

RANCHO “Protective Face Shield”



Materials & Parts

Forehead strap: 1/16-inch polyethylene,

- 1.9cm ($\frac{3}{4}$ inch) wide x 46 cm long
- Punch holes 1 cm in on each side
- Punch holes 9 cm in on each side

Shield strap: 1/16 inch polyethylene

- 1.3 cm ($\frac{1}{2}$ -inch) wide x 36 cm long
- Punch hole in center or 18 cm
- Punch hole on each edge

Elastic strap: $\frac{3}{4}$ inch or 1" width

- 14 cm long
- Length can be adjusted depending on the stretch of the elastic material

Transparency Film (clear report cover)

- 9x11 sheet with distal edges rounded
- Landscape orientation

Plastazote: Create padding 1/8-inch thick Zote

- 1.9 cm ($\frac{3}{4}$ inch) wide x 46 cm long
 - can be made wider for ease of gluing

Small Speedy rivets: 7 pairs



Fabrication Steps:

- 1) Punch hole at 18 cm (center) of shield strap
- 2) Punch edge of shield strap at 1cm from each edge
- 3) Rivet center of transparency paper onto center of the shield strap



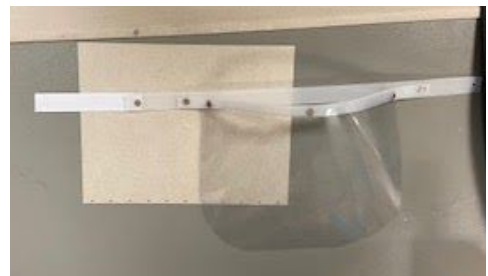
- 4) Punch hole at edge of transparency paper through the paper and the plastic
- 5) Rivet the edges of the transparency paper to the plastic



- 6) Rivet shield strap onto the forehead strap



- 7) Rivet one edge of the elastic strap onto the forehead strap



- 8) Apply glue to the pad and the forehead strap



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- 9) Place pad onto forehead strap while leaving one edge free to rivet the other side of the strap



- 10) Rivet the other edge of the strap to the forehead strap



- 11) Trim foam to the edge of the plastic
12) Clean up foam and clean shield



Appendix

- Plastazote foam that lines ② is approximately 4cm by 1.9cm. The width can be increased to help with gluing.
- The transparency paper will be attached onto the center rivet of ① and 2 more rivets will be attached near the ends of the paper onto the plastic strip.
- Elastic strap is 13 cm long.
- Pre-stretch material after riveting as necessary.

