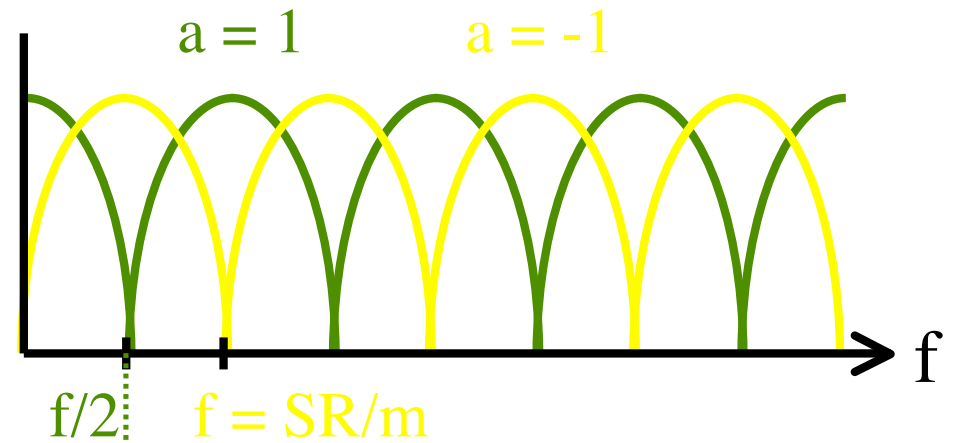
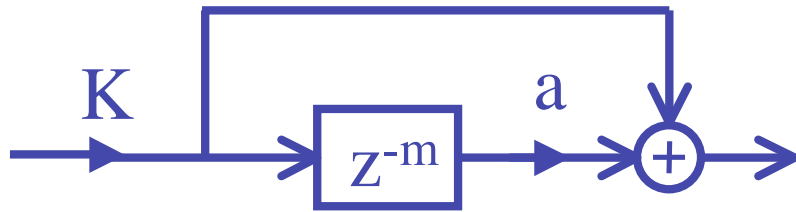
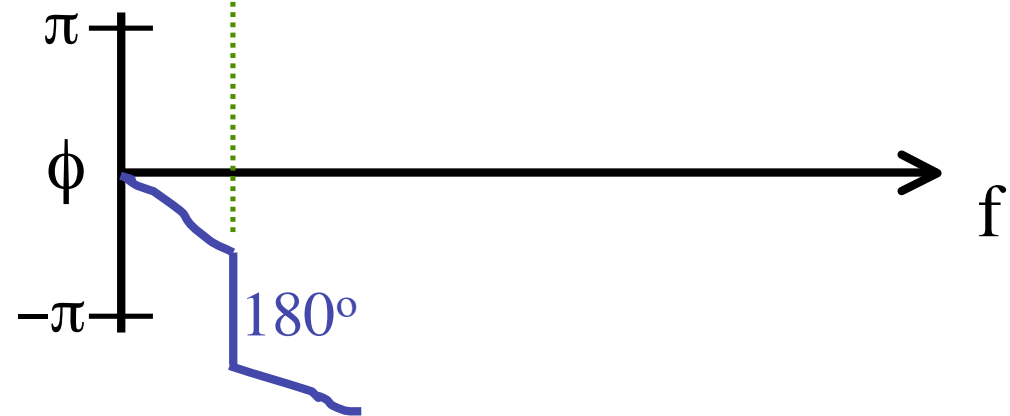
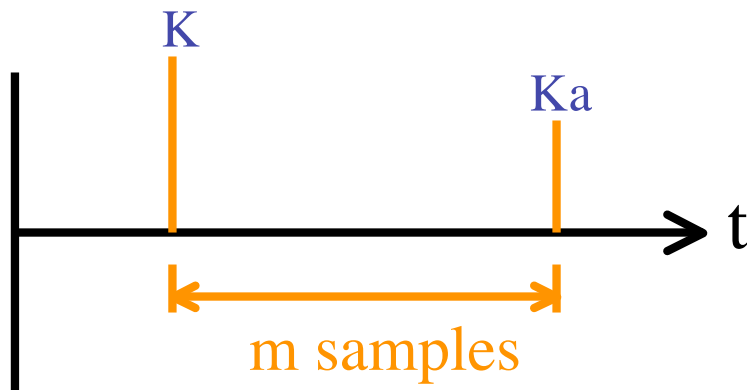


**Review:
Reverberation
Building Blocks**

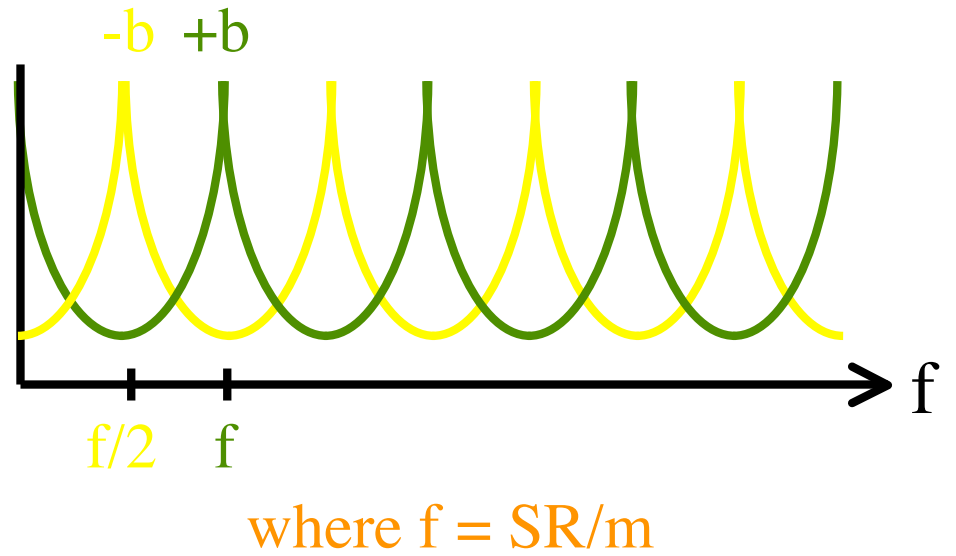
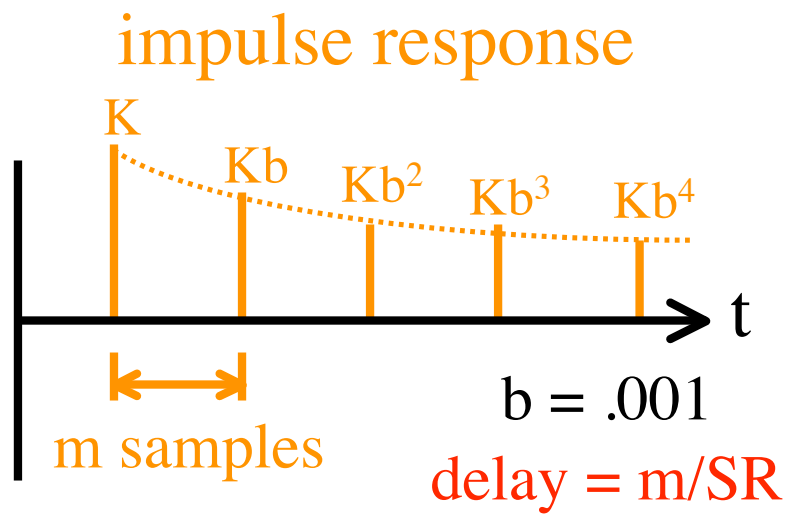
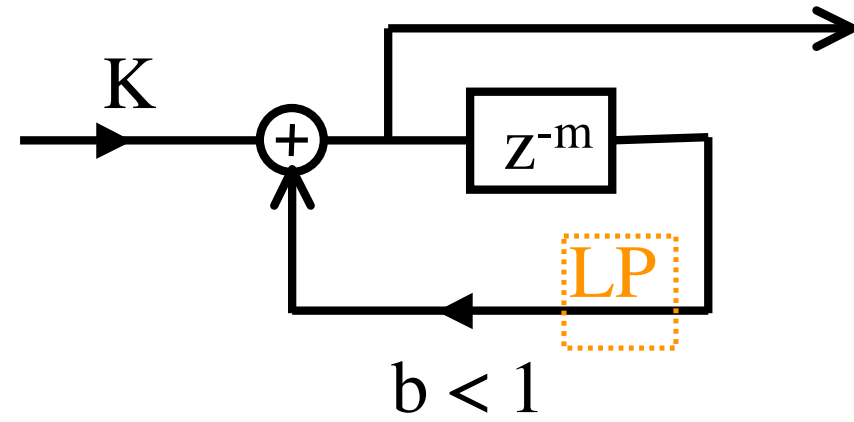
Non-recursive Comb Filter: DelayN/L/C



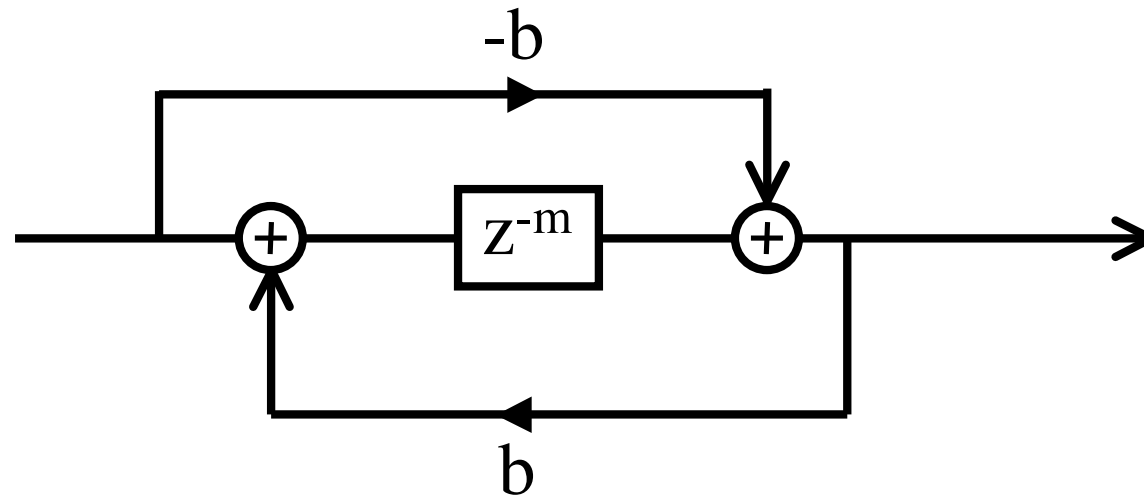
impulse response



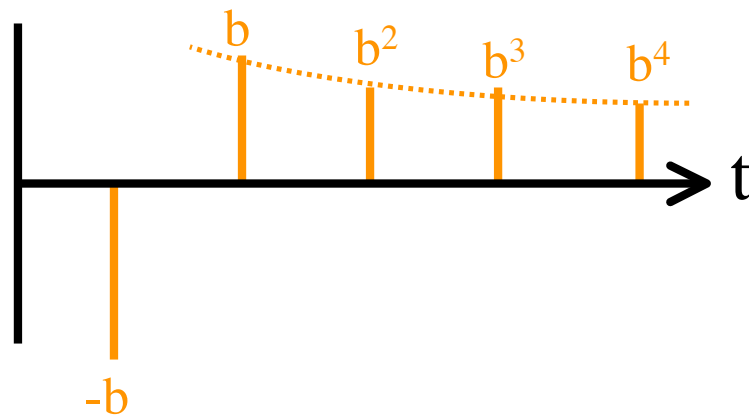
Recursive Comb Filter: CombN/L/C



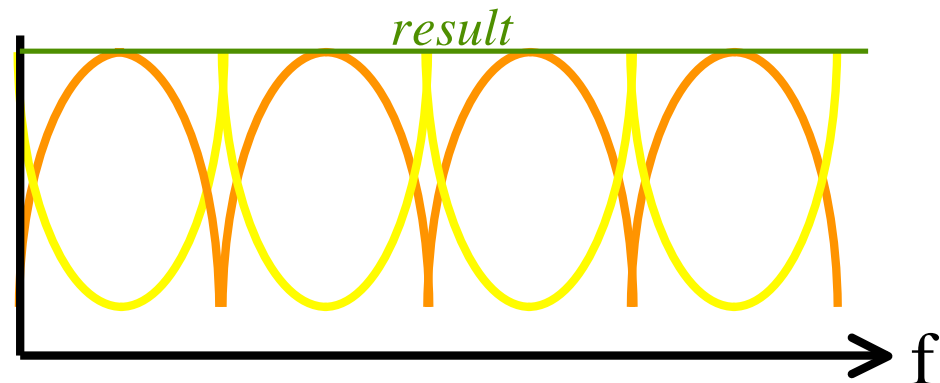
All-pass Comb Filter: AllpassN/L/C



impulse response

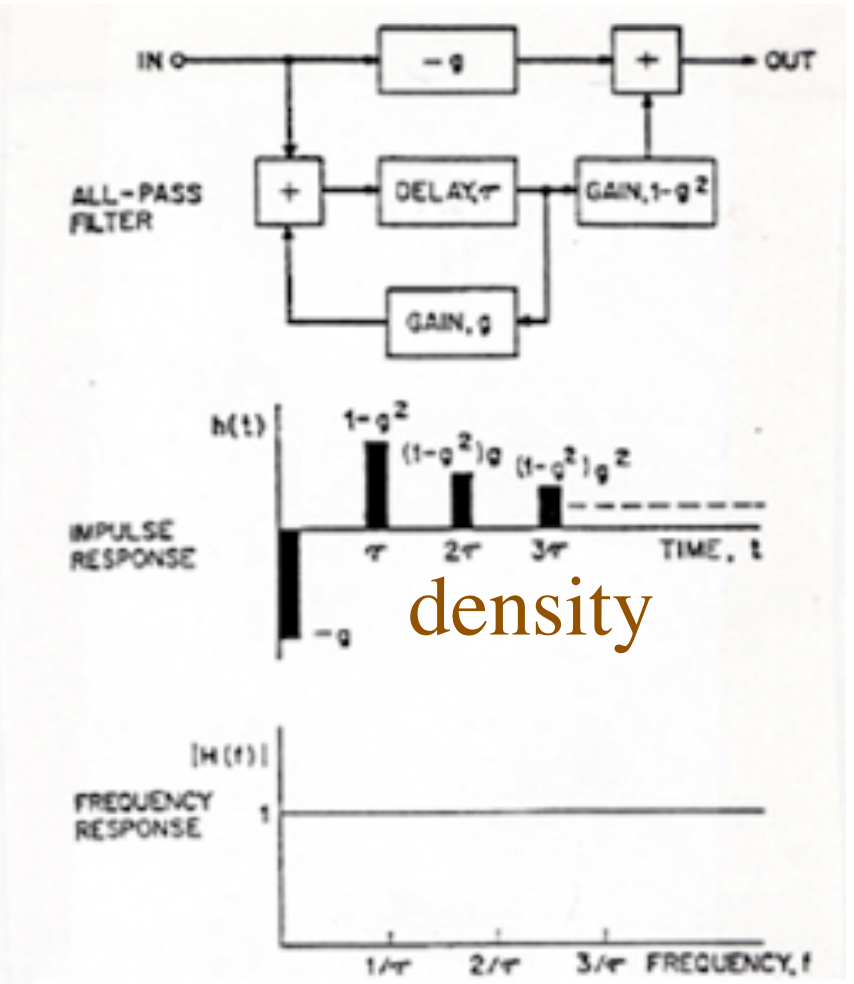
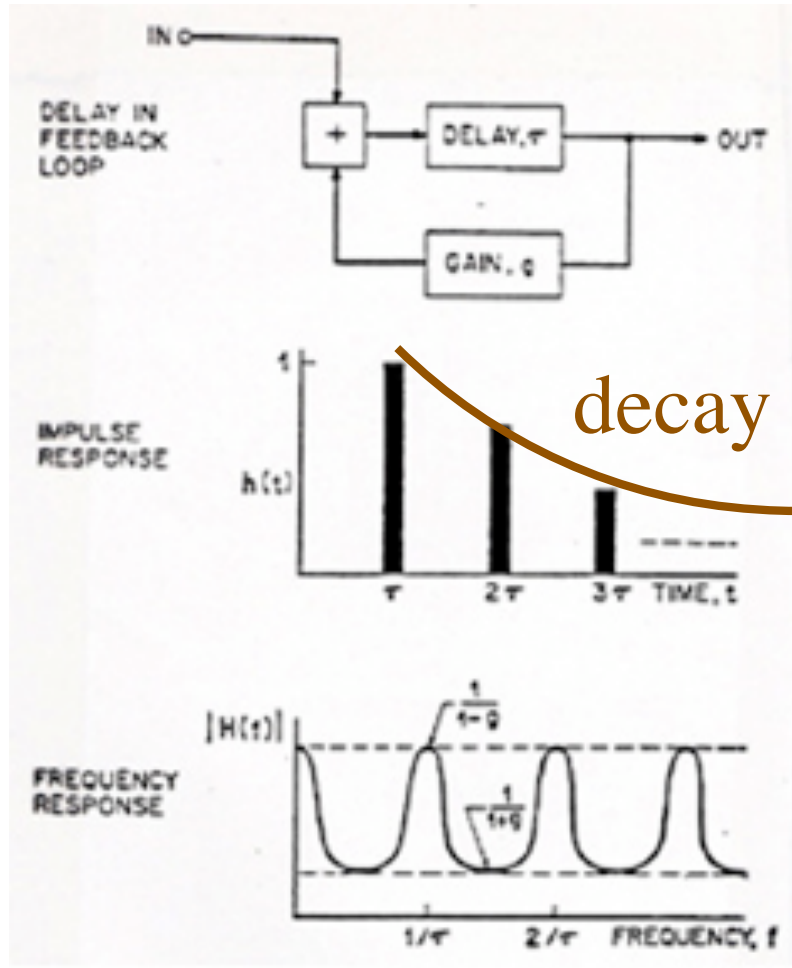


recursive and non recursive
parts cancel each other



Reverberator Design

Manfred Schroeder Reverberator (1962)



David Griesinger Lexicon

modulating delays in reverb

Lexicon-Style Reverb

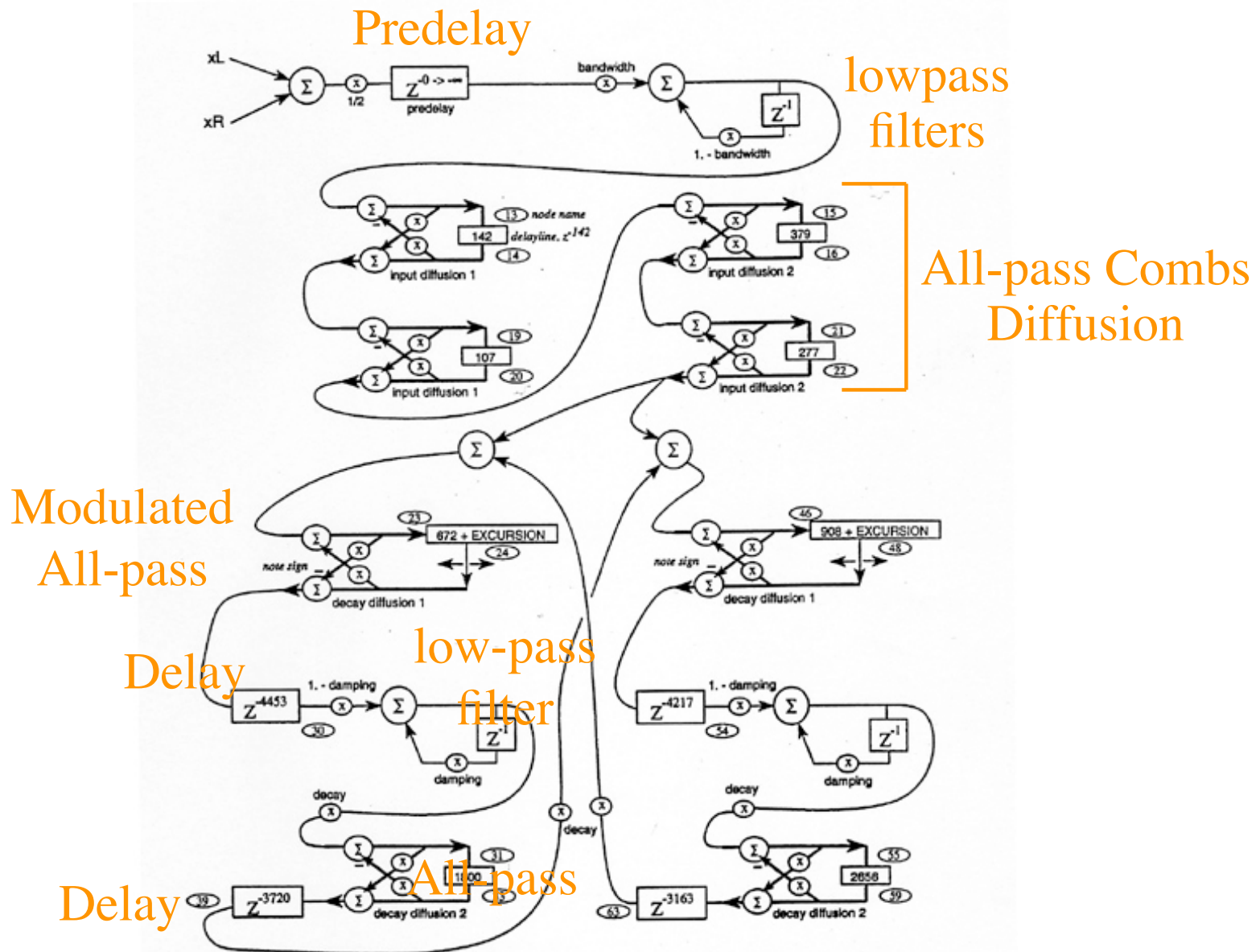
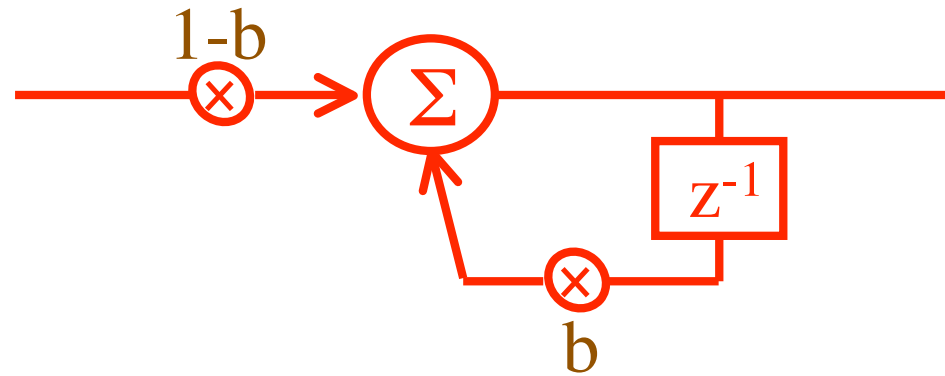
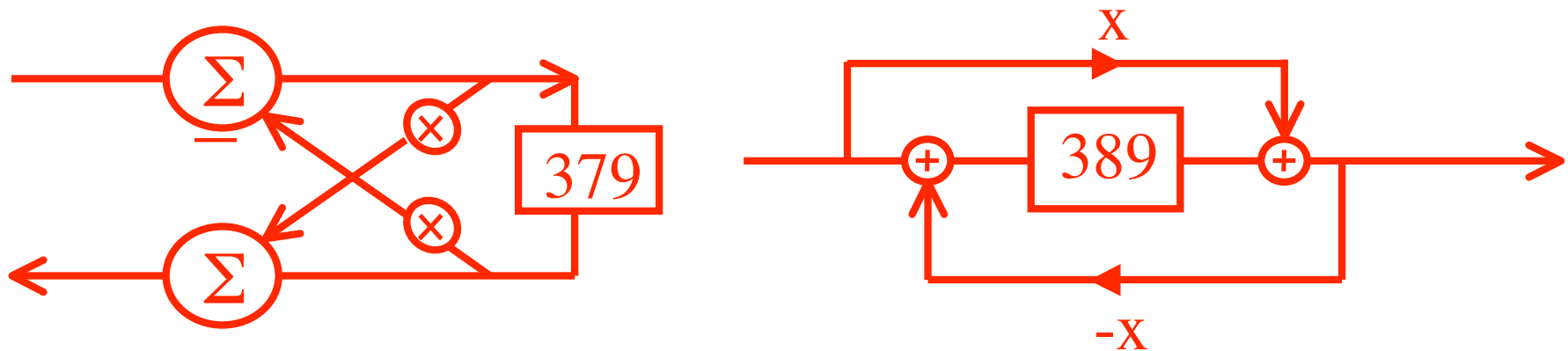


Fig. 1. Simplified plate-class reverberation topology in the style of Griesinger. For output tap structure (y_L , y_R) see Table 2. Delay-line taps at nodes 24 and 48 are modulating.

Building Blocks

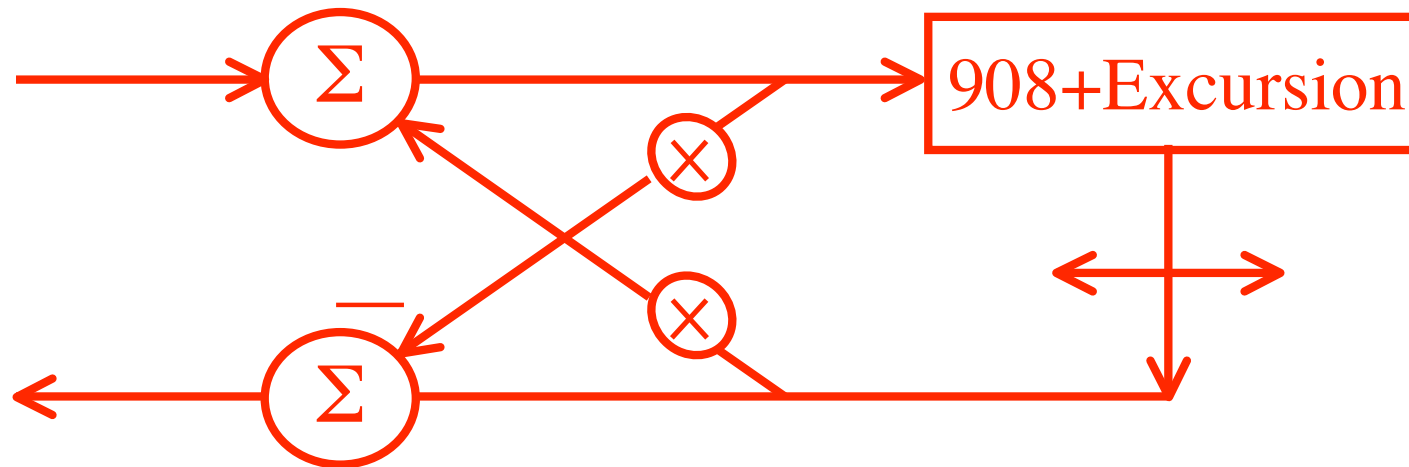


1st-order recursive filter (low-pass)



all-pass comb filters

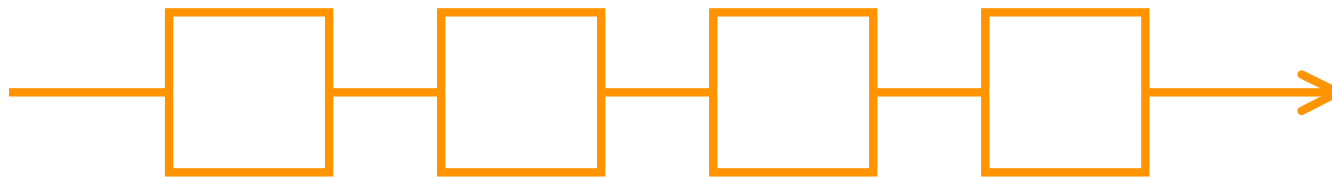
Modulating Delay



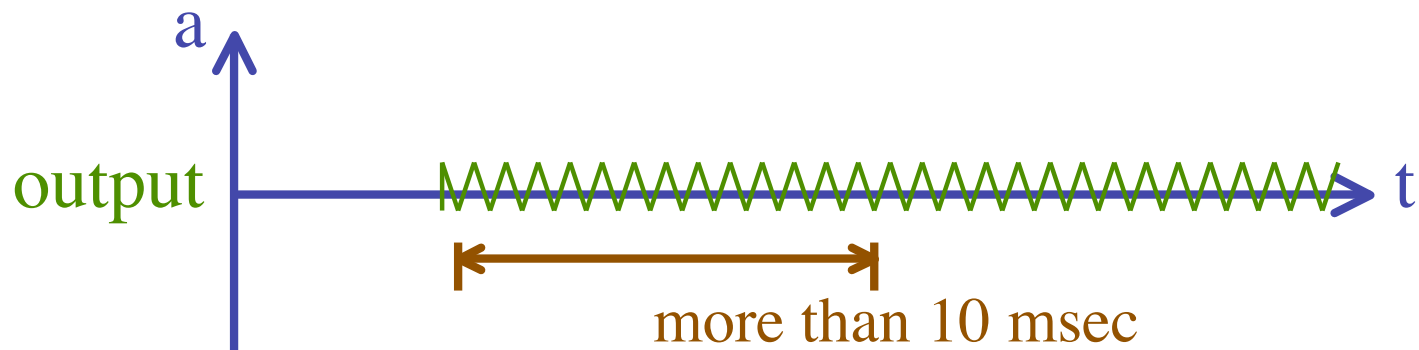
Modulation rate ~ 1 Hz

Excursion ~ 0.3 msec (12 samples @ 44.1)

Temporal Diffusion



Allpass Filters in Series.

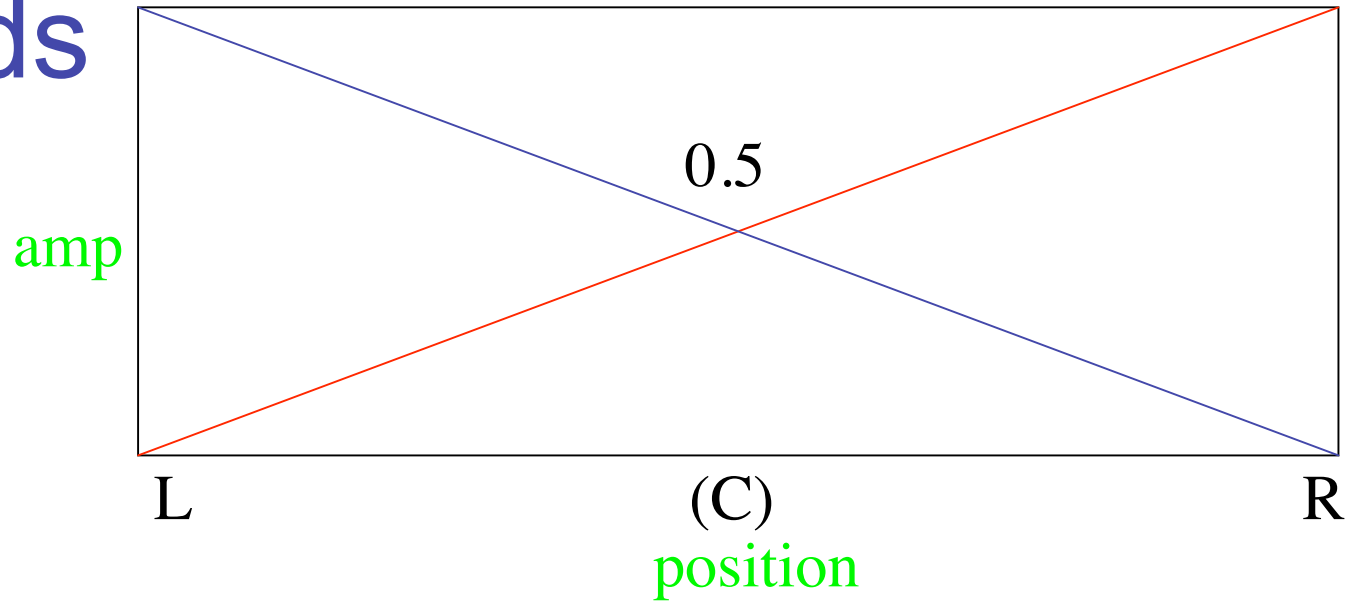


Panning and Positioning

Panning Methods

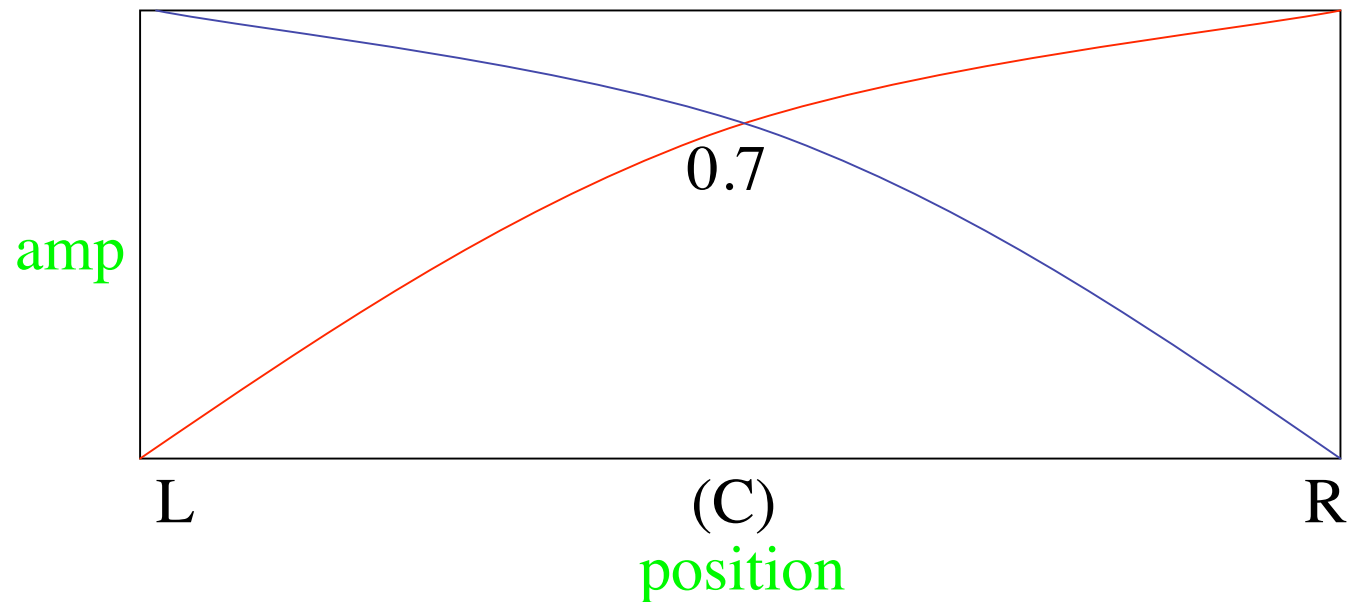
Amplitude Panning

LinPan2



Intensity or Power Panning

Pan2



Panning Methods

Near-field Monitoring:

Greatest accuracy:

Low Frequencies:

amplitude panning

High Frequencies:

power panning

Large-space Monitoring:

power panning

Panning Inaccuracy in Nearfield

