
Subject: How hot should the amp head get?

Posted by [KustomKyle](#) on Mon, 20 Feb 2006 14:13:51 GMT

[View Forum Message](#) <> [Reply to Message](#)

I just replaced the speakers in my cabinet. I had a discussion going that I could wire 2 8-ohm 15" speakers in Parallel, and it would work out fine (based on the model number and the serial number, the head is a '66 K-200). When I replaced the speakers, I noticed that the speakers had been wired in series. I think they were the original speakers, but it looks like they were re-wired at some point because the wiring looked really 2nd rate, and there were about 4 different sizes and colors of wire in there as well. Anyway - the amp is MUCH louder and sounds MUCH better now. However, after playing it for a while, I noticed that the back of the amp is getting a little hot. I'm still able to touch it (and keep my hand on it) without burning my hand, so it's not terribly hot. I never thought to do this with the old speaker configuration, so I have nothing to compare it to....is the amp heating up in the back normal? I just don't want to blow the amp up. Any help would be greatly appreciated.

Subject: Re: How hot should the amp head get?

Posted by [C4ster](#) on Mon, 20 Feb 2006 15:36:51 GMT

[View Forum Message](#) <> [Reply to Message](#)

If the 2 speakers were wired in series, then the impedance would cause the amp to put out lower power than 2 speakers wired in parallel. 2-8 ohm speakers in series would be 16 ohms and the same speakers in parallel would be 4 ohms. The amp would work much harder with the parallel arrangement and put out more sound also. That is the result you saw and heard. That is normal. Now for the question I can't answer. I believe the amp you have, with the mesh transistor cover, is a Frankenstein model, 595, 795 etc. model numbers. That I think was an 8 ohm amp. The 2 speakers in the cabinet would have been 16 ohm speakers in parallel. Series connections on their own are not a good idea. If 1 speaker were to fail, then both would not work. The 4 ohm connection might be a little low for a Frank but, if the amp sounds good and is not so hot as to fry your hand, I think you are OK. Later models, K200A and B units were 4 ohm rated and could handle 2 cabinets with ease. Steve and others could give more Frank specific info than I can.
Conrad

Subject: Re: How hot should the amp head get?

Posted by [chicagobill](#) on Mon, 20 Feb 2006 16:54:20 GMT

[View Forum Message](#) <> [Reply to Message](#)

Kustom Kyle:

If your head is getting too warm take your hat off! Just kiddin'.

All amps will get warm/hot with use, how hard were you playing before you noticed the temperature rise? If it gets warm from just being on (idling), I'd have the head checked. If it gets warm after playing a loud session, I'd just keep an eye on it, until you get a feeling for what is normal for your amp. Even if it does get warm after playing it hard, it should cool back down fairly quickly.

All Kustom amps have a built-in thermal cut-off switch that is attached to the output transistor heat sink. If the temperature rises above the safe level it will shut off the ac power to the amp. Once the amp has cooled down, the cut-off will close and the power will be turned back on.

As far as I know, the Frankenstein heads will work ok with a four ohm load. I think my stock horizontal 2-15 cabinet is wired that way.

Bill

Subject: Re: How hot should the amp head get?
Posted by [KustomKyle](#) on Mon, 20 Feb 2006 21:03:22 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thanks a lot guys. Everything I've read and everyone I've talked to said that I'd be ok. So I'm figuring that I'm safe. I really appreciate your help.

Subject: Re: How hot should the amp head get?
Posted by [stevem](#) on Tue, 21 Feb 2006 13:32:32 GMT
[View Forum Message](#) <> [Reply to Message](#)

If you go to the comment section of the webboard, you will see a post that I did called AMP OUTPUT REVIEW. In the review you will see that I tested my frank style head at 4 ohms, and it is ok with that speaker load and will indeed be many watts louder. The Frank heads have 2 fuses on the lower right front panel, one being for the output section. If you have the right ratted fuse in the one for the speaker then you are OK and do not have to fret about the amp running to hot. If it is pulling to much current thru the outputs transistors mounted on the back panel it will pop the fuse. Thses Frank heads do not have the thermal circuit breaker for the output stage like the latter 200B models. I do not know about the 200A MODELS with the circuit breakers on each side of the on off, these models seem to be a combination of the frank models and the 200B models. I have never seen a schematic for a 200A model, or seen one in person, so I can not say if they have a themal breaker like the 200B models.

Subject: Re: How hot should the amp head get?
Posted by [chicagobill](#) on Tue, 21 Feb 2006 17:42:06 GMT
[View Forum Message](#) <> [Reply to Message](#)

Oops! My bad. Steve is right about the Frank heads not having a thermal cut-off like the 200B's do. Thanks for keeping me honest!
Bill

Subject: Re: How hot should the amp head get?

Posted by [KustomKyle](#) on Tue, 21 Feb 2006 20:48:03 GMT

[View Forum Message](#) <> [Reply to Message](#)

Thanks. I do have the correct rated fuse, so I think I'm ok. What exactly is the deal with the Frankenstein heads? Why did they make them in the first place? It seems like Kustom did some weird stuff back in the day.

Subject: Re: How hot should the amp head get?

Posted by [stevem](#) on Wed, 22 Feb 2006 12:57:54 GMT

[View Forum Message](#) <> [Reply to Message](#)

Don't know! The frank heads where their first models and I can only guess that to them, the big top edge of the head cabinet was a good looking way to go. I like their looks myself! I think as usual though the cost savings of less wood and tuck-n-roll was more prudent to the bottom line.

Subject: Re: How hot should the amp head get?

Posted by [chicagobill](#) on Wed, 22 Feb 2006 16:25:04 GMT

[View Forum Message](#) <> [Reply to Message](#)

I always assumed that it was easier to make all of the cases the same, and because the PA's and the RV's needed the space to mount the reverb tank, all the heads had the same wide top panel.

When the tank was mounted inside the chassis on the A's, B's and metal fronts, there was no longer a need for the extra "forehead" space.

Bill

Subject: Re: How hot should the amp head get?

Posted by [stevem](#) on Wed, 22 Feb 2006 17:41:29 GMT

[View Forum Message](#) <> [Reply to Message](#)

Yea, Thats true too. I forgot about the need for space for the reverb pan.
