



The LOUDENER r/ flashlight (>4000m range)

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updated 9. 10. 2026 | published 9. 10. 2026

Summary

Cone/head to mount a D230mm F190mm PMMA fresnel lens on any Convoy C8+ or M21A flashlight.

[Hobby & Makers](#) > [Electronics](#)

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<https://www.reddit.com/r/flashlight/s/vfhdbym7Dg>

Reddit link to project above.

Welcome to the LOUDENER, a ridiculously pocketable thrower flashlight project!

Specs (approx):

1. 3000 lumen (SFT-42R / 3V10A buck driver)
2. **4.2 million candela equal to 4100m ANSI throw (2.55miles)**
3. Convoy C8+ or M21A modification

BOM:

1. Convoy C8+ or M21A (preferably with a round emitter)
2. Printed cone and press-fit retaining ring (preferably PETG)

3. Fresnel lens Diameter = 230mm, Focal length = 190mm
4. 3 Rubber O-rings (I used 32mm ID, 3.55mm thickness)
5. Matte black paint

Instructions:

- Print the cone and retaining ring
- Paint the inside of the cone matte black (PETG is inherently shiny)
- Mount D= 230mm F= 190mm fresnel lens inside cone and press fit retaining ring
- Carefully remove the bezel AND reflector of the C8+/M21A
- Mount 3 O-rings inside the 3 "heatsink" notches of the C8+/M21A's head
- Slide cone over the O-rings.
- Adjust beam convergence by sliding the cone up/down (shouldn't take much, best done outside)

Info:

- The lens can be found on alie.xpress. Make sure it's the right size and focal length.
- The O-rings do not need to be the exact size, just make sure it's a tight but adjustable fit.
- You can use whatever emitter and driver you want, but square emitters will give a square beam.
- When removing the bezel, use some painters tape on top of the hole of the reflector to prevent dust ingress while storing it.

WARNING: this is not a toy, be responsible!

Model files

retaining-ring.stl



lens-cone.stl



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