

Class-D Motor-Speed Control

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As shown in Figure 1, the standard application circuit for a class-D audio amplifier (U1) requires only slight modifications. In place of the usual audio-signal input is a variable DC voltage generated by a potentiometer (R2). Resistor R1 biases the potentiometer to match the input range of U1. Full counter-clockwise rotation of the pot corresponds to maximum-speed reverse rotation of the motor. Mid-scale on the pot corresponds to motor off, and full clockwise rotation of the pot produces maximum-speed forward rotation in the motor.

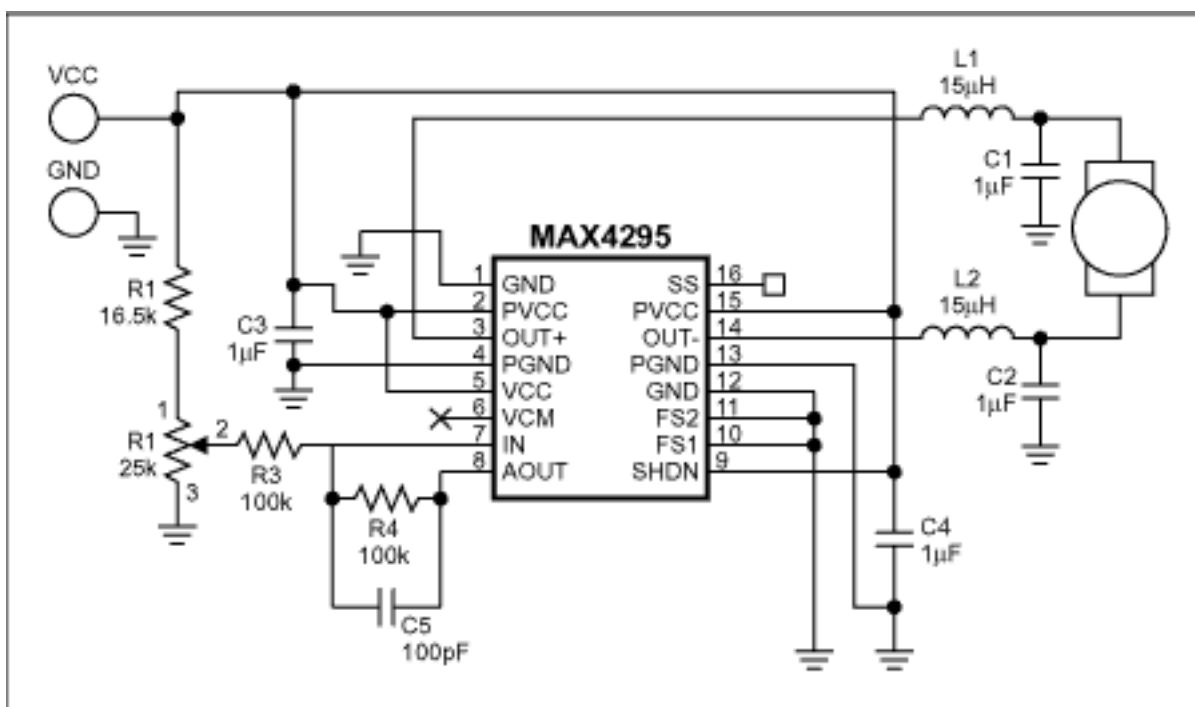


Figure 1. A class-D audio amplifier (U1) helps implement this simple motor-speed controller.

The characteristics of a given motor may allow you to eliminate the amplifier's output filter (L1, L2, C1, and C2). But, unless the control circuitry shown is located near the motor, you should include the filter to reduce EMI.

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More Information

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