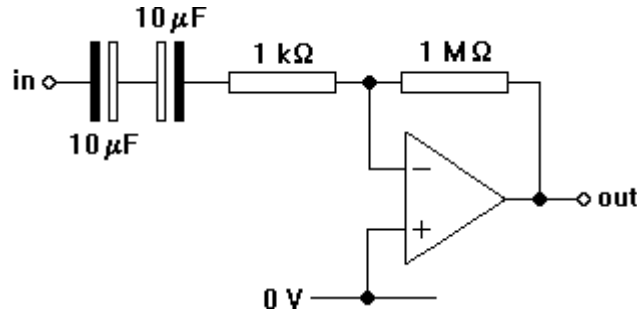


The unity-gain frequency of an op-amp

1. Assemble the circuit shown below. It is an a.c. amplifier with a break frequency of about 30 Hz.



2. Use a double-beam CRO to monitor the signals at the input and output of the amplifier. Trigger on the output signal.
3. Use a signal generator to inject a signal at 100 Hz into the amplifier. Adjust its amplitude until the output signal of the amplifier has a peak value of 1.0 V.
4. Use the peak value of the input signal to calculate the gain of the amplifier at 100 Hz.
5. Repeat steps 3 and 4 at the following frequencies: 100 Hz, 1.0 kHz, 10 kHz and 100 kHz.
6. Use your results to plot a gain-frequency plot for the amplifier. Use the plot to estimate the unity-gain frequency of the op-amp.
7. Repeat the experiment with the $1\ \text{M}\Omega$ feedback resistor replaced with $100\ \text{k}\Omega$.