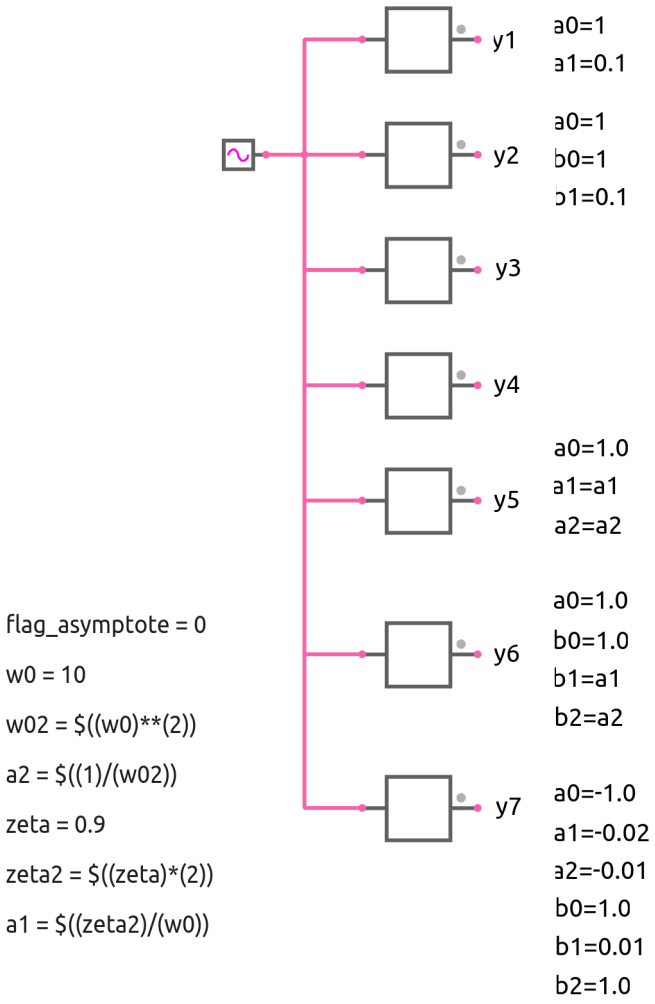
test_filter_2.sqproj



Shown in the figure are several filters with a common input signal.

Exercise Set

1. With the coefficient values as specified in the figure, draw the asymptotic gain and phase plots (Bode plots) for each filter for $0.001\,\text{Hz} < f < 1\,\text{kHz}$. The frequency and gain axes should be logarithmic, and the phase axis should be linear.

   (Note that, for each filter, the output is equal to the transfer function since the filter input $\mathbf{V}_i$ is set to $1\angle 0$.)

2. Compare your plots with simulation results obtained by setting the global parameter `flag_asymptote` to 1.

3. Compare the asymptotic plots with the actual gain and phase plots obtained by setting `flag_asymptote` to 0.