

Sim'n Tonic

Midronome (Nome I) User Guide

For Firmware 3.0

For U-SYNC 1.0

This PDF is the full manual for the Midronome (also called Nome I) by *Sim'n Tonic*. Read it through to learn all the things this versatile device can do!

Complementarily to this PDF, you can watch this Video walkthrough:

 **Midronome Walkthrough (Video manual)**

Note: *the video section about external sync is outdated, it has been replaced by U-SYNC, please refer to this PDF manual instead.*

If you are in doubt, or if the walkthrough does not match with what is written in this User Guide, always refer to the information from this PDF.

If you need help, ask on:

- [The Sim'n Tonic Forums](#)
- [The Sim'n Tonic Facebook Group](#)
- [Or contact Support](#) (please prefer public channels if possible)

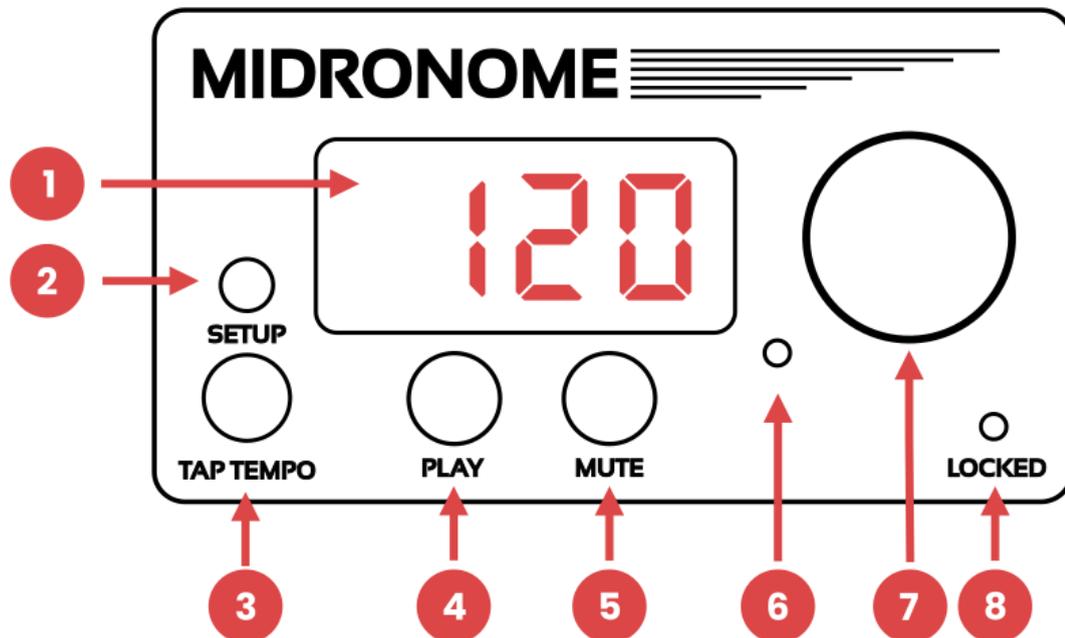
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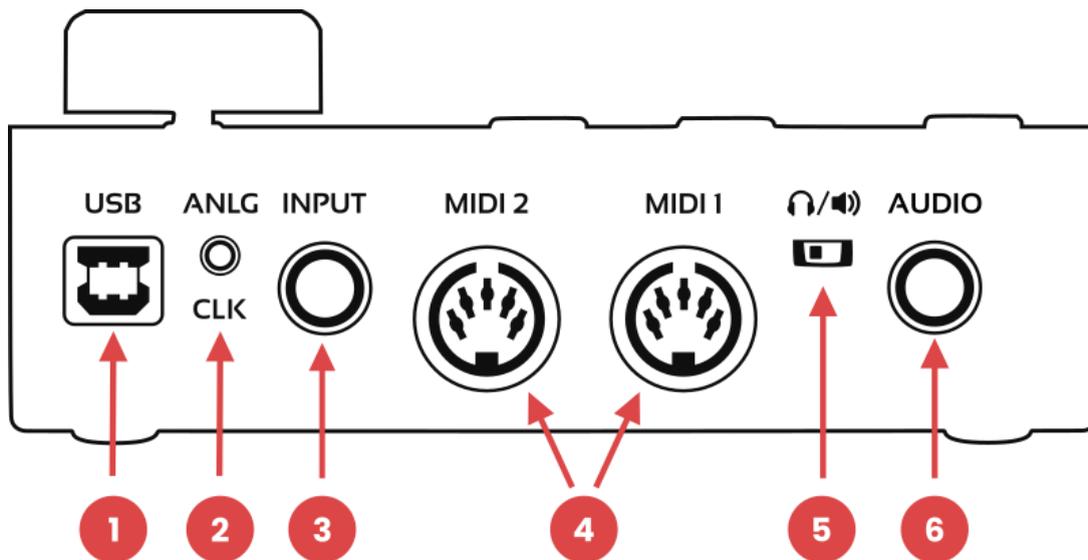
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1. Buttons & Connectors



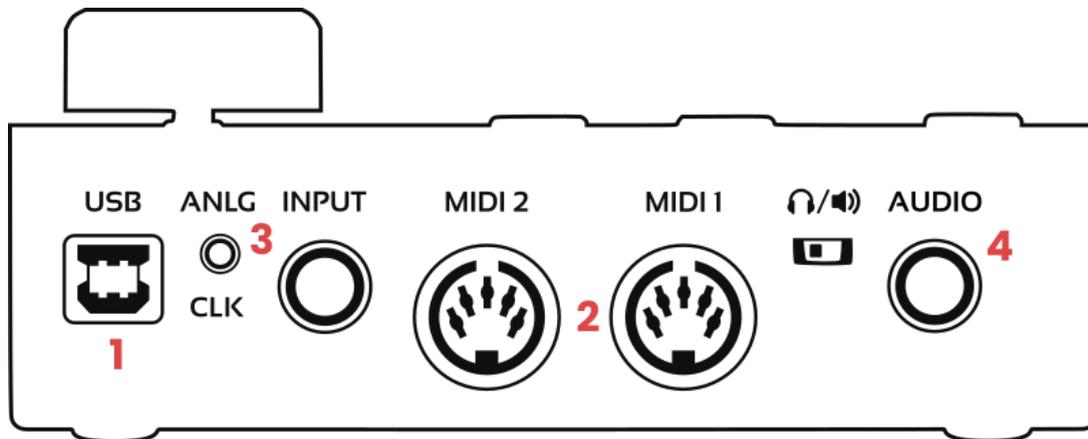
1. Display - shows the current tempo (or current setting/value/info)
2. Red Setup Button - enter and leave the settings
3. Tap Tempo Button - tap a new tempo
4. Play Button
 - start/stop your gear
 - long press to resync/restart your gear
5. Mute Button - mute/unmute the audio metronome
6. Click LED - blinks at tempo (green on downbeat, red on other beats)
7. Knob
 - turn it to change the tempo, or change settings/value
 - press it to validate
 - hold it down for 1 second to "lock" the tempo, where changes need to be validated (making a tempo jumps)
 - Note that Locked mode is disabled if **external sync** is enabled
8. Locked LED
 - turns on when device is locked or synced (see **external sync** section)
 - blinks when in the settings



1. USB Type-B plug
 - Used to power the device
 - **USB communication** with a computer
2. CV/Analog/DIN Sync Clock Output
 - 3.5mm TRS plug (stereo jack)
 - sends 5V analog pulses on both Tip & Ring for your modular synths
 - can be configured to DIN Sync (sync24) for vintage gear
 - this will require a TRS-to-DIN Sync adapter
3. Multi-function Input
 - 6.35mm TRS plug (stereo jack)
 - plug in 2 pedals here (one on Tip/Left and one on Ring/Right)
 - plug a drum pad here (to tap the tempo and/or time signature)
 - send the sync signal here (see **external sync** section)
4. MIDI Outputs
 - Sends MIDI Clock, MIDI Start/stop, and forwarded USB-MIDI messages
 - Start/stop can be independently controlled on each port
5. Headphones/Line Out switch
 - selects headphones (🎧) or balanced line out (🔊) for audio out (6)
6. Audio Output
 - 6.35mm TRS plug (stereo jack)
 - plays metronome click
 - Do not send phantom power (+48V) to this output

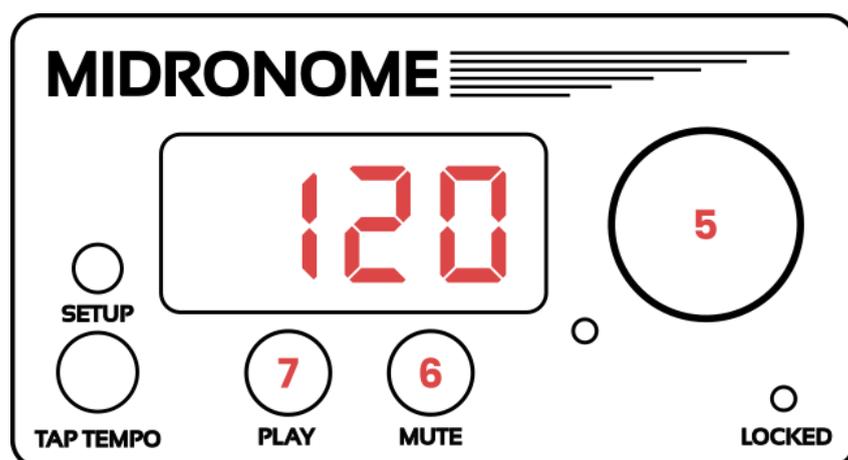
2. Quick start

Start by plugging cables on the back of the device:



1. Connect the USB cable for power
2. Connect a MIDI cable to the *MIDI IN/Inpu*t connector of your MIDI devices
 - o Make sure your devices synchronise to external MIDI Clock
3. Connect a mini-jack (3.5mm) cable to send pulses to your modular synths
4. Plug-in a pair of headphones to listen to the Metronome

Now your devices should be in time with each other, and you can:



5. Change the tempo
6. Mute/unmute the metronome
7. Start/stop your MIDI sequencers

Furthermore:

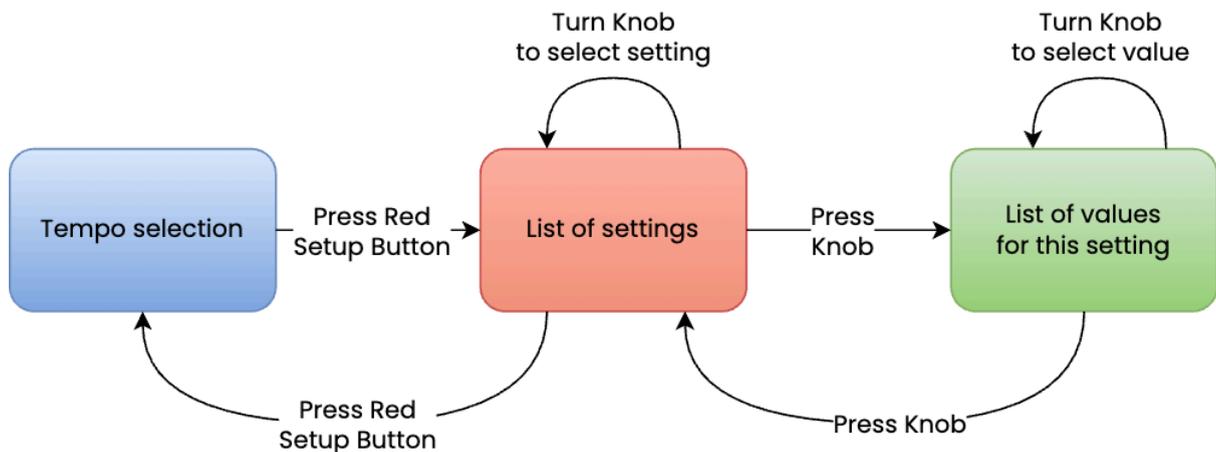
- Change the volume by holding down the Red Button and turning the Knob
- When pressing the Play button:
 - The button will blink
 - On the next bar it starts and the display shows *PLA* (Play)
 - Holding it down will send a re-sync/rewind signal (*Syn*)
 - Pressing it shortly will stop your gear (*Sto*)
- Holding the Knob down for 1 second will activate "Locked Mode"
 - The Locked LED will turn on
 - tempo changes need to be validated by pressing the Knob
 - This way you can make tempo jumps
 - Note that Locked mode only possible if no external sync is enabled, meaning:
 - the *inP* setting is not set to *24P*
 - the device is not connected to the plugin via *U-SYNC*

3. The settings

The settings are different configuration options changing the way the Midronome will act or react, when for example a button is pressed, or when a piece of hardware is plugged in.

3.1 - Editing the settings

The settings are accessible by pressing the Red Setup Button. Use the Knob to select, change, and save a setting value.

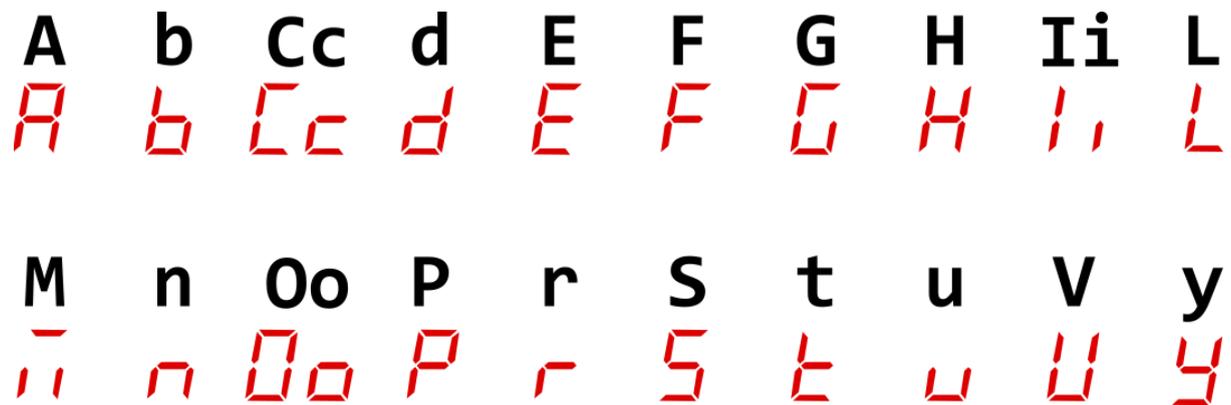


Step	Turning the Knob	Display example
Tempo selection	Changes the tempo	120
List of settings	Changes the selected setting	Ua. 1
List of values for this setting	Changes the value of this setting	OFF

All settings are saved and applied automatically. They are also preserved when the firmware is updated.

3.2 - Reading letters on the display

Understanding what the display is telling you can be a bit tricky if you are not used to it. This is the alphabet used by the Midronome:



Note that the dot is used for separation, for example: *Uo.1* reads Volume 1, *A.P.L* reads Auto-Play.

3.3 - The list of settings

Setting Name	Meaning	Setting Values
<i>Uo.1</i>	Volume of Click 1 *	1 to 9 (6dB steps)
<i>Uo.2</i>	Volume of Click 2 *	(Click 1 = downbeat, Click 2 = other beats)
<i>CL.1</i>	Click Sound for Click 1	0 (no sound) to 59
<i>CL.2</i>	Click Sound for Click 2	Sounds 1-9 are "natural" sounds, while 10+ are digital
<i>bAr</i>	Beats per bar	1 to 99 (time signature in x/4)

<p><i>inP</i></p>	<p>INPUT Plug Mode</p>	<p><i>OFF</i></p> <p><i>PEd</i> Pedal</p> <p><i>PA_d</i> Drum Pad **</p> <p><i>P.A_d</i> Drum Pad with time signature detection **</p> <p><i>24P</i> external sync to an or audio/analog signal</p> <p>(after selecting <i>PA_d</i> or <i>P.A_d</i> the display shows <i>PA-</i> , so you can adjust the sensitivity of the Pad by turning the knob)</p>
<p><i>PEd</i></p>	<p>Pedal Function</p>	<p><i>Mute</i> Mute/Unmute</p> <p><i>PLA</i> Play/Stop</p> <p><i>TAP</i> Tap Tempo</p> <p>(this is hidden unless <i>inP = PEd</i>)</p>
<p><i>AnL</i></p>	<p>Analog Clock Mode</p>	<p><i>OFF</i></p> <p><i>On</i> Clock is sent constantly</p> <p><i>PLA</i> Clock only sent after pressing PLAY</p> <p><i>d in</i> DIN sync / sync24 output mode</p>

<i>An.1</i>	Analog Clock 1 Speed	0 (clock off) to 24 ppq (pulses per quarter note)
<i>An.2</i>	Analog Clock 2 Speed	(settings hidden if <i>AnL = OFF</i> or <i>AnL = d in</i>)
<i>PLA</i>	Play Button Setup	<i>bot</i> Both - MIDI Ports 1 and 2 are sending Play <i>one</i> One - only MIDI Port 1 is sending Play <i>SEP</i> Separate - the Play button acts on MIDI Port 1, and the Mute button is now a second play button for MIDI Port 2 ***
<i>APL</i>	Auto-play Mode	<i>OFF</i> Auto-play is off <i>On</i> Start/Stop is sent automatically when sync start and stops - see external sync
<i>br1</i>	Display Brightness	Adjust brightness of the display from 100 to 800

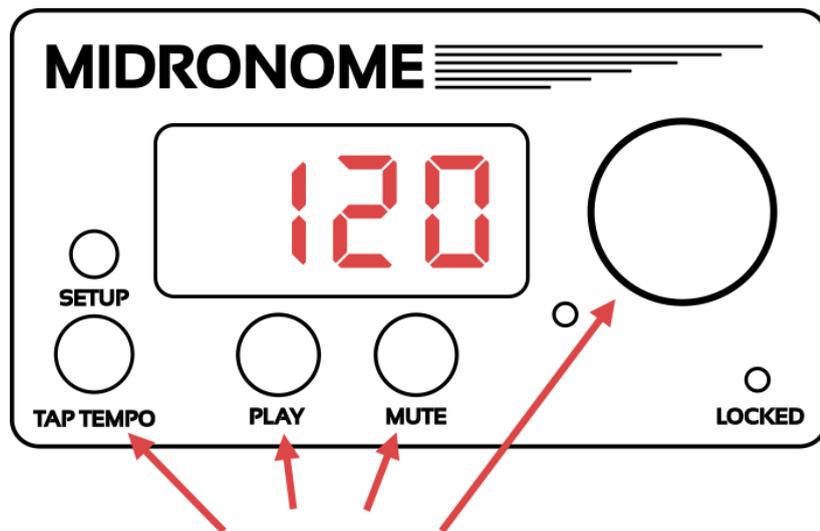
* Adjust both volumes by holding down the Red Setup button and turning the Knob while the display is showing the tempo.

** When PAd or P.A.d. mode is selected, before leaving the settings, the LED's of the device will stop blinking, now reacting to taps on the pad. In P.A.d. mode, to be able to tap the time signature you want first to practise tapping 1 2 3 4 1, with both 1's being green and all other taps red. Feel free to adjust the sensitivity as needed. See [the walkthrough on Youtube](#) for a video explanation.

*** The metronome will automatically be unmuted when choosing this option, as the mute button will not perform mute/unmute anymore. Note that you can still mute or unmute using a pedal.

3.4 - Advanced settings

Because the Midronome is so versatile, there are even *more* settings. But to avoid an overwhelmingly long list, a few settings are hidden. These settings will appear if you press the following combination when you are in the list of settings:



**Hold down
Tap Tempo + Play + Mute + the Knob
for 1 second (in the settings)**

Then the display will blink *Adv* (Advanced) and the list will now have the following options:

Setting Name	Meaning	Setting Values
<i>Uo.1</i>		
<i>Uo.2</i>		

CL1		
CL2		
bAr		
inP		
PEd		
PE2	Pedal 2 Function *	<p>OFF Pedal 2 is deactivated (<i>default</i>)</p> <p>MUTE Mute/Unmute</p> <p>PLA Play/Stop</p>
PEt	Pedal Type	<p>SUS Sustain - use momentary pedals like piano sustain pedals (<i>default</i>)</p> <p>LAT Latching - use latching pedals like guitar amp footswitches</p>
AnL		
An.1		
An.2		
PLA		

<i>RES</i>	Reset Mode	<i>OFF</i> Play is sent on the next bar (<i>default</i>) <i>On</i> Play is sent right away and the audio metronome is reset/rewind <i>(this setting is hidden and the Reset Mode is off when external sync is enabled)</i>
<i>A.P.L</i>		
<i>LED</i>	Click LED brightness	<i>OFF</i> <i>nor</i> Normal brightness (<i>default</i>) <i>HIG</i> High brightness
<i>br1</i>		

All the advanced settings will stay visible until the device restarts. After restarting, all advanced settings with a default value will be hidden again (the others will stay visible).

* Pedal 2 is the Ring/Right part of the INPUT plug, it can be used in conjunction with any of the *inp* settings (making it 2 pedals, 1 pedal and *external sync*, or 1 pedal and a drum pad)

4. USB communication and commands

The Midronome is USB-MIDI Class compliant. It will add 6 MIDI interfaces on your computer, 3 INs and 3 OUTs:

- **Midronome Clock [IN]** - sends MIDI Clock to your DAW
- **Midronome Module Itf 1 [IN]** - forwarded MIDI from the Module interface
- **Midronome Module Itf 2 [IN]** - same (second port)
- **Midronome Commands [OUT]** - receives commands for the Midronome
- **Midronome MIDI Out 1 [OUT]** - forwards any MIDI to the "MIDI OUT 1" Jack
- **Midronome MIDI Out 2 [OUT]** - forwards any MIDI to the "MIDI OUT 2" Jack

Note that on Windows the interfaces might be called differently, usually simply "Midronome", then "Midronome Port 2", "Midronome Port 3", etc. They should be in the same order as written above.

Important: if you recently upgraded the firmware, and cannot see all the interfaces, then you need to delete the Midronome Setup registered in your computer, then unplug-replug your Midronome.

You can do this in the "Audio MIDI Setup" on macOS and in the "Device Manager" on Windows.

4.1 - The Clock interface

The first MIDI IN interface, "Midronome Clock", sends the MIDI Clock as well Start and Stop messages.

Use it with software or hardware that can follow MIDI Clock, for example it can be a way to get your **DAW to follow the Midronome**.

4.2 - The 2 module interfaces

These are used when you connect a physical add-on module to your Midronome which sends data over the USB cable. For example a MIDI IN module could forward data from its MIDI IN jacks to these interfaces.

4.3 – MIDI Forwarding interfaces Out 1&2

Send MIDI data to “Midronome MIDI Out 1” or “Midronome MIDI Out 2”, and that data will be forwarded to the corresponding DIN-MIDI port on the back of the device.

The MIDI data is merged with the MIDI generated by the Midronome so that:

- The clock has the highest priority and is 100% unaffected by other data
- Start & Stop messages also have high priority and will be sent on time

MIDI System Common messages and MIDI System Realtime messages (which all start with 0xFn) are **not** forwarded, except Song Select message (0xF3).

All other MIDI messages, including Note On/Off, Aftertouch, CC, PC, Channel Pressure, and Pitch Bend are all forwarded.

System Exclusive (SysEx) messages are forwarded, but limited to **500 bytes**. They have lower priority than realtime messages and could be interrupted and resent later if a higher priority message needs to be sent (for example Start).

4.4 – Midronome Commands

You can send MIDI to the “Midronome Commands” interface in order to control your Midronome. The same commands can be sent to the module interface.

4.4.1 – Change tempo and time signature

On Channel 12, use MIDI CC 85&86 to set the tempo to $(128 \times CC85) + CC86$

- CC85 val. 0 followed by CC86 val. 30-127 will set the tempo to 30-127
- CC85 val. 1 followed by CC86 val. 0-127 will set the tempo to 128-255
- CC85 val. 2 followed by CC86 val. 0-127 will set the tempo to 256-383
- CC85 val. 3 followed by CC86 val. 0-16 will set the tempo to 384-400

For example:

- To set the tempo to 170, send CC85 val. 1 followed by CC86 val. 42
- Later on, sending CC86 val. 117 (and no CC85) will set the tempo to 245.

Alternatively, still on Channel 12, using MIDI CC 87, 88, and 89:

- CC 87 val. 0-127 will set the tempo tempo to 60-187

- **CC 88 val. 0-127** will set the tempo tempo to **100-227**
- **CC 89 val. 0-127** will set the tempo tempo to **140-267**

Finally, still on Channel 12, use MIDI CC 90 to set the time signature:

- **CC 90 val. 1-127** will set the time signature to **x/4**
 - For example **CC 90 val. 3** will set the time signature to **3/4**

4.4.2 - Mute/unmute metronome

On Channel 12, **MIDI CC 102**, with the following values:

- **0** = mute metronome
- **1** = unmute metronome
- **2** = toggle mute (unmute if muted and mute if unmuted)

4.4.3 - Change analog clock speed ("An.1" and "An.2" settings)

On Channel 12, use MIDI CC 104 or 105 with the following values:

- **CC 104 val. 0-8** will set ANLG clk 1 speed to **0, 1, 2, 3, 4, 6, 8, 12, 24**
- **CC 105 val. 0-8** will set ANLG clk 2 speed to **0, 1, 2, 3, 4, 6, 8, 12, 24**

Note that this corresponds to the **An.1** and **An.2** settings.

4.4.4 - Start/stop sequencers

- **MIDI Continue:** (re)start machines on MIDI Port X* on the next bar
- **MIDI Start:** reset/rewind the clock ** and start machines on MIDI Port X*
- **MIDI Stop:** stop machines connected to MIDI Port X*
- On Channel 12, **MIDI CC 103:**
 - **1** = same as MIDI Continue but for Port 1 only
 - **2** = same as MIDI Continue but for Port 2 only
 - **11** = same as MIDI Stop but for Port 1 only
 - **12** = same as MIDI Stop but for Port 2 only
 - **20** = same as MIDI Start (i.e. acting on MIDI Port X*)
 - **21** = same as MIDI Start but for Port 1 only

These start/stop commands are acting no matter the current playing state and no matter the configuration of the device (in particular *PLA* and *rES*). This way, if you have started your sequencer manually you can still stop it by sending MIDI Stop. Or if you want to send a resync message (= long press on the Play button), you can do that by sending MIDI Continue.

Note: To avoid conflicts with a DAW sending transport messages, the MIDI Start/Continue/Stop commands are disabled if the device is *connected to a U-SYNC plugin* and if the *auto-play is on* at the same time. The MIDI CC Commands (including CC 103) are always enabled.

* Port X = Port 1 and 2 if the setting PLA is set to "bot" (both), otherwise Port 1 only

** This is independent of the **rES** setting. But note that resets are not possible when *external sync* is enabled. In this case, MIDI Start will have the same effect as MIDI Continue.

5. External sync – follow other devices & DAWs

The Midronome has been designed to be used as a Master Clock, and if you can you should always let it be the master. But there might be some situations where this is not possible, this section is about how to get your Midronome to follow another device.

5.1 – Sync to an analog clock or an audio signal

Setting the *inp* setting to *24P* will get your Midronome to follow an analog sync signal sent to the “INPUT” jack of the device.

The analog sync signal can be any loud short sounds or analog pulse sent at **24ppq** (parts per quarternote), i.e. every **64th triplet note**. This could be for example a recorded (and edited to be < 5ms) sound sent regularly or a 5V analog clock like the ones sent by modular or vintage synths.

Once you have made your audio sync track at the right tempo, all you need is to get your hardware to play it to get the Midronome to follow it. This could be:

- A tape machine
- A hardware recorder
- DJ equipment
- SPD Drum pad
- A piece of software
- etc.

Important: the Midronome cannot sync to any audio, like a song or a drum beat, it needs regular pulses. Syncing to any audio is usually called Beat Detection or Tempo Following.

In this mode, the device will sync to any regular pulses, sent at 24 Parts Per Quarternotes (PPQ), which is equivalent to **64th note triplets**. Firmware 4.0 might add syncing to pulses sent at lower ppq.

5.2 – Syncing to your DAW with U-SYNC

Syncing your hardware to your DAW has **never been easier**! Firmware 3.0 added a very innovative feature which we decided to call **U-SYNC**.

Note: for now, U-SYNC is only available on Mac. On Windows you will have to use the **24P mode and the old plugin**.

5.2.1 – Setup

- Download and install the **Midronome U-SYNC software package**
- Load the *Midronome U-SYNC* plugin in your DAW

Then the plugin will show a green indicator above “U-SYNC”. When you press play in the DAW, everything should be in sync, right away.

5.2.2 – 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**.

But you can open the plugin window to check the status or to adjust a few settings. The indicator above “U-SYNC” at the bottom right will show you information about the connection.

	<p>U-SYNC light is green</p> <p>Everything is ok</p>
	<p>U-SYNC light is red</p> <p>No Midronome found</p>
	<p>Error Screen</p> <p>Error is shown on the screen, and all controls are disabled</p>

The LOCKED indicator matches the one on the Midronome, it will turn orange when you press Play in the DAW.



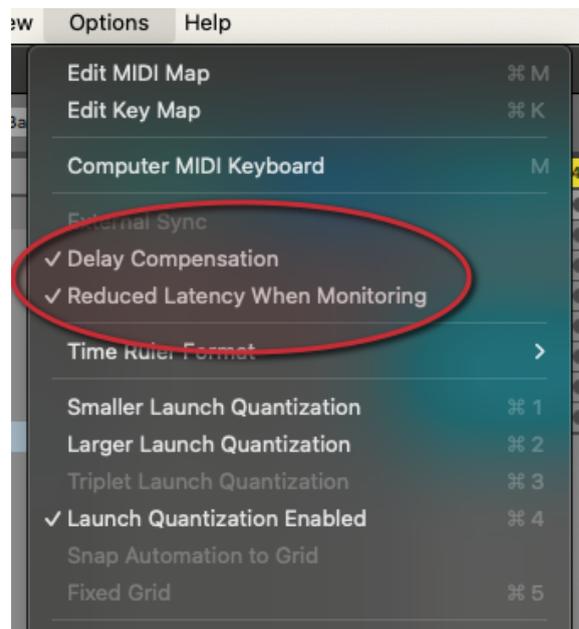
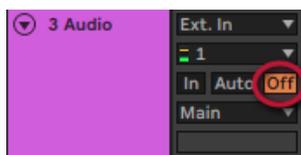
You can press the Settings button on the bottom left to adjust the latency, as well as a few DAW-specific parameters written below.

5.2.3 - DAW-specific information

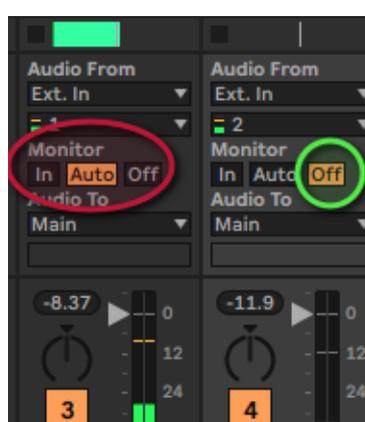
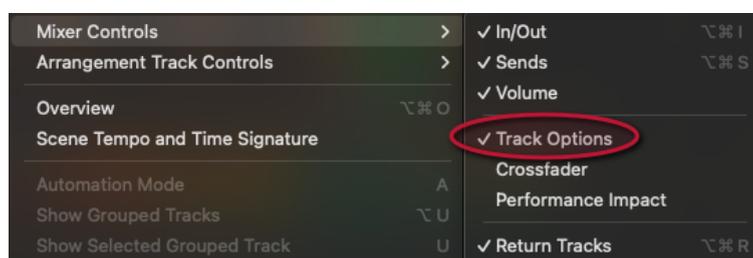
Ableton Live

- Make sure to tick *Delay Compensation* and *Reduced Latency When Monitoring* in the Options

- Set your tracks' monitoring to "Off" otherwise the recording will be delayed.

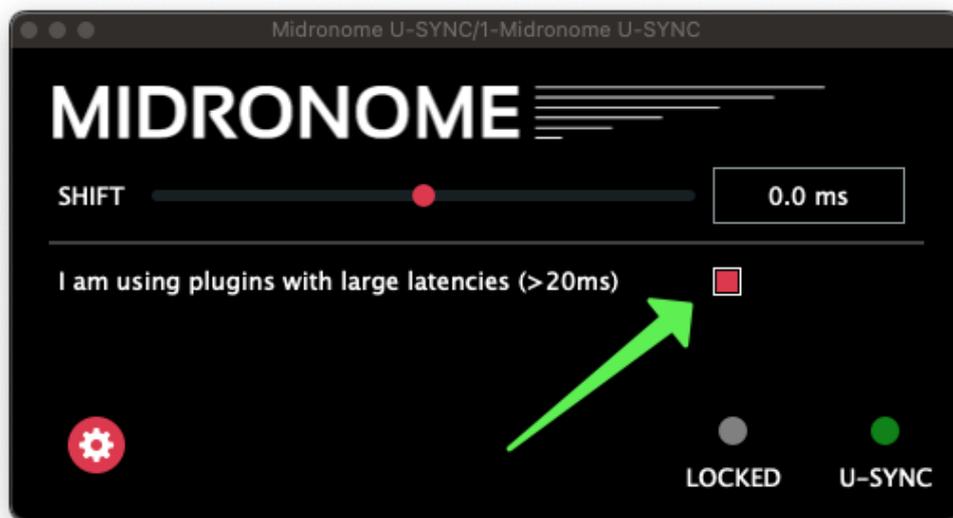


If you really need monitoring through Ableton, version 12 added an option to remove that extra delay. First set "Track Options" in View -> Mixer Controls.



Then for each track, either set monitor to "Off" or disable "Keep Latency".

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

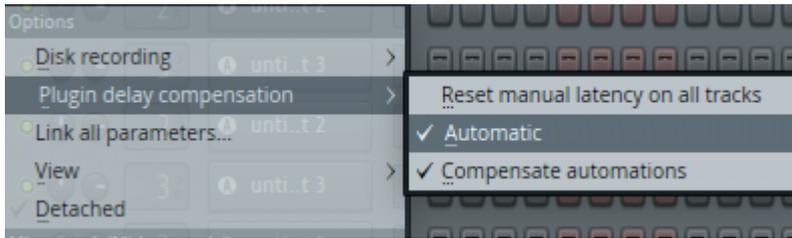


This will work with up to 250ms of combined latency per track. Above this you will need to manually compensate using the *SHIFT* slider.

Image-Line FL Studio

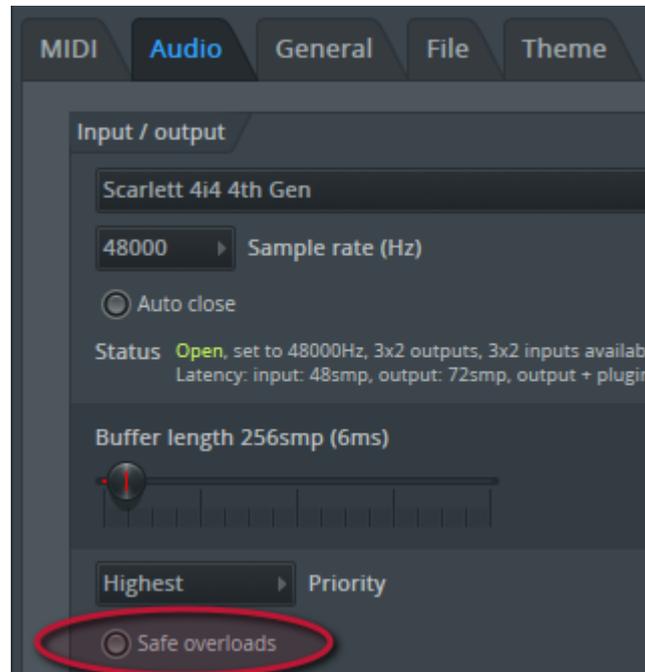
- Click on the small arrow at the top left of the Mixer and enable both "Automatic" and "Compensate automations" in "Plugin delay compensation"



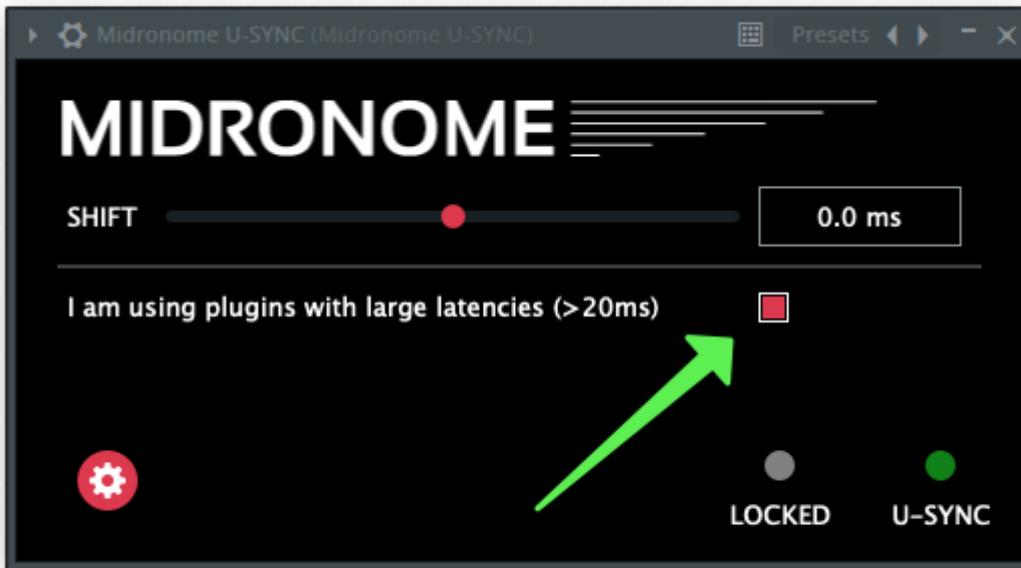


- Make sure the plugin track is connected to the Master output

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



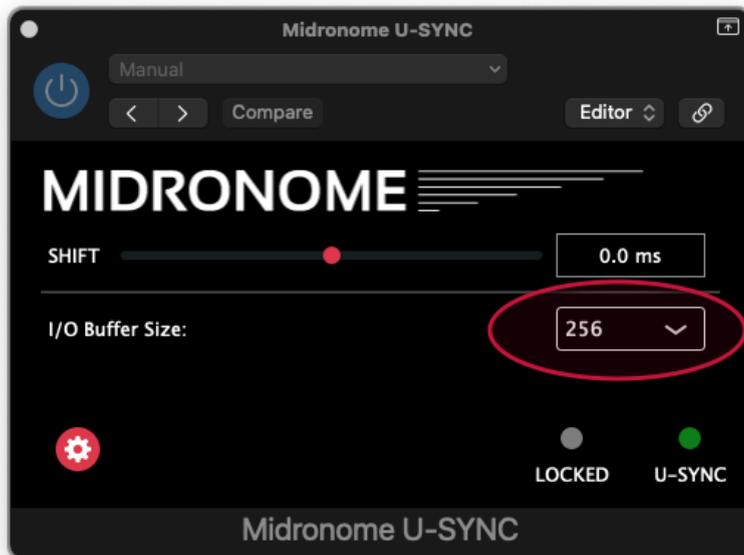
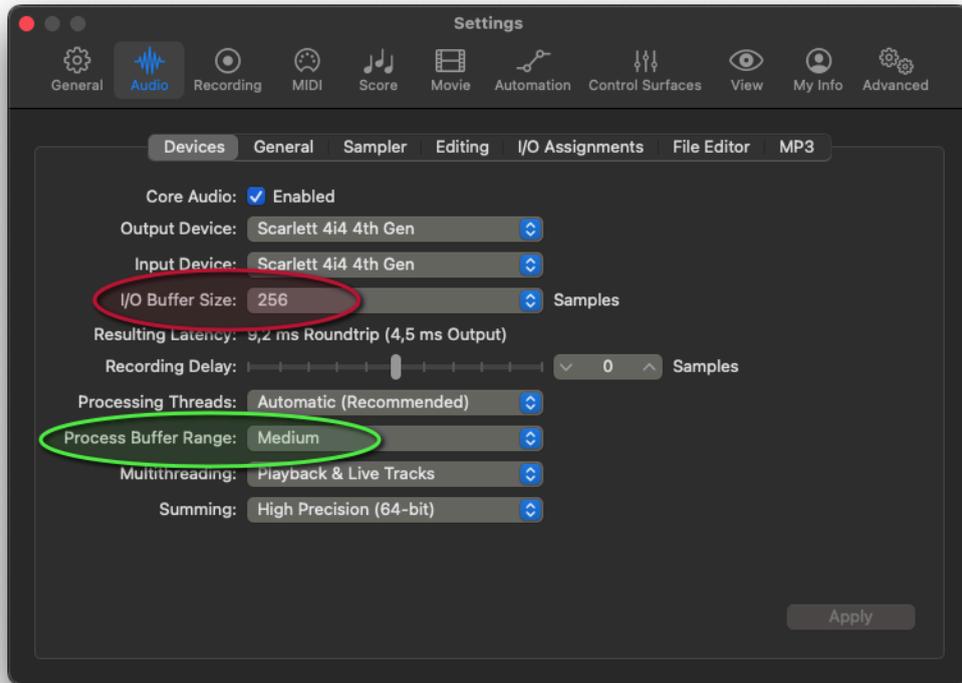
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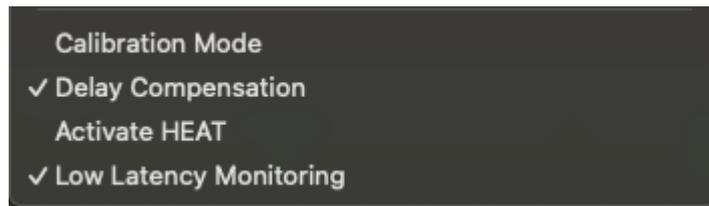
Apple Logic Pro

- Please avoid selecting or recording the U-SYNC plugin track
- In the Audio Settings, Set the *Processing Buffer Range* to **Small** or **Medium**
- 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

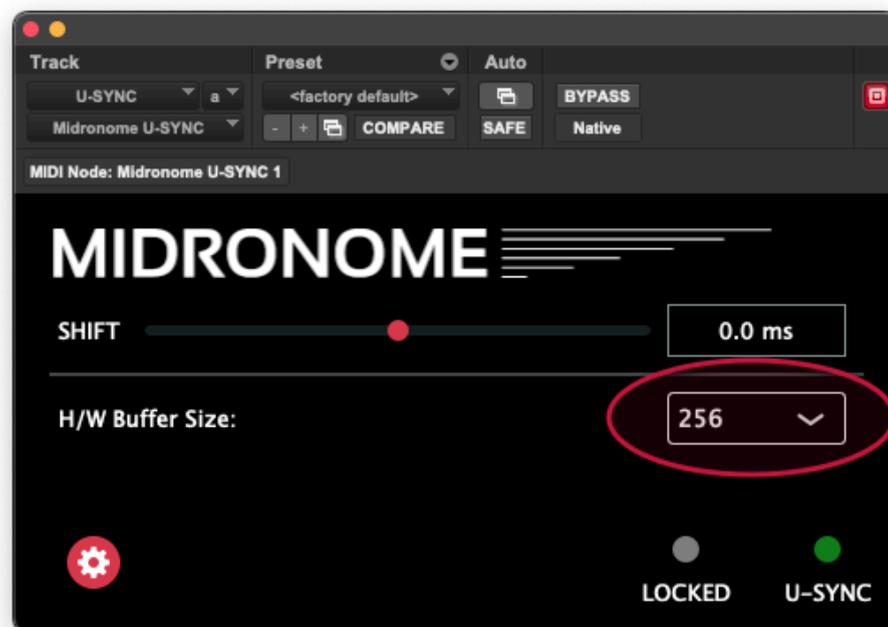
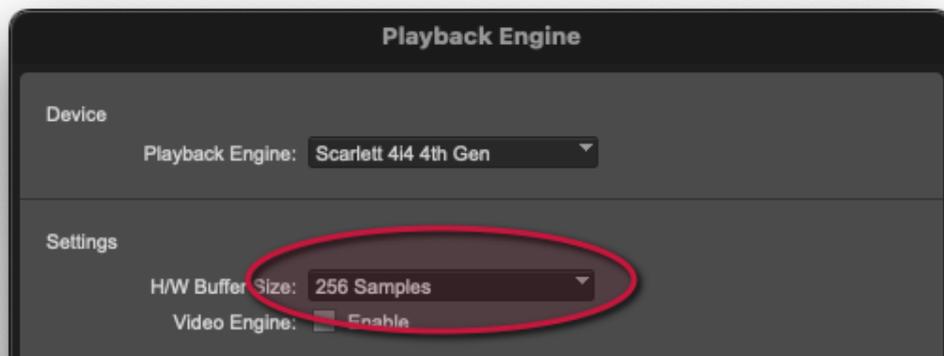


Avid Pro Tools

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

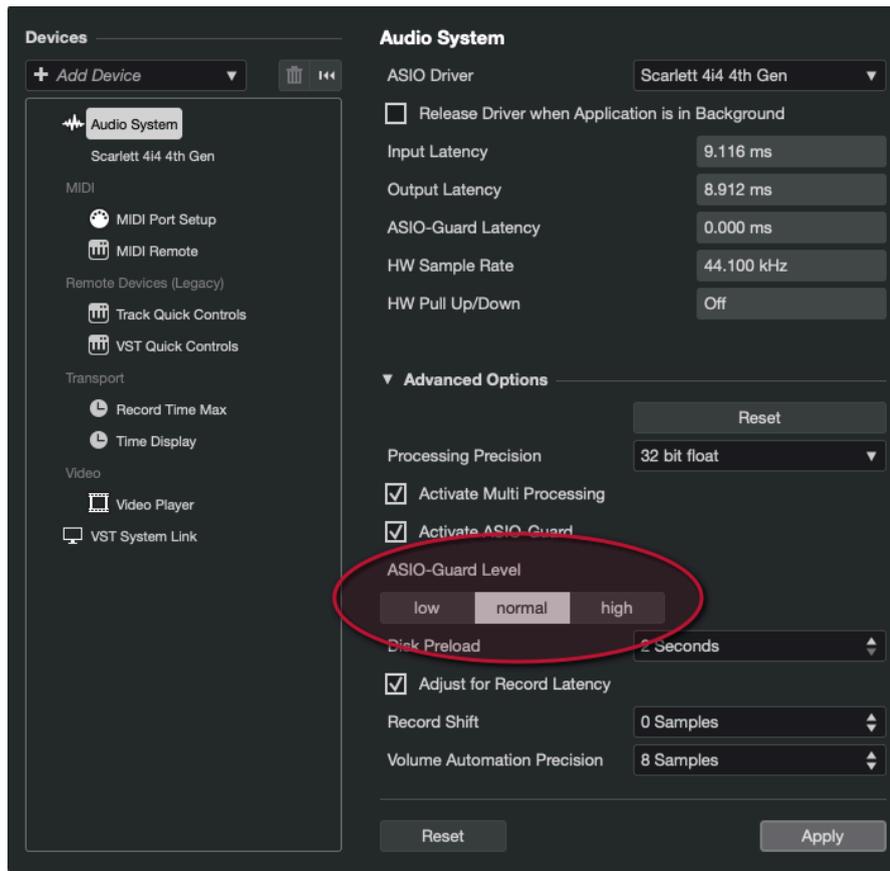


- Make sure to select the correct H/W Buffer Size in the plugin, it must be the same as in the *Playback engine* setup in Pro Tools.

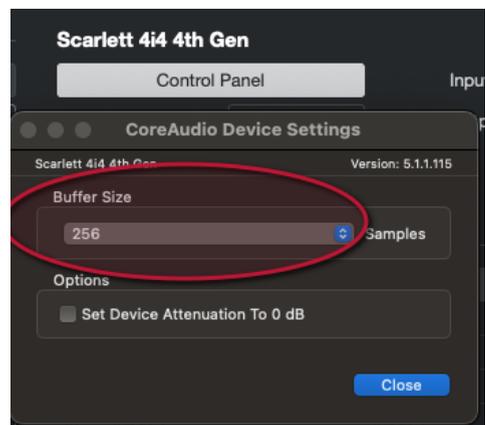
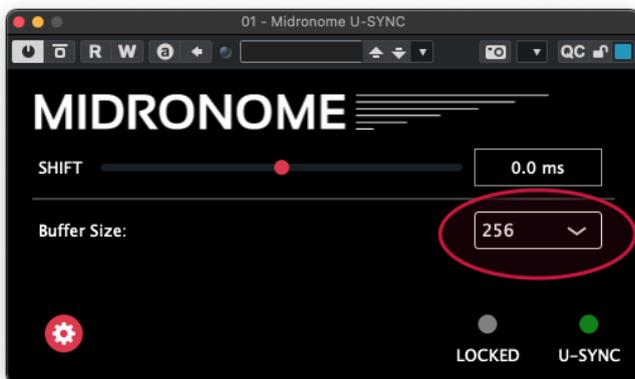


Steinberg Cubase

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

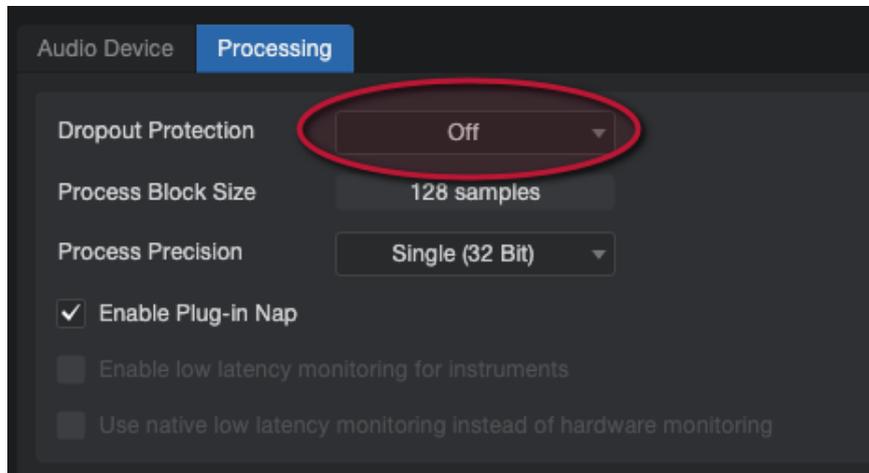


- Make sure to select the correct Buffer Size in the plugin, it must be the same buffer size you have selected in the "Studio Setup"



Presonus Studio One

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



Cockos Reaper

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



Bitwig Studio

- Use a buffer size of 1024 or less

Other DAWs

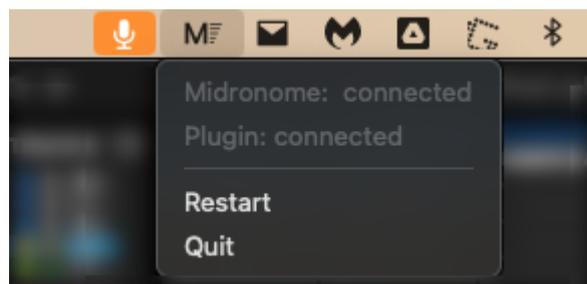
If your DAW is not in this list it means the plugin has not been tested with it and is not officially supported. But try loading the plugin in your DAW and record its metronome output. 3 possible outcome:

- 1) The plugin works as it should, and the synchronisation is very precise - note that the latency might still be affected by sample rate and/or buffer size changes.
- 2) The plugin and the synchronisation works but the Midronome has a positive or negative latency. In this case you can manually correct this using the "shift" parameter (make sure your DAW has *Delay Compensation*). Note that the latency will be affected by sample rate and/or buffer size changes.
- 3) The plugin does not load, the synchronisation does not work at all, or it keeps making the Midronome jump and resyncing. In this case you will have to use **the old plugin and the 24P mode**.

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.

5.2.3 - Troubleshooting

If the sync does not work (the "Locked" LED does not turn on), open the plugin to check if its "U-SYNC" light is green, and eventually click on the Daemon tray icon to see the connection status of the plugin and the device.



Then try one or more of the following:

- Disable/Re-enable the plugin
- Delete and put back the plugin
- Restart the Midronome daemon
- Restart the DAW
- Unplug and replug the Midronome

The U-SYNC plugin will **not** change the tempo of your DAW, only the tempo of the Midronome (sync is one way only, the Midronome follows the DAW). If you experience your DAW tempo changing slowly, it probably is because your DAW is trying to **sync to the Midronome as well over USB-MIDI**. Disabling the sync over MIDI in your DAW will prevent this.

The plugin is designed to get the Midronome in time with the DAW within +/- 1 millisecond when the *shift* parameter on the plugin is 0. 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 settings are correct (see sections above)
- Try restarting your DAW

5.3 – Syncing to your DAW using the 24P mode

If you are on Windows, or if your DAW does not work with U-SYNC, you can sync using the old Midronome plugin. This plugin sends analog (audio) pulses at 24ppq, so that the Midronome can sync to it like it would to an analog clock for example.

Note: this old “Midronome” plugin is **open-source** and not maintained anymore. Feel free to report any bugs on its github page, they might be fixed by the community, or we might have a look at it as well. You can download the VST/AU/AAX files on the **github page**.

Once you have the plugin installed:

- Load the plugin on a track in your DAW
- Then configure your DAW and your audio interface so that this track is routed to a dedicated (physical) output on your audio interface
- Make sure that only this track is sent on that output
- Make sure the volume of that output is loud is loud
- Connect a cable from this output to the Midronome's “INPUT” plug
- Enable the **24P mode** on the Midronome

Then press play in your DAW, the Midronome's "Locked" LED should turn on and it should follow your DAW's timing.

For more information about how to set up the old plugin, see the old PDF for FW 2.0 called "How to sync with DAWs", also on the [github page](#).

5.4 - Syncing your DAW to the Midronome using MIDI over USB

U-SYNC and the 24P mode will get the Midronome to follow your DAW (*i.e.* the DAW is the master), but you might prefer it the other way around, getting your DAW to follow the Midronome (*i.e.* the Midronome is the master).

The Midronome sends MIDI Clock over USB, which you can use to sync your DAW to it. Please refer to your DAW's documentation regarding how to do this, for example the "Syncing Live to another device or application" section in the [official Ableton documentation](#) describes how to set it up for Ableton.

Most DAWs have a setting to adjust the synchronisation delay, see your DAW's documentation regarding this as well.

Note that:

- as of today, only **Ableton**, **Bitwig**, **FL Studio**, and **Reason** can do this
- this type of synchronisation is not very precise

5.5 - Automatically start and stop sequencers

The **APL** setting gives the possibility to automatically "press" the play button when the sync starts and stops. Simply set this setting to "On" and the Midronome will automatically send Start/Stop on its physical MIDI Outputs ports when the sync starts and stops.

This works both when syncing to external gear using the **24P** mode, and when syncing with DAWs.

The MIDI Outputs where the messages are sent is the same as if the PLAY button was pressed, so it could be **MIDI OUT 1**, or both **MIDI OUT 1 & 2** depending on the *PLA* setting.

6. Sync multiple Midronomes together

To get more outputs you can sync multiple Midronomes together. This sync is one-way only: one Midronome will be the *master* and all the others will *follow*. The tempo and time signature can only be changed on the master.

There is no real limit regarding how many Midronome you can get to sync (in fact, *we tested it with 36!*).

On every follower Midronome:

- press the red Setup button to enter the settings
- choose the *inP* menu
- select *24P* in the list
- Press the Knob for 1 second
- The setting will change to *54n*
- leave the settings

On the master Midronome:

- Make sure that
 - *inP* is **not** set to *54n* or *24P*
 - the Midronome is **not** connected to a DAW (delete the Midronome plugin from your session if needed)
- In the settings, select *CL 1*, and set it to 59
- Press the Knob for 1 second
- The *CL 1* setting will change from 59 to *54n*

Now connect a 6.35mm jack cable from the AUDIO plug of the master Midronome to the INPUT plug of every follower Midronome (use a Y splitter cable if syncing more than 2 Midronomes).

For best results, set the audio output switch to *line out* () on the master Midronome.

7. Upgrade the firmware

7.1 - Upgrade procedure

The firmware of your Midronome can be freely upgraded and downgraded.

To do so, you need:

- the **Firmware Updater** software
- a firmware file (***.midr**)

You can download them both on the [support page](#).

Then close all applications on your computer (in particular your DAW), start the Firmware Updater tool and follow the steps shown in the tool.

When it asks for a file, select the downloaded **.midr* file.

(see also [this Youtube video](#))

7.2 - Troubleshooting

The device, when started in bootloader mode, will show "**Err XXX**" in case of errors, where "**XXX**" could be one of the following.

These first two happen in case of a configuration mistake somewhere:

- **Err Dat (Data)**
 - this indicates the device received wrong firmware data
 - make sure to close all other softwares on your computer
 - in particular software that could send MIDI Data like DAWs
 - Someone reported [here](#) that the *Elektron Overbridge* process needed to be shut down
 - try redownloading the ***.midr** firmware file (in case it is corrupt)
 - or try with another firmware file
 - try the upgrade procedure from scratch again

- if you have tried all the above, please ask or search
 - The [Forums](#)
 - The [Facebook Group](#)
- **Err USB**
 - this indicates the device could not connect to the computer via USB, or that it lost the connection
 - make sure the USB cable is properly inserted, in particular on the Midronome side
 - try unplugging and re-plugging the USB cable
 - try disconnecting all other cables on the Midronome
 - try disconnecting all other USB devices
 - try removing USB hubs
 - make sure your computer allows the USB connection (MacOS for example often shows a popup with an "Allow" button)
 - potentially try with a different USB cable, and a different computer/OS if possible
 - if you have tried all the above, please ask or search
 - The [Forums](#)
 - The [Facebook Group](#)

Note: if one of these errors happen in the middle of an upgrade, the device will be left without a valid firmware on. In this case it will automatically (always) start in bootloader mode. Simply load a valid firmware again to be able to use your device. The device's settings will be unaffected.

These other errors probably mean your device is defect:

- **Err Pro (*Programming*)**
 - this indicates the device failed to program (=write to) its memory
 - try the upgrade procedure again
 - if it fails again, try it with another ***.midr** file
 - then please [contact support](#)

- **Err Cry (Crystal)**
 - this indicates the hardware crystal in your device is defect
 - if you see this, please restart your device normally (unplug and replug the USB cable)
 - it should also show an error (“Er.1”)
 - then please **contact support**

- **Err FLt (Fault)**
 - if you see this, please restart your device normally (unplug and replug the USB cable), it might also show an error
 - if it does not, try the upgrade procedure again
 - then please **contact support**

Feel free to search and ask on:

- The **Sim'n Tonic Forums**
- The **Sim'n Tonic Facebook Group**

And feel free to contact support:

- by email on **support@simntonic.com**
- on **Facebook Messenger**

8. Error Reporting and Firmware crash

Do not hesitate to report any bug you find, no matter how minor, it's a huge help! You can do it on [the Sim'n Tonic Bug Reporting forum](#).

If the firmware were to crash, the display will show "**Er.X**", with X from 2 to 9. This could be caused by a hardware issue or by a firmware bug.

If it ever happens (it still hasn't to this day!), all you have to do is press the MUTE button and your Midronome will restart (reboot). But the device will have also saved some info about the crash, which we would **very much like to get**, so if this happens to you, please reach out to support@simntonic.com.

Thank you!
Simon