Test report

EMU 0404 audio driver: Recording

W.Pasman, 6 february 2015

# Tested driver details

EMU Audiodriver

Download: https://github.com/Wouter1/EMU-driver/commit/2c6e34b7b08b97ef8414e3321fc4a28e3588aa4c

Driver version 2c6e34b7b08b97ef8414e3321fc4a28e3588aa4c on Feb 6, 2015

Driver latency setting: 4.2ms

# The test setup

The built-in output is used to play a 1000Hz sine tone for 10 minutes.

A headphone is attached to the output. The microphones (stereo pair) are put inside the headphone cushions and they are wrapped together into a blanket to shield room noise and to fix their position.

Sound is sampled using OSX 10.9.5 Mavericks (Retina Macbook Pro late 2013 quad core i7) the EMU driver into Audacity 2.0.5

Audacity recording settings: Audio to buffer 1ms, Latency correction -1 ms.

# Test procedure

1. We use the EMU control panel to select the test rate

2. Audacity is started and set on the selected sample rate

3. playback of the sine tone is started

4. recording is started in audacity

5. recording is stopped after 10 minutes

6. Notch filter is applied, 1000Hz, Q=10

7. Amplify is done of the remaining signal

8. Sound is scrutinized visually for sharp peaks in the signal (1 bit wide). If there are sharp peaks they are played and zoomed in further. Clicks in the recording result in a very distinct pattern.

9. The console output is checked. There should be no input ring push warnings between “USB timer started” and “EMUUSBInputStream::stop” except at the very first and last second.

# Results

|  |  |  |
| --- | --- | --- |
| rate | Result | Text |
| 44k | Ok | Ok |
| 48k | Ok | Ok |
| 88k | Ok | Ok |
| 96k | Ok | Ok |
| 176k | Ok | Ok |
| 192k | Ok | Ok |
| 96k | Ok | Ok |
| 96k | Ok | Ok |
|  |  |  |
|  |  |  |

# Summary

All sample rates were tested. No single click was detected in 80 minutes of total recording time.