EMEO

EMEO User Manual for New Firmware 4.4.11.17 (version1.0.3)

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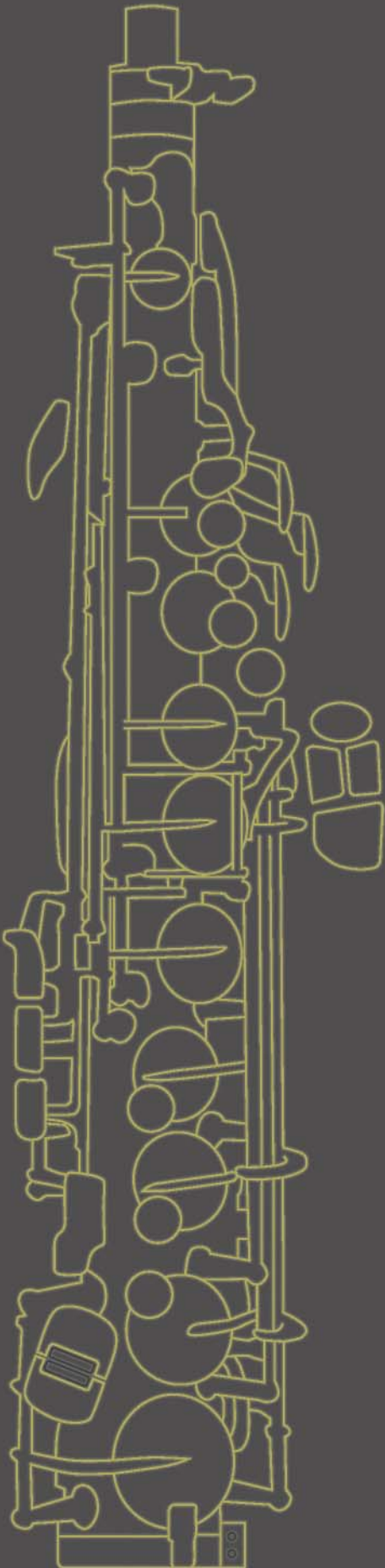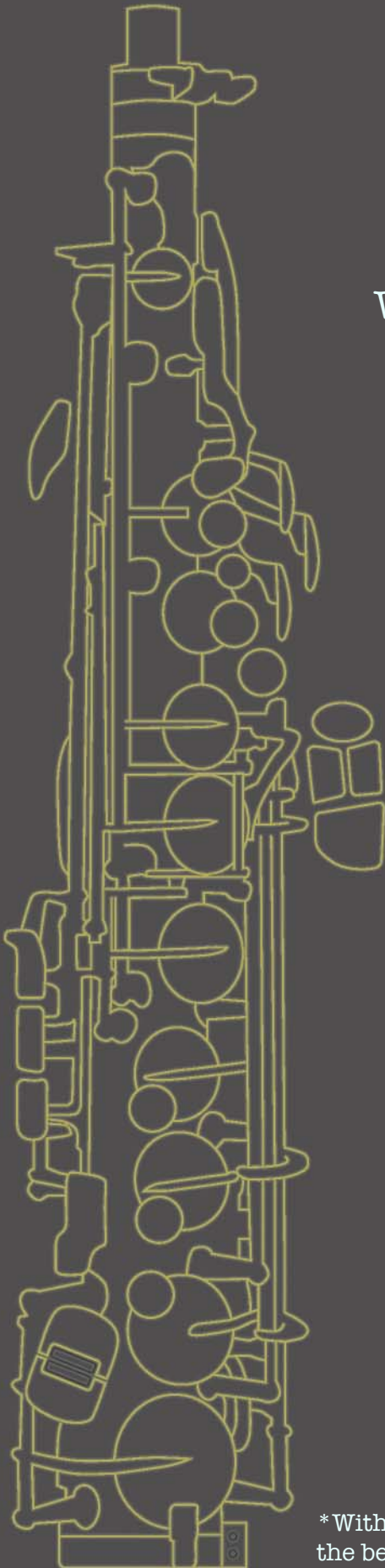
Welcome to the new EMEO Firmware

The new EMEO Firmware builds upon previous versions*, retaining all functionalities from earlier iterations.

You can find previous instructions on our website.

Within this user manual, you will discover the new features exclusive to firmware version 4.4.11.17.

*With the new firmware update, you may observe a slight difference in the behavior of the LEDs. However, all functionality remains unchanged.

⊗ **Firmware Update Process**

This instruction guides you through the firmware update process.
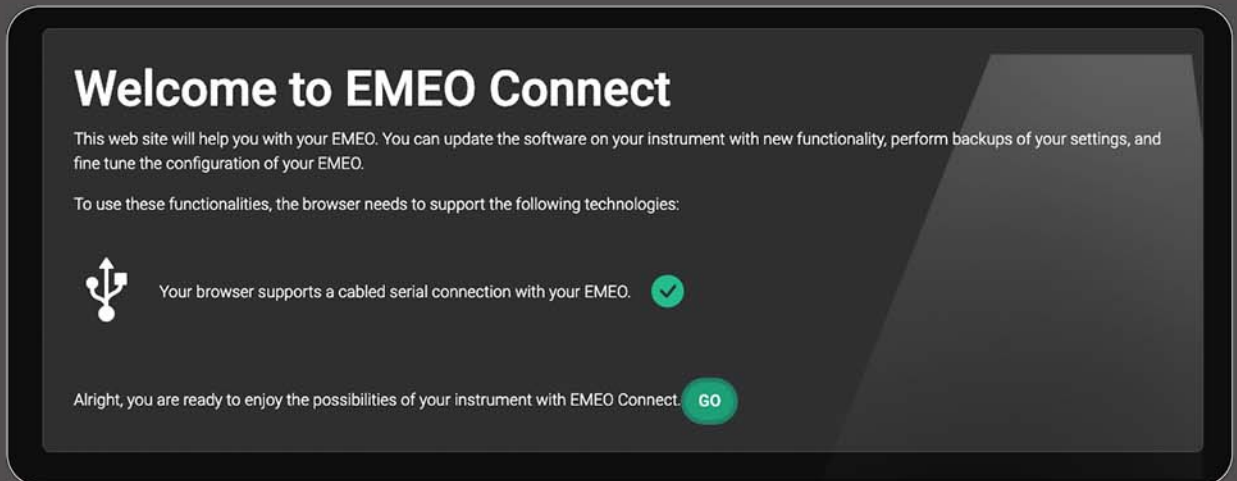
To take full advantage of EMEO Connect, you can use one of the following browsers that support cabled serial connections: 🌐 Google Chrome or 🔵 Edge

1. Copy the link https://connect.emeomusic.com/ and paste it into the address bar of your Google Chrome or Edge browser, then press Enter
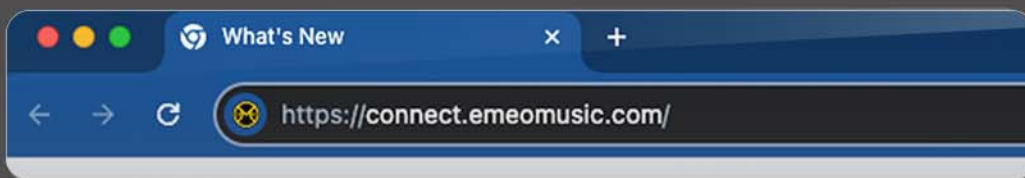
2. Click the 'GO' button

3. Connect your EMEO's data cable first to the computer, then to the EMEO

4. Click the 'Connect' button on the top bar
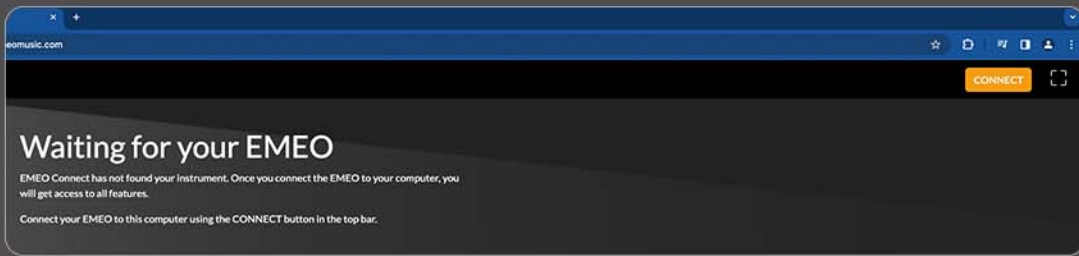
5. In the pop-up window, select the Arduino MKR WiFi 1010 and click the 'Connect' button
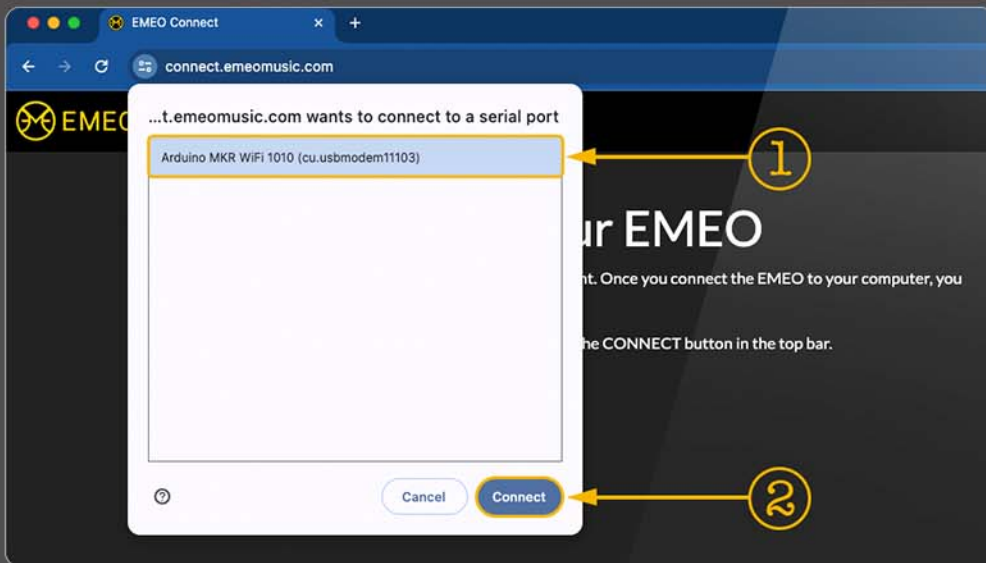
Note: If your EMEO is already registered in the list of your browser, the connection will proceed automatically, and step 6 will be skipped

6. Wait until the 'LOADING DEVICE PROCESS' is complete and the EMEO diagram appears
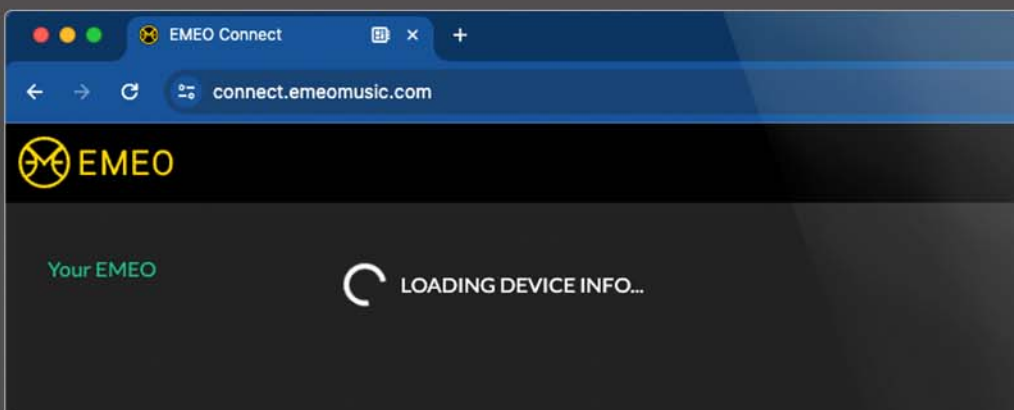
7. Click the 'Update Firmware' button to initiate the update action
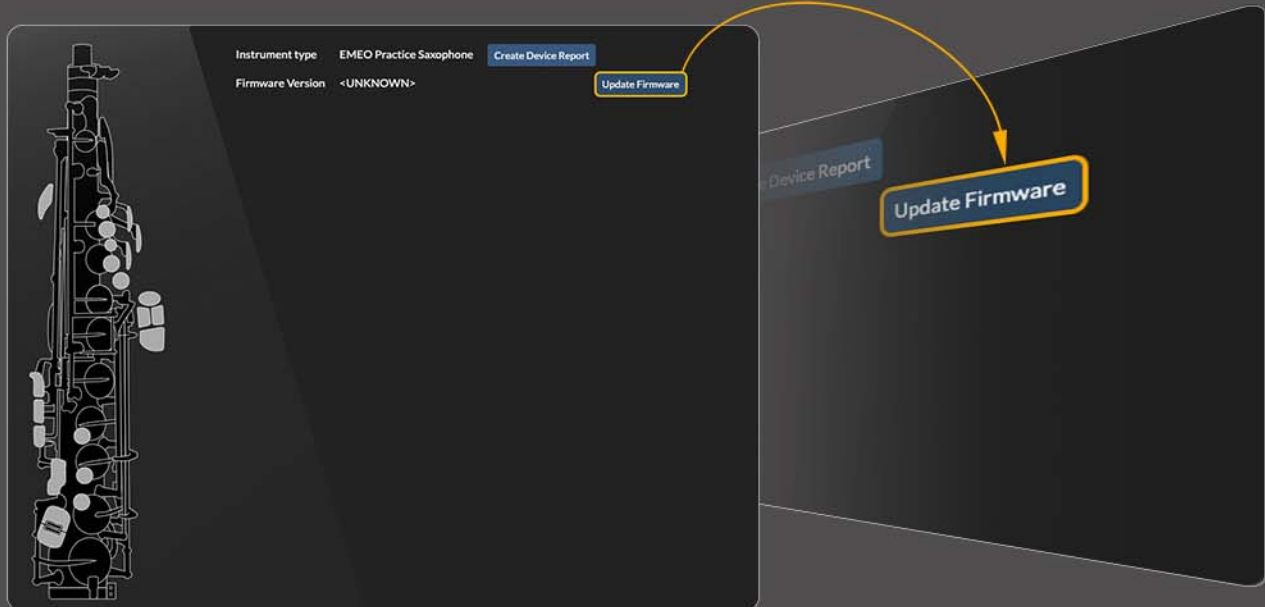
8. Carefully read the instructions in the Firmware Update Wizard and click the 'Start' button

9. Click the 'Download' button

10. When the downloading and checking of the firmware image are complete, click the 'Continue' button

Firmware Update Wizard

Welcome
Firmware
Prepare Instrument
Install Firmware
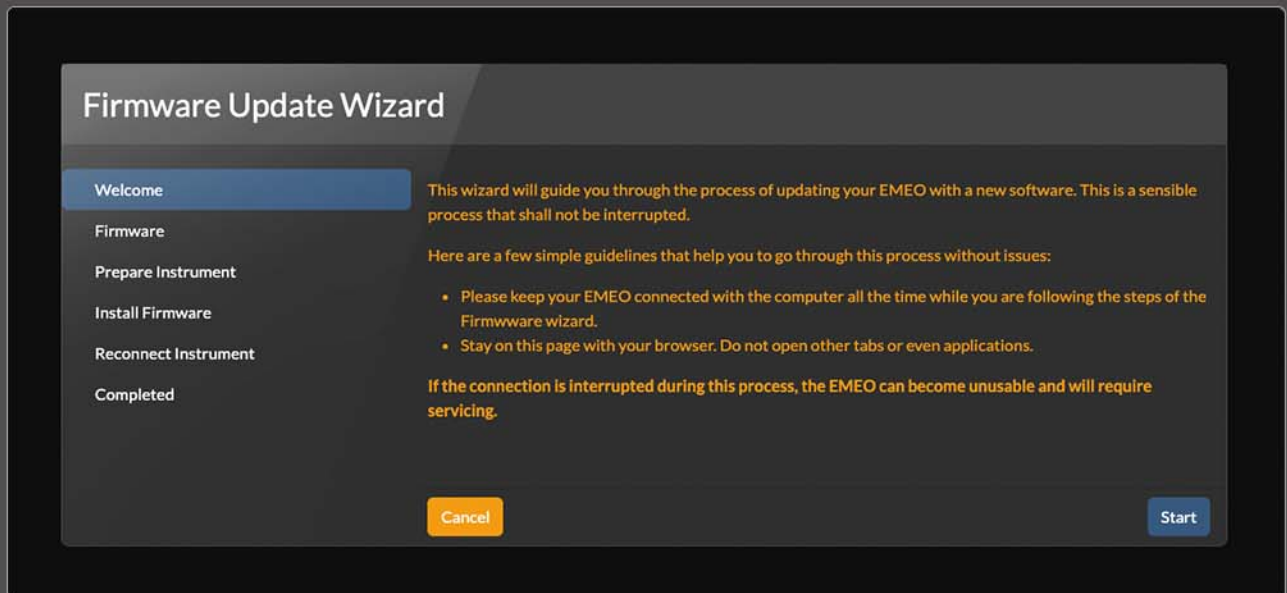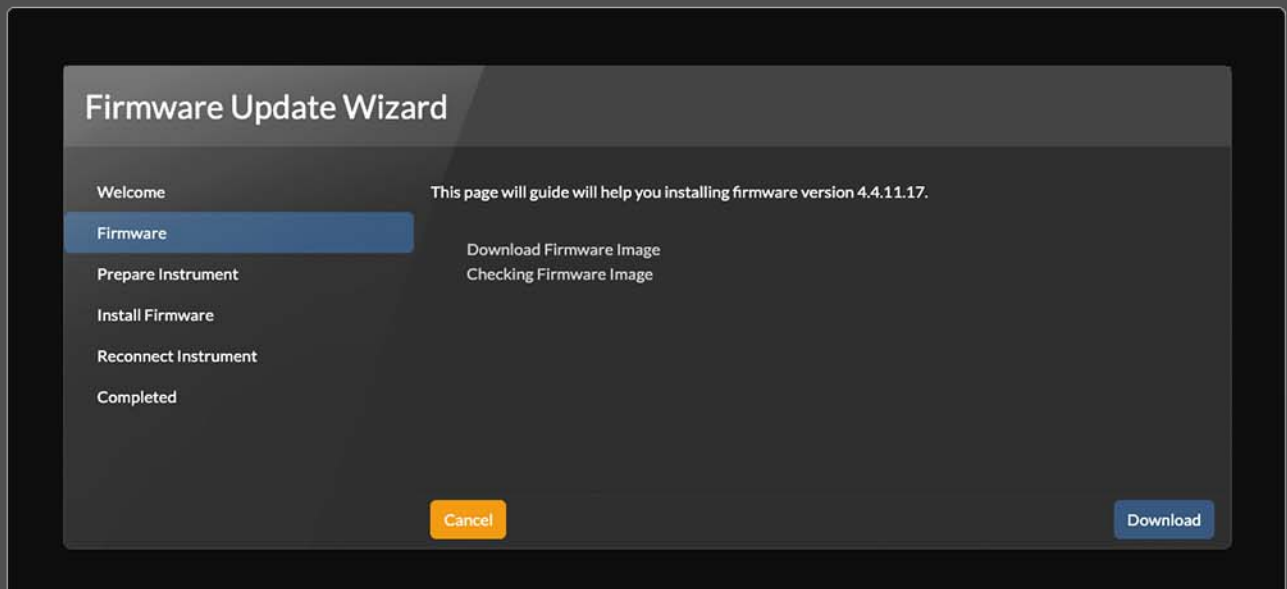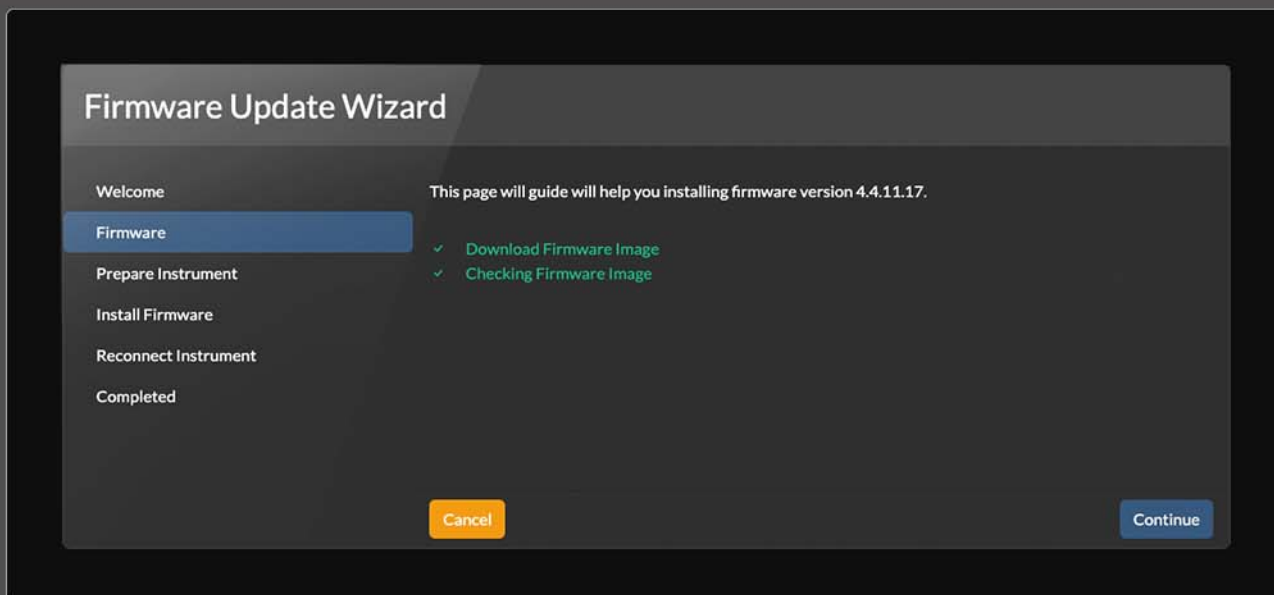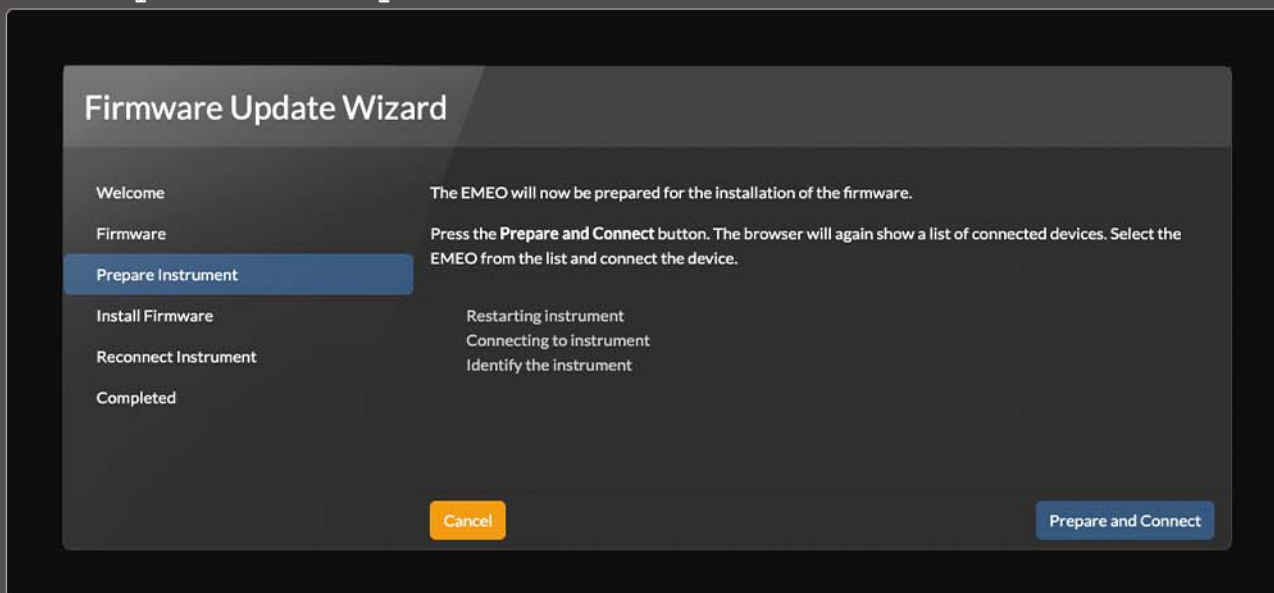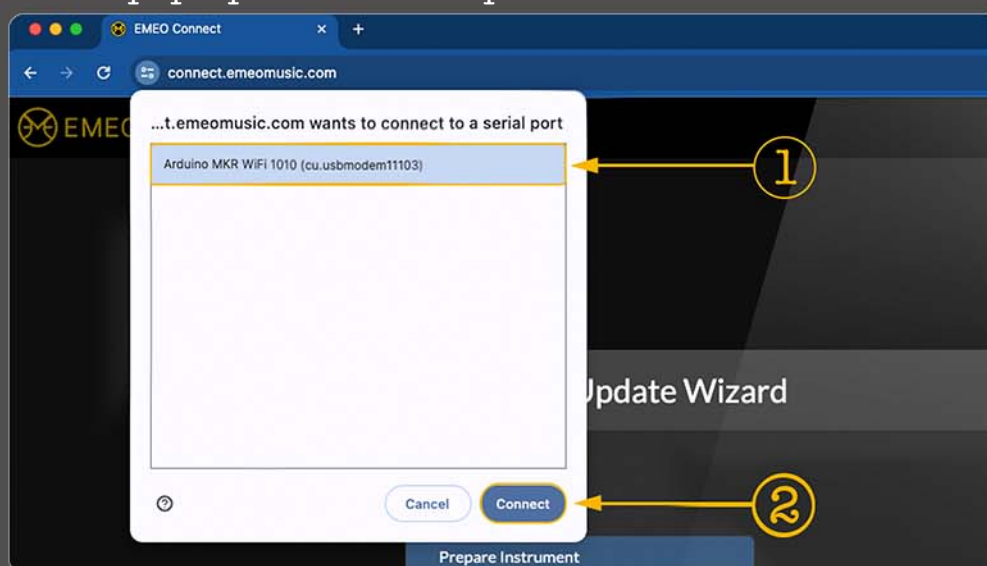Reconnect Instrument
Completed

This page will guide will help you installing firmware version 4.4.11.17.

✓ Download Firmware Image
✓ Checking Firmware Image

Cancel   Continue

11. Read the information in the wizard and press the 'Prepare and Connect' button

Firmware Update Wizard

Welcome
Firmware
Prepare Instrument
Install Firmware
Reconnect Instrument
Completed

The EMEO will now be prepared for the installation of the firmware.

Press the **Prepare and Connect** button. The browser will again show a list of connected devices. Select the EMEO from the list and connect the device.

Restarting instrument
Connecting to instrument
Identify the instrument

Cancel   Prepare and Connect

12. Once your EMEO has restarted, choose 'Arduino MKR WiFi1010' again in the pop-up window and press the 'Connect' button

EMEO Connect   ×   +

← → C   connect.emeomusic.com

EMEO

...t.emeomusic.com wants to connect to a serial port

Arduino MKR WiFi 1010 (cu.usbmodem11103)   ①

Update Wizard

⑦   Cancel   Connect   ②

Prepare Instrument

Firmware Update Process

13. Your EMEO is ready to flash the firmware. Please do not touch the EMEO during the installation process. Click the 'Flash Firmware' button
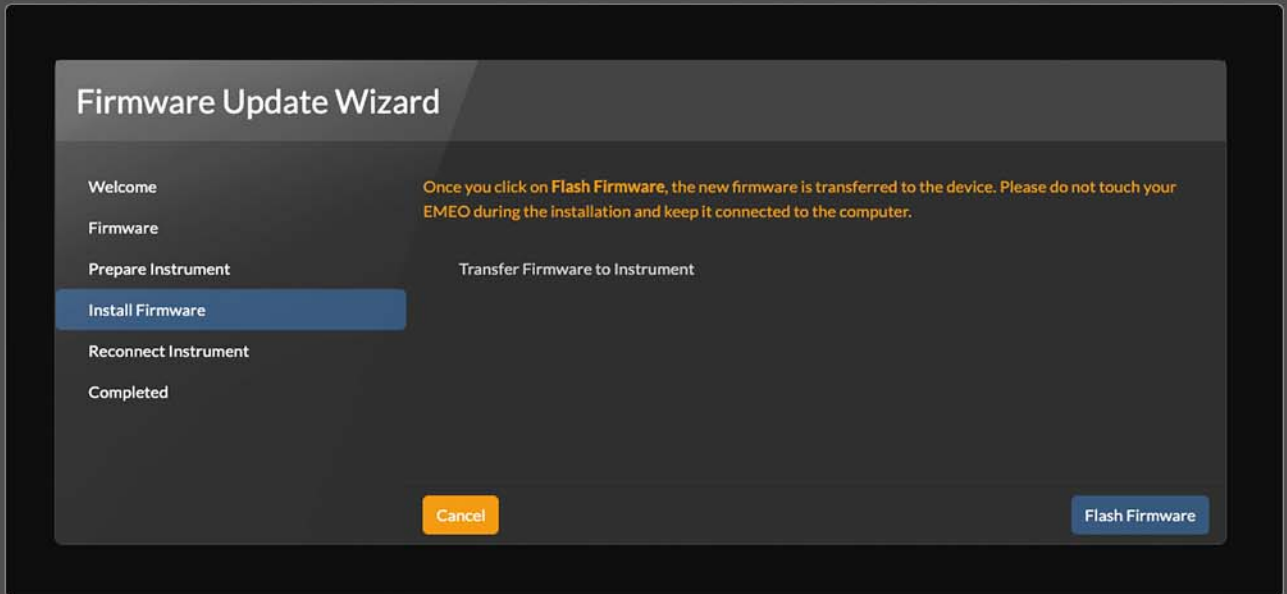
14. Wait for the firmware flashing process to complete
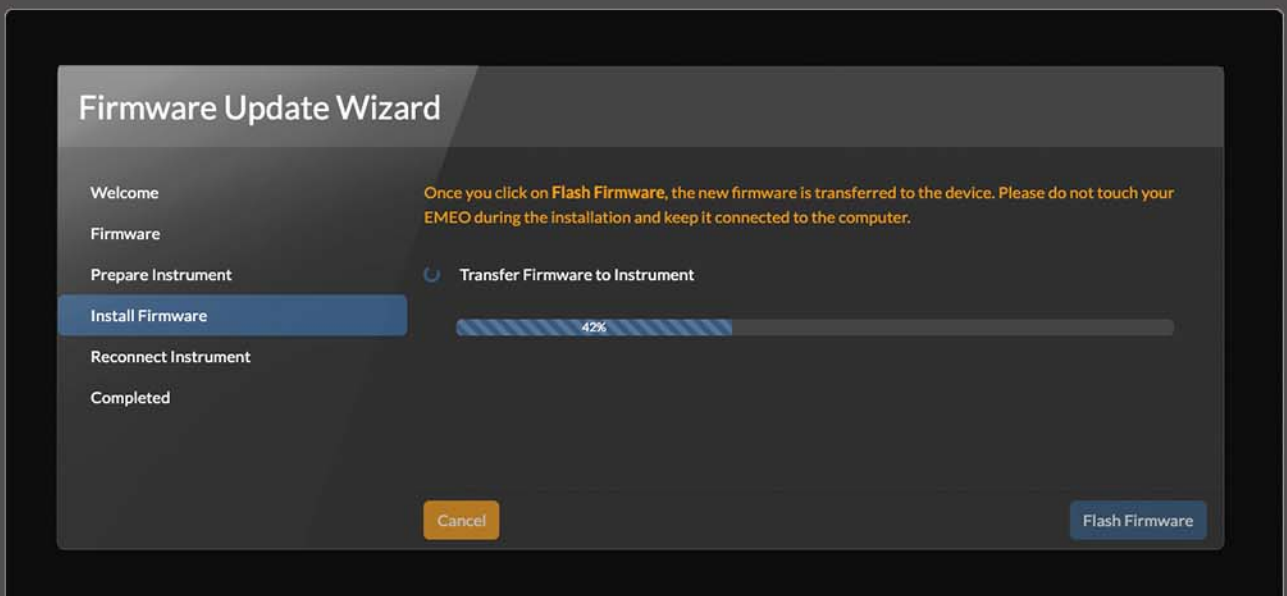
15. Once the firmware flashing process is completed, a reconnect instrument window will appear with a "Connect Instrument" button. Your instrument will reconnect automatically, so you don't need to take any actions.
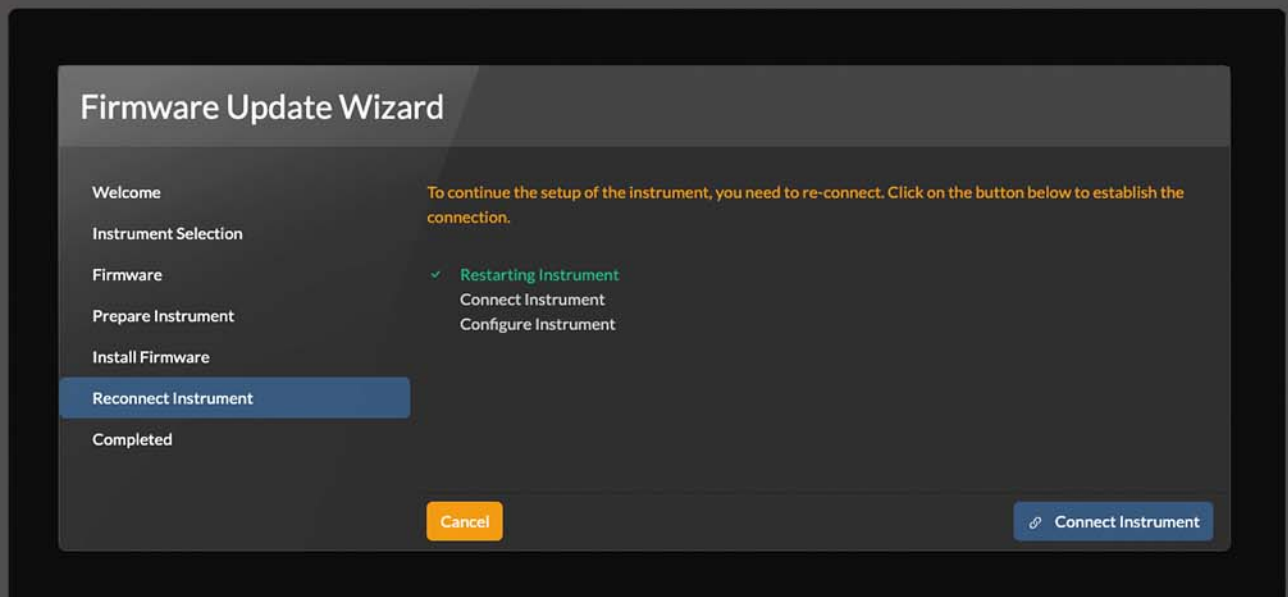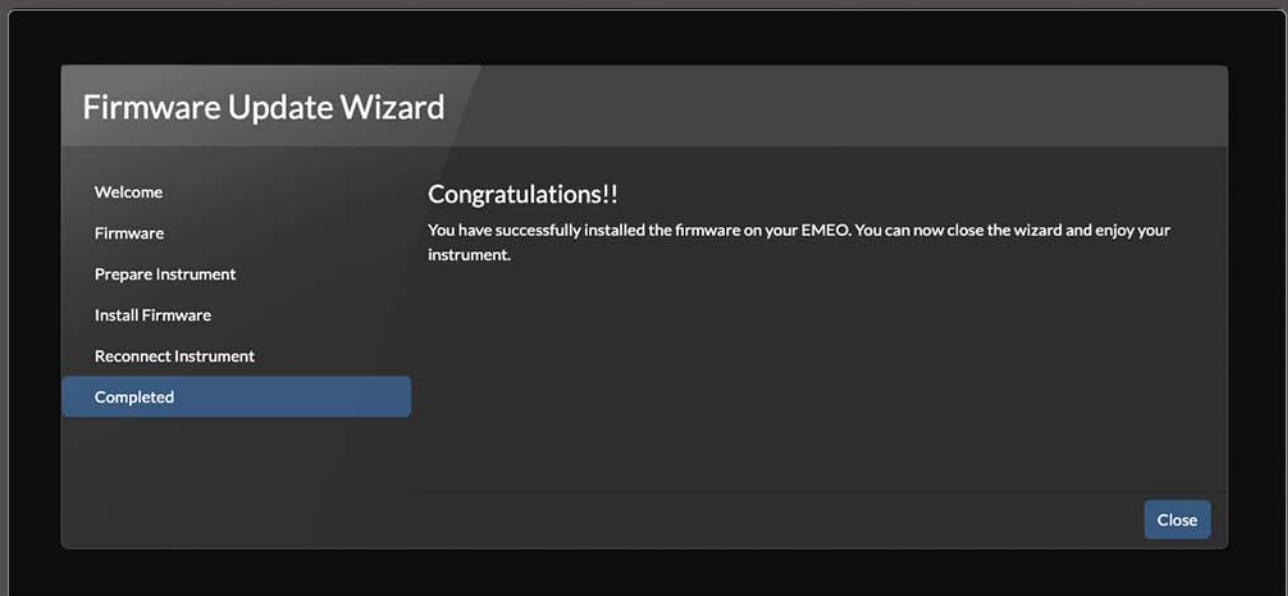

16. Click the 'Close' button.

EMEO Customize Fingering

Note: This functionality (e.g., assigning, disabling, enabling, detuning, adjusting the volume, deleting user fingering, calibrating pressure sensor, and playing without blowing) is available to you with the instrument alone, without the utility.

Color codes

On the graphical representation in the utility, you will be able to monitor your actions in real-time. Your actions will be displayed in the utility in three different color-coded variations.

Yellow – the conventional fingering is assigned and used for performance.

Note: You cannot reassign conventional combinations. If you attempt to do so, EMEO will alert you with a short, distorted sound signal, indicating that you need to choose another available fingering.

Orange – no assigned fingering combination, it is available to assign a custom fingering.

Note: You can see the color codes only in the 'EMEO connect' utility. When assigning fingering using the instrument alone, rely on your ears.

Blue - user-assigned fingering

The process of assigning a user-specific fingering using the example of the note A3

A3

● Press and hold the desired fingering combination for the note A3 in this octave.

If the combination is available,
it will be displayed in orange in the utility.

● Keep the keys pressed, and take a long inhale through the instrument, approx. 2 seconds long.
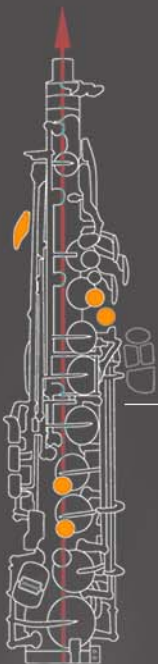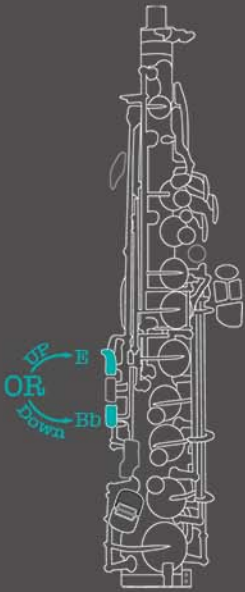
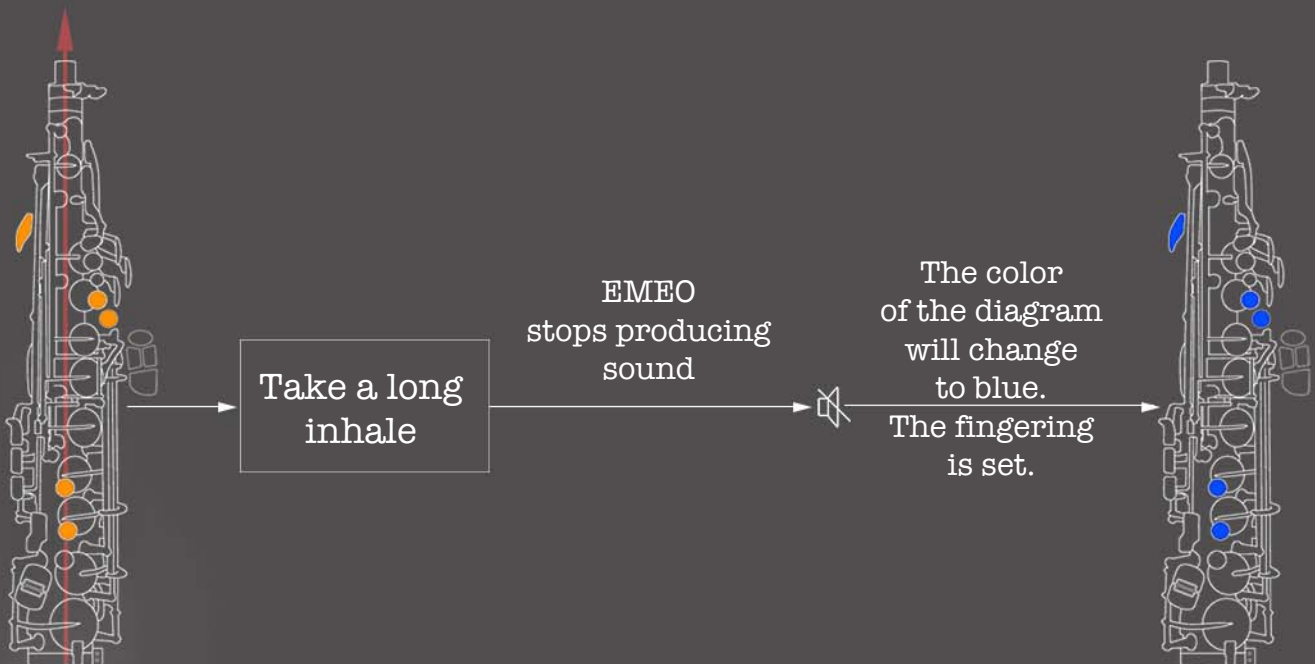| Take a long inhale | EMEO will start playing the note | Release the keys | EMEO will keep playing the note |

The 'Traffic lights' LEDs will blink red throughout the procedure.

- Use the side keys Bb or E to control the pitch of the sound. Each press on Bb will lower the pitch by half-tone, and pressing the E key will raise the pitch by half-tone.

Use the Bb or E side keys to tune the tone according to your needs.

UP — E
OR
Down — Bb

- Once the EMEO is playing the desired tone, take a prolonged inhale (approx. 2 sec.) to save the result.

Take a long inhale

EMEO stops producing sound

The color of the diagram will change to blue. The fingering is set.

In the EMEO connect utility, you'll find a diagram of your custom fingering, now with a blue color code instead of orange.

Note: If you enter the mode for assigning custom fingering and take no action for approximately 15 seconds, the process will be terminated automatically, and the fingering will not be assigned.

Detune user-fingering

All user fingering combinations are available for detuning

- Press and hold desired fingering

- Take a long inhale through the instrument (approx. 2 sec). The instrument will produce sound.

- Release the keys.

- Press and hold the **F#** additional key throughout the entire detuning procedure.

- To detune the sound downward, use the Bb side key. Press and release the Bb side key.

- The sound's pitch will start to decrease. Press and release the Bb key again, and the pitch change will stop.

- To detune the sound upward, use the E key. Press and release the E side key.

- The sound's pitch will start to increase. Press and release the E key again, and the pitch change will stop.

- Take another long inhale through the instrument (approx. 2 sec).

incr.

OR

decr.

RESET C

HOLD F#
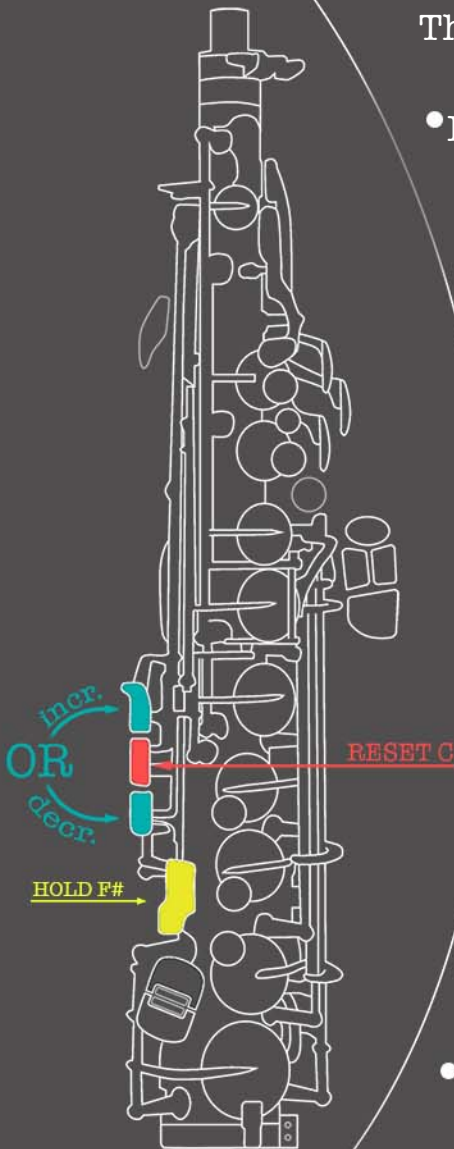
Adjust the volume for a user-programmed fingering

All user fingering combinations are available for adjusting the volume

- Press and hold desired fingering

- Take a long inhale through the instrument (approx. 2 sec). The instrument will play the sound.

- Release the keys.

- Press and hold the Bb key throughout the procedure.

HOLD Bb

- During the hold of the Bb key, press the Bb side key to decrease the volume or the E side key to increase the volume.

incr.
OR
decr.

RESET C

- Each press on the Bb or E keys will decrease or increase the volume step by step.

- Take another long inhale through the instrument (approx. 2 sec).
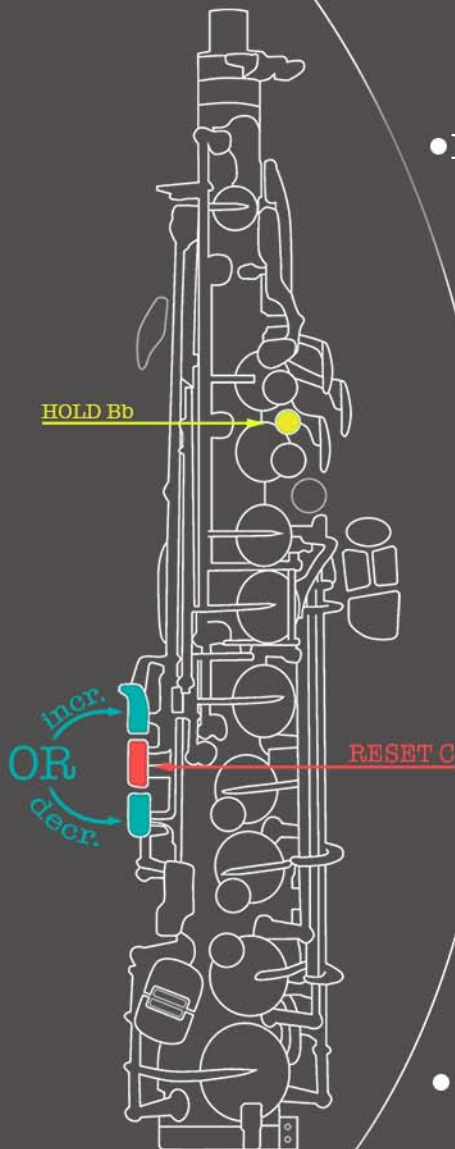
*The RESET C key allows you to return to the zero (start) point while you are in the detune or volume adjustment process.
Implementing the RESET key: During pressing the HOLD key, press and release the RESET key simultaneously.

Disable and Enable user fingering combinations
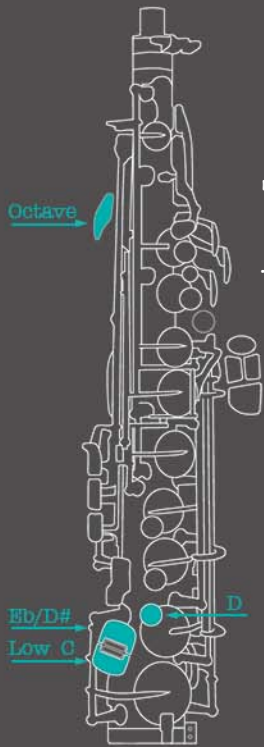
To disable or enable user-programmed fingering, press the combination as shown in the picture. You will hear two types of sound signals:
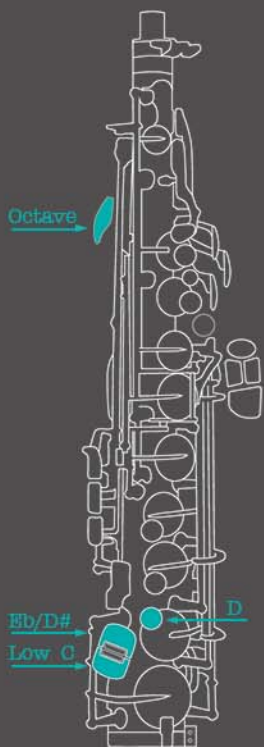
All user combinations are disabled

All user combinations are enabled

Note: You can create a backup of your finger combinations using the EMEO Connect utility anytime

Deleting all user-programmed fingering combinations

To initiate the process of deleting all user-programmed fingering combinations, press and hold the keys as shown in the picture for approx. 10 seconds until you hear a sound signal:

Result: all user combinations are deleted.

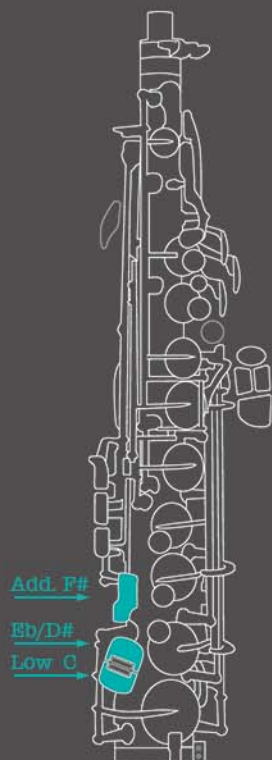# Deleting selected user fingering combination

Octave

- Press the desired fingering you want to delete.
- Take a long inhale through the instrument (approx. 2 sec).
- The instrument will sustain a sound.
- Press the key combination as shown in the picture.

Add. F#
Eb/D#

Result: combination deleted.

Calibrating pressure sensor

During the power-on of EMEO via the power button
 or cable connection, the pressure sensor is
automatically calibrated.

It is prohibited to blow into the EMEO during
the calibration process.

To initiate the pressure sensor calibration procedure,
press and hold the key combination as shown in the picture
for approximately 7 seconds. Release the keys after
 the sound signal (you'll hear a diminished chord).

Add. F#
Eb/D#
Low C

Playing Without Blowing

Octave

G

Add F#

Low C

To activate the 'Playing Without Blowing' mode, use the following key combination: Octave key, G key, Add F#, and Low C key. You can press and hold them one by one, or simultaneously as shown in the picture.
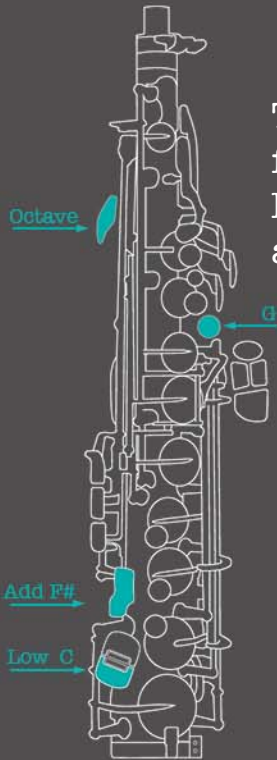
To exit the 'Playing Without Blowing' mode, press the same key combination used for activation. Alternatively, you can press the Low C and Eb/D# low keys simultaneously.

Volume adjustment while 'Playing Without Blowing' is enabled.

With the new firmware the 'Playing Without Blowing' mode now allows you to adjust the volume to your comfort level. Once the 'Playing Without Blowing' mode is enabled, blow into the EMEO. The intensity of your blowing will determine the volume level.
For example, if you'd like to increase the volume, blow while playing a slow crescendo; blow while playing a diminuendo to decrease the volume

Crescendo → 🔊 increase the volume

Blow into the instrument

Diminuendo → 🔊 decrease the volume
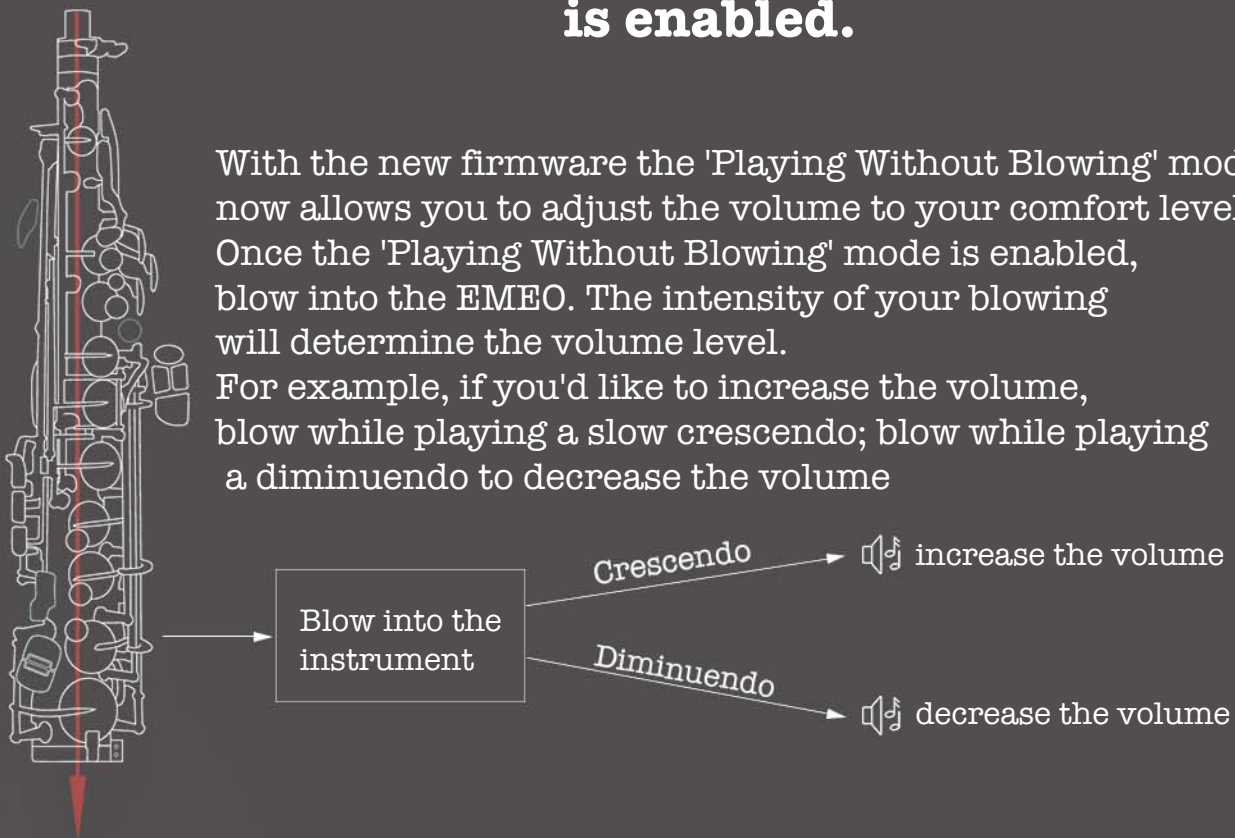
Note: You can also use the EMEO Connect utility for volume adjustments.