How to Present External Stereo Audio Stimuli from PC - MOTU Soundcards

This page explains how to present audio stimuli from a Researcher PC with a Mark of the Unicorn (MOTU) soundcard to a test subject in the CMA 2 CSD Clinic Audiology Booths.

This workflow addresses playback of standard mono or stereo media typically used in audiology testing. Media is played using FooBar2000 media player.

Sections of this Document

- Overview
- Before Your Session
- During Your Session
- After Your Session
- Troubleshooting PC Audio Stimuli Playback
  - No Sound from PC
    - Is PC selected as the source on the correct switcher?
    - Is the Foobar2000 player time moving?
    - Is the Foobar2000 player Volume turned up?
    - Is the MOTU soundcard playing audio?
    - Is there any audio output from the PC?
    - Are the transducers connected to correct jacks & working?
    - Is there power to the Switcher?
  - Sound from PC too low
    - Is the Foobar2000 player Volume turned up?
    - Is Windows' volume slider in the system tray turned up?

Overview

The audiometers in Booths B, E, F & G have external inputs which are fed from an Audiometer Aux Switcher which allow CD, iPod & PC external sources to be presented to the test subject.

In Booths B & E, the Researcher PC has an 8-channel Mark of the Unicorn (MOTU) 838 USB soundcard. This device is capable of recording up to (2) mic or (8) line sources and playing back up to (8) channels of audio. Outputs 1 & 2 are the primary outputs (aka default Windows playback device) from the computer. These outputs feed to the audiometer via the Audiometer Aux Switcher. Outputs 3 - 8 feed directly to the jackpanel for use in specialized experiments.
Using the Researcher PC, you can present audio stimuli from any program or website. This document will outline how to use a media player called Foobar 2000 to present standard audio tests to a subject via the primary outputs and the audiometer.

**Before Your Session**

Power on the equipment in your booth. Instructions [here](#).
Press CTRL-ALT-DELETE.

On the login screen, click the red arrow in the bottom right corner and choose RESTART

Once the machine has restarted, log into the PC using your EID & password.

Launch Foobar2000 using the icon on your desktop or by clicking Start > All Programs > Foobar2000

Select PC on the audiometer aux switcher. Note that the volume knob on this switcher has been disabled and does not affect output volume.

Select External Input as your source on the audiometer.

- Input Ext A corresponds with the Left output from your device.
- Input Ext B corresponds with the Right output from your device.
In the left-hand folder browser in Foobar, navigate to the test media you wish to present.

Drag the test media to the Default Playlist.

Double click on a file in the playlist to begin playing it.

Find the calibration tone for the test media you are going to present and use it to calibrate the audiometer's external input trims.

Test and confirm all transducers are working prior to your test subject's arrival.

### During Your Session

You can drag elements in your playlist to order them most appropriately for your session.

Use the transport controls at the top of Foobar to stop, play, & pause the playback of files.

Use the scrub bar at the top of Foobar to jump to a different part of a track.

### After Your Session

Log out of the PC. Please do NOT shut it down.

Power off the equipment in your booth. Instructions [here](#).

### Troubleshooting PC Audio Stimuli Playback

<table>
<thead>
<tr>
<th>No Sound from PC</th>
<th>Is PC selected as the source on the correct switcher?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>✗ Some booths have 2 identical switchers in the rack (Audiometer Aux In &amp; Mother's Distraction). Ensure the one labeled &quot;Audiometer Aux In&quot; has PC selected as the source.</td>
</tr>
<tr>
<td></td>
<td>✗ Connect a pair of headphones to the Audiometer Aux In switcher. If you can hear the PC, the issue is downstream in the audiometer or transducers. If you cannot hear the PC, the issue is in the switcher or your device.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
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<tr>
<td>Is the Foobar2000 player time moving?</td>
<td>You should see the time indicator progressing and movement from the VU meters in Foobar.</td>
</tr>
<tr>
<td>Is the Foobar2000 player Volume turned up?</td>
<td>Ensure that the volume slider at the top of the Foobar2000 interface is set to maximum.</td>
</tr>
<tr>
<td>Is the MOTU soundcard playing audio?</td>
<td>Look at the front panel of the MOTU 828 soundcard and confirm output meters 1 / 2 show signal present.</td>
</tr>
<tr>
<td>Is there any audio output from the PC?</td>
<td>Try opening a web browser and playing a video from youtube. If no sound is heard from any program, reboot the PC. If audio is heard from some programs but not others, contact Moody Technology Services at CMA 3.104.</td>
</tr>
<tr>
<td>Are the transducers connected to correct jacks &amp; working?</td>
<td>Test other transducers and/or replacement transducer.</td>
</tr>
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</table>
| Sound from PC too low | Is there power to the Switcher?  
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<tr>
<td></td>
<td>~ The Audiometer Aux In switcher has a small blue LED to the right of the headphone volume knob. Ensure that this is lit indicating that the switcher has power.</td>
</tr>
</tbody>
</table>
|                      | Is the Foobar2000 player Volume turned up?  
|                      | ~ Ensure that the volume slider at the top of the Foobar2000 interface is set to maximum. |
|                      | Is Window's volume slider in the system tray turned up?  
|                      | ~ Left-click on the speaker in the bottom right of the desktop (near the clock) and ensure that the volume slider is set to maximum. |

reviewed 10/9/17 -Cox