



Frequently Asked Questions



v1.0

Using Large Amplifier Rigs on Generator Power

02-27-2023

In 2012, a large tour was assembled in the U.S. using roughly 200 I-Tech 12000 HD amplifiers running at 208V, powered from a single generator. The generator failed at particularly dynamic portions of source material. The exact same rig experienced no power issues while running on grid power.

Solution

We found the problem could be rectified two ways:

- By changing two settings on the generator itself (explained below) to allow for the stable operation of such a large dynamic load, OR...
- By running no more than approximately 50 amplifiers per generator (with factory default generator settings).

Procedure

Most generators capable of powering large amplifier rigs have two generator settings that relate directly to powering particularly dynamic loads:

Range of Frequency Deviation

- This setting is usually set at 58 Hz to 62 Hz, or approximately +/- 3% of 60Hz.
- Setting it to a broader range of 55 Hz to 65 Hz allowed the generator to better handle the dynamic audio load.
- The analogy of a car's alternator is a useful example here. As the load changes on the engine, the alternator must adjust as well.

Time Delay on Feedback Loop

- This is called "Gain Control" by most generator manufacturers.
- Typically set to a Fast setting that works in most applications.
- This should be set to a slower setting for large amplifier rigs.
- This allowed the generator to keep working hard throughout the instance of a kick drum impulse, where the required current goes from very high to almost nothing and then back high.

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