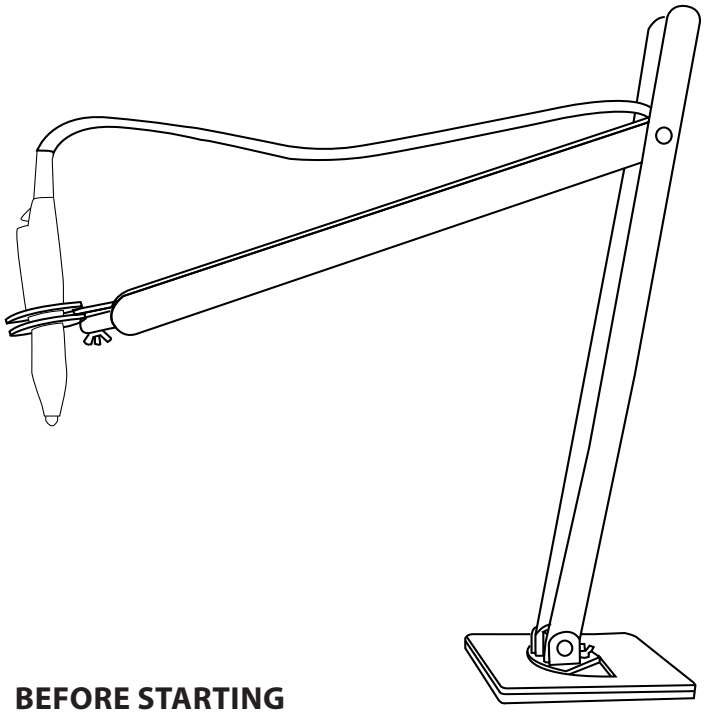
ASSEMBLY INSTRUCTIONS FOR THE PLECO STAND

www.fablab-neuch.ch/**pleco**

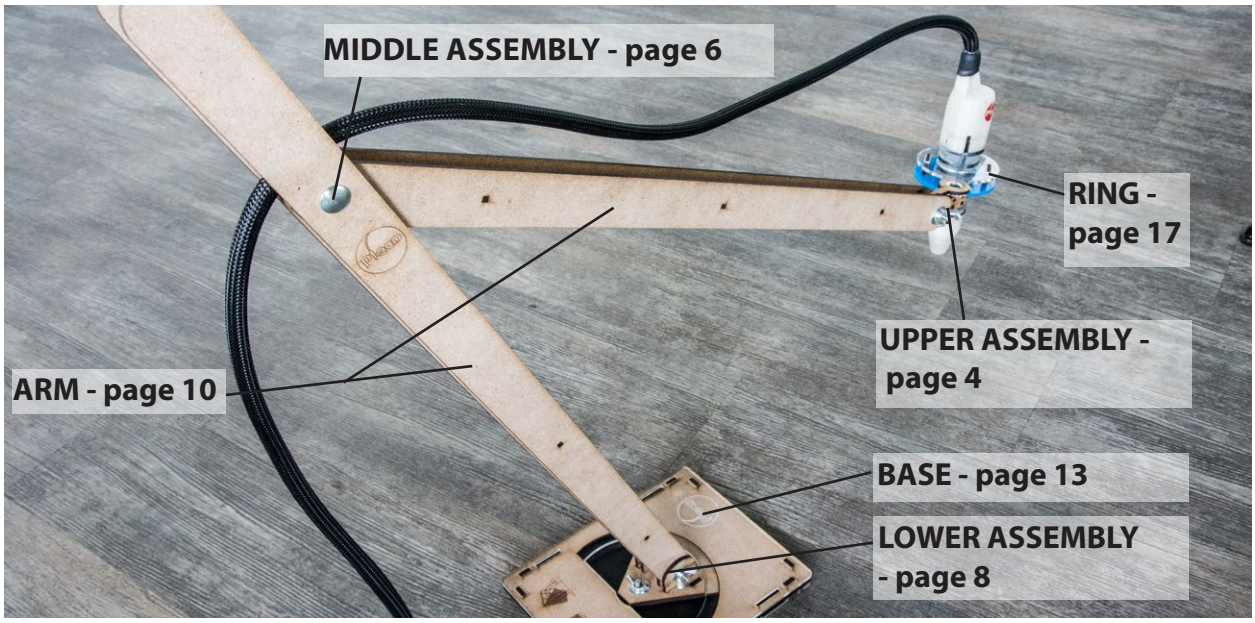
Hes·so
Haute Ecole Spécialisée
de Suisse occidentale



BEFORE STARTING

The stand for the Pleco has been designed for comfortable use of the Pleco. The same philosophy as behind the fabrication of the Pleco has been applied (http://www.fablab-neuch.ch/pleco/plus.php?id=4).

The stand is entirely fabricated using laser cutting. Several assemblies consist of slotted components driven into each other. Therefore significant force will be required to assemble the different parts. A hammer might even be required.



COMPONENTS AND REQUIRED TOOLS

Arm:
4 x wooden arms (A1, A2, A4 and A5)
2 x wooden reinforcements (A3 and A6)
1 x M5 x 35 dome head square neck bolt
1 x M5 metal washer
1 x M5 wing nut
2 x white PP washers

Base:
2 x PMMA plates (E1 and E2)
1 x PE plate (E3)
1 x wooden plate (E4)
1 x transparent PMMA plate (E5)
8 x wooden inserts (I3)
1 x M5 x 20 dome head square neck bolt
1 x M5 metal washer
1 x M5 wing nut

Upper assembly:
2 x wooden components (B1)
2 x wooden components (B2)
2 x wooden components (B3)
1 x wooden component (B4)

Middle assembly:
2 x wooden components (C1)
2 x wooden components (C2)

Lower assembly:
1 x wooden component (D1)
1 x wooden component (D2)
2 x wooden components (D3)
2 x wooden components (D4)
1 x wooden component (D5)
1 x wooden component (D6)
2 x wooden inserts (I1)

Ring:
1 x transparent PMMA component
1 x coloured PMMA component
2 x wooden inserts

Final assembly:
1 x M5 x 45, dome head square neck bolt
2 x M5 x 30, dome head square neck bolts
3 x metal washers
3 x M5 wing nuts
6 x white PP washers

Clamp

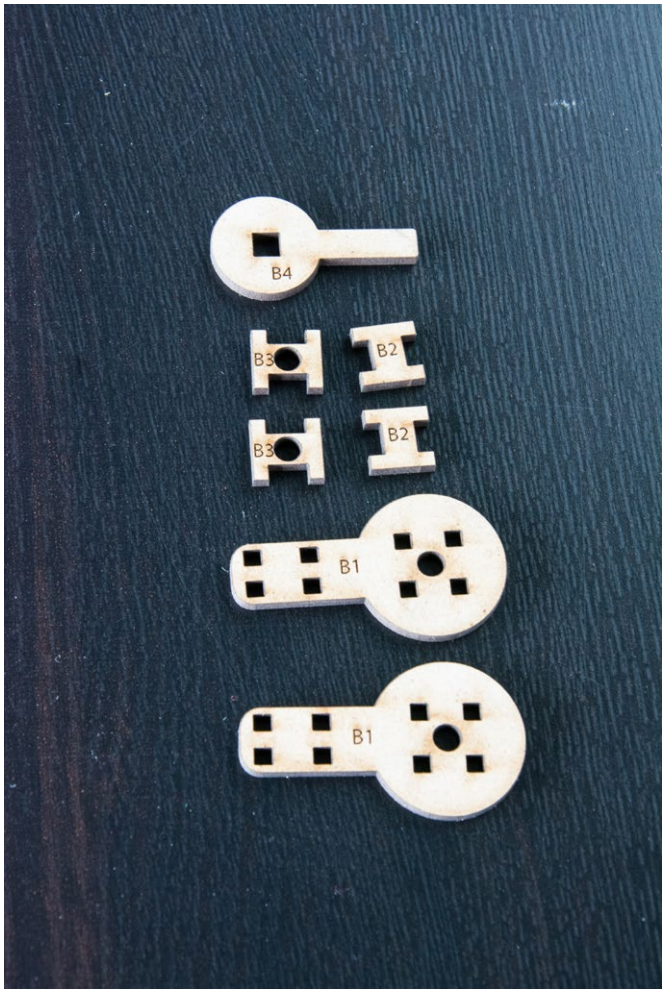
Tools:
A small hammer
Superglue

Remark: The colours of PMMA and PE plates of the base and the PMMA component of the ring are given for information. They can be modified by the user.

1. MOUNTING THE "UPPER ASSEMBLY"

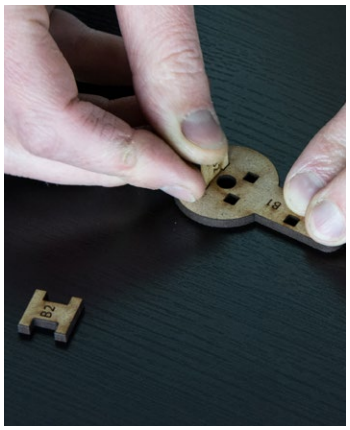
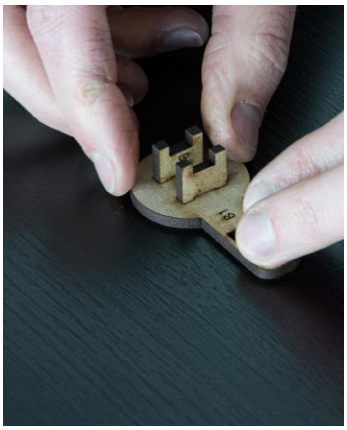
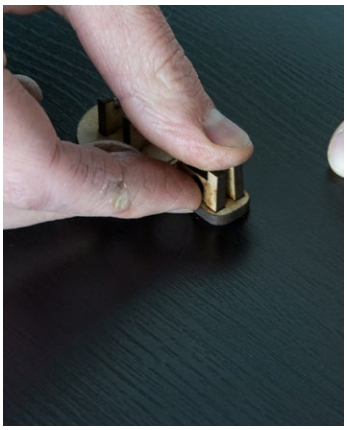
Contents of the sachet labelled "upper assembly":

2 x wooden components (B1)
2 x wooden components (B2)
2 x wooden components (B3)
1 x wooden component (B4)

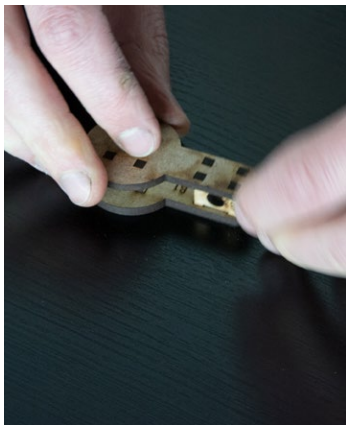
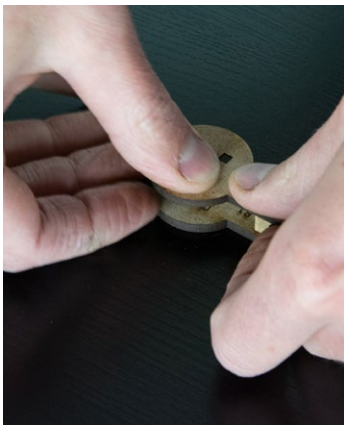
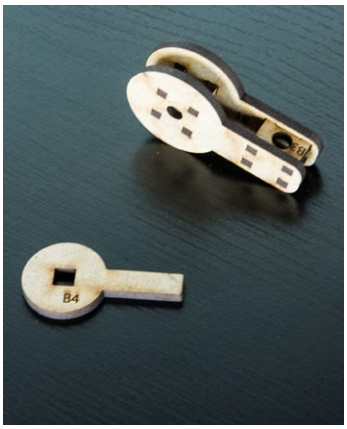


1. MOUNTING THE "UPPER ASSEMBLY"

1.1
Drive the 2 B2 components and the 2 B3 components into one of the B1 components.

1.2
Drive the second B1 component into the prior assembly so they are well interlocked.

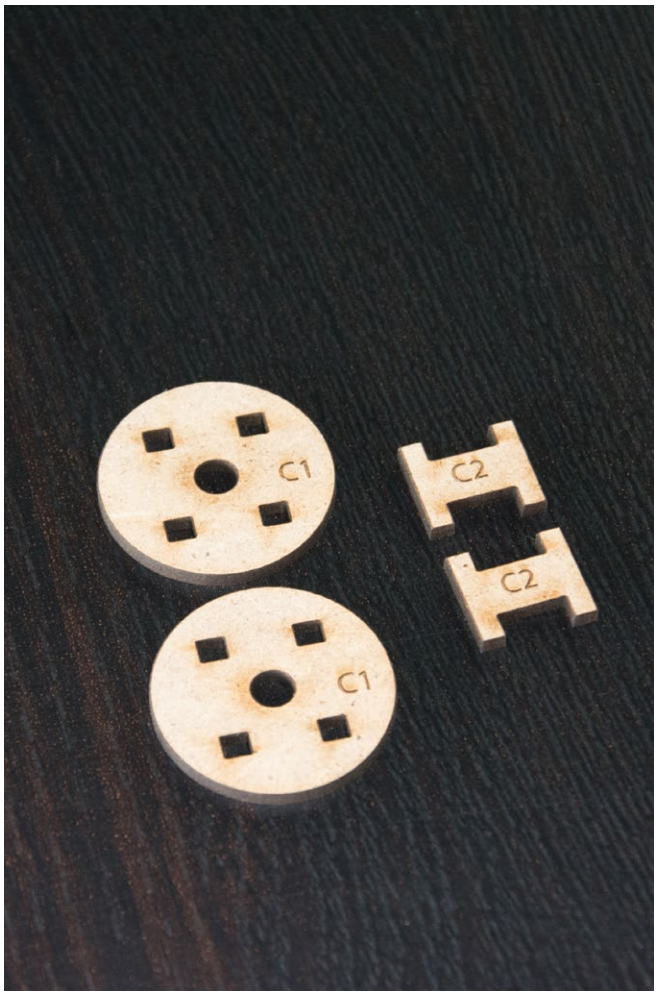




Tip:
The laser cutting produces a small dimensional difference between the rear and front of the components. Make sure that the assemblies are made along the face on the side of each component which is marked.

2. MOUNTING THE "MIDDLE ASSEMBLY"

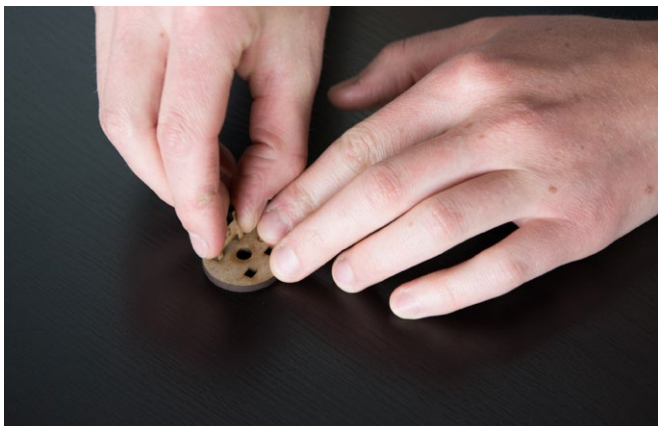
Contents of the sachet labelled "middle assembly":

2 x wooden components (C1)
2 x wooden components (C2)

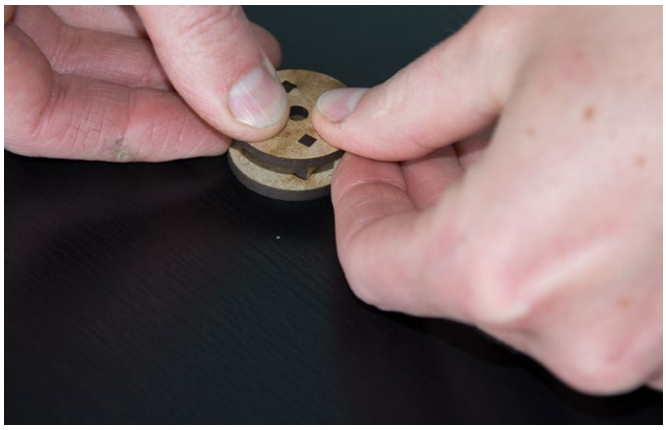


2. MOUNTING THE "MIDDLE ASSEMBLY"

2.1
Drive the 2 C2 components in one of the two C1 components.



2.2
Drive the second C1 component into the prior assembly so they are well interlocked.



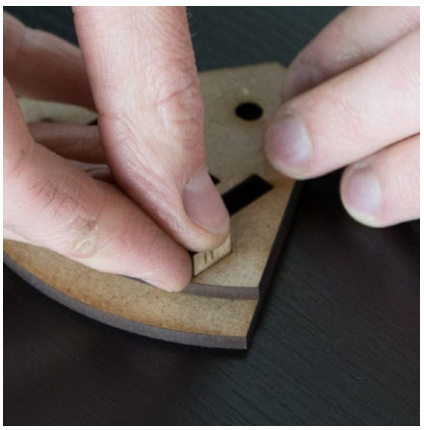
3. MOUNTING THE "LOWER ASSEMBLY"

Contents of the sachet labelled "lower assembly":

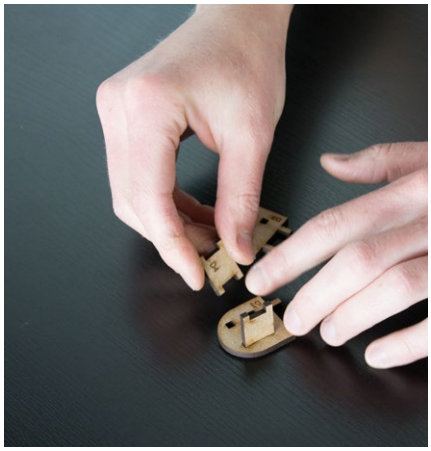
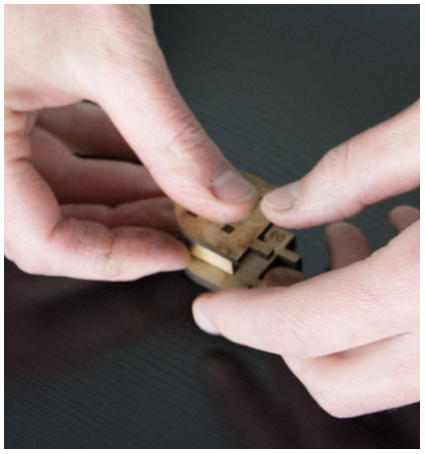
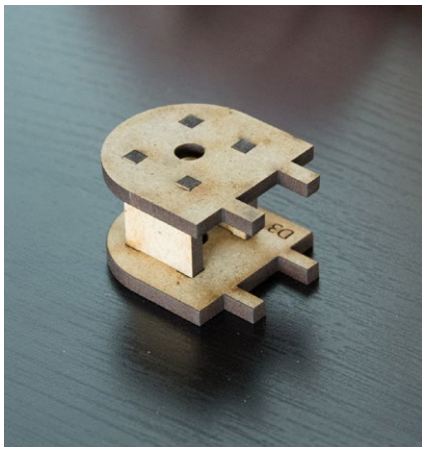
1 x wooden component (D1)
1 x wooden component (D2)
2 x wooden components (D3)
2 x wooden components (D4)
1 x wooden component (D5)
1 x wooden component (D6)
2 x wooden inserts (I1)

3. MOUNTING THE "LOWER ASSEMBLY"

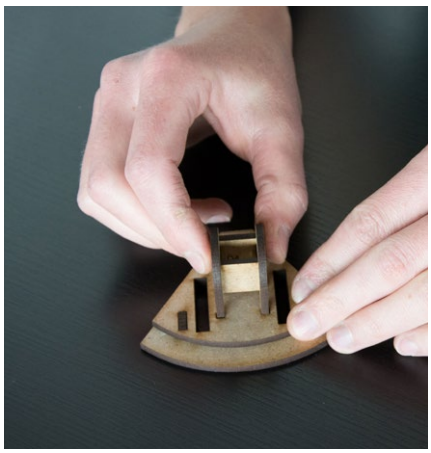
3.1
Position component D5 on component D6, so the holes are opposite each other. Drive the two I1 inserts into the external notches. Use a hammer if necessary.


3.2
Drive the two D4 components into one D3 component and drive the second D3 component into the assembly.

3.3
Drive the second assembly of components (D3-D4) into the first assembly (D5-D6-I1)

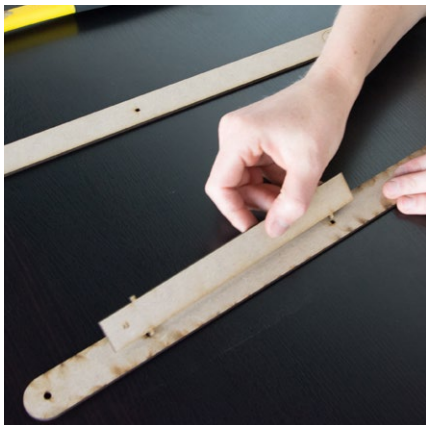



4. MOUNTING THE ARM

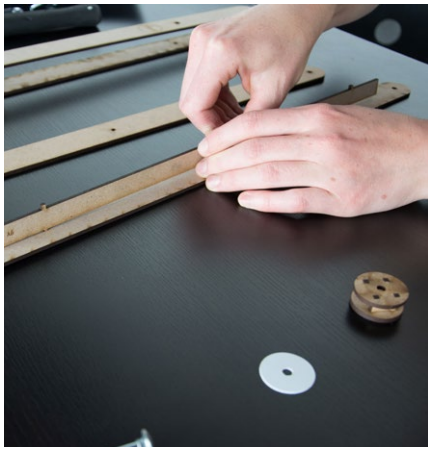
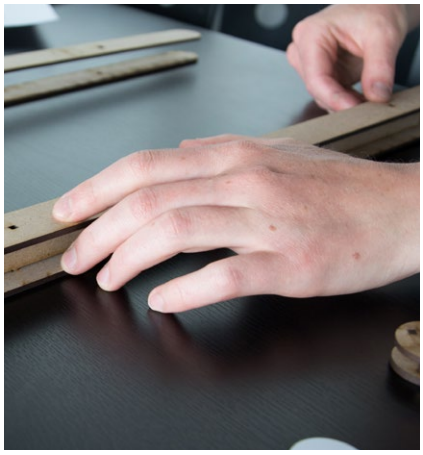
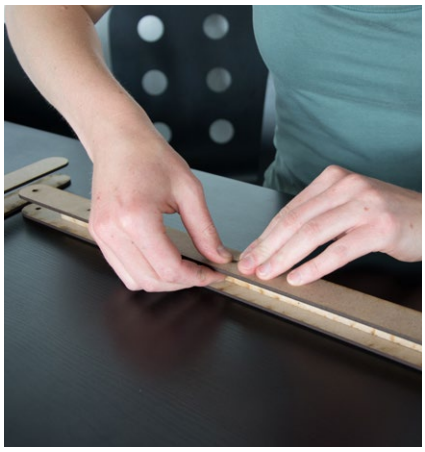
Contents of the sachet labelled "arm":
4 x wooden arm (A1, A2, A4 and A5)
2 x wooden reinforcements (A3 and A6)
1 x M5 x 35 dome head square neck bolt
1 x M5 metal washer
1 x M5 wing nut
2 x white PP washers

4. MOUNTING THE ARM

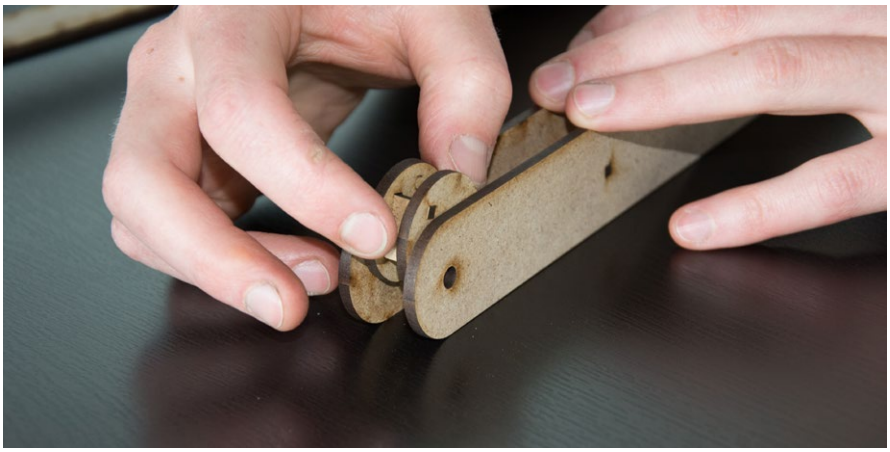
4.1
Slot the short reinforcement (A3) between the two long arms (A1 and A2) as shown below. Make sure that you place the printed number on the component so it is facing outwards (i.e. visible).




4.2
Slot the long reinforcement (A6) between the two short arms (A4 and A5).

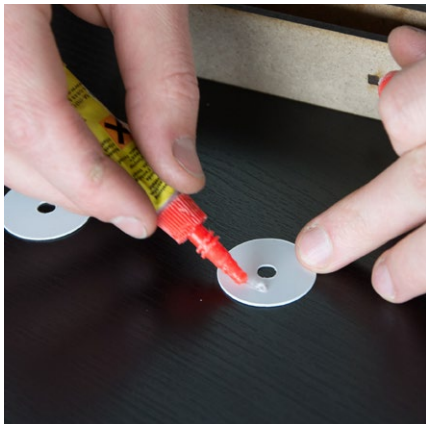
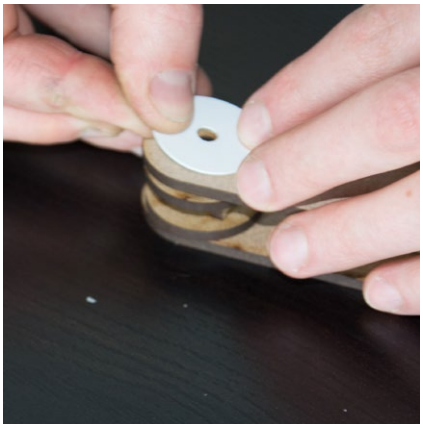




4.3
Place the "middle assembly" (mounted in step 2) in the end of the short arm without a square hole.



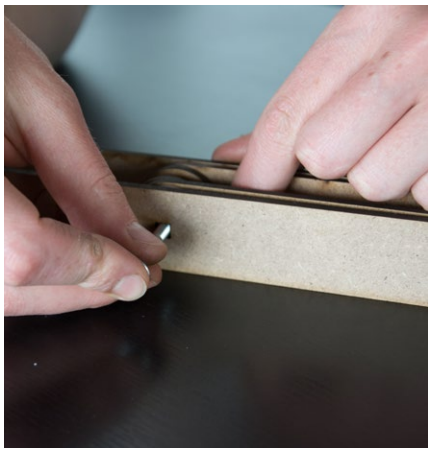
4. MOUNTING THE ARM

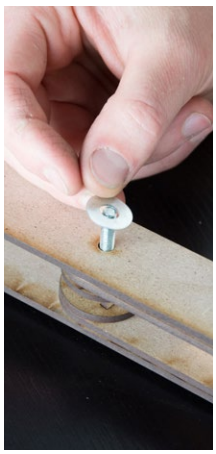
4.4
Adhere the two PP washers on each side of the assembly with superglue.

4.5
Place the end of the short arm with the "middle assembly" inside one of the ends of the long arm, at the level of the holes next to the logo. Take care that the square holes in the short and long arms are both located on the same side. This enables all the wing nuts to be on the same side where adjustment of the stand can be made.

4.6
Insert the bolt so that its head is on the side with the square hole. The metal washer and the wing nut are placed on the other side for fastening the assembly.

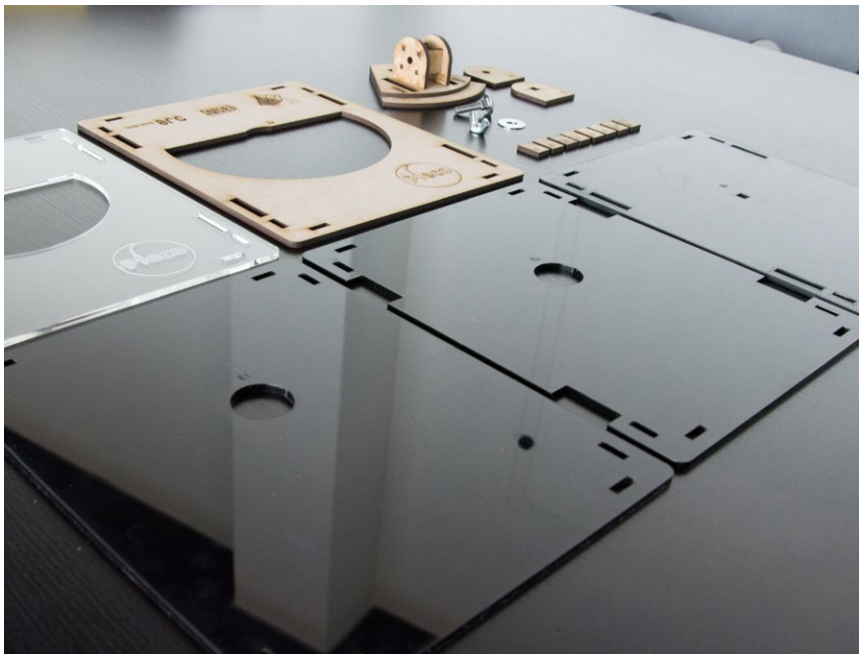





5. MOUNTING THE BASE

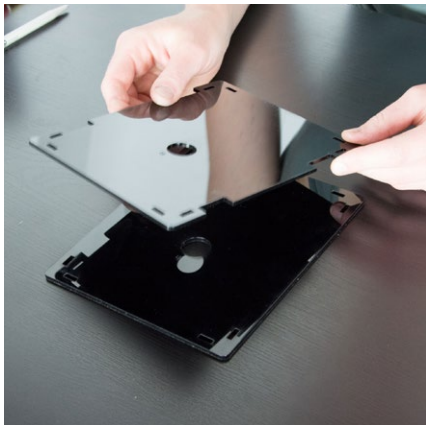
Contents of the sachet labelled base:

2 x PMMA plates (E1 and E2)
1 x PE plate (E3)
1 x wooden plate (E4)
1 x transparent PMMA plate (E5)
8 x wooden inserts (I3)
1 x M5 x 20 dome head square neck bolt
1 x M5 metal washer
1 x M5 wing nut

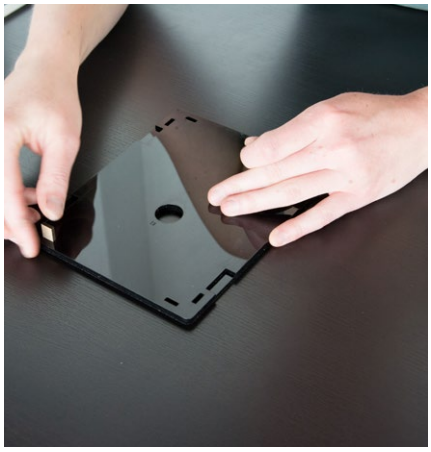


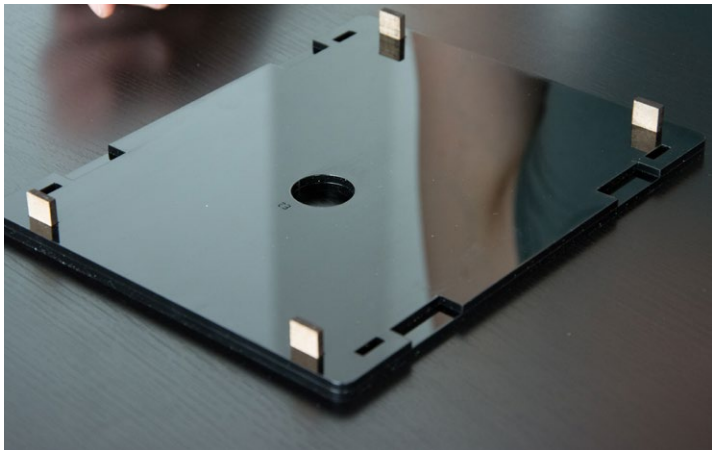
5. MOUNTING THE BASE

5.1
Position plates E1 and E2 on top of each other; E1 being underneath.

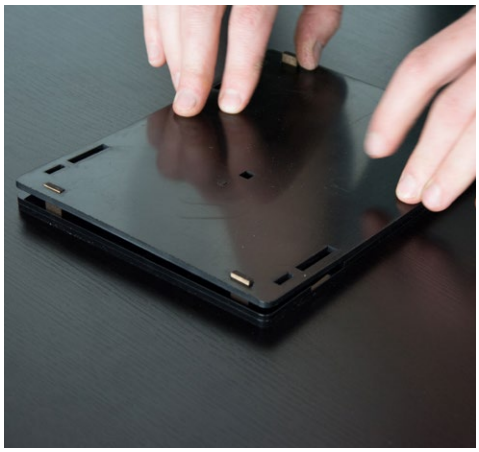


5.2
Place the 4 I3 inserts at the four corners of the prior plates (E1 and E2).





5.3
Position plates E3 and E4 on the previous assembly.



5. MOUNTING THE BASE

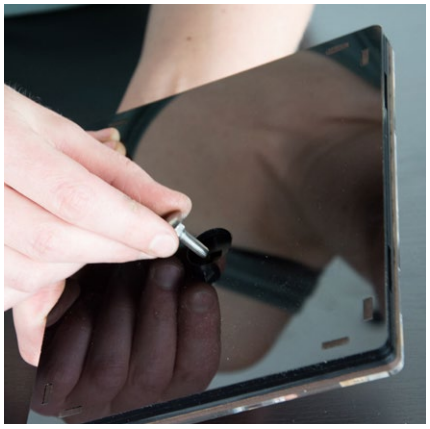
5.4
Place the "lower assembly" mounted in step 3 into the notch on plate E4.

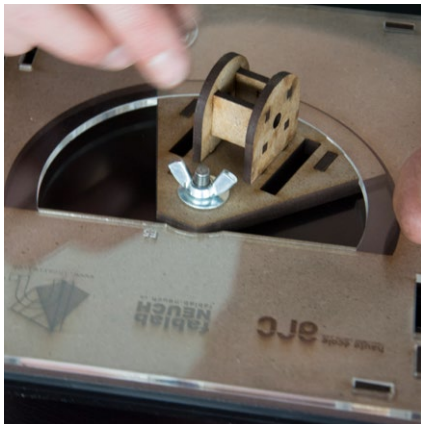
5.5
Position plate E5 on top of the assembly.

5.6
Drive the 4 I3 inserts into the notches provided, as shown below.

5. MOUNTING THE BASE

5.7
Insert the dome head square neck bolt underneath the base. The metal washer and the wing nut are placed on the other side for fastening the assembly.

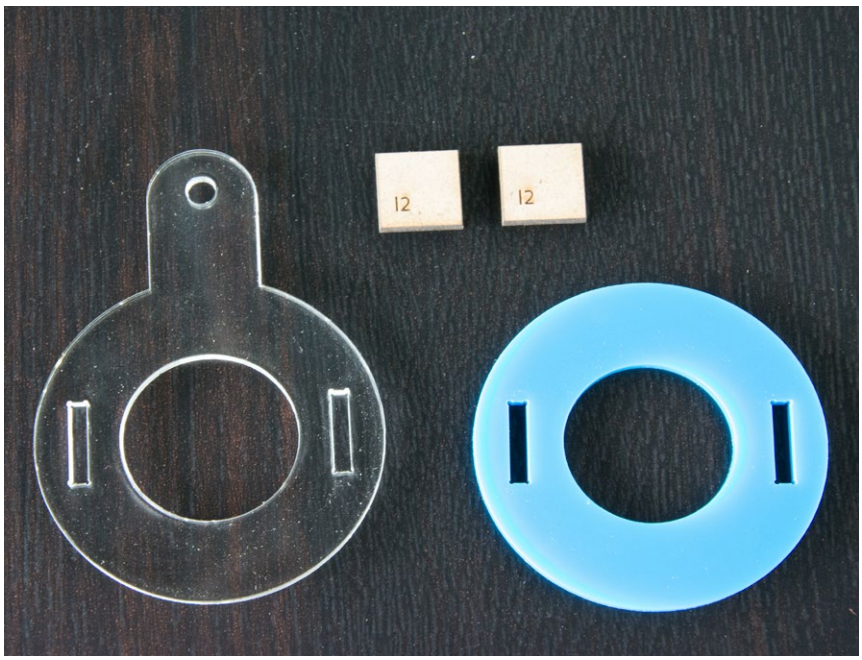




6. MOUNTING THE RING

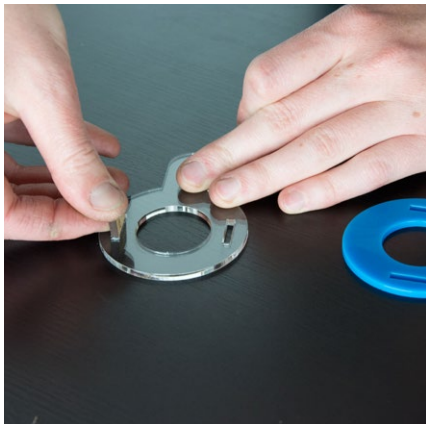
Contents of the sachet labelled "ring":

1 x transparent PMMA component
1 x coloured PMMA component
2 x wooden inserts (I2)



6. MOUNTING THE RING

6.1
Drive the I2 inserts into the transparent component and ensure it stays flat. These plastic components can break easily. Therefore you must check that inserts are not oblique while driving.

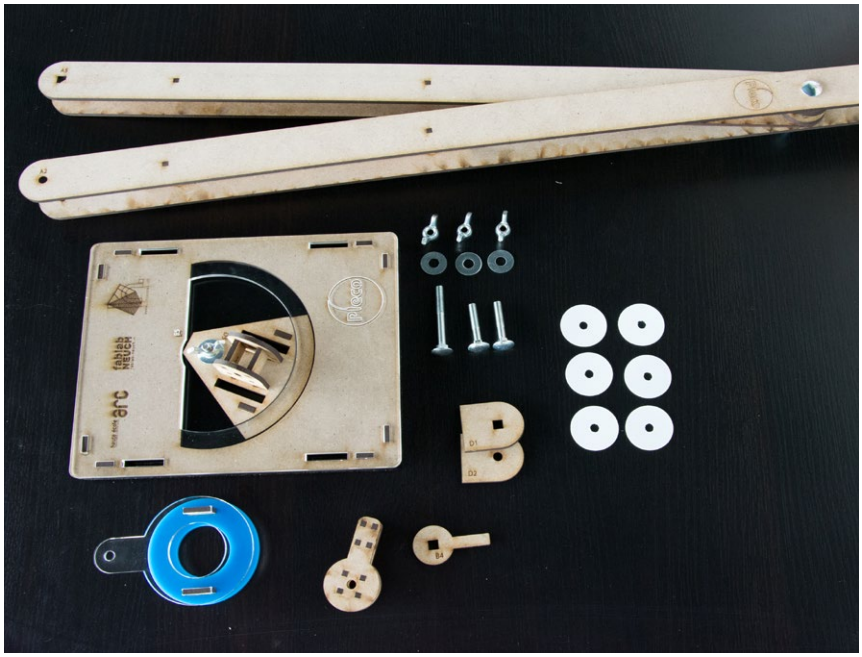


6.2
Hold the coloured component flat and drive in the transparent component by pressing down on its attached inserts.

7. FINAL ASSEMBLY

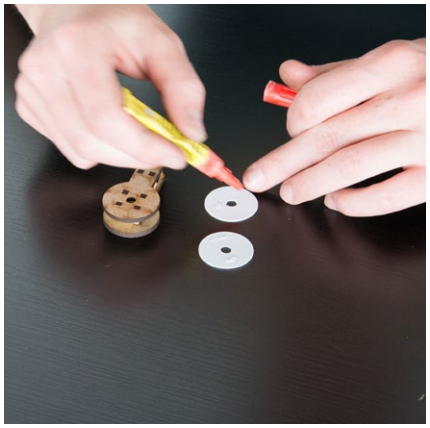
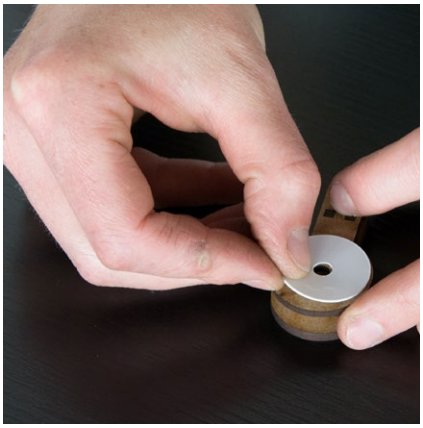
Contents of the sachet labelled “final assembly”:

1 x M5 x 45 dome head square neck bolt
2 x M5 x 30 dome head square neck bolts
3 x metal washers
3 x M5 wing nuts
6 x white PP washers



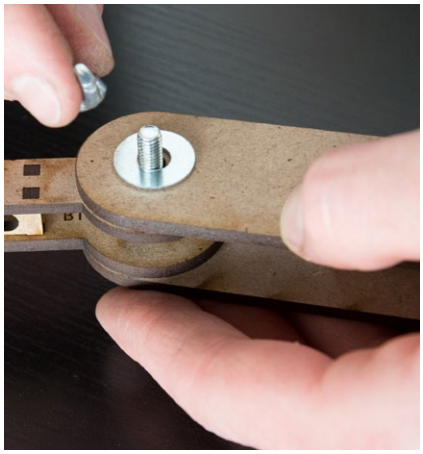
7. FINAL ASSEMBLY

7.1
Position two PP washers on both sides of the "upper assembly" (mounted in step 1), with superglue.

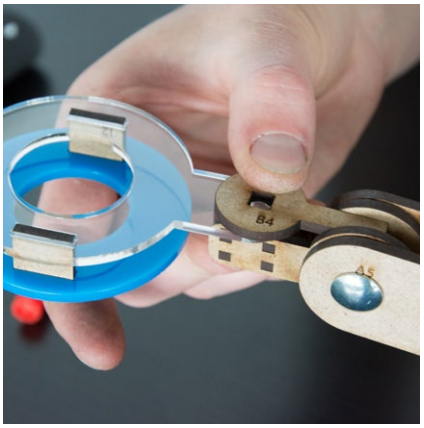
7.2
Place the "upper assembly" inside the free end of the short arm, while the holes are opposite each other.

7.3
Insert a M5 x 30 bolt so that its head is on the side with the square hole. The metal washer and the wing nut are placed on the other side for fastening the assembly.

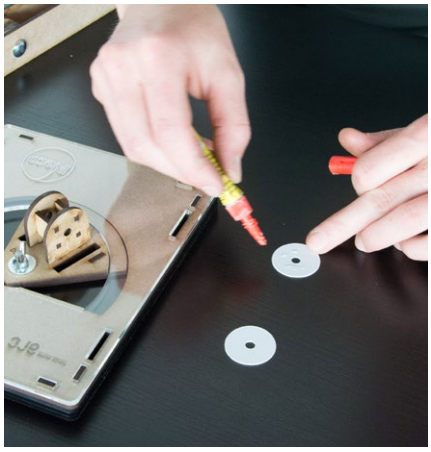

7. FINAL ASSEMBLY

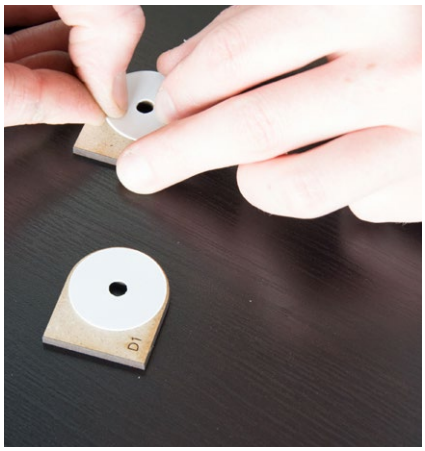
7.4
Place the "ring" (mounted in step 6) on the "upper assembly" with the holes opposite each other. Position component B4 on top by inserting its strip in the "upper assembly".

7.5 Insert a M5 x 30 bolt so that its head is on the side with the square hole. The metal washer and the wing nut are placed on the other side for fastening the assembly.

7.6
Adhere two PP washers on both sides of the "lower assembly" (mounted in step 3), with superglue. The same should be done with components D1 and D2.

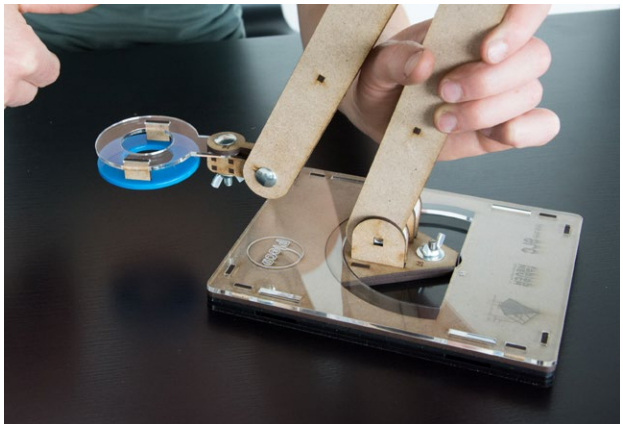




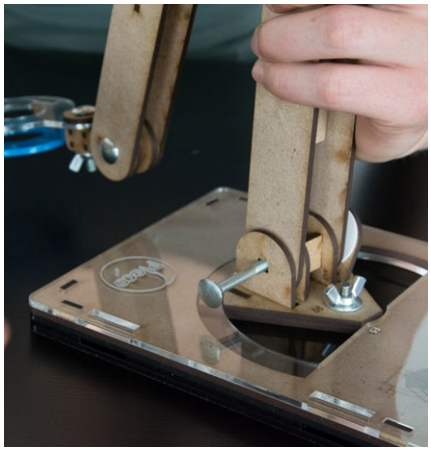
7.7
Place components D1 and D2 in the notches provided.

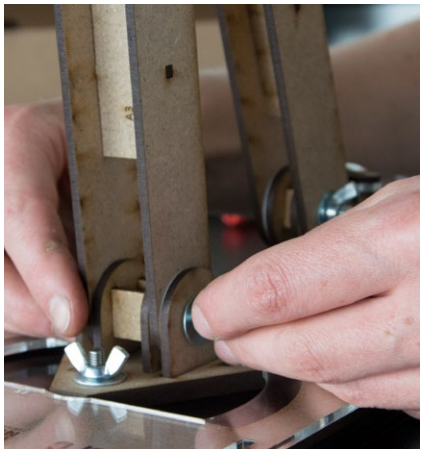
7. FINAL ASSEMBLY

7.8
Hold down the arm on the base, pay attention to the orientation of the arm (unfolding towards the Pleco logo on the base).



7.9
Insert a M5 x 45 bolt so that its head is on the side with the square hole (invert components D1 and D2 if the wing bolt is not on the same side as the others). The metal washer and the wing nut are placed on the other side for fastening the assembly.





With a clamp, your stand is now ready to use!