Agenda for Today

- Compressor
- Delay: Echo; Delay Modulation
- Reverberation

Compressor

Lab task:

- Change the basic program so that it acts as a dynamics compressor.
- A slider controls the amount of compression applied from none (output equals input) to complete (almost constant output level).
- The setting done with the slider is applied to the sound almost immediately.

Delay: Echo; Delay Modulation

Lab task:

- Change the basic program so that it produces an echo with adjustable delay time.
- Use a ring buffer for the delay line.
- Let the user control delay time, feedback level, and dry/wet ratio with sliders in real time.
- Observe what happens if the delay time is changed. Use a low-frequency sine wave to modulate the delay time.

Reverberation

- continuous set of reflections, no distinguishable echos
- cannot be realized with a set of delay lines alone (shatter effect, like in a bathroom, or metallic coloration)
- typical real-time solution: use a set of delay lines and smear out the echos using special diffusion filters
- now also a real-time solution: convolution reverb. The impulse response of a room is applied to each sample.