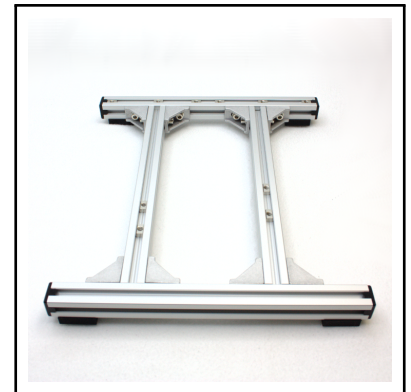
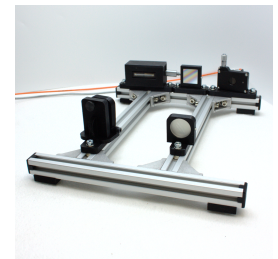


Profile Base MPB-250x250

A frame made of 20×20 mm aluminum profiles forms a base on which further modules are mounted, suitable for spectrometer setups such as a Czerny-Turner spectrometer, among other things. The modules can be moved freely along a profile and then permanently fixed at the respective end position with the help of slot nuts. The individual profiles are connected to each other with angles. These angles can also be moved and fixed using slot nuts. In this way, the exact shape of the frame (especially the distance between the two inner profiles) can be adapted to the respective application.



Caps at the end of the profile not only improve the appearance of the structure, but above all prevent unused, unfixed sliding blocks from getting lost, e.g. during transport. Floor caps with rubber buffers on the underside absorb shocks from outside and ensure that the structure stands securely, so that the structure does not slip so easily during adjustment. The picture on the right shows an example setup with mounted modules for a Czerny Turner spectrometer.



Components and tools required

| AMOUNT | DESIGNATION | DESCRIPTION |
|--------|-------------|---|
| 4 | PR-250 | aluminum profile 20×20 mm, 250 mm long |
| 8 | CC-20L | angle connector |
| 4 | 3D-1020 | 3D printed part end cap (04.07.001) |
| 4 | 3D-1010 | 3D printed bottom cap |
| 16 | SM-5x12 | M5x12 Cylinderhead screw |
| 16 | WA-M5 | Washer M5 |
| 4 | SM-5x8 | M5x8 Cylinderhead screw |
| 30 | SN-20-M5 | M5 slot nuts for 20 mm profile |
| 4 | RB-12x12 | rubber buffers 12×12 mm |



The »3D-« components are individually adapted to the component and made from PLA filament using a 3D printer. The step files are available on request and via download.

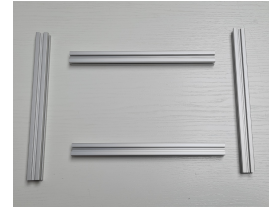
Tool: Allen key 4.



Assembly

It is recommended to gather all the parts and tools needed, to remove any sawdust residue from the aluminum profiles and carefully read the instructions before assembly.

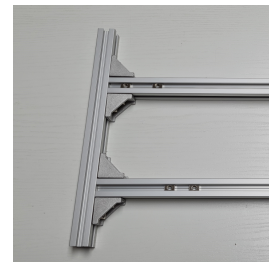
Place the profiles on a flat surface as shown in the adjacent image.



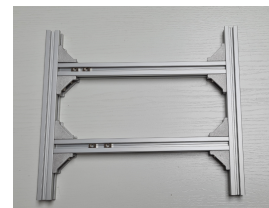
Screw profiles B and C to A: To do this, slide four slot nuts into the side groove of part A and one slot nut into each of the side grooves of parts B and C. Now screw the profiles together using the angle connectors, M5 screws and washers.



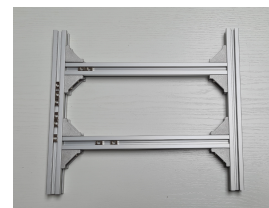
The exact distances between profiles B and C will be set later when assembling the spectrometer, but when assembling it for the first time you should make sure that all profiles are at right angles to each other and that the finished frame lies on the base without wobbling.



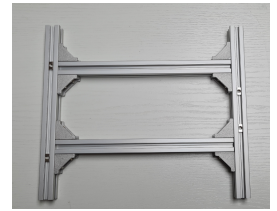
Screw profile D to B and C: Similar to the previous step, two slot nuts are required in the lateral groove of part D and one each in the lateral grooves of parts A and B. Before assembling, however, two slot nuts each must be inserted into the upper groove of parts B and C (modules will be placed here later).



Now insert six slot nuts in the groove on the top of profile A.



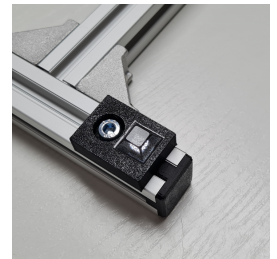
Turn the frame over and slide two slot nuts into the bottom of profile A and profile D.



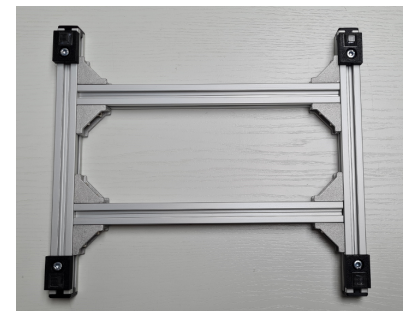
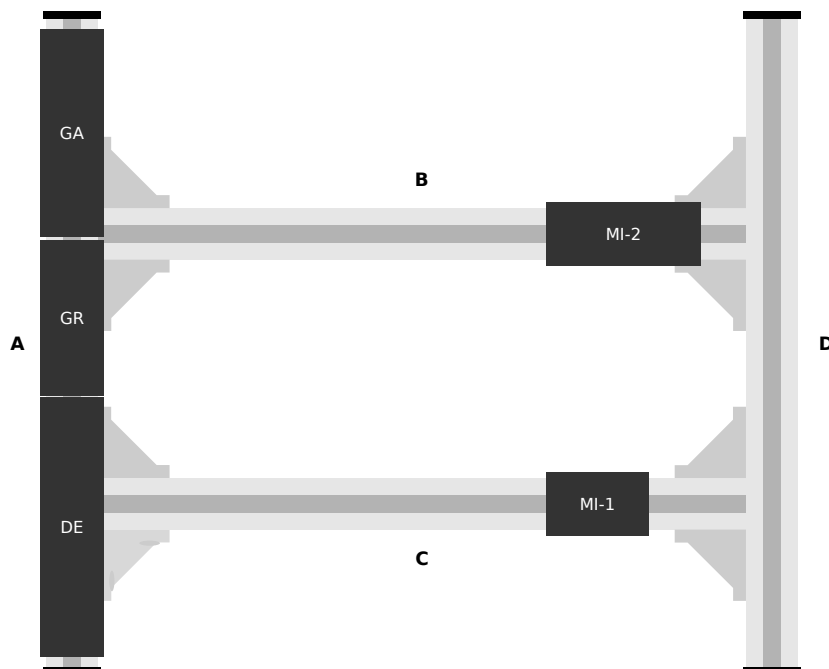
Put the four end caps on all profile ends to protect the slot nuts that have not yet been screwed on from accidental loss.



Lay the profile frame upside down and screw the bottom caps to the respective ends of profiles A and D, with the rubber buffers pointing outwards for better tipping stability.



Sketch and top view of the profile base



More on our website: <https://www.eureca.de/LSC/>.

17. Juli 2023 – Version 1.0

