Subject: Speaker Electrical Specifications Questions
Posted by PageantDirector on Wed, 18 Dec 2013 16:55:53 GMT
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I have spoken with my former sound guy about our needs and instead of telling me everything that I need to know he has said that I need to figure it out for myself. He suggested that I answer 2 questions that will apparently help me understand better what our needs are.

What is the best wattage for speakers? What is the best ohm for speakers?

I am not sure what an ohm is, and I don't understand why wattage would effect anything as far as sound. Please forgive my ignorance on this topic. As my screen name suggests, I am a pageant director so everything in the sound world is Greek to me. Thank you for your patience.

Subject: Re: Speaker Electrical Specifications Questions
Posted by Wayne Parham on Wed, 18 Dec 2013 17:44:13 GMT
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Honestly, those are two very basic properties and, by themselves, don't tell you all that much about how a speaker will act. It's like knowing what gas and oil are recommended for a car. That will give you a basic knowledge of what is needed to make the car "go", and will probably be enough for you to use the car for a few months. But there's a lot more to know to understand a car's performance - things like tire size, camber, caster, suspension geometry, spring rate, shock damping, gear ratios and even more detailed stuff like intake, exhaust and head flow, turbulence, swirl, spark timing and what camshaft valve timing gives best power in what RPM range for a particular intake manifold and exhaust or what rod/journal size and clearance is required to get a hydrodynamic wedge in the main and rod bearings without overheating for the RPM range chosen.

I know, that didn't help much, it's like using an anology in Russian to help you understand something in Greek, when the language you know is English. But my point is that impedance and maximum power ratings are not enough to describe a speaker. More importantly, you want to know things like its response curve and coverage pattern.

To answer your question though, "ohms" are a rating of the speaker's average impedance. This is important when selecting speakers to use with a particular amplifier. But in general, most

handle that range, so that's not too tricky. The "wattage" rating of a speaker tells you how much power it can safely handle. Above that point, it can be damaged. You'll usually hear it strain before it is damaged too. So that also isn't too tricky.

The amount of power dissipated is actually set by the amplifier's voltage and the speaker's impedance. Higher voltage and/or lower impedance results in higher power levels. So there is an interaction there, and I suppose some might see that relationship as kind of tricky. But there's no need to complicate this. It's pretty basic stuff.

Subject: Re: Speaker Electrical Specifications Questions
Posted by PageantDirector on Wed, 18 Dec 2013 22:36:44 GMT
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Wow, now I feel like he is trying to send me everywhere except where I need to be. I think I may have to end up taking a class for all of this stuff. Your analogies made this quite a bit easier to understand. Thank you for your patience. I really appreciate it.