Arturia MUSICAL INSTRUMENTS	**MiniBrute** **Oscillator Calibration**	**Technical note** **01** Version 1.2 Date 27 July 2012 Page 1/1

Document revisions:

1.0	2012/07/23	Initial document.
1.1	2012/07/26	Swapped "offset" and "slope" labels; revised tolerance values.
1.2	2012/07/27	Various rewordings

Description

This note details the calibration procedure of the MiniBrute oscillator.

Disclaimer

This procedure shall be followed if and only if **all** of the following conditions fulfills!

- The note tracking is not accurate, i.e. the note played is shifted more than 5 cents when compared to a reference note.



If and only if your machine fits into the above description, please apply the following method to fix it.

Make sure to **fully read** and **understand** the directives contained in the hereunder pages before processing.

Arturia shall not be responsible for any damage or problem caused by misuse of this procedure.

Equipment needed

- Digital tuner (hardware or software)
- 2mm flat screwdriver (plastic only: DO NOT USE A METAL SCREWDRIVER!)



1. Warming up

Plug the power supply unit and switch the MiniBrute on.

The oscillator core being fully analog, requires a minimal warming time of **10 minutes** before reliable frequency stabilization occurs.

Do not proceed to measures or settings before the frequency is totally stable!

2. Reference note

Slide up the sawtooth waveform fader to the maximum level.

Press the **Octave** buttons until reaching the **center** position: green LED is lit.

Make sure the **Fine Tune** knob is at **center** position.

Press the **lowest key on the left** of the keyboard, and hold it down.
The frequency should be a perfect **C1** at **130.80 Hz** (0 cent).
If it is not the case, turn the **Slope** trimmer to reach this value.
Release the C1 key.

3. Calibration

STEP #1
Press the **upper most key on the right** of the keyboard and hold it down.
Turn the **Offset** trimmer to reach **C3** at **523.30 Hz** (+/- 5 cents).
Once the correct value has been reached, release the key.

STEP #2
Press the **lowest key on the left** of the keyboard and hold it down.
Turn the **Slope** trimmer to reach **C1** at **130.80 Hz** (+/- 5 cents).
Once the correct value has been reached, release the key.

This is an iterative process: redo the 2 above steps until you don't need to modify the trimmers anymore!

As with the major modules of the MiniBrute, the note tracking is pure analog, therefore:

- Full "0-cent accuracy" can not be achieved: +/- 5 cents tolerance generally is OK.
- Expect some drift at the extremes (up to +/- 20 cents): C-3 will *not* be accurate, neither will be C5.