DIY - Tracking: Hardware

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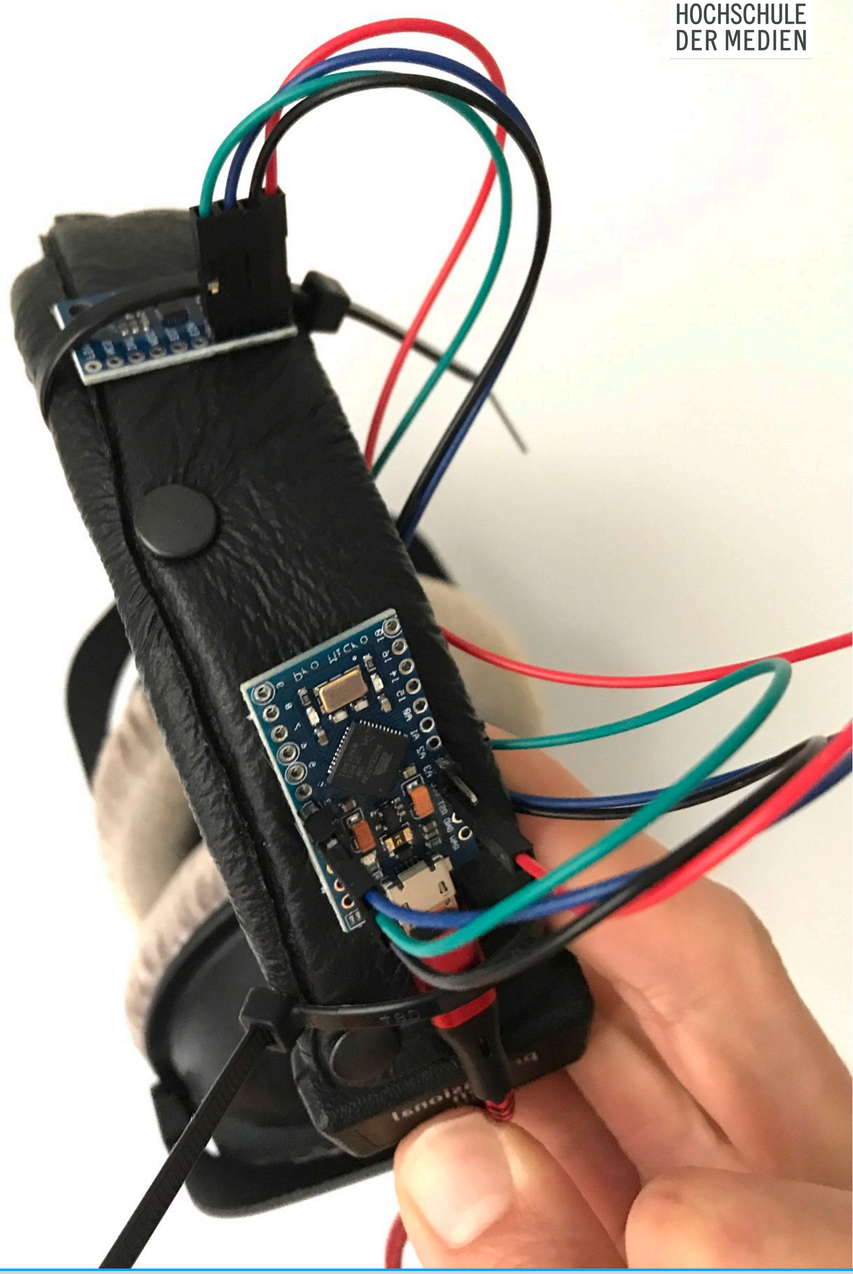
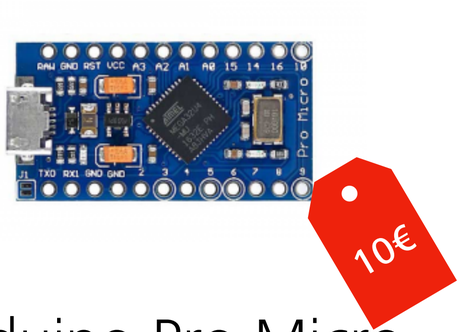
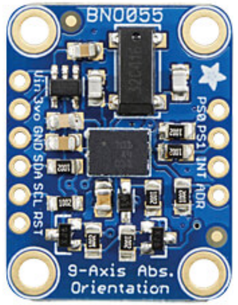


Optionen

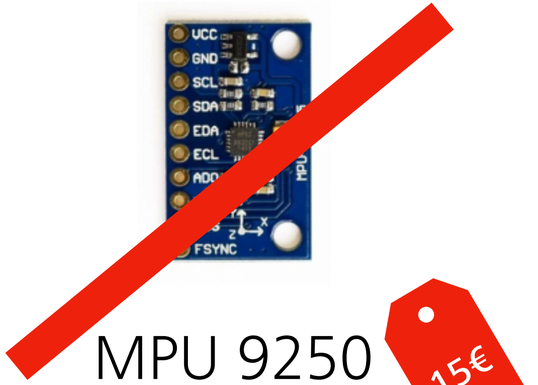


Arduino Pro Micro

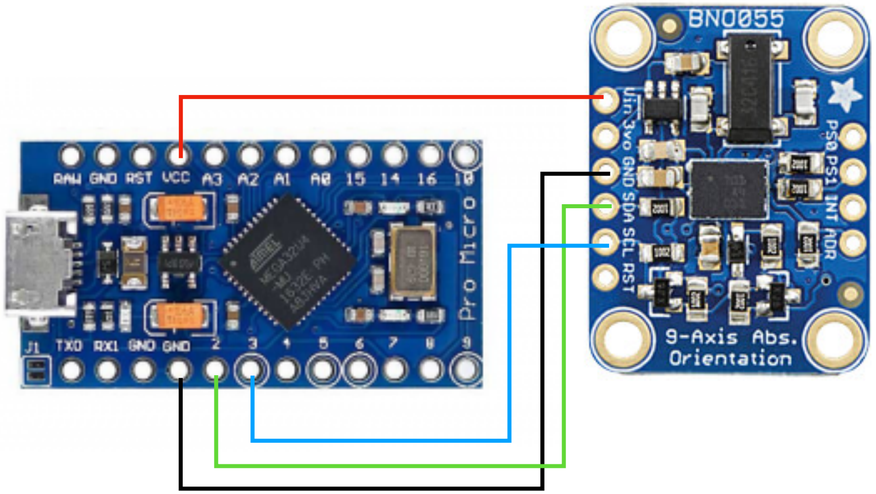
https://learn.adafruit.com/adafruit-bno055-absolute-orientation-sensor

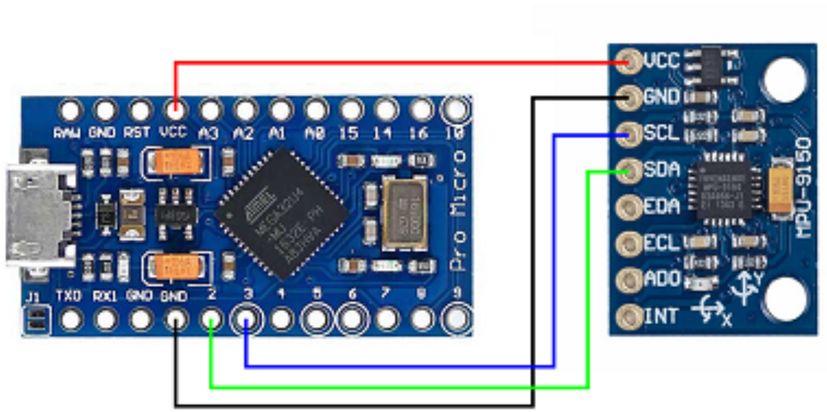


BNO055 40€



MPU 9250 15€





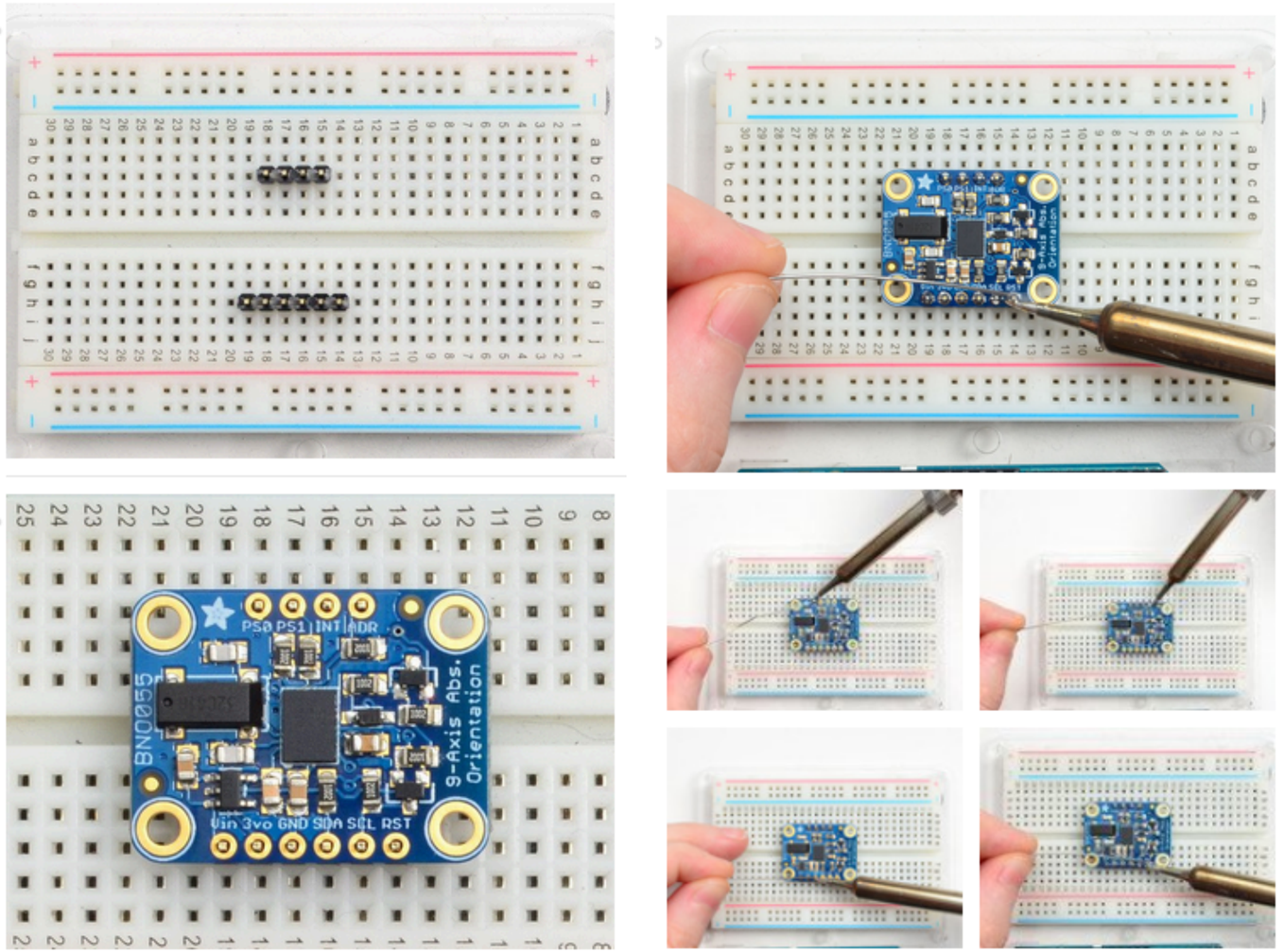
https://github.com/trsonic/nvsonic-head-tracker

Anschluss - BNO055

- Connect **Vin** to the power supply, 3-5V is fine. Use the same voltage that the microcontroller logic is based off of. For most Arduinos, that is 5V
- Connect **GND** to common power/data ground
- Connect the **SCL** pin to the I2C clock **SCL** pin on your Arduino. On an UNO & '328 based Arduino, this is also known as **A5**, on a Mega it is also known as **digital 21** and on a Leonardo/Micro, **digital 3**
- Connect the **SDA** pin to the I2C data **SDA** pin on your Arduino. On an UNO & '328 based Arduino, this is also known as **A4**, on a Mega it is also known as **digital 20** and on a Leonardo/Micro, **digital 2**

https://learn.adafruit.com/adafruit-bno055-absolute-orientation-sensor/

Aufbau und Löten



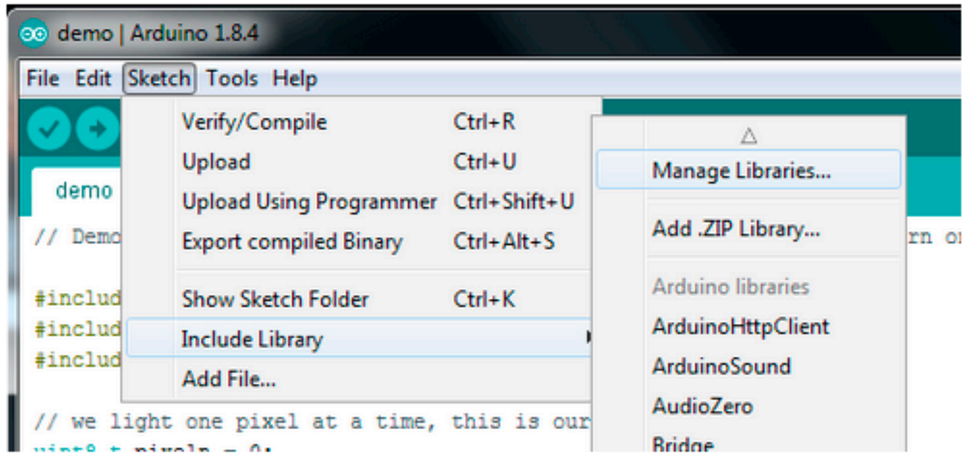
https://learn.adafruit.com/adafruit-guide-excellent-soldering

Software - Arduino

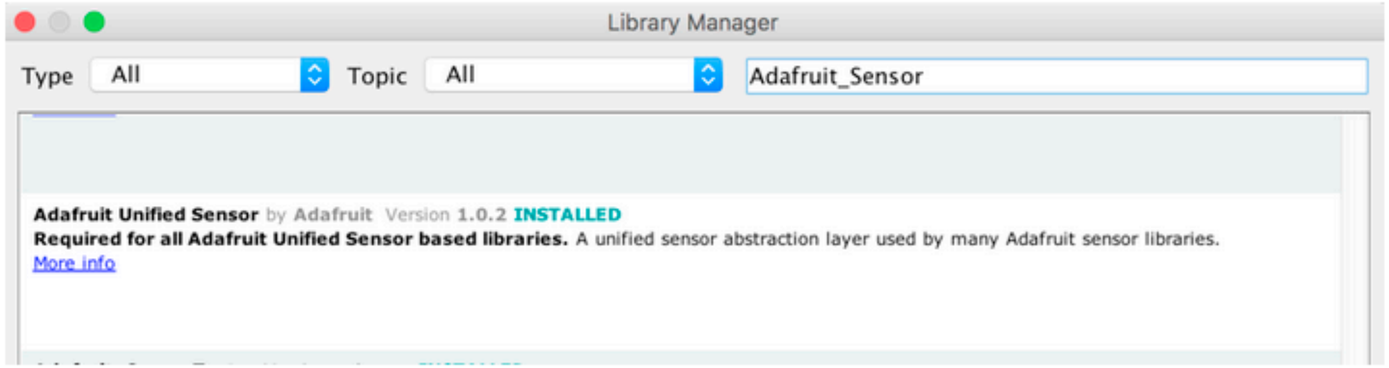
Download and Install the Arduino IDE from: https://www.arduino.cc/en/Main/Software

Software - Arduino

In the Arduino IDE open the library manager:



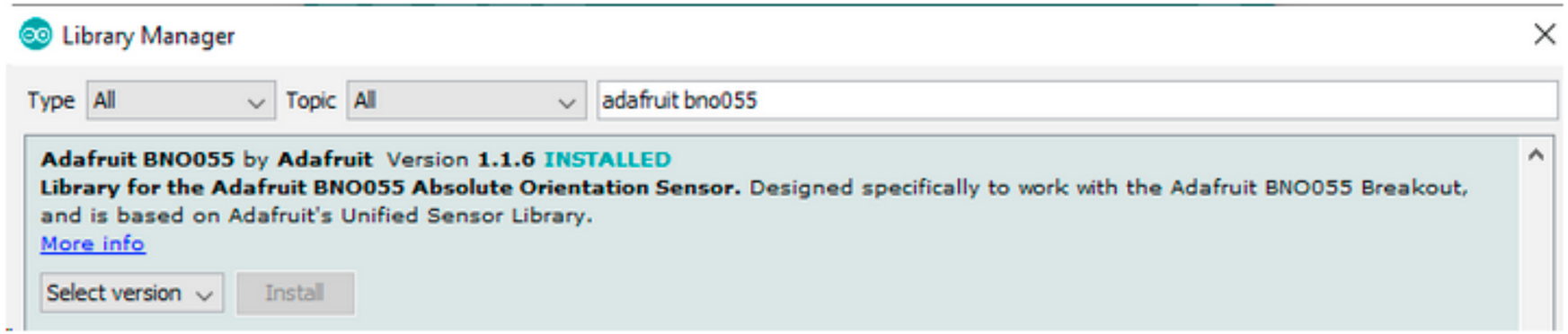
Search for the Adafruit Sensor library and install it



https://learn.adafruit.com/adafruit-bno055-absolute-orientation-sensor/

Software - Arduino

Search for the Adafruit BNO055 library and install it



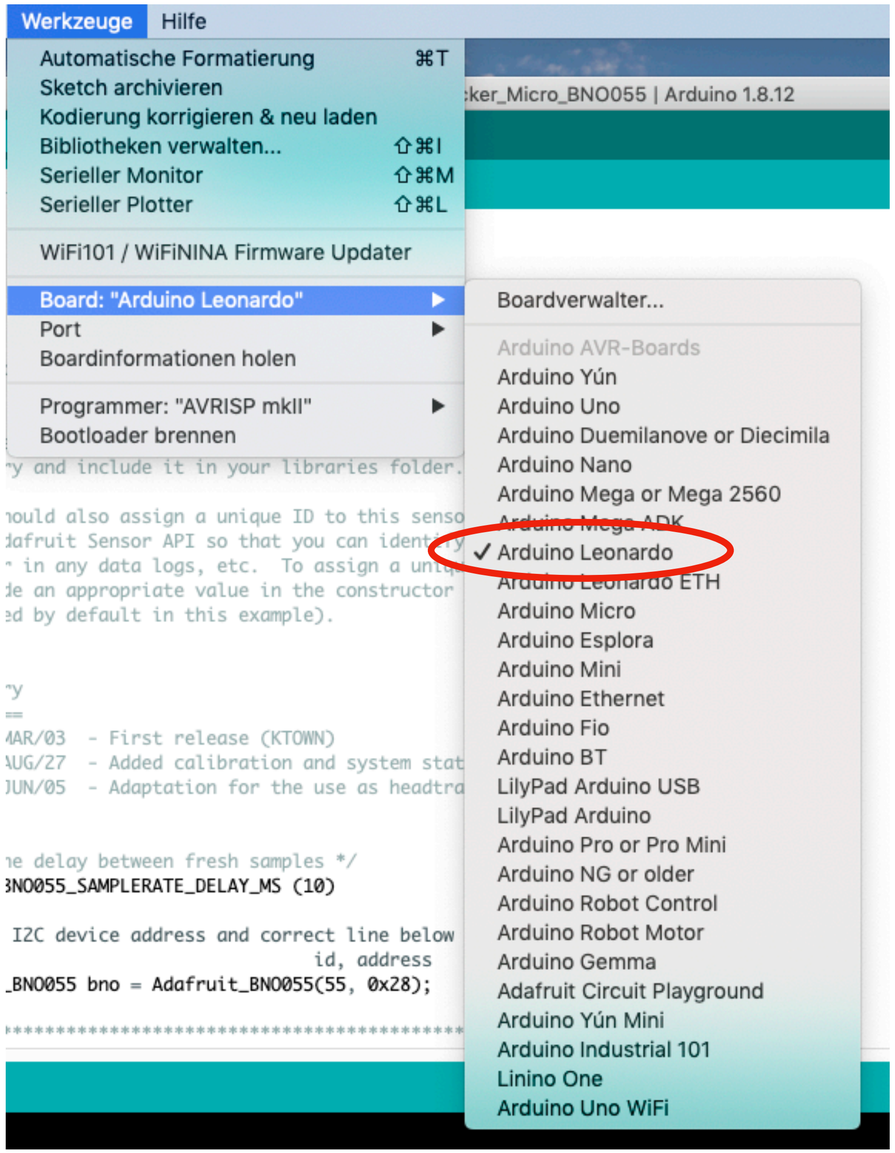
https://learn.adafruit.com/adafruit-bno055-absolute-orientation-sensor/

A tutorial on Arduino library installation can be found at:

https://learn.adafruit.com/adafruit-all-about-arduino-libraries-install-use

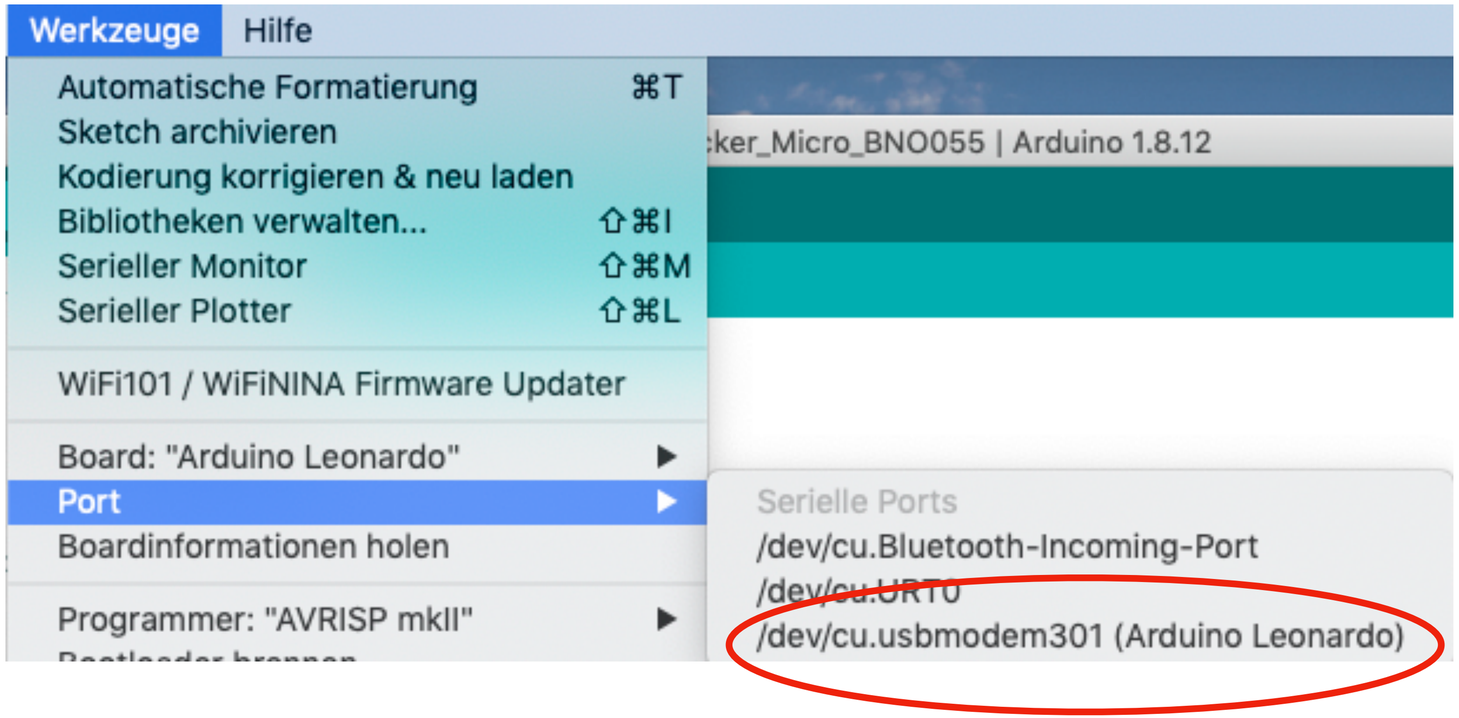
Software - Arduino

Select the correct board:



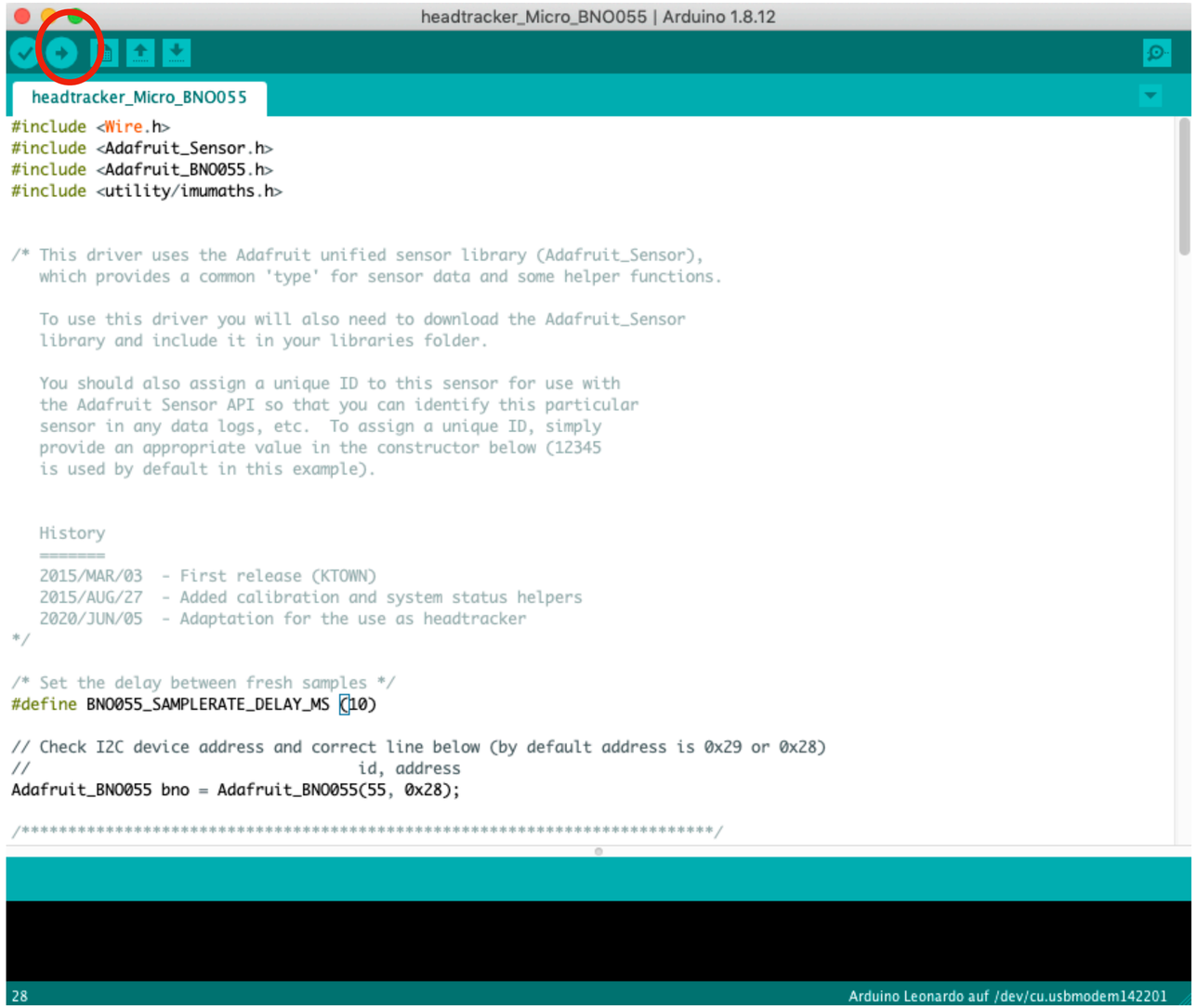
Software - Arduino

Select the correct port

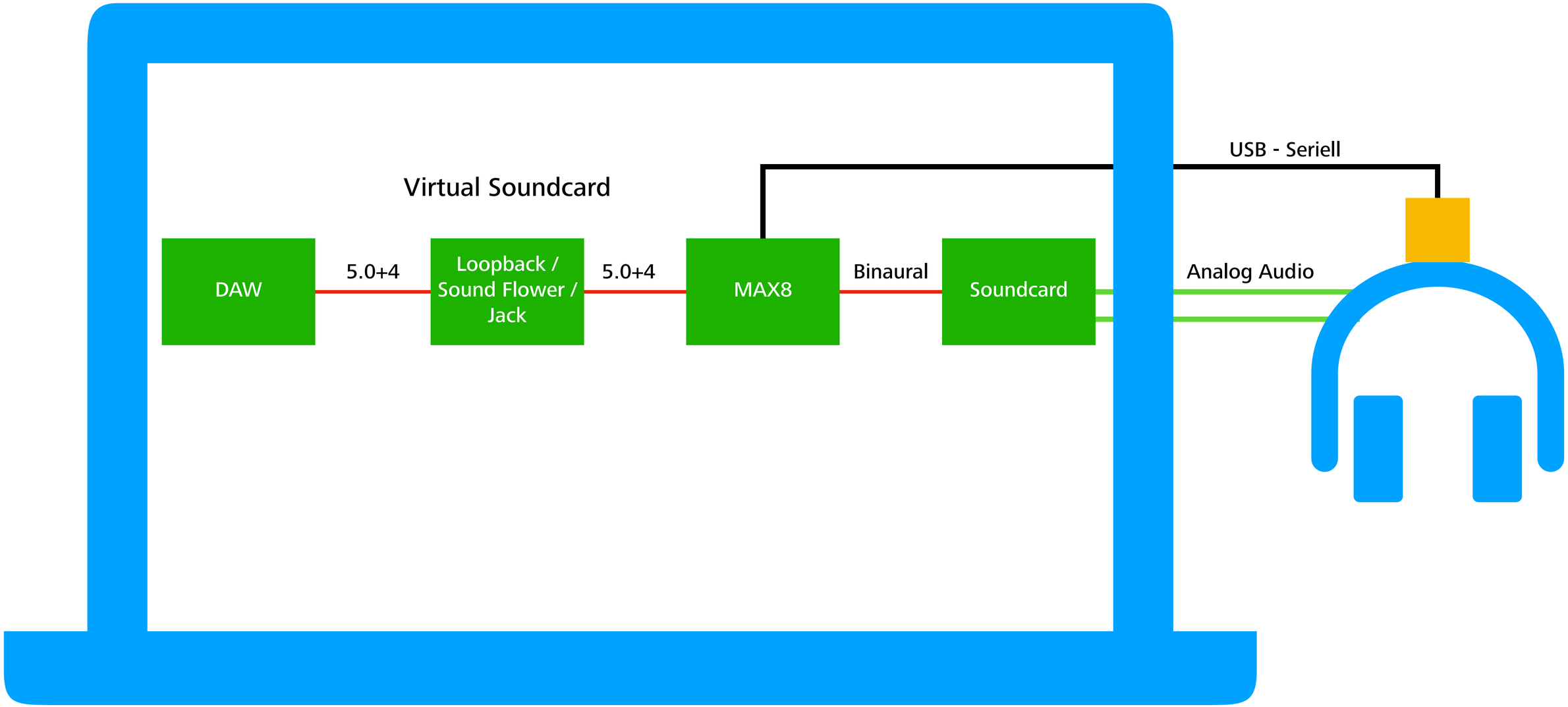


Software - Arduino

Compile and upload the sketch

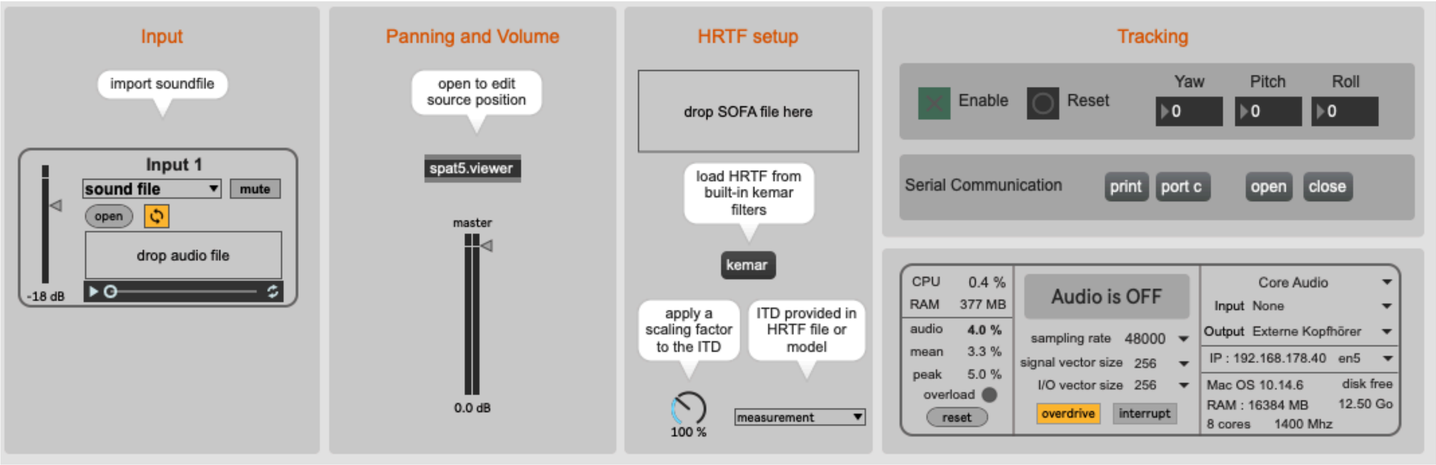


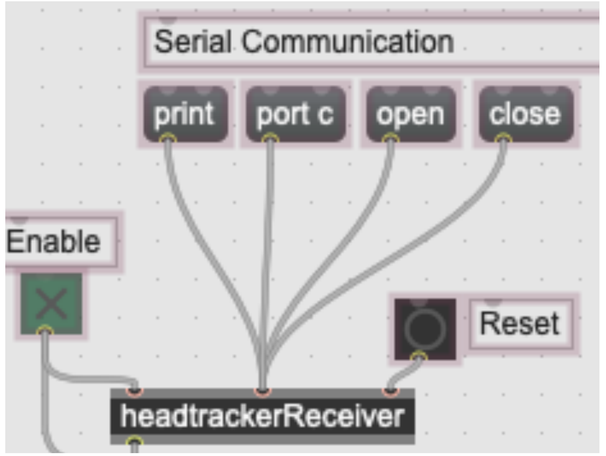
Application: MAX as rendering engine



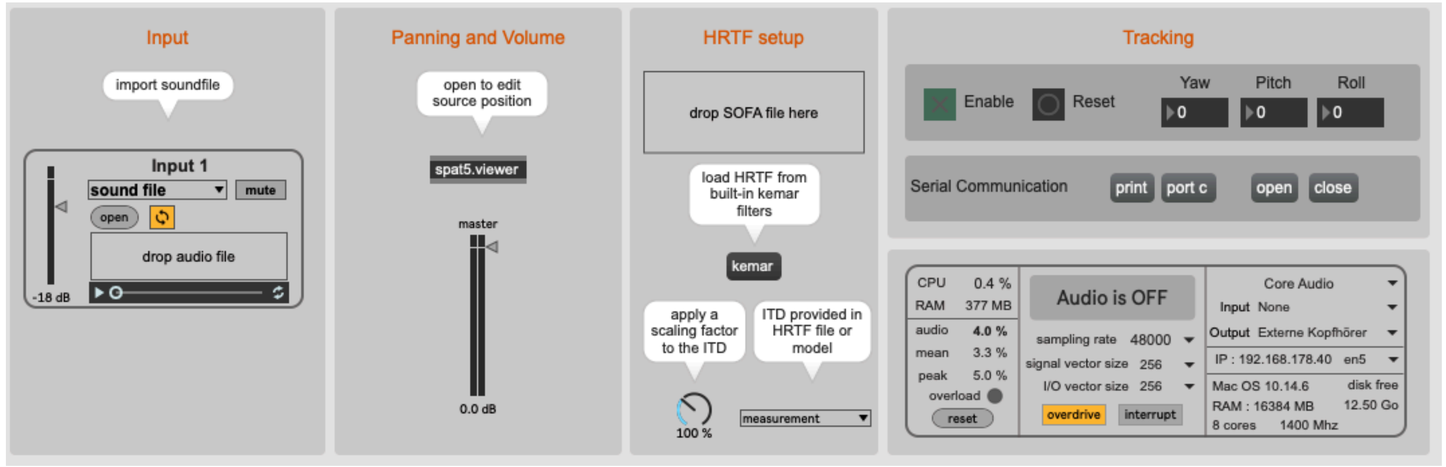
Application: MAX as rendering engine

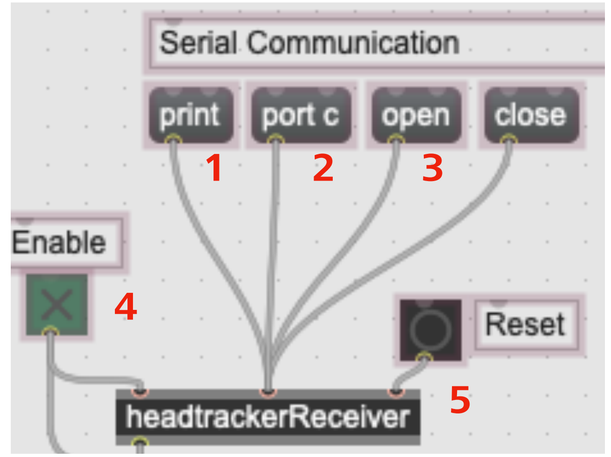
Download the example patch including the patch to receive the headtracking receiver





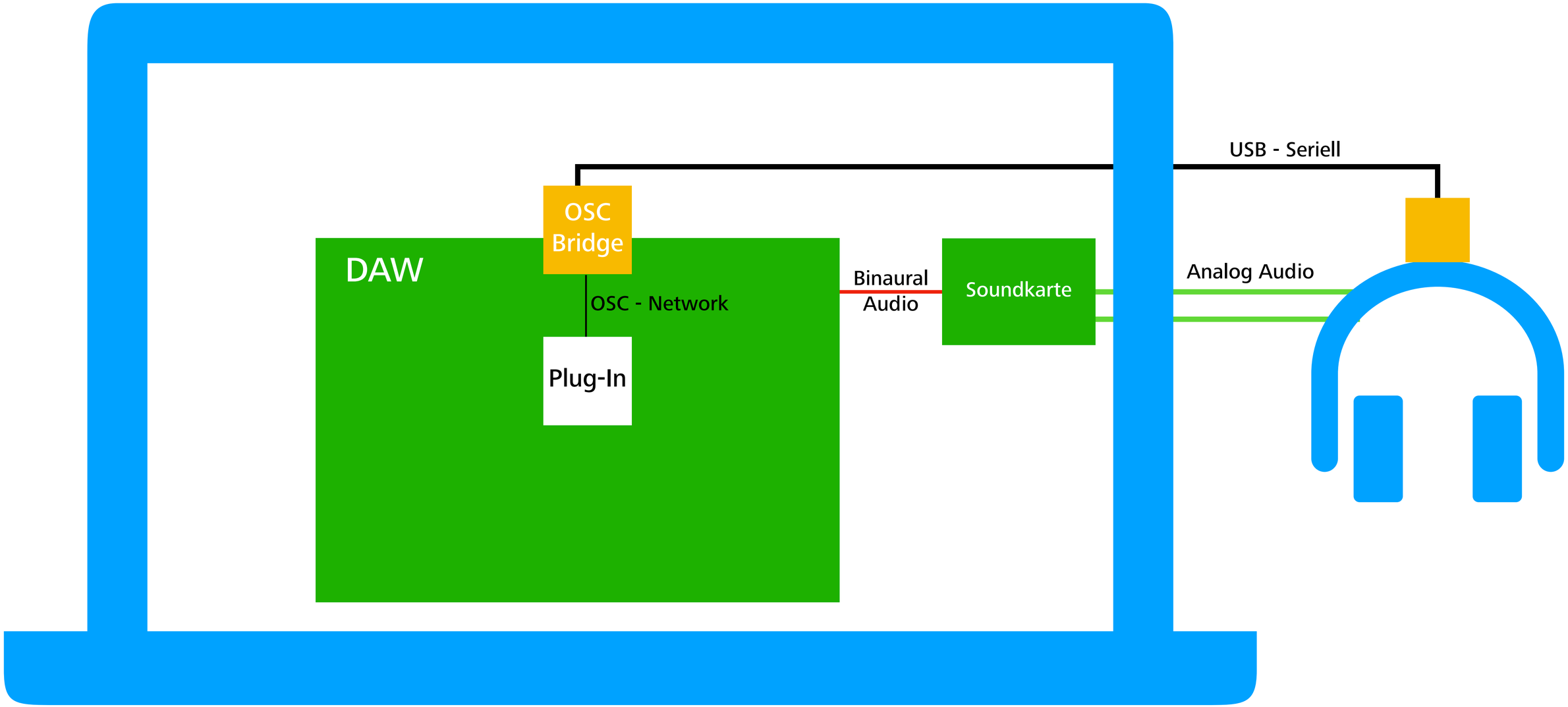
Using the MAX-Patch





1. Use print message to find correct port address
2. Adjust port message if needed
3. Open port using the open message
4. Enable headtracking
5. Use reset button to adjust orientation

Application: Plug-in controll via OSC



Using the OSC-Bridge

1. Download OSC Bridge:
   https://github.com/trsonic/nvsonic-head-tracker

2. Compile the application if necessary

3. Select port from port list after refresh button

4. Connect to Headtracker

5. Enable OSC link to plug-in