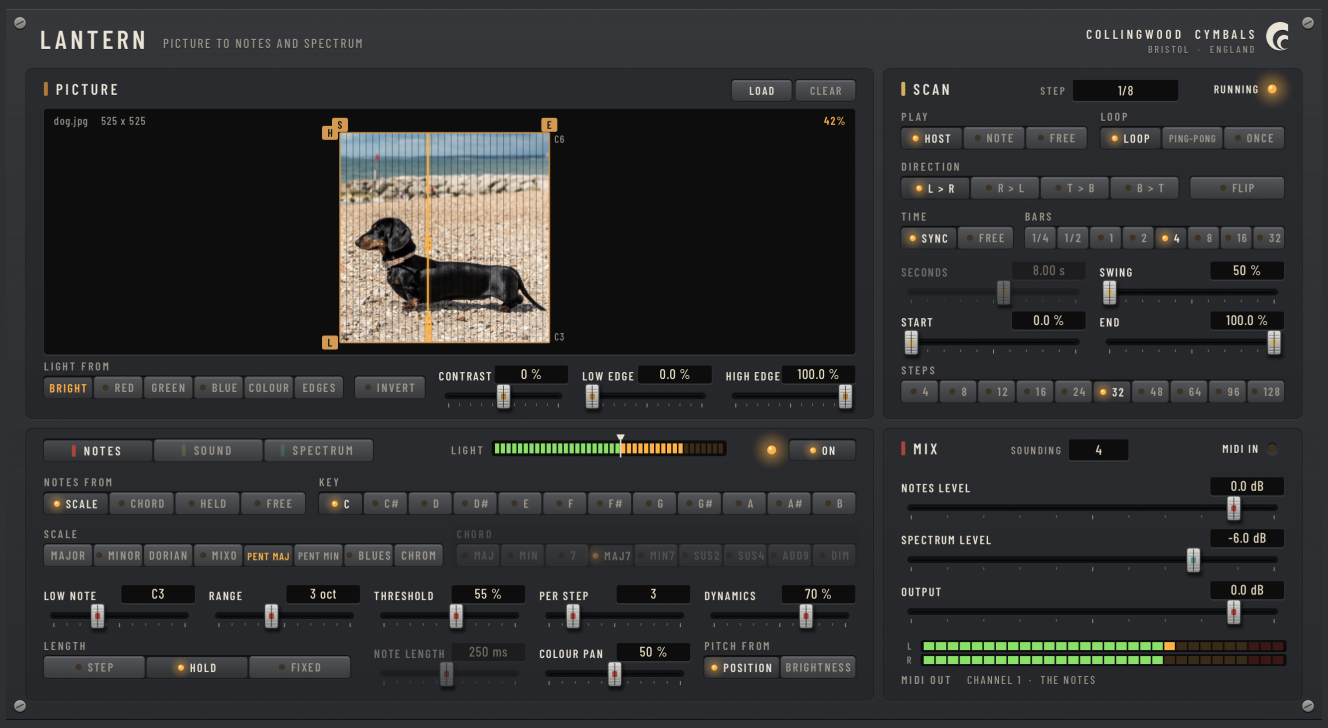
COLLINGWOOD CYMBALS

BRISTOL · ENGLAND

LANTERN

PICTURE TO NOTES AND SPECTRUM

VERSION 1.0 · USER MANUAL



VST3 FOR WINDOWS · AUDIO UNIT + VST3 FOR MAC · CYMBALSAMPLES.COM

Lantern

Lantern is an instrument that plays a picture. A scan line moves across the picture. NOTES turns the bright places under the line into notes in a key, played by a built-in synth and sent out as MIDI. SPECTRUM plays the slice under the line as a spectrum, one sine per band, so the picture shows up on a spectrogram. Use either or both.

Installing

WINDOWS	Copy the Lantern.vst3 folder into C:\Program Files\Common Files\VST3 (click Continue when Windows asks for permission; replace any older Lantern.vst3). Rescan plug-ins in your DAW if it doesn't find Lantern on its own. It is listed under Collingwood Cymbals as an instrument. 64-bit Windows 10 or 11, any VST3 host.
MAC	In Finder choose Go > Go to Folder and paste ~/Library/Audio/Plug-Ins/Components, then drag Lantern.component in. For VST3 hosts also drag Lantern.vst3 into ~/Library/Audio/Plug-Ins/VST3. Logic: make a Software Instrument track and choose AU Instruments > Collingwood > Lantern. If it isn't listed, use Logic Pro > Settings > Plug-in Manager, select Lantern and click Reset & Rescan Selection. Apple silicon and Intel, macOS 10.15 or later.

Lantern takes MIDI in and gives a stereo output. In VST3 hosts its notes also go out as MIDI on channel 1. Logic does not take MIDI from an instrument plug-in.

Quick start

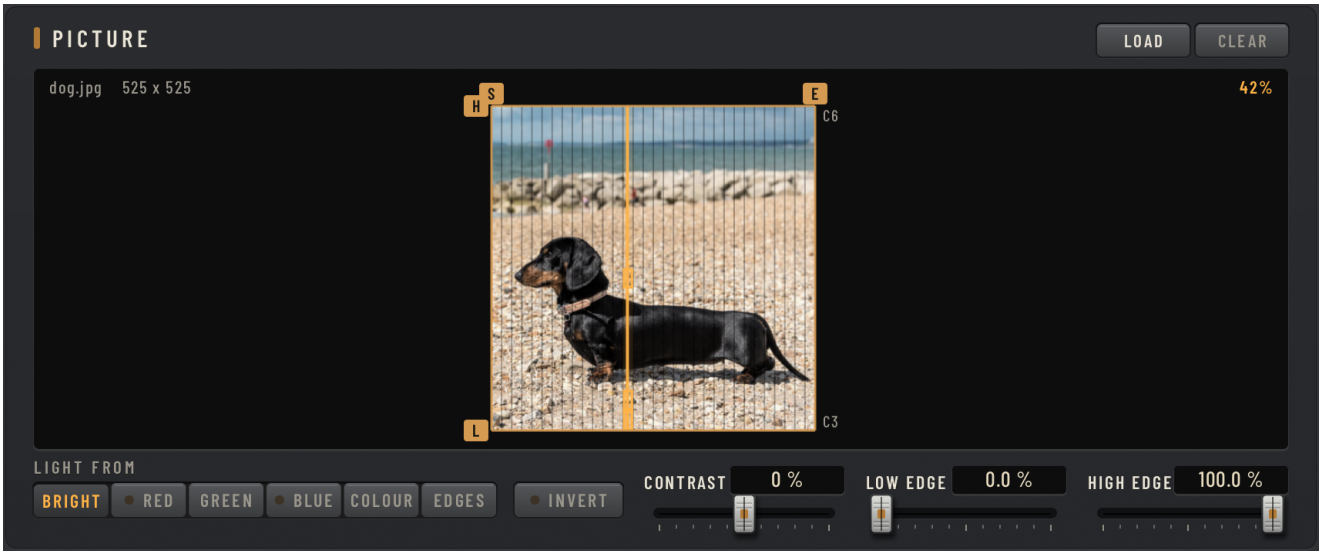
1. Put Lantern on an instrument track. Drop a picture on the display, press LOAD, or paste one.
2. Press play in the host. With PLAY on FREE it runs without the transport.
3. Set KEY, SCALE and STEPS. Drag LOW EDGE and HIGH EDGE to the part of the picture you want.
4. Bring SPECTRUM LEVEL up or down in MIX to set the balance between the notes and the spectrum.

The window



PICTURE and SCAN at the top. NOTES, SOUND and SPECTRUM are tabs in the lower left; MIX is beside them. The tab is not saved with the project.

PICTURE



Drop a picture file on the display, press LOAD, or paste a picture: Ctrl+V on Windows, Cmd+V on a Mac, or right-click the display and choose Paste (Ctrl-click on a Mac). A picture file copied in Explorer or Finder pastes too. JPEG, PNG, BMP, GIF (first frame), TGA, PSD and TIFF; HEIC and WebP where the system reads them. The picture is stored in the project at up to 384 pixels on its longer side, so the project plays without the file. A pasted picture shows as PASTED PICTURE. CLEAR removes it.

The display shows the picture as Lantern reads it, START and END (S and E), LOW EDGE and HIGH EDGE (L and H), the steps, the scan line and the places playing now. Drag a line to move it; double-click it to reset it.

LIGHT FROM	What counts as light: BRIGHT, RED, GREEN, BLUE, COLOUR (how colourful) or EDGES (outlines). The brightest half percent of the picture is treated as full light.
INVERT	Dark plays, light is silent.
CONTRAST	-100 to +100%.
LOW EDGE, HIGH EDGE	The part of the picture used across the reading direction. That part is spread over the full note range and over the spectrum's bands.

SCAN



PLAY	HOST follows the transport and song position. NOTE runs from START while a key is held. FREE runs all the time.
LOOP	LOOP, PING-PONG (there and back) or ONCE.
DIRECTION	L > R, R > L, T > B, B > T. Low notes are at the bottom, or at the left when reading downwards. FLIP turns that over.
TIME	SYNC: one pass lasts BARS, following the time signature. FREE: one pass lasts SECONDS (0.25 to 120 s).
START, END	The part of the picture scanned, along the reading direction.
STEPS	4 to 128. The pass is cut into this many steps. STEP in the heading shows the length of one.
SWING	50 to 75%.
RUNNING	Lights while the scan moves.

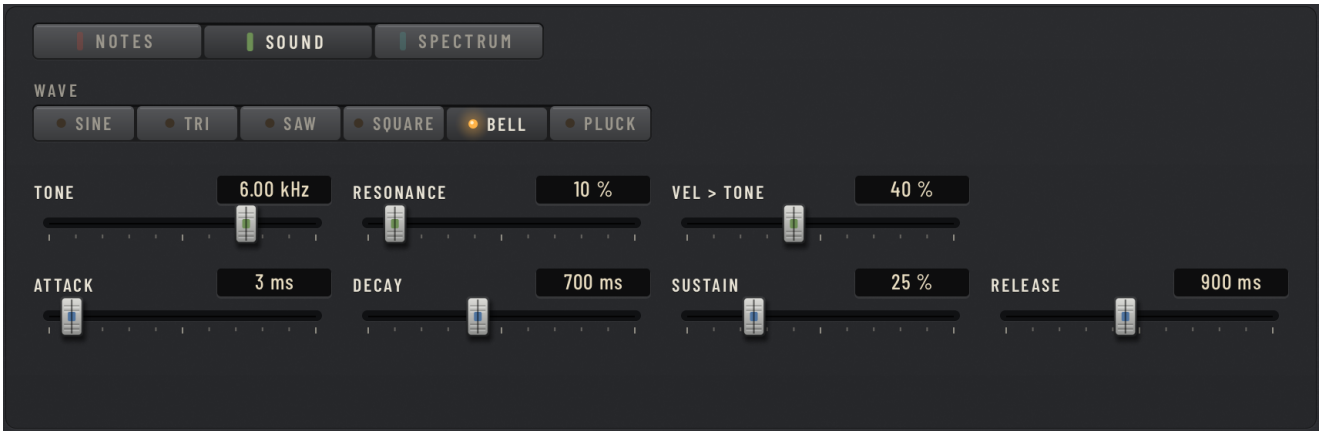
NOTES



Each step plays the brightest places in its slice above THRESHOLD, at most PER STEP of them. ON switches the notes on and off.

NOTES FROM	SCALE: KEY and SCALE. CHORD: KEY and CHORD. HELD: the keys held; KEY and CHORD until a key is played, then the last keys held. FREE: quarter tones.
KEY, SCALE, CHORD	The notes used.
LOW NOTE, RANGE	The lowest note, and the range above it in octaves (1 to 6).
THRESHOLD	How bright a place must be to play. It can also be dragged on the LIGHT ladder, which shows the brightest place in the current step.
PER STEP	1 to 12 notes. 1 gives a melody.
DYNAMICS	How much brightness sets velocity.
LENGTH	STEP: one step. HOLD: as long as the light carries on into the next steps. FIXED: NOTE LENGTH.
COLOUR PAN	Pan from the colour: red to the left, blue to the right.
PITCH FROM	POSITION: the height of a place picks its note. BRIGHTNESS: its light picks the note; the darkest place in the step is the lowest note, full light the highest.

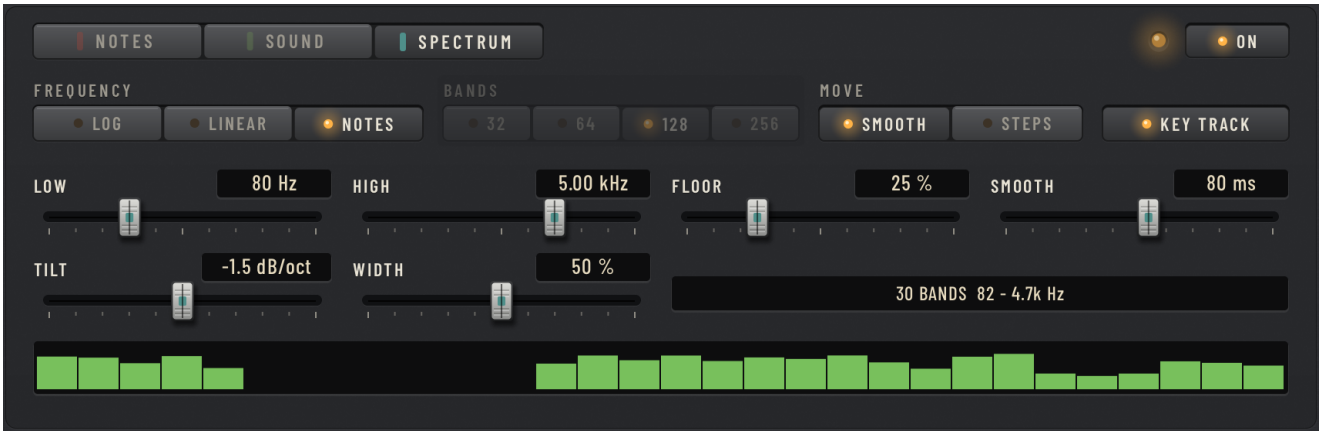
SOUND



The built-in synth that plays the notes.

WAVE	SINE, TRI, SAW, SQUARE, BELL or PLUCK.
TONE	200 Hz to 20 kHz. A low-pass filter.
RESONANCE	The filter's resonance.
VEL > TONE	Softer notes are darker.
ATTACK, DECAY, SUSTAIN, RELEASE	The level envelope.

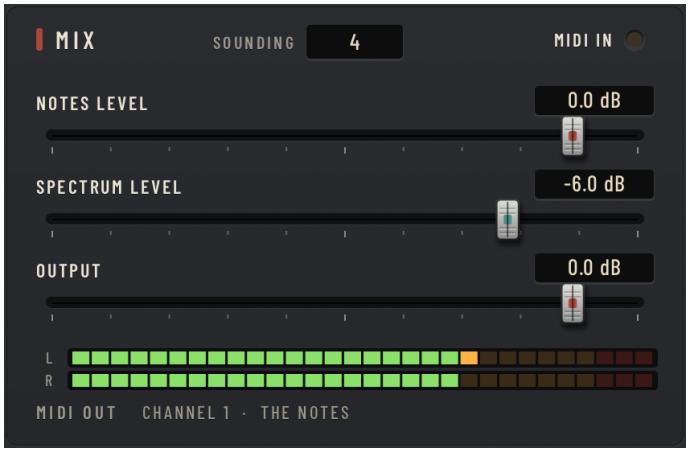
SPECTRUM



ON	Switches the spectrum on and off.
FREQUENCY	LOG, LINEAR (the usual spectrogram view), or NOTES: the notes of KEY and SCALE between LOW and HIGH, one sine per note.
BANDS	32, 64, 128 or 256, for LOG and LINEAR.
MOVE	SMOOTH glides along the picture. STEPS holds each step's slice, in time with the notes.
KEY TRACK	A held key transposes the spectrum. C4 plays as set.
LOW, HIGH	The frequency range.
FLOOR	Light below this is silent.
SMOOTH	2 ms to 2 s. How quickly each band follows the picture.
TILT	-6 to +3 dB per octave around 1 kHz.
WIDTH	Alternate bands spread left and right.

The bar graph shows the bands now. Level is evened out between busy and sparse slices. To make a picture readable on a spectrogram, use LINEAR, TIME FREE, a long pass, FLOOR around 10% and SMOOTH under 10 ms.

MIX



NOTES LEVEL	The built-in synth. Off at the bottom: MIDI out only.
SPECTRUM LEVEL	The spectrum.
OUTPUT	The final level.
SOUNDING	Notes sounding now.
MIDI IN	Lights on incoming MIDI.

Values

DOUBLE-CLICK A VALUE	Type a value and press Enter. Esc cancels. Units are understood: 2.5k, 250 ms, c4, off.
DOUBLE-CLICK A FADER	Back to its default.
MOUSE WHEEL	Over a fader or its value: small steps. Hold Shift for finer steps.
SHIFT-DRAG	Fine control.

Updates



Once a day, when you open the window, Lantern checks whether a newer version is out. If one is, UPDATE x.y AVAILABLE lights up at the top of the window; click it to open the download page. Nothing is downloaded or installed automatically and nothing about you or your computer is sent.

Thank you for using Lantern. Updates, more plug-ins and cymbal samples are at cymbalsamples.com.

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