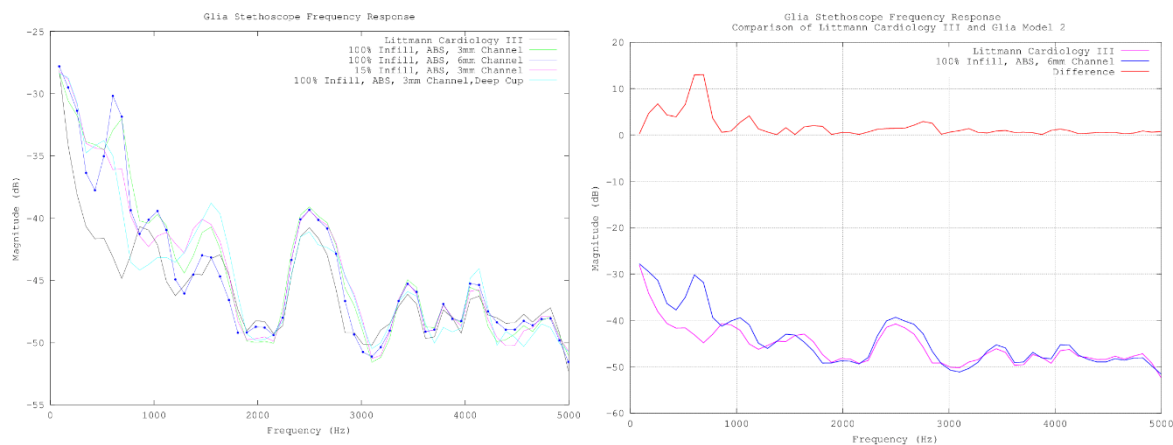


## Appendix A

Item	Dimensions	Cost (USD)
Stethoscope head	44.30mm x 62.45mm x 17.80mm	\$0.206
Stethoscope Y piece	70.89mm x 29.94mm x 9.00mm	\$0.09
Stethoscope ear tube	170.79mm x 83.62mm x 5.80mm	\$0.07
Stethoscope ring	r = 21mm, h = 7mm	\$0.012
Stethoscope spring	91.25mm x 111.62mm x 15.05mm	\$0.032
Silicone tubing	40 cm – 12mm OD, 8mm ID / 2x 9 cm – 6mm OD, 4 mm ID	\$1.93
Diaphragm	r = 20mm	\$0.06
Ear plugs with mold	n/a	\$0.43
Total		\$2.83

Table 1. Bill of materials for the Glia model stethoscope (100% infill)



**Calibration and comparison of 3D printed Glia model stethoscopes to the gold standard Littmann Cardiology III.** Stethoscope output responses were measured using the equipment setup described in the methods. Each stethoscope model recorded input sound at multiple frequencies and the change in amplitude between input and recorded sound was documented for each stethoscope. Further comparison between the Glia Model 2 and the gold standard Littmann Cardiology III is shown in with the absolute  $\Delta$ magnitude plotted above.