



# Pre-Production

SLQ Wiki Fabrication Lab 2024/04/20 23:50

# Pre-Production

This information is for the pre-production process of preparing materials for the workshop kits.

1. Laser cut hull
2. Laser cut plug
3. Laser cut lock pick and key pin rings
4. Laser cut tension wrench
5. Saw metal pipe (pin Sleeve)
6. Saw dowel length and indentation (for o-ring)
7. Saw and drill plug housing

You will need to cut the following materials and documents for a single kit (if not specified otherwise).

## 1. Hull

1. 1x A3 6mm cardboard - lock\_hull\_1\_v2-sheet.cdr - Approx. 1 min 40 sec per sheet
2. 1x A3 6mm cardboard - lock\_hull\_2\_v2-sheet.cdr - Approx. 1 min 40 sec per sheet

## 2. Plug

1. 1x A3 3mm cardboard - lock\_plug\_v2-sheet.cdr - Approx. 3 min per sheet

## 3. Lock Pick & Key Pin rings

1. 1x A3 3mm Acrylic - lock\_pick\_v2-sheet.cdr - (This will produce shitloads of picks and rings)

## 4. Tension wrench

1. 1x A3 6mm Acrylic - lock\_tension\_v2-sheet.cdr - (This will produce shitloads of wrenches)

## 5. Metal Pipe

1. 1x 50mm (10mm O/D) metal pipe

## 6. Key and Set Pins

1. 3x 30cm (6mm O/D) dowel (Set pins)
2. 3x 25mm (6mm O/D) dowel (Key pins)
  1. Key pins will need a slight groove (no more than 1mm deep, 1mm wide, 3-4mm from top) for the o-rings
  2. Put o-ring on key pin and make sure it doesn't fit through the acrylic key pin ring (step 2 above)

## 7. Plug Housing

1. 1x 50mm (60mm O/D) postage tube
  1. Drill 3x holes in the housing (use acrylic hole template) This needs to be very straight and accurate!

## -Material prep process

- 25 and 30mm Pins cut to length



Press inside face of the saw blade against the inside surface of the 90 deg mitre box gap. Use a square to measure the desired length (in this case 25 and 30mm) Secure a block of wood as a stop. As you cut check your tolerances regularly.

- O-ring seating groove cut into 25mm Pin



Set a hacksaw blade into a vice at about 45 deg. Set the dowel into battery drill chuck. cut your groove.



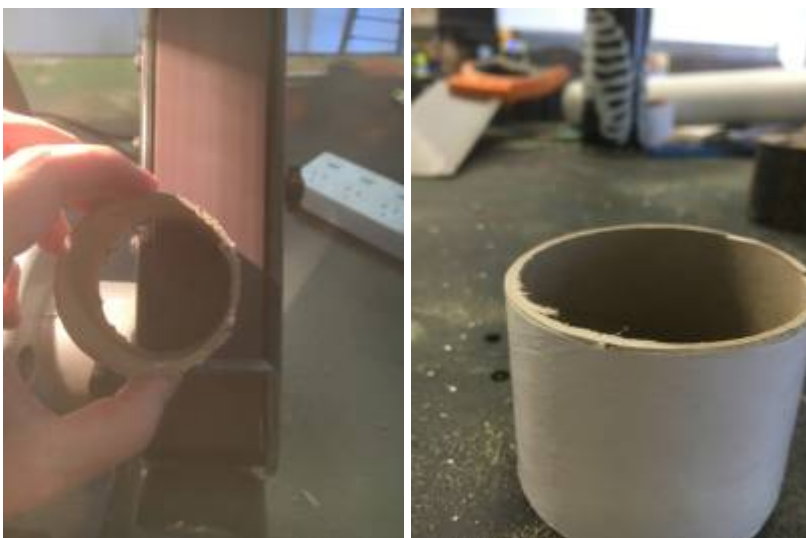
- Plug Housing cut



Again secure a timber stop in the mitre box measuring with a square, this time 50mm,

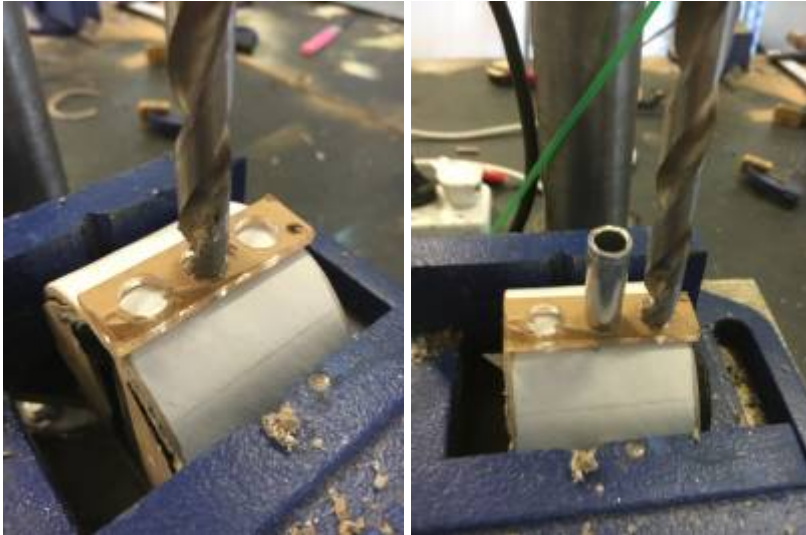


Clean up daggy edges on sanding belt on the bench grinder. Use the workrest on the belt sand to level up the cuts to 90 deg

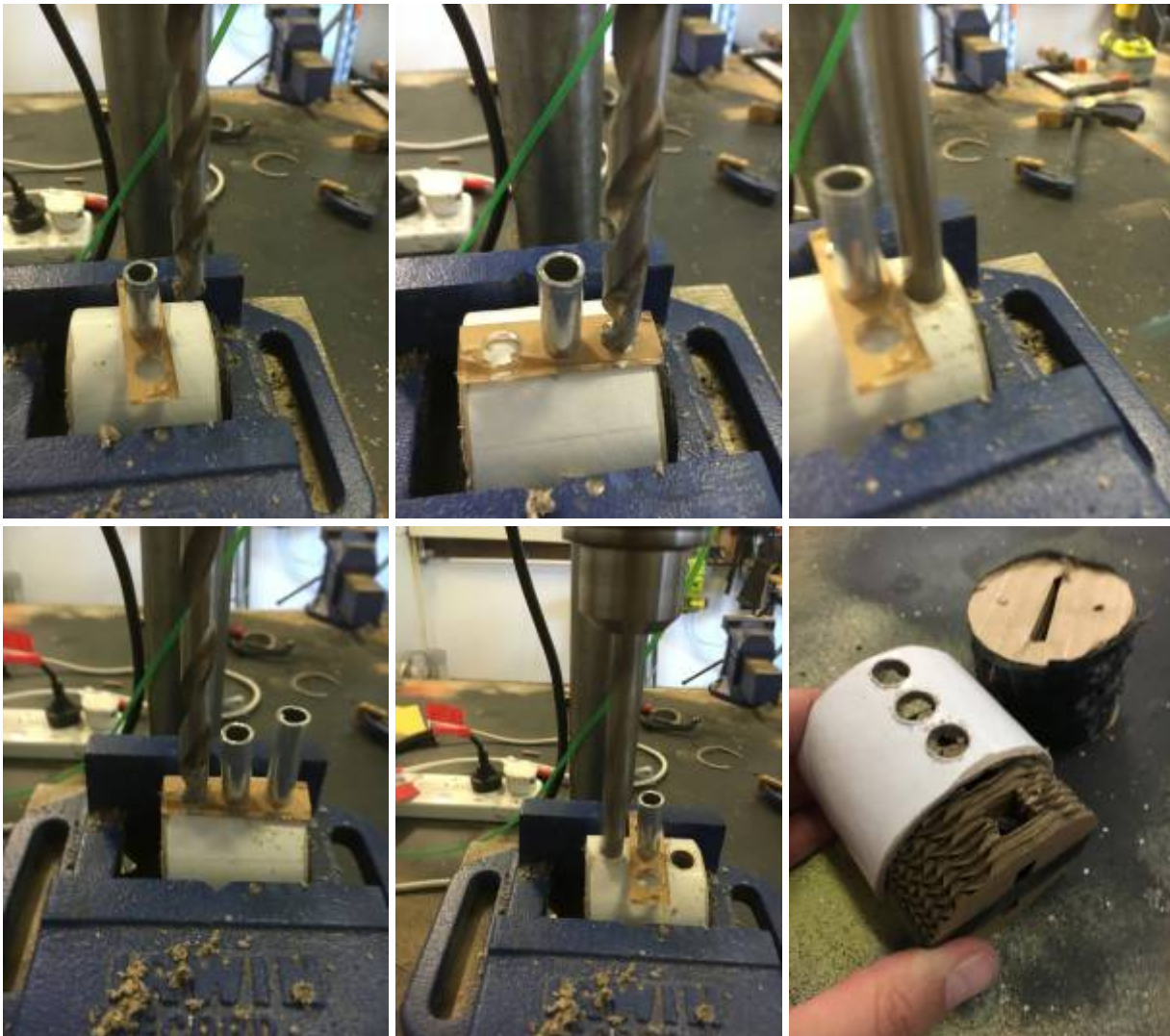




- Plug Housing holes drilled



after drilling each use metal sleeves to ensure the alignment of the hole template is correct



check alignment of holes on example plug are within tolerance

