

This tool provides a simpler alternative to measure transfer functions as input data for HAF correction service. The control can be made from a basic interface or using a phone/tablet as remote control : this latter option is well suited for acoustics measurements as you can stand far away from the loudspeakers & listening area while performing the measurements.

Note: this tool is only valid if you are able to control your DAC from the computer where your microphone is connected

Installation procedure

- Download & install Pure Data extended software (available for Mac / Windows) <https://puredata.info/downloads/pd-extended>
- Install LittleOSC on your phone/tablet from the Appstore or from Google Play
- Download and extract the measurement tool package from HAF in a specific folder

LittleOSC configuration

- In order to use your phone/tablet as a remote control, it must be connected to the same local Wifi network as your computer
- There are 2 parameters to be set in LittleOSC
 - IP address : this must be the one from the local Wifi network (check the appendix if you don't know how to access your IP)
 - Port : set it to 8000

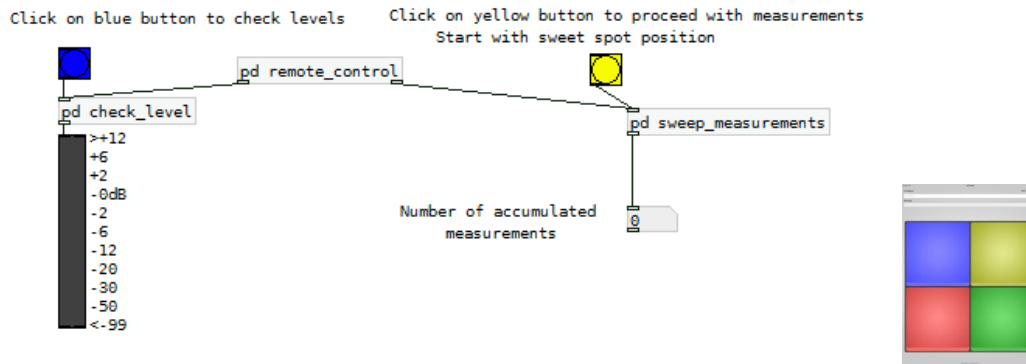
Pure data configuration

- Open the file « HAF_measurement.pd »
- The first time you use Pure Data you need to configure the input (microphone) & output (DAC) devices to be used. For that go to the « Media » « Audio configuration » and pick the appropriate devices



Measurement procedure

The tool is very basic & easy to use as there are only 2 options



« Check level »

This option helps adjusting the gain on your amplifier to reach a correct measurement level. You can activate this option either by pressing the blue button on the interface or by using the blue pad on LittleOSC. Start with a low volume on your amplifier to not damage your loudspeakers

There will be a sweep signal played by the left loudspeaker and the VU meter (below the blue button, not the main pd vumeter) will display the level of the signal recorded by the microphone. Adjust your amplifier gain to stay in the range -12 to 0 dB. Once set, the amplifier gain must not be changed during the whole measurements process

« Perform measurements »

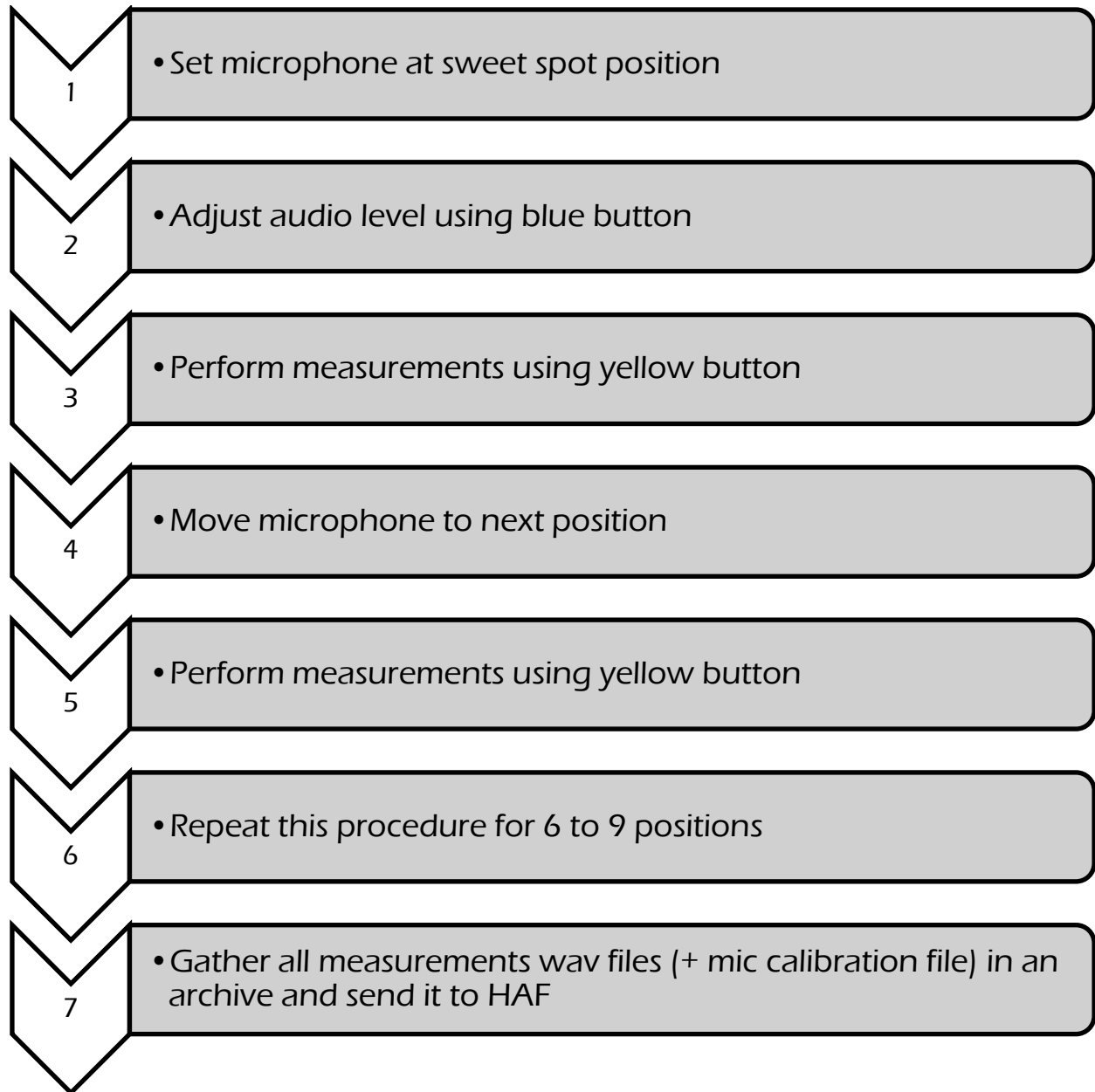
You can activate this option either by pressing the yellow button on the interface or by using the yellow pad on LittleOSC. Each time you activate this option a measurement is made for left & then right channel. There is an automatic naming and the output files are saved in the folder you have created to extract the HAF measurement package. You always have to start the measurement process by the sweet spot position.

Once you have made all measurements, you just have to gather all .wav files (L1, R1, etc..) in a compressed archive and send it to HAF. If you have a calibration file for your microphone you have to send it as well.

Note: if you close down and re-start "HAF_measurement.pd" you need to re-start measurements from scratch (e.g. sweet spot)



Measurements procedure overview



Appendix : Finding IP address

OS X

Open System Preferences from the Dock or the Applications folder

In the resulting window, click the Network icon

In the Network window select Airport in the list to the left

Your IP Address will be shown below the Status display to the right in the sentence:

AirPort is connected to <Wireless Network Name> and has the IP address <Your IP Address>

Windows

Click the Start menu button

Go to All Programs > Accessories > Command Prompt

Type ipconfig and press Enter

Find the row showing the IP address in the list

Note: If you have multiple network interfaces the previous list will show multiple IP addresses. Use the one that is listed for an interface indicating that it is the wireless interface by looking at the interfaces' names.

