Compact Dual-Chamber Whistle V2

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VIEW IN BROWSER

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Summary

A loud, very shrill, compact, whistle. ~3.6g of filament to print. Designed to be batch printed.

Gadgets > Audio

Tags: tiny   small   easy   compact   emergency   survival   easyprint   loud   sos   emergencywhistle   shrill   dualchamber

This is the second iteration of a compact and easy-to-print whistle that can also be batch printed due to being printed on its side. This takes less time to print and less filament than my first iteration, but you might like that style more.

The reason for this second design is faster production and a more shrill tone. The need for whistles around Chicago was outpacing my ability to print V1s.

This is pretty loud at around 100db, and shrill due to each chamber being slightly different volumes, creating warbles that are attention-grabbing. Chamber frequencies are around 2850hz and 2800hz. It is still compatible with keychains.

These take about 3.6g-3.9g of filament, and they take around 5-7 minutes to print, depending on your printer.

Updates

Oct 15, 2025

I added 3 new models.

- "Whistle V2 v23 - Overpressure Release"
  - Better blade (0.2mm flat surface at the tip) to help with printing
  - Addresses an over-pressure issue I was sporadically seeing in 1 of the chambers, causing inconsistent warbles.
  - **Printing**
    - Print on its side with the hole side on the build plate
    - Able to print consistently with 0.25mm - 0.3mm layer height
- Whistle V2 v22 - Standard
  - Better blade (0.2mm flat surface at the tip) to help with printing
  - **Printing**
    - Print on its side
- Whistle Holder
  - Jig to hold 10 whistles at a time for post-processing
  - For me that's hitting them with a heat gun to get rid of stress marks on the build-plate side (ABS, ASA) and getting rid of tiny hairs

Oct 18, 2025

- Whistle V2 - Overpressure Release
  - Added 0.1mm additional clearance to smaller chamber airway
- Whistle V2 - Standard
  - Added 0.1mm additional clearance to smaller chamber airway

My observed printing times

- Voron 2.4: 6 minutes
- Annex K3: 4 minutes
- Bambu X1-C: 15 minutes, but I've printed it at 166% speed and they came out fine
  - The first iteration is faster to print on an X1-C

Printing

I've been able to print this successfully with a 0.25mm layer height with some filaments (LDO ABS, Fusion FIlaments ABS 1.5), but I would

recommend starting with 0.2mm. With "Whistle V2 v23 - Overpressure Release" I've been able to print with adaptive layer heights up to 0.3mm.

I've only ever printed this out of ABS or ASA, but assume PLA would be fine.

Tips

- Print them on their side. Do not print them how slicer's orient them with "auto orient"
  - If printing "Whistle V2 v23 - Overpressure Release", make sure the side with the hold is on the build plate.
    - Make sure the hole is clear, it might be sealed if your first layer or flow is off
- You need to have pressure advance and flow tuned in.
- If printing in a material that shrinks (ABS, ASA, etc) you need to make sure your "Shrinkage (XY)" setting under your filament is set correctly. This messed me up when trying out a new filament brand and not noticing it as set to 100%.
  - I've found 99.6%-99.8% to be good for multiple different ASA/ABS brands.

Print Settings

- layer height: 0.2mm
- walls: 3
- Infll: 30%
- Bridges
  - Make sure the bridge orientation looks correct, you may need to adjust "external bridge infill direction" in OrcaSlicer

Happy printing and stay safe!

Model files

whistle-v2-v13-original-depreciated.3mf

whistle-holder.3mf

whistle-v2-standard.3mf

whistle-v2-overpressure-release.3mf

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