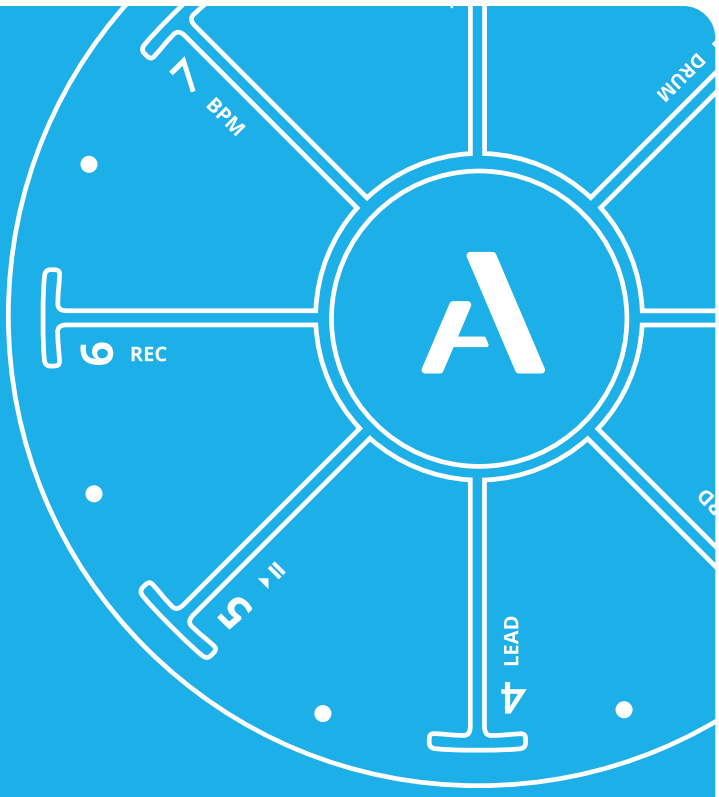
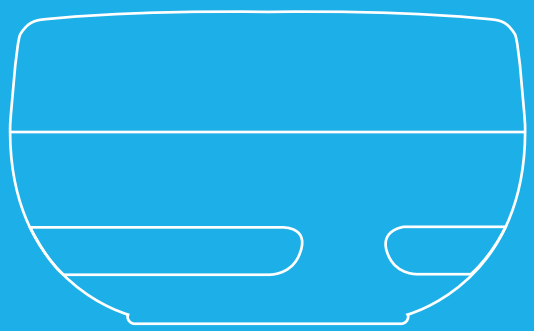
ORBA
BY ARTIPHON



USER MANUAL



V. 1.1

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Welcome

Congratulations! You are one of the first to take Orba for a spin. There are all kinds of things this new instrument does, and we're excited for you to try them all. You might see how many loops you can make as you ride the bus to work. Or perhaps you'll use Orba as a gestural synth at your next gig – waving it through the air to control effects as the crowd goes wild.
Or maybe you'll use Orba to play a software synth in that track you've been working on in Logic Pro or Ableton Live. The possibilities are endless.

However you plan to Orba, you probably have some questions. You may be wondering why we only put eight pads on Orba. Or maybe you're wondering what all of those little flashing lights mean. Or maybe you just want to know how to turn up the volume.

You're in the right place. Welcome to the official Orba User Manual.

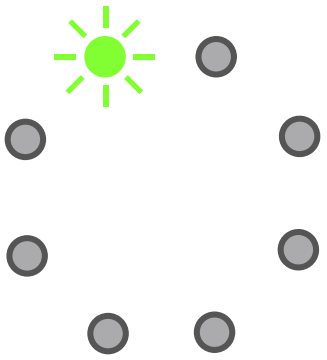
Power

Charging Orba

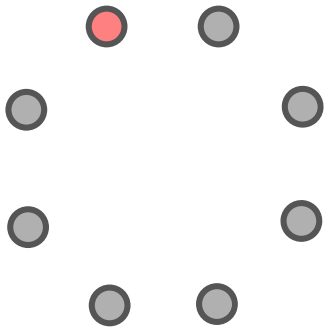
Orba can be charged from any power-charging USB port using the included USB-C cable. Either a wall charger for your phone or a computer will work perfectly. Orba remains fully functional while charging, so you can keep playing even while you're juicing up.

Charging Indicators

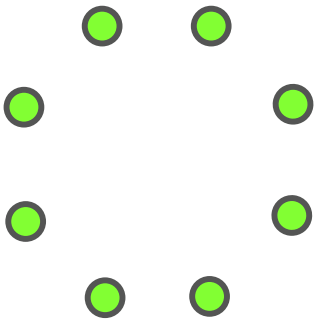
When you connect Orba to a power source and turn it on, you'll see a single green LED tblinking on pad 8. This indicates that Orba's battery is charging. If Orba is off you won't see any lights, but rest assured it's still charging.



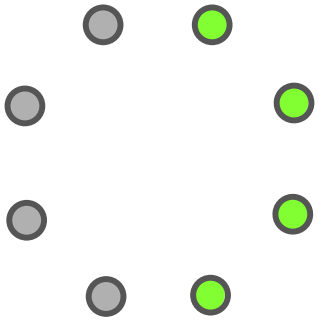
BLINKING GREEN
ON AND CHARGING



BLINKING RED
LOW BATTERY

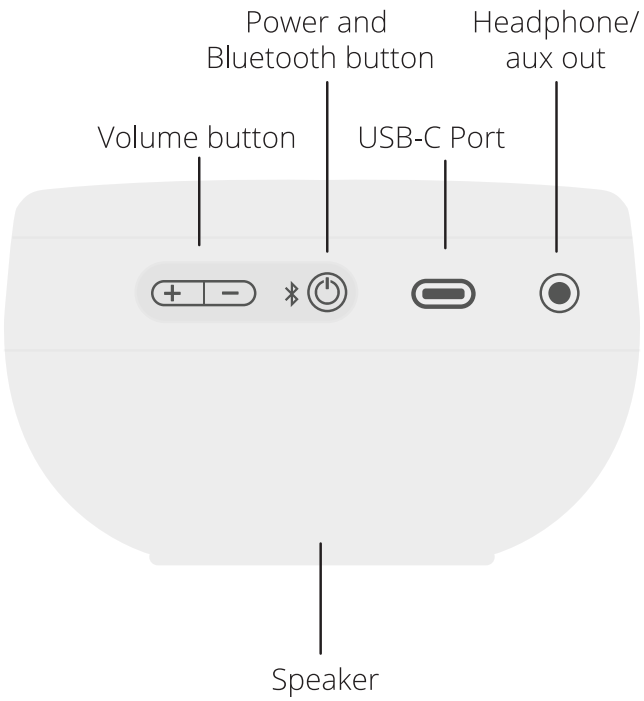


FULLY GREEN
FULLY-CHARGED



HALF-FILLED GREEN
HALF-CHARGED

Panel and Controls



Volume button	Increase and decrease the volume of Orba's speaker
Power and Bluetooth button	Press and hold to turn Orba on and off
USB-C Port	Charge Orba's built-in battery and connect your external hardware devices
Headphone/aux out	1/8" audio output for headphones or speakers
Speaker	3W active speaker system

The "A" Button

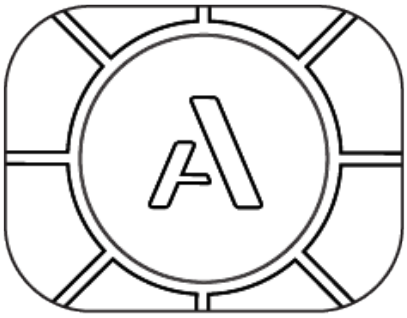


fig. 1
"A-button"

You can think of the A button as a function or menu button. Any time you want to change what you're doing on Orba, you'll use the A button to make it happen.

A single tap of the A button will cycle through each of the four main modes.

Try it:

Start in Drum mode and press the A button once.
Now you're in Bass mode!

Using the A Button to Switch Modes

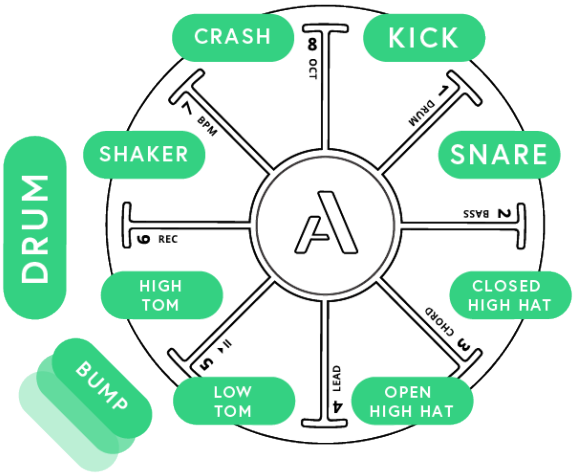
Press and hold the A button at the same time you press one of Orba's first four pads to activate that mode.

Try it:

If you don't want to cycle between modes, you can jump to any playing mode directly by holding A and pressing the pad for that mode.

Modes
DRUM

Drum mode has nine distinct drum sounds: one per pad, plus an additional one that is triggered by using the Bump gesture. You can also keep trigger the shaker by holding pad 8 and, well... shaking.



Drums are velocity-sensitive and will respond to different intensities of tapping, similar to how a traditional drum changes its tone and volume by hitting it harder or softer. The sounds also respond to how long your finger stays on each pad. Try holding your finger on a cymbal to cut it short, or tap and release quickly on a tom to hear a long decay.

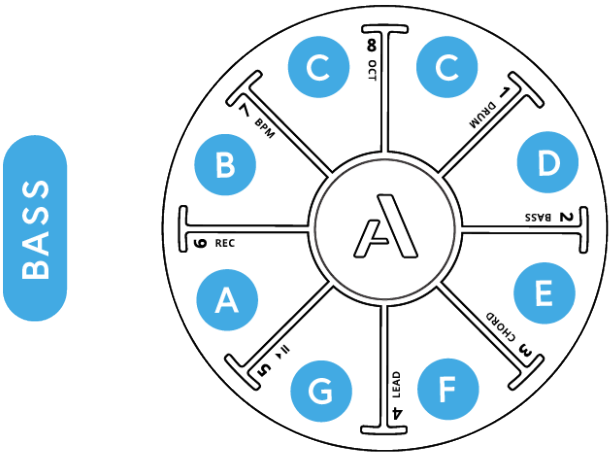
Try it:

You can alternate between open and closed hi-hat sounds on the same pad simply by changing the way you touch it. A tap with a quick release will let the "cymbal" ring out, a tap and hold will "choke" the sound.

Modes

BASS

Orba's Bass mode is monophonic, meaning only the most recent note is played at a given time (this is called "last-note priority" in synthspeak). By default, Bass is tuned to a C major diatonic scale.

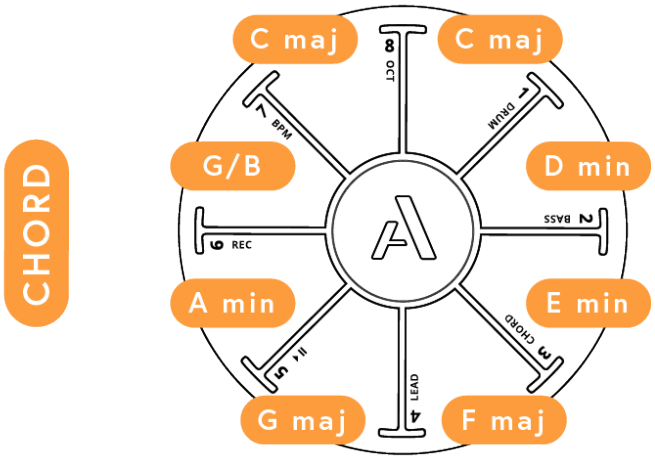


Try it:

Bass is a great mode for trying different motion gestures, especially Tilt and Radiate.

Modes
CHORD

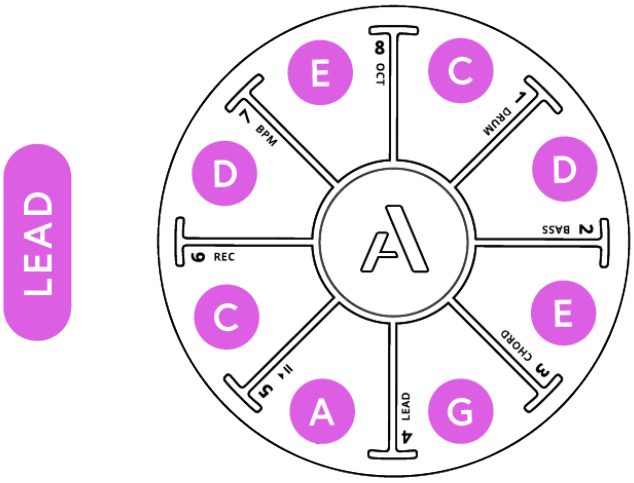
In Chord mode, each of Orba's pads triggers multiple notes simultaneously to form a chord in the key of the song. Chords are a fun way to casually explore song structures and create new ideas quickly. Like Bass, Chord mode is very responsise to the gestures Tilt and Radiate.



Modes

LEAD

Lead is a polyphonic mode (meaning you can play several different notes simultaneously). In Lead, the pads are tuned to a pentatonic scale. This is a fun scale with five notes per octave, making it easy to find a melody that goes along all that rhythm you just played.

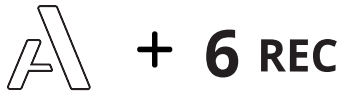


Looping

Looping is a fun and intuitive way to create a lot of musical ideas very quickly. Orba's built-in looper lets you record and layer all four modes together, and even overdub to add more notes as you get going.

Starting a Loop

- Choose one of the four instrument modes.
- Press **A + Pad 6 (REC)** together. When you release you'll hear the metronome click—this indicates the tempo of the song and means you're ready to play your first loop. Although the metronome has started, the loop won't begin recording until you play your first note.



- Record a few notes, and then tap the A button when you're ready to end your loop. The notes you just played will automatically start to play back from the beginning. Note: the song length will always be as long as the first loop you've recorded. Orba can record up to 16 bars.
- Orba's looper is intuitive, meaning you can start or stop a loop a little ahead or behind the beat, and it will adjust the notes to what you intended to.

Overdubbing

While your first loop continues to play, you can begin to layer additional notes and loops on other modes. Orba will stay in overdub mode until you pause or stop playback by pressing
A + Pad 5 (Play/Pause) to pause the song, or if you press **A + Pad 6 (REC)** to disarm

Try it:

Start with a simple Kick + Snare on drum, then press A to start overdubbing. Add in your hi-hats on the second pass, maybe toms on a third. Keep adding drum beats till you notice that your head has been bobbing for a few minutes ;)

Playback/Pause

- To pause or resume playback, hold the **A + Pad 5 (Play/Pause)** buttons together.
- To restart playback from the beginning of the loop, hold the **A + Pad 5 (Play/Pause) for one second.**

Clearing a Loop

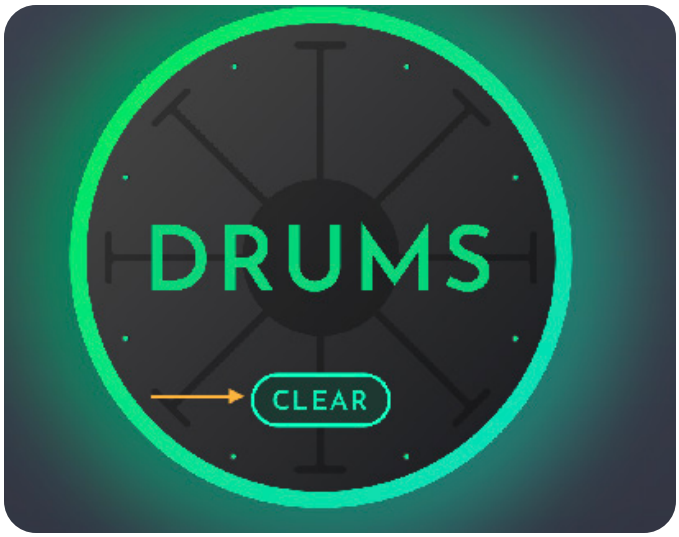
To clear loops one at a time:

1. Pause playback (A + Pad 5 (Play/Pause))

2. Select the mode that you want to clear

3. Press and hold **A + Pad 6 (REC)** together for two seconds. Alternatively, you canhold A and Shake Orba to clear your current loop

Note: You can also clear loops by pressing **CLEAR** in the Orba app.



Overdubbing

To clear your Song (all of your loops at once):

1. Press and hold **A + Pad 6 (REC)** for 5 seconds. Alternatively, you can hold **A + Pad 6 (REC) and Shake** Orba to clear your song.

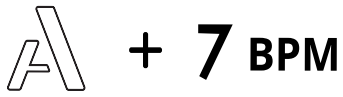
Adjusting Tempo

Orba's default tempo is 120 beats-per-minute (BPM). There are a few different ways to adjust the tempo of your song.

Adjusting Tempo by Tapping

1. Hold the **A** button

2. Tap **Pad 7 (BPM)** at the desired tempo



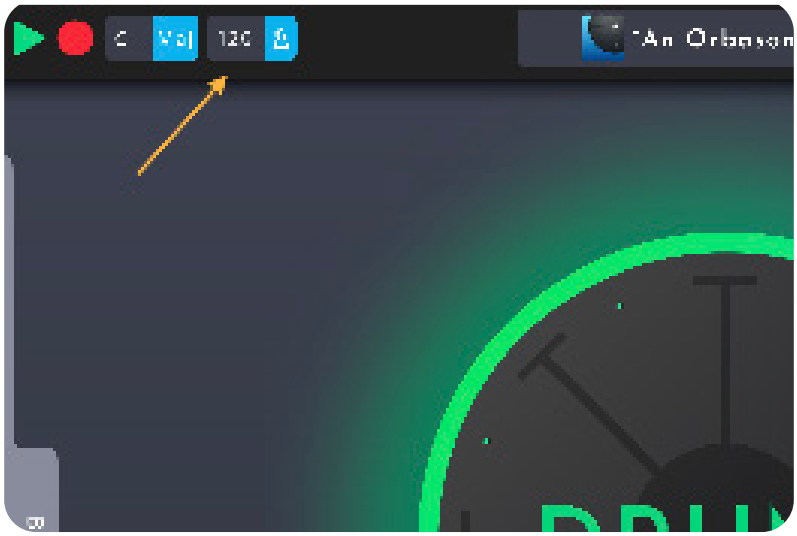
Adjusting Tempo by Sliding

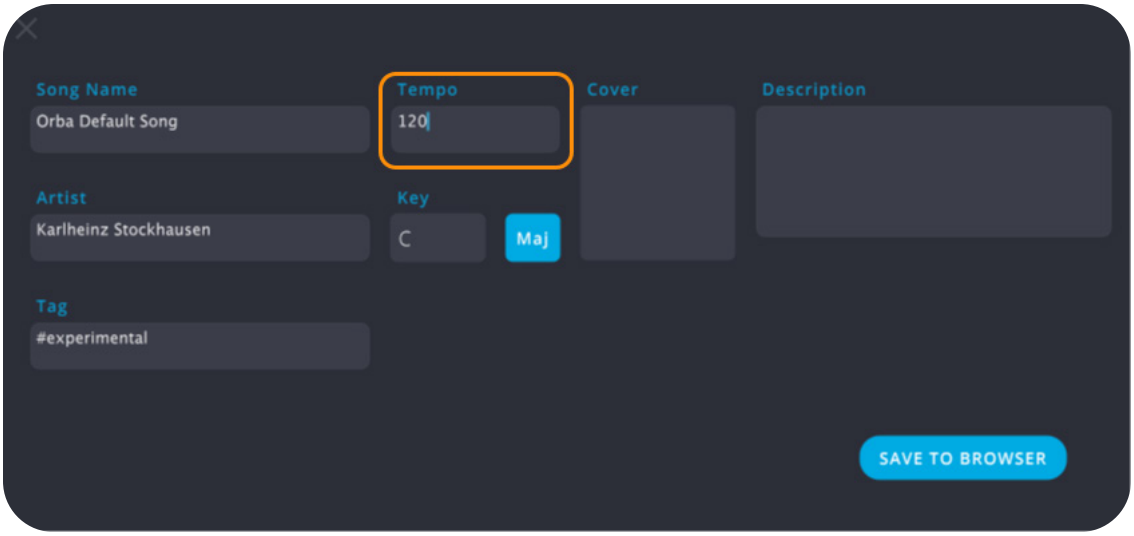
You can also make smaller adjustments to your tempo by using the Slide gesture.

- Hold **A + Pad 7 (BPM)** together
- Slide your finger up or down from the BPM pad

Adjusting Tempo in the App

To achieve a specific tempo, you can type the desired tempo in the top left corner of the screen or in the song window of the Orba App.





Transposing Orba

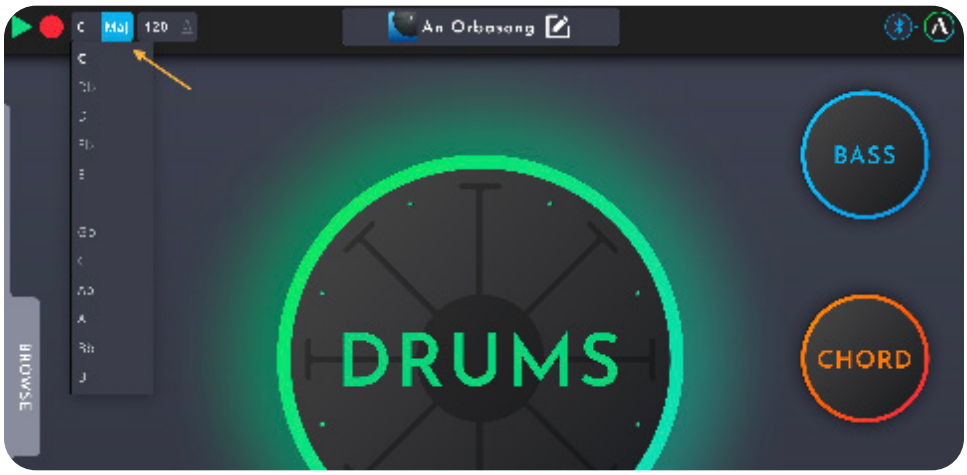
Changing Octaves

You can transpose octaves right on Orba itself. To shift octaves, press and hold **A + Pad 8 (OCT)** Slide your finger up from the Octave pad to raise the tuning.

Changing Keys

Orba's default tuning is in the key of C major. However, Orba can play in any key you desire.

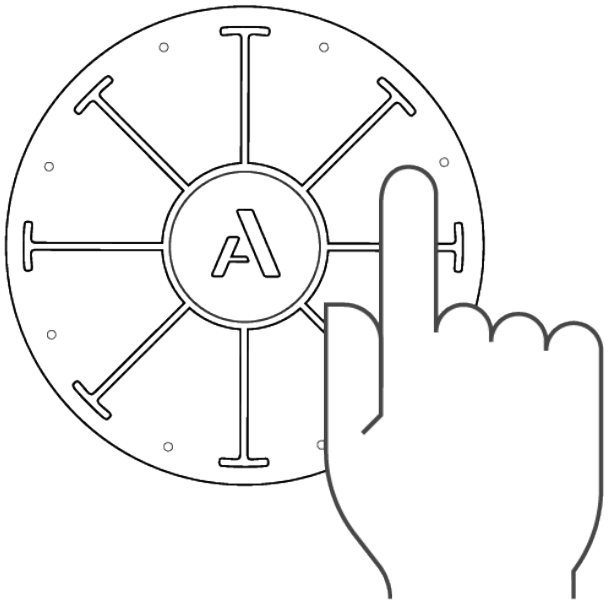
The key of your song is changed in the Orba App in the top left corner of the screen or in the song window of the Orba App.



Gestures

Orba's touch and motion sensors combine to capture even your most subtle gestures. Pick it up and hold it, or just reach over and play a few notes while it's sitting on your desk. Tap it with one hand or both, with your fingertips or thumbs, or shake it and bump the side. You can slide around each pad, or go crazy with some vibrato. It's all up to you! Below, you'll find a bit more information on each gesture and how exactly it works.

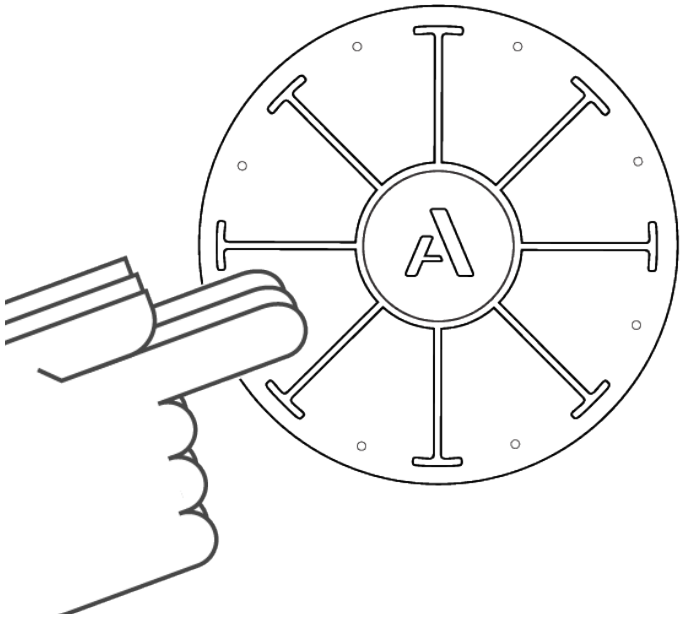
Tap



Tap your finger on a pad. Orba is velocity-sensitive, so the harder you Tap, the louder the sound.

MIDI Message: Note On/Off

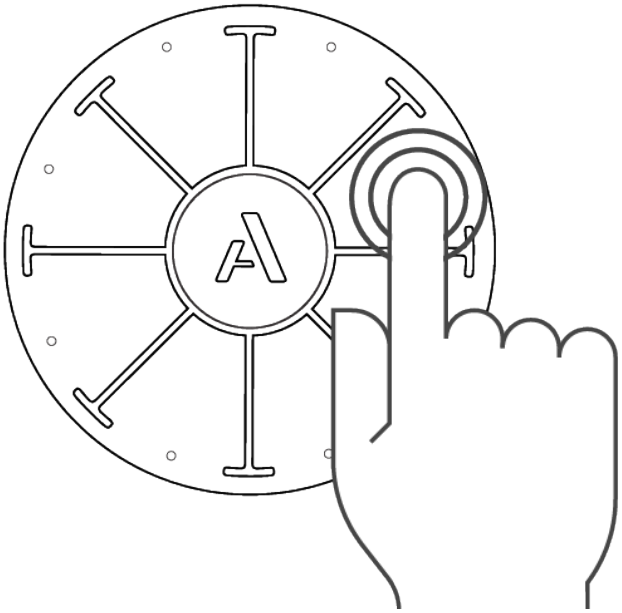
Vibrato



Tap and move your finger from side-to-side on a pad. Vibrato produces a change in pitch. the range of pitch can be adjusted with the Pitch Bend Scaling setting in the Orba App.

MIDI Message: Pitch Bend

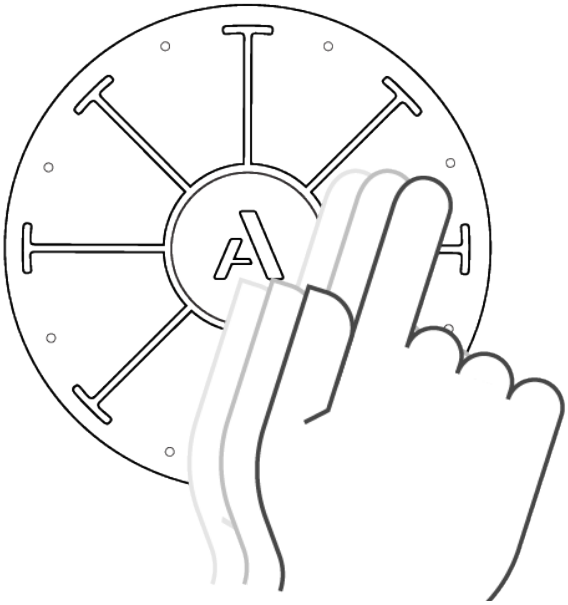
Press



Tap and hold your finger on a pad with varying degrees of intensity. As opposed to velocity which detects pressure, Press is activated by making your finger take up more (and less) surface area. Think about it like this: the more you spread out your finger, the more Press is activated. Pressing with sustained pressure will modulate effects on Orba's synth.

MIDI Message: Channel Pressure

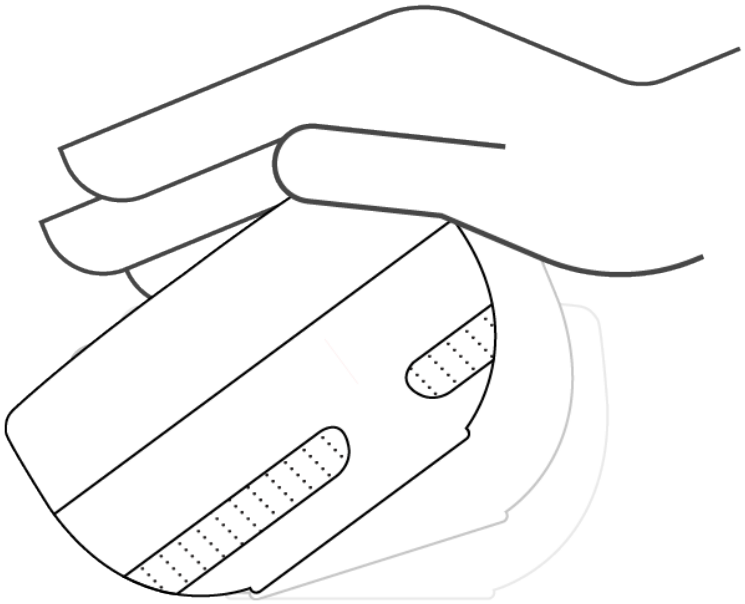
Radiate



Press and move your finger within a pad, in and out from the center to the edge of Orba. Radiate effects Brightness. When using it with Orba's internal synthesizer it may be affecting volume, envelopes, and others effects. Try it in Bass and Chord modes to start.

MIDI Message: Brightness - CC#74

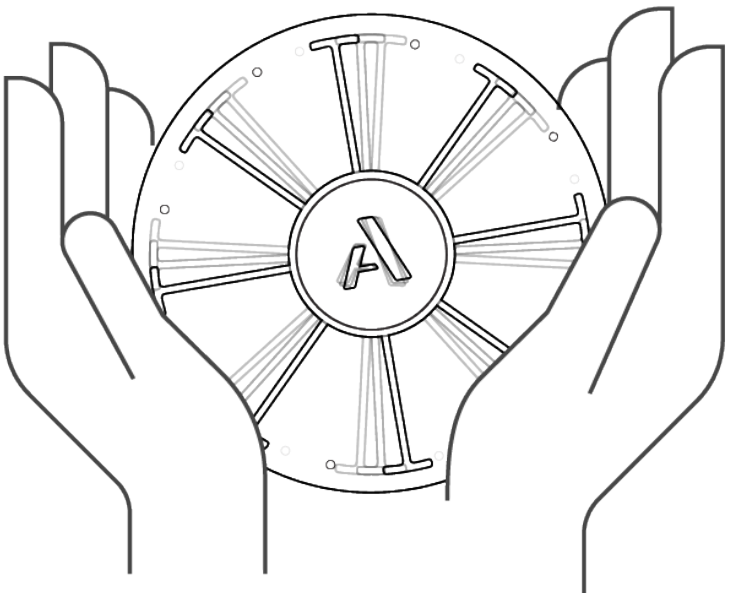
Tilt



Tilt Orba to the side to play effects. Tilt is Orba's version of the mod wheel on a t raditional keyboard controller. As mod wheel is a very common MIDI effect, you'll find Tilt works automatically with most software synths and apps.

MIDI Message: Mod Wheel - CC#1

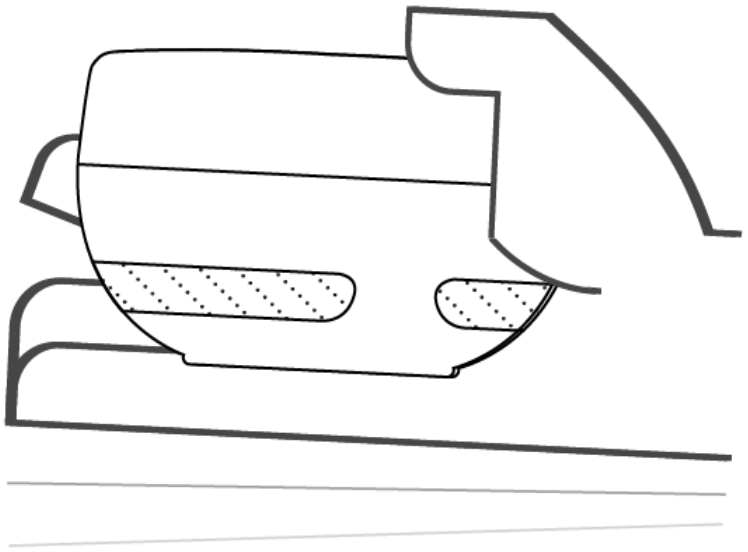
Spin



Rotate Orba like a knob.

MIDI Message: CC#112

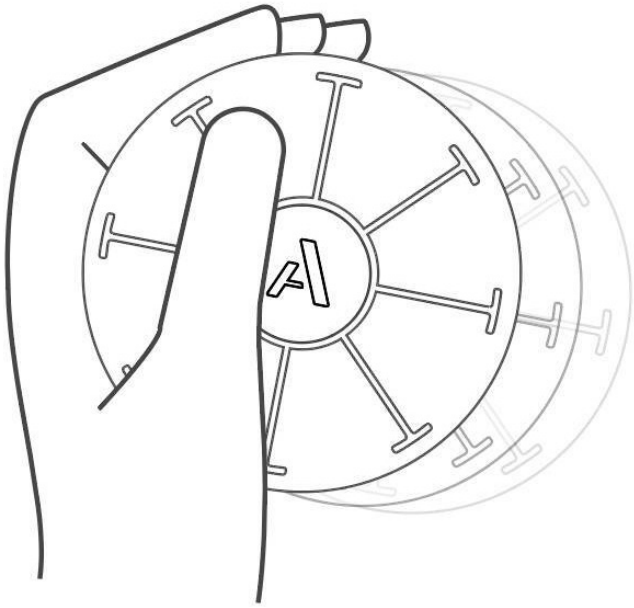
Move



Move Orba in space to modulate sounds and effects.

MIDI Message: CC#113

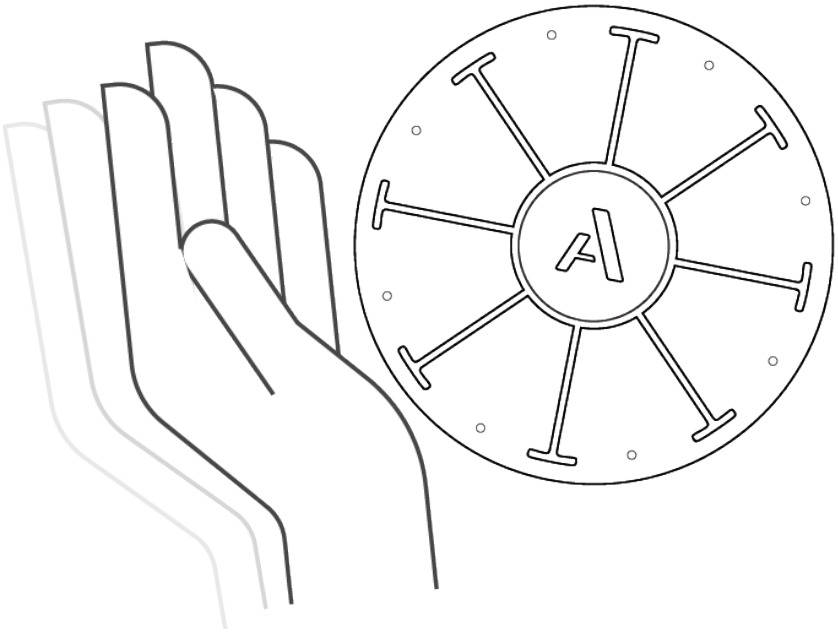
Shake



In Drum mode, hold the pad 8 and shake Orba. Shaker works best using soft movements in a side-to-side motion.

MIDI Message: MIDI note 69 and CC#2

Bump



Tap Orba on its side. Try to Bump in drum mode: you'll get a "clap" sound!

MIDI Message: MIDI note 39

The Orba App

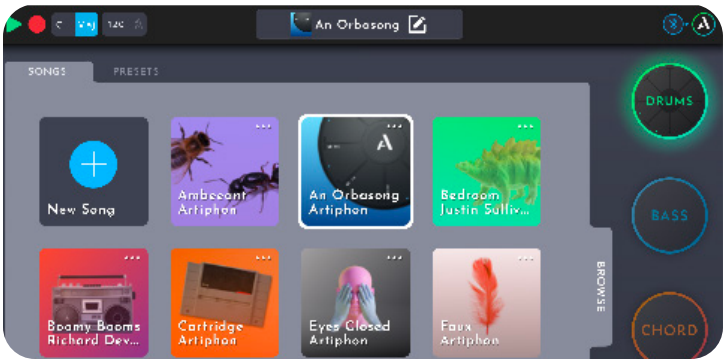
The Orba App allows you to customize Orba's key and tempo as well as load presets. You can use the Orba app to update firmware, too, ensuring you've got the latest and greatest features enabled on your instrument.

Songs

What is a Song?

A song is a collection of 4 presets (one for each instrument - Drum, Bass, Chord, and Lead). Songs can be saved to the Orba app and loaded on to Orba itself. They can be made from any combination of Presets. Tuning and Tempo adjustments are also saved when you save a Song, and will be loaded accordingly when a Song is loaded.

Songs can be accessed and created from the Browser in the Orba app.



To save a Song, click the pencil icon in the heading of the Orba app. This opens the song details window, where you can edit tuning and tempo parameters along with other metadata (like song title and artist name).

To load a Song, select it from the Song tab in the Browser and click "Send to Orba".

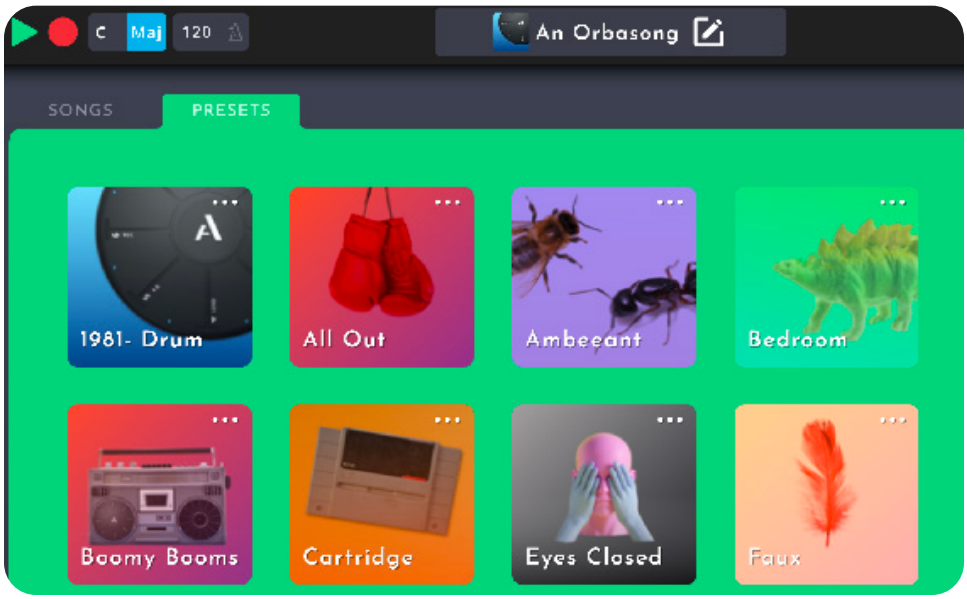
Presets

What are presets?

A preset is a sound, tuning, and set of gestures that apply to one of Orba's four instrument modes. Note: Presets are mode-specific.
For example: a Drum preset could only be selected while in Drum mode. Changing a preset on Orba is done within the Orba app.

Changing your preset

1. Navigate to the Presets folder
2. Select the mode you would like to change!
3. Tap the preset of your choice, select **Load** and voila



Using Orba As A MIDI Controller

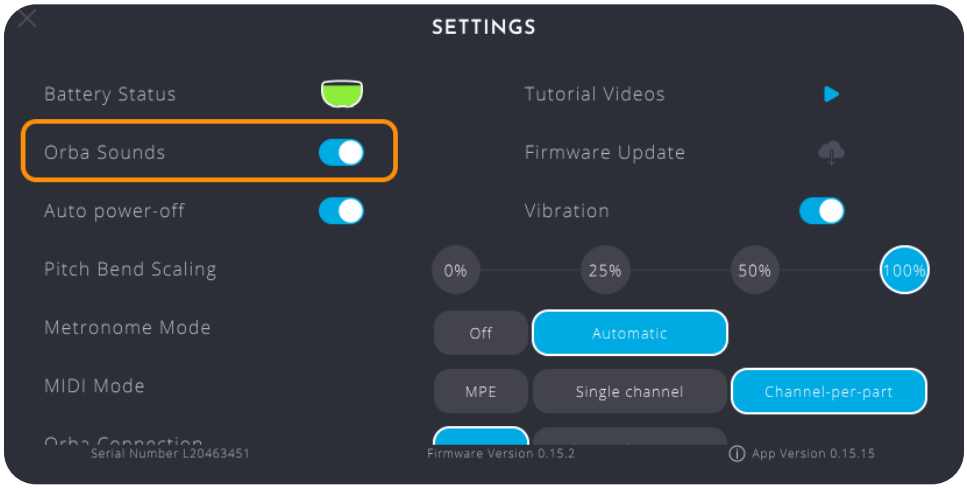
In addition to being a standalone synthesizer, Orba also works as a MIDI controller. You can use Orba to trigger and affect sounds in any MIDI-enabled software or hardware.

There are two ways to connect Orba as MIDI controller:

- You can use Orba using **MIDI over Bluetooth** on macOS, iOS, and Android.
- You connect via **USB-C** on macOS, Windows, and Android.

For ease, we've provided instructions below on connecting to macOS, Windows, iOS, and Android.

If you like, disable Orba's internal synth to make sure you're not hearing two different sound sources. To do that, open the Settings page in the Orba app and toggle Orba Sounds On/Off (This function only works when Orba is connected via USB).



Connecting To MacOS

Via USB-C

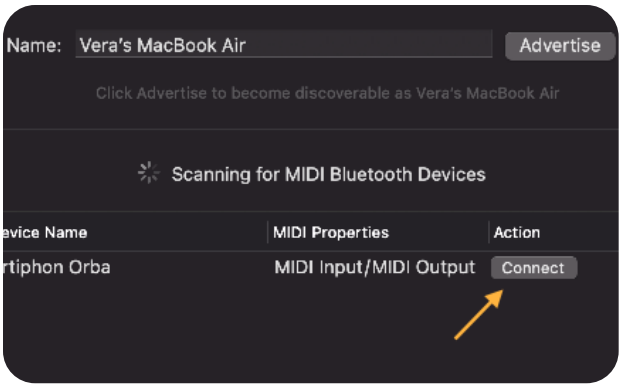
Simply connect the included USB-C to USB-A cable to your computer. Macs with USB-C inputs will require a USB-C to USB-C cable or an adapter.

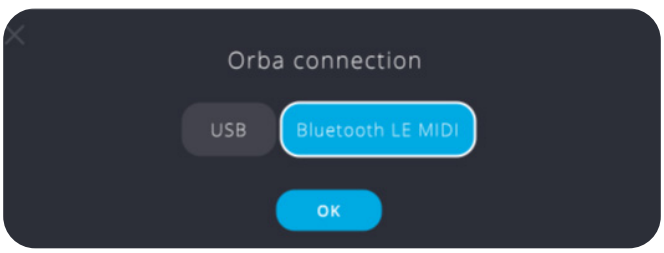
Via MIDI over Bluetooth

The simplest way to connect via Bluetooth is through the Orba app.

1. Click the Orba icon in the upper-right corner of the app to pull up the Orba Connection window.

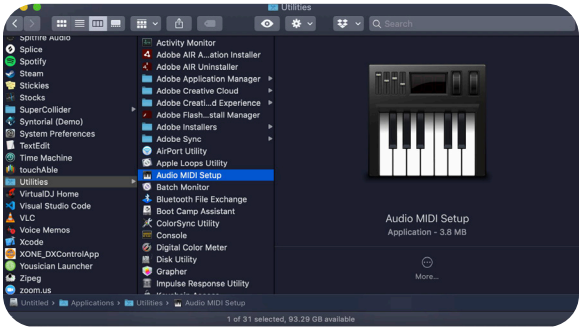
2. Select Bluetooth LE MIDI and choose the Orba device from the window that follows. If you don't see Orba in the list of available devices make sure that Orba is turned on and within range of your computer.



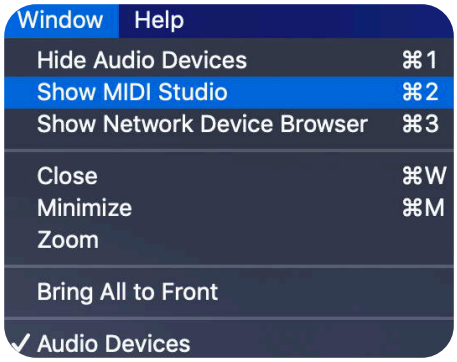


It's also possible to connect via Bluetooth without the Orba app. To do that, follow these steps:

1. Open Audio MIDI Setup on your Mac. This is found in the Utilities folder. Alternatively, you can use the keyboard shortcut **Command + Space.** Type "Audio MIDI Setup" to find the program.

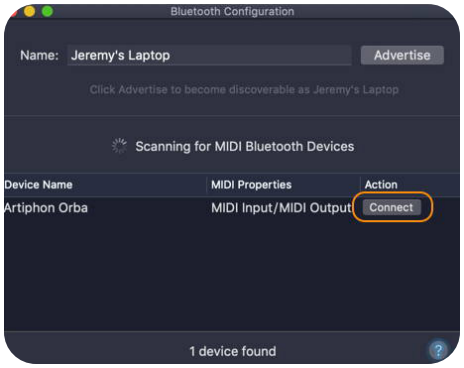


2. Open the **Window** drop-down in Audio MIDI Setup and select Show MIDI Studio, or use the keyboard shortcut **Command+2.**



3. Select the Configure Bluetooth icon from the header window.

4. Select Orba from the list of available devices. If you don't see Orba on the list, make sure you have it turned on and in range.



Connecting to Windows

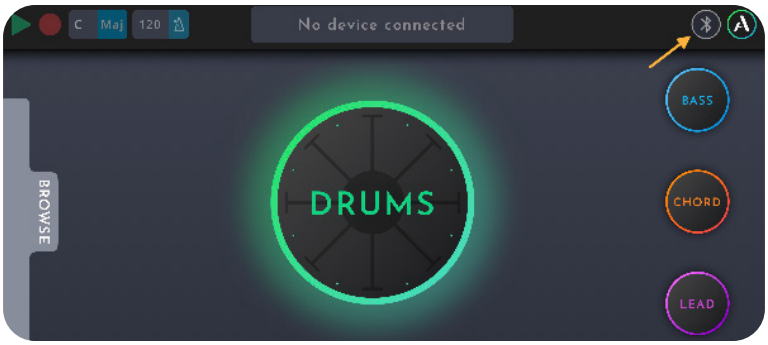
Via USB-C

Windows is easy! Just connect the included USB-C-to-USB-A cable to your computer. Unfortunately, Windows does not currently support MIDI over Bluetooth.

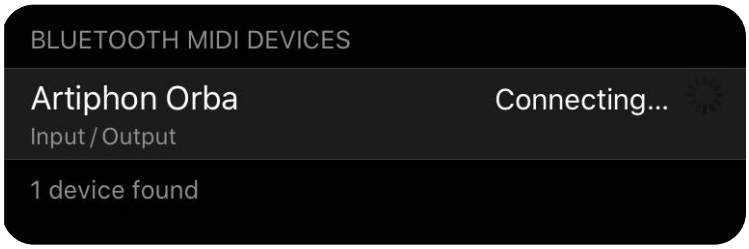
Connecting to iOS

With the Orba App

- In the Orba app, navigate to the Orba icon in the upper right-hand corner of the screen.



- Select Orba from the list of Bluetooth MIDI Devices.

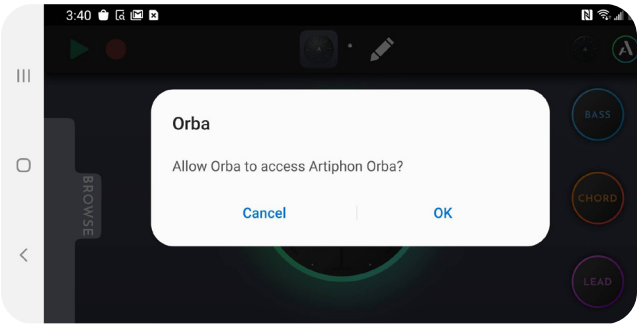


- Note: If you don't see Orba as an option in this list, make sure the instrument is powered on and within range.

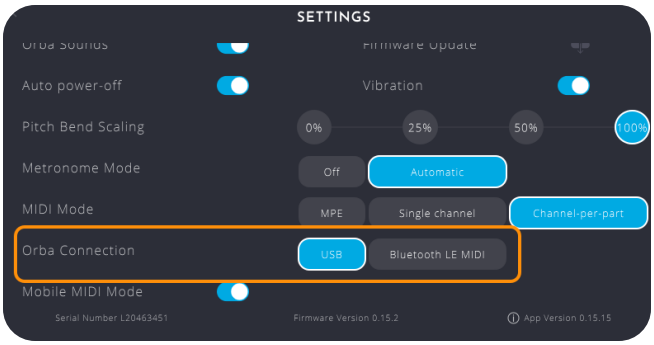
Connecting to Android

With USB

- Open the Orba app and connect to your Android phone with a USB-C cable. When prompted, tap "OK" to confirm USB connection.

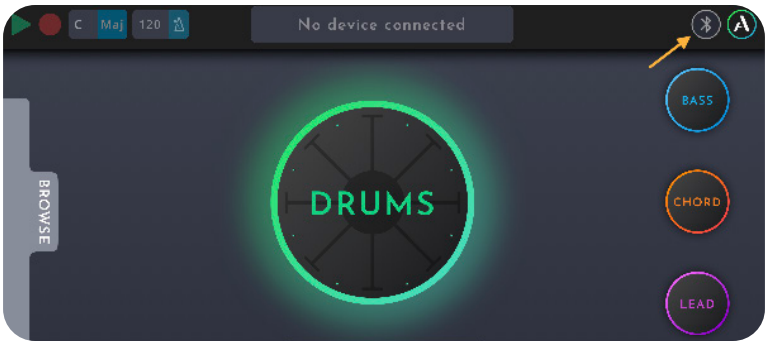


- Open the Settings window to makes sure that the Orba Connection setting is switched to USB.

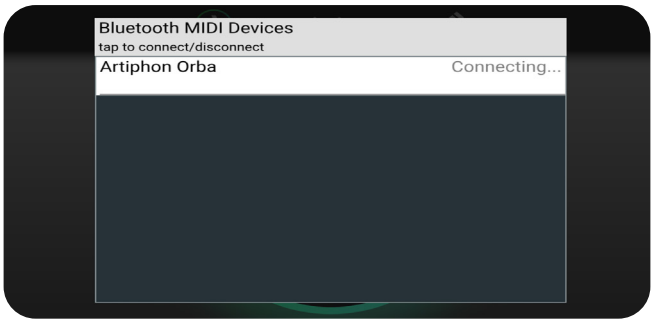


With Bluetooth

- In the Orba app, navigate to the Orba icon in the upper right-hand corner of the screen.

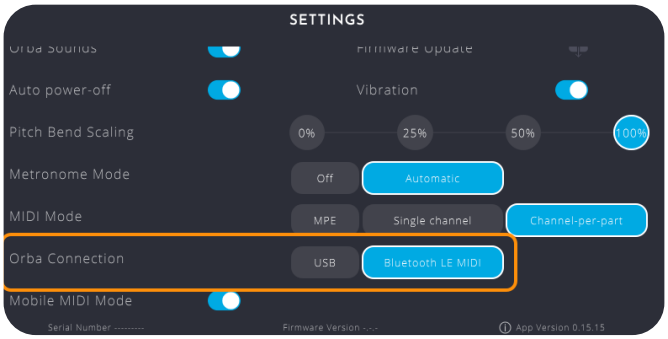


- Select Orba from the list of Bluetooth MIDI Devices



- Note: If you don't see Orba as an option in this list, make sure the instrument is powered on and within range.

- Open the Settings window to makes sure that the Orba Connection setting is switched to Bluetooth LE MIDI.



Settings

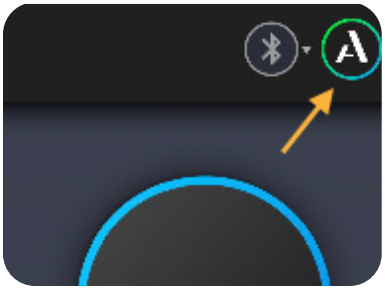
Updating Firmware

We are always adding features and improving the Orba experience. Keeping your firmware up-to-date is the best way to ensure you're getting the best this unique instrument has to offer.

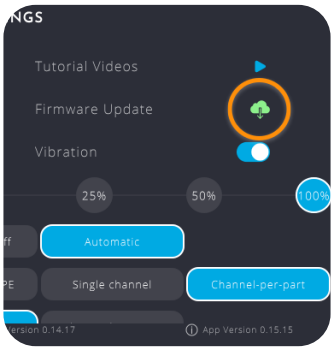
Note: Updating firmware can only be done through the Orba desktop app with a USB-C connection. These downloads are available at artiphon.com/pages/downloads

1. Connect Orba to your computer using the included USB-C cable.

2. In the Orba app, open the Settings panel by clicking the A icon in the upper-right corner of the screen.

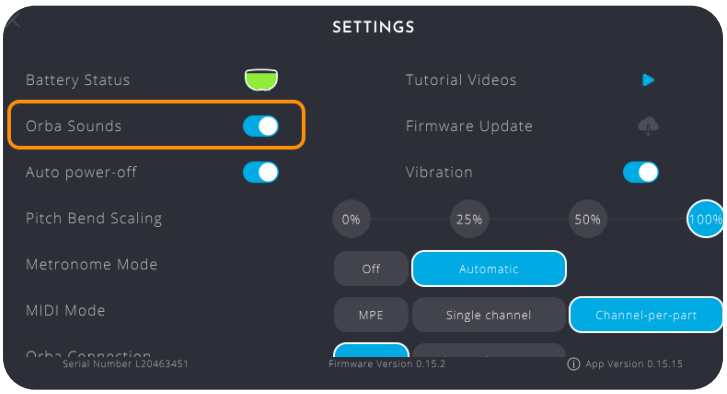


3. In the settings panel, click the cloud icon next to the text Firmware Update. Note that this icon will be greyed out and unselectable if you are already running the most current version of the firmware.



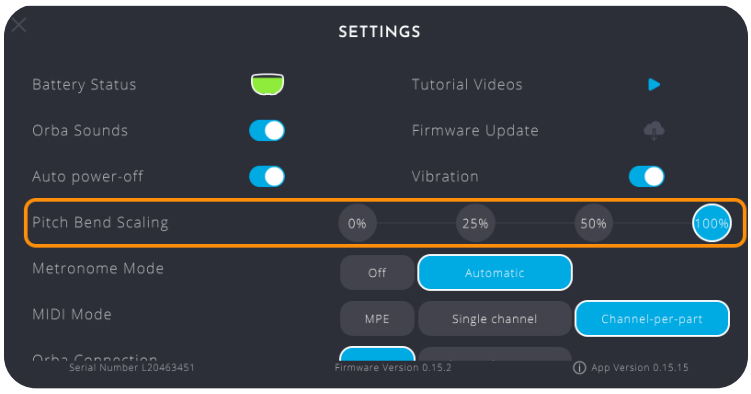
Orba Sounds On/Off

When you use Orba as a MIDI controller to trigger sounds in external software or hardware, you may want to temporarily disable Orba's internal synth to prevent it from interfering with the sounds in your external gear. Otherwise, you'll hear two sounds every time you play (which could be awesome!). Do this by toggling the Orba **Sounds On/Off** setting. (This function only works when Orba is connected vias USB).



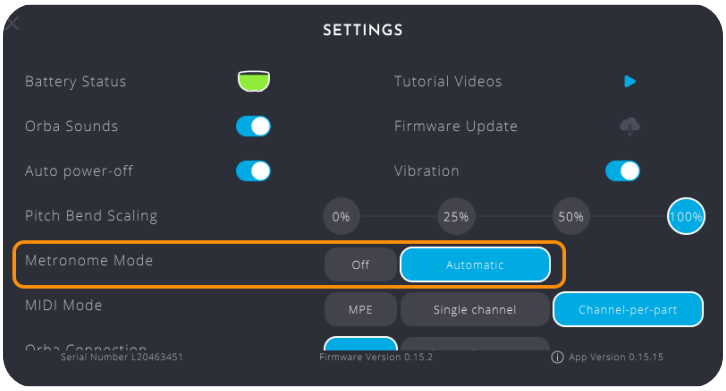
Pitch Bend Scale

Adjusts Orba's Pitch Bend Scaling settings by ranges (0% - 25% - 50% - 100%). This affects the rate of change in pitch shifts when performing Vibrato.



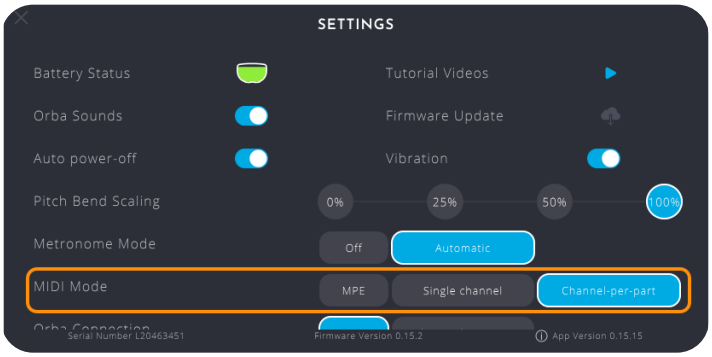
Metronome Mode

Orba's on-board metronome can be disabled by setting the Metronome Mode to "Off". By default this toggle is set to "Automatic", meaning the metronome will automatically start when a recording is made on Orba.



MIDI Modes

Orba can be configured to send MIDI messages in 3 different ways: MPE, Single Channel, and Channel-Per-Part.



MIDI Modes (Ctd)

Single Mode

All notes are sent on MIDI channel 1. Only the MIDI notes for the currently active mode are sent. For example when drum mode is selected only the drum notes are sent out on MIDI.

Channel-per-part

Each instrument mode sends MIDI data out on a dedicated channel. Switching modes will switch the output channel accordingly.

Channel 10	Drum
Channel 9	Bass
Channel 16	Chord
Channel 1	Lead

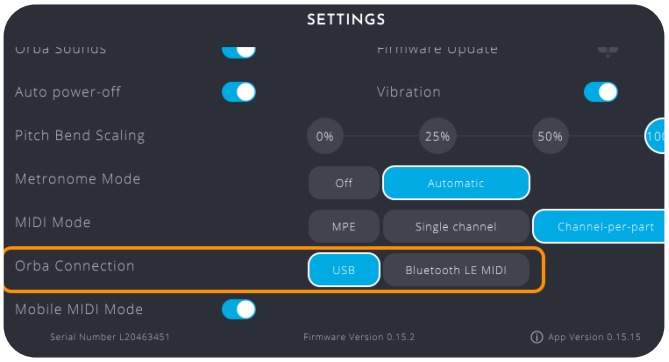
MPE (MIDI Polyphonic Expression)

MPE (MIDI Polyphonic Expression) is a method that allows players to control multiple parameters (pitch bend, aftertouch, and vibrato) independently per note. On a traditional MIDI keyboard, for example, the Pitch Bend wheel affects all notes at once. An MPE compatible controller will allow these notes to be affected independently from one another.

All notes are sent as MPE MIDI with every note having its own channel so that per-note controllers can be used. In this mode, only the MIDI notes for the currently active mode are sent out on MIDI. For example, when Bass mode is selected only the MIDI out for Bass is sent.

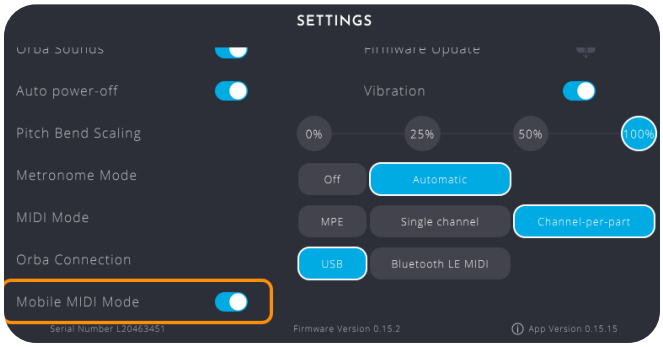
Orba Connection

Switch between connection Orba's methods. Orba can connect via USB on desktop computers and Android devices. Bluetooth LE MIDI connections are possible on macOS, iOS, and Android devices (Windows does not currently support Bluetooth LE MIDI).



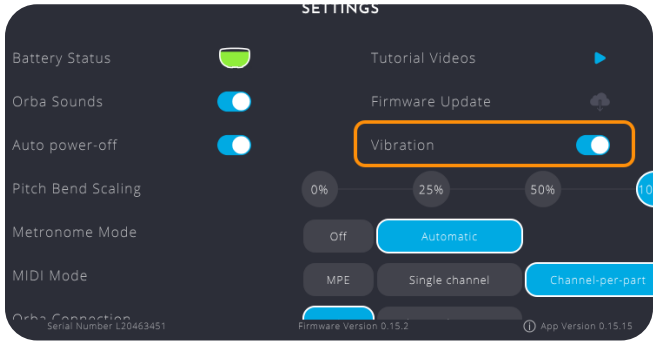
Mobile MIDI Mode

This mode consolidates the number of MIDI input ports available on Orba. When disabled (the default setting) Orba shows separate ports for Drum, Bass, Chord, and Lead. When enabled, Orba shows just one port. Some third-party apps may work better when only one MIDI input port is available, in which case enable Mobile MIDI Mode.



Vibration

Orba's haptic feedback can be disabled using the Vibration toggle.



MIDI Implementation Chart

Gestures are associated with specific MIDI assignments. Below are the default MIDI assignments. Note: These may vary depending on the preset you load.

Gesture MIDI Note Mapping

Gestures	MIDI
Tap	Note On
Press	Channel Pressure
Vibrato	Pitch Bend
Radiate	CC 74 (Brightness)
Bump	MIDI Note 39
Shake	MIDI Note 69 and CC2
Move	CC 113
Spin	CC 112
Tilt	CC 1 (Modwheel)

Default Note Mapping

Each pad and each Mode sends its own MIDI messages. Below are the default MIDI assignments.

Note: These may vary depending on the preset you load.

Drum MIDI Note Mapping

Drum	Note	MIDI Number
Pad 1 (Kick)	C1	36
Pad 2 (Snare)	D1	38
Pad 3 (Closed Hi-hat)	F#1	42
Pad 4 (Open Hi-hat/ Crash)	C#2	49
Pad 5 (High Tom)	G1	43
Pad 6 (Low Tom)	A1	45
Pad 7 (Ride Cymbal)	D#2	51
Pad 8 (Shaker)	A#3	70
Bump (Clap)	**A3**	**39**

Bass MIDI Note Mapping

Bass	Note	MIDI Number
Pad 1	C2	48
Pad 2	D2	50
Pad 3	E2	52
Pad 4	F2	53
Pad 5	G2	55
Pad 6	A2	57
Pad 7	B2	59
Pad 8	C3	60

Chord MIDI Note Mapping

Chord	Note	MIDI Number
Pad 1	C2, G2, C3, E3	48, 55, 60, 64
Pad 2	D2, A2, D3, F3	50, 57, 62, 65
Pad 3	E2, B2, E3, G3	52, 59, 64, 67
Pad 4	F2, A2, C3, A3	53, 57, 60, 69
Pad 5	G2, B2, D3, G3	55, 59, 62, 67
Pad 6	A2, C3, E3, A3	57, 60, 64, 69
Pad 7	G2, B2, D3, B3	59, 62, 71, 55
Pad 8	G2, C3, E3, C4	60, 64, 72, 55

Lead MIDI Note Mapping

Lead	Note	MIDI Number
Pad 1	C3	60
Pad 2	D3	62
Pad 3	E3	64
Pad 4	G3	67
Pad 5	A3	69
Pad 6	C4	72
Pad 7	D4	74
Pad 8	E4	76

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