

DREAMCATCH

User Manual (v0.3)

DREAMDEEP

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1. WELCOME TO DREAMCATCH

DreamCatch is an instrument from DreamDeep that runs inside your DAW. You give it a recording, choose a short part of that recording and DreamCatch turns that part into a sound you can play on your keyboard and hold for as long as you like.

WHAT DREAMCATCH DOES

A sample player loops the audio it is given, so a held note repeats the same piece of sound and often clicks or jumps where the loop starts again. DreamCatch works differently. It measures which frequencies the part you chose contains and how they move over time and then builds a new sound from those measurements. This is called resynthesis and it means the sound can be held for ever with no join and no click.

Working with DreamCatch follows a few simple stages. First you drag a recording of up to 60 seconds onto the window. If you want just one instrument from a mix, SEPARATE can split the recording into four stems: bass, drums, vocals and everything else. Then you choose the part you want, which DreamCatch calls the snippet and press MAKE. MAKE builds the sound in four different ways at once and you choose the one you like best.

Once the sound is made, you play it with up to 32 notes at once. You can shape it with a filter, two envelopes, three LFOs and a full modulation system and then save it as a preset to use again in any project.

WHAT YOU NEED

On a Mac, DreamCatch needs an Apple Silicon Mac running macOS 11 or later and a DAW that can load Audio Unit (AU) or VST3 instruments, such as Logic Pro, GarageBand, Ableton Live, Reaper or Cubase.

On Windows, DreamCatch needs a 64-bit PC and a DAW that can load VST3 instruments.

SEPARATE needs the stem model, a large file of about 530 MB that is installed once (see section 2). On a Mac, SEPARATE needs macOS 14 (Sonoma) or later. Everything else in DreamCatch works on macOS 11 and later, even without the stem model.

A MIDI keyboard is needed to play the sounds you make. An MPE keyboard works too and DreamCatch gives each of its notes its own pitch bend and pressure.

HOW THIS MANUAL IS LAID OUT

Sections 1 and 2 cover what DreamCatch is and how to install it. Section 3 is a short tour of the window and section 4 takes you from a recording to a playable sound in five steps. Sections 5 to 15 then describe every part of the window in turn, from the top of the window to the bottom. Sections 16 to 20 cover using DreamCatch in your DAW, shortcuts, troubleshooting, a table of every control and the credits.

Every control is named in capitals, exactly as it is written on the screen, such as MAKE or CUTOFF. Where this manual says Option-click, Windows users should hold the Alt key and click. Where it says right-click, Mac users can also hold the Control key and click.

You can also rest the pointer on any key or knob for a moment and a short note appears saying what it does. You can switch these notes off in the cog panel (see section 15).

2. INSTALLING DREAMCATCH

DreamCatch comes with an installer for each computer. The stem model, which SEPARATE uses, is installed separately from inside DreamCatch.

ON A MAC

Double-click the DreamCatch disk image (a file ending in .dmg) to open it, then double-click the installer package inside it and follow the steps on screen.

The installer offers three parts. DreamCatch (AU) installs the Audio Unit for Logic Pro, GarageBand and other Audio Unit hosts into /Library/Audio/Plug-Ins/Components. DreamCatch (VST3) installs the VST3 for Ableton Live, Reaper, Cubase, FL Studio and other VST3 hosts into /Library/Audio/Plug-Ins/VST3. Factory Presets installs DreamCatch's factory presets into /Library/Application Support/DreamDeep/DreamCatch, for everyone on the Mac. All three are chosen at first and you can leave them all chosen.

When the installer has finished, open your DAW and load DreamCatch on an instrument track. Installing a new version replaces the old one and your presets and settings are kept.

ON WINDOWS

Right-click the file DreamCatch-Installer.zip and choose Extract All, then click Extract. A folder opens with the installer inside it, named DreamCatch_v0.3.36_Setup.exe (or similar).

Double-click the installer. If Windows asks whether you want to allow the app to make changes to your device, click Yes. Then click Next on each page and Install on the last one.

The installer puts DreamCatch.vst3 into the folder C:\Program Files\Common Files\VST3, which is where Windows DAWs look for VST3 instruments and the factory presets into C:\ProgramData\DreamDeep\DreamCatch. Open your DAW and load DreamCatch on an instrument track. If your DAW does not list it, ask the DAW to scan for new plug-ins.

INSTALLING THE STEM MODEL

SEPARATE splits a recording into stems with an AI model that is too large to include in the installer. You install it once, from inside DreamCatch and it then stays installed for every project.

Open DreamCatch in your DAW, click the cog at the top right of the window and click INSTALL MODEL, under STEM MODEL. Choose the model file, which ends in .onnx and click Open. DreamCatch copies the file into its own Models folder, which takes a few moments because the file is large and the line beside the key says when it is done, or why it could not be installed.

Editor's note: how customers obtain the model file is still to be decided and this paragraph should say where to download it once that is settled.

On a Mac the model is kept in ~/Library/Application Support/DreamDeep/DreamCatch/Models and on Windows in %APPDATA%\DreamDeep\DreamCatch\Models. The first SEPARATE after installing the model takes longer than usual, while the computer prepares the model to run on its graphics processor.

3. A TOUR OF THE WINDOW

The DreamCatch window has three bands. The dark stage across the top shows the recording and the sound. The silver deck in the middle holds the controls that make the sound. The dark strip along the bottom holds the controls that shape how it plays.

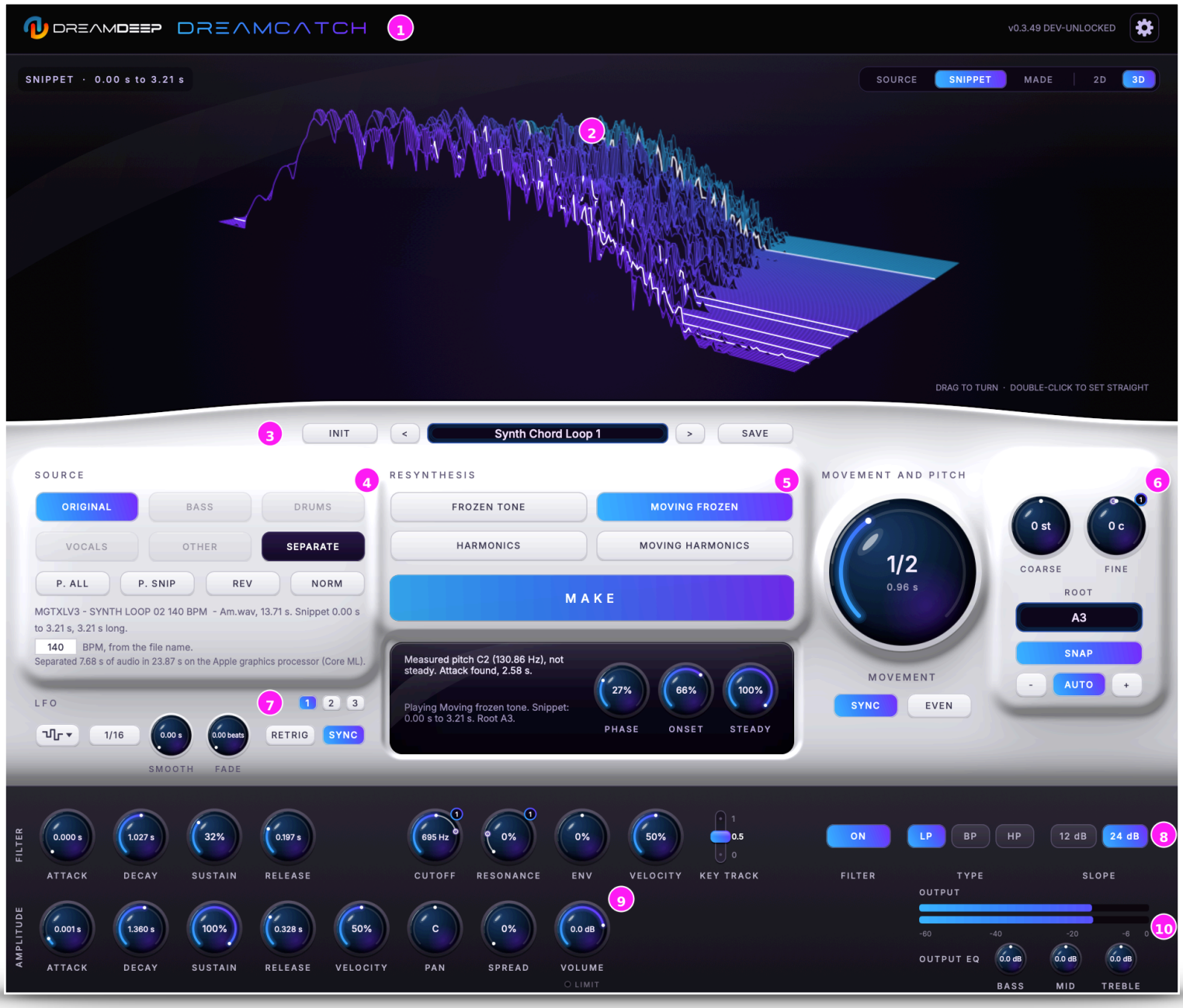


Figure 1. The DreamCatch window
1: the header 2: the stage 3: the preset row. 4: SOURCE. 5: RESYNTHESIS
6: MOVEMENT AND PITCH 7: the LFO row 8: the FILTER row 9: the AMPLITUDE row 10: OUTPUT

THE HEADER: LOGO, NAME, VERSION AND THE COG

The DreamDeep logo and the DreamCatch name sit at the top left (1). The version number sits at the top right, beside the cog. Click the cog to open the panel of settings described in section 15, where you can change DreamCatch's colours and the size of its window, install the stem model and switch the tooltips on or off.

THE STAGE

The stage (2) shows the recording and the snippet you choose from it and then the sound MAKE has made, moving as you play. The keys at its top right choose what it shows: SOURCE, SNIPPET or MADE, each in 2D or 3D. Section 5 describes each view.

THE DECK: SOURCE, RESYNTHESIS, MOVEMENT AND PITCH AND LFO

The preset row (3) runs across the top of the deck. It holds INIT, the arrows that step through your presets, the name of the preset playing and SAVE.

Below it are three raised areas. SOURCE (4) is where you separate the recording into stems, listen to it, reverse or normalise it and shape the snippet's sound. RESYNTHESIS (5) holds the four methods, MAKE and a small glass panel that reports what MAKE found. MOVEMENT AND PITCH (6) sets how fast the sound moves and how it is tuned.

The LFO row (7) runs below SOURCE. It holds the controls of the three LFOs, which are slow, repeating movements you can use to move other controls.

THE STRIP: FILTER, AMPLITUDE AND OUTPUT

The FILTER row (8) holds the filter and its own envelope and VOICES. The AMPLITUDE row (9) holds the envelope that shapes each note's volume, with VELOCITY, PAN, SPREAD, VOLUME, ANALOG and UNISON. OUTPUT (10), at the bottom right, holds the level meter and the OUTPUT EQ.

4. YOUR FIRST SOUND IN FIVE STEPS

This section takes you from a recording to a playable sound. Each step is described more fully later in the manual.



Figure 2. Recording dropped, a snippet chosen, MAKE pressed. The MADE view shows each note.

STEP 1: DROP A RECORDING

Drag an audio file from the Finder (or File Explorer on Windows) onto the DreamCatch window and let go. DreamCatch reads WAV, AIFF, FLAC and Ogg Vorbis files and on a Mac also MP3, AAC and the other formats the Mac itself can play. It takes up to 60 seconds of the file and a longer file is cut to its first 60 seconds.

The recording appears on the stage and its name, length and tempo appear under the SOURCE keys.

STEP 2: CHOOSE A SNIPPET

Drag across the waveform on the stage to choose the part you want to play. This part is the snippet and it shows as a lit band. Click P. SNIP to hear it and drag its edges until it sounds right. A snippet can be up to 20 seconds long and a steady part of a sound, such as a held chord or the body of a note, usually makes the best loop.

STEP 3: PRESS MAKE

Click MAKE. Its key fills from left to right while DreamCatch works and its lettering flashes when the sound is ready. A snippet of a few seconds takes a few seconds to make.

STEP 4: PLAY IT

Play your keyboard. The note shown as ROOT plays the sound at its original pitch and the other keys play it higher or lower. Try each of the four method keys above MAKE while you play, to hear the four ways DreamCatch has made the sound and keep the one you like.

STEP 5: SAVE IT AS A PRESET

Click SAVE in the preset row, type a name and click SAVE PRESET. The preset holds the sound itself and every control, so it plays exactly the same in any project, even if the recording is later moved or deleted.

5. THE STAGE

The stage shows the recording you are working with, the snippet you choose from it and the sound MAKE has made. The keys at its top right choose the view.



Figure 3. SOURCE in 2D, with a snippet chosen. The faint lines mark the recording's beats and the numbers mark its bars.

SOURCE, SNIPPET AND MADE

SOURCE shows the whole recording, or the stem you have chosen, with the snippet. It is where you choose the snippet. Each sliver of the waveform is coloured from DreamCatch's first colour for a dark sound to its second colour for a bright one, so you can see where the tone changes. While a SHAPE card is on, SOURCE and SNIPPET in 2D also draw the shaped snippet over the recording as a white wave you can see through (see section 6).

SNIPPET shows the snippet close up. Once MAKE has made the sound from this snippet, it also shows what MAKE found: the attack, shaded in the second colour up to where the loop begins and the steadiest part of the snippet, bracketed.



Figure 4. SNIPPET in 2D after MAKE, with the attack shaded and the ATTACK END line where the loop begins.

MADE shows the sound MAKE made, band by band, with the lowest frequencies at the bottom. Each lane rises where its band is louder and falls where it is quieter. The attack comes first, shaded, followed by two turns of the seamless loop, with a dotted line where the loop repeats with no join. The column at the right shows the sound's harmonics as bright lines. While you play, the column comes alive and follows the last note you played: each part of it swells and fades with the sound's movement and with FLUCTUATIONS and its left and right halves show the sound's left and right sides, so a part that drifts to one side leans that way. Each note you play is a bright line moving through the attack and then round the loop.



Figure 5. MADE in 2D while a chord is held. Each bright line is one of the notes playing.

2D AND 3D

The 2D and 3D keys choose how the view is drawn. In 3D, SOURCE and SNIPPET show the sound as a landscape: low frequencies at the left, high frequencies at the right, loudness as height and the start of the sound at the front. Drag to turn and tilt the landscape. Scroll up or down, or pinch, to zoom in or out towards the part under the pointer and scroll left or right to slide the zoomed landscape sideways. Double-click to set it straight again. MADE in 3D shows the endless loop as glowing rings, one for each band, with low frequencies inside and high frequencies outside. One trip round the rings is one turn of the sound's movement and the attack is the spiral that comes in from outside to join them. Each note playing is a glowing dot with a short trail. Scroll or pinch to zoom, drag up or down to tilt the rings and double-click to set them back.

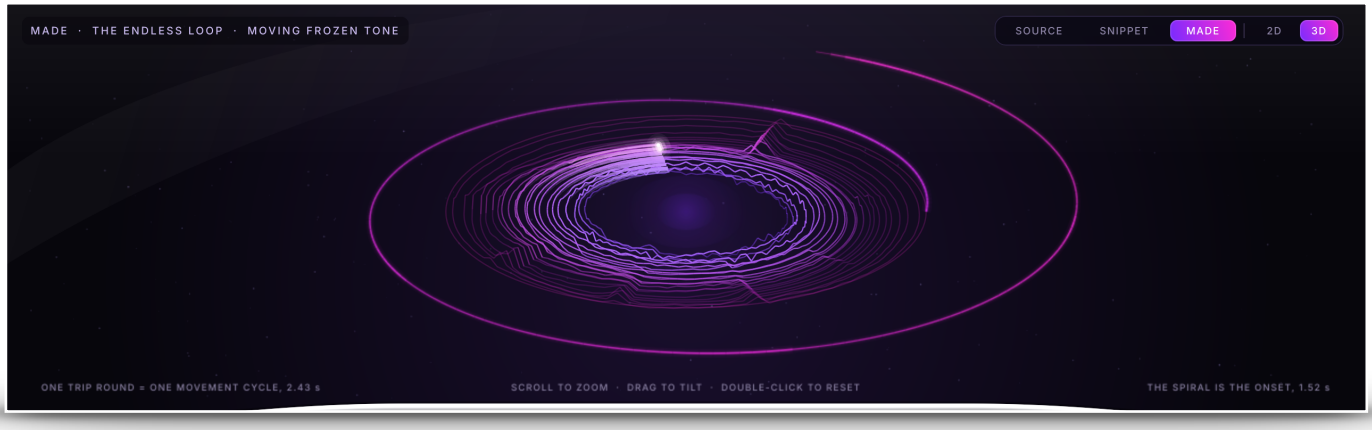


Figure 6. MADE in 3D while a chord is held.

CHOOSING ONE OR MORE SNIPPETS

In SOURCE 2D or SNIPPET 2D, drag across an empty part of the waveform to draw a new snippet. Drag inside the snippet to move it without changing its length and drag either of its edges to make it longer or shorter. While you drag, the time of each edge you are moving shows at the top of it and stays for 3 seconds after you let go. Shift-click in the left half of the snippet to move its start to that point, or in its right half to move its end there. Double-click the snippet to clear it. With several snippets, double-clicking one deletes it (see below).

Scroll with the mouse wheel, or pinch on a trackpad, to zoom in and out around the pointer, right down to the single samples. Hold Shift and scroll, or swipe sideways on a trackpad, to move along the recording. The thin strip along the bottom of the view shows the whole recording and the part on screen and you can drag it. Dragging a snippet edge past the side of the view scrolls the view as well.

You can join up to eight snippets of the same recording into one sound. Each snippet has a letter: A for the first, then B, C and so on. The keys for them sit in the middle of the top of the stage: +, the minus key, a letter for each snippet and SAME PITCH.

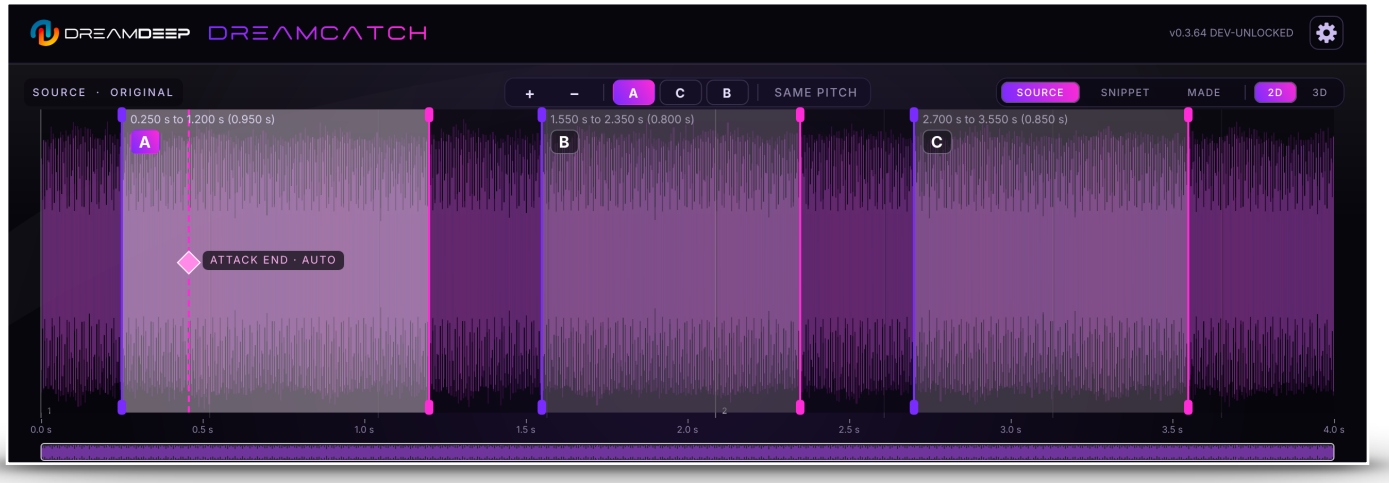


Figure 6a. Multiple snippets and related controls, top centre of the stage.

To add a snippet, click + and then drag across the waveform to draw it. Every snippet shows its times and its letter and you can drag any snippet's edges, or drag inside it to move it, whether it is selected or not. Clicking or dragging a snippet, or clicking its letter, selects it. The SNIPPET view shows the selected snippet and the minus key deletes it. The snippets after a deleted one are lettered again, so there are no gaps. The letters at the top of the stage show the order the snippets are played in. Drag a letter sideways to move its snippet to another place in the order. MAKE joins the snippets in that order into one sound. The first keeps its attack, and each one after it is set to the first one's loudness and joined to the one before by a crossfade of a quarter of a second. Each crossfade is made from the ends of the two snippets it joins, and is never longer than half of either one. In a short snippet, the crossfades can take up most of the part after its attack, so the markers of the notes you play may seem to jump from one snippet to the next. They are following the crossfades, and making that snippet longer

lets them travel through it. ATTACK END belongs to the snippet played first. All the snippets together can be at most 20 seconds long, and + is greyed out once they are.

SAME PITCH retunes every snippet to the pitch of the one played first before they are joined, as a tape is retuned by changing its speed. Use it when the snippets are different notes. Without it, MAKE hears them as one chord and finds the note they share, which can be far below the notes themselves. In the two Moving methods you hear each snippet in turn and the other two methods hold one tone made from all of them.

P. SNIP, SHAPE and NORM(alise) all work on the snippets joined, as MAKE is given them. Presets and projects keep every snippet, its letter, the order and SAME PITCH.

BEAT LINES, BAR NUMBERS AND SNAPPING

When DreamCatch knows the recording's tempo, faint lines mark its beats, counted from the start of the recording. Each bar's line is stronger and carries the bar's number at its foot. The beats follow your DAW's time signature, so in 6/8 a beat is an eighth note and a bar is six of them. Zoomed far out, only every second, fourth or eighth beat is drawn. When you draw, move or stretch the snippet, an edge that comes within a few pixels of a beat line is pulled onto it, so a snippet of exactly one or two bars is easy to choose. Anywhere else, the edge goes exactly where you drag it. Hold Shift while dragging to switch the pull off altogether.



Figure 7. Close up: the beat lines, a bar number and the ATTACK END marker with its diamond.

ATTACK END

Many sounds start with an attack that is unlike the rest of the sound, such as the strike of a piano key or the breath before a flute note. MAKE plays the attack once at the start of every note and builds the seamless loop from the part after it, so the attack never repeats. ATTACK END is the line, in the second colour with a diamond on it, that marks where the attack ends and the loop begins.

While DreamCatch decides this point itself, the line is dashed and labelled ATTACK END · AUTO. Drag the diamond to choose the point yourself: the line turns solid and the next MAKE uses your point. While you drag it, its time shows at the top of the line and stays for 3 seconds after you let go. Dragging it onto the start of the snippet means the sound has no attack. When DreamCatch decides the point itself, it always leaves at least half a second for the loop, or half the snippet if the snippet is shorter than a second. When you drag it, it can go to within 0.05 seconds of the snippet's end, so most of the snippet can be attack. Double-click the diamond to hand the decision back to MAKE.

THE MARKERS WHILE YOU PLAY

While you play, each note shows as a glowing line on SOURCE and SNIPPET, in 2D and 3D. The line moves through the attack and then round the part of the snippet the loop was made from, so you can see which part of the recording each note is playing. With several snippets, the line moves through each one in turn, and may seem to jump past a short snippet whose length is taken up by the crossfades at its joins (see Several snippets).

6. SOURCE

SOURCE is where a recording comes into DreamCatch. Its keys choose whether you work with the whole recording or one of its stems and let you listen to it, reverse it, normalise it and shape the snippet's sound. The lines under the keys show the recording's name, length, tempo and note.

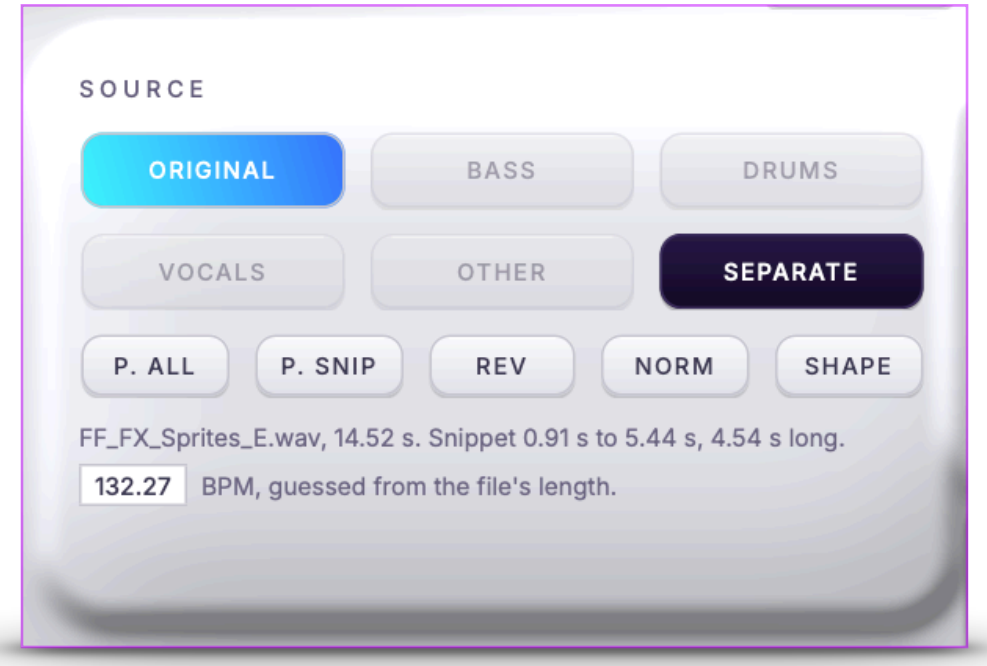


Figure 8. SOURCE, with a recording loaded and a snippet chosen.

DROPPING A RECORDING: A FRESH START

Dragging a new recording onto DreamCatch starts afresh, as if you had just opened a new copy of DreamCatch. Every control goes back to its starting value, every modulation assignment is removed and the preset name goes back to Untitled. Each envelope starts as its ADSR menu is set (see section 11). The sound you were playing is let go, so the keyboard is silent until you press MAKE. The stage switches to SOURCE in 2D, ready for you to choose a snippet.

KEEPING YOUR SETTINGS: SHIFT WHILE DROPPING

If you hold Shift while you drop the new recording, DreamCatch keeps everything exactly as it is: every control, all the modulation and the preset's name, author, description and tags. Only the sound is let go, so you still press MAKE to make the new recording's sound. This is the quick way to try your favourite settings on a different recording.

> Take care. Because Shift keeps the preset's name, clicking SAVE and leaving the name as it is saves the new recording's sound over the preset you started from, without asking and that preset's original sound is lost. To keep the original, type a new name in SAVE before you save.

TEMPO AND ROOT NOTE FROM THE FILE NAME

DreamCatch reads the recording's tempo from its file name if it can. A number marked as a tempo, such as 124BPM, is taken first and otherwise a plain number from 15 to 240. If the name gives no tempo, DreamCatch assumes the recording is exactly 1, 2, 4, 8, 16 or 32 bars long and chooses the tempo nearest your DAW's, between 60 and 180 BPM. The tempo shows in the small box under the keys, with where it came from beside it and the box shows -- when DreamCatch could not find a tempo. To type the tempo or correct it, click the box, type the right tempo and press Return. The tempo sets the beat lines, where the snippet's edges snap and MOVEMENT's SYNC.

DreamCatch also reads the root note from the file name, such as Am, C3, F#4, Bb2 or Ebm, where C3 is middle C. When the name gives a note, ROOT uses it straight away. If the name gives no octave, DreamCatch uses octave 3 until MAKE has measured the sound.

SEPARATE AND THE FOUR STEMS

SEPARATE splits the recording into four stems: BASS, DRUMS, VOCALS and OTHER, which holds everything else. When it has finished, the stem keys light up and you can click any of them to work with that stem alone. ORIGINAL goes back to the whole recording. The snippet stays in the same place whichever you choose.

SEPARATE uses the computer's graphics processor where it can and the words under the keys say how long it took and where it ran. Separating takes a while, depending on the computer and the recording's length. While it works, a bar under the keys shows how far it has got, in place of the recording's details, which come back when it has finished. Click SEPARATE again while it is working to stop it.

DreamCatch starts opening the stem model in the background as soon as it opens, which takes about a minute in each session. If you click SEPARATE before the model is ready, DreamCatch says so and starts separating by itself as soon as it can.

P. ALL, P. SNIP, REV, NORM AND SHAPE

P. ALL plays the whole recording, or the stem chosen, once.

P. SNIP plays just the snippet once, or, with several snippets, all of them joined in their order, as MAKE is given them. Clicking either key again while it is playing stops it. Both keys play at the level VOLUME sets, so you hear the recording at the same level as the keyboard.

REV plays the recording and its stems backwards. The snippet turns round with it, so it still holds the same sound and ATTACK END goes back to AUTO.

Clicking NORM opens a small menu. Normalise the whole recording turns the recording and its stems up together until the loudest peak is at full level, so the stems keep their levels against each other. Normalise the snippet turns up only the snippet, in the recording and its stems together, until its own loudest peak is at full level and leaves the rest as it was. It stays on that part of the recording if you then move the snippet, so choose it again to follow the snippet. MAKE sets the sound's level from the snippet, so this is how a quiet snippet makes a loud sound. While a SHAPE card is on, it is the shaped snippet that is turned up to full level. Click REV again, or choose As it was from NORM's menu, to go back to the recording as it was. Both change what you hear, what the stage shows and what MAKE makes the sound from, so press MAKE to hear them in the sound you play. A new recording always starts with both off.

SHAPE, the fifth key in the bottom row, opens the SHAPE panel, which changes the snippet's own sound before MAKE makes the sound from it. The panel holds eight cards and each card is a process with its own ON key and knobs. A card's knobs are greyed while it is off. The cards that are on work one after another, along the top row and then along the bottom row. Each card shows its place in that order before its name. To change the order, drag a card by its name to a new place. The other cards slide along to make room and the keys follow the new order as you let go. The order often makes a big difference: a vowel shaped by FOLD sounds quite different from FOLD shaped by a vowel, though a few pairs, such as EQ and COMB, sound the same either way. The table below lists the cards in the order they start in. The SHAPE key is lit while any card is on.



While the panel is open, the keys play the snippet itself, shaped, instead of the made sound, so you hear every change as you make it. Each key plays the snippet from its start and then loops it, at the key's pitch and a chord you hold changes as you turn a knob. As soon as you change anything in the panel, its DONE key becomes DONE AND MAKE. Click it to close the panel and make the sound from the shaped snippet straight away. If nothing has changed, DONE just closes the panel. Escape or a click outside the panel cancels instead: every card, knob and the order go back to how they were when you opened it and MAKE does not run. When the panel closes, the keys play the made sound again.

Card	Knobs	What it does
EQ	TILT and VOWEL	TILT leans the sound brighter to the right and darker to the left. VOWEL puts three strong resonances in place of the sound, so it sounds like a voice singing AH, EH, EE, OH or OO.
DRIVE	DRIVE and SYMMETRY	DRIVE squashes the sound, which adds harmonics. SYMMETRY adds even harmonics for a warmer growl and at 100 % folds the wave up an octave.
FOLD	FOLDS and BIAS	The louder parts of the wave fold back over themselves into bright new harmonics. BIAS folds one side sooner than the other.
CRUSH	BITS and RATE	Fewer BITS add a grainy noise. A lower RATE adds metallic tones that do not belong to the note.
EXCITE	AMOUNT and FROM	Adds new upper harmonics, made from the sound above FROM, for air and bite.
COMB	TUNE, FEEDBACK and SWEEP	A comb filter tuned from the snippet's own pitch. FEEDBACK above 0 rings like a string and below 0 hollows the sound as an out-of-phase copy does. SWEEP moves the comb slowly up and down.
BELL	RING and SHIFT	RING multiplies the sound by a tone at a ratio of its pitch and SHIFT moves every partial up by the same number of Hz. Both move the partials off the harmonic series, for bells and metal.
CHOP	RATE and DEPTH	A gate that opens and closes in time with your DAW's tempo. Its rhythm comes through MAKE in the moving methods.

DreamCatch finds the snippet's pitch before it is shaped, so shaping never changes which key plays the sound at its own pitch. The shaped snippet also keeps the snippet's loudness, unless NORM is set to Normalise the snippet, which turns the shaped snippet up until its loudest peak is at full level. RANDOM switches on a few cards at random, sets their knobs anywhere and puts the cards in a new order, which is a quick way to find new sounds. AS IT WAS switches every card off and stays lit and clicking it again switches the same cards back on, even after the panel has been closed. Switching a card on yourself in the meantime makes AS IT WAS forget them. The knobs and the order always stay as they are. While any card is on, SOURCE and SNIPPET in 2D draw the shaped snippet over the recording as a white wave you can see through, so you can see what shaping has done, such as a sharp attack made smooth. P. ALL and P. SNIP still play the recording without SHAPE. A new recording always starts with every card off, in the order the table above lists them.

7. RESYNTHESIS

RESYNTHESIS is where the sound is made. It holds the four method keys, MAKE and the glass panel that reports what MAKE found.

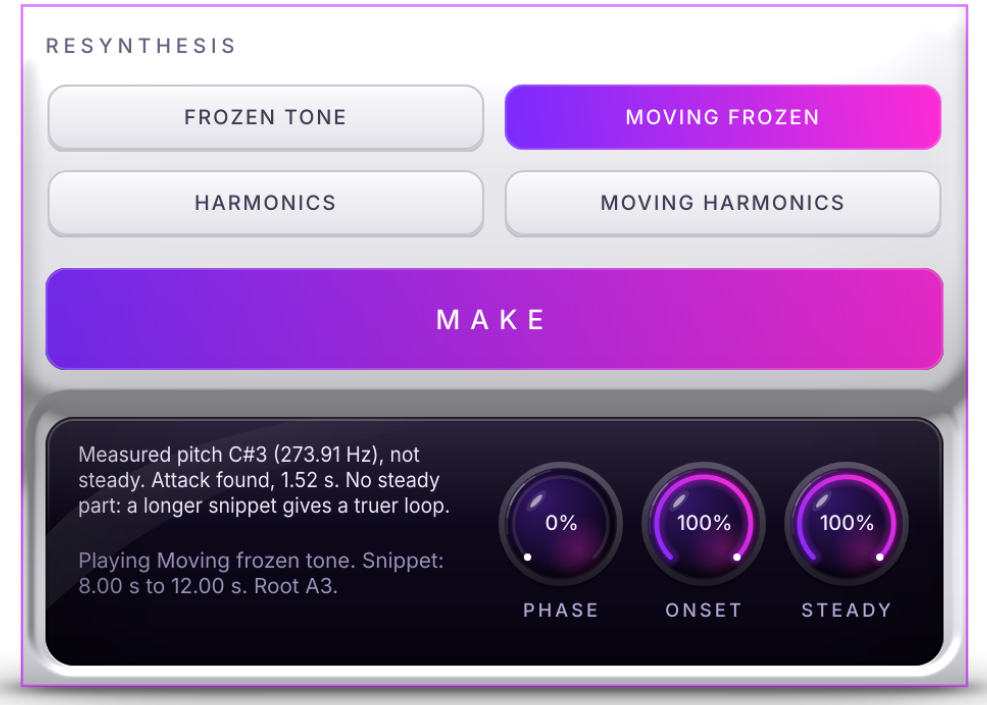


Figure 9. RESYNTHESIS, with its glass panel below MAKE.

THE FOUR METHODS

MAKE builds the sound in four ways at once and the lit key chooses which one you hear. You can switch between them at any time, even while you hold a chord, so it is easy to compare them.

FROZEN TONE captures the snippet's overall tone and holds it perfectly still, with each part of it where it sat between left and right. MOVING FROZEN holds the same tone and plays the snippet's own movement over it: how each part of its tone rose and fell, how it moved between left and right and how its pitch wobbled.

HARMONICS rebuilds the sound from its exact harmonics, plus a frozen layer of everything between them. It suits pure single notes. MOVING HARMONICS adds the snippet's own movement, as MOVING FROZEN does. The two harmonic methods need a clear pitch, so their keys are greyed out when MAKE cannot measure one and resting the pointer on them says why.

MAKE

MAKE measures the snippet and builds the seamless loops from it. While it works, its key fills from left to right and when the sound is ready its lettering flashes. The keyboard is silent while MAKE works and plays the new sound as soon as it is ready.

Pressing MAKE again on the same recording, with a different snippet or a moved ATTACK END, refines the sound and keeps the preset's name and details. Sounds that never settle sometimes bring up a short note over the stage after MAKE, suggesting a shorter snippet nearer the start. A note also appears when the part the loop is made from is much duller than the attack, such as a bright pluck that soon turns dull, because held notes will then sound much duller than the start of the snippet. Each note appears only the first time it applies to a recording, so trying more snippets of the same recording does not bring it back. Click anywhere to close it.

PHASE, ONSET AND STEADY

PHASE works on FROZEN TONE and MOVING FROZEN when the snippet has a pitch. At 0 %, every harmonic starts at a random point in its cycle, which gives the soft, wide sound of a pad. At 100 %, the harmonics line up as they did in the recording, which brings back its wave shape and bite.

ONSET is the volume of the attack that plays at the start of every note and STEADY is the volume of the loop that plays after it and underneath it. At 100 % each plays exactly as it was recorded and at 0 % it is silent, so ONSET at 0 % leaves out the attack and STEADY at 0 % plays only the attack. ONSET is greyed out when the snippet has no attack. If the filter sounds gritty on a loud recording, turn STEADY down and VOLUME up.

WHAT THE GLASS PANEL TELLS YOU

The lines in the glass panel say what MAKE found in the snippet: the pitch it measured, whether the sound is steady and how long the attack is. They also say which method is playing, where the snippet starts and ends and the root note, with how far the sound is from that note in cents. If MAKE cannot do what you asked, the panel says why.

8. MOVEMENT AND PITCH

MOVEMENT AND PITCH sets how fast the sound's movement plays and how the sound is tuned.



Figure 10. MOVEMENT AND PITCH. MOVEMENT shows the length of one turn of the movement in seconds, with its length in beats underneath.

MOVEMENT

MOVING FROZEN and MOVING HARMONICS play the snippet's own movement and MAKE arranges it so that it repeats seamlessly. When DreamCatch knows the recording's tempo, the movement is the whole snippet, exactly as long, so every beat in it stays where it was. Without a tempo, MAKE may use a shorter part of the snippet that repeats. MOVEMENT sets how fast it plays. Centred, it plays at its own speed. Turn it left to slow it down, to as little as a sixteenth of its speed, or right to speed it up, to as much as sixteen times. The movement plays at the same speed on every key, like an LFO, so high notes do not move faster than low ones. MOVEMENT also sets the speed of the attack, so at twice the speed the attack plays in half its time. The knob shows the length of one turn of the movement in seconds, with the same length in beats of your DAW's tempo underneath. Double-click it to type a length in seconds. In FROZEN TONE and HARMONICS, which have no movement, MOVEMENT sets only the speed of the attack and the knob shows that speed, such as x1.00, which is also what you type when you

double-click it. SYNC and EVEN lock the movement to your DAW, so they are greyed out in those two methods.

SYNC AND THE MUSICAL LENGTHS

With SYNC on, the movement lasts an exact musical length at your DAW's tempo and every note's movement is locked to your DAW's bars, so a one-bar movement starts again on every downbeat. The attack still starts the moment you play a key. For the beats inside the movement to land on your DAW's beats, choose a snippet that is a whole number of beats long from a recording whose tempo DreamCatch knows, so MAKE uses the whole snippet. MOVEMENT then chooses the length, in equal steps: 16, 8, 4, 2 and 1 bars fully left, then 1/2D, 1/2, 1/4D, 1/2T, 1/4, 1/8D, 1/4T, 1/8, 1/16D, 1/8T, 1/16 and 1/16T fully right, where D means dotted and T means triplet. The length shows large on the knob, with its time in seconds underneath. Switching SYNC on chooses the length nearest the sound's own movement and Option-click on MOVEMENT does the same. Switching SYNC off brings back the speed MOVEMENT had before. When your DAW is stopped, the movement carries on at its tempo. When your DAW jumps to a new place, each note's movement glides to its new place in about 10 milliseconds, so nothing clicks.



Figure 11. MOVEMENT with SYNC on, set to a musical length.

EVEN, beside SYNC, limits MOVEMENT to the even lengths: 16, 8, 4, 2 and 1 bars, then 1/2, 1/4, 1/8 and 1/16, with no dotted or triplet lengths. It can be used when SYNC is on.

Switching EVEN on chooses the even length nearest the one playing and switching it off keeps that length.

MODULATING MOVEMENT WITH SYNC ON

MOVEMENT can be modulated (see section 13) and the same modulation works whether SYNC is on or off. With SYNC on, it steps through the musical lengths and with EVEN on too, through the even lengths only, so Q's steps (see section 13) land only on them. A note's new length waits for your DAW's next beat and takes over exactly on it and the note's movement goes straight to its place in the new length. A note's first length is taken the moment you play it.

This makes rhythmic changes easy. For example, LFO 1 set to a square wave with SYNC on and a length of 1/2 changes the movement's length on every beat.

COARSE AND FINE

COARSE tunes the sound in semitones, up to 24 either way. FINE tunes it in cents, up to 100 either way, where 100 cents make a semitone.

ROOT, AUTO AND SNAP

ROOT shows the key that plays the sound at its original pitch. With AUTO lit, DreamCatch chooses it: the note in the file name if there is one and otherwise the note nearest the pitch MAKE measured. Click - or + to choose the root note yourself one semitone at a time, which switches AUTO off. Click AUTO to switch it back on.

SNAP corrects the sound's own tuning, so the root note plays exactly in tune. When the file name gives a note, SNAP corrects the tuning only if the measured pitch is within 50 cents of that note and otherwise takes the sound to be in tune already.

FLUCTUATIONS

FLUCTUATIONS, the slider under SYNC and EVEN, makes every note you play fluctuate in everything but its pitch. The speed at which it plays through its attack and its movement, the level of each of its frequency bands and each band's place between left and right all wander smoothly and at random for as long as it plays, so its tone colour breathes and moves across the stereo picture. Each note also starts a little late and from its own place in its loop. With UNISON, each of a note's voices fluctuates on its own, so they bloom apart and drift past one another. At 0 %, where it starts, nothing changes. The left half of the slider stays subtle and 100 % is deliberately extreme: a note can play anywhere from half its speed to one and a half times it, each band can be 16 dB louder or quieter and anywhere from left to right and a note can start up to 100 ms late. It works with SYNC on too, when each note runs a little ahead of or behind your DAW's bars. Drag it, or double-click it to type a value. Its value shows beside its name while the pointer is on it. FLUCTUATIONS can be modulated.

9. LFO

An LFO is a slow, repeating movement that you can use to move other controls, such as a gentle sweep of the filter or a wobble in the pitch. DreamCatch has three LFOs and the LFO row shows the controls of one of them at a time. An LFO does nothing on its own until you use it as a modulation source (see section 13).



Figure 12. The LFO row, showing LFO 1.

CHOOSING LFO 1, 2 OR 3

The 1, 2 and 3 keys at the top right of the row choose which LFO's controls are shown. All three LFOs keep running whichever one is shown.

WAVE

The wave key shows a drawing of the LFO's shape. Click it to choose from seven shapes: Sine, Tri, Saw, Ramp, Square, S&H and Random. S&H (sample and hold) jumps to a new random level each cycle and Random glides smoothly from one random level to the next.

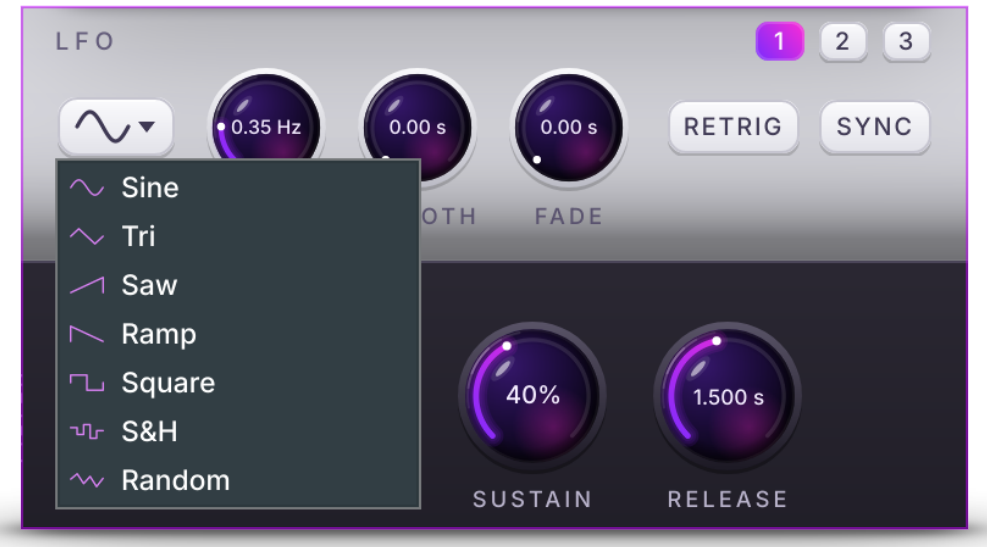


Figure 13. The list of LFO shapes, each drawn beside its name.

RATE, SMOOTH AND FADE

RATE sets how fast the LFO repeats, from 0.01 Hz (one cycle every 100 seconds) to 120 Hz. SMOOTH rounds the LFO's shape, softening the steps of Square and S&H and is set

in seconds from 0 to 1. FADE fades the LFO in from the start of each note, over up to 2 seconds, so a note starts still and then begins to move.

RETRIG

With RETRIG on, every note starts its own copy of the LFO from the start of its cycle, so every note moves the same way from the moment it starts. With RETRIG off, every note follows one shared LFO that keeps running, so notes played at different moments move together.

SYNC

With SYNC on, the LFO's speed becomes a musical length at your DAW's tempo and RATE becomes a key showing that length. Click it to choose from 23 lengths, from 8 bars to 1/32T. When RETRIG is off and your DAW is playing, the shared LFO sits exactly where your DAW is in that length. S&H and Random step and Saw and Ramp jump exactly on the beat, to the sample. With SYNC on, FADE is measured in beats, up to one bar.



Figure 14. LFO 2 with SYNC on: the length shows where RATE was.

10. FILTER

Every note plays through its own filter, with its own filter envelope, as on a classic polyphonic synthesiser. The filter takes away part of the sound's frequencies and its envelope can sweep it as each note plays.



Figure 15. The FILTER row, switched on.

ON, TYPE AND SLOPE

ON switches the filter on and off. With the filter off, every sound plays exactly as it was made and the filter's controls are greyed out. Switching it on or off while you play crossfades smoothly.

LP (low-pass) lets through the frequencies below the cutoff and takes away those above it, for a darker sound. BP (band-pass) lets through a band around the cutoff and HP (high-pass) lets through the frequencies above it, for a thinner sound. NOTCH takes away a band around the cutoff and lets through everything else, for a hollow sound.

12 dB is a gentle, open filter inspired by the Oberheim SEM and 24 dB is a steep, strong ladder filter inspired by the Moog, with its band-pass, high-pass and notch taken from the stages of the ladder, an idea inspired by the Oberheim Xpander. Both have a subtle analogue character: each note's filter differs very slightly from the others and loud sounds pick up a little warmth.

Behind the filter's keys, a curve shows what the filter does to each frequency, from 20 Hz at the left to 20 kHz at the right, with the level the sound passes at drawn just above the keys. It follows the last note you played, so it moves as ENV, VELOCITY, KEY TRACK, ANALOG and modulation move that note's cutoff and resonance. With no note sounding, it shows CUTOFF and RESONANCE as the knobs set them. While the filter is off, the curve is faded.



Figure 16. The FILTER row switched off, with its controls greyed out. The filter envelope stays live.

CUTOFF AND RESONANCE

CUTOFF sets the frequency where the filter starts to work, from 20 Hz to 20 kHz. RESONANCE adds a peak at the cutoff, which makes the filter sound sharper and more vocal. At 100 % the filter rings on its own and plays a tone. With NOTCH, RESONANCE sets how wide and how deep the notch is instead: at 0 % it is a wide, gentle dip and as you turn it up the notch becomes narrower and deeper, until at 100 % it is a narrow, deep cut. The notch never rings.

ENV, VELOCITY AND KEY TRACK

ENV sets how far the filter envelope moves the cutoff: up when turned to the right and down when turned to the left, by up to 10 octaves at either end.

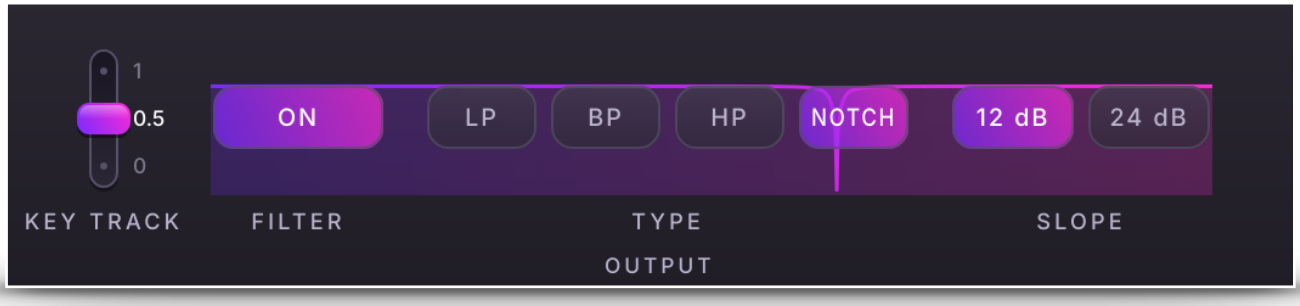
VELOCITY sets how much playing harder opens the filter. At 100 %, a key struck at full strength opens the cutoff by up to 4 octaves more and at 0 % playing harder makes no difference.

KEY TRACK sets how far the cutoff follows the notes you play. At 0 it does not follow them at all, at 0.5 it moves half as far and at 1 it follows them exactly, an octave for every octave, measured from C3. At 1 with RESONANCE at 100 %, the ringing filter plays in tune.

THE FILTER ENVELOPE

The filter envelope has its own ATTACK, DECAY, SUSTAIN and RELEASE, which work exactly as the amplitude envelope's do (see section 11) and sit directly above them. ENV sets how far it moves the cutoff. The small ADSR menu above its ATTACK works as the amplitude envelope's does.

The filter envelope stays live even when the filter is off, because it is also a modulation source, FILTER ENV, which can move any other control.



VOICES

VOICES sits in the FILTER row, between the filter envelope and CUTOFF and sets how many voices the sound can play at once, from 1 to 32. Click it, type the number and press Return. When you play more notes than VOICES allows, each new note takes over an old one, choosing first a note you have let go, then a note held only by a pedal and then the oldest note you are still holding. Lowering VOICES never cuts off notes that are already sounding. At 1, DreamCatch plays like a monophonic synthesiser and each new note cuts off the last. VOICES is saved with the preset and a new recording starts with the number set by MAX VOICES in the cog panel (see section 15). Fewer voices ask less of the computer, which helps on a busy project.

11. AMPLITUDE

The AMPLITUDE row shapes each note's volume over time and sets how the sound responds to your playing and how loud it is. ANALOG and UNISON, at its right, give the notes the drift and thickness of an old analog synthesiser.



Figure 17. The AMPLITUDE row, with PAN, SPREAD, the LIMIT light under VOLUME and ANALOG and UNISON.

THE AMPLITUDE ENVELOPE

Every note has its own envelope, which shapes its volume in four stages. ATTACK is the time the note takes to rise to full level when you press a key, from 0 to 10 seconds. DECAY is the time it then takes to fall to the SUSTAIN level, from 0.001 to 20 seconds. SUSTAIN is the level held while the key stays down, from 0 to 100 %. RELEASE is the time the note takes to fade away when you let go, from 0.01 to 20 seconds. The attack is a straight rise and the decay and release fall away smoothly, as on an analogue synthesiser. The DECAY and RELEASE times are the time to fall by 60 dB, which is where the sound has all but gone and the release then fades on smoothly to silence. An ATTACK of 0 starts the note at once, but never with a click.

A new DreamCatch starts with ATTACK at 0, DECAY at 0.5 seconds, SUSTAIN at 80 % and RELEASE at 1 second. The filter envelope starts at the same values.

The small ADSR menu above ATTACK sets all four at once, as a quick start that you then adjust as usual. Default sets the starting values above. Pad sets 1 second, 1.5 seconds, 90 % and 5 seconds. Pluck sets 0.05 seconds, 0.8 seconds, 20 % and 0.9 seconds. The menu ticks your last choice and remembers it on this computer, whichever preset or project is open. INIT, a new copy of DreamCatch and a dropped recording then start the envelope with that choice instead of the starting values. The menu is not part of any preset and changes nothing else.

VELOCITY, PAN, SPREAD AND VOLUME

VELOCITY sets how much louder playing harder makes each note. At 0 % every note plays at the same level, however hard you play.

PAN sets where the sound sits between left and right, from L100 to R100 and starts at C, the centre. It works as a balance: as you turn it towards one side, the other side fades away, so a stereo sound keeps its width until PAN is turned fully over. Modulation moves each note's PAN, so an LFO or VELOCITY can place every note in a different spot.

SPREAD gives every note you play its own random place between left and right, chosen as you strike the key. At 0 %, where it starts, every note plays where PAN puts it. As you turn SPREAD up, each note can land further to either side of PAN. At 10 %, each note lands up to a tenth of the way to either side, so the notes stay near the centre and move a little left or right. At 50 %, every note seems to come from a different place and at 100 % a note can land anywhere from fully left to fully right.

With PAN turned towards one side, a note that would go past the edge stays at the edge. Each note keeps its place while it plays, but turning SPREAD while you hold a chord spreads its notes out or draws them in. SPREAD can be modulated too, so VELOCITY can send hard notes wider than soft ones.

VOLUME sets DreamCatch's output level, from -48 dB to +12 dB. It starts at -3 dB.

THE LIMIT LIGHT

DreamCatch has a safety limiter on everything it plays, which is always on. It does nothing until the sound would go above -0.3 dB of full scale and then turns it down smoothly just enough to stop it clipping. The LIMIT light under VOLUME glows while the limiter is working. If it glows often, turn VOLUME down for the cleanest sound.

ANALOG AND UNISON

ANALOG makes each note stray, as the notes of an old analog synthesiser do when its circuits drift. At 0 %, where it starts, every note is exactly in tune. As you turn it up, each note you play is given its own tuning and with the filter on its own cutoff too and both then drift slowly while you hold the note. The lower half of the knob keeps this subtle. At 100 %, a note can be struck up to 40 cents out of tune and its cutoff up to half an octave away and both then drift up to 15 cents and a quarter of an octave further. ANALOG can be modulated.

UNISON sets how many voices each note plays at once, from 1 to 8 and starts at 1. All of a note's voices start together unless FLUCTUATIONS staggers them. Each has its own ANALOG tuning, its own SPREAD place and its own FLUCTUATIONS, so with ANALOG turned up they drift against each other into a rich chorus. With FLUCTUATIONS up each voice takes its own tone colour and timing (see section 8) and with SPREAD they fan out between left and right. With ANALOG and FLUCTUATIONS at 0, the voices are exact copies, which only makes the note louder, so turn either up to hear the chorus. A note stays about as loud as one voice once its voices drift apart. Every voice counts towards VOICES (see section 10), so UNISON at 4 with VOICES at 16 plays four notes at once.

12. OUTPUT

OUTPUT, at the bottom right of the window, shows how loud DreamCatch is playing and holds a simple EQ for the final sound.

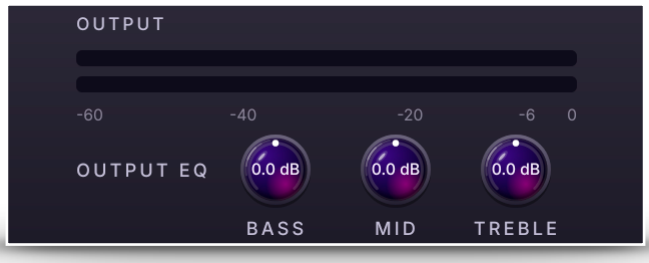


Figure 18. OUTPUT: the meter and the OUTPUT EQ.

THE OUTPUT METER

The meter shows the level of the left and right channels of everything DreamCatch plays: the keyboard, P. ALL and P. SNIP.

OUTPUT EQ: BASS, MID AND TREBLE

The three small knobs under the meter shape the tone of everything DreamCatch plays, each by up to 12 dB up or down. BASS is a gentle shelf below 100 Hz, MID is a wide bell around 1 kHz (from about 500 Hz to 2 kHz) and TREBLE is a gentle shelf above 8 kHz.

All three start at 0 dB. A knob at 0 dB takes no part in the sound at all, so with all three at 0 dB the sound is exactly as it was made. The EQ comes before the safety limiter.

13. MODULATION

Modulation lets one thing move a control automatically while you play. The things that move controls are called sources: your keyboard's pitch bend, mod wheel and pressure, the two envelopes and the three LFOs. Each note is moved on its own, so an LFO with RETRIG on, or the pressure on one key of an MPE keyboard, can move each note differently.

Almost every knob can be modulated. The knob itself never moves while it is modulated, so its setting and its automation in your DAW are untouched.

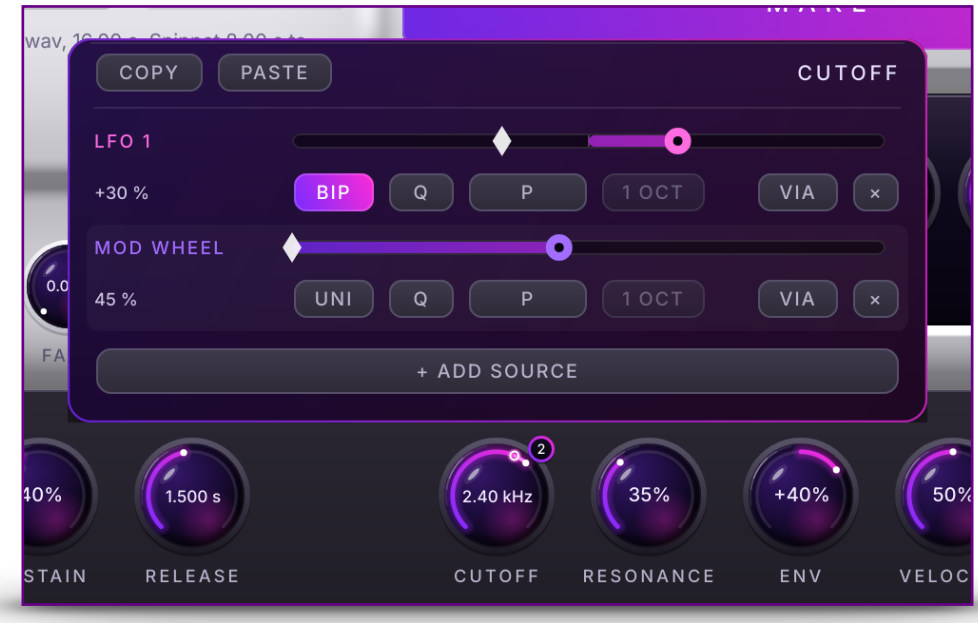


Figure 19. The modulation panel for CUTOFF, with LFO 1 and the mod wheel moving it.

OPENING A KNOB'S MODULATION

Right-click a knob to open its modulation panel beside it. The panel lists every source moving that knob, one to a row. Several sources on one knob add together. Click anywhere outside the panel, or press Escape, to close it.

Every knob and the FLUCTUATIONS slider, can be modulated except SMOOTH on the LFOs and the OUTPUT EQ, KEY TRACK, which is a switch and UNISON, whose number of voices is fixed as each key is struck. MOVEMENT can be modulated with SYNC on or off (see section 8).

THE SOURCES

Click + ADD SOURCE to add a source. The list is in two groups. The MIDI group holds MPE PITCH (each key's own pitch bend from sliding a finger on an MPE keyboard), CHANNEL AT (the pressure on each key's channel, which is per key on an MPE keyboard), POLY AT (each key's own aftertouch), PITCH BEND (the pitch bend wheel), FOOT PEDAL (an expression pedal on CC11), MOD WHEEL (CC1), VELOCITY (how hard each key was played, so every note has its own) and KEYBOARD (where each key is on the keyboard, so every note has its own, with C3 in the middle and the far ends five octaves either side).

The ENVELOPES AND LFOS group holds FILTER ENV and AMP ENV, which are each note's own filter and amplitude envelopes and LFO 1, LFO 2 and LFO 3. A source already moving the knob is greyed out in the list.

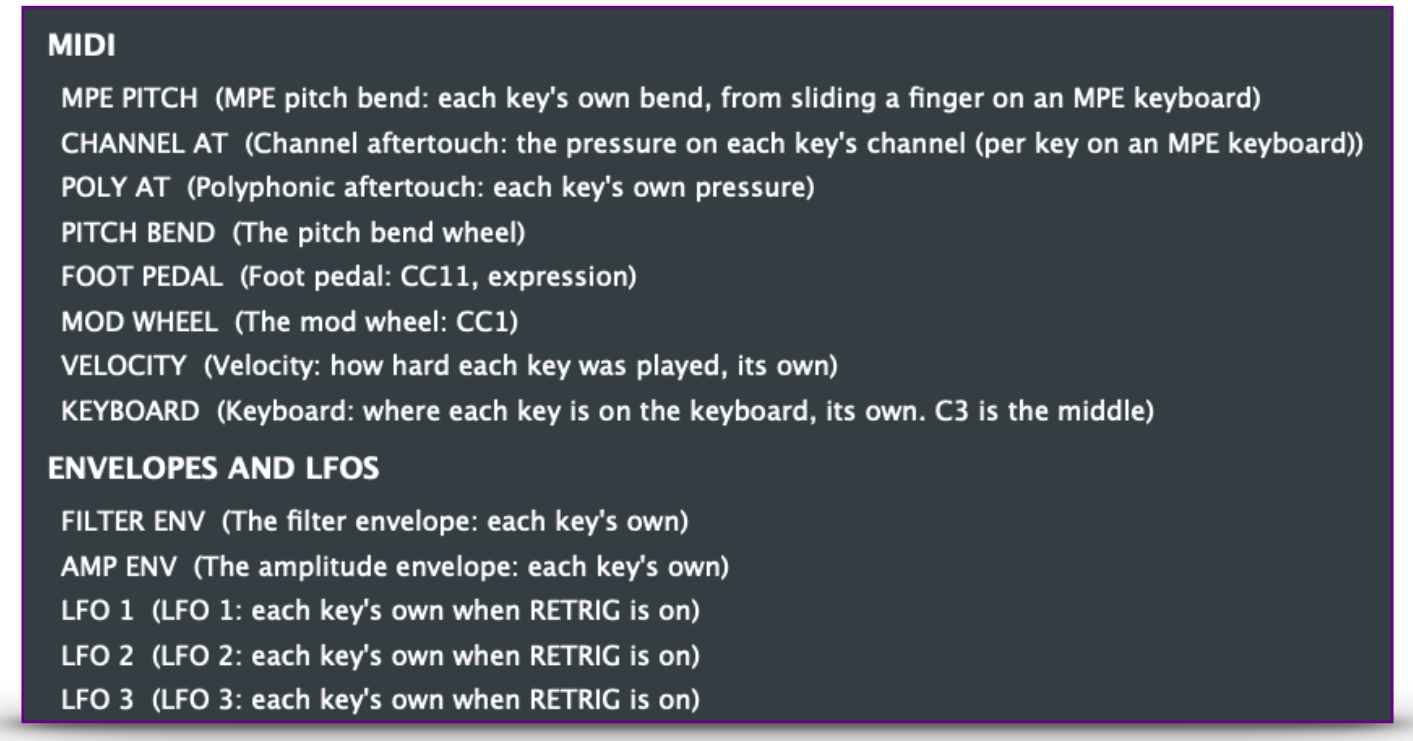


Figure 20. The list of sources, with the MIDI sources first and then the envelopes and LFOs.

THE AMOUNT, BIP AND UNI

Each row has an amount track. Drag along it to set how far the source moves the knob, as a share of the knob's whole travel. The diamond on the track shows what the source is doing right now.

BIP (bipolar) moves the knob both ways from its setting, with an amount from -100 % to +100 %, so a negative amount moves it the opposite way. UNI (unipolar) moves it one way only, with an amount from 0 to 100 %. The pitch bends, KEYBOARD and the LFOs start as BIP and the other sources start as UNI. KEYBOARD on PAN with BIP, for example, leaves C3 where PAN is set and moves lower notes to one side and higher notes to the other. Switching between them sets the amount back to 50 %. The cross at the end of the row removes the source.

Q and P

Q makes the source move the knob in equal steps instead of smoothly, with 2, 4, 8, 16 or 32 steps. On MOVEMENT with SYNC on, switch EVEN on so that the steps land only on the even lengths (see section 8). P snaps the movement to the notes of a scale, such as Major, Minor, Dorian or Pent Min, over 1 to 4 octaves. On COARSE and FINE, an octave is twelve real semitones, so an LFO on COARSE with P set to a scale plays a melody in that scale. Choosing one of Q and P switches the other off.

VIA, SMOOTH and SLOW

VIA changes how the source reaches the knob. SMOOTH softens sudden changes, over up to half a second. SLOW lets the movement rise at once but fall back slowly, over up to 4 seconds. VIA can also be another source, which then decides how much of the amount gets through, so for example the mod wheel can bring in an LFO. The VIA amount is set on a line under the row and clicking VIA again on a row that has one takes it off.

Badges, markers and the summary

A modulated knob shows a small badge with the number of sources moving it and a second marker on its ring showing where the modulation is taking it right now. Click the badge to mute all of the knob's sources and click it again to bring them back. The badge turns grey while they are muted. Rest the pointer on a modulated knob to see a short summary of its sources.



Figure 21. A modulated knob: the badge shows two sources and the second marker shows where they are taking it.

Copy and paste

COPY, at the top of the modulation panel, copies all of a knob's modulation. Open another knob's panel and click PASTE to give it the same modulation.

14. PRESETS

A preset holds everything needed to play a sound again: the sound MAKE made, the chosen method, every control and all the modulation. It does not need the original recording, so a preset plays exactly the same even if the recording is moved or deleted. The preset row on the deck shows the preset playing and the preset browser lets you find, load and save presets. DreamCatch comes with a set of factory presets, which the browser lists together with your own.

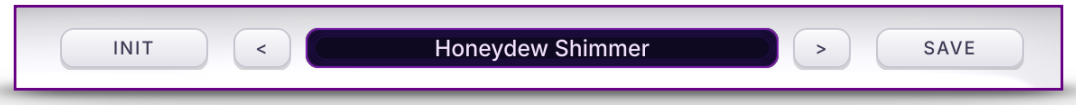


Figure 22. The preset row: INIT, the arrows, the name of the preset playing and SAVE.

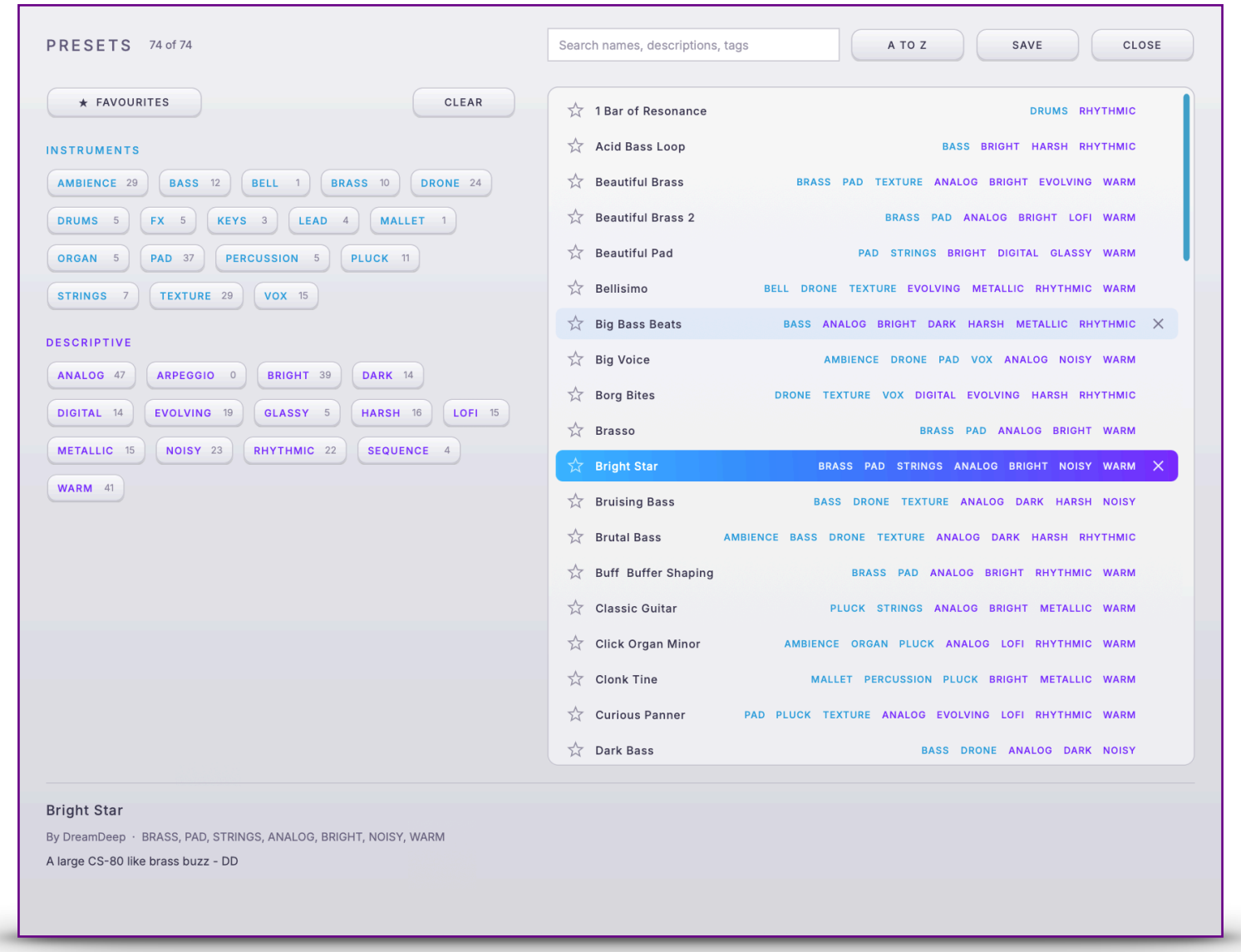


Figure 23. The preset browser.

BROWSING AND SEARCHING

Click the preset name in the preset row to open the preset browser over the window. Click a preset to load it and hear it straight away. The up and down arrow keys walk through the list, loading each preset as they go. Press Return or double-click a preset to load it and close the browser. Click CLOSE, press Escape or click outside the browser to close it.

Type three or more letters in the search box to find presets by their names, descriptions and tags. The search stays in the box when you close the browser and open it again, until you delete it. The order menu sorts the list from A to Z, from Z to A, newest first or oldest first. The foot of the browser shows the chosen preset's name, author, tags and description.

The arrows either side of the name in the preset row step through exactly the list the browser shows, with its search, tags, FAVOURITES and order, without opening it. When nothing matches, the arrows say so.

TAGS AND FAVOURITES

The tags at the left of the browser are in two groups: INSTRUMENTS, such as PAD, KEYS or BASS and DESCRIPTIVE, such as WARM, BRIGHT or EVOLVING. Click tags to show only the presets that carry them, where choosing several tags shows the presets that carry all of them. Each tag shows how many presets carry it.

Click the star beside a preset to make it a favourite and click FAVOURITES to show only your favourites. CLEAR lets go of every tag and FAVOURITES and leaves the search as it is. To delete one of your own presets, point at it and click the cross at the end of its row. DreamCatch asks before it moves the preset to the Bin. Factory presets cannot be deleted, so they have no cross.

SAVING A PRESET

Click SAVE in the preset row, or SAVE in the browser, to save the sound. Type a NAME of up to 31 characters and an AUTHOR and DESCRIPTION if you like and click tags at the left to give the preset its tags. Then click SAVE PRESET, or CANCEL to go back without saving. If one of your own presets already has that name, DreamCatch asks before replacing it. Once the preset is saved, the browser closes and the instrument shows again, with a line above MAKE saying what was saved.

On a Mac, your presets are kept in ~/Library/Application Support/DreamDeep/DreamCatch and on Windows in %APPDATA%\DreamDeep\DreamCatch, one file ending in .dcpreset for each preset. The factory presets are kept in /Library/Application Support/DreamDeep/DreamCatch on a Mac and in C:\ProgramData\DreamDeep\DreamCatch on Windows.

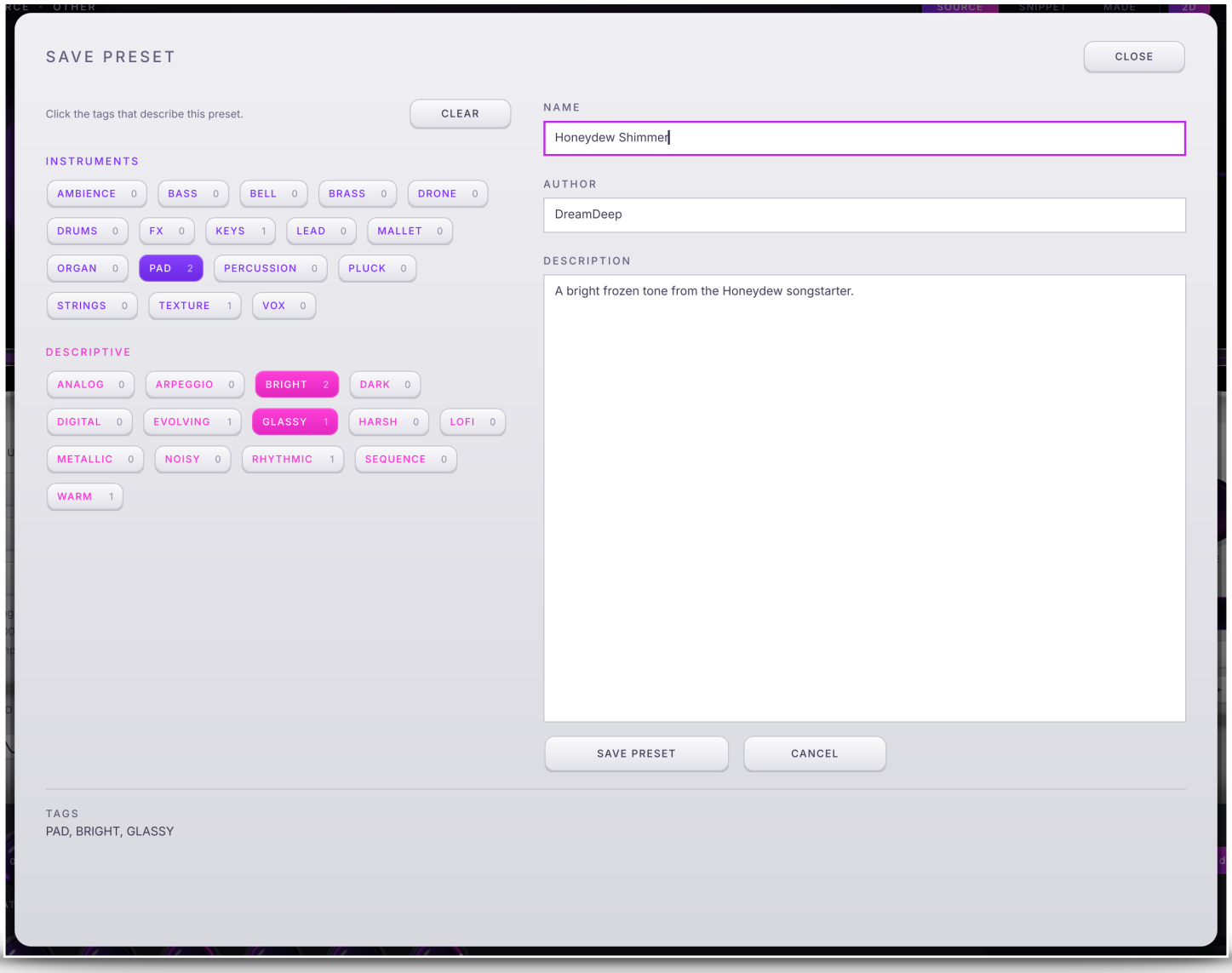


Figure 24. Saving a preset: the name, author and description, with the tags at the left.

Refining a preset with MAKE

When you choose a new snippet, move ATTACK END or change anything else and press MAKE again on the same recording, you are refining the same preset. Its name, author, description and tags all stay. Only dropping a new recording without Shift starts a new, Untitled preset.

Saving over a preset, or as a new one

When you click SAVE, the name of the preset playing is filled in for you. Leave it as it is to save your changes over that preset. Type a new name to save a new preset and leave the original as it was. A factory preset itself is never changed: saving with its name saves your own copy, which takes its place in the browser until you delete your copy.

> Take care. Saving with the name of the preset playing replaces that preset without asking. This matters most after dropping a new recording with Shift held (see section 6), because the preset's name is kept: saving without changing the name puts the new recording's sound in place of the preset's original sound. Type a new name whenever you want to keep the original.

Starting again with INIT

INIT, at the left of the preset row, clears everything at once. The recording and its stems are put away, the sound is let go, every control goes back to its starting value, all the modulation is removed and the preset becomes Untitled, exactly as DreamCatch is when you first open it. Your two colours, the settings in the cog panel and the choices in the ADSR menus stay as they are. Each envelope starts as its ADSR menu is set.

INIT does not ask before it clears, so save the sound first if you want to keep it.

15. THE COG PANEL

Click the cog at the top right of the window to open the panel of settings and click DONE to close it. The colours belong to each project and the other settings apply to DreamCatch on this computer, in every project.

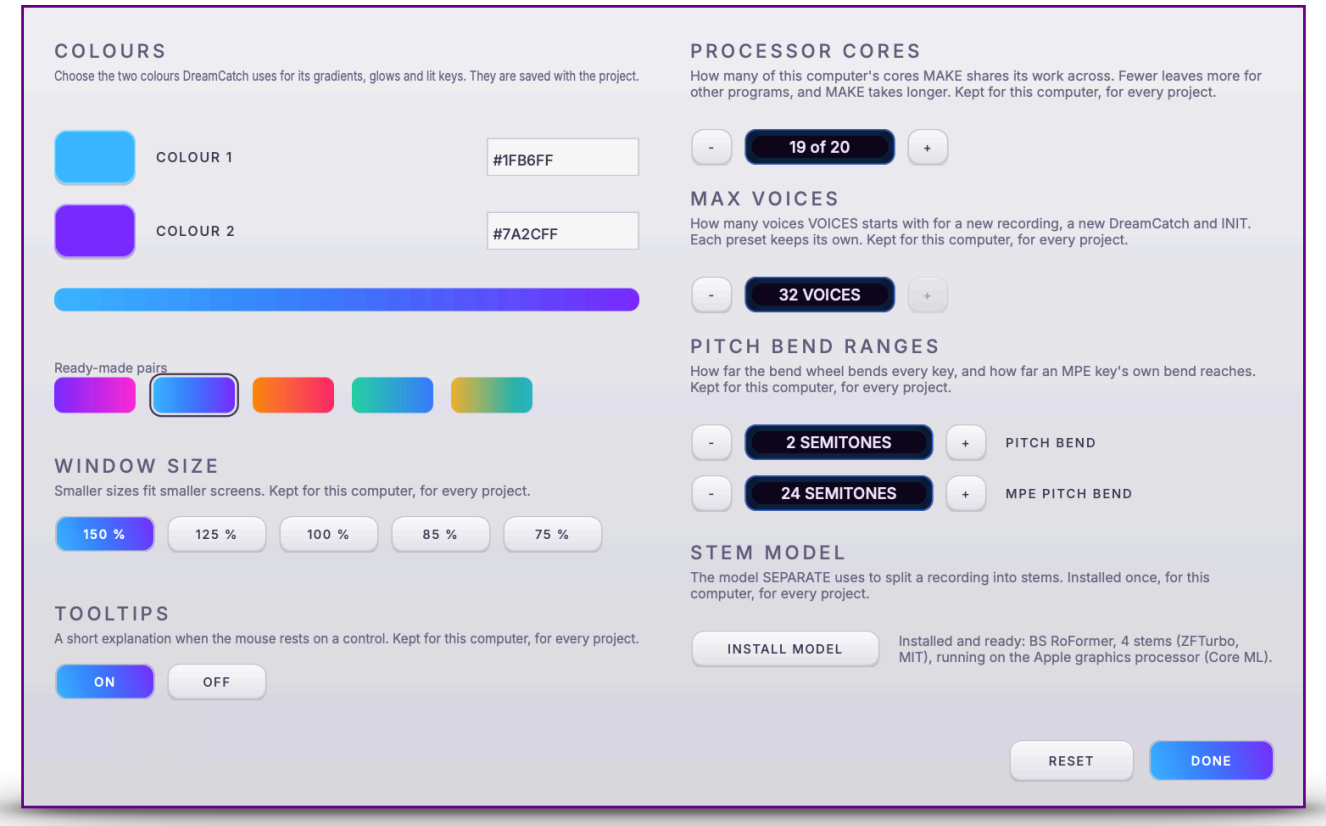


Figure 25. The cog panel.

COLOURS

Everything in DreamCatch that glows, such as the lit keys, the knob rings, the stage and MAKE, is drawn in two colours, violet and magenta at first. Click the colour beside COLOUR 1 or COLOUR 2 to pick a new one, type its hex code in the box at the right, or click one of the ready-made pairs. RESET goes back to violet and magenta. The two colours are saved with the project.

PROCESSOR CORES

PROCESSOR CORES sets how many of the computer's cores MAKE and preset loading may use, from 1 to all of them. At first it is set to every core but one, so the computer always keeps one free. MAKE always runs at a lower priority than your DAW's audio, so playback comes first.

MAX VOICES

MAX VOICES sets the VOICES that a new recording, a new copy of DreamCatch and INIT start with, from 1 to 32. It starts at 16. Each preset keeps its own VOICES, so changing MAX VOICES does not change your presets.

WINDOW SIZE

WINDOW SIZE scales the whole window to 150 %, 125 %, 100 %, 85 % or 75 %. The larger sizes suit 4K and larger screens. At 100 % the window is 1280 by 1080 pixels.

PITCH BEND RANGES

PITCH BEND sets how far the pitch bend wheel bends every note and MPE PITCH BEND sets how far each MPE key's own bend bends that note. Both range from 0 to 48 semitones and start at 2 and 48.

STEM MODEL

STEM MODEL is where you install the model that SEPARATE uses to split a recording into stems (see section 2). Click INSTALL MODEL and choose the model file, which ends in .onnx. The line beside the key says whether a model is installed and ready, whether one is being installed, or why installing failed. The key is greyed out while SEPARATE is working.

TOOLTIPS

TOOLTIPS switches on or off the short notes that appear when you rest the pointer on a key or knob. They are on at first.

16. DREAMCATCH IN YOUR DAW

DreamCatch saves everything with your DAW project, so a project reopens with the sound playing at once, exactly as it was. The recording itself is remembered but not reloaded. Click the message on the SOURCE view to load it again if you want to choose a new snippet.

AUTOMATION

Every knob and key that changes the sound can be automated in your DAW: the method, MOVEMENT with its SYNC length and EVEN, FLUCTUATIONS, the tuning, both envelopes, the filter, the three LFOs, SPREAD, VOLUME, ANALOG, UNISON and the OUTPUT EQ. VOICES and SHAPE's settings are saved with the project, but are not offered for automation.

MPE KEYBOARDS

DreamCatch plays MPE keyboards, such as the Roli Seaboard or the Expressive E Osmose. Each note takes its pitch bend and pressure from its own channel, so add MPE PITCH and CHANNEL AT as modulation sources to use them (see section 13). Set how far an MPE key bends in the cog panel, under PITCH BEND RANGES.

SUSTAIN AND SOSTENUTO PEDALS

DreamCatch follows a sustain pedal and a sostenuto pedal, on any MIDI channel. While the sustain pedal is down, notes keep sounding after you let go of their keys and fade away when you lift the pedal. The sostenuto pedal holds only the notes whose keys are down at the moment you press it, so you can hold a chord with it and play over the top with notes that stop as usual.

TEMPO AND SYNC

MOVEMENT's SYNC and the LFOs' SYNC follow your DAW's tempo and time signature and lock to its bars while it plays. When your DAW is stopped, they carry on at its tempo.

LATENCY

The safety limiter looks 10 milliseconds ahead, so it can turn a peak down smoothly before it arrives. DreamCatch tells your DAW about this delay and the DAW makes up for it when it plays recorded MIDI. Notes played live sound 10 milliseconds after the key is pressed.

17. MOUSE AND KEYBOARD SHORTCUTS

These shortcuts work throughout DreamCatch. On Windows, use Alt where the table says Option.

What you do	What happens
Drag a knob up or down	The knob turns.
Hold Shift and drag a knob	The knob turns four times more slowly, for fine settings.
Drag the FLUCTUATIONS slider left or right	The slider moves. Hold Shift to move it four times more slowly.
Double-click a knob	A box opens to type a value in the units the knob shows, such as 50 for 50 % or 0.44 for 0.44 s. A value outside the knob's range is refused and the box's outline turns orange.
Option-click a knob	The knob goes back to its starting value. On MOVEMENT with SYNC on, it chooses the length nearest the sound's own movement and with EVEN on, the even length nearest it.
Right-click a knob	The knob's modulation panel opens beside it.
Click a modulation badge	All the knob's sources are muted and a second click brings them back.
Rest the pointer on a key or knob	A short note says what it does, unless TOOLTIPS is off in the cog panel.
Drag across the waveform	A new snippet is drawn.
Drag inside the snippet	The snippet moves without changing its length.
Drag an edge of the snippet	The snippet becomes longer or shorter.
Shift-click inside the snippet	In its left half, the snippet's start moves to that point. In its right half, its end moves there.
Double-click the snippet	The snippet is cleared. With several snippets, the one double-clicked is deleted.
Click + and drag across the waveform	A new snippet is drawn, with the next letter and is played last.
Drag any snippet's edge, or inside it	That snippet is selected and changes, without clicking it first.
Drag a snippet's letter at the top of the stage	The snippet moves to another place in the order the snippets are played in.

What you do	What happens
Hold Shift while dragging the snippet	The snippet's edges are not pulled onto the beat lines.
Scroll or pinch on the waveform	The view zooms in or out around the pointer.
Shift and scroll, or swipe sideways	The view moves along the recording.
Drag the ATTACK END diamond	You choose where the attack ends and the loop begins.
Double-click the ATTACK END diamond	MAKE decides where the attack ends again.
Click the tempo line under SOURCE	A box opens to type the recording's real tempo.
Drag a 3D view	The view turns and tilts and a double-click sets it straight again.
Hold Shift while dropping a recording	Every control, all the modulation and the preset's name and details are kept.
Click P. ALL or P. SNIP again	The playing stops.
Press the up or down arrow in the preset browser	The next or previous preset loads.
Press Return in the preset browser	The chosen preset loads and the browser closes.
Press Escape	The preset browser, the modulation panel, the cog panel or the SHAPE panel closes. Closing the SHAPE panel this way cancels its changes.
Drag a SHAPE card by its name	The card moves to a new place, the other cards slide along to make room and the processes work in the new order.

18. TROUBLESHOOTING

This section covers the questions that come up most often.

NO SOUND WHEN I PLAY

The keyboard plays only once a sound has been made. After you drop a new recording, or click INIT, the keyboard is silent until you choose a snippet and press MAKE. Check that the track with DreamCatch is armed or selected in your DAW, so that it receives your keyboard's notes and that VOLUME is not turned right down.

SEPARATE IS SLOW OR UNAVAILABLE

SEPARATE needs the stem model (see section 2). If none is installed, SEPARATE says so: click the cog at the top right of the window, then INSTALL MODEL. On a Mac, SEPARATE also needs macOS 14 or later. On older versions of macOS, it explains that it cannot run. DreamCatch takes about a minute to open the model in each session and the first SEPARATE after installing it takes longer still, while the computer prepares the model.

On Windows, SEPARATE needs Microsoft's Visual C++ runtime, which most PCs already have. If it is missing, SEPARATE says that ONNX Runtime could not be opened and gives the reason Windows reported.

THE SOUND IS QUIETER OR DULLER THAN I EXPECT

If the snippet never settles, MAKE builds the loop from its fading end, which can sound thinner than the start and DreamCatch shows a note saying so the first time this happens with a recording. Choose a shorter snippet nearer the start of the sound.

Check that the filter is not taking away more than you want, that ONSET and STEADY are not turned down and that the LIMIT light is not glowing. If the LIMIT light glows, turn VOLUME down.

19. EVERY CONTROL AT A GLANCE

This table lists every control, where it is, its range and the value it starts at in a new copy of DreamCatch, after a new recording is dropped and after INIT.

The settings in the cog panel and the choices in the ADSR menus belong to this computer, so dropping a recording or clicking INIT leaves them as they are. The envelopes start at the values shown while their ADSR menus are on Default.

Control	Where	Range	Starts at
Method	RESYNTHESIS	FROZEN TONE, MOVING FROZEN, HARMONICS or MOVING HARMONICS	MOVING FROZEN
PHASE	RESYNTHESIS	0 to 100 %	0 %
ONSET	RESYNTHESIS	0 to 100 %	100 %
STEADY	RESYNTHESIS	0 to 100 %	100 %
MOVEMENT	MOVEMENT AND PITCH	A sixteenth to sixteen times the movement's own speed	Its own speed (centred)
SYNC	MOVEMENT AND PITCH	Off or on	Off
MOVEMENT with SYNC on	MOVEMENT AND PITCH	16 BARS to 1/16T, in 17 steps	1 BAR
EVEN	MOVEMENT AND PITCH	Off or on	Off
MOVEMENT with EVEN on	MOVEMENT AND PITCH	16 BARS to 1/16, in 9 steps	1 BAR
FLUCTUATIONS	MOVEMENT AND PITCH	0 to 100 %	0 %
COARSE	MOVEMENT AND PITCH	-24 to +24 semitones	0 semitones
FINE	MOVEMENT AND PITCH	-100 to +100 cents	0 cents
ROOT	MOVEMENT AND PITCH	C-2 to G8	C3, chosen by AUTO
AUTO	MOVEMENT AND PITCH	Off or on	On
SNAP	MOVEMENT AND PITCH	Off or on	Off

Control	Where	Range	Starts at
WAVE	LFO	Sine, Tri, Saw, Ramp, Square, S&H or Random	Sine
RATE	LFO	0.01 to 120 Hz	2 Hz
SMOOTH	LFO	0 to 1 s	0 s
FADE	LFO	0 to 2 s, or up to a bar with SYNC on	0 s
RETRIG	LFO	Off or on	Off
SYNC	LFO	Off or on	Off
Length with SYNC on	LFO	8 bars to 1/32T, in 23 steps	1/4
ON	FILTER	Off or on	Off
LP, BP, HP, NOTCH	FILTER	Low-pass, band-pass, high-pass or notch	LP
12 dB, 24 dB	FILTER	12 or 24 dB per octave	24 dB
CUTOFF	FILTER	20 Hz to 20 kHz	20 kHz
RESONANCE	FILTER	0 to 100 %	0 %
ENV	FILTER	-100 to +100, up to 10 octaves down or up	0
VELOCITY	FILTER	0 to 100 %, up to 4 octaves	50 %
KEY TRACK	FILTER	0, 0.5 or 1	0.5
VOICES	FILTER	1 to 32	MAX VOICES, 16 at first
ATTACK	FILTER and AMPLITUDE	0 to 10 s	0 s
DECAY	FILTER and AMPLITUDE	0.001 to 20 s	0.5 s
SUSTAIN	FILTER and AMPLITUDE	0 to 100 %	80 %
RELEASE	FILTER and AMPLITUDE	0.01 to 20 s	1 s
ADSR menu	FILTER and AMPLITUDE	Default, Pad or Pluck	Default (the button always shows ADSR)

Control	Where	Range	Starts at
VELOCITY	AMPLITUDE	0 to 100 %	50 %
PAN	AMPLITUDE	L100 to R100, a balance, with C the centre.	C
SPREAD	AMPLITUDE	0 to 100 %	0 %
VOLUME	AMPLITUDE	-48 to +12 dB	-3 dB
ANALOG	AMPLITUDE	0 to 100 %	0 %
UNISON	AMPLITUDE	1 to 8 voices for each note	1
ON, on each SHAPE card	SHAPE panel	Off or on	Off
TILT	SHAPE panel, EQ	-12 to +12 dB	+6 dB
VOWEL	SHAPE panel, EQ	OFF, AH, EH, EE, OH or OO	OFF
DRIVE	SHAPE panel, DRIVE	0 to 100 %	40 %
SYMMETRY	SHAPE panel, DRIVE	0 to 100 %	20 %
FOLDS	SHAPE panel, FOLD	1 to 8	2.5
BIAS	SHAPE panel, FOLD	-100 to +100 %	0 %
BITS	SHAPE panel, CRUSH	1 to 16	4
RATE	SHAPE panel, CRUSH	500 Hz to 48 kHz	4 kHz
AMOUNT	SHAPE panel, EXCITE	0 to 100 %	50 %
FROM	SHAPE panel, EXCITE	500 Hz to 8 kHz	2 kHz
TUNE	SHAPE panel, COMB	-24 to +24 semitones from the snippet's pitch	+12 semitones
FEEDBACK	SHAPE panel, COMB	-95 to +95 %	+70 %

Control	Where	Range	Starts at
SWEEP	SHAPE panel, COMB	0 to 100 %, up to an octave each way	0 %
RING	SHAPE panel, BELL	OFF, or 0.01 to 4 times the snippet's pitch	x1.41
SHIFT	SHAPE panel, BELL	0 to 500 Hz	0 Hz
RATE	SHAPE panel, CHOP	1/2 to 1/32, with 1/4T, 1/8T and 1/16T	1/16
DEPTH	SHAPE panel, CHOP	0 to 100 %	100 %
The order of the SHAPE cards	SHAPE panel	Any order of the eight cards	EQ, DRIVE, FOLD, CRUSH, EXCITE, COMB, BELL, CHOP
+	Top of the stage	Adds a snippet, up to eight	Off
The minus key	Top of the stage	Deletes the selected snippet	
The snippet letters	Top of the stage	Any order of the snippets	The order they were made in
SAME PITCH	Top of the stage	Off or on	Off
BASS, MID, TREBLE	OUTPUT EQ	-12 to +12 dB	0 dB
COLOUR 1, COLOUR 2	Cog panel	Any colour	Violet and magenta
PROCESSOR CORES	Cog panel	1 to all of the computer's cores	Every core but one
MAX VOICES	Cog panel	1 to 32	16
WINDOW SIZE	Cog panel	75, 85, 100, 125 or 150 %	100 %
PITCH BEND	Cog panel	0 to 48 semitones	2 semitones
MPE PITCH BEND	Cog panel	0 to 48 semitones	48 semitones
INSTALL MODEL	Cog panel	Chooses the stem model file (.onnx)	No model installed
TOOLTIPS	Cog panel	On or off	On

20. CREDITS AND LICENCES

DreamCatch is designed and made by DreamDeep Plugins. Copyright DreamDeep Plugins 2026.

The stem separation model is converted from the BS-RoFormer 4-stem model trained by ZFTurbo. SEPARATE runs it with Microsoft's ONNX Runtime, using Core ML on a Mac and DirectML on Windows.

DreamCatch includes software written by others and used under their own licences. Their names and the full text of their licences are in the file DreamCatch_Third-Party_Licences.txt. On Windows it is installed with DreamCatch and on a Mac it is in the DreamCatch disk image beside the installer.