U-SYNC Manual

Version 1.4.1

For Nome Firmware 5.0 or newer
For Reliq Rlx 1.2.0 or newer

This PDF is the full manual for **U-SYNC**, a brand new technology syncing your hardware devices to your DAW.

U-SYNC was developed in collaboration between Sim'n Tonic and Reliq Instruments.
It is currently available for Sim'n Tonic Nome I and Nome II, and for Reliq as well.

Contents

1. What is U-SYNC

U-SYNC is your new favorite way to **sync any hardware device to your DAW**. The "U" stands for USB - because all you need is a USB connection to make it work.

It has 3 components:

1. A DAW plugin, available as VST3, AU, and AAX formats
    ○ It needs to be loaded as an virtual instrument in your DAW

2. A Daemon, which is a background program linking the plugin and your device
    ○ It lives in the tray icon bar at the **top right** of your screen:
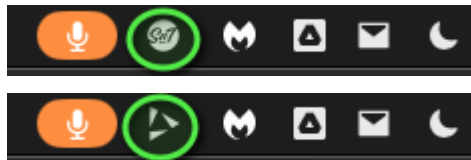
    (the icon will change depending on which device is selected)

3. For Ableton, Bitwig, Cubase, and Nuendo, a control surface script, so your device controls your DAW as well

Note: for now, U-SYNC is only available on **Mac**. We're working hard to bring it to Windows, but it's a long journey. U-SYNC relies heavily on the stability of low-level Audio and MIDI drivers, and the default drivers on Windows aren't stable enough to guarantee reliable performance. Supporting Windows requires custom driver development, which is a complex and time-consuming process.

Note bis: you can still sync a *Sim'n Tonic Nome* to your DAW on Windows, by using an audio signal generated by another plugin.

2. Installation

- Download and install the U-SYNC software package
    ○ Make sure to select all necessary components based on your setup
    ○ Make sure to approve when the installer asks for permissions
- Load the *U-SYNC* plugin in your DAW, as a **virtual instrument**

If it connects fine, then the plugin outlook will match your device, and when you press play in the DAW, your device will be in sync.
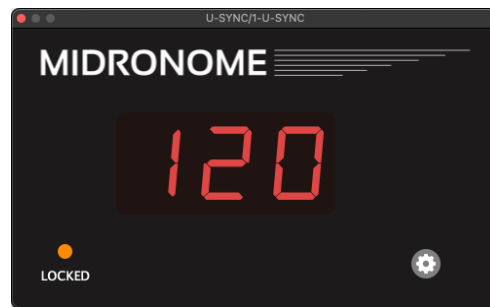
Note that you do **NOT** need to send anything else to the device, for example MIDI Clock, start, stop, etc. The plugin takes care of everything. In the settings in Ableton for example, you can uncheck all "Sync" boxes.

3. The U-SYNC Plugin

The U-SYNC plugin just needs to "*be there*" in your DAW, it will not generate any audio. Simply load it on a track and let that track be (do not record-enable it and avoid selecting it). The plugin is a "*software instrument*", not an "*audio effect*", so you will need to **load it on an instrument/MIDI track**.

You can press the Settings button on the bottom right to adjust the latency, as well as a few DAW-specific parameters written below.

The plugin window will tell you if no device is found or if the U-SYNC Daemon is not running.
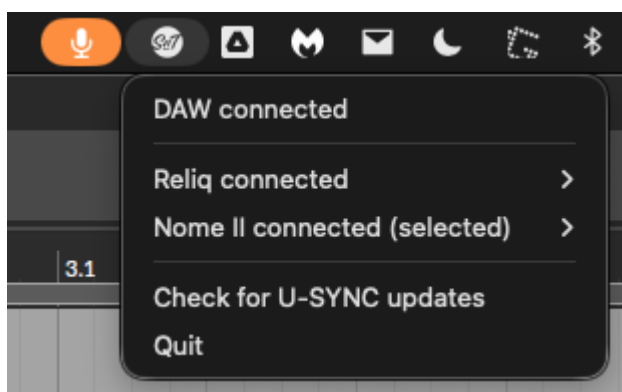
If this is the case, check the U-SYNC Daemon to see which device is connected to it.

4. Supported DAWs and versions

While U-SYNC has a good chance of working on older machines and older versions, we only test on the **latest macOS** and the **latest DAW** version <u>at the time of a given U-SYNC release</u>.

So if possible, keep your software and hardware updated, and try to stay as close as possible to the settings mentioned in the next section.

4.1 - Supported DAWs

U-SYNC officially supports all DAWs listed in the next section. If your DAW is not listed, then please read the Other DAWs section.

4.2 - DAWs with bi-directional control

On top of the usual *syncing to the DAW*, you can use your device to **control your DAW**. This means that you can change the tempo and control the transport from either the DAW and/or the device and both DAW and device will react.
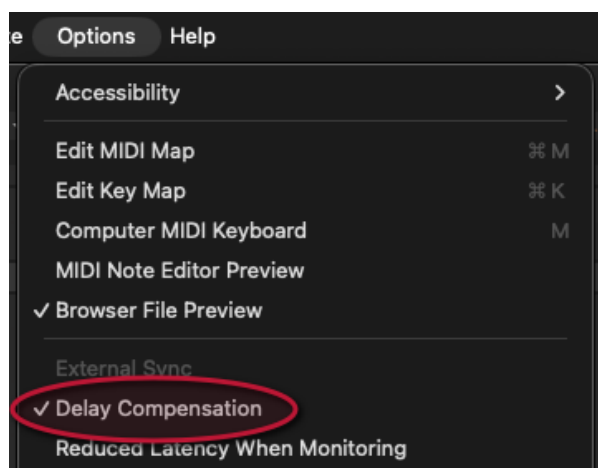
As of version 1.3, this is only possible in **Ableton**, **Bitwig**, and **Cubase/Nuendo** (Nome I & II only).

More info about this in the Bi-directional control section.

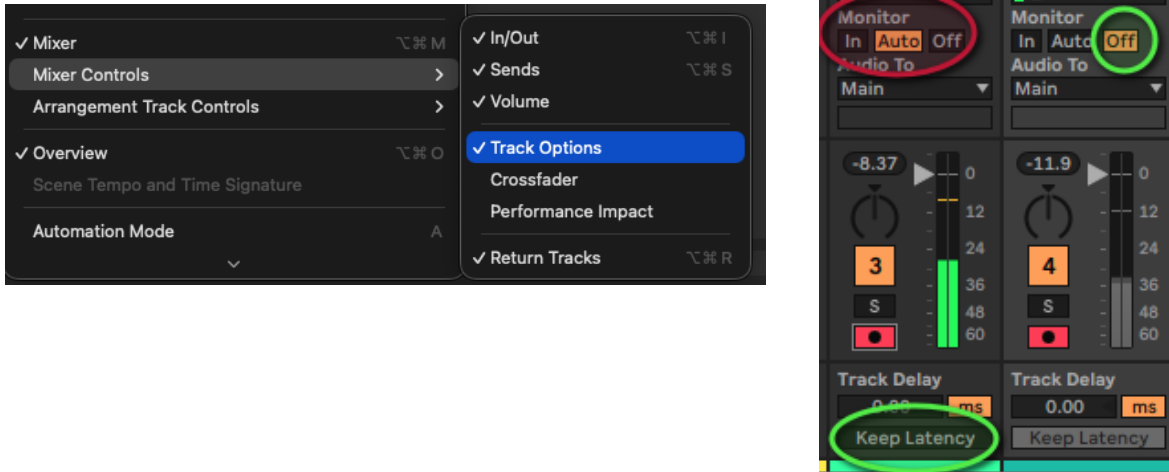# 5. DAW-specific information

5.1 - Ableton Live

- Make sure to tick **Delay Compensation** in the Options

- On the tracks you are recording, set monitoring to "*Off*"

- Or, if you need monitoring through Ableton, disable the the "*Keep Latency*" setting (to see the setting, enable "*Track Options*" in View -> Mixer Controls)

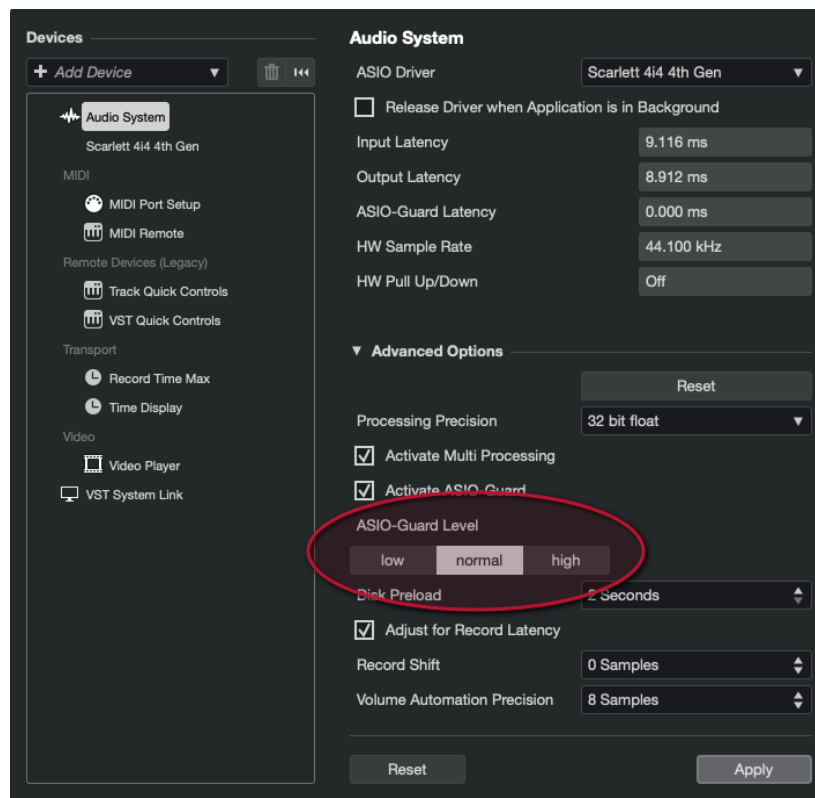- If you are using plugins with large latencies, check the box in the plugin
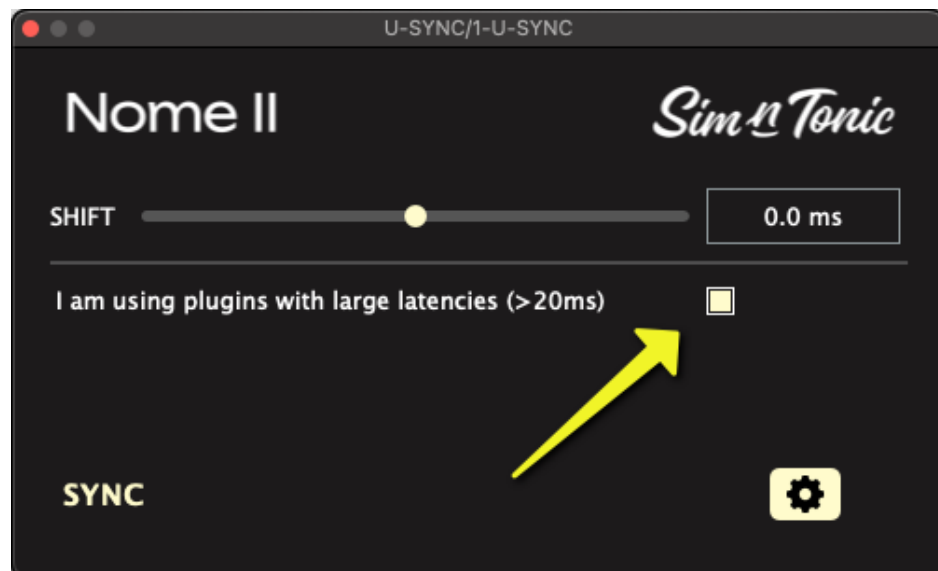
This will work with up to **250ms** of **combined** latency per track. Above this you will need to manually compensate using the *SHIFT* slider. You can see how much latency your plugins have by hovering your mouse over them.
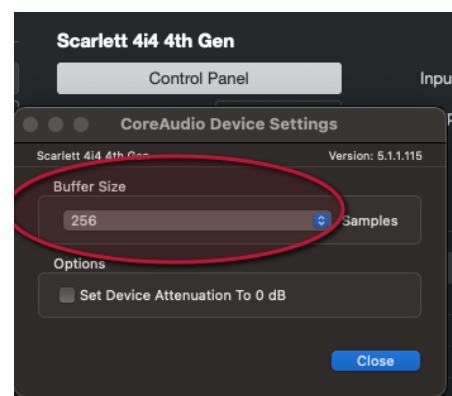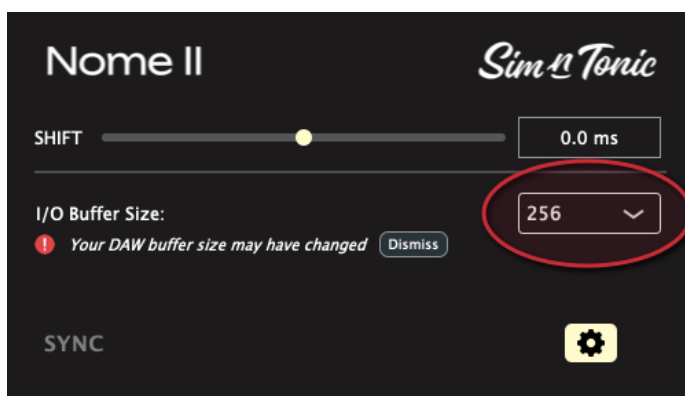
5.2 - Bitwig Studio

- Use a buffer size of 1024 or less

5.3 - Steinberg Cubase & Nuendo

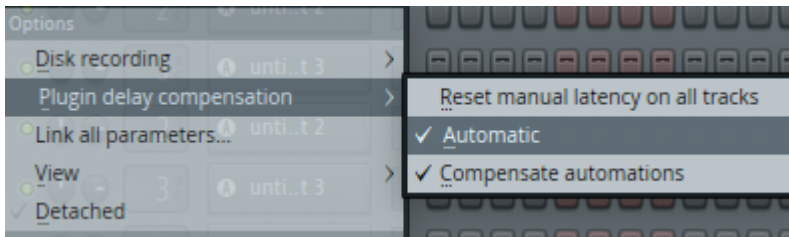- Make sure ASIO Guard is activated and set to "normal" in "*Studio Setup*"

- Make sure to select the correct Buffer Size in the plugin, it must be the same buffer size you have selected in the "*Studio Setup*"
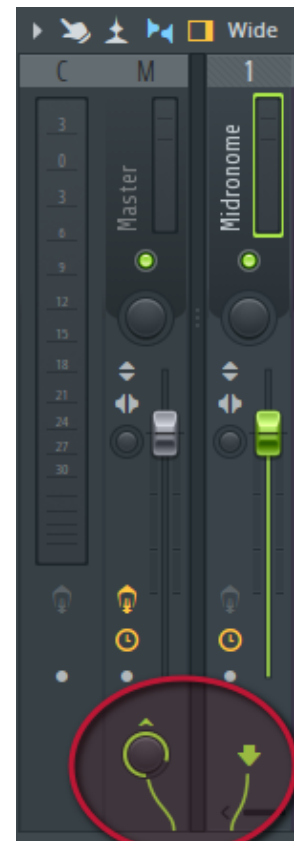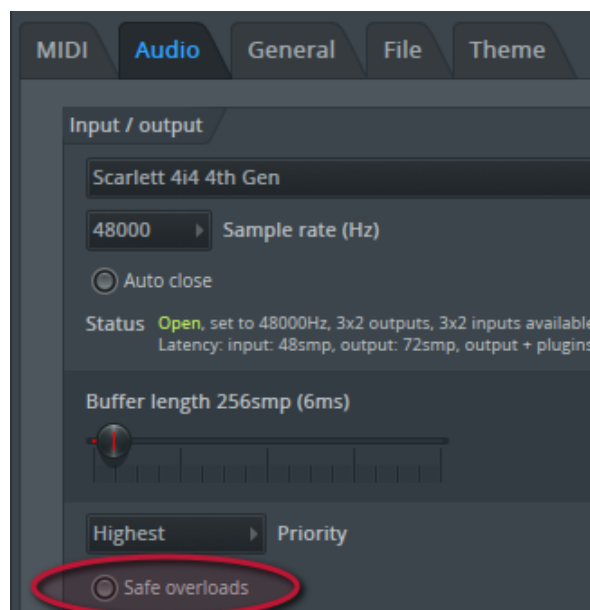
5.4 - Image-Line FL Studio

- Click on the small arrow at the top left of the Mixer and enable both "*Automatic*" and "*Compensate automations*" in "Plugin delay compensation"
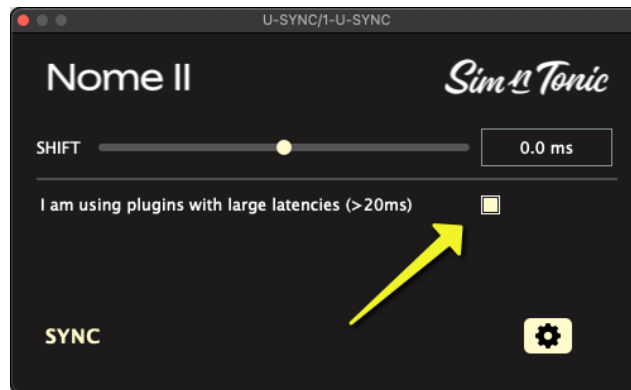

- Make sure the plugin track is connected to the Master output

- If you get strange issues like resyncing and jumping, try disabling the "Safe overloads" in the audio settings

- If you are using plugins with large latencies, check the box in the plugin


This will work with up to **250ms** of combined latency per track. Above this you will need to manually compensate using the *SHIFT* slider.

5.5 - Apple Logic Pro

- Please avoid **selecting** or **recording** the U-SYNC plugin track

- In the Audio Settings, Set the *Processing Buffer Range* to **Small** or **Medium** and Multithreading to "**Playback & Live tracks**"
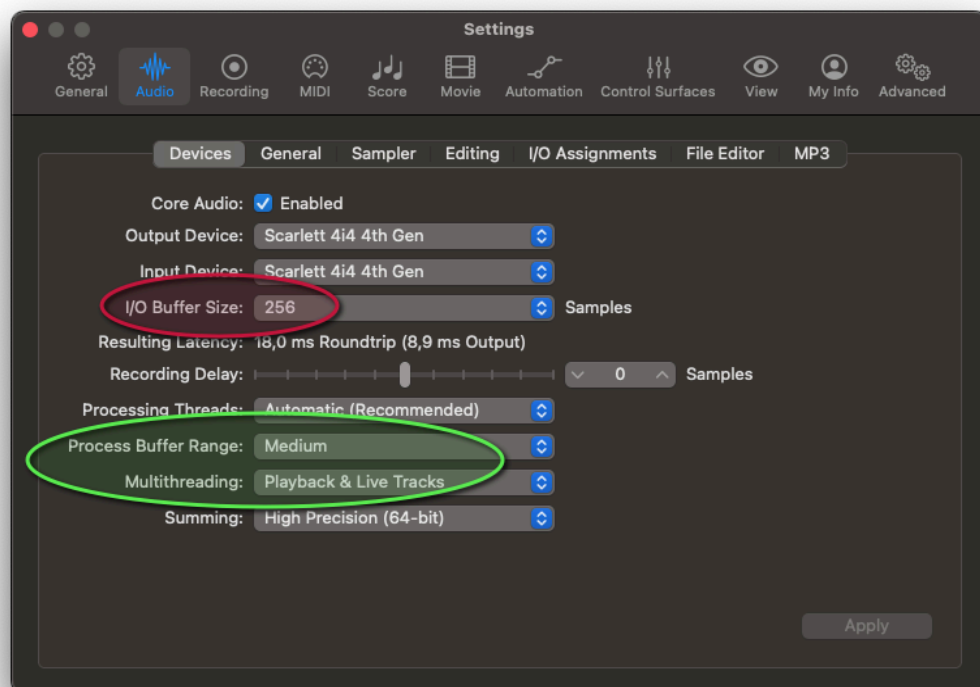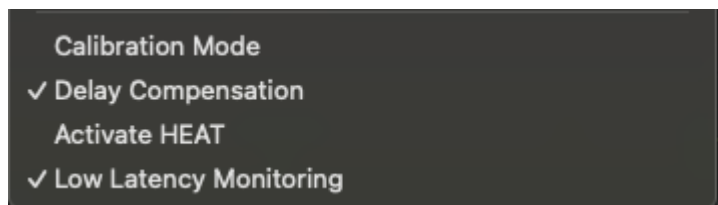
- Make sure to select the correct I/O Buffer Size in the plugin, it must be the same as the one in the Audio Settings
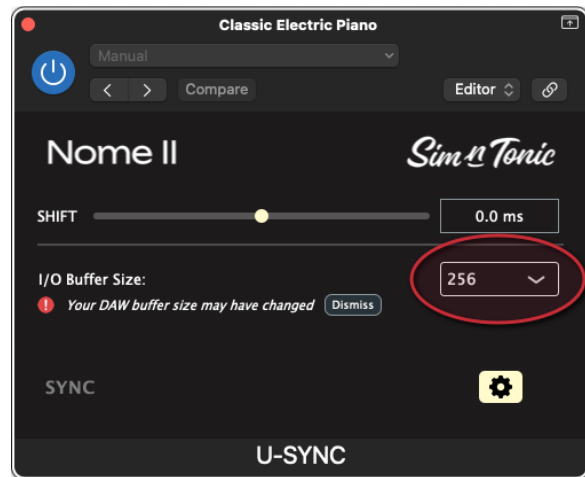
5.6 - Avid Pro Tools

- Make sure that Delay Compensation is turned on in *Options*

- Make sure to select the correct H/W Buffer Size in the plugin, it must be the same as in the *Playback engine* setup in Pro Tools.
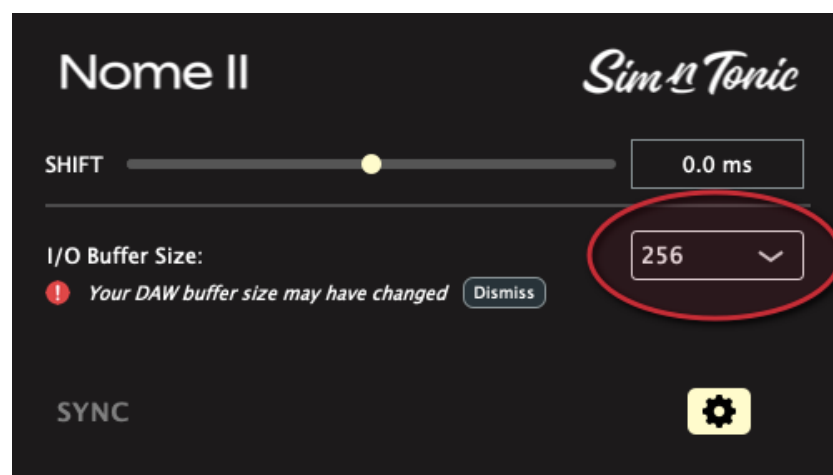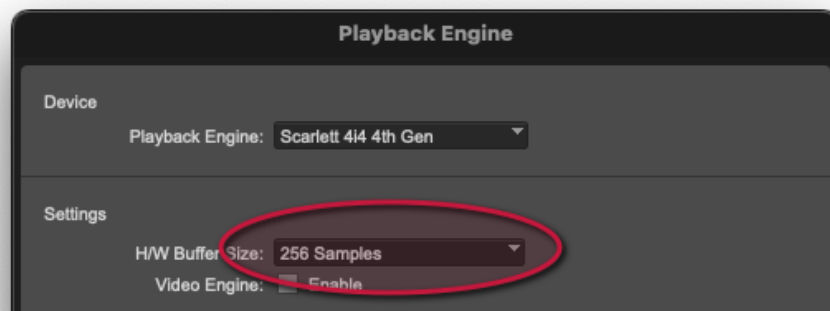
5.7 - Presonus Studio One

- Disable the Dropout Protection in Preferences -> Audio Setup -> Processing
  Alternatively, keep Dropout Protection on but use a small block size
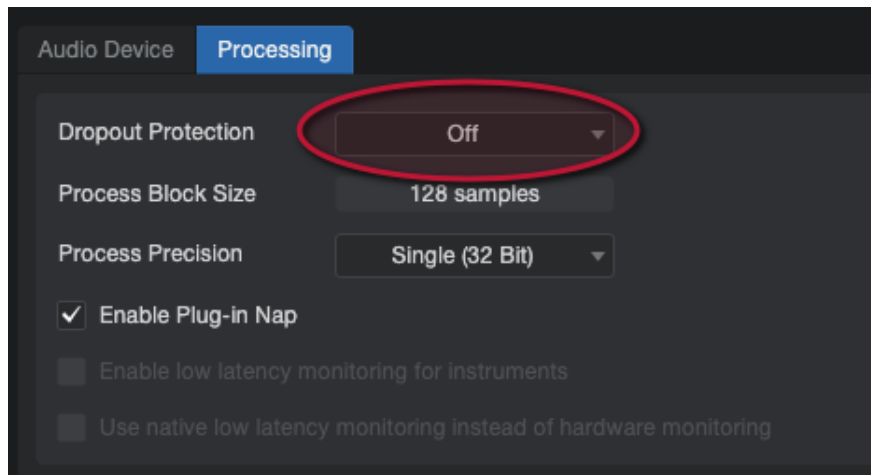
5.8 - Cockos Reaper

- Disable *anticipative FX* on the U-SYNC plugin track, by right clicking the track and
  going to "*Track performance options*". The other tracks can keep anticipative FX on.

5.9 - UAD Luna

- Please use the VST3 plugin (and **not** the AU plugin)

5.10 - Other DAWs

If your DAW is not in this list it means the plugin has not been tested with it and is not officially supported. But try loading the plugin in your DAW and record your device (for example Nome's metronome output). You will get 3 possible outcome:
1. The plugin works as it should, and the synchronisation is very precise
   - note that the latency might still be affected by sample rate or buffer size
2. The plugin and the synchronisation works but your device has a latency:
   - you can manually correct this using the "*shift*" parameter (make sure your DAW has *Plugin Delay Compensation* turned on)
   - note that the latency might be affected by sample rate and buffer
3. The plugin does not load, the synchronisation does not work at all, or it keeps making the device jump and resyncing
   - In this case you will have to sync another way. For example you can sync a Sim'n Tonic Nome using an audio signal generated by another plugin.

Feel free to inform us about any issues but note that there is no guarantee they will be solved or that support for your DAW will ever be added.

6. Bi-directional control

6.1 - General considerations

When bi-directional control is active, you can change the tempo, change the time signature, or press play/stop on both your device or the DAW.
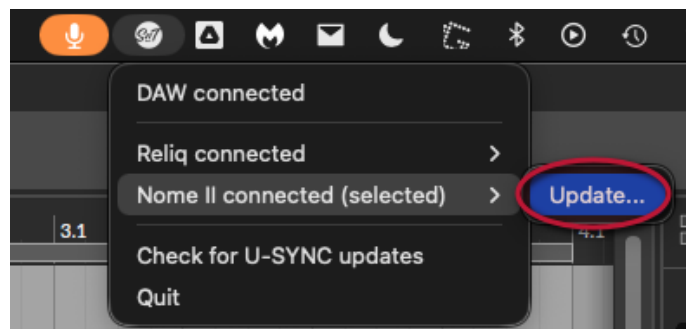
For now, the bi-directional control only works on the DAWs with an "*integration*" package:
- Ableton Live
- Bitwig Studio
- Steinberg Cubase & Nuendo (only for Sim'n Tonic devices)

Make sure you checked the integration packages you need in the U-SYNC installer:
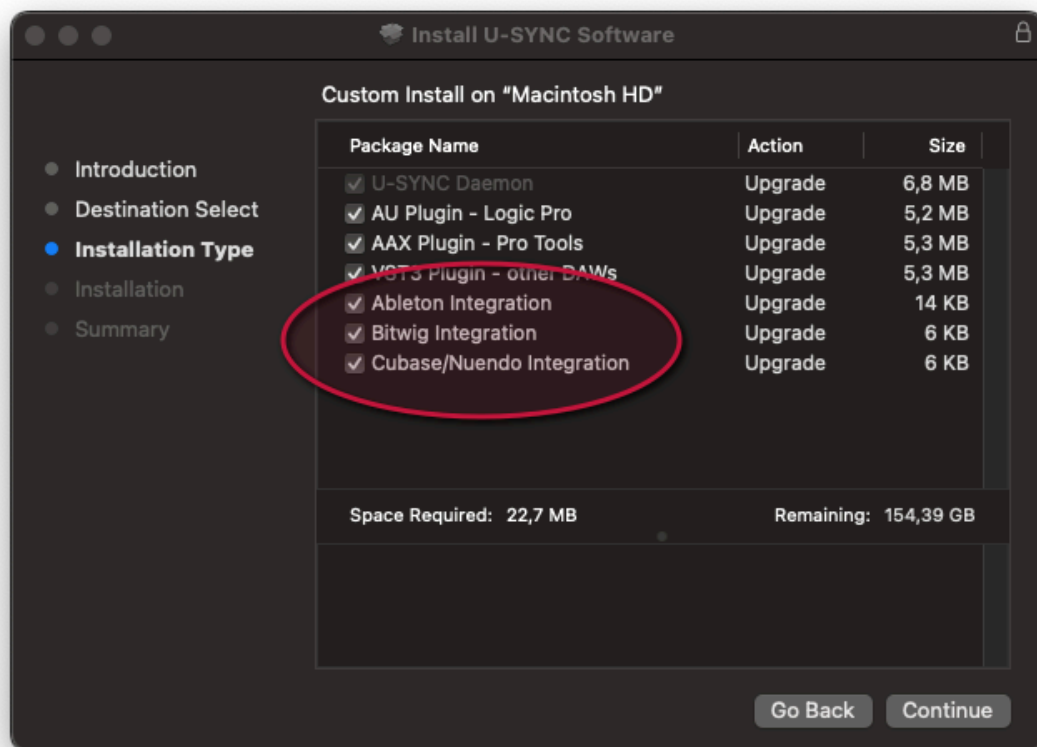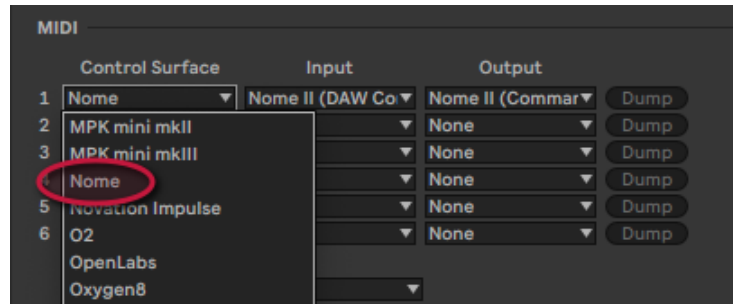

Make sure your device's firmware is also up to date *(you can update Nome I & II from the U-SYNC Daemon directly)*
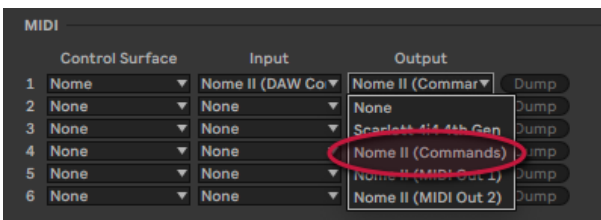
6.2 - Ableton Live setup

On Ableton you need to add your device as a control surface.

Open the Settings, go to **Link, Tempo & MIDI**, and add a Control Surface:

For Nome II:
- **Control Surface:** Nome
- **Input:** Nome II (DAW Control)
- **Output**: Nome II (Commands)
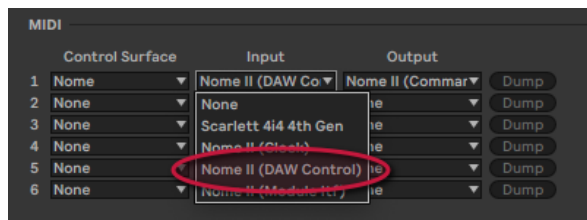
For Reliq:
- **Control Surface:** Reliq
- **Input:** Reliq MIDI Input **2**
- **Output**: Reliq MIDI Output **2**

6.2 - Bitwig Studio setup

On Bitwig, you need to add a *Controller*. Once added it should automatically find the device every time you restart Bitwig:
- go to **Settings > Controllers**
- press "**+ Add Controller**"
- choose "**Sim'n Tonic**" or "**Reliq**" **(*)** and your device
- then press **Add**

Then click twice on at the top right, potentially unplug/replug your device, and it should be automatically detected.
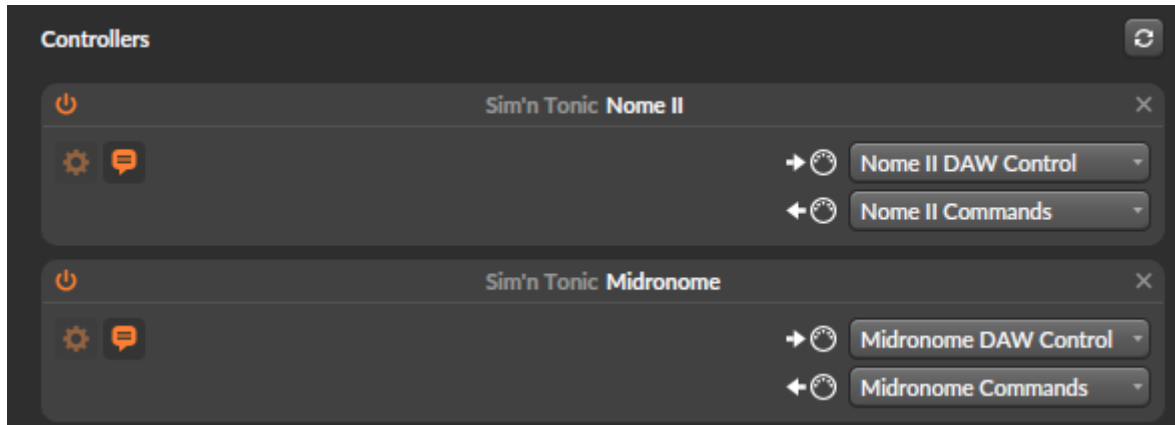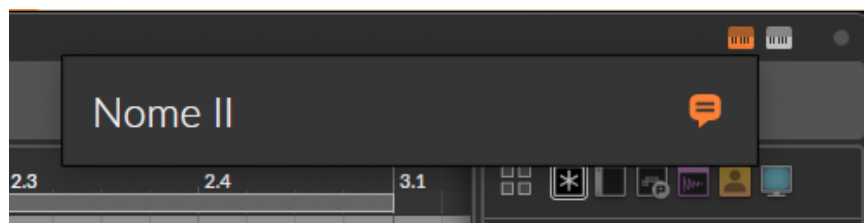

From your session, you can see the controllers at the very top right of the Bitwig window:

(*) *if you cannot see "**Sim'n Tonic**" or "**Reliq**" in the Hardware Vendor list, please check:*
- *that you are on Bitwig 5.3.8 or newer*
- *in **Settings** > **Locations**, that the location for "My Controller Scripts" is set to:*

`/Users/<username>/Documents/Bitwig Studio/Controller Scripts`

6.3 - Steinberg Cubase & Nuendo setup

The MIDI Remote Controllers should be added automatically, if not you can open the *Lower Zone* and check the "**MIDI Remote**" tab.

Then you can ignore it and your device should be able to control the DAW's tempo.

Important notes:
- Time Signature cannot be changed on the Nome (on in the DAW)
- You cannot connect multiple *Controller Surfaces* at the same time

So if you have more than one device connected, you will need to:
- Open the **MIDI Remote Manager**
- Remove all Controller Surfaces
- Then add <u>only one</u> manually by selecting:
  - **Vendor**: SimnTonic
  - **Model**: Nome
  - **Input Port**: <device> DAW Control
  - **Output Port**: <device> Commands
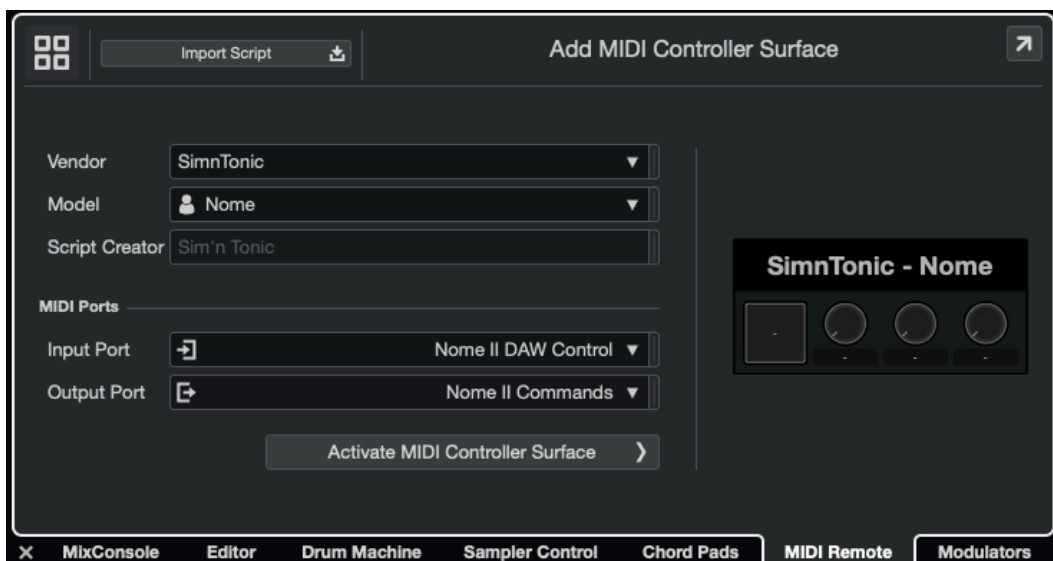
7. Troubleshooting

7.1 - Sync does not work

If the sync does not work, *i.e.* changing the tempo on the DAW does not change the tempo on your device, then open the plugin to check its status, and eventually click on the Daemon tray icon to see the connection status of the plugin and the device.
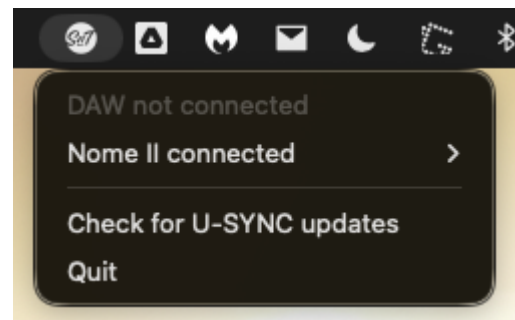
Check also your device:

- Reliq will show the U-SYNC logo ⊜ when connected correctly
- Nome I and II will light up when pressing play ("Locked" and "SYNC" LEDs)

If this is not the case, try the following:

- Disable/Re-enable the plugin
- Delete and put back the plugin
- Quit and restart the U-SYNC daemon
- Restart the DAW
- Unplug and replug your device

The U-SYNC daemon communicates with the device mainly using USB audio. The U-SYNC audio interface is called "*do-not-use-xxx*". It's important **not to use this interface**.
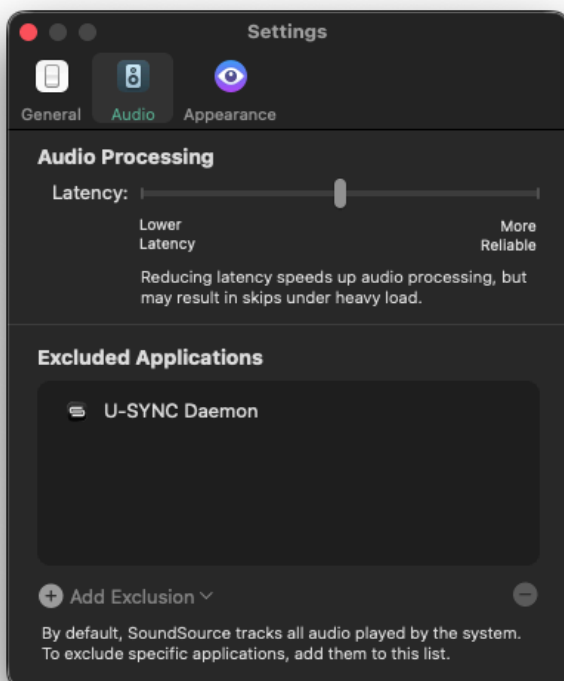
If you have a software affecting sound interfaces, it might interfere with the daemon.

For example, it has been noticed that the **SoundSource** software from *Rogue Amoeba* created issues. If you use it, make sure to add an **exclusion** for the U-SYNC Daemon: in SoundSource, go to *Settings → Audio*, then press "*Add Exclusion*" and select the U-SYNC Daemon.

7.2 - There is a large latency

The plugin is designed to get your device in time with the DAW with a **very stable latency** (usually no more than 10 milliseconds) when the *shift* slider on the plugin is <u>zero</u>. If that's not the case:

- Make sure your DAW has *Delay Compensation* enabled
- Try to use a different buffer size or different sample rate
- Make sure the plugin and DAW settings are correct (see sections above)
- Try restarting your DAW

Once you have a stable latency, record once to measure it and then compensate for it with the *shift* slider in the U-SYNC plugin.

*Please note that U-SYNC only <u>deals with MIDI Clock</u>. Other MIDI data (like Notes) do not go "through" U-SYNC but through normal USB-MIDI. So using the Nome to send MIDI Notes will **not** improve your synths' timing. We hope to solve this in U-SYNC 2.0.*

7.3 - Sync works but not the bi-directional control

If the sync works but you cannot control your DAW from your device, i.e. changing tempo, or pressing play/stop on the device does not affect the DAW, then check the Control Surface / Controller setup in your DAW (see sections above).
You can also try disabling/re-enabling it, unplugging, replugging the device, etc.

Note that on Nome you need to <u>enable the auto-play</u> (**A.PL** setting) for the DAW to react to play/stop on the Nome. Without it, DAW and device will still be in sync, but can independently start. This way you can decide when the DAW starts and when your machines start by pressing the play buttons.

8. Contact

If you need help, please prefer the public community channels like the Sim'n Tonic Forums or Facebook Group, or the Reliq Discord Channel. You will get an answer faster there and it will both engage and help the community.

You can get help on:
- The Sim'n Tonic Forums
- The Sim'n Tonic Facebook Group
- Contact Sim'n Tonic Support
- Contact Reliq Support