

# Wire Gauge Calculation Chart

## Maximum Current Draw

Wire Gauge

	5 Amps	10 Amps	15 Amps	20 Amps	25 Amps	30 Amps	35 Amps	40 Amps	45 Amps	50 Amps
22 AWG	6 Feet	3 Feet	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient
20 AWG	9.5 Feet	5 Feet	3 Feet	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient
18 AWG	15 Feet	7.5 Feet	5 Feet	4 Feet	3 Feet	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient
16 AWG	24.5 Feet	12 Feet	8 Feet	6 Feet	5 Feet	4 Feet	3.5 Feet	3 Feet	Insufficient	Insufficient
14 AWG	39 Feet	19.5 Feet	13 Feet	9.5 Feet	8 Feet	6.5 Feet	5.5 Feet	5 Feet	4.5 Feet	4 Feet
12 AWG	62 Feet	31 Feet	20.5 Feet	15.5 Feet	12.5 Feet	10.5 Feet	9 Feet	7.5 Feet	7 Feet	6 Feet
10 AWG	98 Feet	49 Feet	32.5 Feet	24.5 Feet	19.5 Feet	16.5 Feet	14 Feet	12.5 Feet	11 Feet	10 Feet
8 AWG	156 Feet	78 Feet	52 Feet	39 Feet	31 Feet	26 Feet	22.5 Feet	19.5 Feet	17.5 Feet	15.5 Feet
6 AWG	248.5 Feet	124 Feet	82.5 Feet	62 Feet	49.5 Feet	41.5 Feet	35.5 Feet	31 Feet	27.5 Feet	25 Feet
4 AWG	395 Feet	197.5 Feet	131 Feet	98.5 Feet	79 Feet	66 Feet	56.5 Feet	49.5 Feet	44 Feet	39.5 Feet
2 AWG	629 Feet	314 Feet	209 Feet	157 Feet	125.5 Feet	104.5 Feet	89.5 Feet	78.5 Feet	69.5 Feet	63 Feet

## Maximum Current Draw

Wire Gauge

	55 Amps	60 Amps	65 Amps	70 Amps	75 Amps	80 Amps	85 Amps	90 Amps	95 Amps	100 Amps
22 AWG	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient
20 AWG	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient
18 AWG	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient
16 AWG	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient
14 AWG	3.5 Feet	3 Feet	3 Feet	3 Feet	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient
12 AWG	5.5 Feet	5 Feet	5 Feet	4.5 Feet	4 Feet	4 Feet	3.5 Feet	3.5 Feet	3.5 Feet	3 Feet
10 AWG	9 Feet	8 Feet	7.5 Feet	7 Feet	6.5 Feet	6 Feet	6 Feet	5.5 Feet	5 Feet	5 Feet
8 AWG	14 Feet	13 Feet	12 Feet	11 Feet	10.5 Feet	10 Feet	9 Feet	8.5 Feet	8 Feet	8 Feet
6 AWG	22.5 Feet	20.5 Feet	19 Feet	17.5 Feet	16.5 Feet	15.5 Feet	14.5 Feet	14 Feet	13 Feet	12.5 Feet
4 AWG	36 Feet	33 Feet	30.5 Feet	28 Feet	26.5 Feet	24.5 Feet	23 Feet	22 Feet	21 Feet	19.5 Feet
2 AWG	57 Feet	52.5 Feet	48.5 Feet	45 Feet	42 Feet	39 Feet	37 Feet	35 Feet	33 Feet	31.5 Feet

Using this chart as described below, determine the proper AWG (gauge) rating for the main power and ground wires. Be sure to size *both* wires to this gage.

- 1) Determine your maximum current draw
- 2) Find the column that matches your current draw
- 3) Within that column, find the row that best represents the distance a length of wire will travel to connect to the vehicle battery.
- 4) The heading for this row indicates the minimum size AWG (gauge) your power and ground wires will be in order to safely carry your current draw.