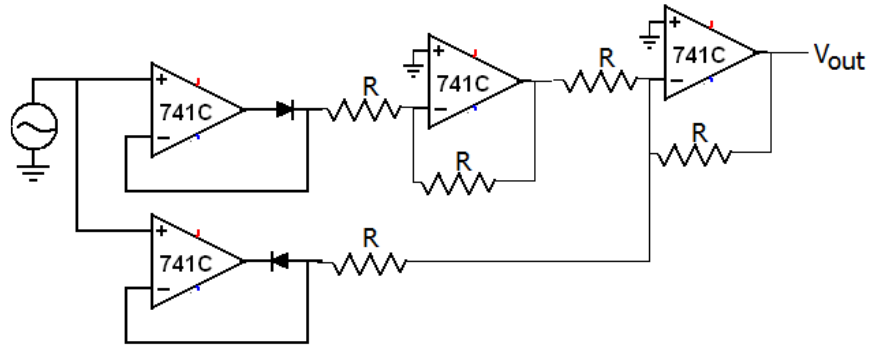


Electronics

Rectifier with opamp

Problem 1.- To measure a low level signal ($\sim 10\text{mV}$, $\sim 1\text{kHz}$) an instrument requires its absolute value. Design a circuit to obtain this.

Solution: There are several ways to accomplish this. For example, using two half-wave rectifiers with opamp feedback (to eliminate the drop in the diodes) as shown below:



The output from the first rectifier is inverted and added to the second one to get the required signal. We can use $10\text{k}\Omega$ in all the resistors.