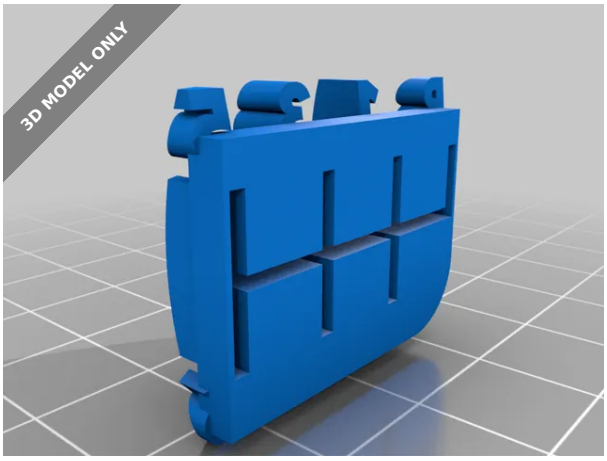

Fiesta ST shift knob

G **Gemini Wing**

VIEW IN BROWSER

updated 28. 10. 2026 | published 28. 10. 2026

Summary

Multi material shift knob designed for Ford Fiesta ST 6-speed. Intended for printing in multiple colors,

Hobby & Makers > Automotive

Tags: shifter ford thingiverse manual fiesta st

Multi material shift knob designed for Ford Fiesta ST 6-speed. Intended for printing in multiple colors,

Print Settings

Printer Brand:

Prusa

Printer:

i3 MK2 MMU

Rafts:

No

Supports:

Yes

Resolution:

0.10mm

Infill:

50%

Filament: Hatchbox PETG

Notes:

Multi material shift knob designed for Ford Fiesta ST 6-speed. Intended for printing in multiple colors, as shown in the example photo, with weight added and surface finished.

Making:

- Print it, then fill it with .177 BBs through the hole in the bottom
- Squirt some superglue in after the BBs, slosh it about and let it set, they'll stop rattling
- Add nut to thread onto shifter, bit more superglue to hold the nut in
- Once the glue is set, tap (through the nut) to thread the upper, plastic section of the hole
- Put in your car and feel clever

Optional finishing for PETG:

- Sand with 300 then 1000 as desired
- Finish top with XTC-3D
- Lightly wet sand bottom half and stem with 1000/2000 to provide matte surface on bottom

Extra parts needed:

- M12 x 1.25mm tap
- M12 x 1.25mm nuts (I used: Uxcell a16033100ux0272 M12x1.25 mm, search Amazon)
- .177 cal BB pellets
- Superglue
- XTC-3D (https://www.smooth-on.com/product-line/xtc-3d/)

More detail: First, check dimensions of whatever nut you plan to use. The hex hole in the model is sized for the specific nuts I used, so you may need to adjust it if using anything else.

Knob prints hollow (support on build plate only!) and once support material is removed from the underside and hollow center shaft you should be left with a hole big enough to feed in .177 BB ammo. That hole will be closed once the nut is installed. Once it's full or gotten to a weight you like, squirt some superglue into the hollow shell after the BBs, slosh it around. The idea is to coat the BBs enough that when the glue sets they'll all be stuck together and not rattle, so give it a good shake. I found that interior glue took overnight to fully set up.

Once you've got weight in and no rattling, add the nut to close up the hole used to add pellets. If you're using a nut with a Nyloc insert, make sure that's facing inward, and make sure the nut is fully seated. Add a little superglue along two opposing edges to fix the nut in place.

Next, take your tap and tap through the nut to thread the plastic section above the nut. Tapping through the now fixed nut ensures the thread position above matches that of the nut (also, if you have a nyloc insert, it's trashed by the tap).

At this point you can mount and use the shifter if you wish. The natural finish comes out not-quite-matte and the layers provide a good tactile surface. Take care not to thread the shifter on too far, which will prevent the lock out ring lifting enough to engage reverse. If the knob is rotating too easily once in position remove it, put a drop of superglue onto the thread plastic section, allow it to dry off the car, then try reinstalling.

If you want a nice glossy knob like the photo, there's a modest amount of additional work. Sand with coarse then fine sandpaper to get a finish which feels somewhat smooth to the touch (bear in mind it'lllook all scuffed up, but we'll fix that). Mount the knob upright and prepare some XTC-3D to coat it. Personally I prefer only the top section glossy, and you can get away with coating just the upper with the XTC-3D to get that effect. In the end I got a finish I liked by coating the whole thing with XTC-3D and then going over the lower part with fine (1000/2000) sandpaper. That clouds the surface enough to make it matte, but without having it just look scuffed up. I also preferred the shifting feel of the glossy top/matte underside, but your taste may be different.

Category: Automotive

Model files

shift_pattern.stl

main_sphere_top.stl

main_sphere_lower_band.stl

main_sphere_upper_band.stl

main_sphere_center_band.stl

main_sphere_bottom.stl

Find source .stl files on Thingiverse.com

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