

Recommended Power & Ground Cable Sizes: Speaker Wire Size & Length

To calculate the proper power and ground cable sizes, find the distance of the power cable along the top row. If your measurement is between two measurements, use the higher one. Next, find the total RMS power the cable must support on the left. If your measurement is between two measurements, use the higher one. The size listed where your two measurements meet is the recommended cable size.

Note: These figures have been rounded off for easy reference. Ground cables should be the same size (or larger) as the power cable. **Current Draw figures are based on RMS Power of the amplifier with a 50% efficiency rating. * Although wire gauge sizes smaller than 10 gauge may be acceptable for the amount of current draw, we recommend using 10 gauge as the smallest wire size for any amplifier of 100 watts or more. The goal is to provide as much current to the amplifier as it could possibly need for optimal performance.*

Recommended Cable Size by Power and Distance					
Total RMS Power (watts)	Distance				
	4 feet	8 feet	12 feet	16 feet	20 feet
100	10 gauge	10 gauge	8 gauge	8 gauge	4 gauge
200	10 gauge	8 gauge	8 gauge	4 gauge	4 gauge
400	8 gauge	8 gauge	4 gauge	4 gauge	4 gauge
600	8 gauge	4 gauge	4 gauge	4 gauge	4 gauge
800	4 gauge	4 gauge	4 gauge	2 gauge	2 gauge
1000	4 gauge	4 gauge	2 gauge	2 gauge	2 gauge
1400	4 gauge	2 gauge	2 gauge	2 gauge	2 gauge

Current Draw by Power	
Total RMS Power (watts)	Current Amps
100	16
200	32
400	64
600	96
800	128
1000	160
1200	172
1400	188

Power & Ground Cable Specs	
Cable Size Wire Gauge	Current Capacity Amperage (amps)
1/0	350
2	225
4	150
8	100
10	60
12	40
14	25
16	15

Recommended Speaker Wire Size by Load and Distance				
Wire Size	2 ohm load	4 ohm load	6 ohm load	8 ohm load
22 AWG	3 feet max	6 feet max	9 feet max	12 feet max
20 AWG	5 feet max	10 feet max	15 feet max	20 feet max
18 AWG	8 feet max	16 feet max	24 feet max	32 feet max
16 AWG	12 feet max	24 feet max	36 feet max	48 feet max
14 AWG	20 feet max	40 feet max	60 feet**	80 feet**
12 AWG	30 feet max	60 feet**	90 feet**	120 feet**
10 AWG	50 feet max	100 feet**	150 feet**	200 feet**

**Over 50 feet. Reference: Roger-Russell.com