

Amplifier Heat Loss

December 2010

Heat losses are the thermal emissions from an amplifier while it is operating. It comes from dissipated waste power—i.e., real AC power in minus audio power out. Measurements are provided for various loads at idle, 1/8 of average full power, 1/3 of average full power, and full power, with all channels driven simultaneously. For typical usage, use the idle and 1/8 power figures. Where an asterisk (*) appears, the data was not available at press time. The designation "na" means not applicable to the particular amplifier model and "nr" means the model is not rated for the particular load. This data is measured from representative samples; due to production tolerances, actual heat emissions may vary slightly from one unit to another. Bridged mono into 8 ohms is equivalent to 4 ohms per channel; into 4 ohms is equivalent to 2 ohms per channel.

	<i>Idle</i> Therma idle or w low sign	l loss at rith very al level.	Thermal approxin repesent	loss at ' nates op is the an	1/8 Power oss at 1/8 of full power is measured with pink noise. It ates operating with music or voice with light clipping and a the amplifier's typical "clean" maximum level, without							1/3 Power Thermal loss at 1/3 of full power is measured with pink noise. It approximates operating with music or voice with very heavy clipping and a very compressed dynamic range.								<i>Full Power</i> Thermal loss at full power is measured with a 1 kHz sine wave. However, it does not represent any real-world operating condition.							
	Not all models		audible clipping.		Use these figures 4Ω		for typical maximu 2Ω		um level 25V-70V-	8Ω		4Ω		2Ω		25V-70V-		8Ω				2Ω		25V-70V-			
Model	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr kcal/hr	BTU/h	kcal/hr	BTUI/h	kcal/hr	BTU/hr	kcal/hr	BTU/hr kcal/hr		BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr	kcal/hr	BTU/hr kcal/hr			
Current models																											
GX3	44	11	904	228	1515	382	nr	nr		1160	292	2105	530	nr	nr			1109	279	2297	579	nr	nr				
GX5	60	15	734	185	1160	292	nr	nr		1456	367	2162	545	nr	nr			1891	477	3754	946	nr	nr				
GX7	82	21	1169	295	1963	495	nr	nr		1807	455	2612	658	nr	nr			2167	546	4478	1128	nr	nr				