Questions

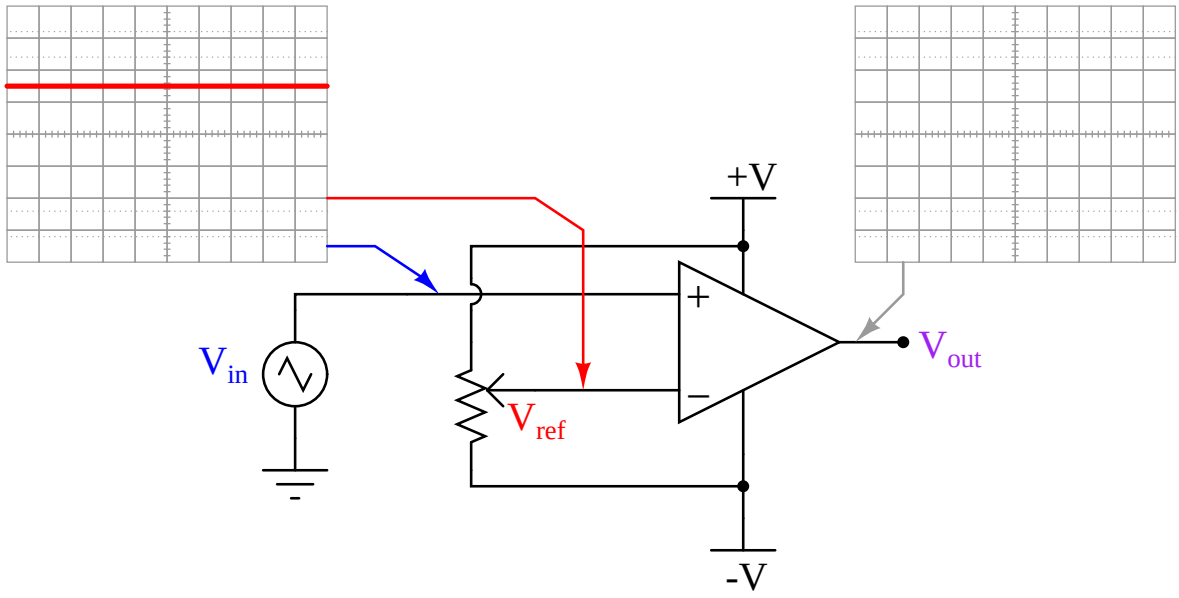
Question 1

Animation: PWM comparator circuit

This question consists of a series of images (one per page) that form an animation. Flip the pages with your fingers to view this animation (or click on the "next" button on your viewer) frame-by-frame.

The following animation shows a comparator used to generate a PWM pulse signal from a triangle wave and a DC reference voltage. Watch what happens as the input voltage goes through a whole cycle, noting when the comparator switches output states. Here are some things to look for:

- What input conditions are necessary for the comparator to output a "high" (+V) state?
- What input conditions are necessary for the comparator to output a "low" (-V) state?
- Which direction would you move the potentiometer wiper to increase the duty cycle of the PWM output?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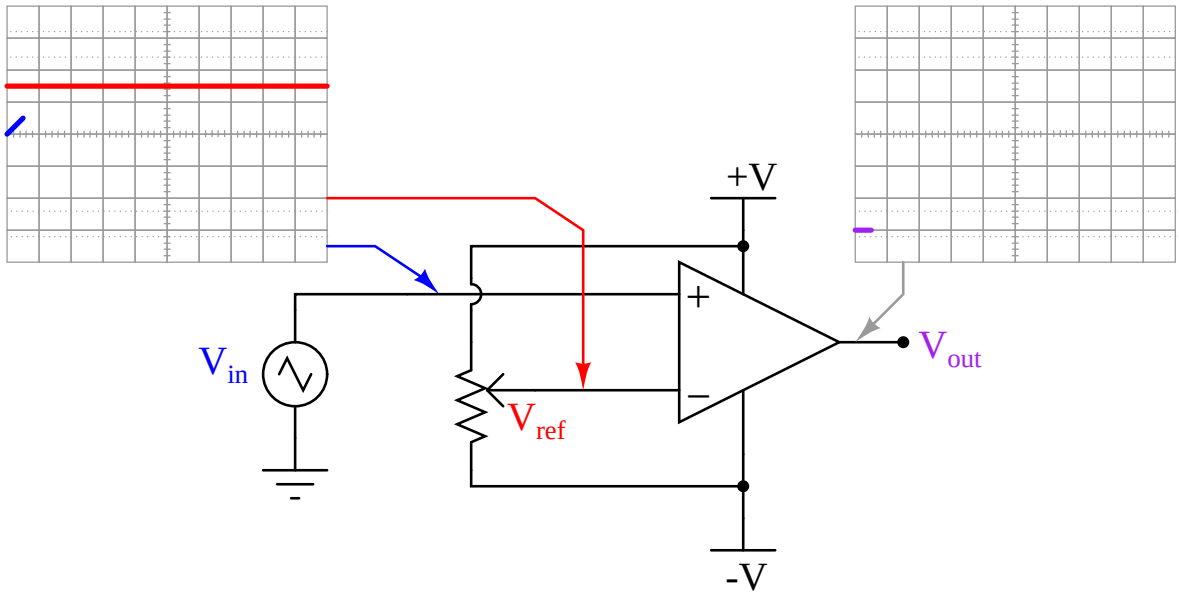
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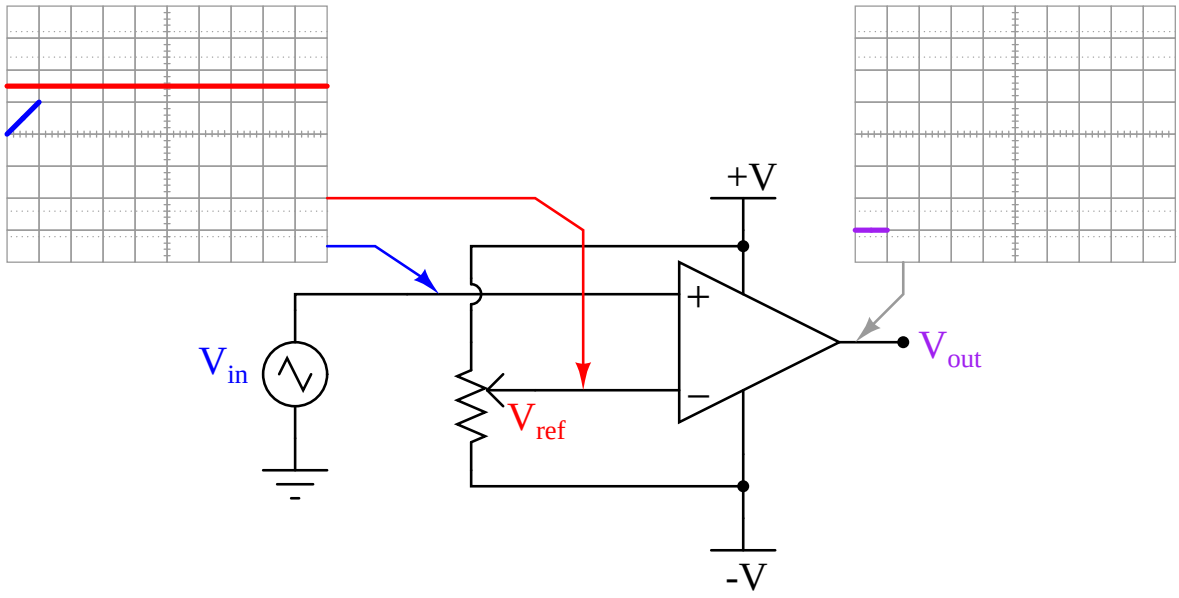
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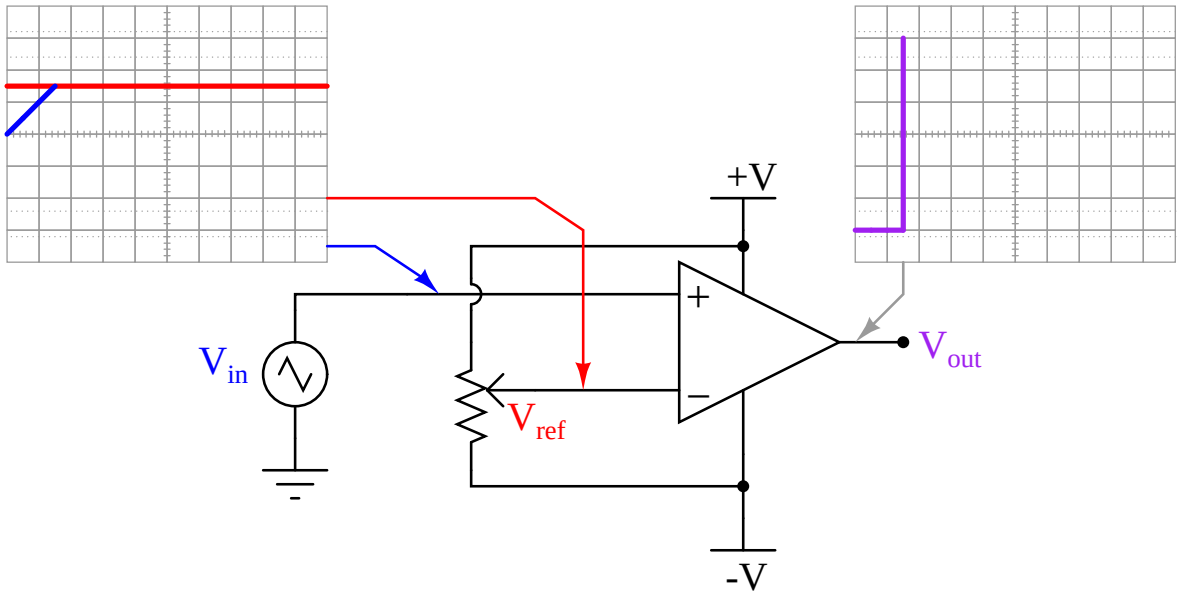
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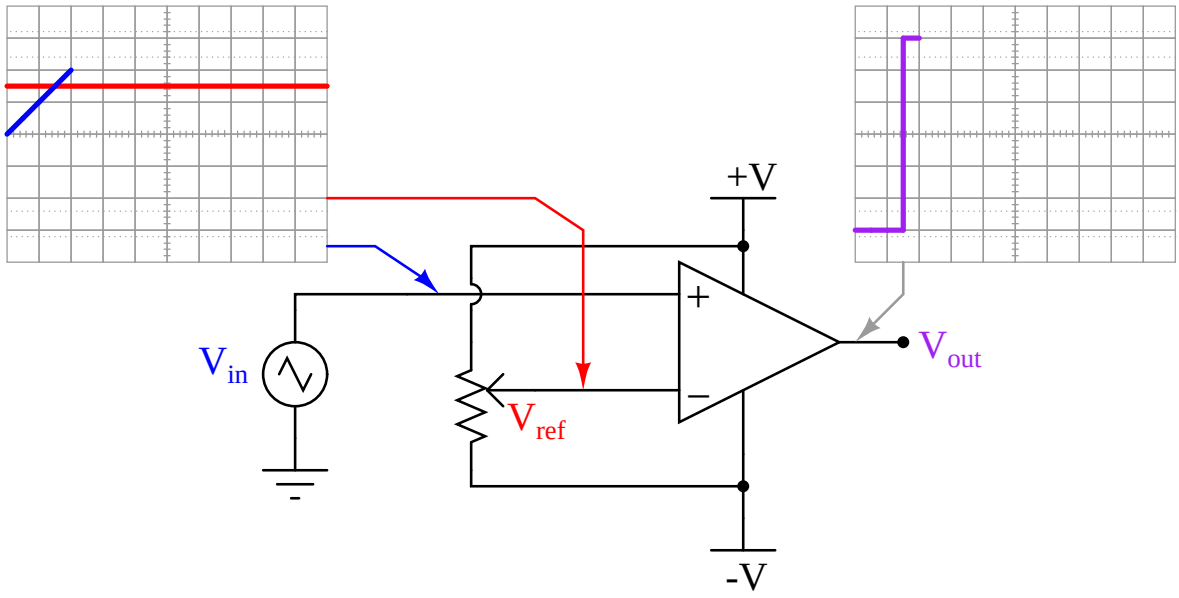
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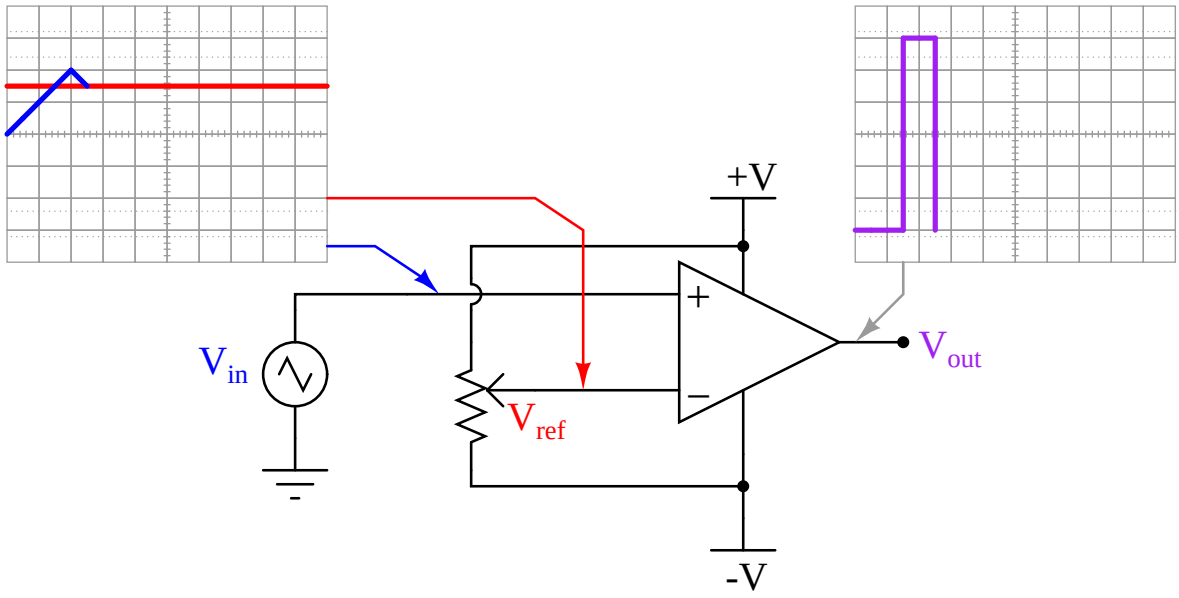
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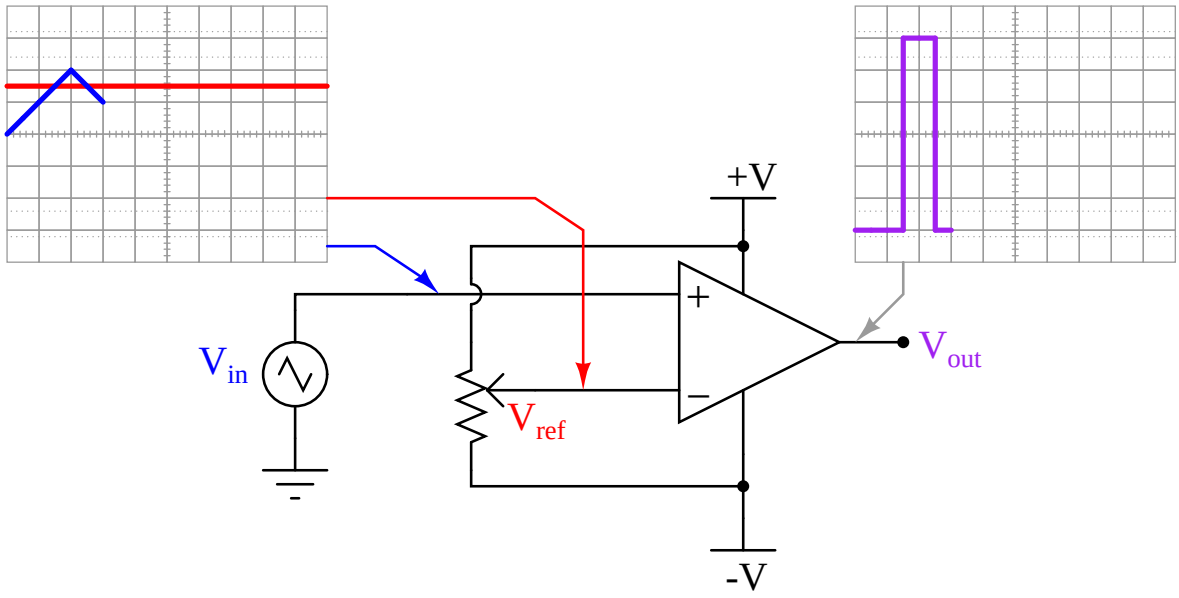
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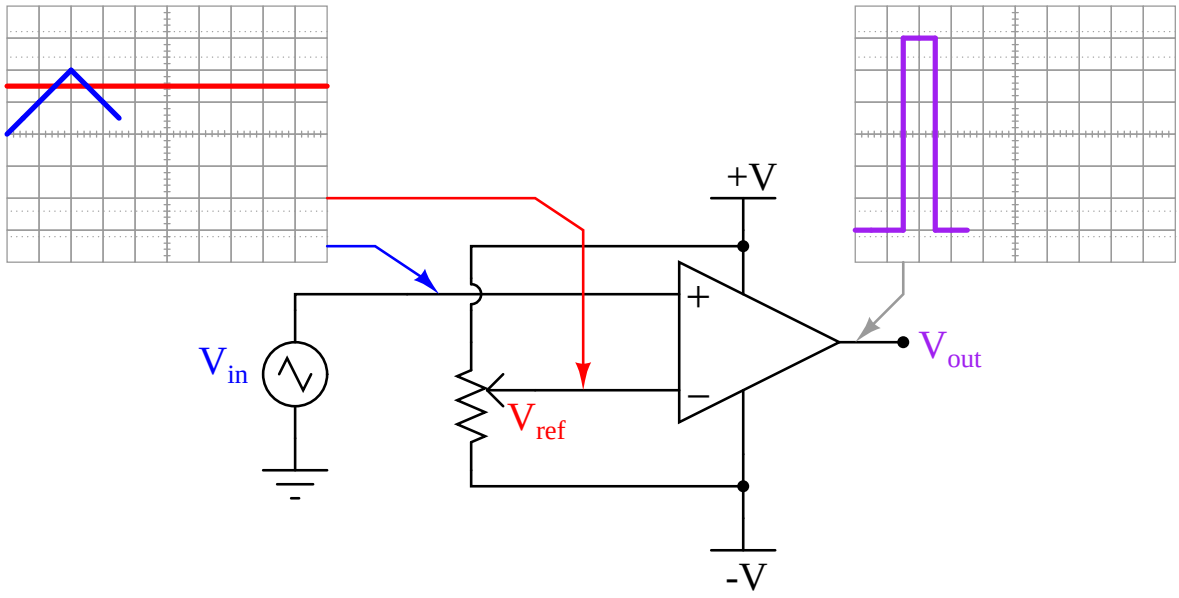
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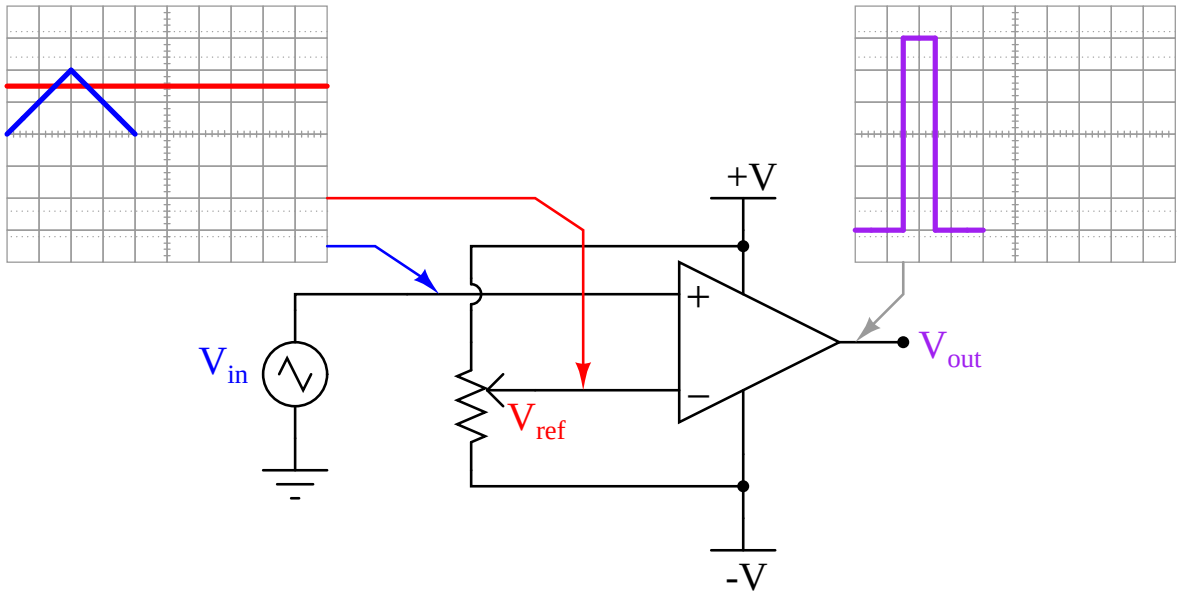
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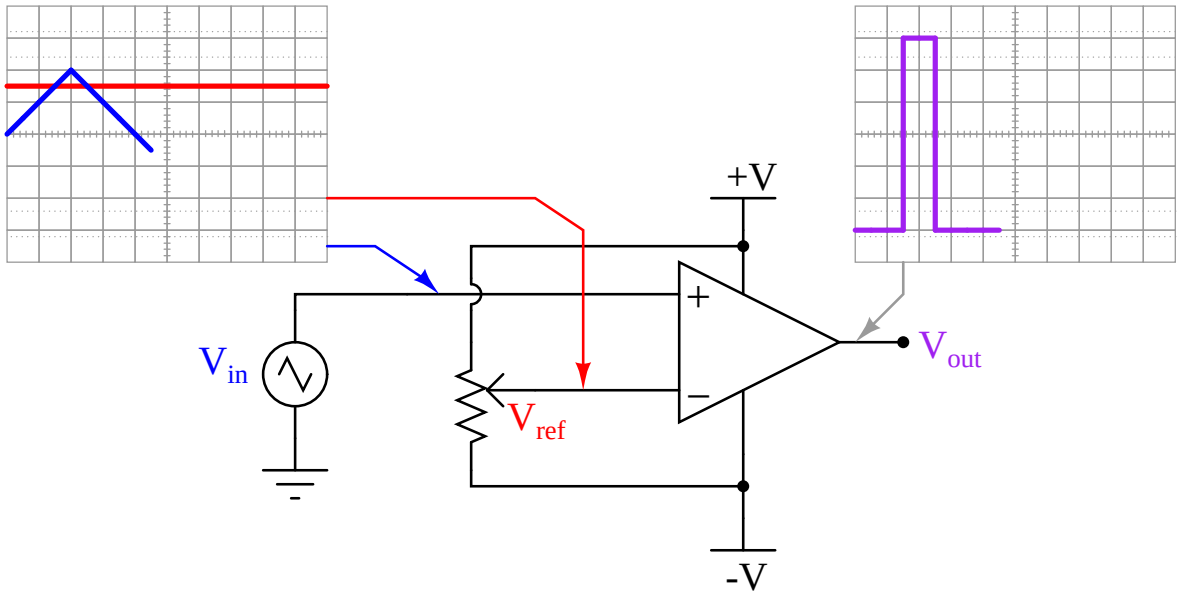
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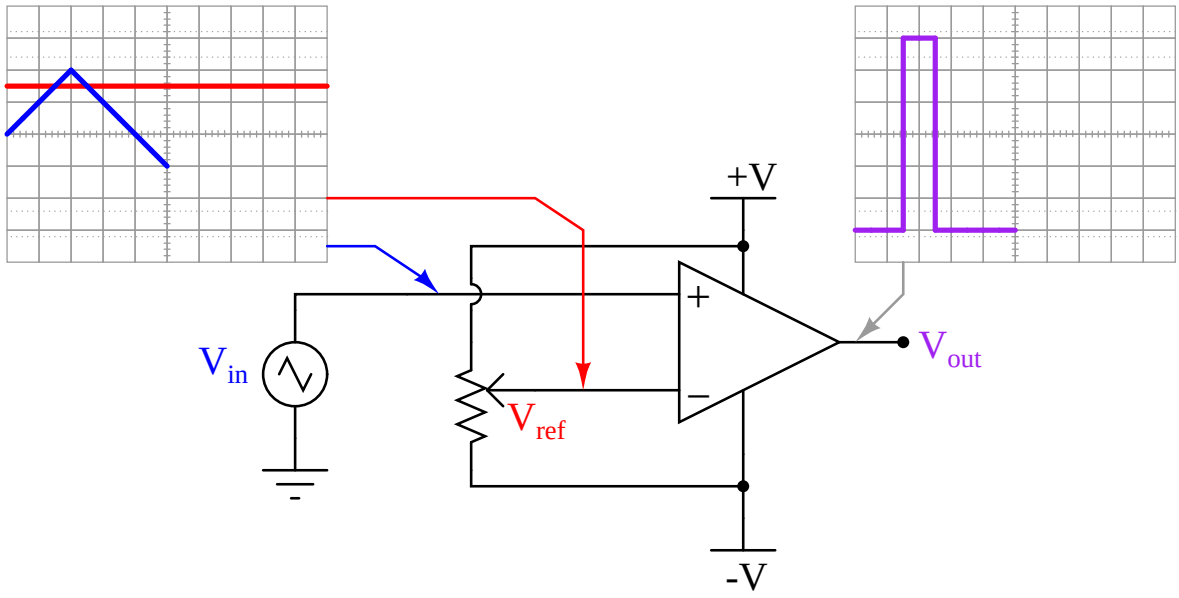
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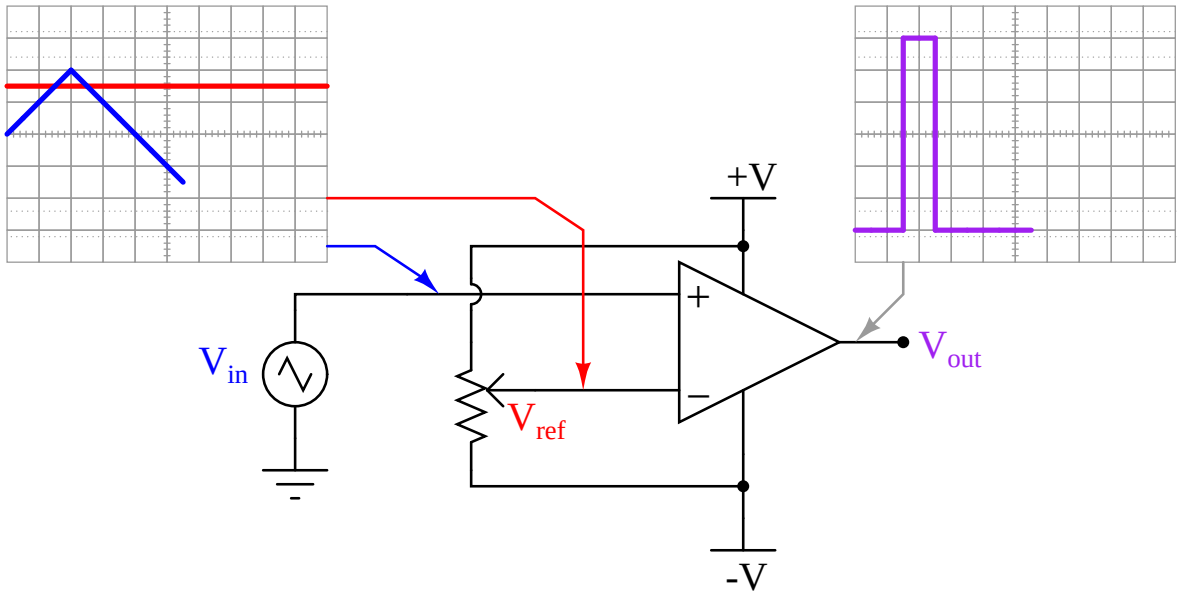
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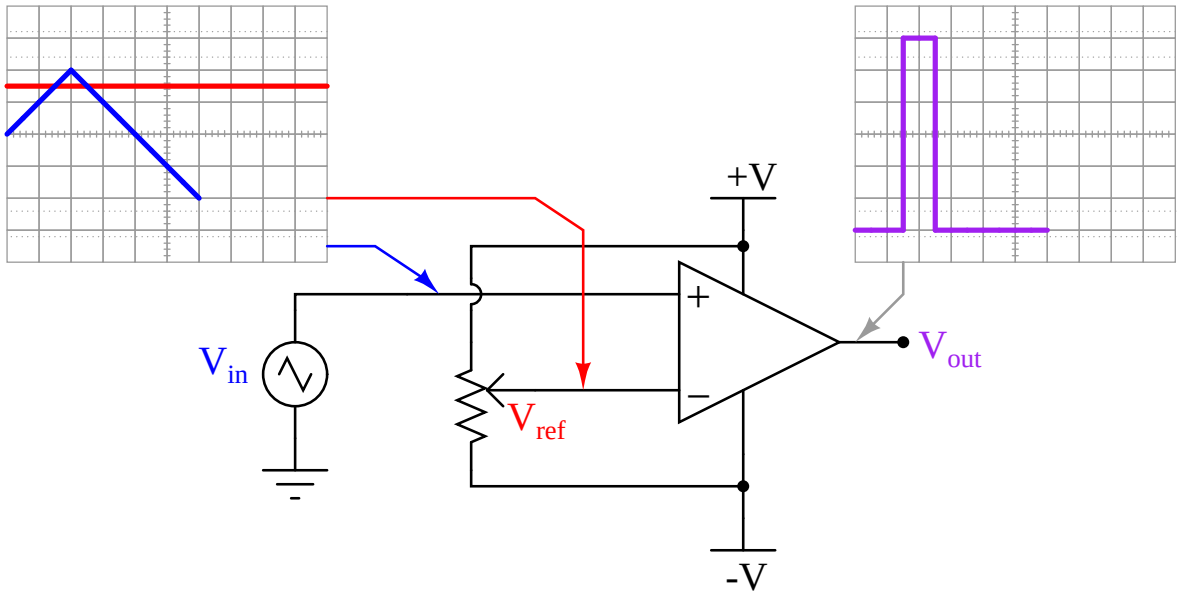
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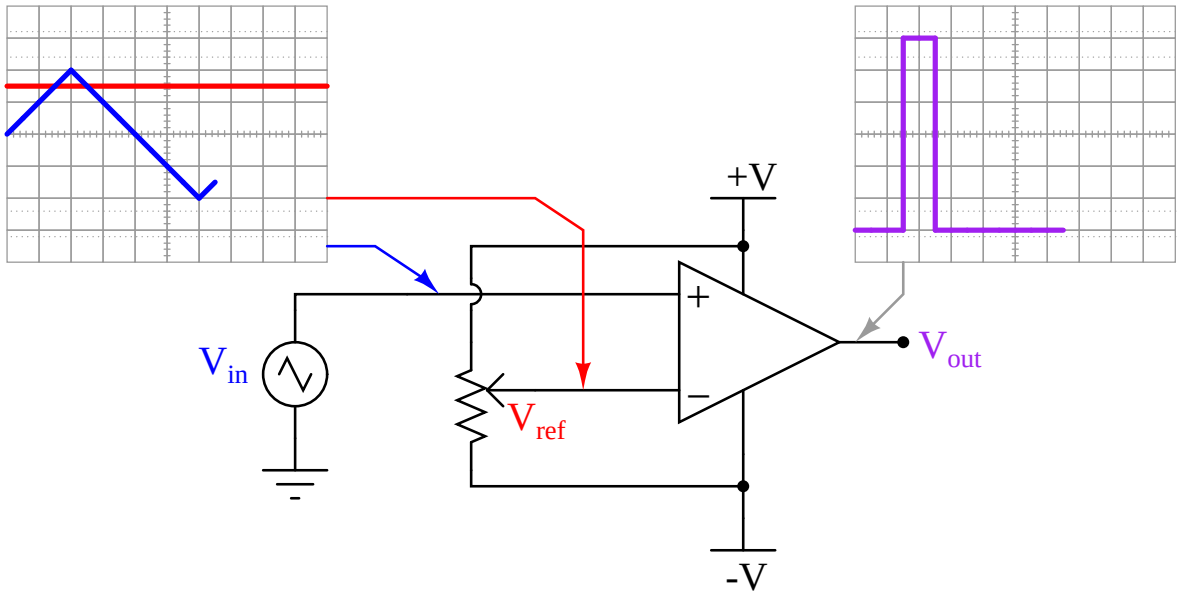
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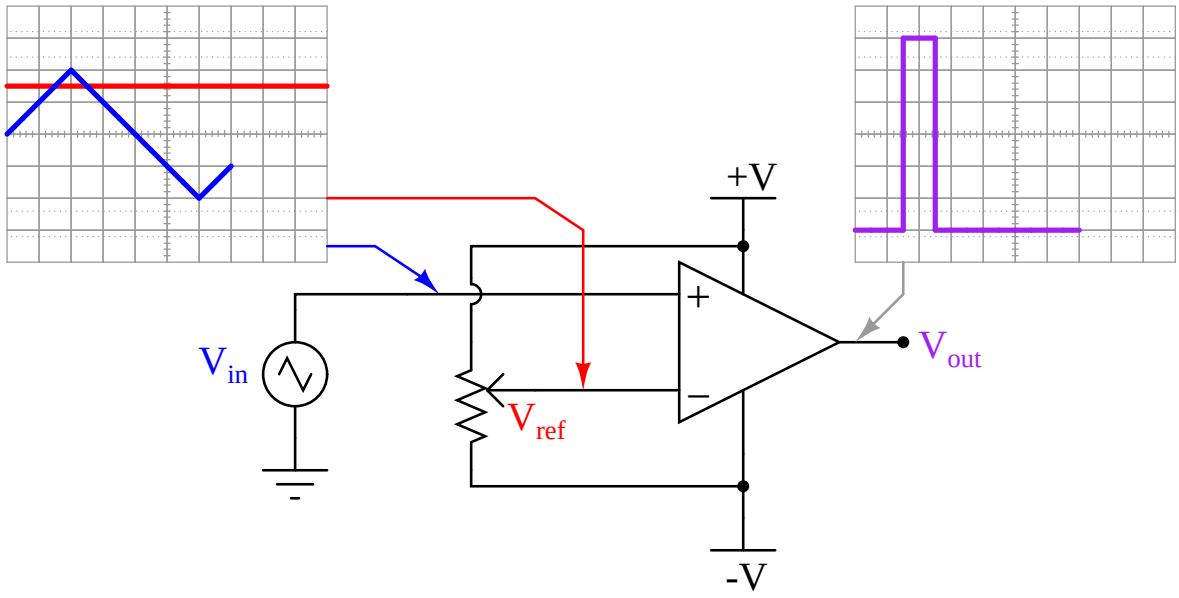
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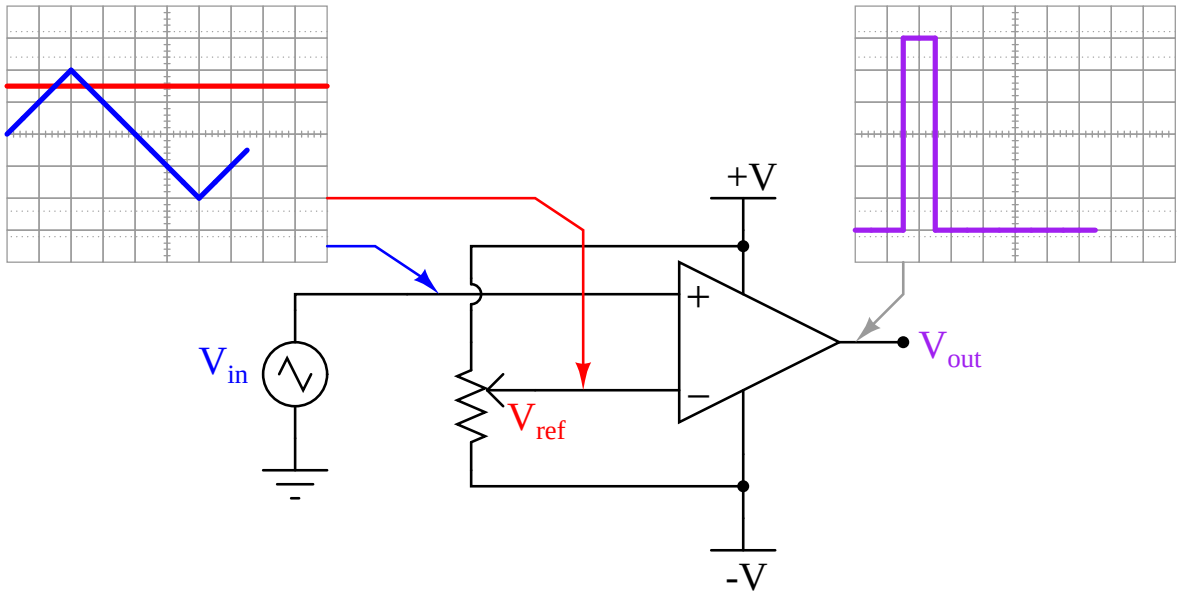
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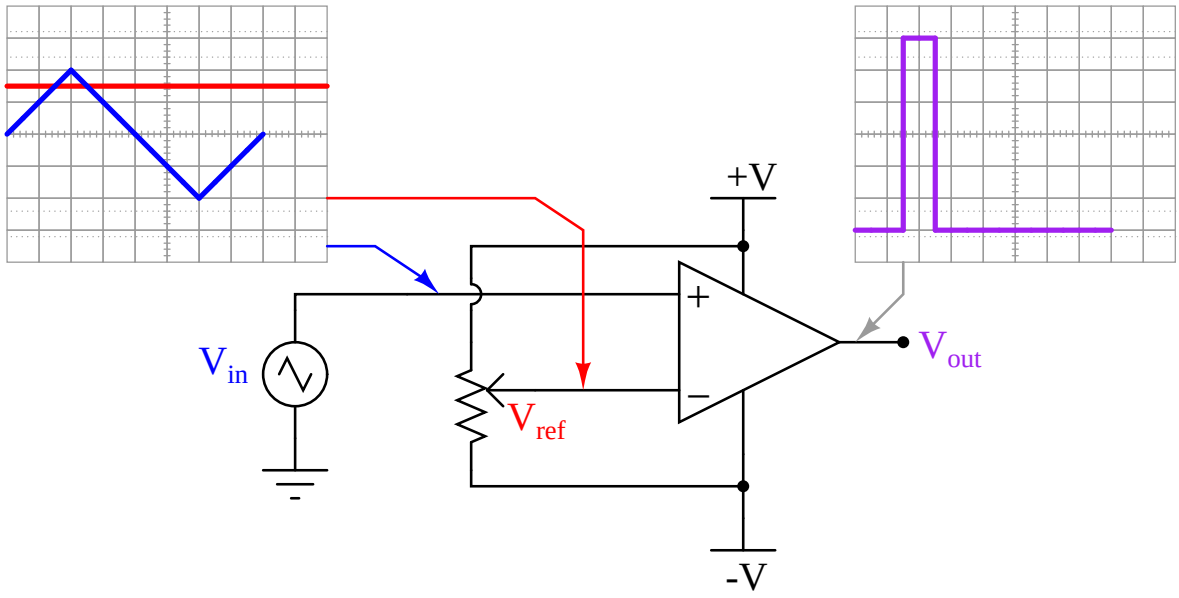
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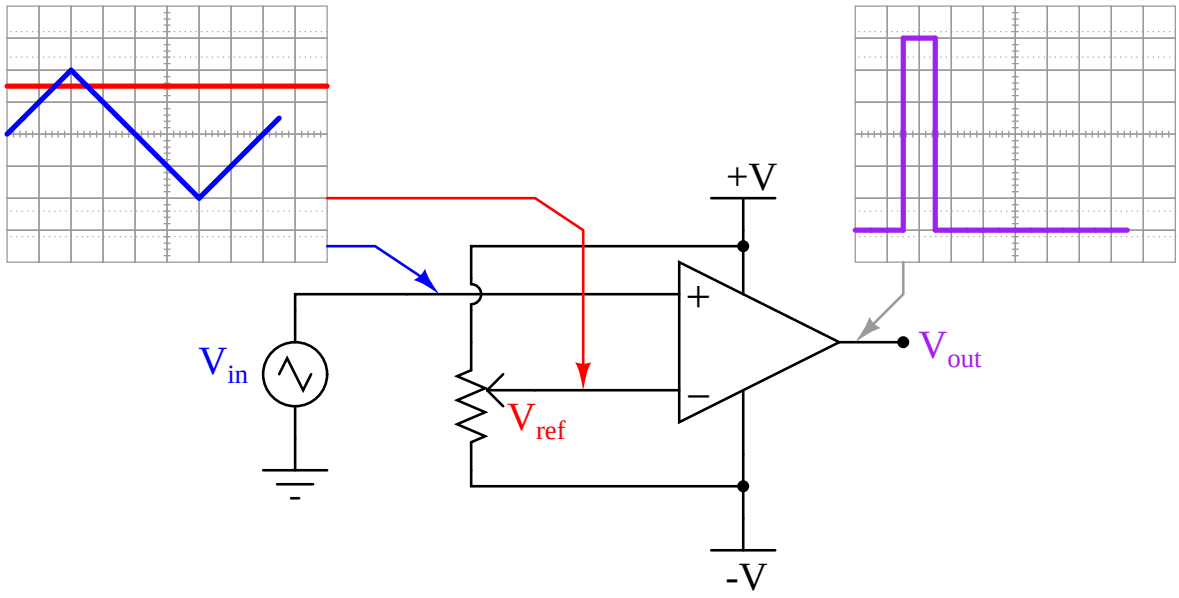
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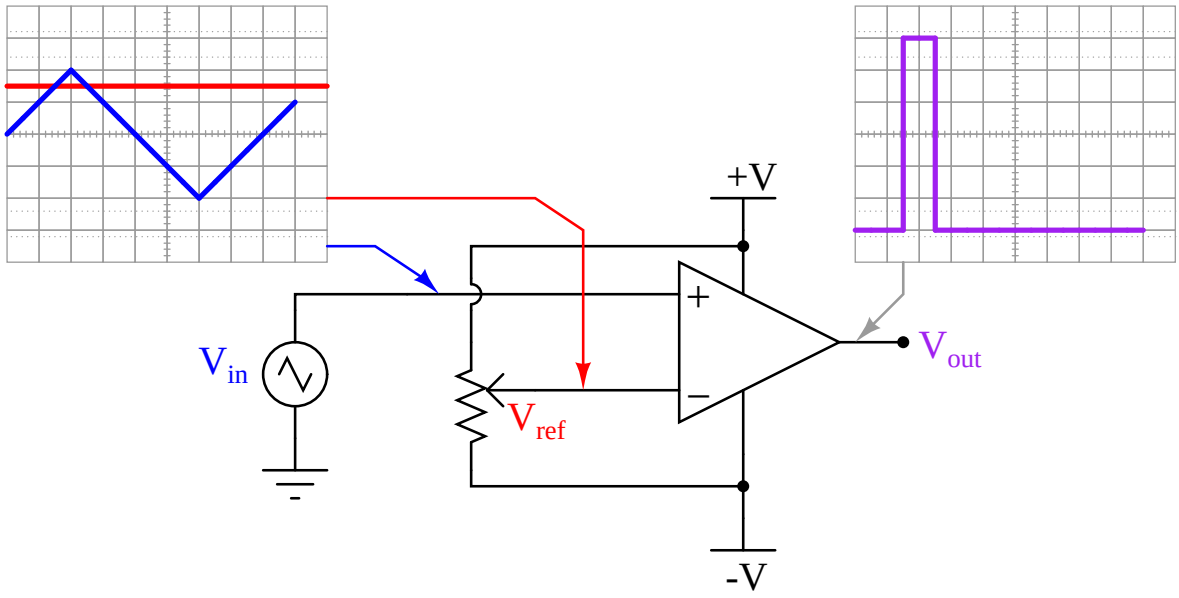
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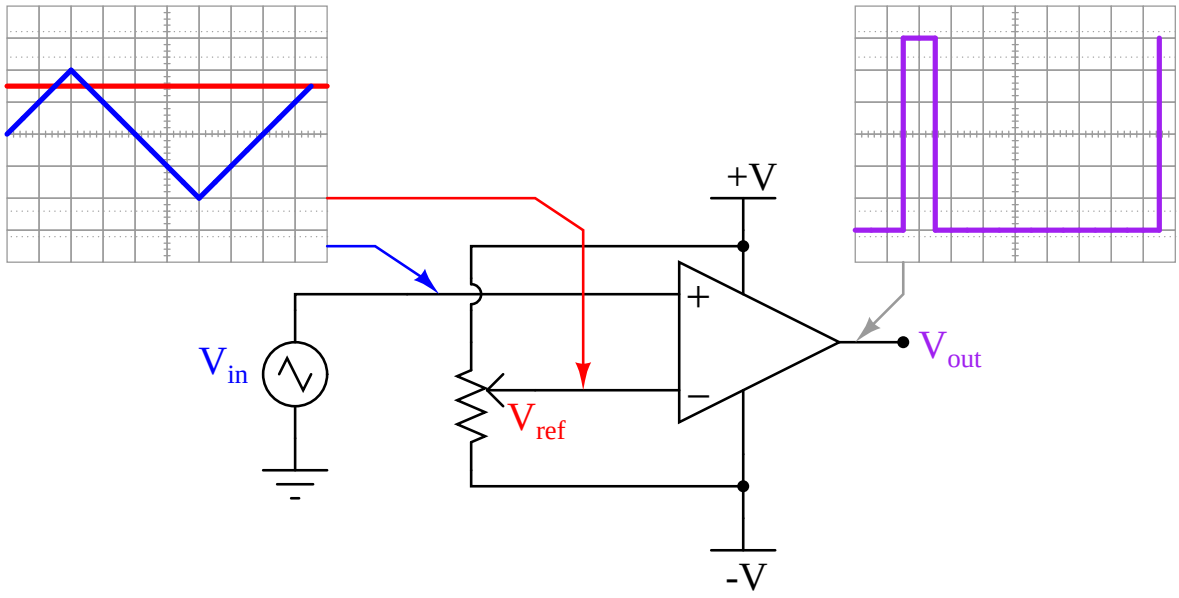
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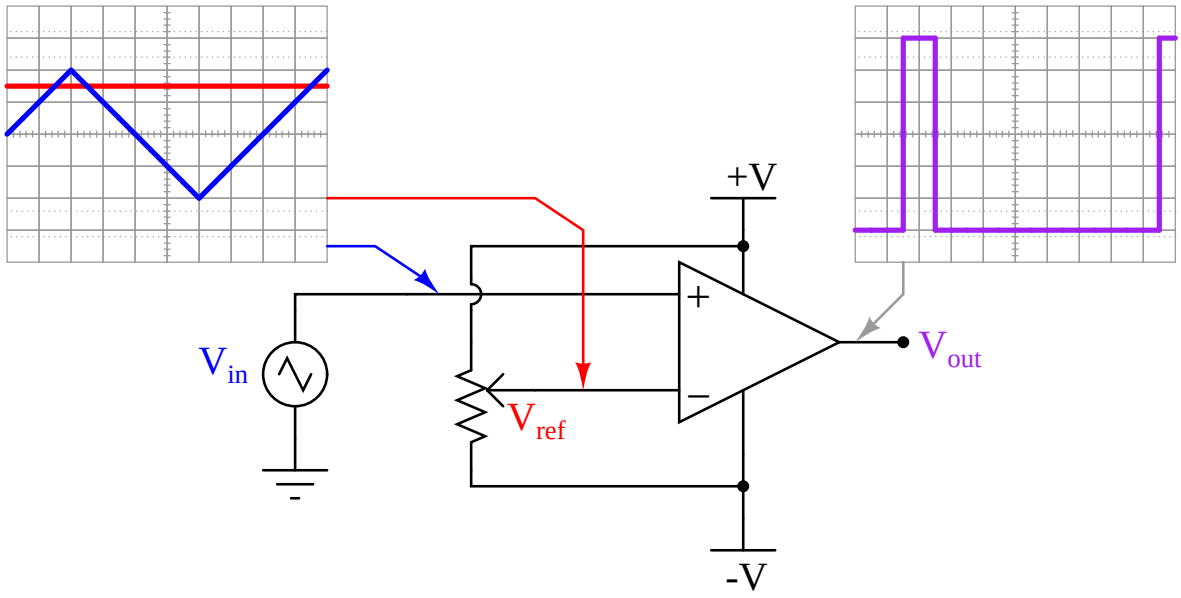
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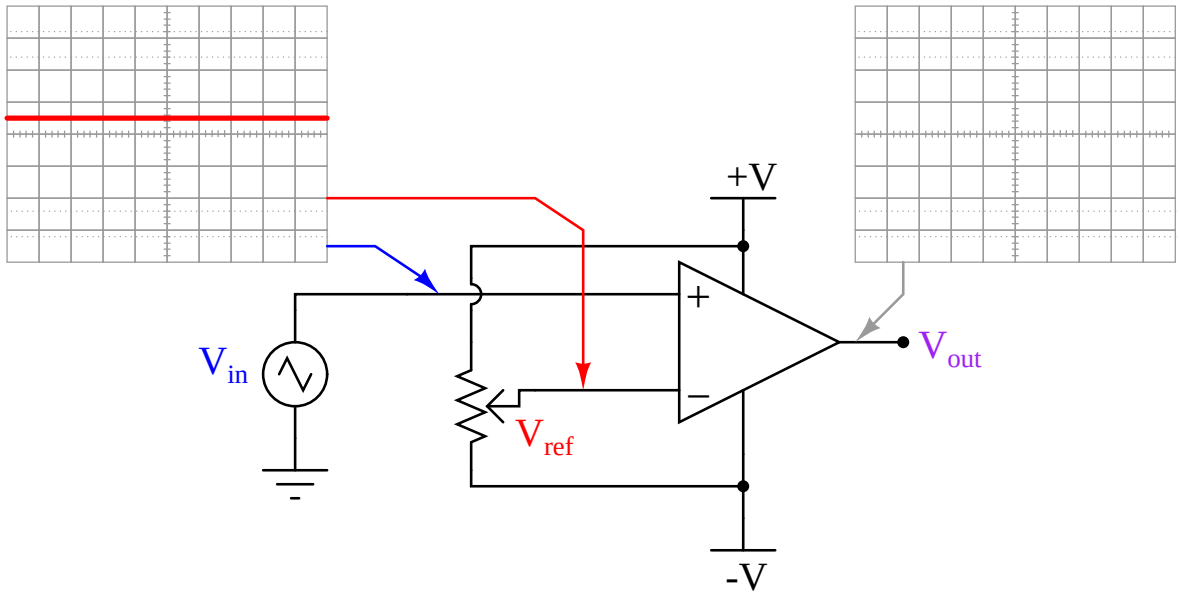
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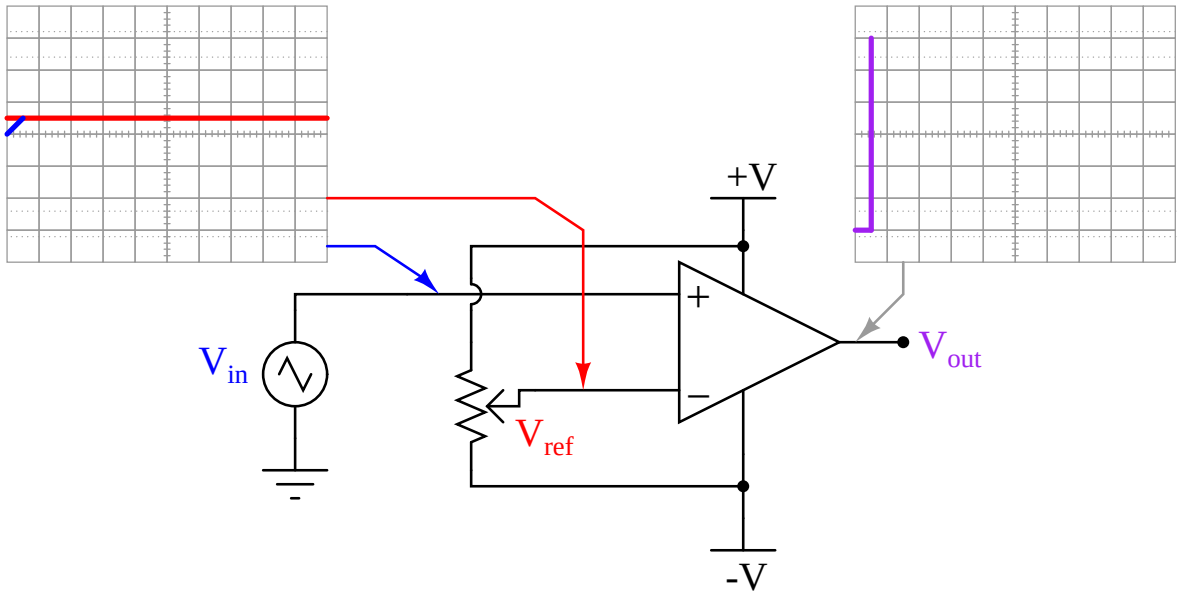
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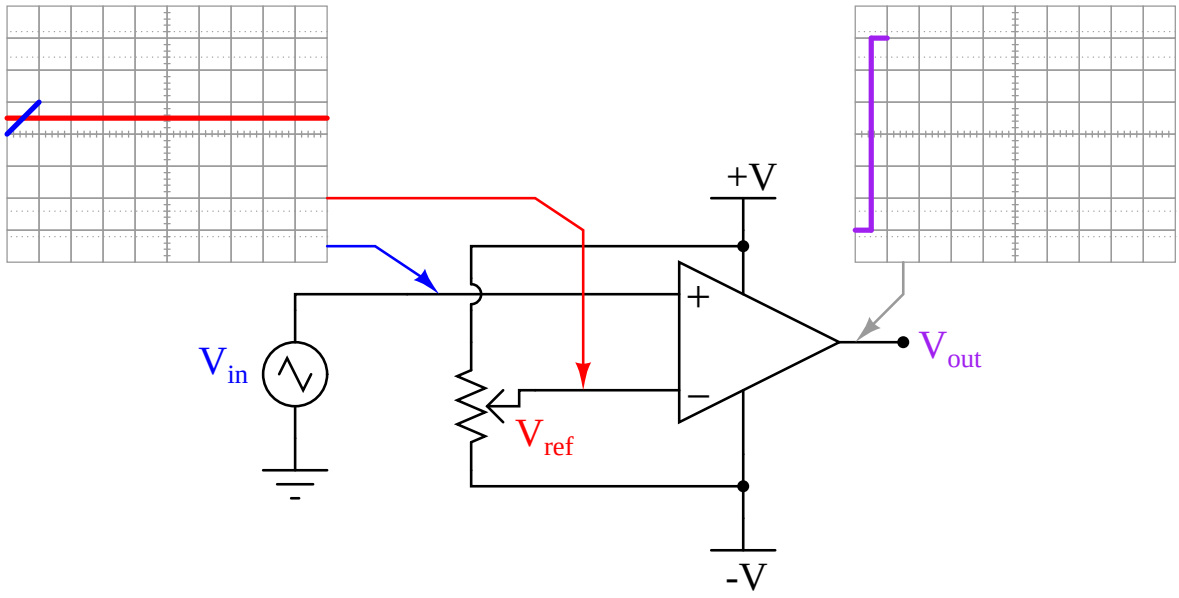
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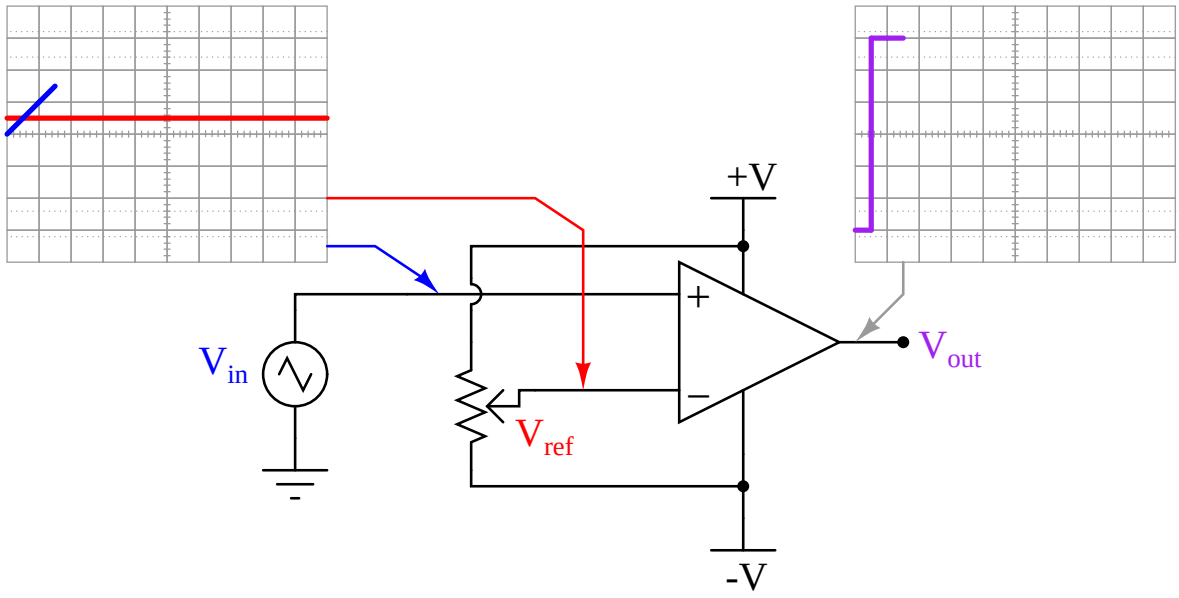
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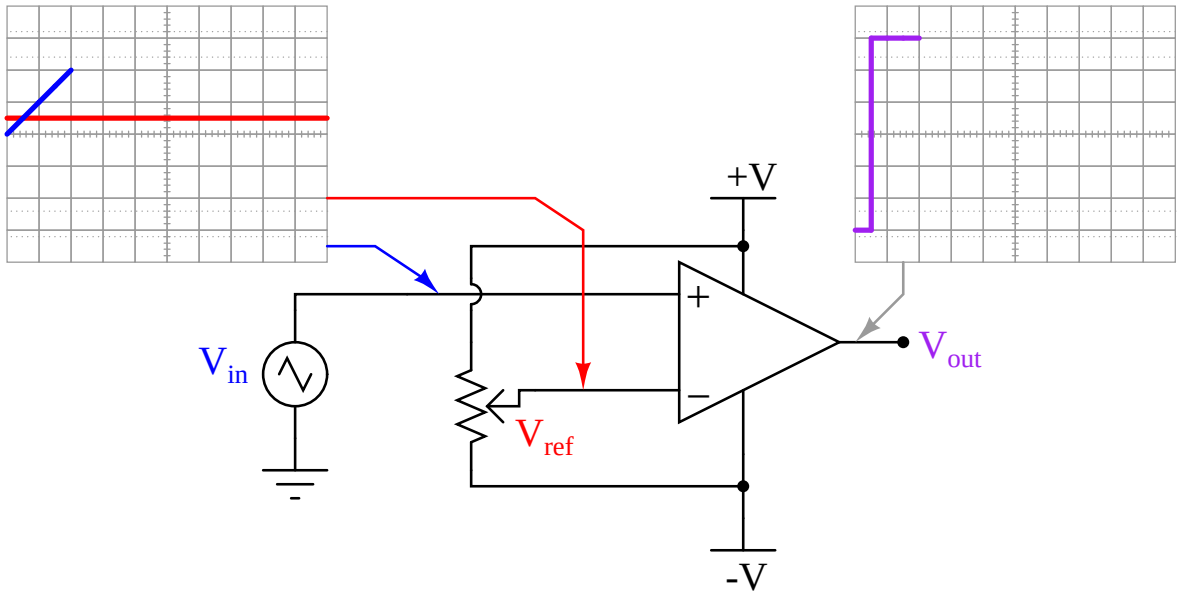
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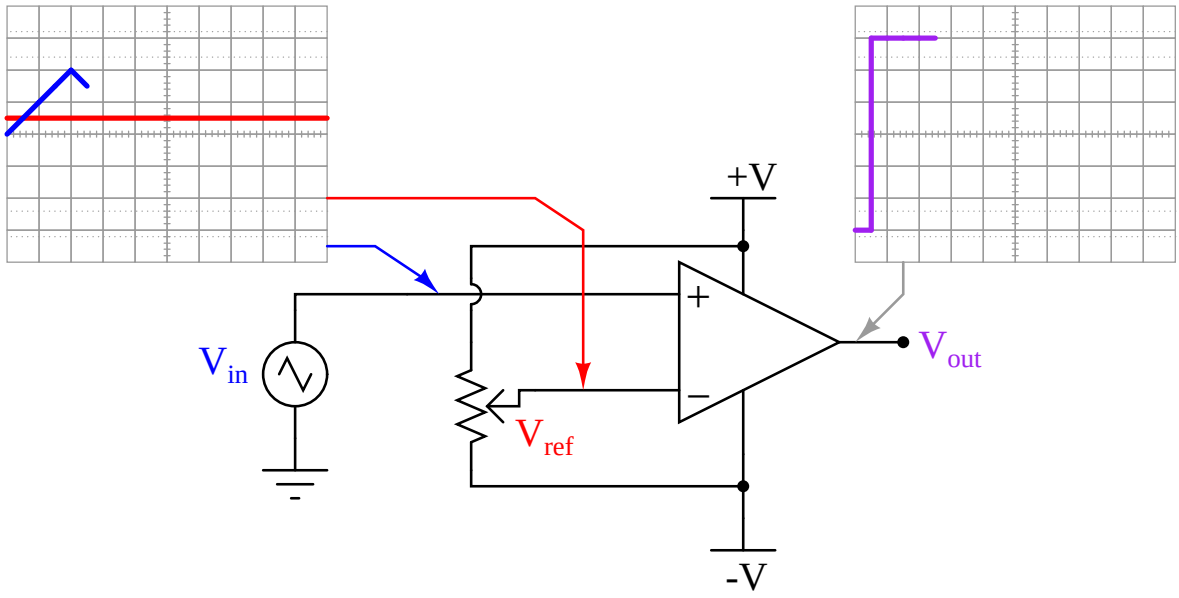
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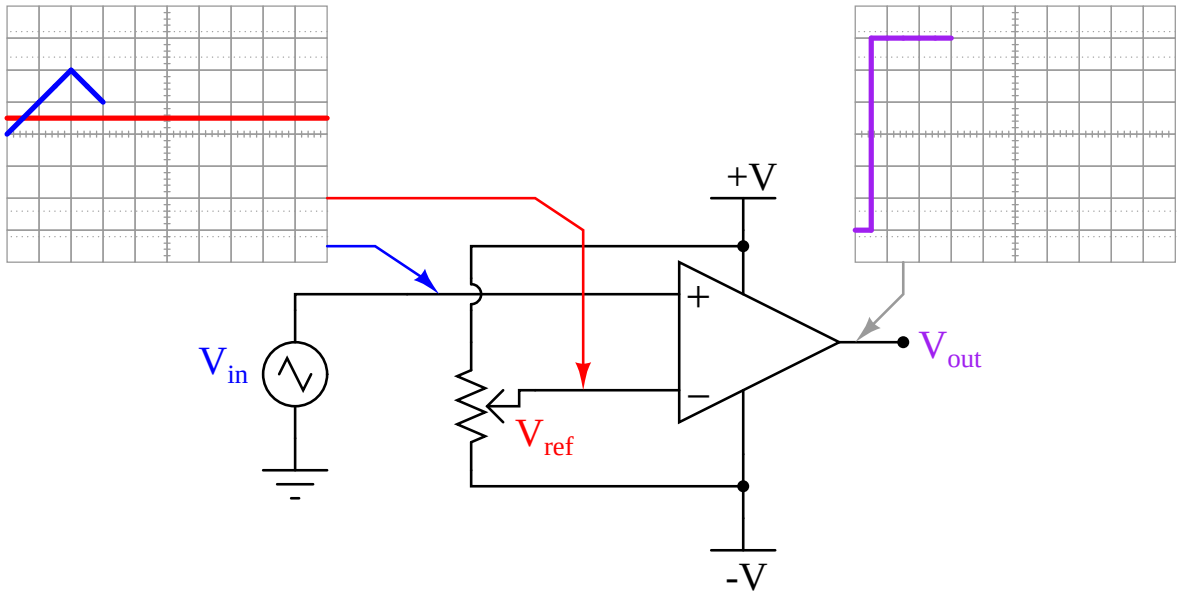
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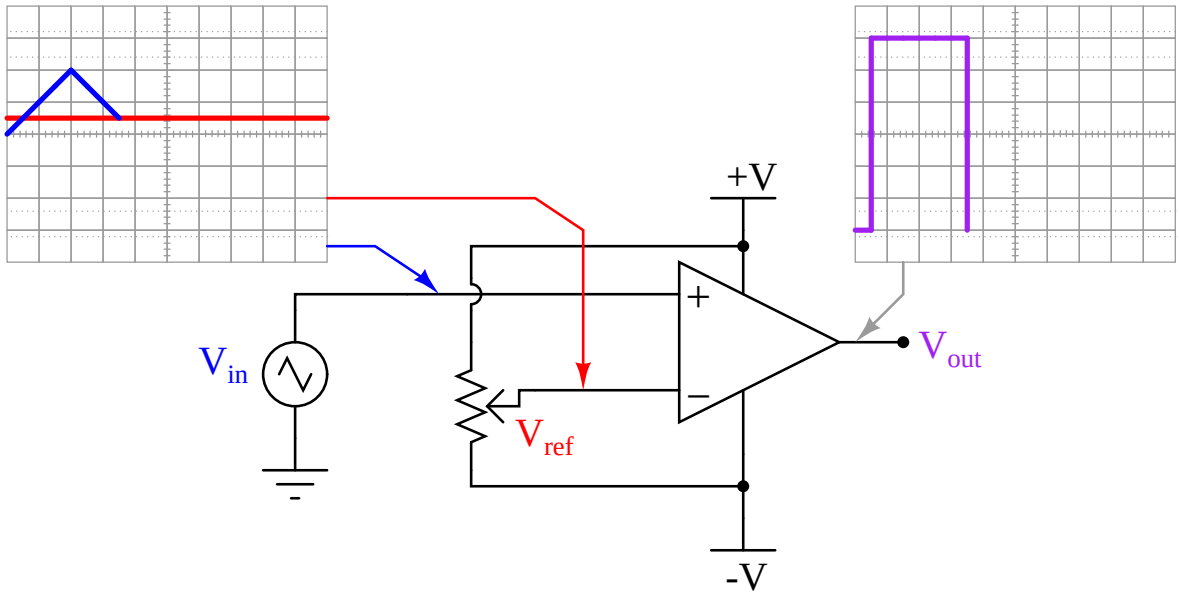
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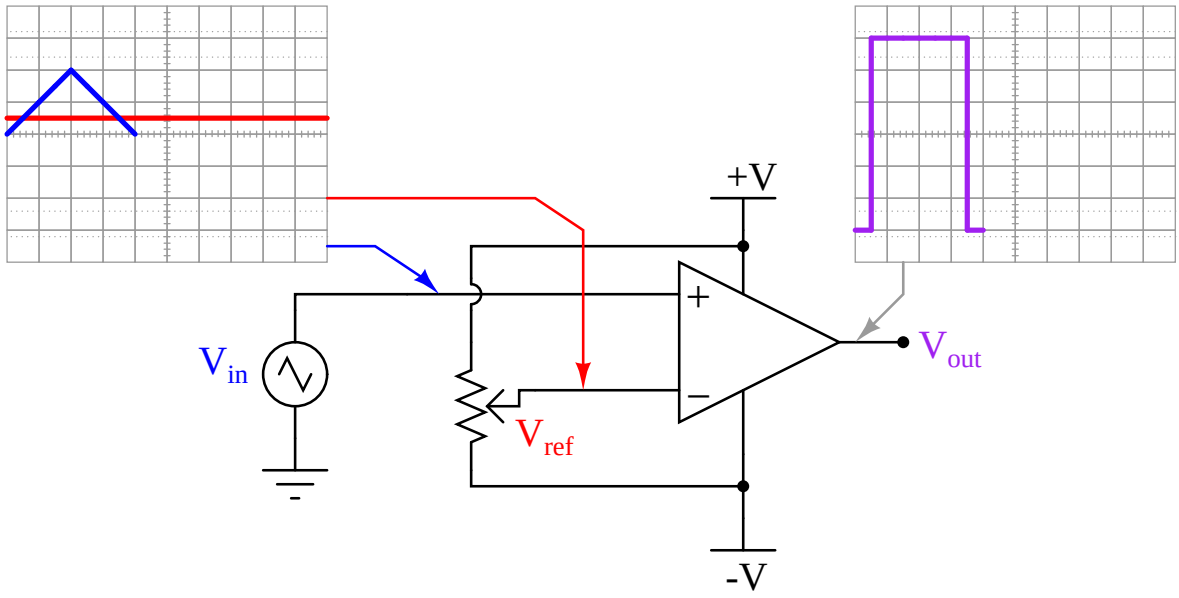
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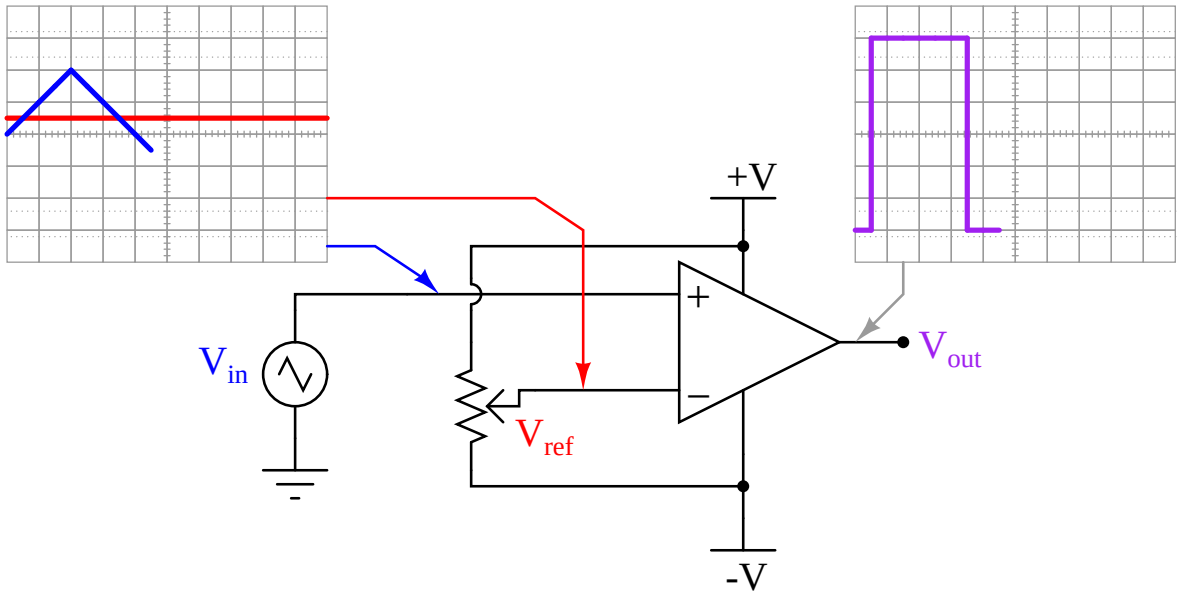
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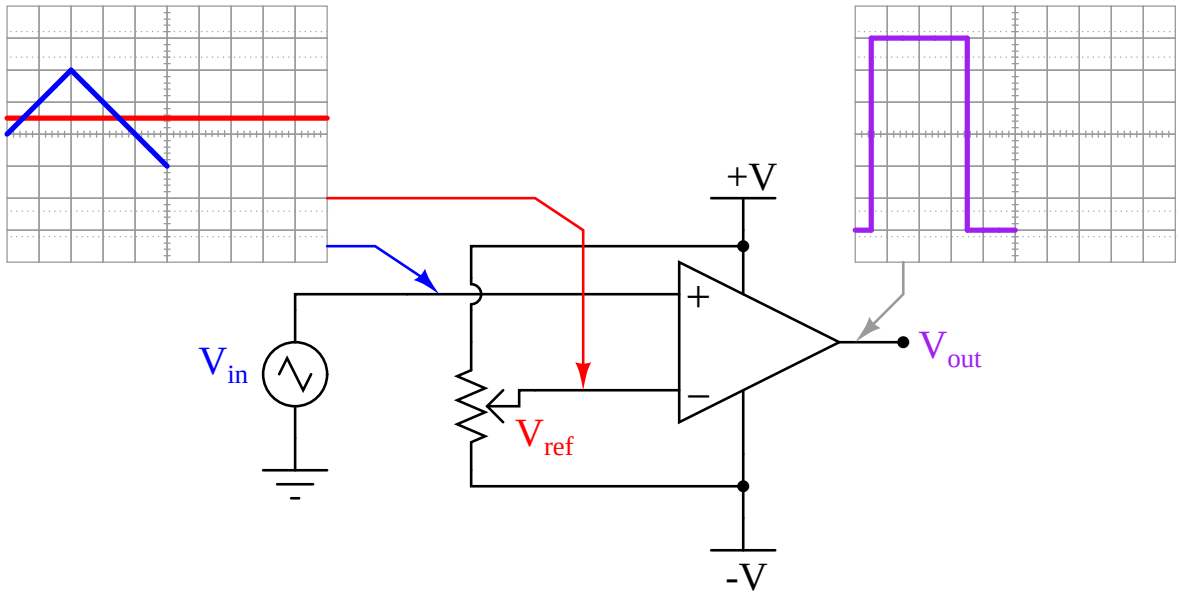
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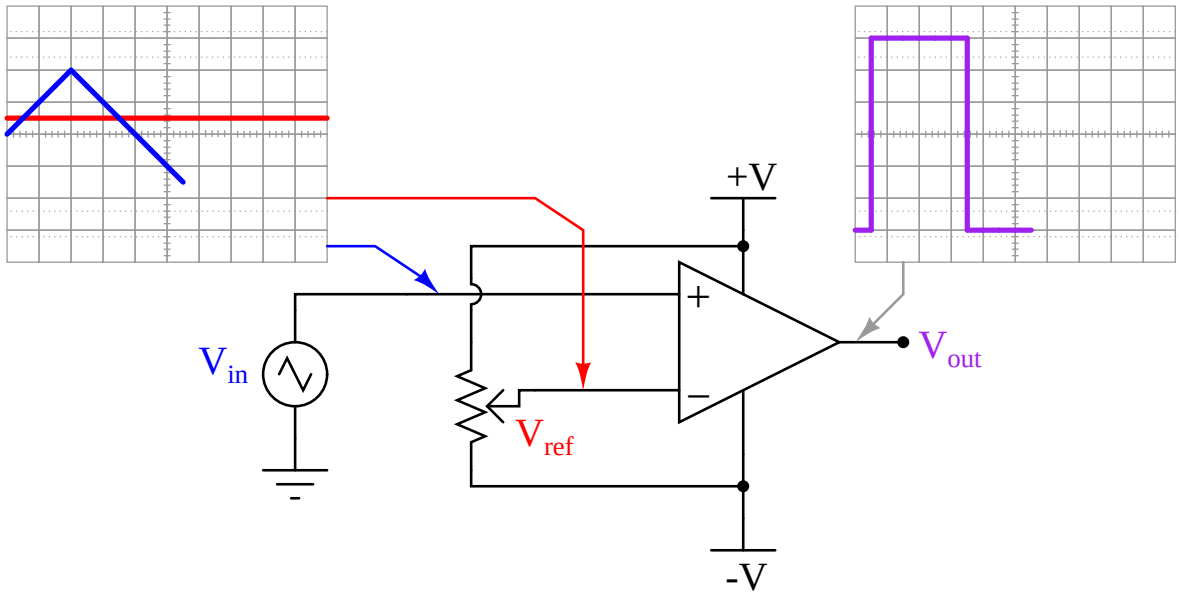
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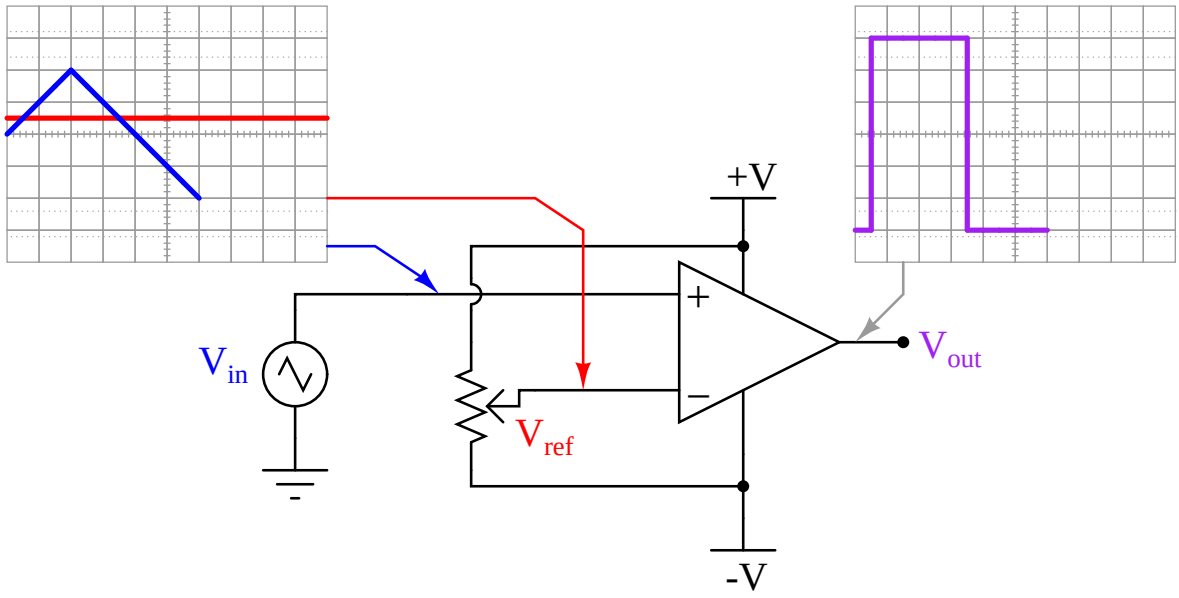
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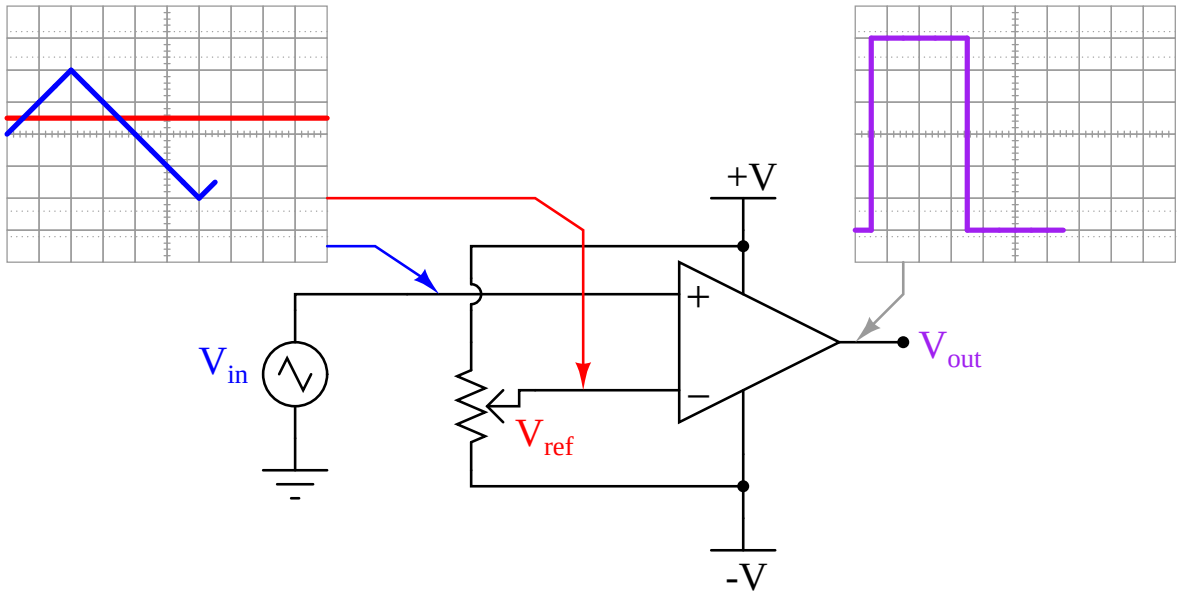
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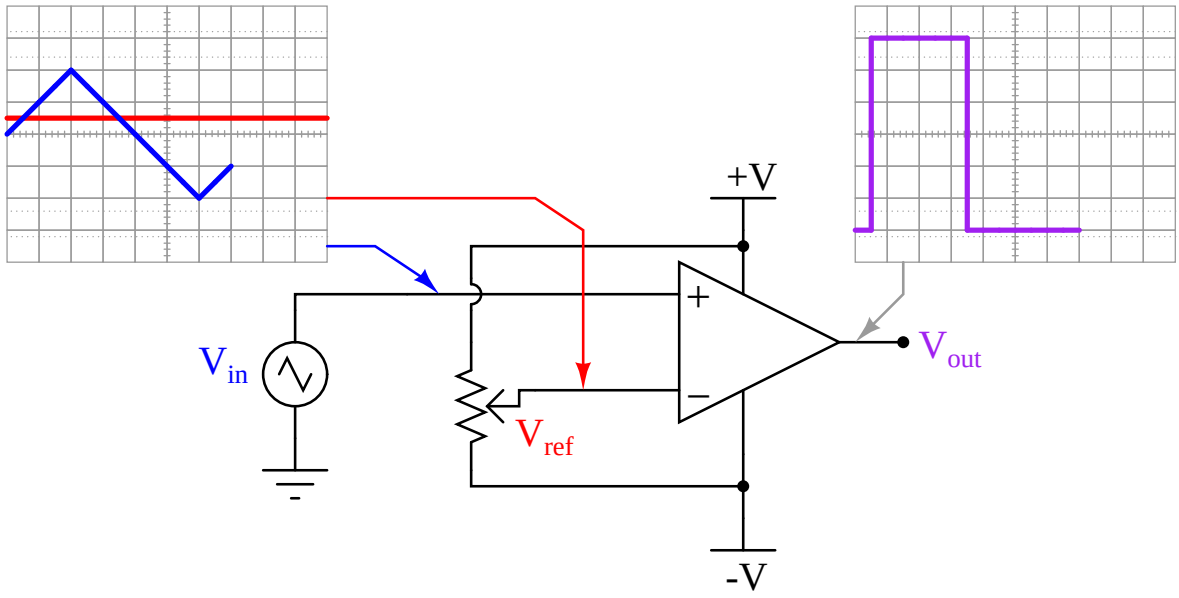
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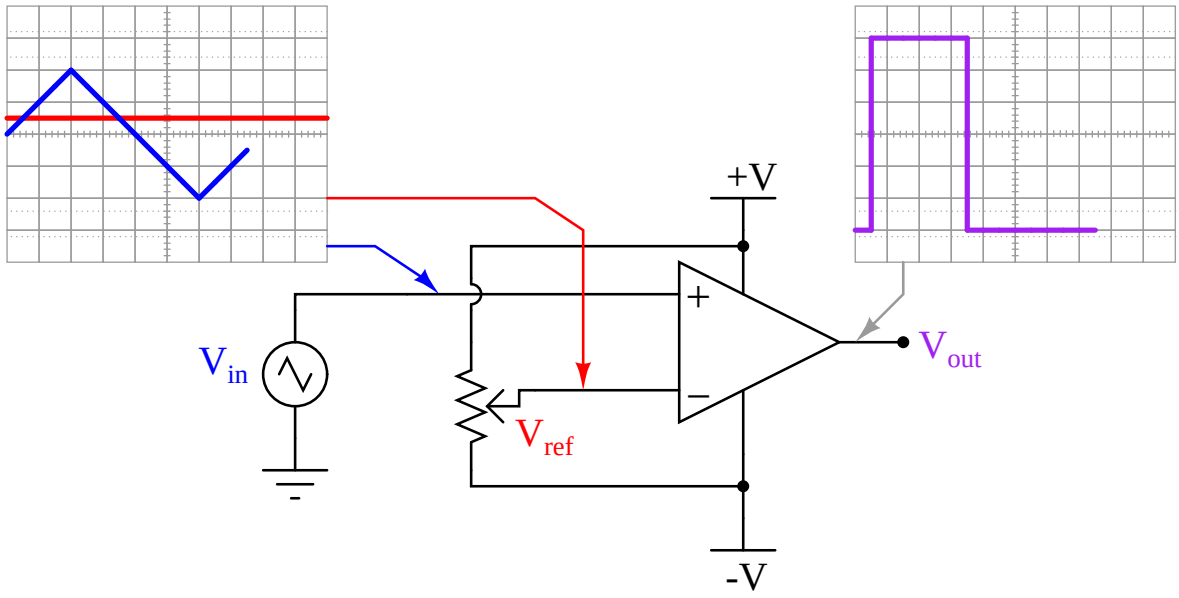
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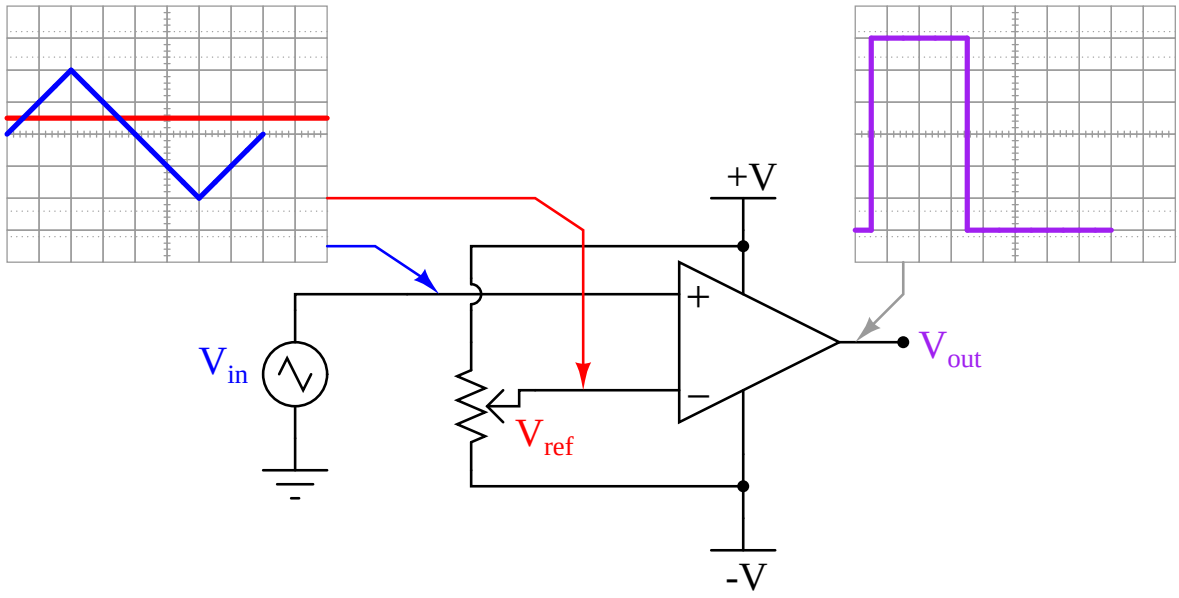
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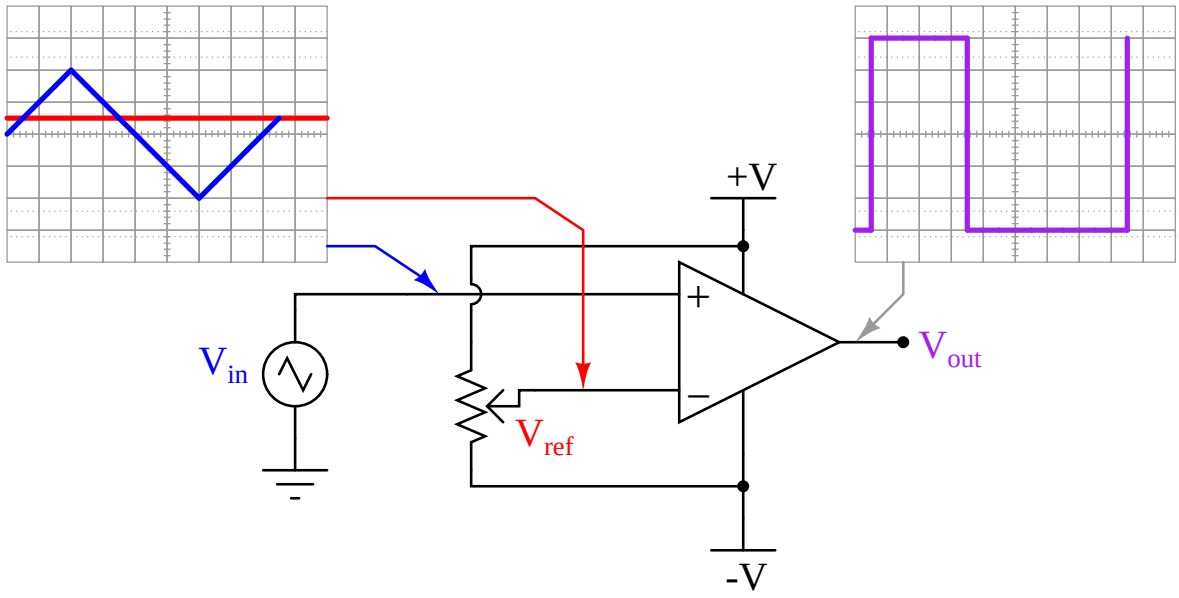
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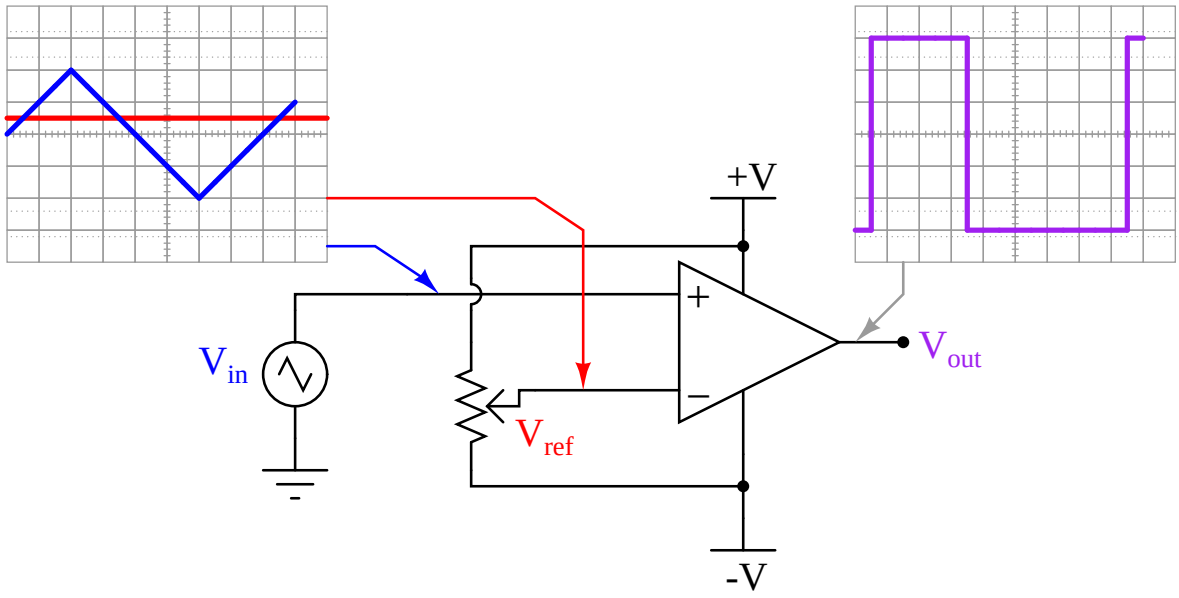
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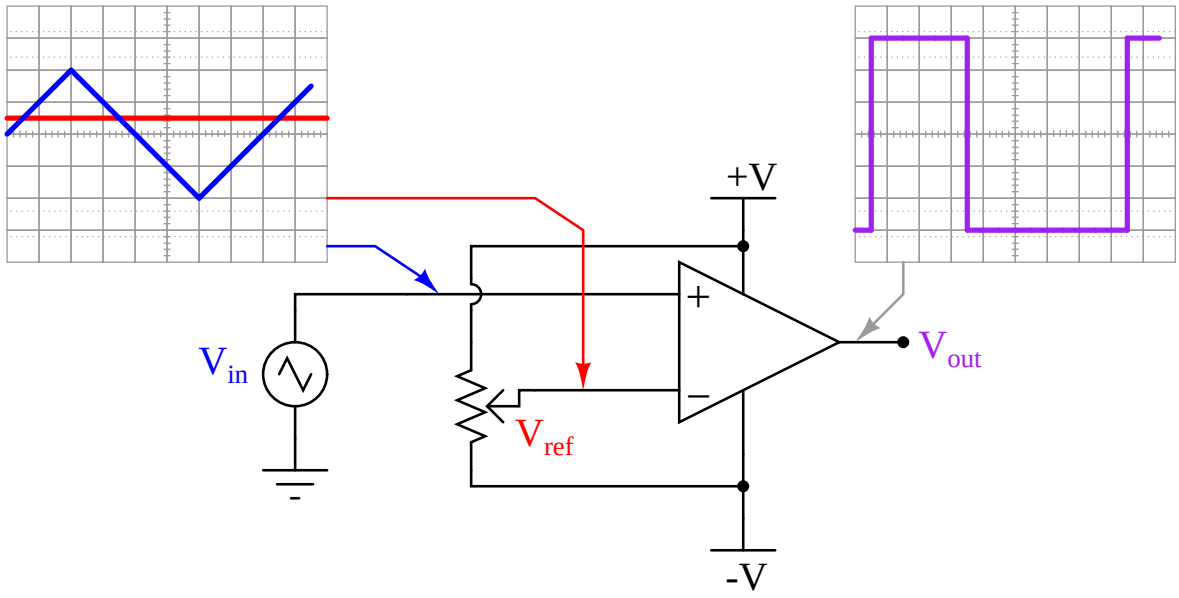
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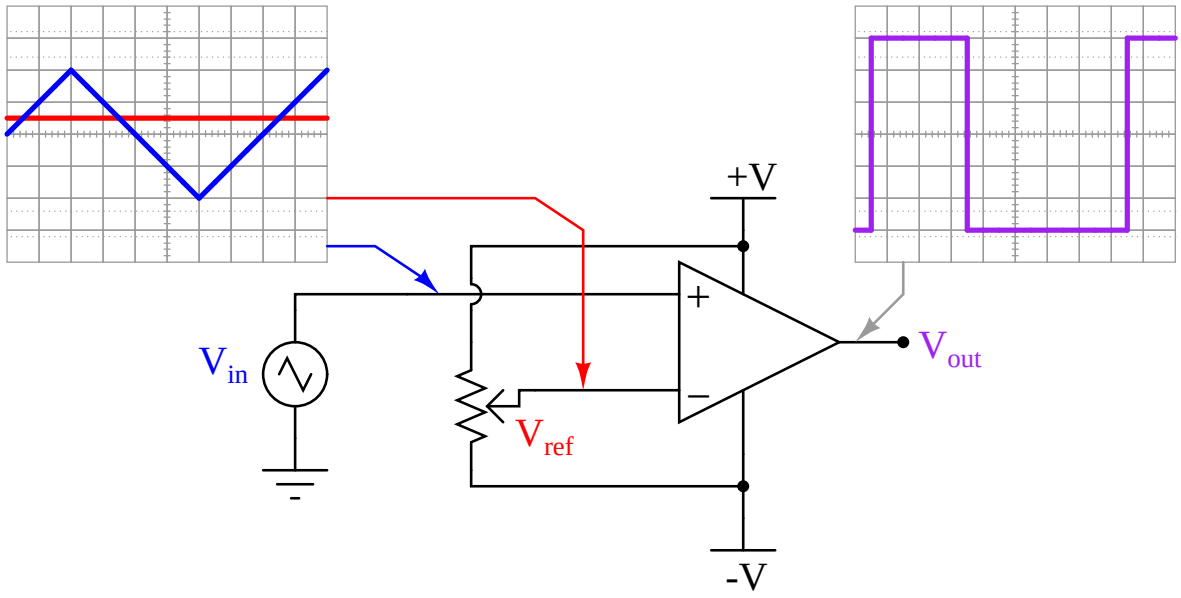

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Answers

Answer 1

Nothing to note here.

Notes

Notes 1

The purpose of this animation is to let students study the behavior of this comparator circuit and reach their own conclusions. Similar to experimentation in the lab, except that here all the data collection is done visually rather than through the use of test equipment, and the students are able to "see" things that are invisible in real life.