



Using a KLR-3200 for 70V Distributed System

How do I get 70V output from my KLR-3200?

The Ashly KLR-3200 amplifier was originally designed for low-Z applications, typically 4Ω or 8Ω speaker loads, however because of its maximum output voltage of 70V, it can also be reliably used for 70V distributed speaker systems. Either channel of the KLR-3200 can directly drive up to 800W into 70V distributed speaker lines, without the use of a step-up transformer.

How do I connect my speakers?

To use the KLR-3200 for 70V systems, wire the 70V distribution line directly to an amplifier channel's (+) and (-) output. Each speaker (or speaker system) connected to the 70V line will have a line transformer with an input side (primary tap) for stepping down the 70V line to the desired power level (typically 2.5W, 5W, 10W, 15W) and an output side (secondary tap) for wiring directly to the speaker load at its rated impedance. Use the power rating chosen on the transformer *input* side to calculate total power drawn from the amplifier channel.

Should I use the High-Pass filter?

Yes. A dedicated 70V amplifier will typically have some form of high pass filtering (HPF) built in. This is intended to protect the amplifier from severe output impedance drops due to a combination of low frequency audio and the inefficiency of step-down transformers. On the rear panel of the KLR amplifiers, there is a selectable HPF switch for each channel, set to "off" as factory default. *Those switches should be set to 50Hz for each channel that is to be used for 70V application.*

*Additional high pass filtering prior to the amplifier may be necessary if the amplifier continues shutting down from over-current protection due to drops in output impedance. 80Hz HPF is recommended for 70V systems, but 50Hz may be enough.

Should I use the Clip Limiter?

Yes. Ashly recommends engaging the clip limiters on each amplifier channel used for 70V to minimize the possibility of sending heavily clipped signal to the speakers. Severely clipped signal can cause additional impedance problems which may force the amplifier into self-protect mode.

What if I want a mix of 70V and low-Z speakers?

The KLR-3200 can have dual use, in that one channel can be wired for 70V distributed audio, and the other for conventional low-Z speakers. The amplifier will function perfectly as long as the system is designed within specified load impedance boundaries. This kind of set-up is typical for an application where there is a large zone of 70V speakers accompanied by an 8 ohm or 4 ohm sub-woofer.