

Technical APPLICATION Guide

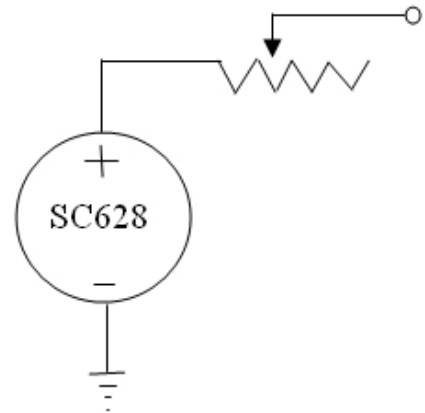
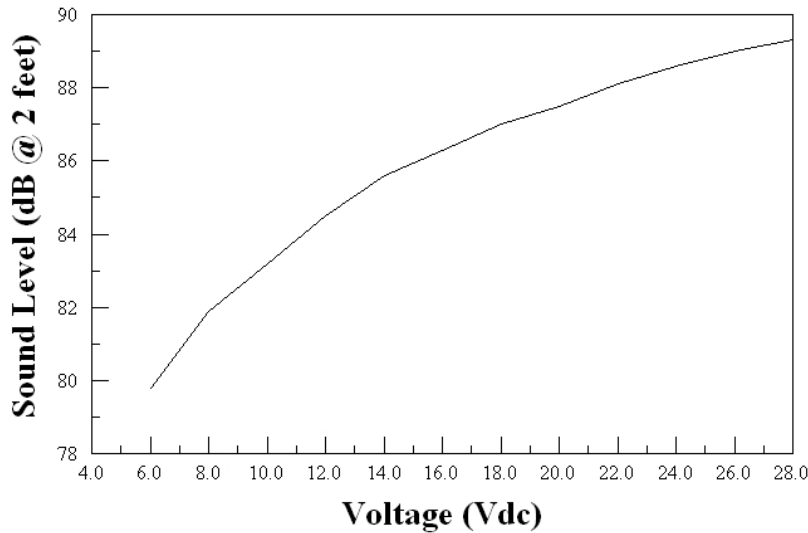
Controlling Sound Level Using a Potentiometer

A potentiometer can be used on many Mallory Sonalert alarm models to control the sound level. However, there are some alarm models where the use of a potentiometer actually interferes with the operation of the alarm circuitry. The first step to using a potentiometer, therefore, is to verify that it will not affect the operation of the audible alarm.

For panel mount model SC628, as the left graph below shows, the sound level will change as much as 10 dB over the rated voltage range. By putting a potentiometer in series with the SC628, we can adjust the voltage to the alarm and thus adjust the alarm sound level.

Panel Mount Model SC628

Sound Level from 6 to 28 Vdc



It was verified that the circuitry of model SC628 is not affected by a potentiometer, so data was gathered to find the value of a potentiometer that gives the greatest range of sound change.

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Results:

At 12 Vdc, it was found that a 7 kOhm potentiometer in series with the SC628 will give the widest swing of sound level. At 0 Ohm, the sound level is 84 dB, and with the POT turned all the way up to 7 kOhm, the sound level drops to 73 dB. This gives a fairly wide swing of 11 dB.

At 28 Vdc, it was found that a 20 kOhm potentiometer in series with the SC628 works well. At 0 Ohm, the sound level is 89 dB, and with the POT set at 20 kOhm, the sound level drops to 73 dB. This gives an even wider swing of 16 dB.

It should be noted that with the two potentiometers listed above turned all the way up to their maximum value, the voltage across the SC628 is only 3 Vdc. While this is outside the rated voltage range, the alarm will still work at this voltage, so it is okay to drop the voltage this low in order to get a wider swing of sound level as long as this sound level is still adequate for the application.