



Components to be Manufactured

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INTRODUCTION

This guide will outline the components that aren't included as part of the kit and need to be manufactured by you or outsourced.

Internally at REA we 3D Printed all of the components listed on our Makerbot Method X using a mix of ABS, PLA and PETG filaments.

Hints:

- Where possible use dissolvable support material to improve the quality of the part and aid in the removal of the support material.
- It is worth looking into the infill percentage that you use to print the parts to adjust the buoyancy of the parts to help trim the Submarine.
- We would recommend sealing the parts before using them on the Submarine as most 3D Printed parts will absorb water which will affect the trim of the Submarine. Filaments like PETG can help with this as it has very good layer adhesion helping the part self seal.

TOOLS:

- [3D Printer](#) (1)
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Step 1 — Download STL Files



- [Fore Cap - Top v1.0.stl](#)
- [Fore Cap - Bottom v1.0.stl](#)
- [Fore Servo Mount v1.0.stl](#)
- [Control Surface - Short v1.0.stl](#)

Step 2 — Fore Servo Mount



- ① This part made separate to the Fore Cap - Bottom to make it easier to install the servo.
- Once printed clean off any support material whether that be breakaway support or dissolvable support.
- Check the diameter of the holes to ensure they are close to 4.0mm as this is required to install the threaded inserts into.
- ① The part is now ready for the assembly guides.

Step 3 — Fore Cap - Bottom



- ① Being a large part it will take quite some time to print.
- Once printed clean off any support material whether that be breakaway support or dissolvable support.
- ① The part is now ready for the assembly guides.

Step 4 — Fore Cap - Top



- ① Being a large part it will take quite some time to print.
- Once printed clean off any support material whether that be breakaway support or dissolvable support.
- ① The part is now ready for the assembly guides.

Step 5 — Control Surface - Short



- There are 2 different length control surfaces used on the Submarine. The short ones are to control the pitch of the Submarine.
- ★ 2 of these are required for the Fore Cap Assembly.
- Once printed clean off any support material whether that be breakaway support or dissolvable support.
- ⓘ The part is now ready for the assembly guides.