



**BLACK LION AUDIO**  
modify it.

## ART Tube MP Modification

The ART Tube MP is inexpensive and widely available. This makes it a perfect candidate for mods and upgrades. While it's not the easiest candidate to modify, it has an unusual design (sweet holy Moses, I've never seen so many capacitors in a signal chain!) that will lend itself to a wide possibility of changes, and a unique sonic signature. *Because* the ART uses so many coupling capacitors (13 in all), I wanted to use Sanyo OS-CON caps, but I couldn't find a reliable supplier of this brand. I've taken the liberty of removing four of them entirely from the circuit. Since the ART uses a single sided supply, many of the coupling caps are biased, which helps reduce nonlinear response normally associated with electrolytic caps. Still, the fewer capacitors in a signal chain the better the audio signal is, so I've recommended that C22, C24, and C26 be removed entirely. This has a trade-off. C24 allows quiet mic/line gain switching since it helps isolate the switch from the circuit. There is more of a pop when activating the switch once the capacitor is removed. C26 serves to isolate the output level pot from the tube circuit, and without it the pot tends to have a swish when rotated. I suspect that this is because of a mismatch in stage to stage impedance. I theorize that lowering the value of R57 from 100k to 50k may solve this problem, but I haven't experimented with this. If anyone wishes to make a suggestion about these two aspects of the circuit, I would be most appreciative.

This is a *really* fast preamp—it'll blow the socks off the stock version, plus it'll compete with some of the higher-priced stuff you may currently be using in your studio. **This isn't something for beginners to tackle. You need good soldering skills and a good iron in order to avoid damaging the Tube MP circuit board.**

### Tools you'll need for the job

- A good soldering iron. If you want a temperature-controlled workstation on a budget, try the Elenco SL540 soldering station. It's a fantastic deal for \$30; I highly recommend it. **DO NOT USE A SOLDERING GUN!**
- Dikes or wire cutters
- Solder
- Desoldering braid or desoldering bulb.
- Solder flux
- Exacto knife