



Making optics modular. One cube at a time.



1

General Manual



Overview

Presentation of the various components and how to adjust their positions according to the intended use. How to assemble and disassemble.

1. ***Cube, insert, puzzle piece system***
2. ***Connecting cubes two ways***
3. ***Open a cube***
4. ***Open a cube with a drift punch***
5. ***Placing and rotating master inserts***
6. ***Different rotation possibilities (for normal pieces)***
7. ***general Safety instructions***



Instruction 1

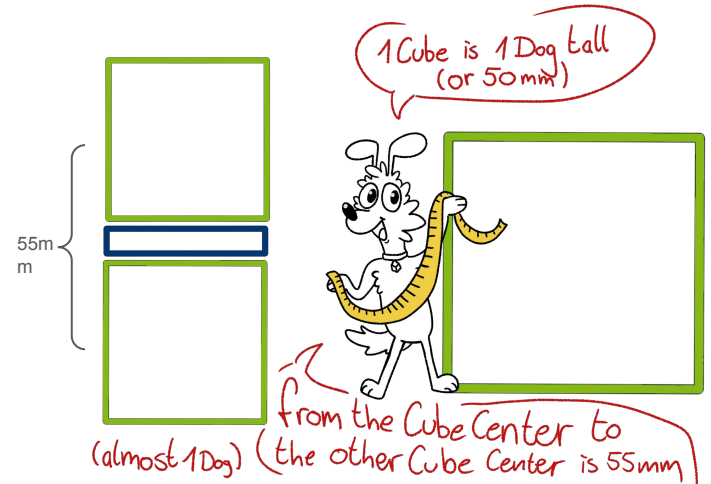
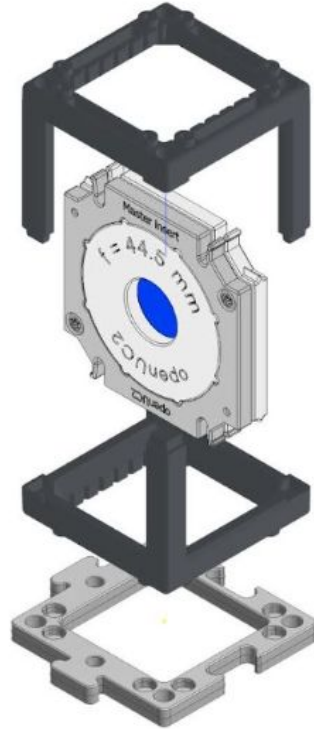
The openUC2 System

Cube half

Insert (e.g. a lens)

Cube half

Puzzle piece



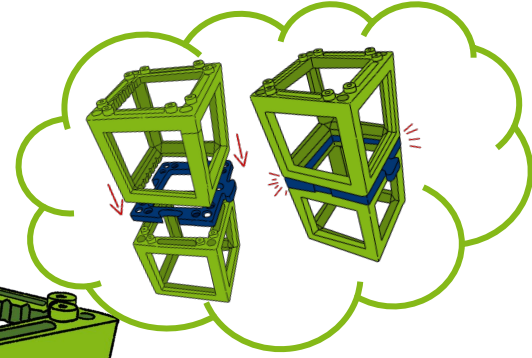
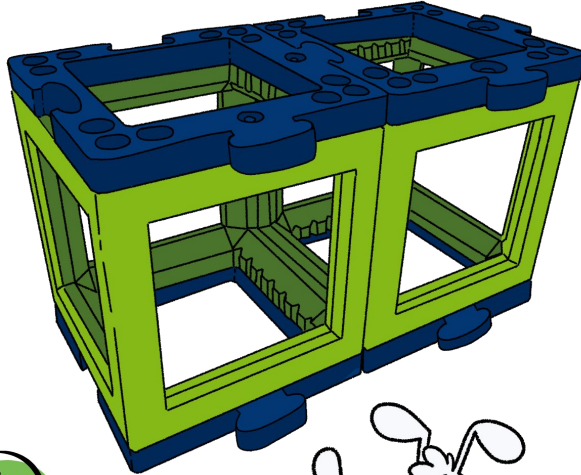
A puzzle piece is 5 mm thick

Instruction 2

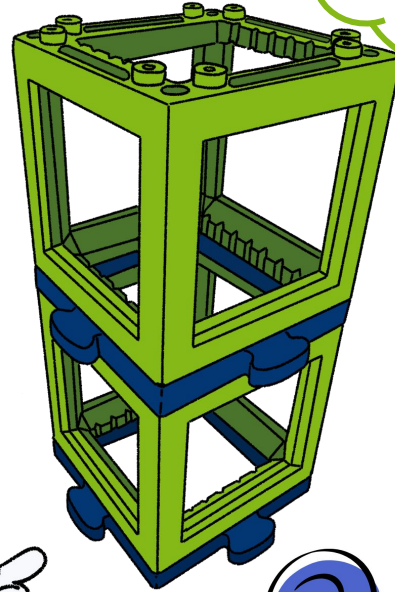
Connecting cubes in two ways

Two ways to connect the cubes:

1) *side-by-side, by connecting two puzzle pieces and then placing the cubes on top. The two additional puzzle pieces at the top are not mandatory, but they ensure greater stability.*



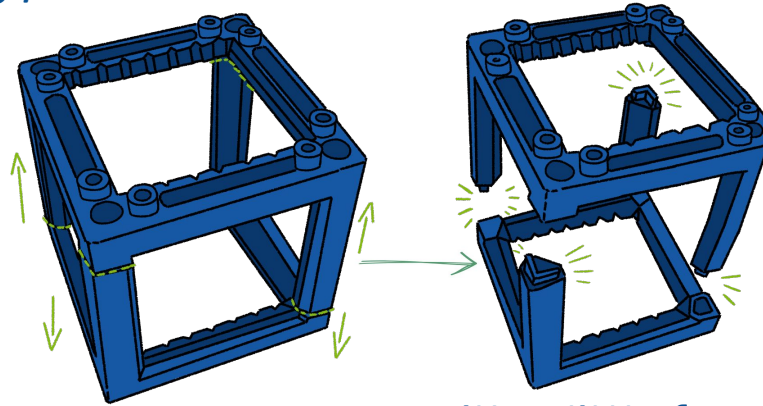
2) *stacked, by placing a puzzle piece between two cubes to join them.*



Instruction 3

Open a cube

To open the cubes, you need to separate the parts at the joining points

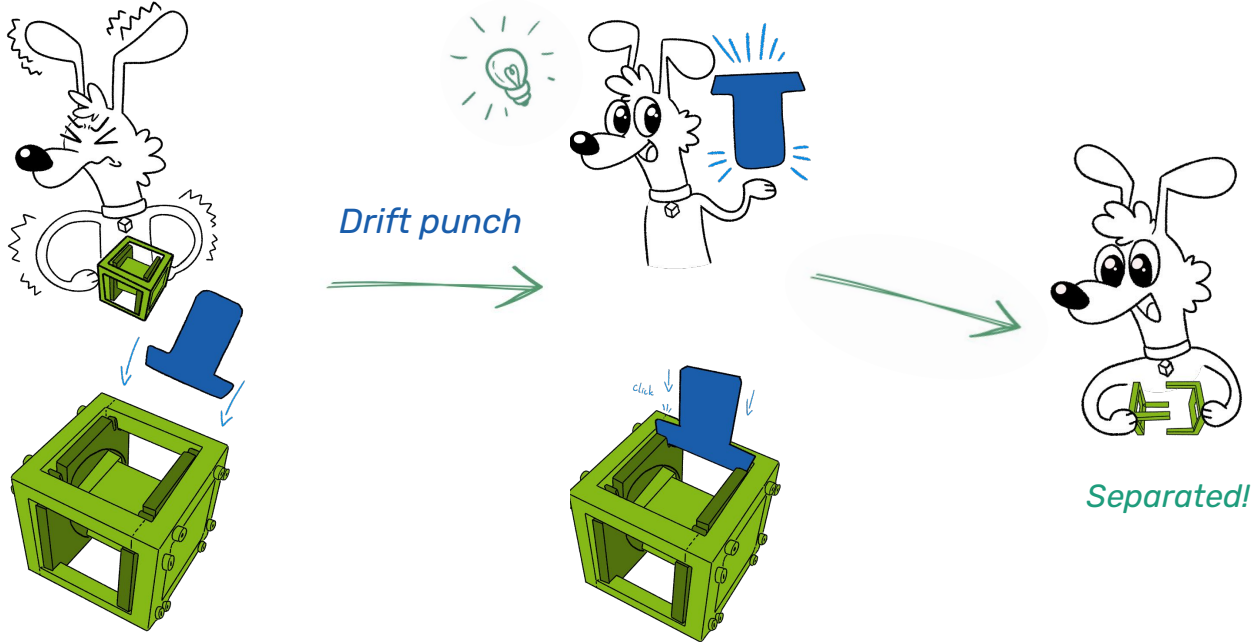


With a little force, they come apart !



Instruction 4

Open a cube with a drift punch

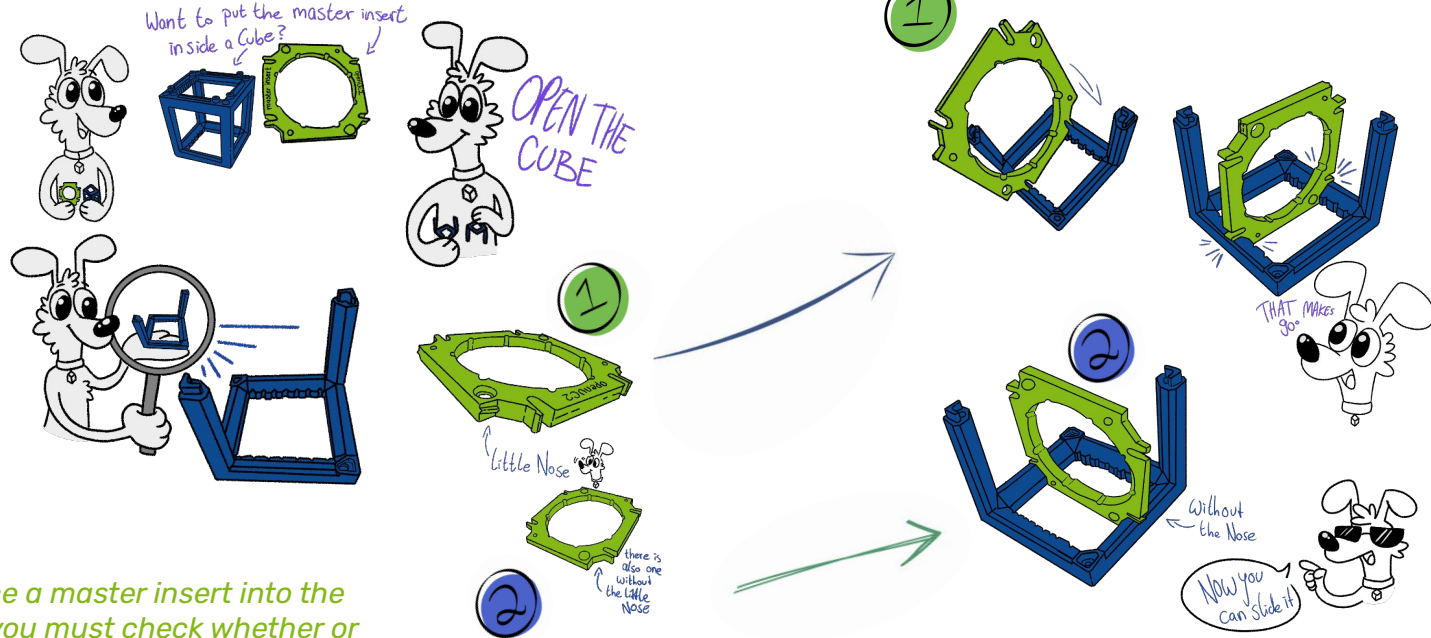


*When dealing with modules that are sandwiched in a cube like this, the **drift punch** helps to open the cube*

Position it as shown in the image and push slightly to separate the cube.

Instruction 5

Placing and rotating master inserts



To place a master insert into the cube, you must check whether or not the part has a little nose.

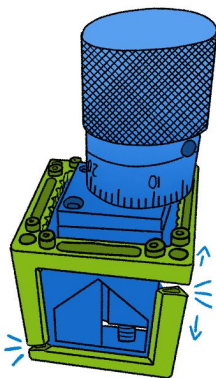
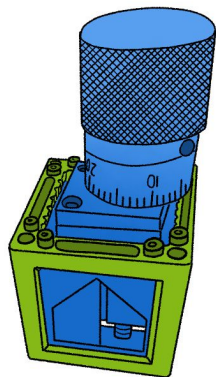
If the master insert has a little nose, then it must be placed as shown in the image, in the notches; it will then be fixed. Otherwise, it is placed as shown in the second image and it can slide.

Instruction 6

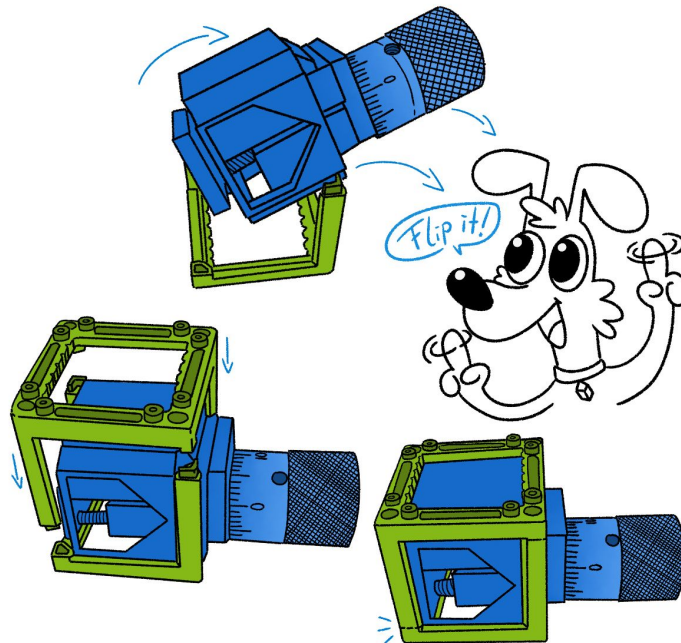
rotating normal inserts

*You can rotate almost every Insert.
An exception are master inserts with noses.*

How to rotate anything (go?)



*Trust me
it works!*



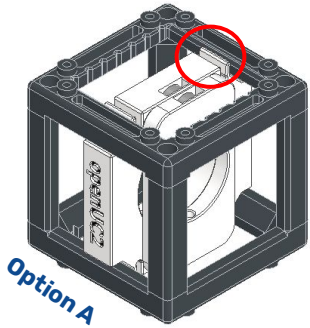
Flip it!



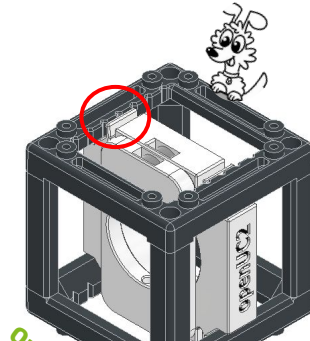
Instruction 6

Different rotation possibilities (for normal pieces only)

For normal pieces (found in Corebox and other Add-ons, not in Qbox or InterferometerBox) you have 5 different rotation position.



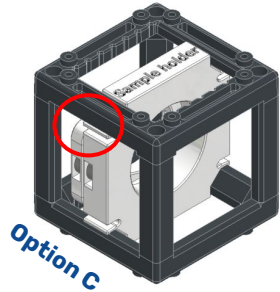
A: The spring wings of the dice insert sit on the smooth side of the cube, with the feathers aligned vertically (up and down). This allows for shift-safe deployment and is used by default in Corebox components. The spring wings hold the insert **firmly** in place, so vibrations or other movements don't affect its position



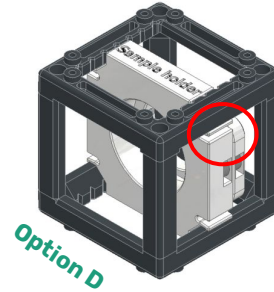
B: The position of the spring wings is on the grooved sides of the cube, aligning the feathers top and bottom. These grooves ensure precise 90° alignment with the optical axis for Masterinserts with noses (found in QBox). For normal pieces, **don't** use option B, but use option A instead.

Instruction 6

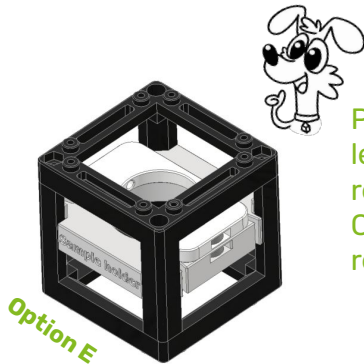
Different rotation possibilities (for normal pieces)



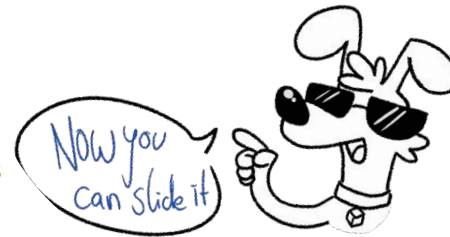
Position the spring wings of the dice insert on the smooth side of the cube, aligning the feathers left and right. This allows for **smoother sliding** during use, but note that without the clamping effect of the springs, the component may **unintentionally shift** out of position.



Position the feather wings on the grooved sides of the cube, aligning the feathers left and right. These grooves ensure precise 90° alignment with the optical axis for other openUC2 components – but this doesn't apply to Corebox components. For Corebox, **don't** use option D.



Position the feather wings on the four legs of the cube. This option is sometimes required for certain experiments. Components positioned this way are referred to as **'rotated 90°'**



Instruction 7

general Safety instructions



- Do not use as a toy.
- Do not look directly at the sun through optical components or point light sources directly into the eyes.
- Do not leave converging lenses exposed to sunlight – fire hazard!
- Mechanical parts pose a risk of pinching – exercise caution during assembly.
- Broken components can cause cuts.
- Do not swallow magnets. Keep away from pacemakers!
- Do not drop modules from a height – risk of injury and damage!
- Do not use defective components.
- Heavy components can cause injury if dropped.
- Sharp objects (pipettes, tweezers, screwdrivers) can cause puncture wounds. Do not bring them near the eyes or sensitive areas of the body.



Making optics modular. One cube at a time.