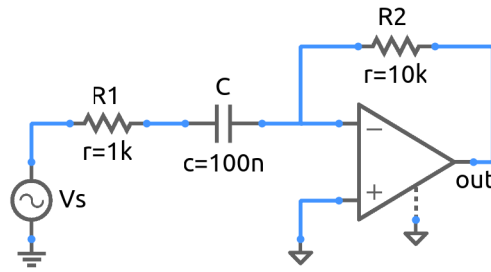


## ee101\_op\_filter\_2.sqproj



### Exercise Set

For the high-pass active filter is shown in the figure,

1. Find the transfer function.
2. Using the transfer function, find the high-frequency gain and the cut-off frequency  $f_0$ .
3. Find the high-frequency gain directly using the fact that  $Z_C \rightarrow 0$  as  $f \rightarrow \infty$ .
4. What will happen to the magnitude frequency response of the filter if  $R_2$  is changed to  $20k\Omega$ ?
5. What will happen to the magnitude frequency response of the filter if  $C$  is changed to  $20nF$ ?
6. Check your answers against simulation.