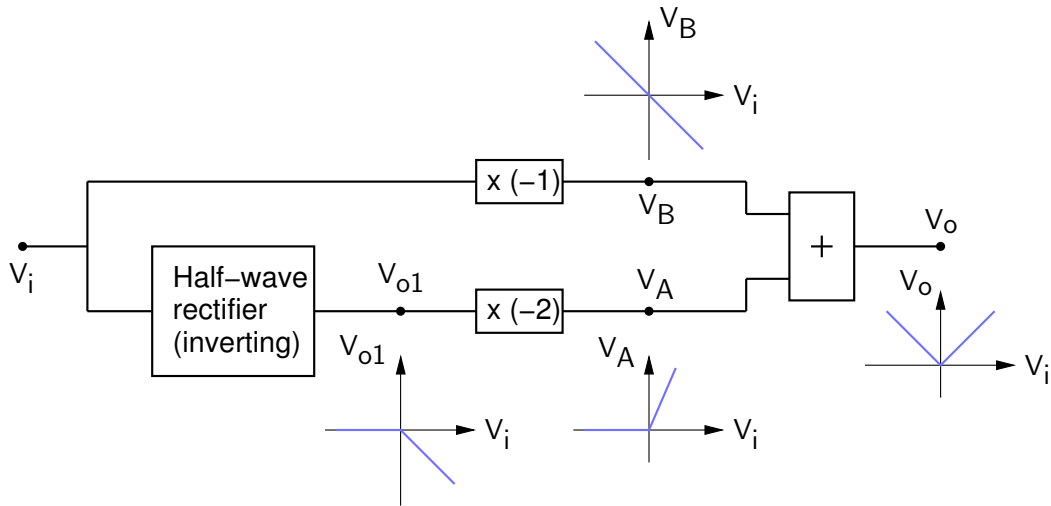`precision_full_wave.sqproj`



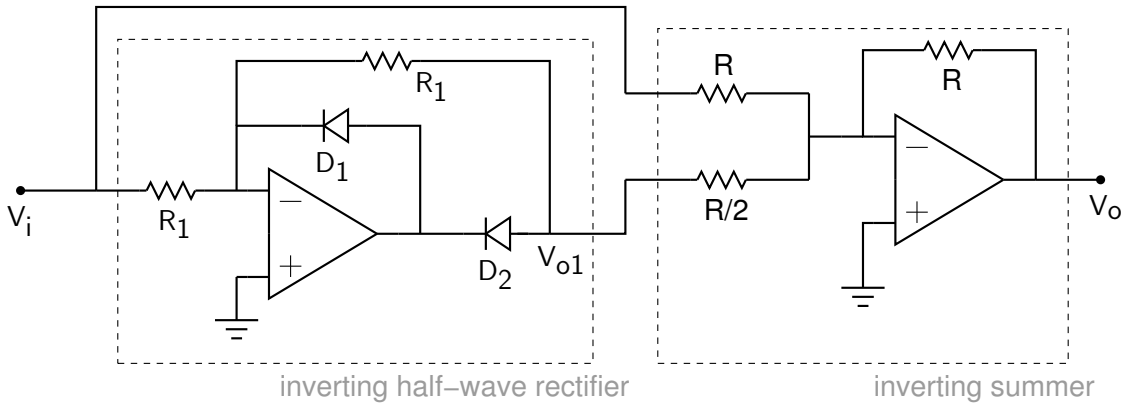Figure 1: Block diagram of a precision full wave rectifier.



Figure 2: Op Amp based implementation of the circuit in Fig. 1.

A precision half wave rectifier and an Op Amp summer can be used to build a precision full wave rectifier, as shown in the block diagram of Fig. 1. Schematic diagrams showing the relationship between the output of a block with respect to the input voltage[1] is also shown. Fig. 2 shows the implementation of the block diagram with Op Amp circuits, viz., a precision half wave rectifier and a weighted summer.

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[1]Note that this is the input to the full wave rectifier, not the input to that particular block.

## Exercise Set

1. Explain how the implementation in Fig. 2 corresponds to the block diagram of Fig. 1.

2. Run the simulation and verify that the circuit performs precision full wave rectification.

## References

1. S. Franco, *Design with Operation Amplifiers and Analog Integrated Circuits,* McGraw-Hill, 1998.

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3. J. Millman and A. Grabel, *Microelectronics,* McGraw-Hill, 1988.