

**Q: We fabricate this circuit board in-house as part of an electronic musical instrument. Any suggestions on how we could decrease its cost?**

A: There are several opportunities to lower the cost of this design. First, change from through-hole components to surface-mount components to reduce board size, board cost, and the cost of the housing (since it too will become smaller).

Second, the board contains several hand-made) cables that should be replaced with commercial ribbon cable and commercial connectors. While ribbon cable is more expensive than the wire currently used to hand-make these cables, the total cost will be lower due to reduced direct labor. Finally, eliminate the sockets for the integrated circuits; sockets both increase circuit cost and decrease circuit reliability.

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