



Manual for Bluetooth Caliper



2023

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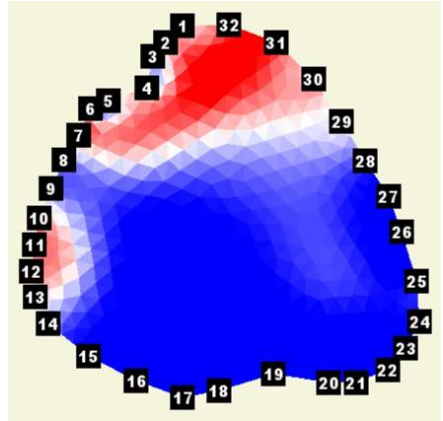
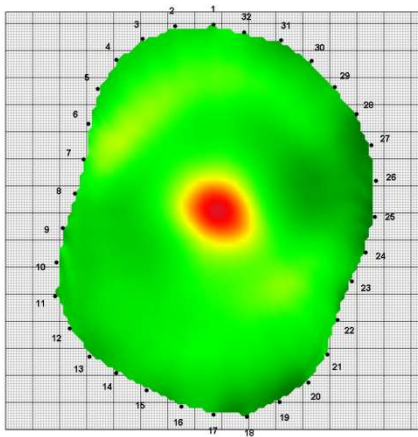
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Introduction

The Bluetooth Caliper is a tool that is capable of quickly measuring distances between two points and transferring the values to PC via Bluetooth. It speeds up registering the sensor positions for Arborsonic3D and ArborElectro, when the sensors are arranged in an irregular shape.



Trunk shapes registered with caliper in ArborSonic 3D and in ArborElectro software.

Package content

- Display unit with screen, battery and electronics



- Measuring arms ending in pins



- Extension arms (optional)



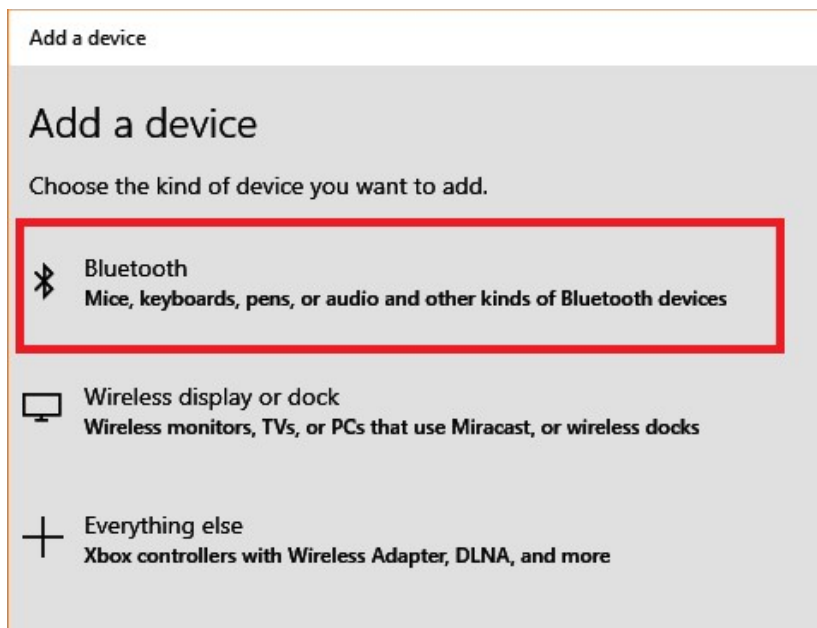
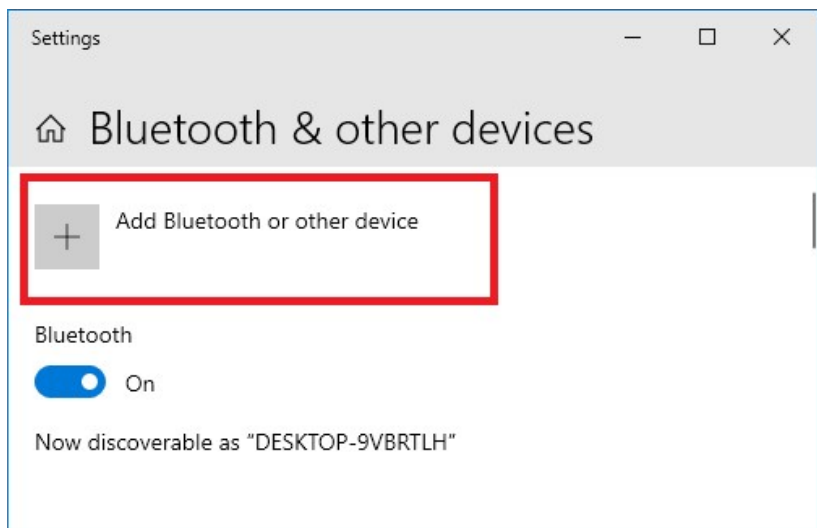
- Textile case
- Charging cable (USB)
- Manual
- Wrench 28

Installation

Installing the Bluetooth unit of the caliper is very similar to the installation of the Bluetooth unit of the ArborSonic 3D or ArborElectro.

- Check if Bluetooth is enabled on your PC. (Some computers have an external button to turn Wireless communication on and off.)
- Turn on the caliper by pressing its button once. For about 6 seconds '- - - -' is displayed which shows that booting up is in progress. When numbers appear, the caliper is ready to be used.
- Go to the control panel or taskbar of your Windows PC. Click the Bluetooth icon and select *Add Device*, then select *Add Bluetooth or other device* and *Bluetooth*.





- Wait for *Caliper* to appear in the list and select it. You may have to enter the security PIN code which is *1234*.
- After pairing check the newly installed COM ports by clicking *More Bluetooth options* (you may have to scroll down), then click *COM Ports*, and then look for an *Outgoing* port with *Caliper* in the name.

Bluetooth & other devices



Add Bluetooth or other device

Bluetooth



On

Now discoverable as "DESKTOP-9VBR7LH"

Mouse, keyboard, & pen



G815 RGB MECHANICAL KEYBOARD



MX518 Mouse

Audio



HD Pro Webcam C920



Headphones (High Definition Audio Device)

[Related settings](#)

[Devices and printers](#)

[Sound settings](#)

[Display settings](#)

[More Bluetooth options](#)

[Send or receive files via Bluetooth](#)

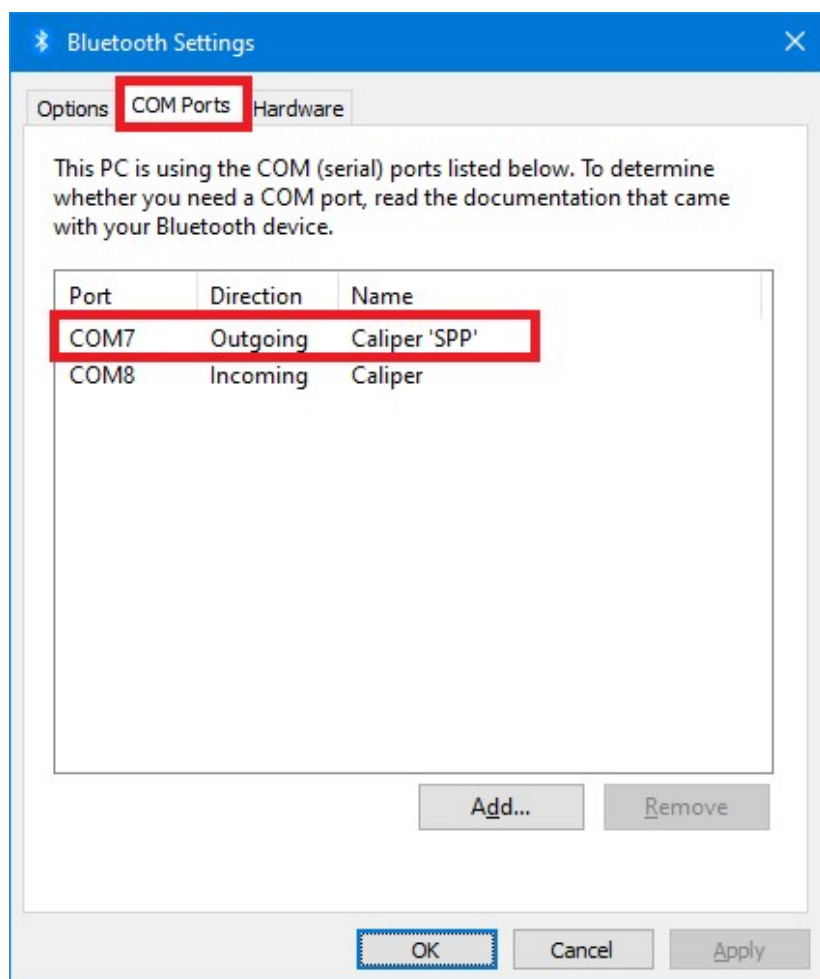
[Help from the web](#)

[Receiving files over bluetooth](#)

[Reinstalling Bluetooth drivers](#)

[Sending files over Bluetooth](#)

[Fixing Bluetooth connections](#)



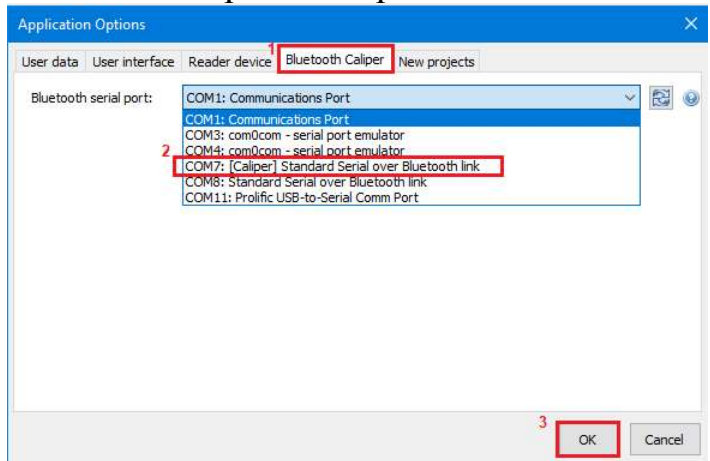
- Setting up the caliper in ArborSonic 3D

- Go to the settings with the wrench icon



- select *Bluetooth Caliper*.

- Select the Caliper COM port



-

Using the Bluetooth Caliper

The two arms of the caliper need to be inserted into the slots on the main part. The arms and extension arms are color-coded, the right arm has a yellow mark.

The Bluetooth caliper has two arms and can have two extension arms. The distance will be measured between

the tips of the measuring arms. The caliper without extension is capable of measuring up to 1100 mm distance. With extension arms, measuring is possible up to 1999 mm distance.

When using the extension arms make sure that the nut on the end is fastened properly. Normally you can do this by hand.



If the arms are still wobbly, use the enclosed wrench to tighten the connection. Use only a minor force and be careful when handling the wrench. Always hold the other side of the connection by hand. Make sure to keep the screws clean, if needed apply grease.

Measurement with the Bluetooth caliper

1. Switch on the caliper by pressing the yellow button, wait for the boot up the finish, this takes approximately 6 seconds.
2. Calibrate zero position by making the measuring tips touch and then holding the yellow button for 5 seconds.

Zero calibration is done when the display shows C110 (for 1100 mm mode) or C200 (for 2000 mm mode when using extension arms).

3. Calibrate end position (only needed for calipers purchased after 2023) by fully opening the caliper and holding the yellow button for 5 seconds. End calibration is done when the display shows C110 / C200.
4. The calibration settings are saved and will be remembered by the device the next time it is used.
5. Recalibration is needed
 - a. After extension arms are added or removed
 - b. In case of wrong values in either the zero or the fully open position (short arm: 1100 mm, long arm: 1999 mm)

Usage of the caliper in ArborSonic 3D

Start the ArborSonic 3D software and go to the Geometry page. To use the caliper, select Irregular or Elliptical shape. Turn the caliper on and click the *Start BT Caliper* button.

The a will be heard from the PC speakers: *Please measure distance between 2 and 1*. Place the measuring tips to point the mentioned sensors are entering the

trunk, then press the yellow button. The data should be transmitted immediately, and you should hear the directions for the next sensor pair. Make sure to turn the speakers on and set maximum volume. The distance from the caliper will always be registered in the selected (blue) cell on the geometry page.

Once all the points are registered, the shape of the trunk will be displayed which can be used to verify the results. If there were any mistakes during the measurement then the image will be either distorted or is not shown at all. The potentially invalid data will be highlighted red. You can repeat the measurement of certain distances by the following steps.

1. Click *Start BT Caliper*
2. Select a previously measured cell
3. Press the yellow button

Usage of the caliper in ArborElectro

Start the program and push *Start* on the left down corner on Sensor Layout tab. A green bar with the text *Status: Caliper Connected* should appear.

Similar to ArborSonic 3D, “Please measure distance between 2 and 1” should be played through the loudspeakers of the PC. The process is the same as described in the previous section.

Usage Notes

Apply short presses for the measurement. Do not push and hold the button during the measurement because it may cause a recalibration at the wrong position.

The caliper turns off automatically after 120 seconds of idle time, the display will start to blink before this happens. To prevent shutting down, press the button.

Maintenance

You can monitor the battery condition in the ArborSonic software. Battery voltage appears on the *Geometry* screen during use. The actual voltage is transmitted when you press the caliper button. If voltage goes below 3.5V, please charge the battery.

The caliper has integrated batteries that can be charged with the attached cable via an USB port. The charging time is about 25 hours. During the charging process the red led will be lit. Battery is fully charged when the led light turns to green.

IMPORTANT:

- Deep discharge may destroy the battery, to avoid this keep caliper charged. When not used for 3-4 month, please recharge the caliper.

- The caliper is not water resistant, do not use it in rain. However, it can take a couple of drops, water protection level is rated IP21.
- When removing the arms please make sure to pull them in a direction parallel to the arms, do not twist or bend them, otherwise the joint might be damaged.

Contact

In case of any questions feel free to contact us:

Email: office@fakopp.com

Web: www.fakopp.com

Guarantee

The guarantee lasts for one year from the arrival of the device for proper use.



Caliper with the 2-meter setup



Caliper with the 2-meter setup



Caliper with the 1.1-meter setup



Caliper display up-close in the end-position