ELEK

STEM SEPARATION · VOCAL SPLIT · DRUM SPLIT · KEY & TEMPO



MODEL EK-84 · 2.0.0

OWNER'S MANUAL

STANDALONE APP · VST3 · AU

SUBVERSELAB

1. WHAT ELEK IS

EK-84

> ELEK takes a finished track apart. It writes the vocals, drums, bass and everything else as separate files, splits the drums into kick, snare and hats, and reads the tempo and key of every track you load.

FOUR SPLITS

- **Vocal Split** writes the vocal and the instrumental.
- **4-Stem Split** writes vocals, drums, bass and other.
- **6-Stem Split** writes vocals, drums, bass, guitar, piano and other.
- **Drum Split** takes the drums out of the track and splits them into kick, snare and hats & cymbals.

Tempo and key are read as soon as a track is loaded; nothing else runs until you press Run.

EVERYTHING STAYS ON YOUR COMPUTER

The separation runs on your own processor. No file is uploaded, no account is needed to use the app, and it works offline.

EVERY RESULT IS KEPT

Each run gets its own folder in Music/ELEK, with the track name, tempo and key in the file names. History lists your earlier runs, so a separation you made last week opens again with one click.

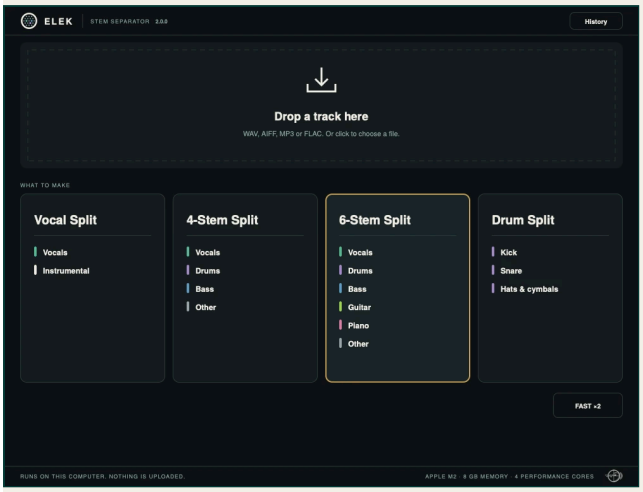
2. QUICK START

ONE MINUTE

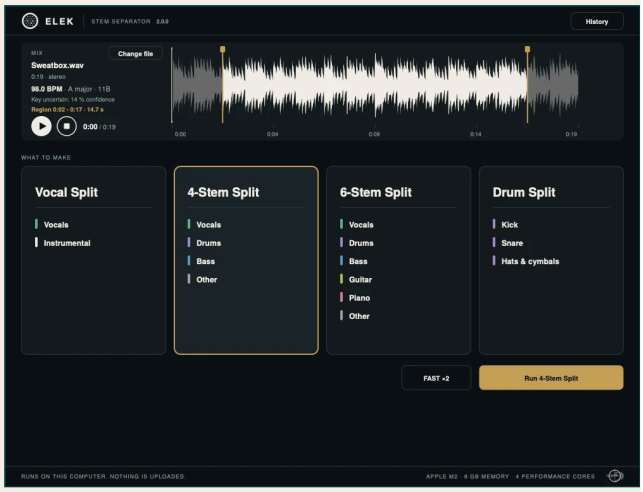
1. **Open ELEK**: the app, or the plug-in on any track in your DAW. Both show the same window.
2. **Drop a track** on the window, or click it to choose a file. WAV, AIFF, MP3 and FLAC all work. ELEK reads its tempo and key straight away.
3. **Listen and pick the part you need** (optional): press Play, then drag the two gold markers on the waveform. With the markers at the start and the end, the whole track is separated.
4. **Choose a split** — Vocal Split, 4-Stem Split, 6-Stem Split or Drum Split — and **press Run**.
5. **Listen in the mixer**, then drag a lane's WAV tab onto a track in your DAW, or press Show files.

3. THE WINDOW

FOUR VIEWS



Start. *Drop a track on the window, or click to choose one. The four splits are under it.*



Loaded. *Tempo and key are read on load. The gold markers pick the part to separate; Run starts the chosen split.*



Working. *Each step with its progress. Cancel stops the run and leaves nothing half-written.*



Result. *Every stem in its own lane, the drum parts under Drums. Play, solo, mute, set levels, drag a WAV into your DAW.*

CONTROL	WHERE	WHAT IT DOES
Drop zone	Start	Loads a track (or click it to choose a file). Tempo and key are read straight away; nothing else runs.
Play / Stop	Loaded, Result	Play listens from the playhead. Stop stops and goes back to the start of the part you picked (or of the track).
Waveform	Loaded	A click moves the playhead there. A drag picks a new part.
Markers	Loaded	The two gold markers mark the part to separate; drag either one. Moving a marker sends the playhead to it, so you hear the new cut at once. A double-click puts them back at the start and the end.
Change file	Loaded	Loads another track.
Vocal Split / 4-Stem Split / 6-Stem Split / Drum Split	Loaded	Chooses what to make. Each tile lists the files it writes.

Run	Loaded	Starts the chosen split on the part between the markers.
Cancel	Working	Stops the run. Nothing half-written is left behind.
M / S	Result	Mute or solo a lane while you listen. The files are not changed.
Level	Result	Playback level of each lane. The files are not changed.
WAV	Result	Drag it onto a track in your DAW, or click it to show the file.
Split the drums	Result, Drums lane	Splits the Drums stem of this run into kick, snare and hats & cymbals.
Show files	Result	Opens the run's folder.
Other operation	Result	Back to the four splits with the same track (and the same part) loaded.
Home / History	Top right	Home goes back to the start; History lists every earlier run that is still on disk.
Audio output	Top right (app)	Chooses the sound card the app plays through.

4. SEPARATING ONLY PART OF A TRACK

MARKERS

When a track is loaded, two gold markers sit at its start and its end. Leave them there and the whole track is separated. Drag them in and only the part between them is separated: quicker, and the files hold just that part.

- **Find the part by ear:** press Play. With markers set, playback runs between them and goes back to the start marker at the end.
- **Fine-tune:** move a marker while it plays. The start marker sends the playhead to the new start; the end marker sends it 3 seconds before the new end, so you hear the cut at once.
- **Long recordings:** ELEK separates up to 20 minutes at a time. For a longer file, pick the part you need with the markers.

The run's folder and file names carry the part, for example `Bir Araya Gelemeyiz 0m02s–0m17s_Drums_98BPM_ELEK.wav`.

5. DRUM PARTS

DRUM SPLIT

Drum Split takes the drums out of the track and splits them into three parts: **Kick**, **Snare** and **Hats & cymbals**. After a 4-Stem or 6-Stem Split, **Split the drums** on the Drums lane does the same for that run's drums.

- **The parts replace the Drums lane** while you listen: soloing Drums plays the three parts together, and muting one part takes it out of the drums.
- **The parts add up to the drums:** kick, snare and hats & cymbals together are the Drums stem, so nothing of the drums is lost between them.
- **The kick keeps its body:** low drum sounds that sit under the kick (an 808's tail, a floor tom) go into the Kick part.

6. WHERE THE FILES GO

MUSIC/ELEK

Every run writes a new folder in your Music folder (macOS: `~/Music/ELEK`; Windows: `Music\ELEK` in your user folder). Nothing is ever overwritten.

WHAT	EXAMPLE
Folder	`Bir Araya Gelemeyiz_88BPM_2026-11-20 1614`
Stem file	`Bir Araya Gelemeyiz_Vocals_88BPM_ELEK.wav`
Drum part	`Bir Araya Gelemeyiz_Kick_88BPM_ELEK.wav`
Run record	`elek.json`: source file, split, part of the track, date, tempo, key and the file list

- **Short names:** ELEK drops the extension, track numbers and tags in brackets, and cuts long names at a word: “01 - Bir Araya Gelemeyiz (Official Video) [HQ].wav” becomes “Bir Araya Gelemeyiz”.
- **The key only when it is sure:** the key goes into the names only when its confidence is 50% or more. The window always shows the key, and says when the reading is uncertain.
- **History** lists every run whose files are all still there. Delete or move the files and the run leaves the list.

7. GETTING THE BEST RESULTS

RECIPES

START FROM THE BEST COPY YOU HAVE

Any split

A WAV or a high-bitrate file separates more cleanly than a small MP3. The encoder’s artefacts are spread across all the stems.

INSTRUMENTAL FOR A COVER OR A KARAOKE TRACK

Vocal Split

The instrumental is the mix minus the separated vocal, so everything that is not the voice stays in it, effects included.

A BREAK OR A DRUM SAMPLE

Drum Split

Pick the bars you want with the markers, run Drum Split, and drag the kick, snare or hats straight into your sampler.

SAMPLING AND REMIXING

4-Stem Split

Take the drums for a break, the bass for a groove, or Other for the chords and leads. The stems line up with the original to the sample.

WHAT ELEK CANNOT DO

No separation is perfect: a little of one instrument can be heard in another stem. Guitar and piano separate best on clear recordings of real instruments; old mono recordings can leak between stems. Tempo and key need at least 6 seconds of music; on shorter files, or on silence, ELEK says so instead of guessing.

8. HOW IT WORKS

THE ENGINE

The stems come from HT-Demucs, a hybrid model that works on the waveform and on the spectrum at the same time (a four-stem and a six-stem model). The drum parts come from a second model that works on the Drums stem. ELEK runs both over overlapping windows with a cross-fade, so there is no click where the windows meet.

The engine works at 44.1 kHz. Files at other sample rates are converted with a windowed-sinc resampler and the converter's delay is removed, so the stems come back aligned to the original to the sample. Everything is written as 24-bit WAV at 44.1 kHz.

Tempo comes from the onsets of the whole mix; the key from its chroma against the major and minor key profiles. The confidence says how far the winning key stands above the next one.

9. INSTALLATION

MACOS AND WINDOWS

ELEK installs as an Audio Unit (AU) and a VST3 plug-in on macOS (Apple Silicon and Intel), and also runs there as a Standalone application. On Windows (64-bit) it installs as a VST3 plug-in and a standalone application.

MACOS

1. Open the installer package (`.pkg`) you downloaded and follow it. It puts the ELEK app in `/Applications`, `ELEK.vst3` in `/Library/Audio/Plug-Ins/VST3` and `ELEK.component` (Audio Unit) in `/Library/Audio/Plug-Ins/Components`. The installer is signed and notarised by Apple.
2. ELEK runs natively on Apple Silicon and Intel Macs (macOS 11 or later). Rescan plug-ins in your DAW if ELEK does not appear.

WINDOWS

1. Unzip the Windows zip you downloaded. If Windows blocks the files: right-click the zip, choose **Properties**, tick **Unblock**, then extract.
2. Copy the `ELEK.vst3` folder to `C:\Program Files\Common Files\VST3\` and rescan plug-ins in your DAW.
3. The app is in the "ELEK App" folder: keep every file of that folder together and start `ELEK.exe`.
4. Windows may warn that the publisher is unrecognised the first time; choose "More info", then "Run anyway".

AUDIO OUTPUT (APP)

The app plays through your default output. To choose another device, press **Audio output** in the window. The plug-in plays through your DAW.

UPDATING FROM ELEK 1

Install 2.0.0 over the earlier version. Your separations in Music/ELEK stay where they are and stay in History; DAW sessions that use ELEK open with the new version.

10. SPECIFICATIONS

TECHNICAL

ITEM	VALUE
Formats / platform	macOS 11 or later, Apple Silicon and Intel: standalone app, VST3, AU · Windows (64-bit): standalone app, VST3
Input files	WAV, AIFF, MP3, FLAC; mono or stereo; any sample rate; up to 20 minutes per run
Output files	24-bit WAV, 44.1 kHz, aligned to the original to the sample
Vocal Split	Vocals, Instrumental
4-Stem Split	Vocals, Drums, Bass, Other (+ Instrumental)
6-Stem Split	Vocals, Drums, Bass, Guitar, Piano, Other (+ Instrumental)
Drum Split	Kick, Snare, Hats & cymbals (+ the Drums stem)
Tempo and key	Read on load: tempo, key, Camelot code, key confidence; needs 6 s or more
Memory	About 2.3–2.6 GB at the peak of a separation; 8 GB computers are enough
Speed	A 4 min 23 s track into six stems: 2 min 17 s on an Apple M2 with 8 GB (measured)
Network	None needed; nothing is uploaded

MEASURED, NOT GUESSED

- **Against the real stems:** on a construction kit from our own sample packs, whose real drum, bass, guitar, keys and FX stems we have, ELEK's Drums stem scored 13.0 dB SDR and its Bass 15.3 dB against the real ones, and the stems added back to the mix within 31.5 dB.
- **Drum parts add up:** kick, snare and hats & cymbals together match the Drums stem within 22.9 dB on the same kit.
- **Memory:** the highest memory use measured in a separation was 2.3–2.6 GB on an Apple M2 with 8 GB.
- **Tempo:** on 55 files of known tempo, 48 were read within 1 % and 7 at half or double the tempo; none was read at any other tempo.
- **Nothing half-done:** Cancel stops a run within a fraction of a second and leaves no files behind.