Mach2GTO compass tray assembly guide

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License

Assembly

Assembly of the Compass Tray

3D print

The mount attachment, tray and clamping screw are printed using the STL files in the STL directory or separately generated by the user with the source code mach2gto_compass.scad.
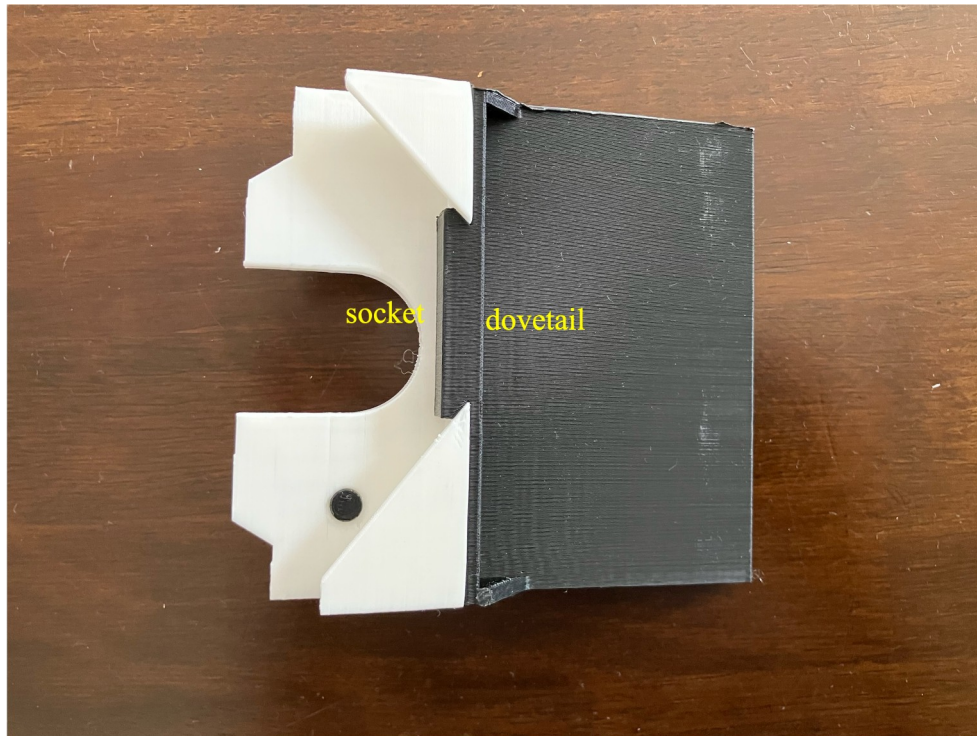

Note 1: the Tray shown here is from an early prototype. Low quality" printing was selected in CURA.

For the final prints, I have set "Standard Quality" for both the clamping screw and mount attachment; "Low quality" for the tray.
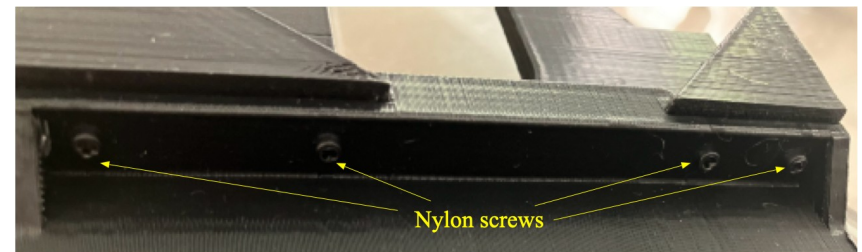
The mount attachment and the tray are attached together by sliding the dovetail on the tray into the socket in the mount attachment:

socket   dovetail

The dovetail and socket combination has a good friction fit and does not need glue or screws if the phone or compass are light. Superglue can be used to permanently join these two parts together.

However, I have provided holes in both the mount attachment and the tray. I used 2-56 screws to thread the holes. Nylon screws are then used to join the two parts together.

Nylon screws

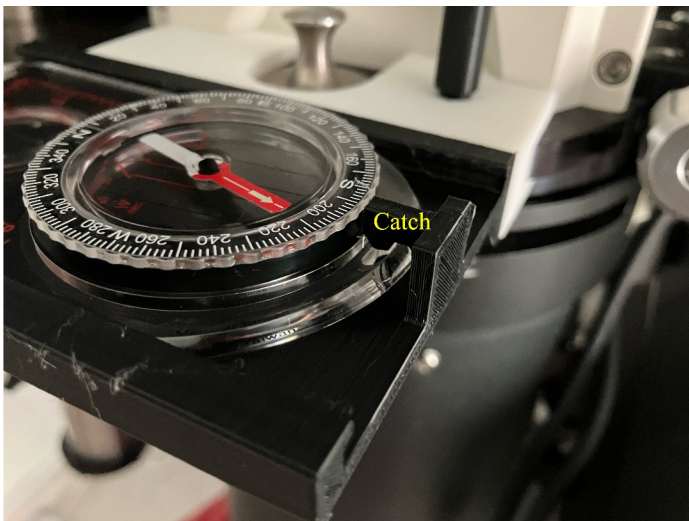Do NOT use steel screws because they are magnetic! Stainless steel, Brass or Nylon screws should be used.
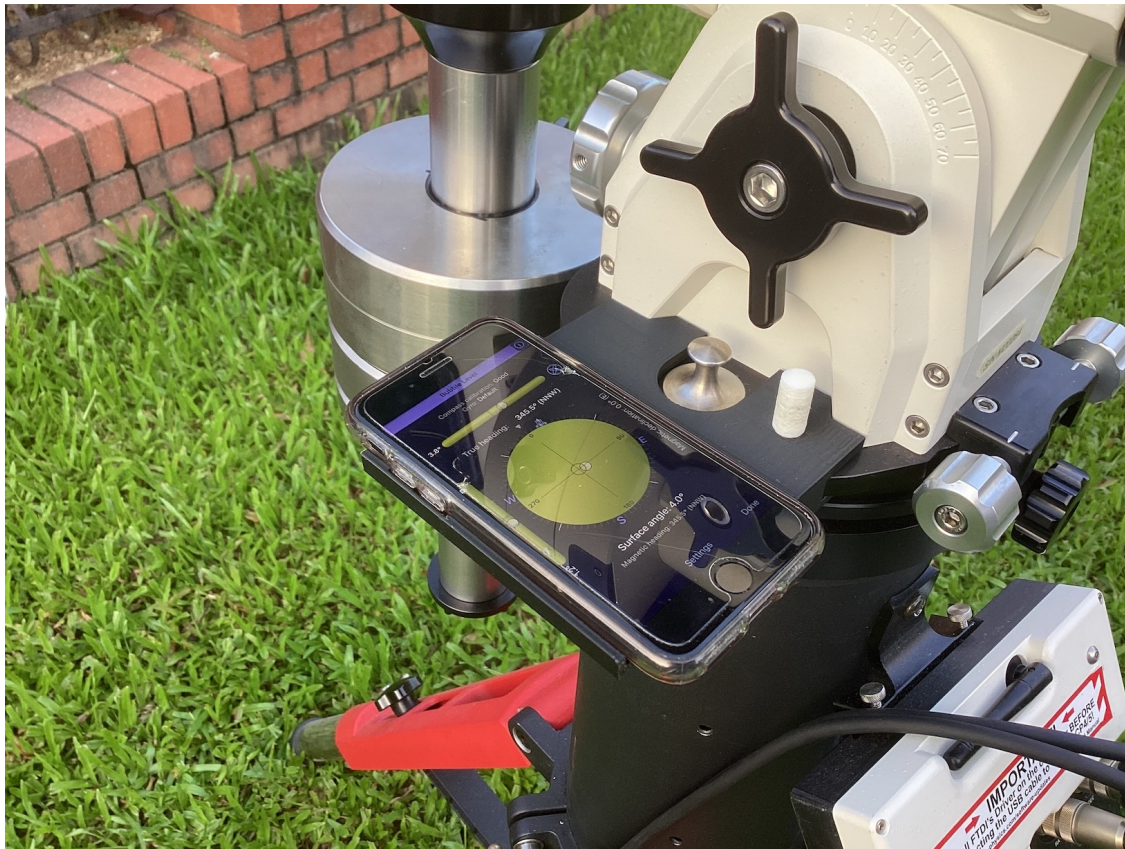
Map compass installation

Catch

Catch

The map compass is slid with the compass end first into the tray so that the "Catch" can catch it.

The Catch stops the compass from sliding off the tray but also allows it to be freed by the user if necessary.

In this example, the tray has not been permanently joined to the mount assembly because the compass is very light. The friction fit between the tray and the mount assembly is strong enough to hold them together.

Mounting

As shown in the photo, the compass tray is slid onto the Mach2GTO. The clamping screw is tightened to stop it from moving.

The shape of the mount attachment is such that it perfectly fits into the recess of the Mach2GTO. This tight fit ensures reproducibility between installs.