with names below them. A click selects a track; the selected one has a white outline
Tabs	the track's settings pages: SRC , STRCH , MCHN , TRIG , AMP , FLTR , LFO , FX , MIXER , SLOTS , MAP
Track card (left)	the track's name and level, which sample it plays, mute and solo buttons, part selector
Page (centre)	a picture (waveform, filter etc.) and eight cells with knobs. At the top: a hint and the COPY , PASTE , CLEAR buttons; the dots on the right show which sub-page you are on
Grid modes	STEP , SLOT , SLICE , CHROM : what the keys at the bottom do. The default is STEP – steps
Crossfader	SCN A on the left, the slider, SCN B on the right
Step grid	up to 64 keys (4 rows of 16). If a track is longer than 64 steps, 1-64 and 65-128 buttons appear
Line at the very bottom	short hints and messages from the plugin

The top bar has a few more buttons you will need later:

- **Q** – whether notes recorded live snap to the grid (section 7).
- **INT** / **HOST** – take the tempo from the plugin or from the DAW (section 11). The standalone app is always INT.
- **PTN** / **ARR** – what PLAY plays: one pattern or a whole arrangement (section 10).
- **SHIFT** – an indicator that lights up while Shift is held.
- **LEARN** – mapping knobs to a MIDI controller (section 11).

Track card

- **VOL** – the track's level. This fader is visible on every page; a double-click returns it to 0 dB. It is the same fader as the track's fader in the mixer; in lists (LFO, MAP) it is called LEVEL. Don't confuse it with VOL on the AMP page: that one is the gain in front of the filter.
- **SLOT A022 >** and the file name – which sample the track plays. A click opens the slot list.
- **MUTE** silences the track, **SOLO** leaves only this track audible. For **GLB** see section 10.
- **HIT** plays the track once – handy for hearing the sound.
- **SMTH** – smooth transitions between locks (section 7).
- **PART** – which part (set of sounds) the current pattern plays. **SAVE** and **RELOAD** below it store and bring back the sound (section 8).

Knobs and cells

Each page has eight cells. A cell can hold a knob (for continuous values), a list (a choice of options, for example **TAPE** / **TIME**) or a number with plus and minus buttons. An empty cell with a dotted outline means there is nothing there in the current mode.

Under each knob is its current value in readable units: **-7.00 st** (semitones), **2.40 kHz**, **1/16**, **L50** (panned left).

Coloured arcs around a knob show what else is changing the sound besides the knob itself: pink – a lock on a step, purple or teal – scene A or B, the third ring – an LFO.

Where a knob writes. Normally a knob changes the sound of the whole track. There are two special modes:

- **P-LOCK** – a step blinks with a white outline, and the knob writes its value only to that step (section 7).
- **Scene editing** – **SCN A** or **SCN B** is lit, and the knob writes into the scene (section 10).

Mouse

ACTION	WHAT HAPPENS
Drag a knob up or down	changes the value
Shift + drag	changes it more finely, in small steps
Double-click a knob	returns it to the default value
Right-click a knob	removes a lock or a scene value (does nothing in normal mode)

ACTION	WHAT HAPPENS
Click a track button	selects the track
Double-click a track button	opens the slot list
Double-click the name under a track	rename the track
Right-click a track button	copy, paste or clear the track's notes (SEQUENCE) or sound (SOUND)
Drag an audio file onto a track button	the track starts playing this file
Hover over a button	a hint

Working with steps is described in section 7.

Computer keyboard

The keys work while the plugin window is active (click on it).

KEYS	ACTION
A W S E D F T G Y H U J K O L P	play the selected track with notes, like a piano: A = C, W = C sharp, S = D and so on
Z / X	octave down / up
C / V	play softer / louder
1 or 2 (hold)	edit scene A or B while the key is held
Backspace (hold)	erases notes while recording
Esc	leave a special mode
Cmd/Ctrl+Z / Cmd/Ctrl+Shift+Z	undo / redo

Some DAWs take keys for themselves. If 1 and 2 don't work, use the **SCN A** and **SCN B** buttons.

4. First steps

In 10 minutes you will build a simple beat, make one step different from the others and try the crossfader. To begin, you can just listen to the demo: press **PLAY** and move the crossfader at the bottom.

Step 1. Load sounds

1. Open the **≡** menu → New project. The project is empty, and the tracks don't play anything yet.
2. Find a kick drum file in Finder, Explorer or your file manager (or in your DAW's browser) and drag it onto the **T1** button.
3. Press **HIT** on the track card on the left. You should hear the kick.
4. Drag a hi-hat onto **T2** the same way.

Step 2. Place notes

1. Click **T1**. At the bottom, click keys 1, 5, 9 and 13 — orange outlines appear on them. That is a kick on every beat.
2. Click **T2** and turn on steps 3, 7, 11 and 15 — hi-hats between the kicks.
3. Press **PLAY**. Change the tempo in the **BPM** field.
4. Try the knobs. On the **SRC** page the **PTCH** knob changes the pitch of the hat; on the **AMP** page set **MODE** to AHD, and the **DEC** knob makes it shorter or longer. (In the default ADSR mode with **SUS** at 1, DEC changes nothing: the sound holds at full level.)

To remove a note, click the step again.

Step 3. Make one step special

This is the key technique in Hexamorph. Any knob can have its own value on a single step. That value is called a **lock**.

1. On **T2**, **right-click** step 7. The step blinks with a white outline.
2. On the **SRC** page turn **PTCH** to +7. A pink arc appears around the knob, and a pink dot on the step.
3. Click an empty part of the window. Now the hat on step 7 plays higher, and on the other steps it plays as before.

Step 4. Try the crossfader

The crossfader moves the sound smoothly from one state (scene A) to another (scene B).

1. Press **SCN B**. The button lights up: knobs now write into scene B.
2. Select **T1**, open the **FLTR** page and raise the **FREQ** knob to about 2 kHz. The kick becomes thin, without lows.
3. Press **SCN B** again to leave.
4. Drag the crossfader slider from left to right. The low end of the kick fades away smoothly and comes back.

Step 5. Save

- The project is saved with your DAW session.
- The **SAVE** button on the track card stores the current sound. If you mess something up later, **RELOAD** brings it back.
- For a separate file, choose ☰ → Save as...

From here you can read the sections in order or jump straight to the topic you need.

5. Samples and slicing

All samples in a project live in one list of 512 slots. They are split into four pages of 128 and named by page and number: A001...A128, B001...B128, C001...C128, D001...D128. A track simply says which slot to play. If you replace the file in a slot, it changes on every track that plays it.

Loading a sample

WAV, AIFF and FLAC files are supported.

- **The easiest way** is to drag a file onto a track button. The file takes a free slot, and the track starts playing it right away. You can drag from Finder, Explorer, the Ableton browser or Splice.
- **Into a specific slot:** on the **SLOTS** page select a slot and click **LOAD**.
- **A whole folder:** **LOAD FOLDER** on the **SLOTS** page. The files go into consecutive empty slots starting from the selected one (on one page if possible); slots already in use are not touched. Subfolders are read too, each as its own block. Hidden and unreadable files are skipped, and the hint line says where the files went and which could not be read. This is handy for loading kits: eight different hats, for example.

The SLOTS page

A list of all slots: number, file name, length, how much memory it takes and which tracks use it. Open it quickly by double-clicking a track button or by clicking **SLOT** on the track card.

ACTION	WHAT HAPPENS
Click	select a slot
Shift+click	listen to the sample without changing anything
Double-click	the selected track starts playing this slot
Right-click	a menu with Clear slot; if the slot is in use, the menu first lists where it is played. Cmd/Ctrl+Z brings a cleared slot back

List pages. At the top are the tabs **REC | A | B | C | D**. REC holds the recorder takes R1–R16, A–D are pages of 128 slots. A star on a tab shows where the selected track's slot is. The **USED** button leaves only the slots the project actually plays (in parts, scenes, locks, through SPAN or LFO), plus the selected one and one empty slot — you can drop a new file there.

Memory: RAM, LIMIT, PURGE

Samples are held entirely in RAM. So that a large file or a whole folder doesn't eat all of your computer's memory, a project has a limit.

- **RAM** — a bar on the SLOTS page, for example "RAM 1.21 / 2.00 GB": how much of the limit is in use. Above 80 % it turns yellow, above 95 % red. A star means the limit has been lowered because the computer has less memory.
- **LIMIT** — how much memory this project's samples may take: 512 MB, 1, 2, 4, 8 or 16 GB. The default is 2 GB. The limit is saved with the project.

- **PURGE** — clear every slot the project doesn't play anywhere. The plugin looks at all parts (including their SAVE points), scenes, locks, SPAN and LFOs on SLOT, and only touches what nothing can reach. Before clearing, it shows how many slots and how much memory will be freed. **PURGE cannot be undone**, and it clears the Cmd/Ctrl+Z history.

If a new file doesn't fit, the plugin first frees memory held by the undo history. If that is not enough, it shows a window: what didn't fit and what you can do — PURGE, a shorter file or a higher LIMIT.

If a sample didn't fit into the limit when a project was opened, its slot is marked **(NOT LOADED)**. The file path is kept and survives saving. As soon as you raise LIMIT or free memory with PURGE, these slots load by themselves.

Files from a DAW

- **Temporary files.** If you drag a file that lives in a temporary folder (for example, a recording from an unsaved Live set), the plugin copies it right away: into the project's **samples** folder, or, if the project has not been saved yet, into the **Imported** folder inside the settings folder. That way the sound is not lost when the DAW cleans up its files.
- **Part of a clip from Live.** A clip gives the whole source file, not the trimmed region. To drag just a piece, Consolidate or Crop it in Live first.
- **Renamed files.** The plugin remembers a "fingerprint" of every sample. If a file is not found by its path or name when a project opens, the plugin looks for the same sound in the sample folders and where the file used to be. Anything found under a new name is reported in the hint line as FOUND UNDER A NEW NAME.
- **Deleted files.** If a file is gone but the sound is still in memory, $\Xi \rightarrow$ Save writes it into the project's **samples** folder.

Which sample a track plays: SLOT, SPAN, PICK

One knob is enough: **SLOT**, the slot number. It is on the third sub-page of **SRC** (press **SRC** twice). The value **--** means "no sample", and such a track is silent. The mouse wheel over the SLOT field moves one slot at a time; Shift+wheel jumps to the same number on the next page (A $\rightarrow$ B $\rightarrow$ C $\rightarrow$ D $\rightarrow$ REC $\rightarrow$ A).

Two more knobs let a track choose between several samples by itself:

- **SPAN** — how many consecutive slots, starting from SLOT, take part in the choice (1–16).
- **PICK** — which of them plays: 0 % — the first, 100 % — the last.

Example: a random hat. Load four hats into slots A012–A015. Set **SLOT** = A012, **SPAN** = 4 and **PICK** = 50 %. On the **LFO** page choose the **RND** (random) wave, the **PICK** destination and **MODE** = HOLD, raise **DEP** to the maximum and **SPD** to, say, 32. Now every hit plays one of the four hats at random.

The sample is chosen at the moment of the hit and doesn't change until the next hit.

A different sample on one step. **SLOT** can be locked like any knob (section 7). For example, a kick plays the whole bar, and on the last step the same track plays a cymbal. Such a step has a pink corner at the top right.

Besides pages A–D there is the REC page with 16 slots R1–R16. These are the takes from the track recorders (section 6).

Grid keys as samples (SLOT mode)

Press **SLOT** above the step grid. Now each key is a slot from the page (A-D) where the selected track's slot is:

- a click plays that sample through the selected track, with all its filters and effects;
- Shift+click makes it the track's main sample;
- while recording (section 7), hits are recorded together with the slot number.

Slicing

A slice is a piece of a sample. For example, a break can be cut at its hits and rebuilt in a different order. A sample can have up to 64 slices, and they are saved with the sample.

How to slice.

1. On the **SRC** page press **EDIT** – the sample editor opens.
2. Press **16** to cut into 16 equal parts, or **TRANSIENTS** to cut at the hits.
3. Press **BACK**.
4. On the third sub-page of **SRC** set **SLICE** = ON. Now the track plays one slice instead of the whole sample.

Knob	What it does
SLICE	play slices (ON) or the whole sample (OFF)
SLIC	which slice plays
SLen	how many consecutive slices one hit plays

To rebuild a break, lock different **SLIC** values on different steps. Even easier, switch the grid to **SLICE** mode: the keys at the bottom become slices, and you can play and record them by hand. In this mode the computer keyboard plays slices too; Z and X page through them 16 at a time.

Sample editor (EDIT)



THE EDIT PAGE: A BREAK CUT INTO 32 SLICES

ACTION ON THE WAVEFORM	WHAT HAPPENS
Click	select a slice
Double-click	add a cut
Drag a flag	move the start or end of a slice
Right-click a flag	remove the cut
Shift+click	listen
Alt+click	set the point the slice loops back to
Mouse wheel	zoom in or out

BUTTON	WHAT IT DOES
8 , 16 , 32 , 64	cut into that many equal parts
TRANSIENTS	cut at the hits
GRID 16	move the cuts onto an even grid
CLEAR	remove all cuts
NORM	make the sample as loud as possible without clipping
REVERSE	reverse the sample
GAIN + APPLY GAIN	make the sample quieter or louder (-24 to +24 dB)

BUTTON	WHAT IT DOES
LEN /2 , LEN x2 , LEN AUTO	correct how many steps the loop lasts (SRC LEN in the header). Needed for time-stretching (section 6)
SNAP 0	while lit, cuts land on points where the waveform crosses zero, so there are no clicks
FOLLOW / PIN	show the sample that is playing now, or keep the selected one

Edits change the sample in the slot, that is, on every track that plays it at once. They can be undone.

The **SRC** page itself also shows a waveform. You can drag the start and end of playback on it with the mouse. The wheel zooms, Alt + drag moves the view, a double-click shows the whole waveform.

6. Track sound: the settings pages

Each track is a chain the sound passes through. Each link of the chain is set on its own tab:

1. **Source** (**SRC** , **MCHN** , **STRCH**) – where the sound comes from and how the sample plays.
2. **Level over time** (**AMP**) – attack, decay.
3. **Filters** (**FLTR**) – which frequencies get through.
4. **Effects** (**FX**) – four in a row (section 9).
5. **Mixer** (**MIXER**) – final level and panning (section 9).

Three **LFO**s work over all of this – they move any knob automatically.

Some pages have several parts. Pressing the tab again shows the next part, and the part number is in the header (**SRC 1/3** , **SRC 2/3** ...).

SRC – how the sample plays

SRC 1/3

KNOB	WHAT IT DOES	RANGE
LVL	the level of the sample itself. Handy for evening out a quiet or overly loud file	-24...+24 dB
PITCH	pitch in semitones. +12 is an octave up	-24...+24
RATE	playback speed. 1.00 – as is, 0.50 – half speed, negative – backwards, 0 – silence	-2...+2
RRNG	how much the RATE knob covers over its full turn: ±1 (finer) or ±2 (wider)	1X, 2X
RMOD	how RATE behaves when time-stretch is on. TAPE – like a tape machine: slower and lower. TIME – slower but at the same pitch; near zero the sound "freezes" into a cloud	TAPE, TIME
STRT	where in the sample to start	0-100 %
LEN	how much of the sample to play	0-100 %
LOOP	where to jump back to when looping (only when PLAYBACK = LOOP)	0-100 %

Start and length apply from the next hit: a note that is already sounding is not cut off.

SRC 2/3

KNOB	WHAT IT DOES	VALUES
PLAYBACK	play once (ONE SHOT) or in a loop (LOOP)	ONE SHOT, LOOP
RTRG	how many times to repeat the hit – for rolls and flams	OFF, 1-16
RTIM	how often to repeat	1/4 to 1/64, triplets included
DCLK	smooths the edges of the sound so there are no clicks. 0 – sharp, as for drums	0-10 ms

SRC 3/3 – choosing the sample and slices: **SLOT** , **SPAN** , **PICK** , **SLICE** , **SLIC** , **SLEN** . Details in section 5.

STRCH – stretching to the tempo

Normally, if you speed a sample up, it also gets higher. Time-stretch changes only the speed and keeps the pitch. That way a loop at another tempo plays at the project tempo.

KNOB	WHAT IT DOES
TSTR	the mode (see below). OFF – no stretching
TLEN	how many steps the sample should last. AUTO – the plugin works it out
GRAIN	the size of the pieces the sound is cut into, 5–250 ms (for GRAIN and TRKR)
BGRD	the musical grid for BEATS and RPT: 1/1 to 1/32, TRNS – at the sample's own hits
BDIR	for RPT: where the repeat goes – once, in a loop, backwards, back and forth
BLEN	for RPT: how much of each piece sounds

MODE	GOOD FOR
BEATS	drum loops and breaks: the hits stay in place
GRAIN	pads, vocals, long smooth sounds
TRKR	the dirty "digital" sound of old trackers: you hear a buzz, and that is part of the sound
RPT	a stutter effect (beat repeat): pieces repeat on the grid

For stretching to work right, the plugin must know how many steps the sample lasts. That number is shown in the sample editor (**SRC LEN**). If a loop plays twice as fast or slow as it should, correct it with the **LEN /2** or **LEN x2** buttons there.

MCHN – where a track gets its sound

The **MCHN** knob ("machine") decides what the track plays. In most cases STATIC, the default, is what you want.

MACHINE	WHAT IT PLAYS	WHEN YOU NEED IT
STATIC	a sample from a slot	always, by default
FLEX	a sample or a take from any recorder (R1–R16)	to play what you just recorded
THRU	sound from outside (a synth, a microphone, another DAW track)	to run outside sound through filters, effects and the crossfader
NEIGH	the sound of the track above it (for T5, the sound of T4)	when one track needs more than four effects
PICKUP	its own recorder as a looper	to record and layer loops live

STATIC and FLEX in the beta. Right now these two machines work the same way: both load the whole sample into memory. STATIC is groundwork for streaming, that is, reading long files straight from disk without loading them into memory. Streaming is still in development, and until it arrives we recommend choosing FLEX, so your project doesn't change in the future.

How NEIGH works. Put the NEIGH machine on T5, and the sound of T4 no longer goes to the mix but through the filters and effects of T5. T4 no longer sounds on its own, and its level meter stays at zero. To mute or solo such a pair, use MUTE and SOLO on T5.

The recorder. Each track has its own recorder that records audio while you play. Track 1's take goes into slot R1, track 2's into R2, and so on. Any track with the FLEX machine can play such a take.

Example: resample the drums and slice them.

1. Choose a free track, for example T16, and open **MCHN**.
2. **MCHN** = FLEX, **RSRC** = MAIN (record the main mix), **RLEN** = 16 (one bar).
3. Start playback and press **REC** on this page. One bar is recorded into R16.
4. On **SRC 3/3** set **SLOT** = R16 and place trigs — the track plays the take.
5. To work with the take like a normal sample (slice it, save it), press **TO SLOT**.

MCHN KNOB WHAT IT DOES

MCHN	the track's machine
RSRC	what the recorder records: the plugin input (IN ...), the main mix (MAIN) or one of the tracks (T1-T16)
RLEN	how many steps to record. FREE — until you stop it
QREC	when recording starts after pressing REC: immediately (OFF), at the start of the pattern (PLEN) or at the nearest 1-16-step boundary
RTRG	what to do if recording is started again: ONE — start over; ONE2 — finish to the end; HOLD — record while REC is held; ONESHOT — record once and then play it until you press CLEAR
RLOOP	after the recording ends, stop (OFF) or keep recording in a loop (ON)
TIN	which input the THRU machine listens to

The buttons next to the recorder: **REC** — start and stop, **CLEAR** — erase the take, **TO SLOT** — turn it into a normal sample, **WAV** — save it to a file. The recording length is limited by the **≡ → Recorder length setting** (4 to 60 seconds). Recording can also be started from the sequencer: Cmd/Ctrl+Alt+click on a step places a red dot that means "start recording here".

PICKUP — the looper. Press **REC** — the track records a piece and immediately starts repeating it in time with the music. Press **REC** again to layer a new overdub. Knobs: **LEN** — the loop length relative to the first one (1/4 to ×8), **OP** — add a layer (DUB) or replace (REPL), **DIR** — forwards, backwards or back and forth, **GAIN** — loop level. **CLEAR** — start over.

AMP — level over time

An envelope is how a sound swells and fades. A short envelope turns any sample into a short hit; a long attack makes a pad that fades in smoothly.

There are two shapes (the **MODE** knob):

- **ADSR** — rise (**ATK**), fall (**DEC**) to the **SUS** level, where the sound stays while the note lasts, and the fade after it (**REL**). Good for long sounds.
- **AHD** — rise (**ATK**), hold (**HOLD**) and fall (**DEC**). Doesn't depend on note length. Good for drums.

KNOB	WHAT IT DOES	RANGE
ATK	how slowly the sound swells	0.5 ms – 4 s
HOLD	how long the sound stays at its peak (AHD)	0.5 ms – 4 s
DEC	how long the fall lasts	5 ms – 8 s
SUS	the level the sound holds at (ADSR)	0–1
REL	how long it fades after the note ends (ADSR)	2 ms – 8 s
RSET	ON: every hit starts from silence. OFF: from the current level (fewer clicks with fast hits)	OFF, ON
MODE	the envelope shape	ADSR, AHD
PAN	panning: left or right	L100...R100
VOL	gain in front of the filter. If the track goes on into drive or distortion, this is the knob to push it with	–24...+24 dB

Note length is set by the **LEN** field on the **TRIG** page (section 7). By default a note lasts until the next hit.

FLTR – filters

A filter removes some frequencies: for example, it cuts the highs to make a sound duller, or the lows to make it thinner. A track has two filters: the main one and an extra one.

Main filter types (**TYPE**):

TYPE	WHAT IT DOES
BAND	passes a band from FREQ up by SPAN octaves. A wide band cuts only the lows, a narrow one leaves only the mids. It is the default and cuts nothing in its initial position
LP2, LP4	cut the highs (duller sound). LP4 is steeper
HP2, HP4	cut the lows (thinner sound). HP4 is steeper
BP	keeps a narrow band around FREQ
NOTCH	cuts out a narrow band around FREQ
PEAK	boosts a narrow band around FREQ

FLTR 1/2 – the main filter

KNOB	WHAT IT DOES
ATK , DEC , SUS , REL	the filter's own envelope: it moves the frequency on every hit. This is how a "quacky" bass is made
FREQ	cutoff frequency, 20 Hz – 18 kHz
RESO	resonance: emphasises the cutoff, the sound gets sharper
TYPE	the filter type (see the table above)

KNOB

WHAT IT DOES

ENV

how far the envelope moves the frequency; negative — the other way

FLTR 2/2 — extras

KNOB

WHAT IT DOES

DEL

delay before the filter envelope starts, up to 1 s

SPAN

band width, 0–10 octaves (BAND type only)

DRV

drive together with the filter; 0 — off

KEY.T

how much the cutoff follows the note pitch: higher notes sound brighter

BASE

WDTH

the extra filter: the lower edge and the width of its band. Handy for removing extra lows or highs separately

BW.RT

the extra filter before the main one (PRE) or after it (POST)

RSET

restart the filter envelope on every hit

LFO — moving knobs automatically

An LFO is an invisible hand that turns the chosen knob back and forth by itself. Use it for a swaying filter, a drifting pitch, a random choice of sample. A track has three LFOs (sub-pages **1**, **2**, **3**).



AN LFO MOVING THE FILTER IN AN EFFECT SLOT

Set it up in four moves:

1. In **DEST** choose what to move. The easiest way is to choose LEARN and turn the knob you want on any page.

2. In **WAVE** choose the shape of the movement.
3. Raise **DEP** (depth) – while it is at zero the LFO does nothing.
4. Raise **SPD** (speed). It is 0 by default, and the LFO stands still. To start, set SPD = 16: with MULT ×8 that is one cycle per beat (4 steps).

Knob What it does

SPD	speed (-64...+64). Negative – the other direction
MULT	speed multiplier, ×1 to ×2048
DEP	depth: how far the knob moves. Negative turns the movement upside down
WAVE	shape: TRI (back and forth), SAW and RAMP (saw), SQR (hard switching), SIN (smooth), EXP, RND (random), USR1–USR16 (drawn by you)
DEST	what to move. You can choose almost any knob of the track, including the knobs of the other LFOs
MODE	how the LFO relates to the hits (see below)
SPH	where on the wave to start at a hit

Mode What happens

FREE	the LFO runs by itself; hits don't affect it
TRIG	every hit starts the wave from the beginning
HOLD	on every hit one value is taken and held until the next hit
ONE	a hit starts one cycle, then the LFO stops
HALF	a hit starts half a cycle

LFO speed is tied to the tempo. Multiply **SPD** by **MULT**: if you get 128, the LFO makes one cycle per beat (4 steps); 32 – one per bar.

Drawing shapes (DESIGN). The fourth LFO sub-page. A project has 16 shapes of its own (USR1–USR16), shared by all tracks. Pick a shape and draw it point by point with the mouse. A right-click on a point makes the move to the next point a step or a smooth line. The buttons next to it fill the shape with ready-made drawings.

7. The sequencer: steps, trigs and locks

The sequencer is the grid at the bottom of the window. Each key is one step. During playback a light runs across the steps, and a note plays on every step that has a trig. Each track has its own grid — switch tracks with the T1–T16 buttons.

Working with steps

ACTION	WHAT HAPPENS
Click an empty step	place a note (a trig)
Click a step with a note	remove the note
Right-click a step	set this step up separately (P-LOCK mode, see below)
Alt+click	a smooth transition to the next note (SLIDE)
Cmd/Ctrl+Alt+click	start recorder recording on this step
Cmd/Ctrl+click or drag across steps	select steps to copy or clear them
Hover the mouse	the bottom of the window says what is on this step
Hold Shift over a step	a window with all the step's details

Hatched steps are past the end of the track and don't play. Track length is changed on the **GRID** page (see below).

What the colours and marks on steps mean

Sequencer: what the marks on a step mean

The main rule: the outline and the underline tell you only about the TRIG. Everything else is a small mark in a corner: marks are added to a trig and never recolour it.

Looks	Name	What it is	What happens when it plays	How to set it
TRIG TYPE – the outline colour				
	Empty step	No trig	Nothing. Whatever was playing keeps playing.	Click to place a normal trig.
	Normal trig	Orange outline and underline. The main trig: it plays a note.	Restarts the voice, the AMP envelope and the LFOs. The sample, slice and STRT/LEN window are chosen at this moment. The step's locks apply.	Click an empty step. Click the trig again to remove it (with its locks).
	Trigless trig	Dim PINK outline: a trig without a note, it only changes settings. The pink dot means it has locks (as on a normal trig).	No note starts, the voice is not restarted, the sample, slice and window stay. The locks apply: the sound changes as it plays.	Right-click an empty step: a trigless trig is made and P-LOCK opens.
MARKS – added to a trig				
	Lock (p-lock)	Pink dot top left: the step has locks. The same on a normal trig and on a trigless one.	The values apply on this step and hold until the next trig (the same for normal and trigless trigs).	Right-click the step, then turn a knob. Right-click the knob to remove the lock.
	Slot lock	Pink quarter circle top right: the step's locks change the SAMPLE (SLOT / SPAN / PICK).	The step plays a different sample from the rest of the track. A trigless trig never shows it: it can't change the sample. PICK moved by an LFO shows no mark.	P-LOCK on the step, then SLOT or PICK. The step details show which slot.
	Recorder trig	Red dot bottom right. The trig under it looks as usual.	Starts the track's recorder. What happens if it is already recording or holds a take is set by RTRG (ONE / ONE2 / HOLD / ONESHOT).	Cmd/Ctrl+Alt+click.
	SLIDE	Orange tab on the right edge of the step.	This step's locks glide smoothly to the locks of the next trig that plays.	Alt+click.
	Condition	Text instead of the number: 50%, 1.4, FILL, IFILL, PRE, IPRE.	The trig plays only when the condition is met. If it doesn't play, its locks don't apply either.	P-LOCK, then the TRIG page, then COND.
STATES AND GUIDES				
	Playhead	A lighter key with a white underline.	The step that is playing right now.	-
	Editing in P-LOCK	Blinking white outline.	The knobs now write locks into this step.	Right-click the step, click an empty spot to leave.
	Selection	A white rim around the key.	Copy, clear or shift a group of steps.	Cmd/Ctrl+click or drag across steps.
	Start of a beat	Grey rim on 1, 5, 9, 13...	Only to make counting easier.	-
	Past the track length	Hatching.	Doesn't play: the track is shorter.	Length is set on the GRID page.
COLOURS				
- orange – a note plays - pink – locks: the dot, the quarter circle (slot lock), the dim trigless outline, also the lock arcs on knobs and in MAP - red – recording - white – playhead, editing, selection - grey – beat guides				
What a step never has: locks without a trig. The engine wouldn't play them, so removing a trig removes its locks. PICK and an LFO on the slot are not shown on steps: see them on SLOTS (the SPAN window) and in MAP.				
STEP DETAILS – no keys to hold				
1) Hover over a step: a short line at the bottom of the window (only what the step has):				
STEP 5 trig plays SLOT 004 03_clap_metal locks: SLIC SLOT 50% REC TRIG (SHIFT: details)				
2) Hold Shift over a step for about 0.4 s: a window with everything on the step. Only in STEP mode, a click or releasing Shift closes it: it doesn't appear for Shift+Backspace in LIVE REC.				
STEP 5 - trig: plays a note SAMPLE: SLOT 004 03_clap_metal (a lock; without it SLOT 022 21_break_140) LOCKS (2): SLIC 3, SLOT 4 COND 50% SLIDE off MICRO 0/24 NOTE 0 st VEL 110 LEN 2.00 st RTRG track RECORDER TRIG: starts this track's recorder (RTRG ONESHOT)				
3) The menu button (three lines) → Step summary: line + window on Shift (default) / line only / off.				

THE STEP MARKS LEGEND: EVERY MARK A STEP KEY CAN CARRY

WHAT YOU SEE	MEANING
orange outline	the step has a note
dim pink outline	a "silent" step: no note, but settings change (see below)
pink dot top left	the step has locks
pink corner top right	the step plays a different sample
red dot bottom right	recorder recording starts on this step

WHAT YOU SEE	MEANING
orange tab on the right	SLIDE
text instead of the number (50%, 1:4, FILL)	the note has a condition
blinking white outline	the step is being edited
white rim	the step is selected
lit key	this step is playing right now
grey rim on 1, 5, 9, 13	start of a beat, to make counting easier

The **SHOW #** button changes the labels on the steps: instead of numbers you can see note pitch (NOTE), velocity (VEL), length (LEN), shift (MICRO) or condition (COND).

Locks: a value of its own on one step

A lock is a knob value stored on one step. For example, all the hats sound the same, but the last one in the bar is longer and higher. Almost any knob of the track can be locked, including the sample, the filter and the effects.

How to place a lock:

1. Right-click a step. It starts blinking white, and **P-LOCK step N** appears in the header.
2. Turn any knobs on any pages. They change only for this step and get a pink arc.
3. Finish: click an empty part of the window or select another track.

To remove one lock, right-click the knob. To remove all of a step's locks, right-click the same step again.

A lock applies from its step until the next note on the same track. If you remove the note, its locks are removed too.

A "silent" step (trigless). If you right-click an empty step, a dim pink outline appears on it. Such a step doesn't retrigger the note; it only changes the knobs of the one already sounding. For example, a long pad starts on step 1, and on step 9 its filter opens. A trigless step doesn't change the sample or the start point.

SLIDE and SMOOTH. Normally a lock switches instantly. SLIDE (Alt+click on a note) makes the transition to the next note smooth. The **SMTH** button on the track card makes all of the track's transitions smooth at once.



THE STEP DETAILS WINDOW (SHIFT OVER A STEP)

TRIG: note settings

The **TRIG** page sets up the note on a step itself. First select a step with a right-click, then turn the knobs.

KNOB	WHAT IT DOES
NOTE	note pitch in semitones (± 48). This is how one sample becomes a melody or a bassline
VEL	velocity, 0-127
LEN	note length in steps (fractions allowed). INF – until the next note
MICRO	shifts the note slightly earlier or later, in 1/24 of a step. Gives a "live" groove
RTRG	how many times to repeat the note (a roll)
COND , COND A , COND B	the condition: when the note plays (see below)

Conditions: a note that doesn't always play

Conditions bring a repeating pattern to life without manual work.

CONDITION	WHEN THE NOTE PLAYS	EXAMPLE
PROB	at random, with the chance from COND A	50% – plays about half the time
A:B	on pass A out of every B	4:4 – only on every fourth pass
FILL	only during a fill (see below)	extra hits at the end of a phrase
!FILL	always except during a fill	drop the cymbal during the fill
PRE	if the previous note with a condition played	link two random notes

CONDITION	WHEN THE NOTE PLAYS	EXAMPLE
!PRE	if the previous one did not play	either one or the other plays

FILL turns on by itself. By default on every fourth pass of the pattern. Set this in **FILL EVERY** on the **GRID** page: every 2nd, 4th, 8th or 16th pass, or OFF – never.

GRID: length, speed, swing

The **GRID** button above the grid opens the pattern settings.

SETTING	WHAT IT DOES
MODE	PATTERN – all tracks have the same length. TRACK – each track has its own
LEN	length in steps, up to 128
SPEED	step speed against the tempo: 2x, 3/2x, 1x, 3/4x, 1/2x, 1/4x, 1/8x. 1x – a step is a 1/16 note, 2x – twice as fast, 1/2x – half as fast, 3/2x and 3/4x – triplets
M.LEN	(in TRACK mode) after how many steps all tracks return to the start together. INF – never
CH.LEN	when a pattern change happens: after this many steps. AUTO – when the pattern finishes
SWING	swing: shifts every second step. 50% – straight, 66% – triplet shuffle
FILLEVERY	how often FILL turns on
PATTERN CHANGE, TAIL, PART	what happens on a pattern or part change (section 8)

Different track lengths. In TRACK mode give the kick 16 steps and the hat 12. The hat shifts against the kick every bar, and the pattern keeps changing. To bring everything back to the start, set M.LEN, for example to 64 (four bars).

Live recording

Instead of clicking steps, you can play by hand. Press the red record button at the top and **PLAY**, then play: with the **HIT** button, the computer keyboard, a MIDI keyboard or the grid keys. Everything you play is recorded into the pattern. If you turn a knob while recording, its movement is recorded as locks too.

- **Q** on: notes land exactly on steps. Off: your exact timing is kept.
- Hold Backspace to erase notes where playback passes. Shift+Backspace erases only recorded knob movements.
- Each pass of the pattern is undone with one Cmd/Ctrl+Z.

CHROM: playing melodies

Press **CHROM** above the grid – the keys become a piano, and the track plays the sample at different pitches. The arrows change the octave. The **SLOT** / **SLICE** switch chooses whether to play the whole sample or one slice. While recording, notes are recorded into the pattern; in P-LOCK mode a key sets the pitch of the selected step.

Copying

The **COPY**, **PASTE**, **CLEAR** buttons in the page header work on whatever is on screen. Next to them it says what exactly will be copied:

- steps are selected — those steps;
- **TRIG** is open — all of the track's notes;
- **GRID** is open — the whole pattern;
- a sound page is open (**SRC**, **AMP**, **FLTR**, **LFO**, **FX** ...) — the settings of that page.

That way you can, for example, copy the filter settings from one track to another.

Everything you can copy. The rule is the same everywhere: Copy remembers, Paste inserts where you are now, Clear returns to the default values. The plugin remembers only the last thing copied, and you can only paste it into the same kind of thing: FLTR settings onto another track's FLTR page, a scene into a scene. Any paste or clear can be undone with Cmd/Ctrl+Z.

WHAT	WHERE TO COPY IT
Several steps	select them (Cmd/Ctrl+click or drag) → COPY. Then select the step to paste from → PASTE
All of a track's notes	COPY on the TRIG page, or right-click the track button → SEQUENCE
A track's whole sound	right-click the track button → SOUND
The settings of one page (SRC, STRCH, MCHN, AMP, FLTR)	COPY on that page
One LFO	COPY on the LFO page with that LFO open
One effect or the whole 1–4 chain	right-click the slot tab on the FX page. The effect type is copied along with the values
A scene	right-click SCN A or SCN B, or COPY in scene editing mode
A part	right-click the PART field
A pattern	right-click the PATTERN field, or COPY on the GRID page
Arrangement rows	COPY, PASTE and DUPLICATE under the ARR table (section 10)

8. Patterns and parts

A reminder: a pattern is the notes, a part is the sounds. Changing patterns takes you from verse to chorus. Changing parts changes the set of sounds. Both changes happen on time, without stopping the music.

Switching patterns

1. Click the **PATTERN** field at the top. A grid opens: banks A–H at the top, the bank's 16 patterns below.
2. Click the pattern you want. If music is playing, it starts when the current one finishes.
3. Shift+click switches immediately, without waiting for the end.

To make the change happen, say, exactly after 4 bars, set **CH. LEN** = 64 on the **GRID** page.

Right-clicking the **PATTERN** field lets you copy, paste or clear a pattern. A handy way to make a variation: copy A01 to A02 and change a couple of notes in the copy.

What happens to sounding notes on a change

The PATTERN CHANGE setting on the **GRID** page:

- **CUT** — everything that was sounding in the old pattern is cut off.
- **HOLD** — notes keep sounding until the new pattern plays a note of its own on that track. Good for long pads. If the new pattern plays a different part, such a track also keeps its old part's sound until then. To switch it to the new part earlier, Shift+click its button; **RELEASE ALL** does it for all tracks at once.

Reverb and delay tails are not cut off on a part change; they fade out smoothly. **TAIL** sets how long they last (50 ms to 5 s, FULL — until they die out by themselves). **KILL TAILS** silences all tails at once.

Parts

A part is the sound of all 16 tracks: samples, filters, effects, levels, scenes and track names. Each bank has 8 parts.

- **Choose a part for the pattern:** the arrow next to the **PART** field on the track card. A star next to a part means it has unsaved changes.
- **Rename:** just type a name into the **PART** field.
- **Copy:** right-click the **PART** field → Copy, then on another part → Paste.

Track names are stored in the part: when the part changes, they change too.

SAVE and RELOAD: bring the sound back

SAVE stores the part as it is now. **RELOAD** returns it to exactly that state.

This is very handy on stage: press **SAVE**, turn everything you like, and when you want to go back, press **RELOAD**. While music is playing, RELOAD happens in time (when exactly — see below); Shift+click brings it back immediately.

A part's SAVE does not save the project to disk. It is a restore point inside the project.

When a part change happens

The **PART** setting on the **GRID** page:

VALUE	WHEN
AS PATTERN	at the same moment a pattern change would happen
NOW	immediately
1 STEP, 4 STEPS, 16 STEPS	on the nearest step, beat or bar

The pattern keeps playing from the same place — only the sound changes.

9. Effects and mixer

In Hexamorph you can place effects in three places:

- **on a track** – up to four, in a row. They affect only that track;
- **on the shared buses A and B** – one effect each. You can send part of any track’s sound to them. Usually a reverb and a delay go there, so all tracks sound "in the same room";
- **on the master** – four effects and a limiter on the whole mix.

Any effect can go in any of these places. Every effect knob can be locked on a step, stored in a scene and moved by an LFO.

Track effects (FX)



FOUR EFFECTS ON ONE TRACK

1. Open the **FX** page. At the top are four tabs – slots 1–4; each says which effect is in it.
2. Select a slot and choose an effect from the list on the right.
3. Raise **MIX** (or **SEND**). A new effect changes nothing until you turn it up.

Some effects have a second settings page, **SETUP**, where you choose how it works. Switch to it with the two small squares on the right or by double-clicking the slot tab. Sound passes through the slots in order: 1 → 2 → 3 → 4.

The effects

EFFECT	WHAT IT DOES	KNOBS (MAIN / SETUP)
FILTER	a simple filter with drive	FREQ, RESO, TYPE, DRIVE, WIDTH, MIX / SLOPE

EFFECT	WHAT IT DOES	KNOBS (MAIN / SETUP)
MM FILTER	a filter with its own envelope: opens on every hit	BASE, WDTN, Q, DEP, ATK, DEC, MIX / HP, LP, ENV, HOLD, Q, DIST
COMB FLT	a comb filter: turns noise or drums into a metallic tone at the note you want	PTCH, TUNE, LP, FB, SPRD, MIX /MOD, MSPD
EQ	a two-band equaliser: boost or cut the frequencies you need	FRQ1, GN1, Q1, FRQ2, GN2, Q2 /TYP1, TYP2
DJ EQ	three bands, like on a DJ mixer: remove the bass, mids or highs	LO, MID, HI, LOFRQ, HIFRQ, MIX
COMP	a compressor: evens out the level, makes the sound denser	ATK, REL, THRS, RAT, GAIN, MIX /RMS, KNEE
SIDECHAIN	ducks the track when another one plays (for example, bass under the kick). See below	THRES, ATK, RATIO, REL, FREQ, MIX, RANGE / MODE, SRC, BAND, SHAPE
LIMITER	stops the sound from getting louder than a set level	GAIN, CEIL, REL
DRIVE	overdrive and distortion	DRIVE, FOLD, BIAS, TONE, OUT, MIX
CHORUS	makes the sound wider and "floating"	RATE, DEPTH, DELAY, FDBK, SPRD, MIX, TAPS, FBLP
FLANGER	a sweeping "jet" sound	DEL, DEP, SPD, FB, WID, MIX
PHASER	a soft swirling movement in the sound	RATE, DEPTH, CENTR, FDBK, NUM, MIX, WID
SPATIAL	widens the stereo image	INP, DPTH, WDTN, HP, LP, SEND /PHSE, M/S, MG, SG
DELAY	echoes in time with the music	TIME, FDBK, TONE, BASE, WIDTH, MIX / PPONG, TAPE, DIR, SYNC, LOCK, PASS
REVERB	reverb: the sound in a room	PRE, SIZE, DAMP, LOCUT, WIDTH, MIX
PLATE REV	a bright, smooth reverb	TIME, DAMP, GATE, HP, LP, MIX /GVOL, BAL, MONO, MIXF
SPRING REV	a spring reverb, like in old amplifiers	TIME, HP, LP, MIX / TYPE, BAL
DARK REV	a dark, long reverb with shimmer	TIME, SHVG, SHVF, HP, LP, MIX /PRE, BAL, MONO, MIXF

Under every knob is its value in readable units. A double-click returns the knob to its initial position.

SIDECHAIN: bass under the kick

SIDECHAIN ducks a track when another track plays. This is how the "breathing" bass and pads of dance music are made.

1. Put SIDECHAIN in an effect slot on the bass.
2. On SETUP, choose the kick track (T1) in **SRC**.
3. In **MODE** choose TRIG (react to the kick's notes) or AUDIO (react to its sound).

4. On the main page raise **MIX** and set the depth (**DEPTH** or **THRES**) and **REL** — how fast the bass comes back.

BAND chooses what to duck: only the lows (LOW), only the highs (HIGH) or everything (FULL). **SHAPE** is the shape of the return: EXP, LIN, SLOW, PUMP, GATE, DOUBLE or one of your drawn USR shapes.

The mixer (MIXER)



THE MIXER: 16 TRACKS, TWO BUSES AND THE MASTER

The first mixer page holds the levels of all 16 tracks. Under each fader are buttons:

- **M** — mute the track;
- **S** — listen to this track only;
- **C** — send the track to the headphones (the separate CUE output, see section 11).

On the right are the faders of buses A and B (**A RET** , **B RET**) and the master level (**MST**). The **FX >** buttons under them open the bus or master effects.

Press **MIXER** again to open the second page:

CONTROL	WHAT IT DOES
X (button)	whether the track follows the crossfader (XFADE). Turn it off so the crossfader leaves the track alone
MAIN (button)	whether the track goes to the main mix. Off, it still feeds its own T output and the sends
SNDA , SNDB (knobs)	how much of the track to send to buses A and B

Buses A and B

A bus is one effect shared by all tracks. For example, put a reverb on bus A and raise **SNDA** on the tracks that need reverb.

To choose a bus effect, press **FX >** under its fader. To get back to the faders — **<** or Esc.

A bus has an "owner" setting (**OWN A** , **OWN B**). The owner track can lock the bus effect's knobs on its own steps or move them with its LFOs. For example, make the snare track the owner, and the delay can get longer on one of its hits.

Master

The master is the overall sound of the whole project. Its settings are the same for the whole project and don't change with the part. Open it with the **FX >** button under the **MST** fader.



THE MASTER: FOUR EFFECTS AND A LIMITER

Sound flows left to right across the tiles:

1. **FLT/DRV** — the master filter and drive. **LP** cuts the highs, **HP** the lows, **RES** is resonance, and **RES ON** decides which of them gets the resonance: LP, HP or BOTH. **DRIVE** is overdrive. **DIR AB** and **DIR CD** are here too — how much of the plugin inputs to mix straight into the main mix.
2. **1-4** — four effect slots.
3. **OUT** — master level (**VOL**) and the limiter (**LIMITER** , **GAIN** , **CEILING** , **REL**). The limiter is off by default. Turn it on to make sure the mix never clips.

Sound character (CHARACTER)

In the **≡** → **CHARACTER** menu you can choose the overall character of the project's sound:

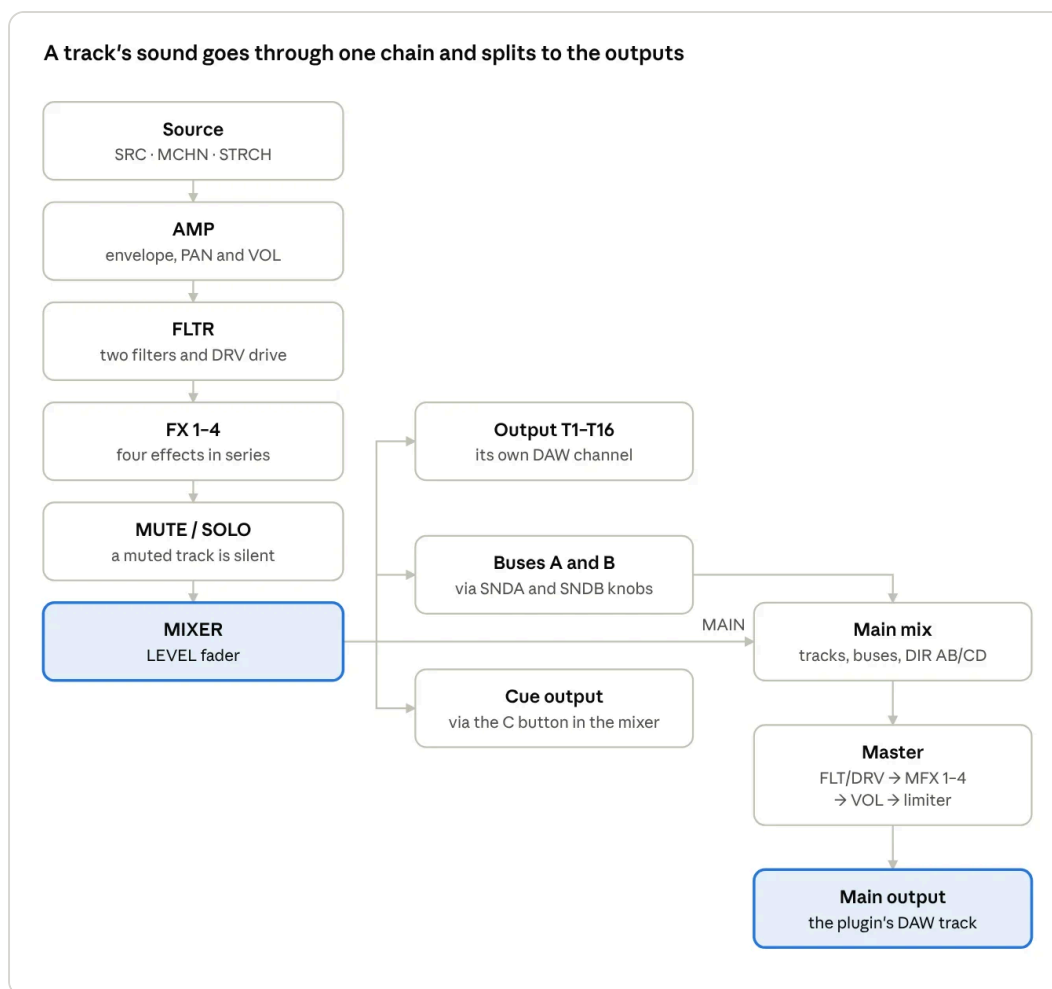
- **CLEAN** — a clean sound, nothing distorts.

- **HARDWARE** — a harder "hardware" character: loud peaks are clipped, filters and effects sound dirtier.

In the ADVANCED submenu these differences can be switched on one by one.

The whole signal path

All 16 tracks are built the same way. The diagram shows one track and where its sound goes.



SIGNAL PATH · FROM A TRACK TO THE OUTPUTS

Worth remembering:

- Inside a track the order is always the same: source → AMP → filters → effects → mixer. So VOL on AMP drives the sound into the filter and effects, while LEVEL in the mixer only makes the track quieter or louder in the mix.
- The extra filter (BASE, WIDTH) sits before or after the main one – BW.RT decides.
- A track's T output takes the sound after the mixer, but without the buses and the master. The MAIN button doesn't affect it (section 11).
- Neither the buses nor the master go to the Cue output: it carries only the tracks with the C button on.
- The limiter comes last, after the master level, so its ceiling is the ceiling of everything that leaves the plugin.
- A recorder with RSRC = MAIN records the finished mix, after the master and the limiter.

10. Performance: scenes, mutes, arrangement

Scenes and the crossfader

A scene is a stored variation of the sound. For example: "filters closed, more delay, bass quieter". A scene remembers only the knobs you stored in it, and it can change many tracks at once.

Scene A sits at the left end of the crossfader, scene B at the right. Moving the slider takes you smoothly from one sound to the other. Each part has 16 scenes.

How to make a scene:

1. Press **SCN A** or **SCN B** (or hold key 1 or 2). The button lights up.
2. The first row of the grid shows 16 keys — these are the scenes. Click one to choose which scene sits at this end of the crossfader.
3. Turn any knobs on any tracks. They are stored in the scene, and the track's normal sound doesn't change.
4. Leave: press the button again, press Esc, or release the key.
5. Move the crossfader.

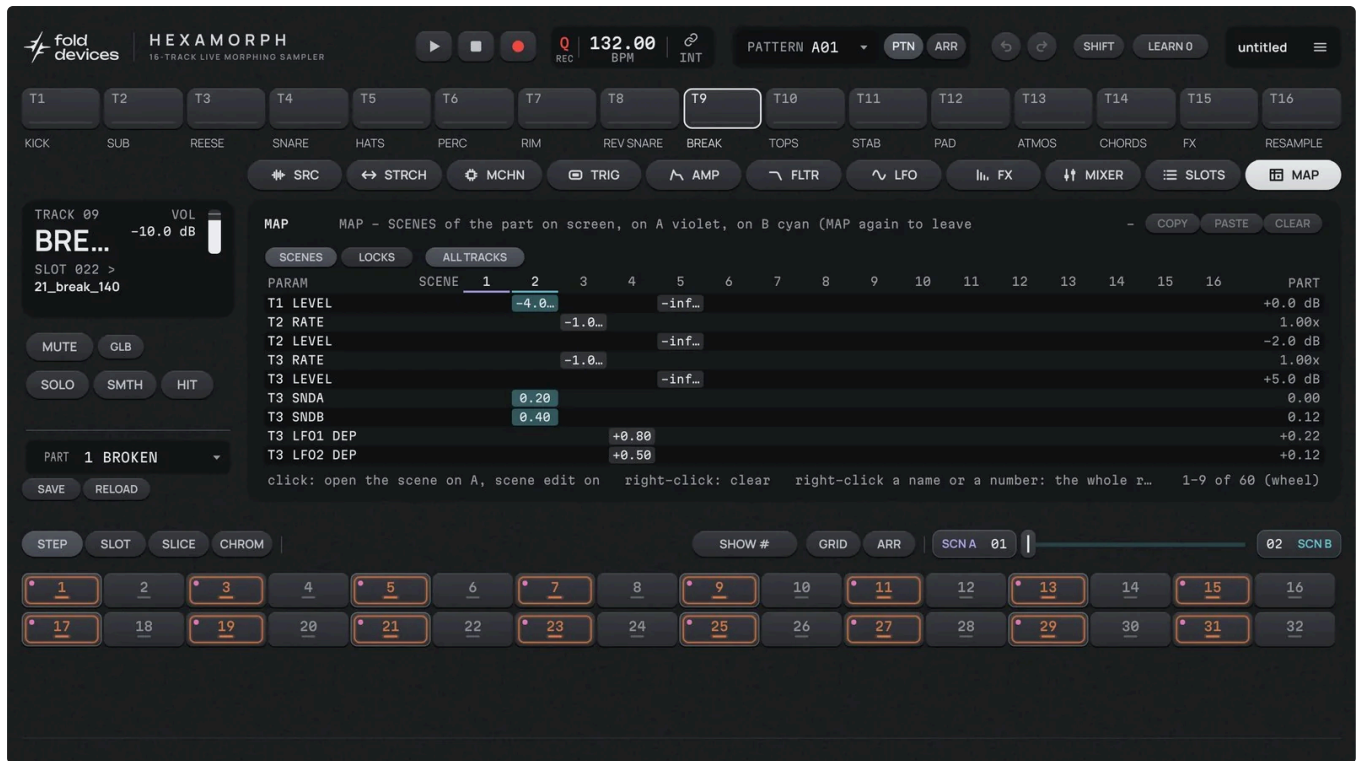
A good trick: leave scene A empty (the normal sound) and store the climax in scene B. Then the crossfader works as the track's "build-up" knob.

Good to know:

- Knobs with continuous values glide smoothly. Switches (for example, the filter type) flip at the midpoint.
- If a knob is in a scene and also locked on a step, the scene wins.
- To keep the crossfader away from a track, turn its **X** (XFADE) button off on the second mixer page.
- Right-click **SCN A** or **SCN B** to copy, paste or clear a scene.
- The crossfader can be controlled from a MIDI controller or by DAW automation (section 11).

MAP: what is stored in scenes and locks

The **MAP** page shows everything as a table. It is handy when you have many scenes and locks and need to see what is where.



MAP: WHICH KNOBS ARE STORED IN THE SCENES

- **SCENES** — rows are knobs, columns are scenes 1–16. On the right is the knob's normal value. The **ALL TRACKS** button shows all tracks or only the selected one.
- **LOCKS** — all of the selected track's locks, by step.

A click on a cell takes you to where the value can be changed. A right-click deletes the value. A right-click on a row name or column number clears the whole row or column. To leave, press **MAP** again.

Muting tracks (MUTE and SOLO)

MUTE silences a track, **SOLO** leaves only that track audible. Shift+click on SOLO adds another track to the soloed ones. Muting is smooth and click-free, and the track keeps playing silently, so when you unmute it comes back right on the beat.

The button next to MUTE switches which mutes you are changing:

- **GLB** — for all patterns. A muted track stays muted whatever pattern plays. Handy on stage.
- **PTN** — only for the current pattern. Saved in the pattern — handy while you build a track.

A track is silent if it is muted in either of the two modes.

Arrangement: putting patterns together into a track

An arrangement is a list of "what to play and in what order": for example, A01 four times, then A02 twice, then A01 again. A project can have 8 such lists.

1. Press **ARR** above the grid — the arrangement table opens.
2. **+ PATTERN** adds a row with the current pattern at the end.
3. In a row you can change the pattern and the number of repeats: with the mouse wheel or by typing a number.

4. At the top switch **PTN** to **ARR** and press **PLAY** — the whole arrangement plays.

COLUMN	WHAT IT SETS
LABEL	a label for yourself, for example "Verse" or "Break"
CMD	the row type: PATTERN — play a pattern, LOOP — go back a number of times, JUMP — go to a row, HALT — stop
PAT	which pattern
REP	how many times to repeat (1-99)
OFS, LEN	which step to start from and how many steps to play — you don't have to play the whole pattern
BPM	change the tempo on this row
TRN	transpose everything by a number of semitones
SCN A, SCN B	which scenes to put on the crossfader
MUTES	which tracks to mute or unmute on this row

The buttons under the table: **INSERT** (insert a row), **DELETE**, **DUPLICATE**, **COPY**, **PASTE**. A double-click on a row number moves playback to it; Shift+click selects several rows. When it reaches the end, the arrangement starts over (unless there is a HALT).

11. Working in a DAW

Tempo and transport: INT or HOST

Next to the tempo is the **INT** / **HOST** switch (click to switch):

- **HOST** — Hexamorph follows the DAW: it takes the DAW's tempo and plays when you press Play in the DAW. This is what you want most of the time.
- **INT** — Hexamorph has its own tempo and its own **PLAY** button; the DAW doesn't affect it. Handy for playing with a pattern without running the whole DAW project. In the standalone app there is nothing to follow, so it is always INT and the switch is disabled. A project with HOST opened in the app also plays on INT and is saved that way.

Where the sound goes: the plugin outputs

By default Hexamorph behaves like a normal instrument: all 16 tracks are mixed and come out as one stereo pair on the channel the plugin sits on. This is the **Main** output.

But the plugin has additional outputs too. You won't find them in the plugin window — they appear in the DAW's routing settings, where you choose where a channel takes its sound from.

OUTPUT	WHAT IT CARRIES
Main	the main mix with the master effects. Always on
Cue	the tracks with the C button on in the mixer. For example, to preview something in headphones
T1-T16	each track separately. T1 is track 1, T5 is track 5, and so on

Each track on its own DAW channel (outputs T1-T16)

Why you'd want this: to put your own DAW plugins on the kick or bass, mix them separately, or record each track to its own audio file (stems).

Example in Ableton Live — send the kick on track 5 to its own channel:

1. Hexamorph is on a MIDI track, for example "1 Hexamorph".
2. Create a new audio track (Create → Insert Audio Track).
3. In its routing section (In/Out; if you can't see it, turn on View → In/Out), in the first **Audio From** list choose "1 Hexamorph".
4. In the list below it choose **T5**. This is where the T1-T16 outputs live. Ableton enables that output on the plugin by itself.
5. Set the audio track's Monitor to **In**.
6. In Hexamorph open the mixer and turn off the **MAIN** button on track 5. Now the kick sounds only from the new track, not twice.

Repeat for any other tracks. To record a stem, arm recording on that audio track.

In other DAWs the idea is the same; only the names change. Look up "multi-output instruments" in your DAW's help: you need to enable the plugin's extra outputs and create channels for them.

Good to know:

- A T output carries the track's sound after its effects and level. The master effects and sends are not included.
- A muted track is silent on its own output too.
- The **MAIN** button affects only the main mix. The T output works whatever its position.
- If a track is fed into another track through NEIGH, it sends nothing to its own output — you hear it on the receiving track's output.

Inputs: getting sound into the plugin

The plugin has two stereo inputs: **In A/B** (on by default) and **In C/D** (enabled in the DAW when needed). The THRU and PICKUP machines and the recorders listen to them. In most DAWs the sound of another channel comes in here through the sidechain (in Ableton, the Sidechain list in the plugin header). If there is silence at the input, the plugin shows a NO INPUT hint.

MIDI notes

Notes coming into the plugin (from a keyboard or a MIDI clip in the DAW) play the tracks. How exactly is set in the project menu, item **MIDI notes**:

MODE	HOW IT WORKS	WHEN IT'S HANDY
AUTO	any note plays the currently selected track. Middle C (C3 / note 60) plays the original pitch, higher and lower notes transpose	playing a sample on the keyboard as a melody
CHANNELS	MIDI channel 1 plays track 1, channel 2 plays track 2... Pitch as in AUTO	controlling several tracks from different clips
PADS	the note chooses the track: 16 consecutive notes = 16 tracks, no transposition	playing tracks from pads, like a drum machine

Notes you play can be recorded into the pattern with LIVE REC (see the sequencer section).

Which note plays which track in PADS. The tracks repeat every 16 notes: note 0 — T1, note 1 — T2, ... note 15 — T16, note 16 — T1 again. It's easiest to start at note 48:

NOTE NUMBER	48	49	50	51	52	53	54	5
Name in Ableton	C2	C#2	D2	D#2	E2	F2	F#2	G2
Track	T1	T2	T3	T4	T5	T6	T7	T8

NOTE NUMBER	56	57	58	59	60	61	62	63
Name in Ableton	G#2	A2	A#2	B2	C3	C#3	D3	D#3
Track	T9	T10	T11	T12	T13	T14	T15	T16

Different DAWs name the same note differently (note 60 is C3 in Ableton and C4 in many others), so go by the number. Many pad controllers start at note 36 — then the first pad plays T5. To make the first pad play T1, shift the controller up an octave (to note 48) or down by four notes (to note 32).

In AUTO and CHANNELS modes note 60 plays the sample at its original pitch, and each neighbouring note is a semitone higher or lower. In all modes the note velocity becomes the hit velocity.

Controlling knobs from a MIDI controller (LEARN)

Any knob in the plugin can be mapped to a knob on your controller:

1. Press the **LEARN** button. It changes to **TURN KNOB**.
2. Turn the knob you want in the plugin. The label changes to **MOVE CC**.
3. Turn the knob on your controller. Done.
4. Press **LEARN** again to leave.

The number on the button (**LEARN 3**) is how many knobs are already mapped. Mappings are saved with the DAW project.

To clear all mappings, choose $\Xi \rightarrow$ Forget all MIDI LEARN bindings. If you map the same controller knob again, it simply moves to the new plugin knob.

Automation from the DAW

The DAW automation list deliberately has only a few items, so it is easy to find your way around:

PARAMETER	WHAT IT DOES
Crossfader	the crossfader position between scenes A and B
Master Trim	overall level on top of the project settings
Pattern	which pattern plays (A01...H16) – you can switch patterns right from the DAW arrangement
Scene A, Scene B	which scenes are at the ends of the crossfader

Everything else is controlled with scenes, locks and LFOs inside the plugin, or through LEARN.

Saving with the DAW project

When you save the DAW project, the whole state of Hexamorph is saved with it: patterns, parts, scenes, LEARN mappings. The samples themselves are stored as links to files. If you plan to move the project to another computer, save it with project menu $\rightarrow$ **Collect samples and save** – then all samples are copied into the project folder.

12. Recipes

Here are complete ways of working, start to finish. Each recipe relies on the sections above – if something is unclear, look there.

Process a DAW track through Hexamorph

Any sound from the DAW – a vocal, a synth, a whole drum group – can run through Hexamorph's filters, effects, locks and crossfader.

1. Put Hexamorph on a MIDI track.
2. Feed the sound of the track you want into the plugin through the sidechain (in Ableton, the Sidechain list in the plugin header). The sound arrives at input In A/B.
3. Pick a free track. On the MCHN page set **MCHN** = THRU and **TIN** = A+B. A THRU track passes sound all the time; you don't need to place notes.
4. Make sure the source track doesn't also go to the DAW master on its own, or you'll hear the dry sound as well.
5. From here on it's like any other track: effects on FX, an LFO on the filter, scene B with a closed filter and a long delay under the crossfader.

If you just want the input sound in the mix, without processing by a track, raise **DIR AB** on the master (section 9).

Live looper

Record loops from a synth or a microphone while you play, and layer overdubs.

1. Feed sound to the plugin input, as in the previous recipe.
2. On a free track open MCHN: **MCHN** = PICKUP, **RSRC** = IN A+B.
3. Start PLAY and press **REC**. The track records a piece and immediately starts repeating it in time.
4. Press **REC** again to layer a new overdub. To have a new take replace the old one rather than add to it, set **OP** = REPL.
5. **CLEAR** – start over. For a second, independent loop do the same on another track.
6. When you like the result, save the project with $\Xi \rightarrow$ Save (Save as... the first time). Otherwise the takes are lost when you close the DAW (section 2, "How your data is stored").

Rebuild a break

1. Drag a break onto the T1 button. On the STRCH page set **TSTR** = BEATS so it plays at the project tempo.
2. On SRC press **EDIT**, then **TRANSIENTS** (cut at the hits) or **16**, then **BACK**.
3. On the third SRC sub-page set **SLICE** = ON.
4. Switch the grid to SLICE mode: the keys at the bottom become slices. Turn on recording and PLAY, and play your own order of hits. Or place notes and lock different **SLIC** values on them.
5. For rolls on single steps, lock **RTRG** on the TRIG page. For a live feel, give a couple of hits a PROB 50% condition.

6. Store **TSTR** = RPT and **BGRD** = 1/16 in scene B. Now moving the crossfader right turns the break into a stutter.

Play a live set

1. Lay the track out across patterns: intro, main section, break. One bank per piece, so its patterns and parts sit together.
2. Before the show, press **SAVE** on each part. Now you can turn anything you like: **RELOAD** brings the sound back in time.
3. Switch mutes to GLB mode — then a muted track won't come back by itself on a pattern change.
4. Pick the next pattern in advance — it starts at the end of the current one. Shift+click switches immediately.
5. Build up and release with the crossfader: scene A is the normal sound, scene B the climax.
6. Map the crossfader and the main knobs to a controller with LEARN (section 11) — a mouse is awkward on stage.

Record stems or resample the mix

- **Stems in the DAW.** Route the tracks you need to outputs T1–T16 and record each onto its own audio track (section 11). Note that the T outputs don't carry buses A/B or the master. Record the shared reverb and delay separately from the Main output, with the tracks muted there.
- **Resample inside the plugin.** A recorder with **RSRC** = MAIN records the finished mix; **RSRC** = T1...T16 records one track. You can play the take straight away with the FLEX machine, slice it and turn it into a sample with **TO SLOT** (example in section 6). The "After a take... mute that track" menu item mutes the source track for you, so the sound isn't doubled.

13. Appendices

A. All pages at a glance

PAGE	WHAT 'S THERE	SECTION
SRC	how the sample plays: pitch, direction, start, loop, slot choice	6
STRCH	stretching to the tempo without changing pitch	6
MCHN	the track type (machine), recorder, looper	6
TRIG	the note on a step: NOTE, VEL, LEN, MICRO, RTRG, conditions	7
AMP	level, panning, envelope	6
FLTR	filters	6
LFO	three automatic "hands" that turn knobs	6
FX	the track's four effect slots	9
MIXER	levels of all tracks, MAIN, CUE, X, sends	9
MASTER	master effects and sends	9
EDIT	sample editor: slices, loop points	5
SLOTS	the list of all loaded samples	5
GRID	pattern settings: length, speed, swing, FILL, pattern and part change	7
ARR	arrangement	10
MAP	the table of scenes and locks	10

B. The project menu

Opens with a click on the project name at the top of the window.

ITEM	WHAT IT DOES
New project	a new empty project (asks to confirm)
Save / Save as...	save the project to a <code>.hexm</code> file
Load...	open a saved project
Collect samples and save	copy all samples next to the project and save – for moving and backups
Sample library folder...	the folder where your samples live
Recorder length	the length of each recorder: 4, 8, 16, 30 or 60 seconds
Audio / MIDI settings...	audio interface and MIDI (standalone app only); on Windows, choose ASIO® for the lowest latency
MIDI notes	how notes play the tracks: AUTO, CHANNELS, PADS (section 11)

ITEM	WHAT IT DOES
LIVE REC knob locks	during live recording, put locks on every step or only on steps with notes
After a take... mute that track	after recording from another track, mute that track so the sound isn't doubled
CHARACTER	sound character: CLEAN — clean, no clipping; HARDWARE — harder, with clipping and colour. ADVANCED — the same settings one by one
UI size	window size: 75, 100, 125 or 150 %
Step summary	the step hint in the status line and the window on Shift
Show debug info	technical information (CPU load etc.)
Report a bug...	report a bug
Known issues	known issues on the website
Licence key...	enter the key
About Hexamorph...	the plugin version
APC40 mkII control surface	control Hexamorph from an Akai APC40 mkII: steps, scenes, patterns, track faders, crossfader
Forget all MIDI LEARN bindings	clear all LEARN mappings (section 11)

C. Cheat sheet: keys and mouse

All the combinations from this manual in one place. Cmd/Ctrl is Cmd on a Mac, Ctrl on Windows and Linux. Alt is Option on a Mac.

Keyboard (while the plugin window is active)

KEYS	ACTION
A W S E D F T G Y H U J K O L P	play the selected track like a piano; in SLICE grid mode, play slices
Z / X	octave down / up; in SLICE mode, previous / next 16 slices
C / V	play softer / louder
1 or 2 (hold)	edit scene A or B
Backspace (hold)	erase notes while recording
Shift+Backspace (hold)	erase only knob movements while recording
Shift (hold over a step)	the step details window
Esc	leave a special mode
Cmd/Ctrl+Z / Cmd/Ctrl+Shift+Z	undo / redo

Mouse

WHERE	ACTION	WHAT HAPPENS
Knob	drag up or down, or wheel	changes the value; with Shift, more finely
Knob	double-click	default value
Knob	right-click	remove a lock or a scene value
Track button	click / double-click	select the track / open the slots
Track button	right-click	menu: the track's notes (SEQUENCE) and sound (SOUND)
Track button	Shift+click	in HOLD mode, switch a track still on its old part to the new one (section 8)
Track button	drag a file	the track plays this file
Name under a track	double-click	rename
SOLO	Shift+click	add the track to the soloed ones
VOL on the card	double-click	0 dB
Step	click	place or remove a note
Step	right-click	set up the step (P-LOCK); on an empty step, a trigless step
Step	Alt+click	SLIDE — a smooth transition to the next note
Step	Cmd/Ctrl+Alt+click	start recorder recording on this step
Steps	Cmd/Ctrl+click or drag	select for copying
Pattern in the PATTERN grid	click / Shift+click	switch at the end of the current one / immediately
PATTERN and PART fields	right-click	copy, paste, clear
SCN A / SCN B	click / right-click	edit the scene / copy, paste, clear
SLOTS list	Shift+click / double-click / right-click	listen / assign to the track / clear the slot
Grid in SLOT mode	click / Shift+click	play the slot / make it the track's main sample
Waveform on SRC	drag / wheel / Alt+drag / double-click	move start and end / zoom / move the view (or middle button) / show everything
Waveform in EDIT	click / double-click	select a slice / add a cut
Waveform in EDIT	drag a flag / right-click a flag	move a cut / remove it
Waveform in EDIT	Shift+click / Alt+click	listen / set the loop point (LOOP)
FX slot tab	double-click / right-click	SETUP page / copy the effect or the chain
Point in LFO DESIGN	right-click	the move to the next point as a step or smooth
MAP cell	click / right-click	go to the value / delete it; right-click a header to clear a row or column

WHERE	ACTION	WHAT HAPPENS
ARR table	wheel or typing / double-click # /Shift+click	change the cell / go to the row /select several
LEARN	click	map a knob (clear all mappings: ☰ → Forget all MIDI LEARN bindings)

D. Track parameter reference

Range runs from the minimum to the maximum. The initial value is what a new track starts with, and double-clicking a knob returns it there. What each knob does is covered in sections 6 and 9.

SRC

KNOB	RANGE	INITIAL VALUE
LVL	-24 ... +24 dB	0 dB
PTCH	-24 ... +24 semitones	0
RATE	-2.00 ... +2.00	1.00
RRNG	1X, 2X	1X
RMOD	TAPE, TIME	TAPE
STRT	0 ... 100 %	0 %
LEN	0 ... 100 %	100 %
LOOP	0 ... 100 %	0 %
PLAYBACK	ONE SHOT, LOOP	ONE SHOT
RTRG	OFF, 1 ... 16	OFF
RTIM	1/4, 1/8, 1/8T, 1/16, 1/16T, 1/32, 1/32T, 1/64	1/16
DCLK	0 ... 10 ms	1 ms
SLOT	A001 ... D128, R1 ... R16, -	- (no sample)
SPAN	1 ... 16	1
PICK	0 ... 100 %	0 %
SLICE	OFF, ON	OFF
SLIC	1 ... 64	1
SLEN	1 ... 64	1

STRCH

KNOB	RANGE	INITIAL VALUE
TSTR	OFF, BEATS, GRAIN, TRKR, RPT	OFF

KNOB	RANGE	INITIAL VALUE
TLEN	AUTO, 1 ... 128 steps	AUTO
GRAIN	5 ... 250 ms	≈ 20 ms
BGRD	1/1, 1/2, 1/4, 1/8, 1/16, 1/32, TRNS	1/16
BDIR	OFF, FWD, BWD, ALT	FWD
BLEN	1 ... 100 %	100 %

MCHN

KNOB	RANGE	INITIAL VALUE
MCHN	STATIC, FLEX, THRU, NEIGH, PICKUP	STATIC
RSRC	OFF, IN A, IN B, IN A+B, IN C, IN D, IN C+D, MAIN, T1 ... T16	OFF
RLEN	FREE, 1 ... 128 steps	16
QREC	OFF, PLEN, 1, 2, 4, 8, 16	OFF
RTRG	ONE, ONE2, HOLD, ONESHOT	ONE
RLOOP	OFF, ON	OFF
TIN	A+B, A, B, C+D, C, D	A+B
DIR (PICKUP)	FWD, REV, PIPO	FWD
LEN (PICKUP)	1/4, 1/2, X1, X2, X4, X8	X1
GAIN (PICKUP)	-24 ... +24 dB	0 dB
OP (PICKUP)	DUB, REPL	DUB

AMP

KNOB	RANGE	INITIAL VALUE
MODE	ADSR, AHD	ADSR
ATK	0.5 ms ... 4 s	0.5 ms
HOLD	0.5 ms ... 4 s	0.5 ms
DEC	5 ms ... 8 s	8 s
SUS	0 ... 1	1
REL	2 ms ... 8 s	≈ 16 ms
RSET	OFF, ON	ON
VOL	-24 ... +24 dB	0 dB
PAN	L100 ... R100	C (centre)

FLTR

KNOB	RANGE	INITIAL VALUE
TYPE	BAND, LP2, LP4, BP, HP2, HP4, NOTCH, PEAK	BAND
FREQ	20 Hz ... 18 kHz	20 Hz
RESO	0 ... 1	0
ENV	-1 ... +1	0
ATK	0.5 ms ... 4 s	0.5 ms
DEC	5 ms ... 8 s	≈ 66 ms
SUS	0 ... 1	1
REL	2 ms ... 8 s	≈ 16 ms
DEL	0 ... 1000 ms	0 (OFF)
SPAN	0 ... 10 octaves	10 octaves
DRV	0 ... 1	0 (off)
KEY.T	0 ... 100 %	0 %
BASE	20 Hz ... 18 kHz	20 Hz
WDTH	0 ... 10 octaves	10 octaves
BW.RT	PRE, POST	PRE
RSET	OFF, ON	ON

LFO (the same for LFO 1, 2 and 3)

KNOB	RANGE	INITIAL VALUE
SPD	-64 ... +64	0
MULT	×1, ×2, ×4 ... ×2048	×8
DEP	-1 ... +1	0
WAVE	TRI, SAW, RAMP, SQR, SIN, EXP, RND, USR1 ... USR16	TRI
DEST	see Appendix F	PTCH
MODE	FREE, TRIG, HOLD, ONE, HALF	FREE
SPH	0 ... 100 %	0 %

MIXER (for each track)

KNOB	RANGE	INITIAL VALUE
LEVEL	$-\infty$... +6 dB	0 dB
MAIN	on / off	on
CUE (C)	on / off	off

KNOB	RANGE	INITIAL VALUE
XFADE (X)	on / off	on
SNDA, SNDB	0 ... 1	0

Master and buses (one set per project)

KNOB	RANGE	INITIAL VALUE
LP	20 Hz ... 18 kHz	18 kHz (open)
HP	20 Hz ... 18 kHz	20 Hz (off)
RES	0 ... 1	0
RES ON	LP, HP, BOTH	LP
DRIVE	1× ... 8×	1× (off)
DIR AB, DIR CD	0 ... 1	0
VOL	$-\infty$... +3.5 dB	0 dB
LIMITER	OFF, ON	OFF
GAIN (limiter)	0 ... +24 dB	0 dB
CEILING	-12 ... 0 dB	0 dB
REL (limiter)	10 ms ... 1 s	$\approx$ 40 ms
RET A, RET B	$-\infty$... +3.5 dB	0 dB
OWN A, OWN B	–, T1 ... T16	– (no owner)
FILLEVERY (GRID)	OFF, 2, 4, 8, 16	4

E. Effects reference

The initial value is what a knob is set to when you pick the effect in a slot, and where a double-click returns it. On most effects MIX starts at zero, so a new effect changes nothing until you turn it up. Knobs marked SETUP are on the effect's second page. Values 0.00–1.00 mean a knob without units: 0 is the minimum, 1 the maximum.

FILTER

KNOB	RANGE	INITIAL VALUE
FREQ	0.00 ... 1.00	1.00
RESO	0.00 ... 1.00	0.00
TYPE	0.00 ... 1.00	0.00
DRIVE	0.00 ... 1.00	0.00
WIDTH	0.00 ... 1.00	0.00

KNOB	RANGE	INITIAL VALUE
MIX	0.00 ... 1.00	1.00
SLOPE (SETUP)	12 dB, 24 dB	12 dB

MM FILTER

KNOB	RANGE	INITIAL VALUE
BASE	OPEN ... 10.19 kHz	OPEN
WDTH	0 octaves ... OPEN	OPEN
Q	0 ... 100 %	0 %
DEP	-8 ... +8 octaves	0
ATK	0.5 ms ... 8 s	0.5 ms
DEC	5 ms ... 10 s	≈ 224 ms
MIX	0 ... 100 %	100 %
HP (SETUP)	12 dB, 24 dB	12 dB
LP (SETUP)	12 dB, 24 dB	12 dB
ENV (SETUP)	BASE ... WDTH	WDTH
HOLD (SETUP)	OFF, ON	OFF
Q (SETUP)	OFF ... BOTH	BOTH
DIST (SETUP)	OFF ... +36 dB	OFF

COMB FLT

KNOB	RANGE	INITIAL VALUE
PTCH	A#0 ... A9	C3
TUNE	-200 ... +200 cents	0
LP	60 Hz ... OPEN	OPEN
FB	-0.99 ... +0.99	+0.68
SPRD	0 ... 50 cents	0
MIX	0 ... 100 %	0 %
MOD (SETUP)	0 ... 50 cents	0
MSPD (SETUP)	0.05 ... 10 Hz	0.32 Hz

EQ

KNOB	RANGE	INITIAL VALUE
FRQ1, FRQ2	20 Hz ... 20 kHz	632 Hz
GN1, GN2	-18 ... +18 dB	0 dB
Q1, Q2	0.5 ... 16	0.5
TYP1, TYP2 (SETUP)	LOW ... HIGH	PEQ

DJEQ

KNOB	RANGE	INITIAL VALUE
LO, MID, HI	0.00 ... 1.00	0.50
LOFRQ, HIFRQ	0.00 ... 1.00	0.50
MIX	0.00 ... 1.00	1.00

COMP

KNOB	RANGE	INITIAL VALUE
ATK	0.2 ... 200 ms	10 ms
REL	10 ms ... 5 s	300 ms
THRS	-60 ... 0 dB	0 dB
RAT	1:1 ... INF	1:1
GAIN	0 ... +36 dB	0 dB
MIX	0 ... 100 %	0 %
RMS (SETUP)	PEAK ... 200 ms	PEAK
KNEE (SETUP)	0 ... 24 dB	0 dB

SIDCHAIN

KNOB	RANGE	INITIAL VALUE
THRES	0 ... -48 dB	0 dB
ATK	0.1 ... 100 ms	0.8 ms
RATIO	1:1 ... 20:1	2.5:1
REL	10 ms ... 2 s	≈ 83 ms
FREQ	30 Hz ... 8 kHz	490 Hz
MIX	0 ... 100 %	0 %
RANGE	0 ... -60 dB	0 dB
MODE (SETUP)	AUDIO, TRIG	AUDIO

KNOB	RANGE	INITIAL VALUE
SRC (SETUP)	T1 ... T16	T1
BAND (SETUP)	LOW ... FULL	FULL
SHAPE (SETUP)	EXP ... USR16	EXP

LIMITER

KNOB	RANGE	INITIAL VALUE
GAIN	0 ... +24 dB	0 dB
CEIL	-12 ... 0 dB	0 dB
REL	10 ms ... 1 s	100 ms

DRIVE

KNOB	RANGE	INITIAL VALUE
DRIVE	0.00 ... 1.00	0.00
FOLD	0.00 ... 1.00	0.00
BIAS	0.00 ... 1.00	0.50
TONE	0.00 ... 1.00	1.00
OUT	0.00 ... 1.00	0.50
MIX	0.00 ... 1.00	0.00

CHORUS

KNOB	RANGE	INITIAL VALUE
RATE	STOP ... 31 Hz	0.044 Hz
DEPTH	0 ... 99 %	50 %
DELAY	0.45 ... 17.3 ms	8.95 ms
FDBK	0 ... -100 %	0 %
SPRD	0 ... 100 %	100 %
MIX	0 ... 100 %	0 %
TAPS	2 ... 10	6
FBLP	15 Hz ... 16.9 kHz	16.9 kHz

FLANGER

KNOB	RANGE	INITIAL VALUE
DEL	0.09 ... 11.2 ms	5.68 ms

KNOB	RANGE	INITIAL VALUE
DEP	0 ... 100 %	50 %
SPD	STOP ... 31 Hz	0.527 Hz
FB	-100 ... +100 %	-30 %
WID	0 ... 100 %	0 %
MIX	0 ... 100 %	0 %

PHASER

KNOB	RANGE	INITIAL VALUE
RATE	STOP ... 31 Hz	0.527 Hz
DEPTH	0 ... 99 %	50 %
CENTR	0 Hz ... 21.9 kHz	11 kHz
FDBK	-97 ... +97 %	0 %
NUM	2 ... 10	6
MIX	0 ... 100 %	0 %
WID	0 ... 100 %	89 %

SPATIAL

KNOB	RANGE	INITIAL VALUE
INP	$-\infty$... 0 dB	0 dB
DPTH	0.25 ... 1	0.5
WDTH	0 ... 1	0.57
HP	OFF ... 4 kHz	OFF
LP	200 Hz ... OFF	OFF
SEND	$-\infty$... 0 dB	$-\infty$
PHSE (SETUP)	NONE ... L+R	L
M/S (SETUP)	OFF, ON	OFF
MG, SG (SETUP)	$-\infty$... +12 dB	0 dB

DELAY

KNOB	RANGE	INITIAL VALUE
TIME	1/32 ... 2 bars (syncd to tempo)	3/8
FDBK	0 ... 110 %	0 %

KNOB	RANGE	INITIAL VALUE
TONE	400 Hz ... 18 kHz	18 kHz
BASE	10 Hz ... 5.12 kHz	60 Hz
WIDTH	0 ... 100 %	0 %
MIX	$-\infty$... 0 dB	$-\infty$
PPONG (SETUP)	0 ... 100 %	0 %
TAPE (SETUP)	OFF, ON	ON
DIR (SETUP)	$-\infty$... 0 dB	0 dB
SYNC (SETUP)	OFF, ON	ON
LOCK (SETUP)	OFF, ON	OFF
PASS (SETUP)	OFF, ON	OFF

REVERB

KNOB	RANGE	INITIAL VALUE
PRE	0.00 ... 1.00	0.00
SIZE	0.00 ... 1.00	0.50
DAMP	0.00 ... 1.00	0.30
LOCUT	0.00 ... 1.00	0.00
WIDTH	0.00 ... 1.00	0.50
MIX	0.00 ... 1.00	0.00

PLATE REV

KNOB	RANGE	INITIAL VALUE
TIME	200 ms ... 10 s	600 ms
DAMP	0 ... 100 %	0 %
GATE	20 ms ... OFF	OFF
HP	OFF ... 4 kHz	OFF
LP	200 Hz ... OFF	OFF
MIX	0 ... 100 %	0 %
GVOL (SETUP)	-72 ... 0 dB	-72 dB
BAL (SETUP)	-64 ... +64	0
MONO (SETUP)	OFF, ON	OFF
MIXF (SETUP)	MIX, SEND	MIX

SPRING REV

KNOB	RANGE	INITIAL VALUE
TIME	50 ms ... 5.6 s	1.7 s
HP	OFF ... 4 kHz	60 Hz
LP	200 Hz ... OFF	OFF
MIX	0 ... 100 %	0 %
TYPE (SETUP)	1 ... 3	2
BAL (SETUP)	-64 ... +64	0

DARK REV

KNOB	RANGE	INITIAL VALUE
TIME	551 ms ... FREEZE	913 ms
SHVG	-157.5 dB/s ... OFF	-157.5 dB/s
SHVF	470 Hz ... 10.8 kHz	10.8 kHz
HP	OFF ... 5 kHz	OFF
LP	3 Hz ... OFF	OFF
MIX	0 ... 100 %	0 %
PRE (SETUP)	0 ... 91.4 ms	0 ms
BAL (SETUP)	-64 ... +64	0
MONO (SETUP)	0 ... 100 %	0 %
MIXF (SETUP)	MIX, SEND	MIX

F. What an LFO can modulate (DEST)

An LFO can move almost any knob on its own track. The **DEST** list starts with LEARN (pick a target by turning a knob), followed by submenus for each page. Each knob is named by its page and its own name, for example "FLTR FREQ", "LFO 2 SPD" or "FX1 REVERB: SIZE".

SUBMENU	KNOBS
SRC	LVL, PTCH, RATE, RMOD, STRT, LEN, LOOP, PLAYBACK, RTRG, RTIM, DCLK, SLOT, SPAN, PICK, SLICE, SLIC, SLEN
STRCH	TSTR, TLEN, GRAIN, BGRD, BDIR, BLEN
MCHN	PICKUP looper knobs: DIR, LEN, GAIN, OP
AMP	ATK, HOLD, DEC, SUS, REL, RSET, MODE, PAN, VOL
FLTR	TYPE, FREQ, RESO, ENV, ATK, DEC, SUS, REL, DEL, SPAN, DRV, KEY.T, BASE, WIDTH, BW.RT, RSET

SUBMENU	KNOBS
LFO 1, LFO 2, LFO 3	SPD, MULT, DEP, WAVE, MODE, SPH of any LFO on this track
FX 1 ... FX 4	the knobs of the effect in that slot, including SETUP. Empty slots are not listed
MIXER	LEVEL (track fader), MAIN, CUE, SNDA, SNDB, XFADE
SEND A, SEND B	the bus effect's knobs and RET — only on the track that owns the bus (OWN A, OWN B)

Not available as targets: DEST itself, the effect type in a slot, RRNG, the MCHN machine and the recording settings (RSRC, RLEN, the recorder's RTRG, QREC, RLOOP, TIN). You can change these with locks on steps.

G. Technical specifications

ITEM	VALUE
Formats	VST3 (macOS, Windows, Linux), AU (macOS only), standalone app
Inputs	2 stereo: In A/B, In C/D (mono possible)
Outputs	18 stereo: Main, Cue, T1–T16
Tracks	16
Patterns	128 (8 banks of 16)
Parts	64 (8 per bank)
Scenes	16 per part
Arrangements	8, up to 256 rows each
Track length	up to 128 steps
Sample slots	512 (pages A–D, 128 each) + 16 recorder takes (R1–R16)
Sample memory	per-project limit: 512 MB, 1, 2, 4, 8 or 16 GB (2 GB by default), but no more than the computer's memory minus 1 GB
Slices	up to 64 per sample
Sample files	WAV, AIFF, FLAC, mono and stereo, any sample rate (played back at the correct pitch)
Recorders	one per track, 4–60 seconds each; takes are saved as 24-bit WAV
Effects	4 per track, 2 buses, 4 on the master + limiter
LFOs	3 per track, 16 custom shapes per project
Swing	50–80 %
Undo	last 200 actions
Latency	1.5 ms — limiter look-ahead; the DAW compensates for it automatically
Project file	.hexm

H. Maintenance

Updating. Install the new version over the old one and restart your DAW. Projects from older versions open in newer ones. The plugin version is shown under  → About Hexamorph...

Demo project. BROKEN is installed with the plugin and opens in every new instance. On a Mac it lives in `/Library/Application Support/Fold Devices/Hexamorph/Demos/Broken`. If the demo can't be found, an empty project opens instead.

Where the plugin is installed

SYSTEM	VST3	OTHER
macOS	/Library/Audio/Plug-Ins/VST3	AU — /Library/Audio/Plug-Ins/Components, app — /Applications
Windows	C:\Program Files\Common Files\VST3	—
Linux	~/vst3	—

Where settings and the licence are stored. One folder for all copies of the plugin and the standalone app:

- macOS: `~/Library/Application Support/Fold Devices/Hexamorph`
- Windows: `%APPDATA%\Fold Devices\Hexamorph`
- Linux: `~/.config/Fold Devices/Hexamorph`

It contains `settings.txt` (sample library folder), `ui.settings` (window size and other view settings) and `license.key` (your key).

Resetting settings. Close the DAW and delete `settings.txt` and `ui.settings` from this folder. Leave `license.key` alone, or you'll have to enter your key again. Your projects are not affected.

Moving to another computer. Save the project with  → Collect samples and save and copy the whole project folder. On the new computer, install the plugin and enter your key via  → Licence key...

Uninstalling. Delete the plugin files from the folders in the table above. To remove everything, including the key and settings, also delete the settings folder. Your projects and samples stay where they are.

The plugin doesn't show up in the DAW. Rescan plugins in your DAW and check that the system VST3 folders (and AU on a Mac) are enabled in its settings.

I. FAQ

I press Play in the DAW, but the plugin doesn't play. Check that `HOST`, not `INT`, is shown next to the tempo.

A track is playing (blinking), but I can't hear it. Check in turn: is a sample loaded; is the track muted (MUTE in GLB or PTN mode); is SOLO pressed on another track; is the `MAIN` button on in the mixer; is the filter closed; is a scene turning the volume down (move the crossfader the other way).

I turn a knob, but it doesn't change or jumps back. Most likely its value is overridden by a step lock, a scene or an LFO. Look at the coloured arcs around the knob (section 3) and at the MAP page.

A slot says (NOT LOADED). The sample didn't fit into the project's memory limit. Raise `LIMIT` on the SLOTS page or free up space with `PURGE` — the slot will load by itself (section 5, "Memory").

I can't find my sample in the slot list. Slots are split into pages A–D and REC. An asterisk on a tab marks the selected track's page, and **USED** shows only what the project actually plays.

INT / HOST won't switch in the standalone app. That's expected: without a DAW there's nothing to follow, so it's always INT.

Where are outputs T1–T16? I can't see them in the plugin. You won't: they appear in your DAW's routing when you choose where an audio track takes its input from. Step by step — in section 11.

A track is heard twice (louder than it should be). It's going both to the main mix and to its own T output. Turn its **MAIN** off in the mixer. After recording into a recorder, the cause may be that both the source and the take are playing — see the menu item "After a take... mute that track".

THRU or the recorder hears nothing (NO INPUT). No audio is reaching the plugin. Set up sidechain in your DAW (section 11, "Inputs"). Input C/D also needs to be enabled in the DAW.

My samples disappeared after moving the project to another computer. The plugin remembers where the files were, and on the new computer they aren't there. Next time, use **Collect samples and save** before moving.

I broke something by accident. Cmd/Ctrl+Z undoes, Cmd/Ctrl+Shift+Z redoes.

On Linux, Alt+click or Alt+drag doesn't work. Many Linux desktops use Alt+drag to move windows and don't pass it to the plugin. Change that key in your system's window settings, for example to Super (the Windows logo key).

The computer keyboard doesn't play notes. Click the plugin window so it gets keyboard focus. Some DAWs also need their own "piano keyboard" turned off (in Ableton — the Computer MIDI Keyboard button).

The window is too small or too large. Project menu → UI size.

J. Glossary

TERM	MEANING
Project	your whole setup: 8 banks, samples, arrangements
Bank	a group of 16 patterns and 8 parts (A–H)
Pattern	the notes and locks of all 16 tracks — "what plays"
Part	the sound of all 16 tracks, scenes and track names — "how it sounds"
Track	one of the plugin's 16 voices
Step	one cell of the sequencer; usually 1/16 of a bar
Trig	a note on a step
Lock	a knob's own value on a single step
Scene	a stored set of knob values for the crossfader
Crossfader	a slider that morphs smoothly from scene A to scene B
Slot	a place for a sample in the project (A001–D128, plus R1–R16 for recorders)

TERM	MEANING
Slice	a piece of a sample, for example one hit from a break
Machine	the track type: STATIC, FLEX, THRU, NEIGH, PICKUP
LFO	automatic back-and-forth movement of a knob
Envelope	how volume (or the filter) changes after a hit: attack, decay, release
Send	a branch of a track's sound into a shared effect
Output T1-T16	each track's separate output in the DAW
HOST / INT	the plugin follows the DAW / plays on its own
LEARN	linking a knob to a MIDI controller knob

K. Support

- **Report a bug:** ☰ → Report a bug... A form opens with the plugin version, DAW, system and audio settings already filled in. Describe what you did, what you expected and what happened.
- **Known issues:** ☰ → Known issues or folddevices.com/known-issues. Check there before reporting a bug.
- **Website:** folddevices.com
- **Plugin version:** ☰ → About Hexamorph...

L. Trademarks

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