

## Immortan Joe Valves

The included valves are straight off a 3D printer, and may require some additional work to get them exactly how you'd like. Due to the nature of printing layer-by-layer, there are very small ridges (striations) across the piece. These can be filled with any sort of body filler, XTC-3D (by Smooth-On), or they can just be left as-is, and painted up straight away, depending on your paint style. The extension pipe on the bottom is 1" diameter; designed to fit into a hole in the mask, and then secured from the inside.

If you ordered hoses, or just valves at the same time as the mask itself, it will be pre-drilled to accept the valves (unless specified otherwise).

### Painting

The valves should be painted, prior to attaching them to the mask. For best paint adhesion, be sure to shoot them with primer, prior to paint. You may wish to wipe them down with mineral spirits, or Prep-All, prior to primer, just to remove any residue. DO NOT use acetone, as it will dissolve the print material (ABS plastic). For primer, I recommend 3M Bondo Easy Finish Sandable Primer (black). For these, it may be beneficial to get the type which includes filler.

They can be painted with your favorite acrylic, or enamel paints.

### Attaching the Valves

Print and hole tolerances vary slightly, so you may need to sand the valve extension a little, to get it to fit; it should be about perfect, right out of the box though.

For masks with pre-drilled holes, simply insert the valves, and depending on the fit, secure them with your favorite adhesive, on the inside of the mask. Hot glue works the best, simply because it's quick and easy.

For the do-it-yourselfer, there are a few options, in order of recommended to least recommended:

1. Drill a 1" hole in the mask, and attach as above. I use a 1" Forstner bit.
2. Cut/sand a little length off of the extension pipe, and attach with epoxy, to the outside of the mask.
3. Drill a hole in the valve extension pipe, to accept a screw. Then drill a hole in the mask (it can be drilled easily, just be careful) and attach with a screw and washer, from the inside. As the 3D print is mostly hollow, there isn't much for the screw to bite into, so you'll need to be careful with this method. Also, the extension pipe is a little long for this method, so hold things in place to see how you like it, before drilling anything.

Send pictures when you're done; I'd love to see it!