TONIC



User Manual

Version 2.0 / October 2026

zplane

© Copyright 2023 - 2026 zplane.development GmbH & Co. KG. All rights reserved.

This manual, as well as the software described in it, is furnished under license and may be used or copied only in accordanterms of such license. The content of this manual is furnished for informational use only, is subject to change without notice, and should not be construed as a commitment by zplane.development GmbH & Co. KG.

zplane.development GmbH & Co. KG assumes no responsibility or liability for any errors or inaccuracies that may appear in this document. Except as permitted by such license, no part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, recording or otherwise, without the prior written permission of zplane.development GmbH & Co. KG.

zplane.development is a trademark of zplane.development GmbH & Co. KG.
Mac, the Mac logo, and macOS are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. Windows is a registered trademark of Microsoft Corporation in the U.S. and other countries. All other product and company names are trademarks or registered trademarks of their respective holders.

Contents

1. Introduction **5**

Key Features 5

Version 2 – New Features and Changes 5

TONIC Overview 6

Naming Conventions 6

2. Installation & Activation **7**

Windows 7

macOS 7

Activation 7

3. The TONIC 2 Interface **8**

Key Analysis Display 9

Enharmonic Spelling (♯/♭) 9

Key Probability Display 10

Tuning Frequency 10

Analysis Controls 10

Realtime Analysis 10

Offline Analysis 10

4. Keyboard Section **11**

The Full Keyboard 11

The Folded Keyboard 12

Chords Mode / Narrow Voicing 12

MIDI Out support 12

5. Settings **13**

6. Help **13**

7. Using TONIC **14**
7.1 Real-time Analysis 14
Verifying the Detected Key 15
Checking Alternate Keys 15
Dealing With Key Changes 16
7.2 Exploring Scales and Chords 17
Exploring Scales with the Keyboard 17
Exploring Chords with the Keyboard 18
8. Using a MIDI Keyboard Controller with TONIC **19**
Setup in Ableton Live & Cubase 19
Setup in Logic Pro 20
Setup in Reaper 20
Setup in Studio One 21
Setup in Pro Tools 21
DAWs Without MIDI Routing Support 22
9. Technical Specifications **22**
10. Feedback & Support **23**

1. Introduction

TONIC 2 is a real-time audio analysis plugin designed to detect the musical key and scale of audio signals. It uses advanced zplane technology to analyse incoming audio or entire audio files and identify the most likely musical context.

Unlike conventional key detection tools that provide a single result, TONIC 2 suggests up to three possible key and scale matches. A percentage Rating shows the probability of each match, helping you identify the correct key when working with harmonically complex or ambiguous material.

TONIC 2 also lets you explore the detected musical context. The integrated virtual keyboard highlights pitches within the selected scale. Use the built-in sound generator to audition matching notes and chords alongside the analysed audio. You can also play notes and chords from a MIDI keyboard or send them to another MIDI sound source. Chords can be dragged directly into your DAW as MIDI clips.

Whether you're composing, transcribing or analysing music, TONIC 2 is your go-to tool to quickly identify compatible notes and chords.

Key Features

- **Real-time key & scale detection:** Analyse incoming audio signals
- **Offline key & scale analysis:** Analyse entire audio files (drag-and-drop support)
- **Displays up to three probable key & scale matches** with probability rating
- **Virtual keyboard:** Highlights pitches within the selected scale
- **Pitch auditioning:** Play scale notes with the built-in sound generator
- **Chord mode:** Suggests chords based on the selected key & scale
- **MIDI input & output support** including MIDI chord export
- **Display of tuning deviations**: Display deviations from A = 440 Hz in cents and Hertz
- **Multiple plugin formats:** Supports VST3, AU, and AAX

Version 2 – New Features and Changes

- **Redesigned user interface:** Fully resizable
- **Key propability rating display** (percent)
- **Octave Shift** for on-screen keyboard
- **Scale chord buttons**
- **Chord voicing:** Narrow voicing option
- **Chord scale degree as Roman numerals** (Fold Keys only)
- **MIDI In:** Control the virtual keyboard (notes & chords)
- **MIDI Out:** Send MIDI data to any MIDI source
- **MIDI chord export:** Drag chords directly into the DAW as MIDI clips

TONIC Overview

The TONIC interface is divided into two main sections:



(1) Analysis Section: Displays and controls analysis results

(2) Keyboard Section: Virtual keyboard for trying out scale notes and chords

(3) Operation Mode: Button for switching between **"File"** and **"Realtime"** operation modes

(4) Help & Settings: The **[?]** and **[⚙]** icons give you access to help and settings

A detailed description of all interface controls is provided in Chapter 3.

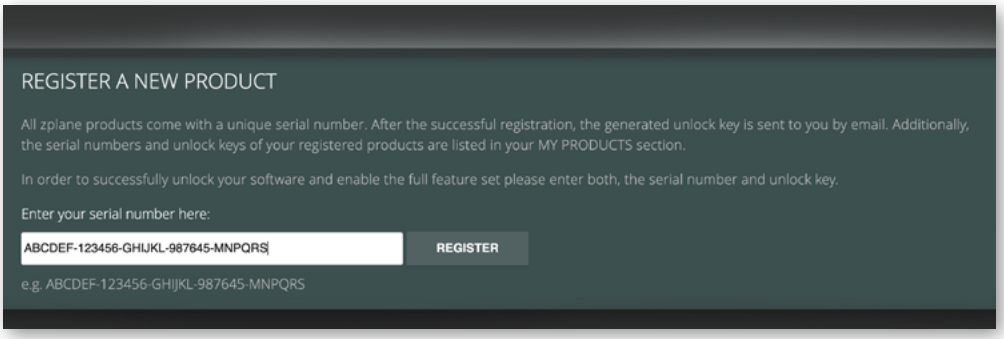
Naming Conventions

In this documentation, interface elements are styled as follows:

- **Buttons, sliders,** and **indicators** are written in bold font within brackets, e.g. **[FILE]**, **[CHORD]**.
- **Selectable menu options** are written in bold font within quotation marks, e.g. **"Stereo"**, **"Mono"**.
- References to **numbered pointers** in images are written in bold font within parentheses, e.g. **(1)**, **(2)**.

2. Installation & Activation

To download the TONIC installer, you must first register the serial number you've received when you purchased the product. Log in to your account on the zplane website (please create a new account if you do not already have one). Select the [REGISTER] tab and paste your serial number as shown below:



Click **[REGISTER]** to confirm. TONIC uses both a serial number and a **corresponding unlock key** for activation. The unlock key is displayed immediately after successful registration.

The product installer, serial number and unlock key are always available in your user account in the **[MY PRODUCTS]** section. Here's a step-by-step description of the installation and activation procedure:

Windows

- Download the TONIC Windows Installer application **(.exe)**
- Double-click the file to launch the Installer and click **[Next]** in the installer window
- Read the End User License Agreement and click **[Next]**, if you agree. Otherwise, click **[CANCEL]** to abort the installation
- Follow the on-screen instructions to complete the installation, then close the installer

macOS

- Download the TONIC macOS Installer (**.pkg)**
- Double-click the file to launch the Installer an click **[Continue]** in the installer window
- Read the End User License Agreement and click **[Continue]** to open the confirmation dialog. If you agree, confirm by clicking on **[Agree**] otherwise click **[Disagree]** to abort the installation
- Follow the installer's on-screen instructions and click **[Close]** to quit when installation is complete



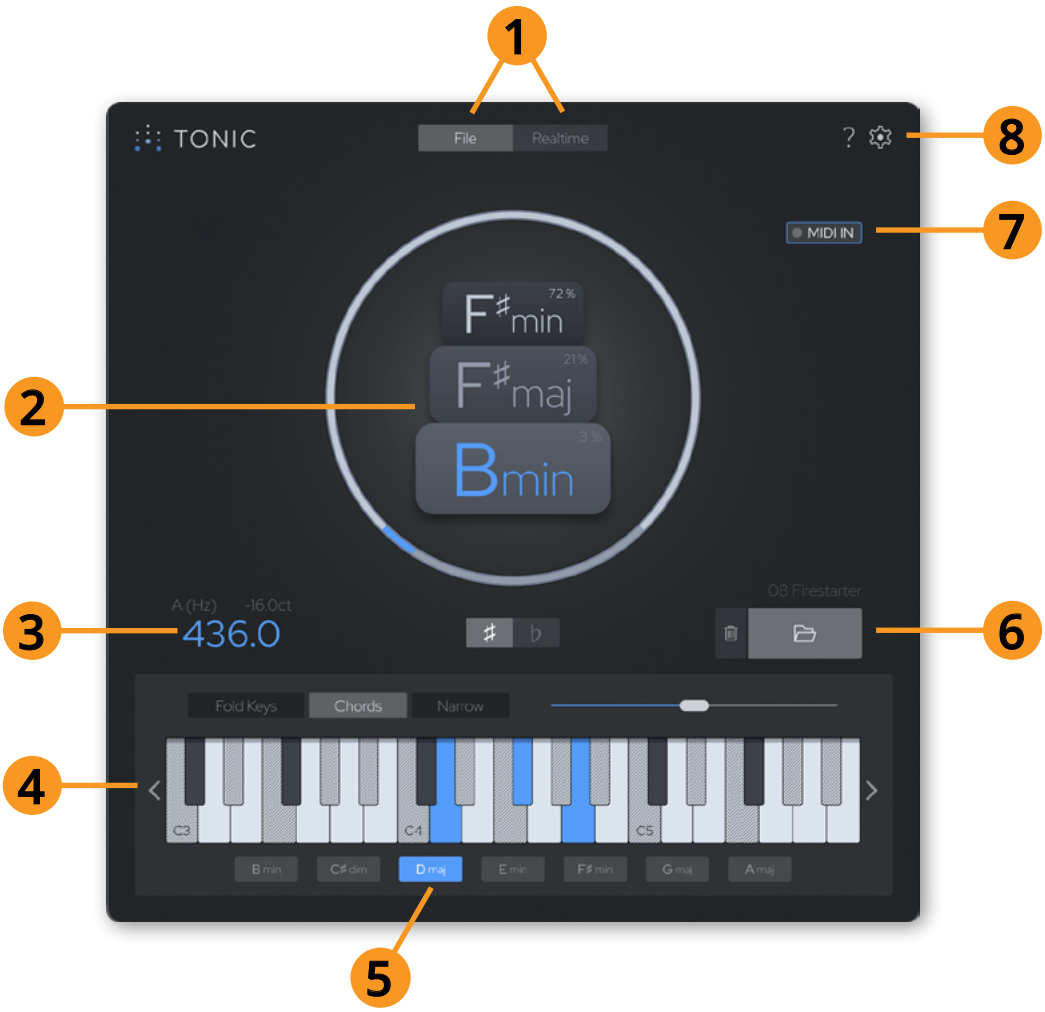
Activation

- After installation, **run your DAW** (make sure the DAW has scanned the new plugin)
- Create an audio track, **load TONIC** and open the user interface
- The **activation dialog** will appear. Enter your serial number **(1)** and unlock key **(2)** into the corresponding fields, then click on **[Activate] (3)**
- You are now ready to use TONIC

This activation process is only required for a new installation, not when updating TONIC.

3. The TONIC 2 Interface

This chapter introduces the TONIC user controls in detail. The top section contains TONIC's **Key Analysis Display** and **Analysis Controls**. The bottom section features the **Virtual Keyboard,** showing notes and chords of the detected scale. You can audition them via the internal sound generator or an external MIDI instrument. Additional controls let you fine-tune the keyboard behaviour.



(1) [File/Realtime] Button: Switch between offline & real-time analysis (Default: **[Realtime]**)

(2) [Key Analysis Display]: Shows up to three keys (highest probability first). Click to update the keyboard. **[♯/♭] Toggle**: Switches key display between sharp and flat

(3) [Tuning Display]: Shows detected pitch and deviation from 440 Hz in cents

(4) [Virtual Keyboard]: Displays notes and chords of the detected key. Non-scale notes are greyed out; played notes appear in blue.
[Fold Keys]: limits keyboard to scale notes.
[Chords]: plays scale chords with a single key.
[Narrow]: Keeps chord voicing within the selected octave

(5) [Note/Chord] Buttons: Display scale notes/chords by name
(Click to play, click & hold to drag MIDI chords into your DAW)

(6) Analysis Controls: Press **[▸]** to start and **[⏸]** to stop real-time analysis.
Press **[🗑]** to reset analysis.

In **[File Mode]** the **[▸ / ⏸]** button changes to a **[🖿]** icon. Click to open the file selector or drag and drop files onto the edit window for analysis

(7) [MIDI In] Switch: Enables control via an external MIDI source (Setup: Chapter 8)
MIDI Out is always active (configure in your DAW)

(8) [Help] and [Settings]: Click to open help **[?]** or settings **[✲]**

Key Analysis Display

Press **[▸]** to start real-time analysis. After a short analysis period, the **Key Analysis Display** shows up to three possible key matches for the analysed audio.



The results are sorted by probability, with the most likely key at the top **(1).**



Click any displayed key displayed to select it **(2).** The selected key determines the valid pitches shown in the **Keyboard View**.

Enharmonic Spelling (♯/♭)

Below the **Key Analysis Display** is the **Enharmonic Spelling toggle (3)**, with two options: **Sharp [♯]** and **Flat [♭]**. Use it to choose how enharmonic keys are displayed. This setting can be changed before, during, or after analysis.



For example:

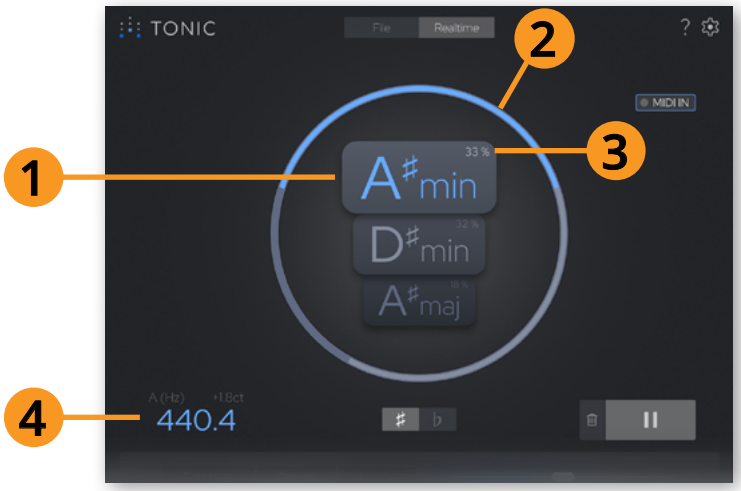
- With **Flat [♭]** selected, you see the key displayed as **"E♭min"**.

- With **Sharp [♯]** selected, the same key is displayed as **"D♯min"**

Both represent the exact same pitches, but differ in notation. This is purely a visual preference.

Key Probability Display

The likelihood of each suggested key is shown in three ways: The order of keys in the **Key Analysis Display (1)**, the **Probability Ring (2)** and the **Numerical Percentage Display (3)**. The Probability Ring is divided into three segments, representing the relative confidence of each key. Click a segment to select its corresponding key.

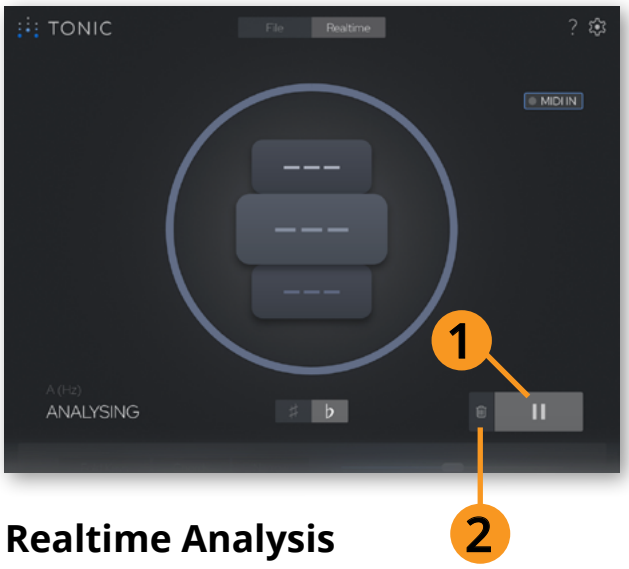


Tuning Frequency

The **Tuning Frequency Display (4)** is located in the lower-left corner of the Main View. It shows the detected or estimated pitch of "A4" in the analysed audio. In equal temperament, "A" is typically tuned to 440 Hz. If the displayed value deviates, you may need to tune other instruments accordingly. The deviation is also shown in cents for precise adjustment. The internal sound generator can automatically match the detected tuning (Settings option).

Analysis Controls

The **Analysis Controls** are located in the bottom-right corner of the Main View:

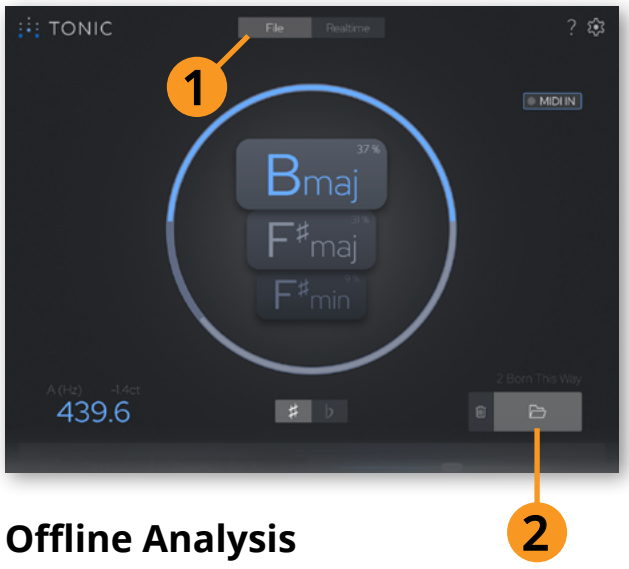


Realtime Analysis

[▸] Start / [⏸] Pause Button (1):

Press **[▸]** to start and **[⏸]** to pause real-time analysis.

[🗑] Reset Button (2): Resets the analysis.
When TONIC is loaded onto a track in your DAW, real-time analysis is enabled by default. Analysis begins as soon as audio is played through the plugin.



Offline Analysis

Switch the **[File/Realtime] Button (1)**, shown in the screenshot above, to **"File"**. The **Analysis Controls (2)** change to display a **[🖿] Folder icon.**

To load a file, drag and drop an audio file onto the edit window or click the **[🖿]** to open your computer's file selector.

4. Keyboard Section

The **Keyboard Section** at the bottom of the **Main View** displays the notes and chords of the selected key. You can audition them using the built-in sound generator or play them via an external MIDI instrument. Two views are available: **Full Keyboard** (default) and **Fold Keys**.



The Full Keyboard

The **Full Keyboard** shows the notes of the active scale by greying out all other keys. The display updates with the selected scale.

(1) Keyboard options:

[Fold Keys]: Switches to the **Fold Keyboard** (see next chapter)
[Chords]: Toggles between **Note** and **Chord** mode
[Narrow]: Adjusts chord voicing

(2) Octave Shift [<] / [>]:

Shifts the keyboard range up or down. If MIDI notes are played outside the visible range, the corresponding shift indicator lights up in blue

(3) Notes not in scale:

Greyed out (playable by default, see Settings to deactivate)

(4) Played notes/chords:

Highlighted in blue. Chords can be dragged as MIDI into your DAW

(5) [Note/Chord Buttons] (2):

Shows only notes (or chords) of the selected scale
(Click to play, click & hold to drag MIDI chords into your DAW)

(6) [Volume Slider]:

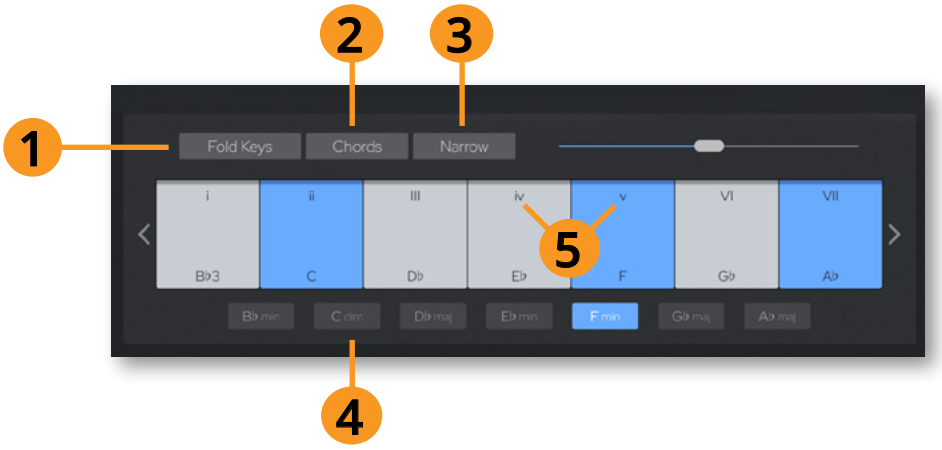
Controls the internal tone generator volume. Set to off when using an external MIDI instrument (Default: on)

(7) [MIDI In] Button:

Enables control via external MIDI source (Setup: Chapter 8)
MIDI Out is always active (configure in your DAW)

The Fold Keyboard

Enable **[Fold Keys] (1)** to show only notes belonging to the selected scale. Non-scale notes are hidden, making it easier to explore scales without hitting incompatible pitches. When using MIDI input, only scale notes are playable and mapped to the white keys; all others are muted.



[Chords] Mode / [Narrow] Voicing

When **[Chords] (2)** is active, pressing one note on TONIC's keyboard triggers the corresponding chord. Alternatively, you can press one of the **[Chord Buttons] (4)** below the keyboard to trigger a chord.

By default, chords play in root position. Enabling **[Narrow] (3)** inverts chords to keep them within the played octave.

Chord MIDI Export: Chords can be dragged into your DAW as MIDI by clicking and holding a **[Chord Button] (4)**, then dragging it into your DAW. Go to **[Settings]** to change volume (default: 127) and length (default: 1/4) for exported MIDI clips.

(5) Roman numeral chord functions are displayed on the keys, making chord progressions easy to transpose.

MIDI Out support

MIDI Out is always active. To use it, configure the input of a MIDI track in your DAW (see your DAW documentation for details).

All notes and chords played on the keyboard are sent to TONIC's MIDI Out port: This allows you to use an external MIDI instrument instead of the built-in sound generator. You can do this in two ways:

• **Realtime:** Configure your DAW to receive TONIC's MIDI Out. Play notes or chords on TONIC's keyboard or via a MIDI controller, and record the MIDI in your DAW. This is an intuitive way to create melodies or chord progressions that match the analysed audio.

• **Drag & drop MIDI clip export:** Click and hold a note or chord on one of TONIC's **[Chord Buttons] (4)**, then drag it into your DAW's track area. This exports the chord as a MIDI clip with a default length and velocity. You can change this default in the **[Settings] dialog**.

*NOTE: **AU (Audio Units) effects cannot output MIDI data to other tracks or devices in your DAW. So the on-screen keyboard only sends MIDI data when using the VST3 plugin version.***

5. Settings

Open the **[Settings]** page via the **[⚙] button** in the header to adjust preferences that affect TONIC's behaviour.



Tune sound generator to detected tuning: Controls the tuning of TONIC's internal sound generator. Enabled by default to keep the keyboard preview in tune with the analysed audio. This setting does not affect external MIDI sound sources.

- **Disabled:** Standard tuning (A = 440 Hz)
- **Enabled**: Follows detected tuning (Default)

Mute non-scale notes: Mutes notes that are not part of the detected scale. (Default: Off)

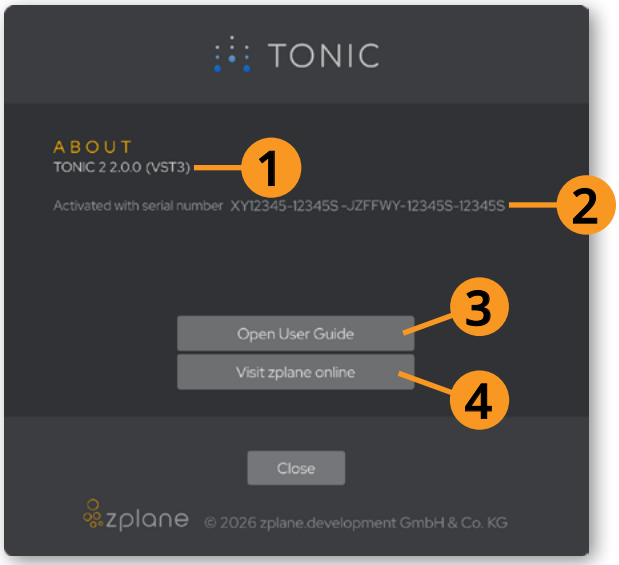
Chord export settings: Defines your preferred note length and velocity for MIDI chords dragged from TONIC into your DAW. (Default: 1/4 note and 127 velocity)

Enable tooltips: Shows tooltips throughout the user interface. (Default: On)

Use current UI size as default for new instances: Saves the current editor size as the default for new TONIC instances. Resize the editor, then click **"Save"**. The button changes to **"Clear".** Click to restore the factory default size.

6. Help

Click the **[?] button** in the upper-right corner of TONIC to open the **[Help]** page.



(1) Product Version: Displays the version number and plug-in format (VST3, AU or AAX).

(2) Activation Info: Displays the serial number used to activate TONIC. See "Installation & Activation" earlier in this manual.

(3) Open User Guide: Opens the TONIC User Manual (PDF) in your default PDF reader.

(4) Visit zplane online: Opens the zplane.de website in your default web browser.

7. Using TONIC

This chapter describes the typical workflow for detecting the key and scale of audio. You can analyse audio in real-time or load a file for offline analysis. TONIC can also help you find compatible chords and melodies for your own music.

7.1 Real-time Analysis

Insert TONIC on the track you want to analyse. Choose the track based on your use case:

- **Single track:** Analyse a specific instrument, vocal or loop.
- **Master bus:** Analyse the complete mix.

The following examples use the song *"Every Breath You Take"* by The Police as a stereo track, but the workflow is identical, when TONIC is inserted on the master bus.



(1) Real-time Mode Enabled by default. Analysis starts automatically during playback. TONIC displays up to three key candidates, ordered by probability, with the most likely shown at the top.
Use **[♯]/[♭]** to adjust enharmonic spelling.

(2) Pause [⏸] Use to **exclude sections** from analysis.
Click **Play [⏵]** again to resume.

(3) Reset [🗑] Press to clear existing analysis data and start over.

NOTE: During the first few seconds, the detected key and probability values may change rapidly as TONIC gathers data. Results stabilise as more audio is analysed. For full tracks or non-repeating material, allow playback to continue as long as possible.

Verifying the Detected Key

Start playback in your DAW, then click the scale notes on the **[Keyboard] (1)** to audition the **selected key (2)**. If they sound harmonious with the audio, the detected key is likely correct.



Checking Alternate Keys

- If some notes sound dissonant, try one of the **alternative keys (2)**.
- The scale notes on the **[Keyboard] (1)** will update, allowing you to quickly reassess the fit.
- Also check the **detected tuning (4)**.

If the audio deviates from A = 440 Hz, even correct notes may sound out of tune. *"Every Breath You Take"* is tuned to approximately A = 448.8 Hz. If necessary, correct the tuning before analysing the key.

> ***TIP:*** *Enable **[Chords]** to audition full chords instead of single notes. This often makes it easier to judge key compatibility.*

Dealing With Key Changes

TONIC assumes a single key and **does not detect or mark key changes**. If the detected key fits most of a track but not a particular section, that section may be in a different key.



For example, “Every Breath You Take” changes key in the bridge (around 1:24). While A♭ major fits most of the song, the bridge is in B major.

To analyse a specific section:

- Loop the suspected section in your DAW **(1)**
- Click **Reset [🗑] (2)** to clear previous analysis
- Start playback and click **Play [▸] (3)** (so the **Pause [⏸]** icon is visible)

Let the section loop until the analysis stabilises. If a different key is displayed, a key change is likely.

- Use the **[Keyboard] (4)** to audition the scale notes against the loop.

If they sound harmonious, you have identified the correct key for that section.

7.2 Exploring Scales and Chords

The **[Keyboard]** shows the selected key's scale notes, making it easy to create melodies and harmonies that match the analysed audio. Enable **[Chords]** to audition compatible triads.

Exploring Scales with the Keyboard

The **[Keyboard]** greys out notes that are excluded from the selected key.



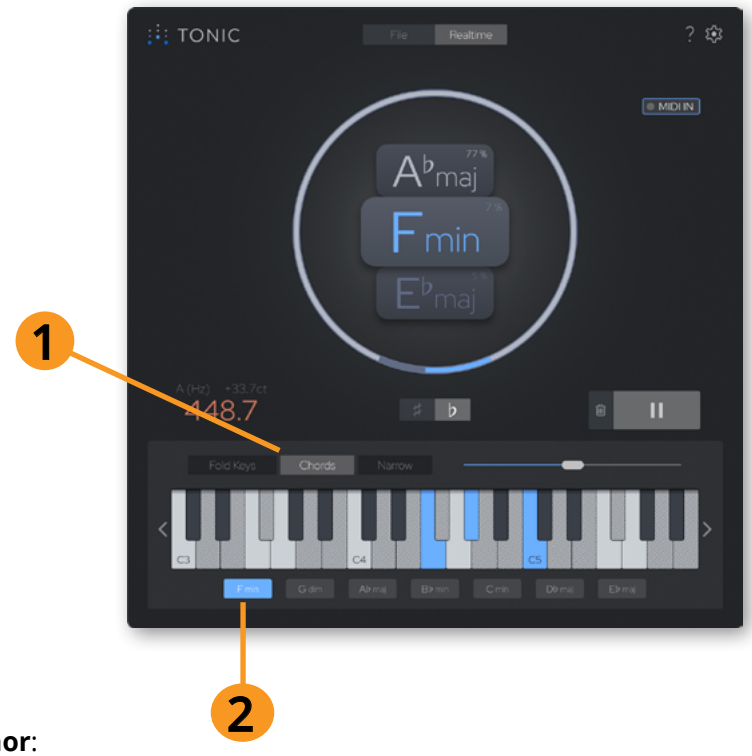
When you change the key in the **[Key Display] (1)**, the **scale notes (2)** update automatically. Use them as a guide for composing melodies that fit the audio.

Enable **[Fold Keys] (3)** to reduce the keyboard to a single octave containing only notes of the selected scale. This ensures that every note played belongs to the current key. Use the **shift buttons (4)** to transpose the octave if required.



Exploring Chords with the Keyboard

Enable **[Chords] (1)** to switch the keyboard to chord playback. Clicking a scale key plays a chord containing that note. The root, third and fifth of a chord all trigger the same chord. Its name is highlighted on the **[Chord] buttons (2)** below the keyboard.



For example, in **F minor**:

- **F m** → **F minor** (F, G♭, C)
- **G dim** → **G diminished** (G, B♭, D♭)
- **C m** → **C minor** (C, E♭, G)

NOTE: *Clicking a greyed out non-scale key plays a single note rather than a chord.*

Enable **[Chords]** and **[Fold Keys]** together **(3)** for a simplified keyboard layout. In this mode, all seven visible keys produce chords that belong to the selected key. If you additionally enable **[Narrow] (4)**, chord voicings remain close to the selected octave.



8. Using a MIDI Keyboard Controller with TONIC

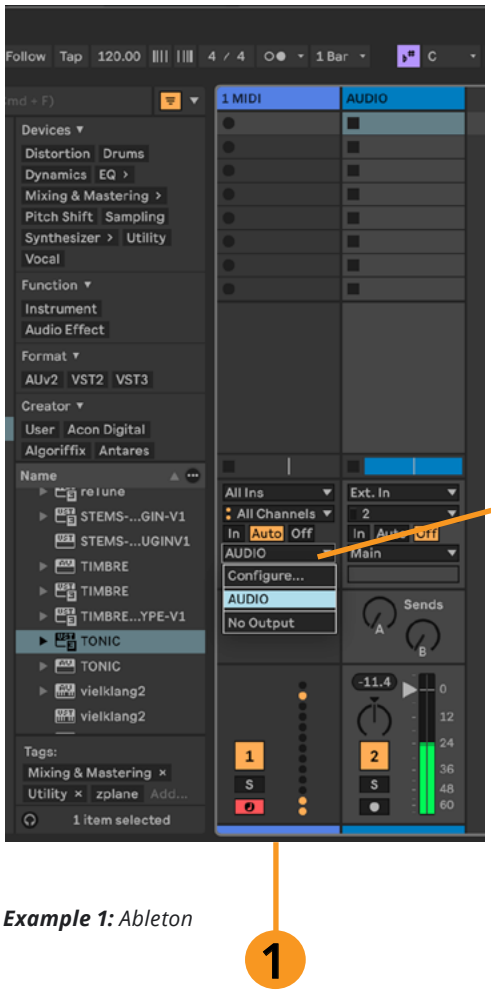
TONIC's **[Keyboard]** can be played from an external MIDI keyboard. Enable the **[MIDI] button** in the UI, then route MIDI to TONIC in your DAW. You can also route TONIC's MIDI output to an external MIDI instrument and mute the internal sound generator by setting its volume to zero.

Using a MIDI controller lets you play the internal sound generator across the full keyboard range. In Fold Keys mode, chords are mapped to the white keys only, making it easy to play chords that match the selected scale.

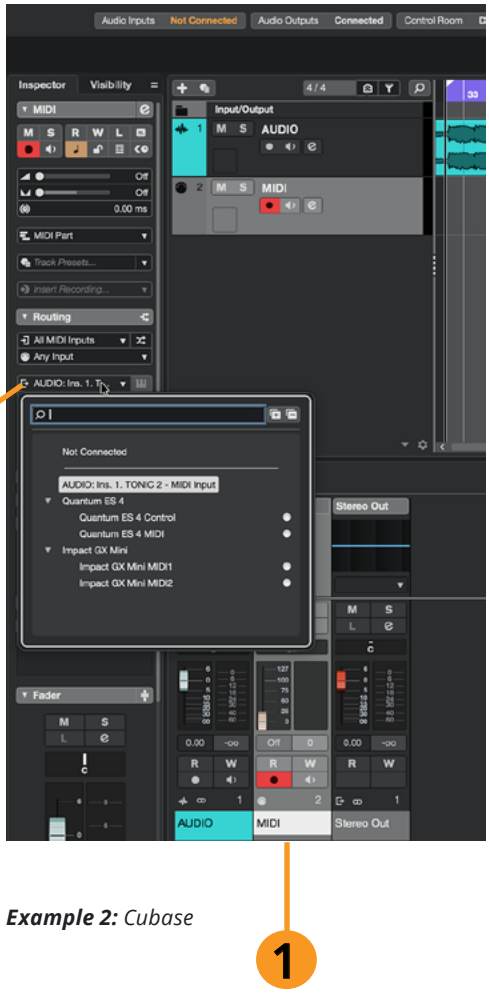
MIDI routing differs between DAWs. The following examples show typical setups:

Setup in Ableton Live & Cubase

- Insert TONIC on the track to be analysed (Audio or MIDI track)
- Create a separate MIDI track for your controller input **(1)**
- Select the desired MIDI input (e.g., "All Inputs" or a specific device/channel)
- Route the MIDI track output to the track hosting TONIC **(2)**
- Enable input monitoring on the MIDI track



Example 1: *Ableton*



Example 2: *Cubase*

Setup in Logic Pro

- Create a new MIDI track and load TONIC as a MIDI-Controlled AU effect **(1)**
- Use the audio track as TONIC's side-chain input **(2)** (e.g., audio track 1 → TONIC on MIDI track 2)
- Mute the original audio track to avoid duplicate playback



Setup in Reaper

- Insert TONIC on the track you want to analyse **(1)**
- Create a new track and enable its Record button **(2)**
- Select your MIDI keyboard as the track input
- Add a **"Send"** from the MIDI track to the track hosting TONIC **(3)**



Setup in Studio One

- Insert TONIC on the track to be analysed **(1)**
- Create a MIDI track and set its output to “Existing Instrument” **(2)**
- Select TONIC from the list



Setup in Pro Tools

- Insert TONIC on the track to be analysed **(1)**.
- Create a new MIDI track.
- Select your MIDI keyboard as the input in the I/O settings.
- Set the output to the TONIC instance on the track being analysed **(2)**.
- Enable input monitoring by clicking the Record button **(3)**.



DAWs Without MIDI Routing Support

Some DAWs do not support routing MIDI input to TONIC. In these cases, TONIC can still analyse audio, but the **[Keyboard]** must be played with the mouse.

We have confirmed that the following DAWs have this limitation:

• Apple GarageBand
Does not support “MIDI-Controlled AU Effects”, which are required for MIDI input to TONIC.

• FL Studio
Supports MIDI input to TONIC, but playing the [Keyboard] in the UI also triggers the content on the track, making accurate keyboard preview impractical.

9. Technical Specifications

Operating Systems	• macOS 13+ • Windows 10 & 11+
CPU Architecture	• macOS: Intel & Apple Silicon 64-bit • Windows: 64-bit
Audio Formats	• 1-2 channels (I/O) • 44.1 kHz - 192kHz sample rate
Plugin Formats	• VST3 • AU (macOS only) • AAX
Audio Latency	• none

10. Feedback & Support

Our website products.zplane.de provides the latest information and news about our products. For tips and tutorials on using TONIC, follow us on Instagram and YouTube.

If you encounter an issue, first make sure you are using the latest version of TONIC. Please also check the manual and the FAQ on our website for a possible solution.

If you still need to contact us directly, provide the following information so we can assist you:

- **Your registration information**, such as the name of your User Account or your login e-mail
- **Your system specifications,** including hardware, operating system, host software
- **The exact plugin version**, shown on the **Help [?]** and **Settings [⚙]** pages

Include a detailed description of the issue and the steps that led to it, so we can try to reproduce the problem.

Contact us via:

✉ zplane.development GmbH & Co. KG
Goerzallee 311
D-14167 Berlin
Germany

products.zplane.de/support

@ support@zplane.de