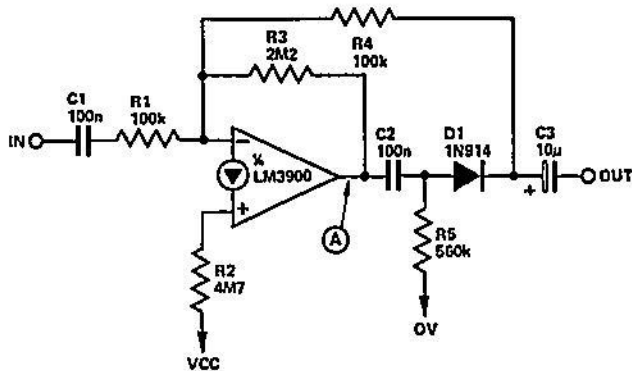


Precision Rectifier

The LM3900 is different from most op-amps in that it is current-differencing and operates from a single supply rail. Standard precision rectifier circuits are not applicable for this device but the circuit shown here works well.

Two feedback paths are provided — R3 for dc stability and R4 for the ac signal after C2 and R5 have filtered out the dc bias. When $R2=2 \times R3$, point A will be at half the supply voltage, allowing the diode to be reversed by the input signal.

For large positive input, input impedance equals R1 and voltage gain is — $R4/R1$, since R4 is made much smaller than R3, C1 and C3 are dc blocking capacitors and determine the low-frequency roll-off.



Your Toolbox Test Bench