

The Extension Cord Puzzle



If you have two extension cords. One nice thick #10 50' cord with good ends and another crappy #14 25' cord. Unfortunately you need to connect them both to get to your drill 75' away.

Which do you connect to the plug and which to the drill.

Come up with what you think... we will wait...

If you said connect the nice one first (to the plug) you would agree with 95% of people.

The answer is. It MAKES NO DIFFERENCE.

An extension cord creates a full circuit.

From hot 120v down both cords to the load (the drill) and back through both neutrals to the neutral plug terminal.

The resistance (opposition to current) and ampacity (safe current carrying capacity) of the circuit is for the entire circuit, period.

We can often fall into the trap of thinking of electricity in terms of points in the circuit. There are good reasons for that in diagnosis, but the end result is the entire circuit between two points of differing electrical charges (potential difference) and the amps, ampacity, voltage drop, watts and resistance of the entire circuit are really what matter.

An electrical circuit is only as good as its weakest link.
Unlike sausage... because all sausage links are delicious.

– Bryan