

# Star Quad Speaker Cable

## Applications

- pa systems
- hi-fi speakers
- dc power lines

## Features

Super Flexibility, even in Sub-Zero Weather  
 Star Quad Design Reduces EMI Noise  
 Low Capacitance & Resistance

### 4S6 (17 Gauge / Star Quad)

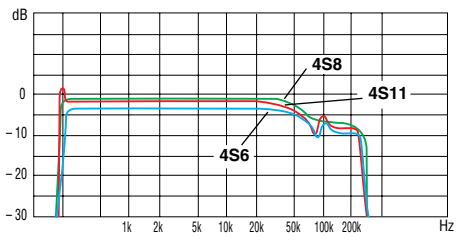
A lighter gauge, very flexible speaker cable, using 4 x 20 AWG insulated conductors. Good choice for high frequency components, short line runs or DC power cords.

### 4S8 (13 Gauge / Star quad)

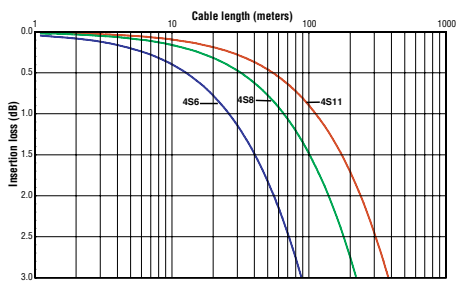
Our most popular 4 x 16 AWG flexible speaker cable. Perfect choice for all broad spectrum speaker systems and general purpose power amp setups. Good on Bi-Amp rigs.

### 4S11 (11 Gauge / star quad)

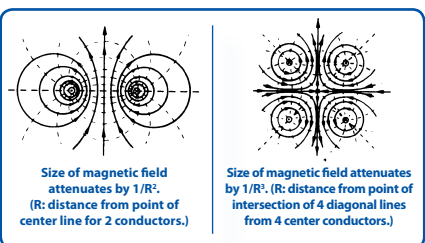
Recommended for long runs and low end Power Amplifier sub-woofer systems. Heavy duty 4 x 14 AWG conductors.



Frequency Response



Insertion loss of 4S series speaker cable



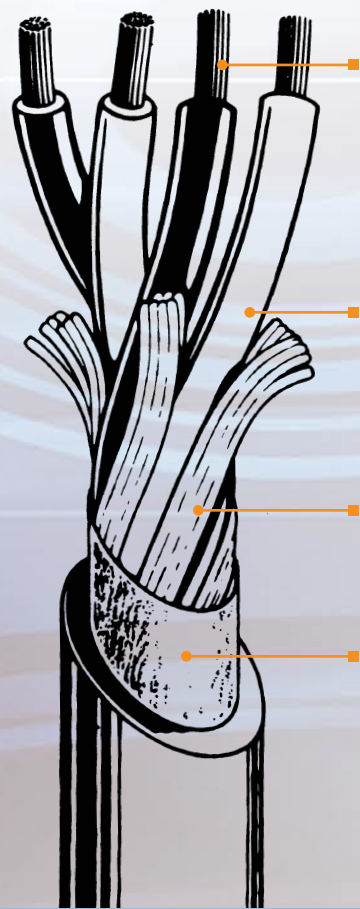
Size of magnetic field attenuates by 1/R². (R: distance from point of center line for 2 conductors.)

Size of magnetic field attenuates by 1/R⁴. (R: distance from point of intersection of 4 diagonal lines from 4 center conductors.)

Magnetic field of 2-conductor cable    Magnetic field of 4-conductor cable

## Tech Note:

Speaker cable must accommodate relatively high signal levels, typically tens to hundreds of watts of RMS power. Electromagnetic interference (EMI) can radiate from these speaker lines directly into adjacent low voltage cables (i.e. microphone, video lines, etc.). Canare solves this problem by using a 4-conductor "Star Quad" configuration in all of our 4S-Series speaker cables. Because every conductor is located the same distance from the center, the opposing magnetic fields are cancelled out. Attenuation of magnetic field radiation is superior when compared to a standard 2-conductor speaker wire.;



## Conductor

Canare uses many thin strands of annealed copper for excellent flexibility and long life reliability.

## Insulation

Special polyethylene dielectric offers low capacitance and low series resistance for improved frequency response over long distance cable runs. Star Quad configuration improves damping factor at the speaker. Individual conductor Color Coding (Red, Clear Red, White, Clear White) allows easy continuity checks.

## Filler

4S-Series speaker cables use tightly packed cotton fibers to help maintain cable shape and keep conductors from shifting.

## Jacket

Durable PVC outer jacket. Stays flexible, resists tears and cracks. Will not stiffen even at sub-zero temperatures.

Colors Available	
Model	BLK    GRN
4S6	■    ■
4S8	■    ■
4S11	■    ■

□ = STANDARD STOCK

Model	Mechanical Specifications							Electrical Performance/ Quad Wired			
	Std. Lng.	Wt. Std. Lng.	Nom. O.D.	Jacket Thick. PVC	Brittle Point	Number of Conductors	Cond - AWG (Qty./mil) Cross Sec. Area (mil.²)	Pitch of Quad	Insul. Type ** Thick	Cond. D.C.R.	Nom. Cap. ***
4S6	656ft 200m	24 11	.252 6.4	.032 0.8		4	AC-#20	<1.78	PE	11.4	38
							20/7.09				
4S8	656ft 200m	42 19	.327 8.3	.043 1.1	-56 -49	RED, CLR RED WHT, CLR WHT	791	<2.76	PE	4.5	44
							#17				
4S11	656ft 200m	70 32	.421 10.7	.047 1.2			1969	<4.73	PE	2.6	45
							#13				
							41/10.24	<120		0.9	146
							3379				
							#11				

\* Effective AWG of combined twin conductors. \*\*\* Capacitance between twin Red and twin White Conductors.  
 \*\* Dielectric Strength = 500V AC / 1min. Insulation resistance/3Mft = >1000MΩ.

**DAMPING FACTOR:** Always try to keep speaker cables as short as possible and select cable models that offer a higher damping factor; 20-50 for music (i.e. concert sound) and 10-20 for speech (i.e. sport stadiums). The greater the damping factor (DF), the better the ability to control speaker excursion to create sharp, clear quality in the low end frequency range. As the formula to the left shows, a higher conductor resistance causes a lower damping factor, which prevents even top quality power amps from performing at peak optimum levels.

$$\text{Damping Factor} = \frac{\text{speaker impedance}}{\text{power amp. output impedance} + \text{speaker cable cond. resistance}}$$

Model	Pair cond. resist. (Ω/100m) & cross-sec (mm²)	Cond. resist. (Ω/100m) for return path	Cable length/damping factor	
			DF=20	DF=50
4S6	1.87/1.0mm² AWG	17	9.5m	3.0m
4S8	0.75/2.5mm² AWG	14	23.3	7.3
4S11	0.43/4.3mm² AWG	11	40.2	12.6

Values calculated assuming power amplifier output at 0.05Ω