



## Troubleshooting Q\*bert Sound Problems

It happens to every Q\*bert sooner or later - the sound dies. There are many Q\*bert machines out there that need to have their sound repaired, but not many people know how to fix them. To help work through the most common problems found with Q\*Bert sound I've created the flowchart below. If you run into any difficulties while repairing your Q\*bert's sound, or if you have a problem that is beyond the scope of the flowchart, feel free to e-mail me at [chumblespuzz@cademo.com](mailto:chumblespuzz@cademo.com) with any questions.

Before you begin, however, there is one very important modification you should make that will greatly reduce the possibility of sound failure in the future. The original Q\*bert designers decided to power the sound amplifier off a +30v line from the power supply board. Unfortunately, the amplifier chip is rated at only +27v. One of the most common Q\*bert sound problems is a fried amp chip. To remedy this problem, replace D26 on the power supply board with a 24v 3-watt zener diode. This will reduce the supply voltage to about +25v, perfectly adequate for the amplifier and well within tolerances. The only other thing driven off this line is the knocker, and 24v is plenty to drive that as well.

