

Black Lion Audio Bellari RP520/220 Modification

This is Bellari's flagship microphone preamp. It uses a transformer coupled front end, followed by a 7025 (12AX7) based gain stage, and an opamp buffer to lower output impedance. As a tube preamp, this unit has a great deal of potential, most of which is drowned out by the cheap parts used in the construction. Many of the caps used are of decent quality, so you can leave them in unless you really want to substitute them for something else. I suggest using Vishay RN55D resistors because of their wonderful AC and thermal characteristics. Doing a full upgrade on this unit will cost you around \$150, but is well worth the investment. It will compete with the high-end tube preamps in your rack.

As a replacement transformer, I've settled on using the Lundahl 1530. A pair of these will cost you about \$117 with shipping from K&K Audio. They are easy to install using a 1x1 protoboard and hex standoffs available from Radio Shack, and they require no Zobel network in a 1:7 configuration. Consult the 1530's PDF for pin connection information.

For potentiometers, use the Clarostat 308N's--these are the same pots used by Avalon and other high-end manufacturers. They're around \$6 each from Allied Electronics, and will get rid of the bulk of the thermal noise you've no doubt come to expect from this preamp.

The output buffers are a 4560 opamp, I suggest an OPA2134 as a replacement. Those 4560's are terrible--they're slow and suffer from high order harmonic distortion in this application.