



USB Aquarium Air Pump Barb Replacement



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Summary

Simple design, easy fix to repair your air pump and save it from the landfill.



0.31 hrs



1 pcs



0.20 mm



0.40 mm



PLA



2 g



Prusa
MK3/S/S+

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Tags: [aquarium](#) [air](#) [fish](#) [pump](#) [6mm](#) [tubing](#) [airstone](#)

Backstory This great little USB air pump ran consistently for over a year in my 20 gallon long tank with no issues. After I took that tank down I used it for a backup when moving fish or during power outages. Unfortunately the barbs had become very brittle and broke off. I tried super gluing it in place which held though the power outage but as soon as I moved the pump it came apart again. I felt like I should be able to repair this little guy since it still runs like new, but I didn't see anywhere to get a replacement part. I first took it apart thinking I could print the whole top piece, but it's actually a fairly complex design with a built in bellow, and air channels, so I opted for the easy fix, just slide on a new piece. I kept the design minimal and thin so I could still stretch the silicon cover over it.

Print Settings I printed with .2mm layers and it worked great in both PLA and PETG. The slicer shows that it's 2 rings of extrusion almost the entire process and only takes about 20 minutes.

I didn't see or hear any leaks, and the bubbles are normal in the tank, but **always use an air check valve** in the tubing just in case something happens. This design should work with both 6mm and 1/4" tubing, although I recommend wrapping the connection with a layer of tape just to make sure it stays put and keeps an air tight connection.

Model files



usb-air-pump-cover-with-barbs.3mf

Print files



usb-air-pump-cover-with-barbs_02mm_pla_mk3s_18m.gcode

PLA 0.40 mm 0.20 mm 0.31 hrs 2 g Prusa MK3/S/S+

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