phyphox trans2MIDI/OSC

Reference：

Touch OSC actually broadcasting UDP msg

TouchOSC Bridge Connection · TouchOSC Mk1 | hexler.net

TouchOSC Bridge is a standalone tool-application for Windows and Mac OS X that can relay MIDI messages sent from TouchOSC over WiFi to any MIDI-capable application on your computer and vice versa. The application can be downloaded from the TouchOSC page.

https://hexler.net/touchosc-mk1/manual/configuration-connections-bridge

GitHub - dorem-midi/phyphox-midi-bridge: Code that converts data received by a computer from phone Phyphox app to midi CC messages

Code that converts data received by a computer from phone Phyphox app to midi CC messages This app was written to be used as a part of the Pianobook project's free VST instruments. I am currently creating a binaural piano instrument that will change sound perspectives as you move your head.

https://github.com/dorem-midi/phyphox-midi-bridge

python-osc

Open Sound Control server and client implementations in pure python (3.5+). UDP blocking/threading/forking/asyncio server implementations UDP client int, float, string, double, MIDI, timestamps, blob OSC arguments simple OSC address callback matching system extensive unit test

https://pypi.org/project/python-osc/

Preliminaries

common preparation for both MIDI and OSC

- install miniconda/PyCharm or any other python IDE

  Here I prefer to use miniconda, you can install it following the instruction delow.

  Installing on Windows - conda 4.10.3.post29+a34aeac02 documentation

  Installing conda on a system that has other Python installations or packages

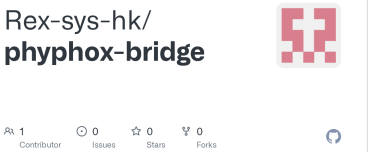
  https://docs.conda.io/projects/conda/en/latest/user-guide/install/windows.html

- VScode/Sublime Text
- You can clone my repo then, there are some ready-to-hand demo and brief introductions. (If you don't know Git, just download and unpackage it.)

  GitHub - Rex-sys-hk/phyphox-bridge

  Code that converts data received by a computer from phone Phyphox app to midi CC messages This app was written to be used as a part of the Pianobook project's free VST instruments. I am currently creating a binaural piano instrument that will change sound perspectives as you move your head.

  https://github.com/Rex-sys-hk/phyphox-bridge

▼ **Preparation for OSC**

- Just install python-osc by command

```
pip install python-osc
```

- Run the demo from my repo

```
python ./phyphox_OSC_Bridge.py
```

Then you need to designate some parameters like your phone IP:Port, OSC server host IP:PORT . Please follow the instructions step by step carefully. Please make sure the app phyphox is operating with remote access enabled and under the same LAN with your PC.

- You can also run the simple server to find out what you sent via OSC by operating the server first

```
python .\OSC\simple_server.py
```

▼ preparation for MIDI(hard to use, not recommended)

- install loopmidi from the following link

> Tobias Erichsen
>
> download loopMIDI Virtual loopback MIDI cable for Windows 7 up to Windows 10, 32 and 64 bit . This software can be used to create virtual loopback MIDI-ports to interconnect applications on Windows that want to open hardware-MIDI-ports for communication. The ports created are unique for each user and only exist while the loopMIDI-application is running.
>
> https://www.tobias-erichsen.de/software/loopmidi.html

note: loopmidi is compatible with PC(Win) only

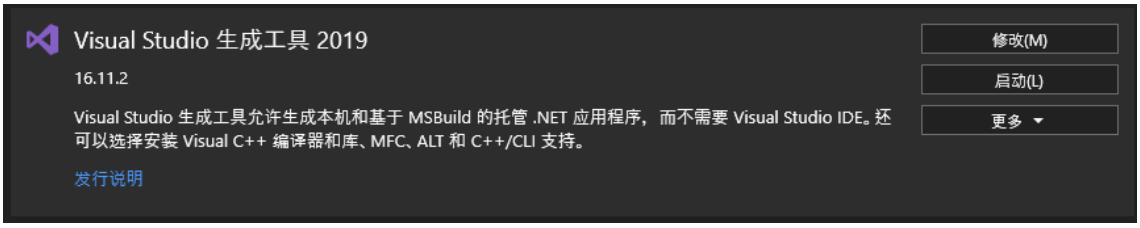
- install RtMidi

> Installation - python-rtmidi 1.4.9 documentation
>
> python-rtmidi uses the de-facto standard Python distutils and setuptools based packaging system and can be installed from the Python Package Index via pip. Since it is a Python C(++)-extension, a C++ compiler and build environment as well as some system-dependent libraries are needed to install, unless wheel packages with pre-compiled binaries are available for your system.
>
> https://spotlightkid.github.io/python-rtmidi/installation.html#from-the-source-distribution

  - need to install buildtools in advance

> 感谢您下载 Visual Studio - Visual Studio
>
> 不熟悉 Visual Studio? 学习新的开发工具可能非常困难。 按照自己的节奏进行此分步学习之旅，以使用你选择的任何语言成功创建简单的应用。 让我们开始吧! 安装 Visual Studio 首先，请确保打开 Visual Studio 下载并安装。 可以通过 仅选择所需的组件 来节省安装时间和磁盘空间。 你始终可以根
>
> https://visualstudio.microsoft.com/zh-hans/thank-you-downloading-visual-studio/?sku=BuildTools&rel=16

then install the



- Run python script

```
python ./phyphox_MIDI_lim_Bridge.py
# or
python ./phyphox_MIDI_free_Bridge.py
```

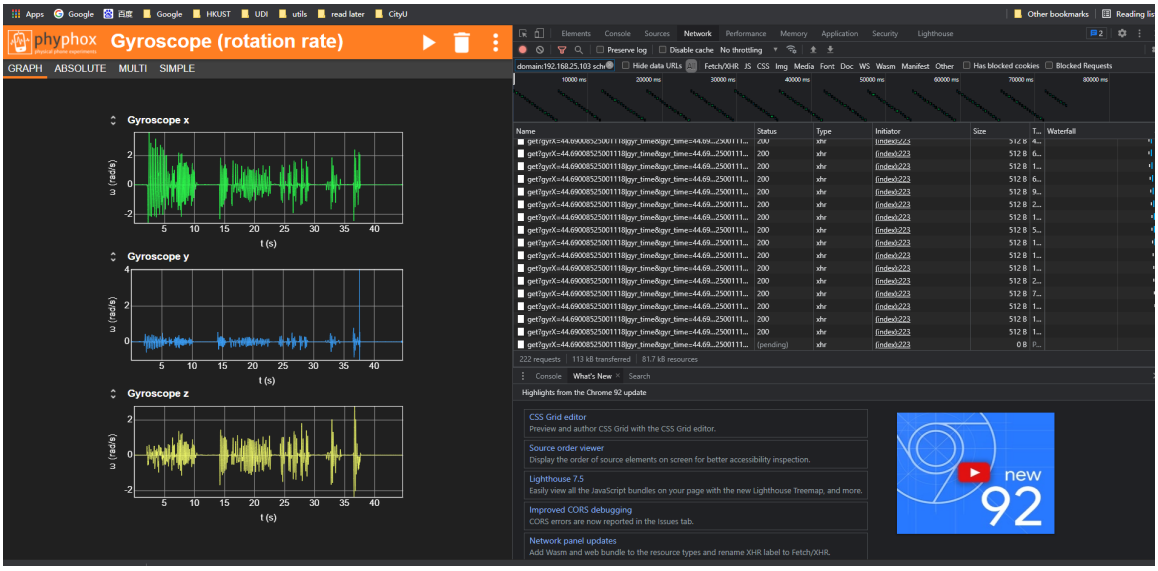
Then you need to designate some parameters like your phone IP:Port, MIDI PORT . Please follow the instructions step by step carefully. Please make sure the app phyphox is operating with remote access enabled and under the same LAN with your PC.

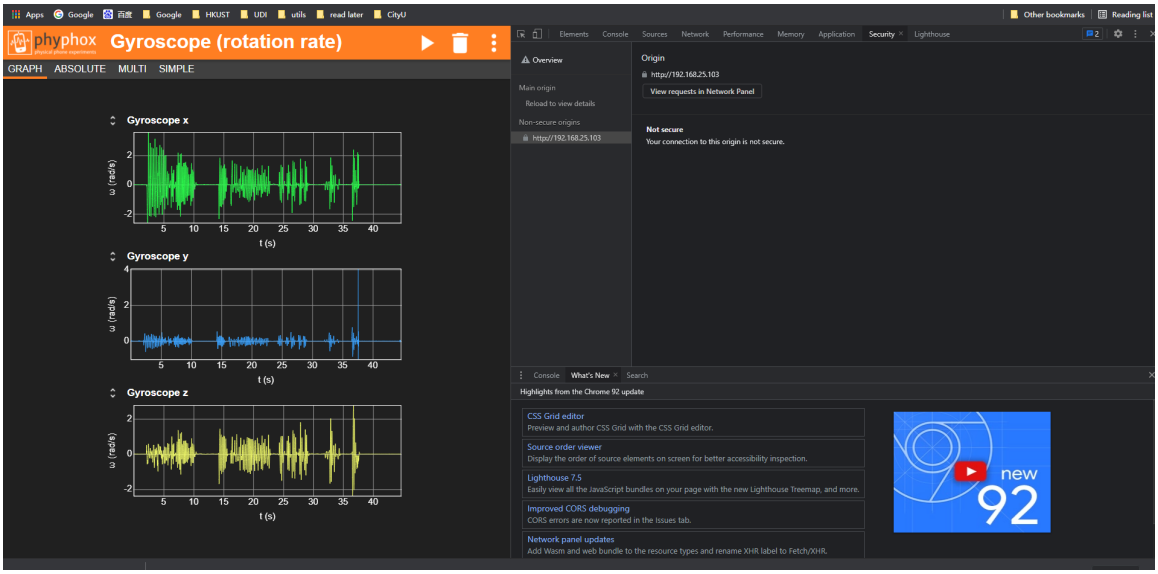
EXTENTION

By default, the bridge can only transfer magnetometer sensor data. We have to find the keys from ethernet data following the instructions below.

get other data

Press F12 in chrome at the remote access page. Then click Network to check the key name (Where gyrX, gyrY, gyrZ located for gyroscope. It would be magX... for Magnetometer).





PS:

I believe all of you with a little coding experience can solve the problems on your own by a glance at the code.

If there are any problem you can't deal with. Please publish it on the forum or in the discussion session.