



AODYO INSTRUMENTS

sylphyo

User guide



VERSION 1.1.1
MAY 4 2016
www.aodyo.com



AODYO INSTRUMENTS

www.aodyo.com

Table of contents

Safety information	1
The Sylphyo at a glance	3
Overview	3
Accessories	4
First steps	4
Keys	5
Control	6
Breath control	
Inertial control	
Slider	
Octave keys	
Preset change	
Display	7
Getting started	9
Charging and pairing the Sylphyo	9
Charging the Sylphyo	
Pairing the Sylphyo to a receiver device	
Using the Sylphyo with a computer, a smartphone or a tablet	10
Using the Sylphyo with OS X	
Using the Sylphyo under Windows	
Using the Sylphyo with a smartphone or a tablet	
Using the Sylphyo with a hardware synthesizer	12
Settings	13
Quick settings	13
Advanced settings	14
Sensor calibration	15
Updating the Sylphyo	17
If problems occur...	19
Installation issues	19
I unboxed the Sylphyo and turned it on, but when I try to play I hear no sound	
My synthesizer or computer doesn't receive any MIDI signal from the Sylphyo	
I'd like to use my Sylphyo under Linux or Android	

Use and performance issues **19**

I can't hear the sound of my synthesizer or of my virtual instrument,
yet I can receive MIDI messages from the Sylphyo

It looks like the Sylphyo doesn't properly respond to my breath or to
my fingerings

I turned my Sylphyo on but the display never turns on

Fingerings **22**

Appendix : complementary information **24**

Safety information

Please take note of the following important information before you begin to use your **Sylphyo**.

Repairing the Sylphyo

Do not open the **Sylphyo** and do not attempt to service it yourself. Notably, the blue ring below the mouthpiece is glued to the body in order to protect internal circuits from moisture in normal playing conditions, thus it should not be removed. More generally, damage to you or your instrument could occur during teardown. Please contact Aodyo or an authorized service provider.

Using the battery

Your **Sylphyo** contains a lithium-ion battery that can only be replaced by Aodyo or an authorized service provider. Do not try to replace the battery yourself, as this could cause overheating and injuries. The battery must be disposed of separately from household waste.

Cleaning

To clean the **Sylphyo**, turn it off, then use a soft and dry cloth. As the **Sylphyo** contains electronic components, moisture must not get into openings.

Using the connectors and the switch

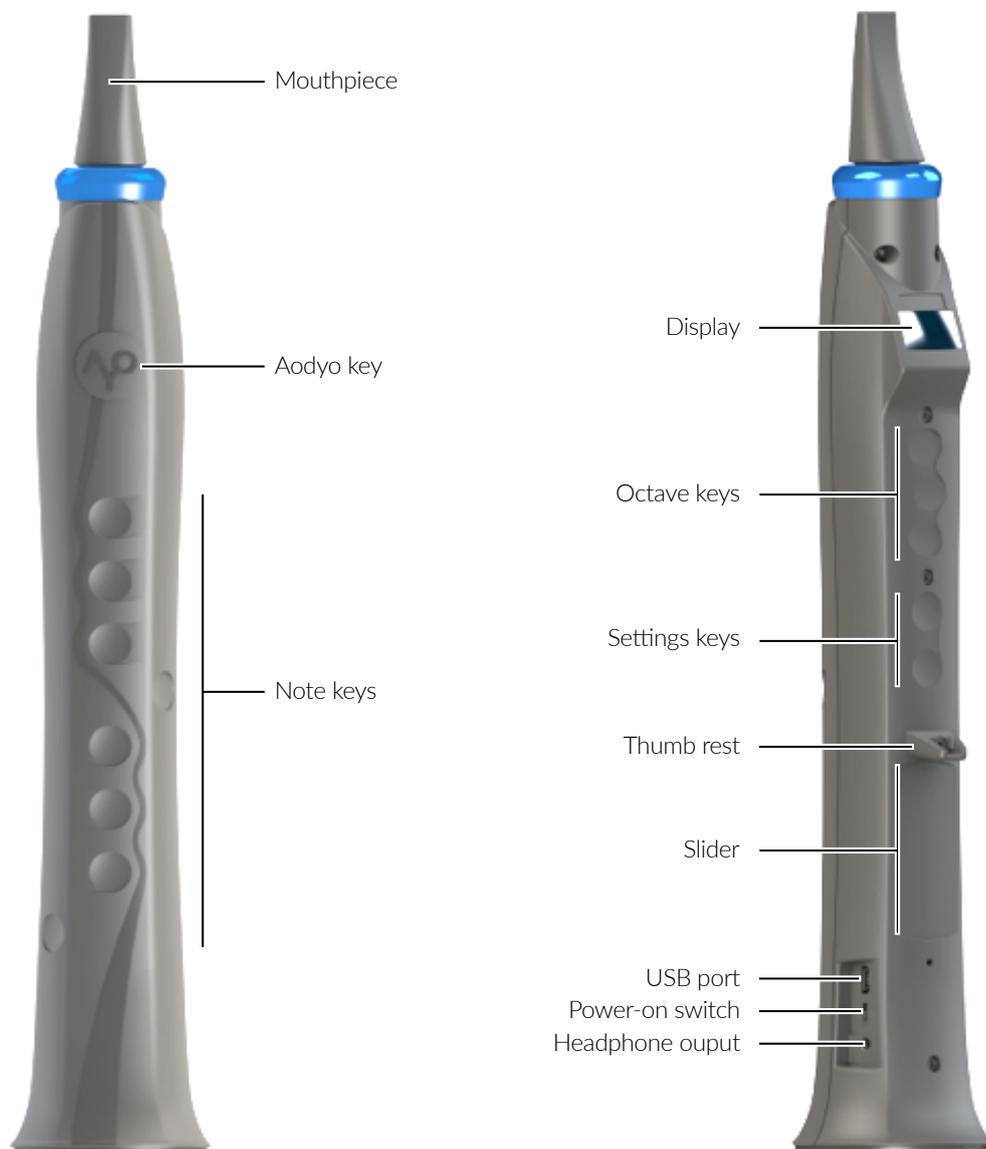
Avoid forcing a connector into a port, and do not use the switch with excessive force. If a connector does not fit into a port, first check that they match. The display of the **Sylphyo** turns on approximately five seconds after power-on. If you suspect that the **Sylphyo** does not turn on normally, make sure you have been waiting for at least ten seconds before trying to turn it off and on again.

The Sylphyo at a glance

The **Sylphyo** is a novel wireless wind instrument.

In this chapter, you will discover the features of the **Sylphyo** and how to control it.

Overview



Accessories

Three accessories are included along with your Sylphyo:



Receiver device

Connect this device to a computer (via USB) or to a synthesizer (via MIDI) in order to receive a signal from the Sylphyo.



5W charger

Plug the 5W charger into a mains socket in order to charge the battery of the Sylphyo.



USB cable

Use the USB cable to connect the receiver device to your computer.

You can also connect the Sylphyo via USB:

- to the 5W charger, in order to charge the battery,
- or to a computer, in order to update its internal program.

First steps

The Sylphyo allows you to control a hardware synthesizer or a virtual instrument on your computer.

While it is wireless, you have to connect the **receiver device** to your computer or synthesizer in order to allow the latter to receive MIDI messages sent by the Sylphyo.

You can turn the Sylphyo on and off using the **power-on switch** located near its base.

For an optimal use during performance, place your fingers as follows:

IMPORTANT

Once the Sylphyo has been turned on, do not blow into it nor press any key before the display is on.



Keys

This page describes the layout of the Sylphyo's keys that can be used during performance. Their functions are detailed in the following pages.

Octave keys allow to transpose the played note to the upper or lower octave.

If you are in a menu, these keys can also be used to select an item and confirm.

Preset keys allow to select another sound preset from your synthesizer.

To avoid involuntary changes, you also have to hold the $\Lambda\circ$ key during selection.

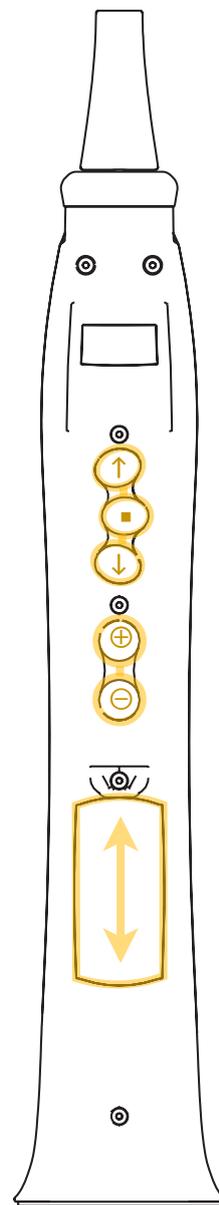
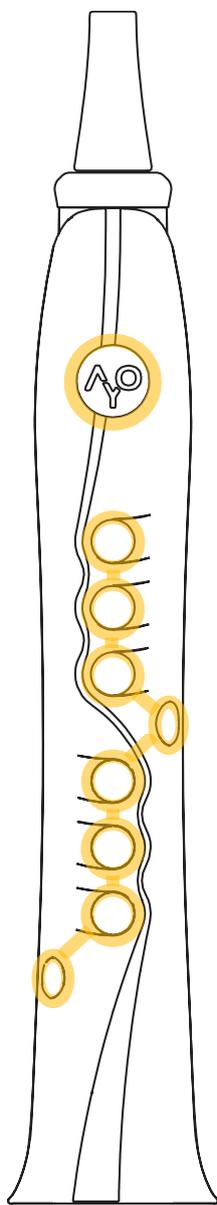
The **slider** enables you to nuance the played sound by sliding your thumb vertically.

The **Aodyo key** ($\Lambda\circ$) allows to easily access any of the settings.

cf. chapter *Settings*

Note keys allow to select the played note. The allowed fingerings are similar to the recorder.

cf. chapter *Fingerings*



Control

This section reviews the different aspects of **Sylphyo** control during performance.

Breath control

You control the intensity of the played note by blowing into the **mouthpiece** of the **Sylphyo**.

Synthesizers and virtual instruments generally receive breath control data through specific MIDI *Control Change* (CC) messages.

By default, the **Sylphyo** is set to use CC2 *Breath Control*, but you can also set it to use CC11 *Expression* (cf. chapter *Settings*).

Inertial control

The **Sylphyo** also features a way to control note intensity through movement (cf. chapter *Settings* for activation instructions). If the *inertial control mode* is activated, the orientation of the instrument replaces breath control. In this mode, blowing into the mouthpiece has no effect.

Other ways to use the included motion sensors will be available soon.

Slider

In playing position, the capacitive **slider** of the **Sylphyo** is located directly below your thumb. Slide it vertically to nuance the sound.

The nearest position to the thumb rest corresponds to a standard sound, and the farthest position corresponds to the most nuanced sound.

The type of sound nuance depends on your synthesizer or virtual instrument. By default, the **Sylphyo** sends MIDI CC1 *Modulation Wheel* messages for the slider.

The *Control Change* message number can be changed if needed (cf. chapter *Settings*).

Octave keys

Even though the **Sylphyo** has recorder-inspired fingerings, it allows a greater note range thanks to its three **octave keys**:

Key	Function
↑	Transpose the played note to the upper octave
■	Go back to the base octave
↓	Transpose the played note to the lower octave

In the resting playing position, your left thumb usually presses **octave key** ■.

When you are not pressing any **octave key**, the **Sylphyo** takes into account the last selected octave, which allows you to easily perform classical recorder fingerings.

If the *extended range mode* is active (cf. chapter *Settings*), octave keys are split into five zones instead of three, which allows you to transpose played notes one or two octaves above or below, depending on the distance between your thumb and octave key ■.

Preset change

To change the current synthesizer or virtual instrument preset without having to leave the **Sylphyo**, use the **preset keys** while holding the  key:



Key	Function
⊕	Select the next preset
⊖	Select the previous preset

By default, **preset keys** allow you to switch between MIDI channels. However, you can set the **Sylphyo** so as to use the **preset keys** to send MIDI *Program Change* messages if you wish (cf. chapter *Settings*).

Display

The **display** of the **Sylphyo** allows you to have a glimpse on how the instrument is set up. The display features the following information:



Icon or indication	Information presented
	If no octave key is selected, displays Alt . If ↑ is selected, displays +12 . If ■ is selected, displays the current transposition setting. If ↓ is selected, displays -12 .
	Volume (MIDI CC7 <i>Volume</i> message).
	Selected MIDI channel.
	Note currently selected using note keys .
performance parameters	1st line MIDI assignment of note intensity: CC2 (BC) or CC11 (EXP). 2nd line Note intensity control mode: breath control (Wind) or movement (Move , <i>inertial control mode</i>).
	Battery level.

Getting started

In this chapter, you will learn how to quickly set up your **Sylphyo** to work with your hardware synthesizer or virtual instruments in your computer, smartphone, or tablet.

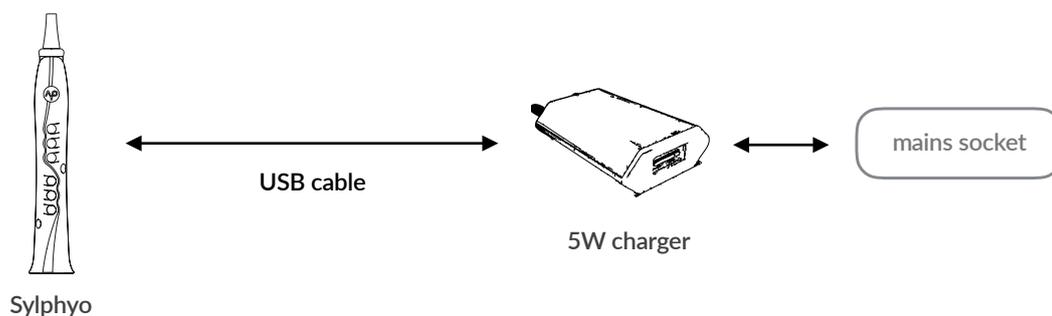
Charging and pairing the Sylphyo

Being a wireless instrument, the **Sylphyo** must be charged from time to time. In addition, it has to be paired with the receiver device in order to work correctly. Although your **Sylphyo** has been carefully charged and paired before shipping, it is important that you know how to perform these operations again.

Charging the Sylphyo

The **Sylphyo** has an internal battery that allows it to last approximately 8 hours. However, you may have to charge it if the on-screen battery level indicator shows the battery is low.

To charge the **Sylphyo**, please connect it to the mains as described in the following diagram:



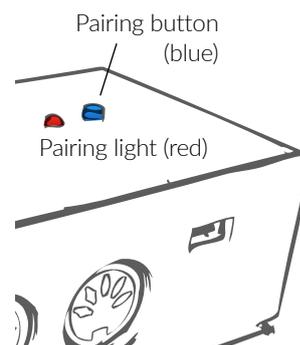
Turn on the **Sylphyo** if you wish to keep an eye on the charge process. If you own a second USB cable, you can also connect the receiver device and play the **Sylphyo** while letting it charge.

Pairing the Sylphyo to a receiver device

When powered on, the **Sylphyo** establishes a wireless connection to a receiver device. If the connection cannot be made, or if you wish to pair the Sylphyo to another receiver device, you will have to start the pairing procedure again.

To begin the pairing procedure, press the blue button located on the receiver device you want to pair to. The red light next to it will continue to blink until the process is over.

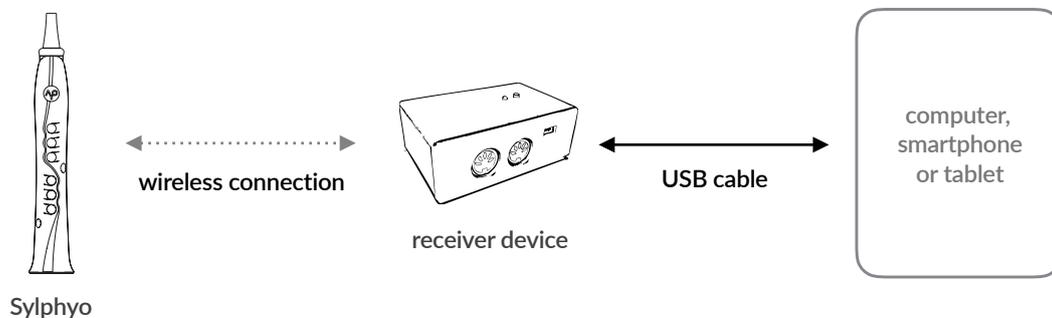
Then, take the Sylphyo and go to the **advanced settings** menu (press simultaneously the **^** key and the **↑** and **↓** octave keys). Select item **W-Connect** and confirm to successfully end the pairing procedure.



Using the Sylphyo with a computer, a smartphone or a tablet

Once the Sylphyo is correctly charged and paired, you can connect it to your computer, smartphone, or tablet. You will also need the receiver device and the USB cable.

Please connect these elements as shown in the following diagram:



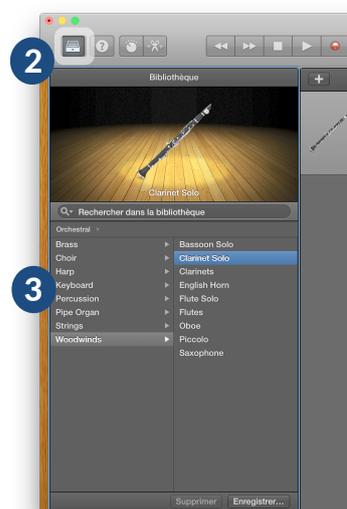
The receiver device should be recognized by your operating system as a standard USB MIDI device.

The following of this section details the use of the Sylphyo with a few applications we could test under several platforms. It will allow you to quickly start practicing if you do not own any sound synthesis application.

Using the Sylphyo with OS X

For a first use, you can use Apple's *Garageband* software, which is normally included in your Mac. If it is not installed yet, please download it from the App Store.

Once *Garageband* is open, ① create a new empty project, then ② open the *Library* if not yet open (first toolbar button), and finally ③ select a virtual instrument (e.g., *Orchestral* > *Woodwinds* > *Clarinet Solo*).



Setup your Sylphyo so as to send breath control data on MIDI CC11 *Expression* (cf. chapter *Settings*), then start playing.

GarageBand is a low-cost option to quickly start using the Sylphyo, but there exist better virtual instruments specialized into wind instrument synthesis that offer wider control possibilities and a more realistic sound.

We particularly like the instruments from *Sample Modeling* (www.samplemodeling.com).

Using the Sylphyo under Windows

For a first use, you will use a virtual instrument in the VST format called *Saxophones*, which will be run inside a VST host called *SAVIHost*.

Both of these pieces of software are available for free and are made by independent developers. If you like them, please show your appreciation by donating to their authors on their website.

First of all, **download** the virtual instrument. Go to www.dskmusic.com/dsk-saxophones and find the *Download DSK Saxophones* section, then click on *Windows VST 32 bits*. **Unzip** the downloaded archive.

Then, you must download the VST host. Go to www.hermannseib.com/english/Savihost.htm and find the *Downloads* section, then click on *savihostx86.zip*.

Unzip the downloaded archive, rename file *savihost.exe* (extracted from the archive) to *DSK Saxophones.exe*, then move it to the folder where the virtual instrument resides.

The folder should now look like the picture on the right.



Now, when you want to play the Sylphyo, just launch *DSK Saxophones.exe*. Do so now.

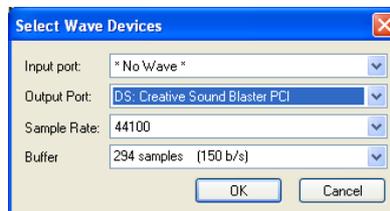
Before playing, we have to configure the MIDI input and the audio output. You only have to follow these steps once.

First configure the MIDI input. Go to menu *Devices* ▶ *MIDI* and select interface *Panda-Audio midiBEAM* as Input Port 1, then click *OK*.



Then, configure the audio output so as to keep a minimal *latency*; that is, the delay between what you play on the *Sylphyo* and what you hear as a result.

Go to menu *Devices* ▶ *Wave* and configure the window according to the following table:



Parameter	Recommended value
Input Port	* No Wave * (no need for audio input)
Output Port	The audio output corresponding to DS: <the name of your sound card>
Sample Rate	44100 (Hz)
Buffer	Around 256 samples (depends on your sound card ; experiment with lower values in order to reduce latency)

Then, click *OK*, setup your *Sylphyo* so as to send breath control data on MIDI *CC11 Expression* (cf. chapter *Settings*), then start to play.

You can find other free virtual instruments on the web, but to get more control possibilities and a more realistic sound, we recommend virtual instruments from *Sample Modeling* (www.samplemodeling.com), or *SaxLab* from *LinPlug* (www.linplug.com), who offer an evaluation version.

Using the Sylphyo with a smartphone or a tablet

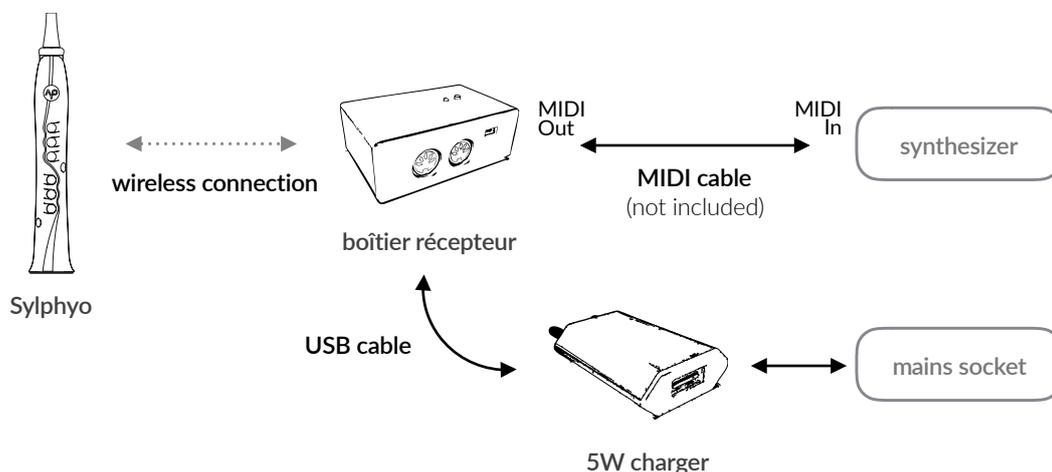
In order to connect the **Sylphyo** receiver device to an iPhone, an iPod touch, or an iPad, you need a specific adapter (not included) :

- a *Lightning-to-USB Camera Adapter* for recent devices with a Lightning port;
- or a *Camera Connection Kit* for older devices with a 30-pin port.

Then, you need an iOS app for sound sythesis. There are several free applications, but we can recommend the following paid apps: *ThumbJam* (www.thumbjam.com) and *bismark bs-16i* (facebook.com/bismark.jp).

Using the Sylphyo with a hardware synthesizer

If you own a hardware synthesizer, you can also use it with the **Sylphyo**. In addition, you will need the receiver device, the USB cable, the 5W charger, as well as a MIDI cable (not included). Please connect these items according to the following diagram:



Once these items are connected and powered on, you can start to play.

Note that if the synthesizer is specialized in wind instrument simulations, like Yamaha's VL70-m, your Sylphyo is already setup so as to send breath control data on MIDI CC2 *Breath Control*.

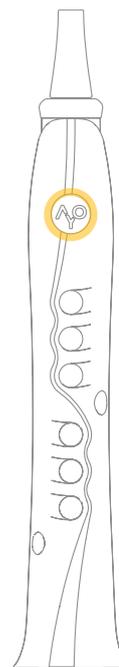
Other synthesizers rather use MIDI CC11 *Expression*, in which case you will have to change the configuration of the Sylphyo (cf. chapter *Settings*).

Settings

In this chapter, you will discover how to setup your **Sylphyo** in the way that best fits your needs.

We designed the **Sylphyo** so that settings can be quickly accessed using the **Aodyo key** (\wedge°) that you can find in the upper part of the instrument.

From the playing position, you can easily reach the \wedge° **key** with you left index finger. Position you left thumb near the **octave keys**, and position your right thumb near the **preset keys**.



There are two places from which you can setup the **Sylphyo** in various ways:

- **quick settings** allow you to quickly change your transposition, fingering, volume, performance parameters, and the MIDI channel.
- **advanced settings** offer other, less often used parameters.

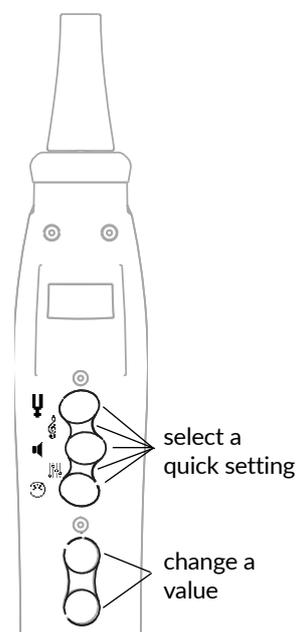
Quick settings

We designed **quick settings** so that once you have learned how to operate them, you can quickly change a setting in the middle of your performance, without even having to look at the display.

The zone covering the **octave keys** is divided into five parts, each one allowing to access a different quick setting.

To enter into quick settings, hold the \wedge° **key** as well as the part of the **octave keys** corresponding to the quick setting you'd like to change (see below). To get out of quick settings, simply stop touching these keys. When inside a quick setting, **preset keys** \oplus and \ominus allow to adjust a value.

The following table summarizes the different quick settings:



Icon	Setting and meaning
	Transposition Change the base note of the Sylphyo .
	Fingering Switch to another fingering (Recorder, Clarinet, etc.).

Icon	Setting and meaning
	Volume Change the volume (sends MIDI message on CC7 <i>Volume</i>).
	Performance parameters Switch between breath control and <i>inertial control mode</i> .
	MIDI Channel/Program Change the current MIDI channel. <i>If advanced setting +/- Select is set t PgC, this setting allows you to set a MIDI Program Change instead.</i>

Advanced settings

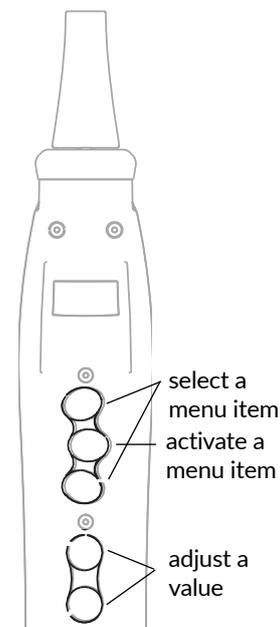
Advanced settings allow you to change several parameters that are less often used.

To enter the advanced settings menu, simultaneously hold the **^P** key, as well as the **↑** and **↓ octave keys**.

Once in the menu, the **↑** and **↓ octave keys** allow you to select a menu item. To adjust the corresponding value, use **preset keys ⊕** and **⊖**.

To exit the menu, select item **Exit** and press the **▣ octave key**.

The following table summarizes the different advanced settings:



First settings page (MENU 1)

Name	Setting and meaning
MENU 1	Switch to another settings page.
Breath CC	MIDI CC used for note intensity data Switch between BC (CC2 <i>Breath Control</i>) and EXP (CC11 <i>Expression</i>).
+/- Select	Preset key function while not in quick settings Switch between Chn (MIDI channel) and PgC (<i>Program Change</i>). <i>Also affects the MIDI Channel/Program quick setting.</i>
Octaves	Width of note range Switch between 3 octaves and 5 octaves (<i>extended range mode</i>).
W. Connect	Pair the Sylphyo again to a receiver device (<i>cf. chapter Getting Started</i>) <i>Press octave key ▣ to pair the Sylphyo.</i>
Info/diag	Display diagnostic information (useful for technical support). <i>Press octave key ▣ to enter the submenu.</i>
Exit	Quit the advanced settings menu <i>Octave key ▣ to select.</i>

Second settings page (MENU 2)

Name	Setting and meaning
MENU 2	Switch to another settings page.
Fixed Vel	Velocity value when playing a MIDI note <i>Only works when dynamic velocity mode is disabled.</i>
Dyna Velo	Dynamic velocity mode If this mode is enabled (On), the velocity of new MIDI notes always depends on breath intensity instead of being a fixed value.
Slider CC	MIDI CC used for slider manipulation
Cal. Sens.	Display the sensor calibration menu. <i>Press octave key ▾ to enter the submenu.</i>
Exit	Quit the advanced settings menu <i>Octave key ▾ to select.</i>

Sensor calibration

The sensor calibration menu can be accessed from the menu item **Cal. Sens.** in the second advanced settings page (**MENU 2**). It allows you to setup minimum and maximum values for the sensor shown in the **Sensor** menu item, as well as a gain value applied to the sensor output, and a specific response curve.

Note that the **Sylphyo** only allows a fixed range of acceptable values for each sensor.

The following table summarizes the different settings and their use :

Name	Setting and meaning
Min Val	Minimum sensor value Hold octave key ▾ and use the sensor to set the minimum desired value, then release the key to confirm the value (for instance, if <i>breath</i> is the selected sensor, gently blow into the Sylphyo). <i>You can also adjust the value manually using preset keys ⊕ and ⊖.</i>
Max Val	Maximum sensor value Hold octave key ▾ and use the sensor to set the maximum desired value, then release the key to confirm the value (for instance, if <i>breath</i> is the selected sensor, blow into the Sylphyo as hard as you can). <i>You can also adjust the value manually using preset keys ⊕ and ⊖.</i>
Gain Val	Gain value applied to the sensor For instance, if <i>breath</i> is the selected sensor, increasing gain allows to blow more softly to produce a louder sound. <i>The gain value is automatically reset when setting minimum and maximum values.</i>
Curve	Response curve Switch between Log (<i>logarithmic</i> , by default), Exp (<i>exponential</i>), Lin (<i>linear</i>), and LnLg (<i>between linear and logarithmic</i>).

Name	Setting and meaning
Factory	Reset calibration to factory settings for the selected sensor. Octave key ▀ to confirm.
Sensor	Selected sensor for calibration Switch between Brth (<i>breath</i> , by default) or Slid (<i>slider</i>). <i>For now, this menu item has no effect: only the breath sensor can be setup.</i>
Exit	Quit the calibration menu Octave key ▀ to select.

Updating the Sylphyo

Chances are that while you are reading this, a new version of the internal program of the Sylphyo is available. Thanks to updates, your Sylphyo will keep evolving for years.

We list all the available updates for the Sylphyo at www.aodyo.com/updates. Regularly check this page, or subscribe to its RSS feed, to stay informed of new updates.

Once in this page, click on the link corresponding to your operating system (Windows or Mac) in order to download the update utility.

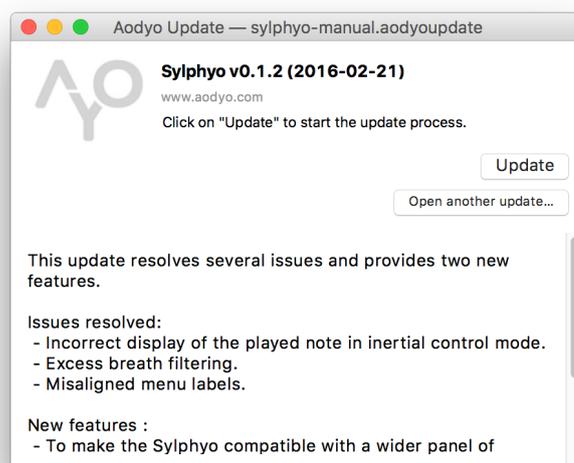
Then, **unzip** the downloaded archive (if needed) and **launch** the update utility. Depending on your operating system, you may have to confirm that you want to launch the utility.

Then, a window like the one to the right should appear.

The utility should automatically find the internal update file that usually comes with it.

If it doesn't, click on *Open...* and manually select the internal update file (extension *.aodyupdate*).

The *Open...* button also allows, if necessary, to reinstall a previous version of the internal software (available on our website).

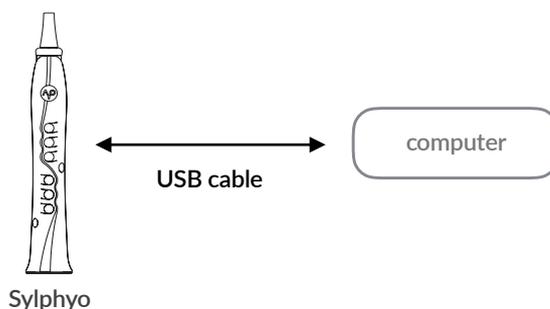


To start the update, click on *Update*.

Then, connect your Sylphyo directly to your computer, as shown on the diagram to the right.

Once the Sylphyo is connected, turn it on. The rest of the update process is totally automatic.

ATTENTION! Do not remove the cable or turn off the Sylphyo before the update process ends.



A dialog box will tell you the update has been successful.

You will then be able to unplug the USB cable and to close the update utility.

If problems occur...

If an unexpected issue occurs with your **Sylphyo**, we hope this chapter will allow you to quickly deal with it.

Installation issues

I unboxed the Sylphyo and turned it on, but when I try to play I hear no sound

Even though it features a headphone output, the **Sylpho** isn't yet able to synthesize its own sounds. For now, it only works as a *MIDI controller*; that is, it allows you to control the sound of a synthesizer or of a computer to which it is connected, *via* the receiver device. Please refer to chapter *Getting Started* to install your **Sylphyo**.

Note, though, that **Aodyo** plans to sell (by mid-2016) an optional synthesizer expansion board that will turn the Sylphyo into a totally standalone instrument. Join our newsletter if you'd like to stay informed!

My synthesizer or computer doesn't receive any MIDI signal from the Sylphyo

If you suspect the problem comes from the **Sylphyo** or from its receiver device, try to turn them off and on again. In addition, check that these items are paired. If not, please follow the pairing procedure described in chapter *Getting Started*.

I'd like to use my Sylphyo under Linux or Android

We do not provide any official support for using the **Sylphyo** under Linux or Android, and we did not test it under these platforms. However, we'd be thrilled if you could tell us about your experiences with the **Sylphyo** under these platforms. Contact us!

Use and performance issues

I can't hear the sound of my synthesizer or of my virtual instrument, yet I can receive MIDI messages from the Sylphyo

First, check the configuration of your synthesizer or your virtual instrument. It is sometimes very easy to accidentally set their volume to zero.

If everything seems correct, maybe your synth or virtual instrument understands MIDI CC7 *Volume* messages, which can be sent from the Sylphyo when you change the *volume* quick setting. Therefore, please also check that the volume on the Sylphyo has been set high enough.

It looks like the Sylphyo doesn't properly respond to my breath or to my fingerings

Try turning your Sylphyo off and on again, but **do not to blow into the mouthpiece or press any key before the display is on.**

Always think of doing so before turning the Sylphyo on, because it undergoes a short calibration phase during which breath and capacitive sensors are automatically tuned in order to ensure an optimal response. Therefore, it is important not to disturb this mechanism.

I turned my Sylphyo on but the display never turns on

The Sylphyo waits 5 seconds before the display turns on. However, if you have waited for longer than 5 seconds and the display still doesn't turn on, please charge your Sylphyo by connecting it to the mains *via* the 5W charger.

« WELL, I TRIED EVERYTHING, BUT IT STILL DOESN'T WORK »

If you cannot solve an issue despite our advice, please shoot us a mail at support@aodyo.com and precisely describe your problem. We'll try to answer you as soon as possible.

Don't hesitate to include pictures, videos, or audio clips, if you feel this can allow us to diagnose the problem faster.

Fingerings

This page presents the main fingerings of the Sylphyo.

Recorder

The diagram illustrates the main fingerings for the Sylphyo recorder. It features a vertical line drawing of the instrument on the left, with a circular logo containing a stylized 'S' and 'Y' and the number '10'. To the right of the instrument is a fingering chart. At the top, a musical staff shows the notes for each column. Below the staff, the notes are labeled with their scientific notation (e.g., C3, C3#, D3, D3#, E3, F3, F3#, G3, G3#, A3, A3#, B3, C4, C4#, D4) and their solfège equivalents (e.g., do3, do#3, ré3, ré#3, mi3, fa3, fa#3, sol3, sol#3, la3, la#3, si3, do4, do#4, ré4). Below the labels is a keyboard diagram with black and white keys. A dashed line labeled 'touche d'octave' (octave key) is shown below the keyboard. The main part of the chart is a grid of circles representing fingerings. Black circles indicate which finger is used for a note, and white circles indicate which finger is not used. The circles are arranged in a grid that corresponds to the notes and the octave key.

A future version of this user guide will detail all other fingerings.

Appendix : complementary information

Disposal and recycling information

Your **Sylphyo** must be disposed of properly according to local laws and regulations. Because it contains electronic components and a battery, it must be disposed of separately from household waste.

Trademarks

All the trademarks cited in this documentation are only used here for descriptive purposes. They remain subject to legal regulations and are owned by their respective property holders.

Disclaimer

This documentation represents the current state of the product, however it may evolve. We do everything we can to provide our users with high-quality products and documentation. However, Aodyo does not guarantee that this documentation exactly reflects the state of the product.

Aodyo is not liable for data loss or damage resulting from the use of this product and/or its documentation.

© 2016 Aodyo.
All rights reserved.

sylphyo

Aodyo SAS
11B avenue de l'Harmonie
59650 Villeneuve d'Ascq
France

contact@aodyo.com
www.aodyo.com



AODYO INSTRUMENTS

