

Tie the End

When a trimmer potentiometer is used as an adjustable series resistance in a circuit, sometimes the unused end of the resistance is tied to the wiper, and sometimes it is not. I've seen it both ways in a circuit. Does it matter?

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Imagine that one end of the resistance in a potentiometer is not tied to the wiper and some dirt gets between the wiper and the resistance—there would be an open circuit. Now, most circuits are designed so that the potentiometer resistance swing of full resistance to zero resistance will not cause damage to a circuit. However, should a resistance element open, causing an infinite resistance, there is the possibility of damage to the circuit. You experimenters at home are better off tying the end of the resistive string to the wiper so that should the wiper open, the circuit would see the full resistance of the potentiometer, and not an open circuit.