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quadAtten ramping scripts quick start guide

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Table of Contents

INSTALLATION

Before downloading and running quadAtten ramping scripts, validate the following:

- The quadAtten firmware is at least 3.2.24
- The system being used has node installed. If using a Windows machine, make sure the node version is 8.x.

Then download the scripts and run the following commands:

cd ./quadAtten_ramping

npm install

CREATING CSV ATTENUATION PROFILE

The script runs through the profile that is specified as a CSV file. There are example CSV profiles in the csv folder. The CSV follows a specific format of with 5 columns of values as below:

Column 1: *time offset (in seconds); time at which the attenuation value is pushed to the quadAtten*

Column 2: *attenuation value (in dB) for channel 1 in quadAtten*

Column 3: *attenuation value (in dB) for channel 2 in quadAtten*

Column 4: *attenuation value (in dB) for channel 3 in quadAtten*

Column 5: *attenuation value (in dB) for channel 4 in quadAtten*

The CSV files in the csv folder follow the following naming convention:

Name of the file in the following format:

sweep_<DWELL TIME(milliseconds)>_<START attenuation (dB)>_<STEP attenuation(dB)>_<STOP attenuation (dB)>.xls

For example if the file name is sweep_100_0_1_63.xls, it means that the dwell time is 100 milliseconds for each attenuation value, and the ramping is starting from 0dB on quadAtten to 63dB in steps of 1db every 100 milliseconds.

CONFIGURING AND RUNNING THE SCRIPT

Before running the script, modify the *playback_request.json* configuration file with details of the run:

```
{
   "device_ip_addr":          "10.19.4.6",
   "loopback_delay_usec":     0,
   "loopback_mode":           "disabled",
   "playback_filename":       ["csv/Transition_FastMobility.csv"],
   "loopback":                15
}
```

device_ip_addr : specify the IP address of the attenuator

loopback_delay_usec : specifies a delay between repetitions of the attenuation profile if a loopback mode is specified.

loopback_mode : specifies how the CSV file is looped, can have one of the three values:

- 'disabled'
- 'sawtooth' : the waveform is played from the beginning each time it ends
- 'triangle' : the waveform is played in reverse from the end to the beginning when the first playback ends. When the reverse playback ends, the waveform is played from the beginning to the end. Each subsequent playback reverses the direction of playback

NOTE: To enable 'sawtooth' or 'triangle' loopback, the number of steps in the attenuation profile must be no more than 100. If loopback is enabled then the playback mode is loopback and the waveform is repeated when it ends.

playback_filename : path to the CSV file that contains the attenuation profile

To run the script type the following command from the quadAtten_ramping directory:

node main playback_request.json

Support:

For support, please call +1.978.222.3114 or email support@octoscope.com

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