First Homework of Computer Music Languages and Systems
A.A.2022/23

The Disteacher

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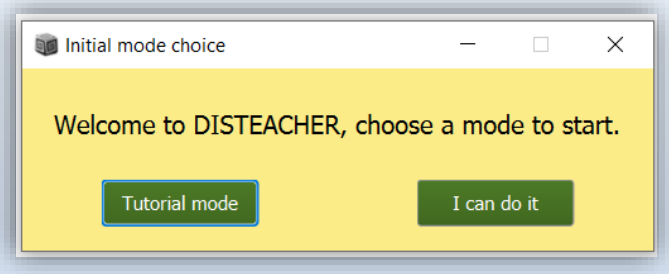
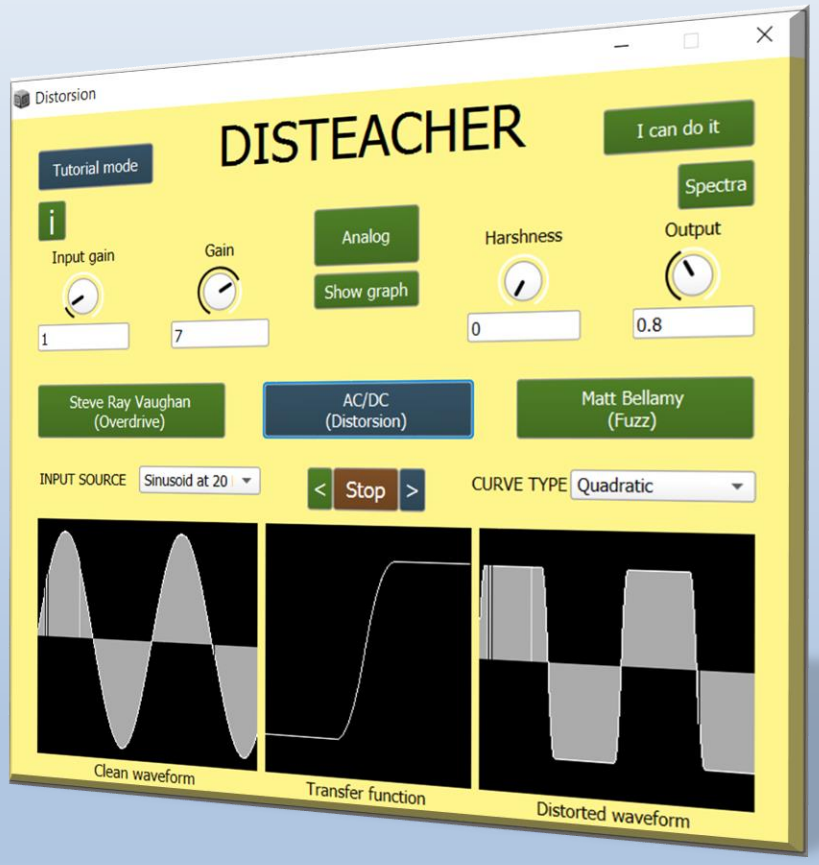
Teaching Distortion



Goal: develop an application to teach how ***distortion*** works.

Two usage modalities, one to learn and one to experiment.

Four knobs to change distortion parameters. Three distortion pre-sets to get an idea of how parameters influence the distorted output.

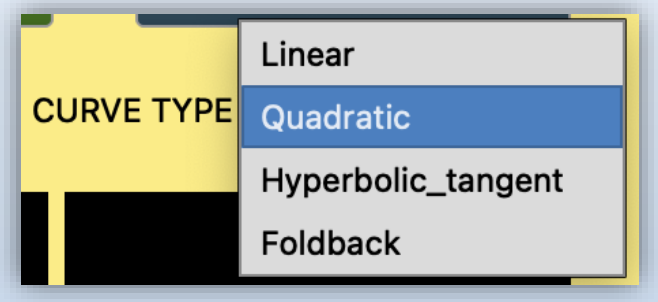


Input choice

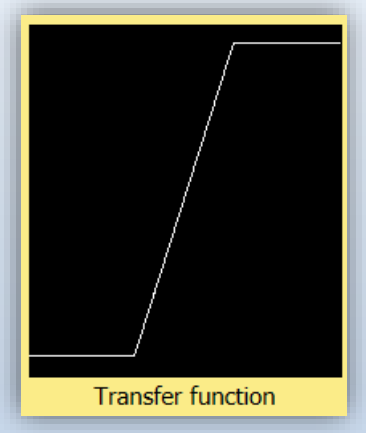
In the ***Tutorial*** mode user can choose the input from a list of recorded audio files.

In the ***I can do it*** mode the distorsion will be directly applied to the sound coming in real-time from the hardware inputs.

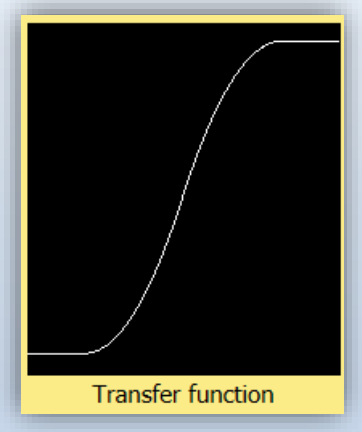
Transfer function choice



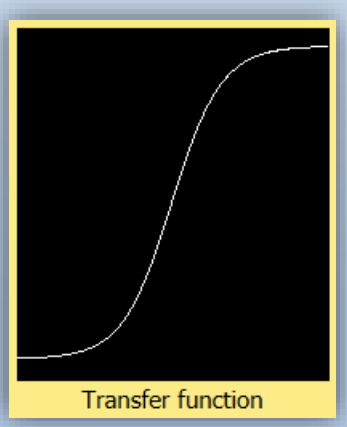
In both modalities user can choose the **transfer function** type. The graph is always shown in the bottom center of the GUI.



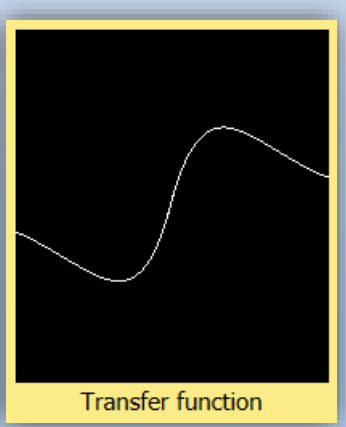
LINEAR



QUADRATIC

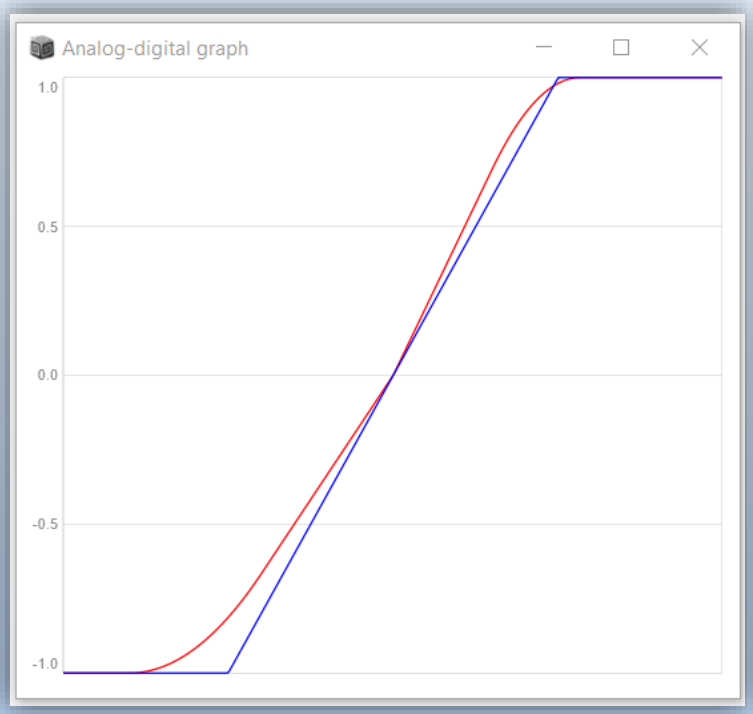


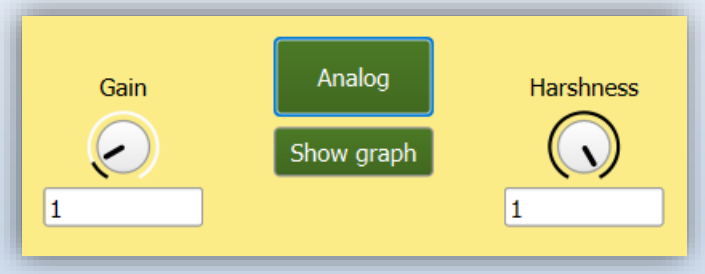
HYPERBOLIC TANGENT



FOLDBACK

Analog Emulation

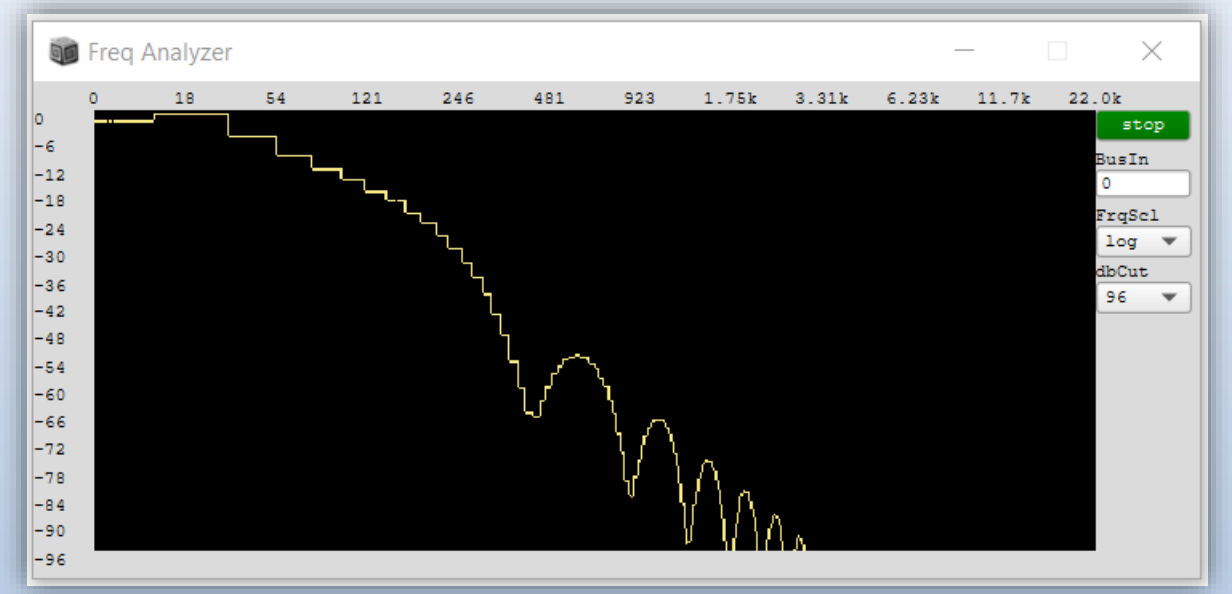




By clicking on the central ***Analog*** button you can add an analog feel to the distortion function.

If you want to see the difference between the normal and the analog function, just click on the ***Show graph*** button.

Show Frequency Spectrum



By clicking on the ***Spectra*** button in the upper right part of the screen you can see the frequency spectrum of the output soundwave.

Thanks for the attention!