

ATTENTION INVENTION

Plan

„Magnetic Eyes and Ears“



Disclaimer

Tools may be dangerous and may cause severe injuries! If you operate tools, make sure that you are allowed and able to safely do so. Please read the entire present document before you start following the instructions. Attention Invention is not liable for physical or economical damages eventuating when rebuilding the items specified therein.

In case you rebuild this invention for private usage, at least in Germany you cannot infringe any third parties patent rights! However, if you consider selling or using embodiments of this invention for commercial application please make sure not to infringe any thirds parties protective right. Please, ask your patent attorney if you have questions in this regard!

Tools:

- Heat source (e.g. hot air pistol)
- Drill
- Saw
- Screwdriver
- Sand paper
- Non-permanent Marker



Parts:

- External hearing Protection
- Protective eyewear with thermoplastic temple arms
- at least 2 neodymium-magnets about 10 mm diameter with ≥ 3 mm bore and countersink, 2 corresponding screws:
 - Metric bolt M3 (3 mm) if your hearing protection has metal pins
 - Wood screws (2,5-3 mm) if your hearing protection has plastic pins
- 2 knurled nuts, M4 (4 mm)
- 2 threaded bolts M4 (4 mm), 12-15 mm length
- 4 washers
- 4 nuts M4 (4 mm)



Let's get started!

First of all, screw the neodymium magnets to the pivoting pin of the hearing protection. Make sure to choose the front facing pair!



If the pin is made of plastic, take a metal drill, drill a shallow hole into the pin, but make sure **not to penetrate** the pin/housing. Take a screw, cut it to a suitable length using the saw or pliers, if necessary, and screw the magnet to the hearing protection.



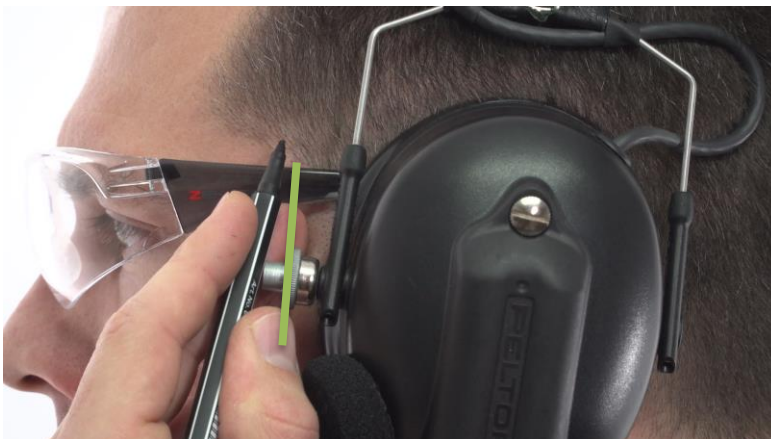
Do not tighten the screw in order to allow the magnet to totter. Make sure that the screw head is flush with the magnet surface. In case the pin is made of metal, you need to cut a thread into the pins of your hearing protection and use a metric bolt for attaching the magnet.

Next, attach the flat face of the knurled nuts to the magnets.



Try it on! For the next step you may use some help of a friend: Put on your eye protection in the state of the art way such that it fits just right.

Make sure your hearing protection is comfortably positioned. Let your friend mark the position where the imaginary line between the knurled nuts front facing surfaces cuts the thermoplastic part of the eyewear's temple arms.



This is where we bend the temple arms: Apply heat to the first temple arm (e.g. with the hot air pistol) until you can bend it. Be careful with the hot air pistol and the heated parts of the temple arms! For avoiding unwanted distortions, shield parts of the eyewear which do not need to be heated.



Bend it outwards by about 90° angle. Depending on how your hearing protection is usually located, bend the temple arms slightly downwards in order to match the position of the hearing protections' pins.



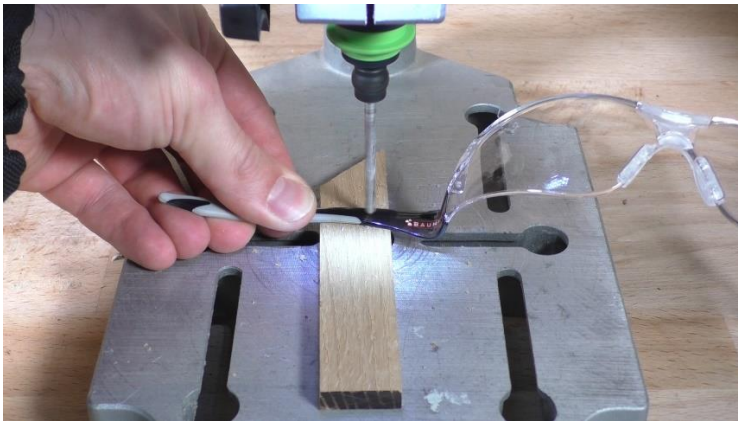
Now the other side.

When the temple arm is cooled down, try the eyewear on: The temple arms should abut the front side of the knurled nuts in a flush manner when the eyewear is appropriately positioned on your nose. Apply some more heat to make adjustments, if necessary.

For the next step you may use some more help of a friend or a mirror. Mark the position of the bore in the knurled nuts on the temple arms.



This is where you drill the holes for the screws you use to attach the knurled nuts to the temple arms.

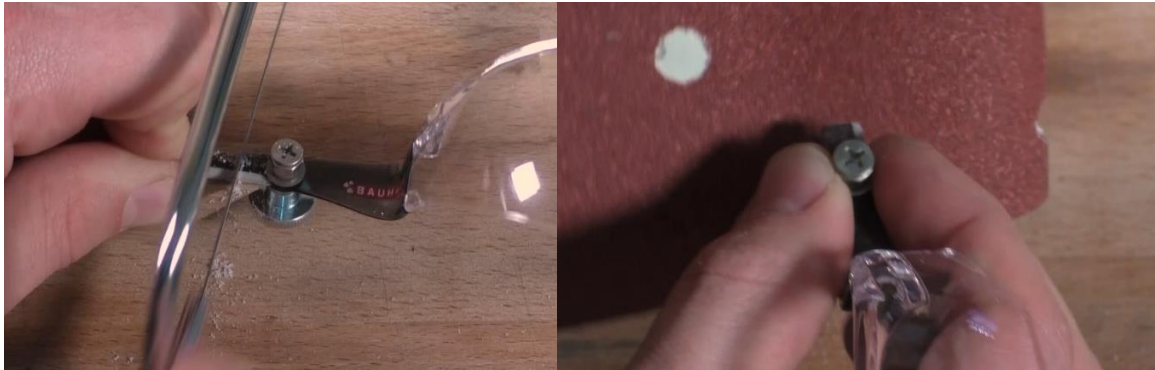


Screw an M4 nut on each of the M4 threaded bolts followed by a washer. Insert these bolts from the front-facing side of the temple arm into the bore and add one more washer. If necessary, screw another M4 nut on the threaded bolts or directly screw on the knurled nuts.



If you want to adjust the distance between the eyewear and the hearing protection (e.g. because you wish to use your magnetic Eyes and Ears by several people or the eyewear with different ear protections) use the knurled nuts or apply some more heat to make final adjustments to the temple arms.

Cut away the excess length of the temple arms and sand the ends.



That's it!

Tipp: Wear a magnet at your jacket to temporarily stow away your eyewear. In case your hearing protection provides the surface, additional magnets can hold your eyewear (e.g. screwed on top of the temple of your hearing protection).

