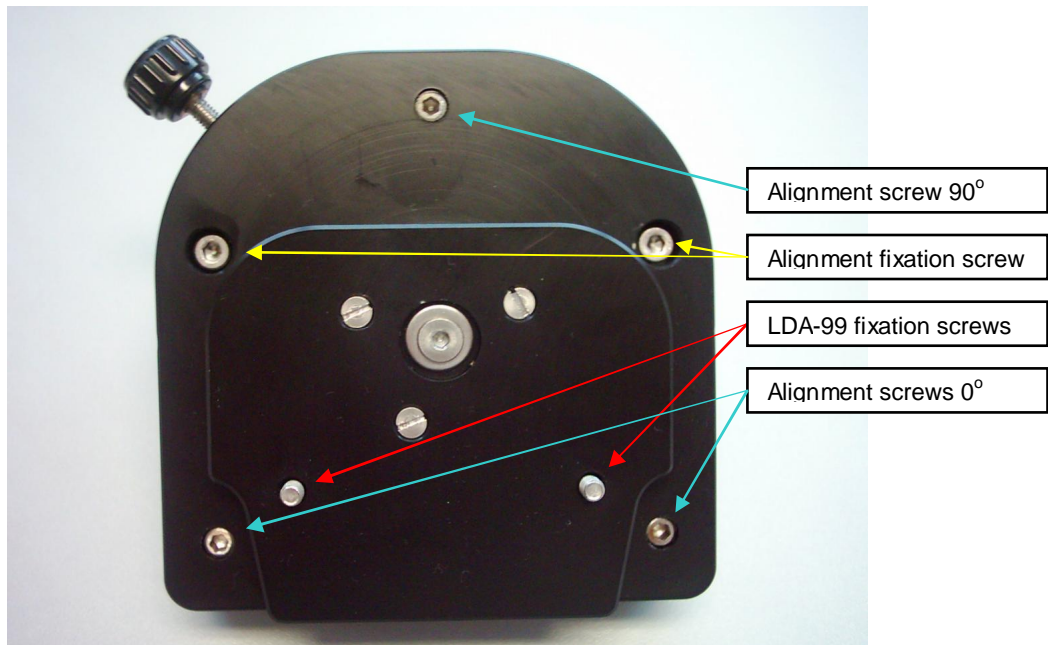
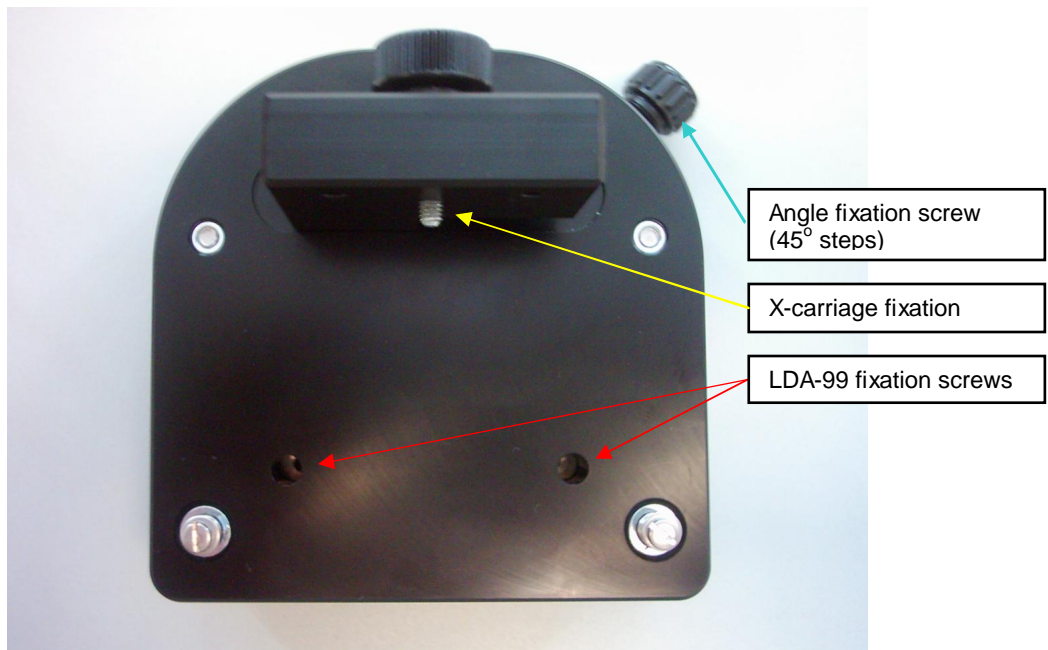


Technical Note: Handling of the LDA-99 adapter

This manual describes how to handle the new LDA-99 adapter for the Blue Water Phantom. The following parts are required to mount and align the LDA-99 within the phantom:



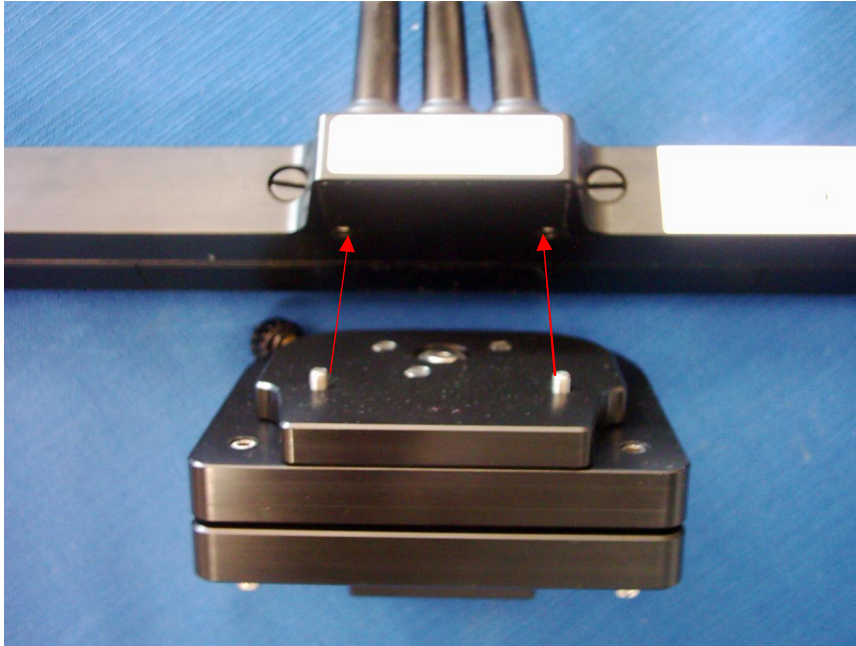
Top of the adapter



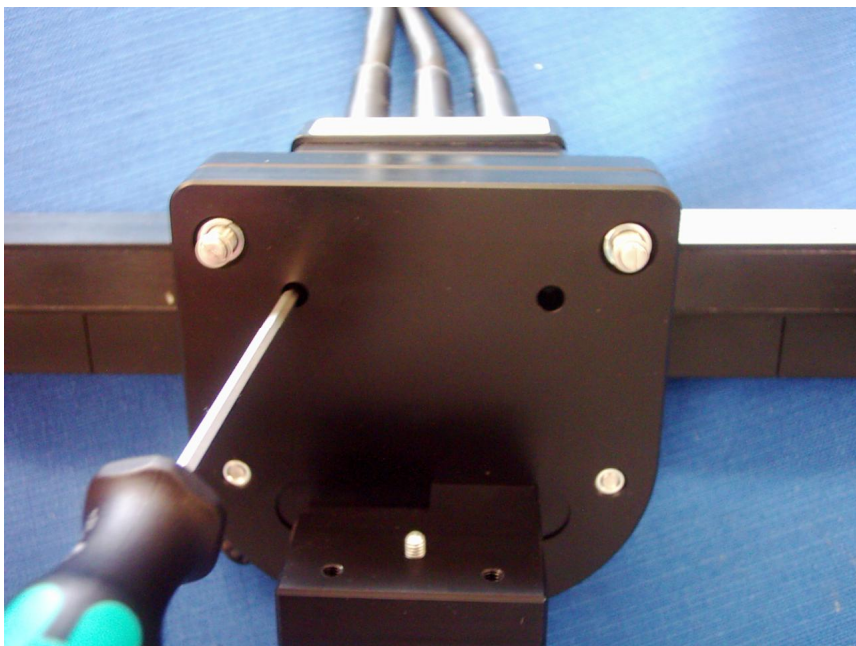
Bottom of the adapter

How to assemble the holder with the LDA-99 and Blue WP:

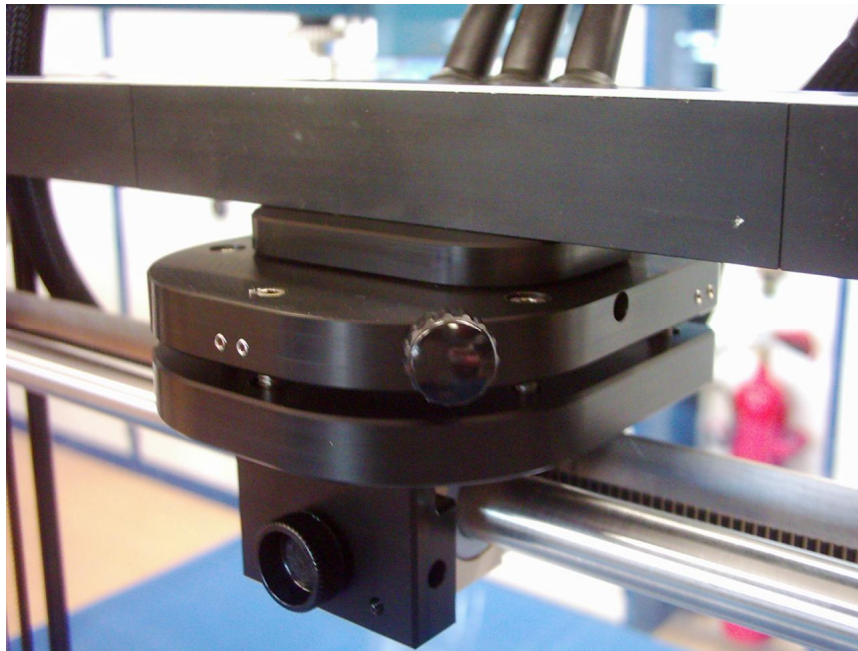
1. Position the adapter with topside to the bottom side of the LDA-99, so that the fixation screws can be inserted into the winding inserts of the array.



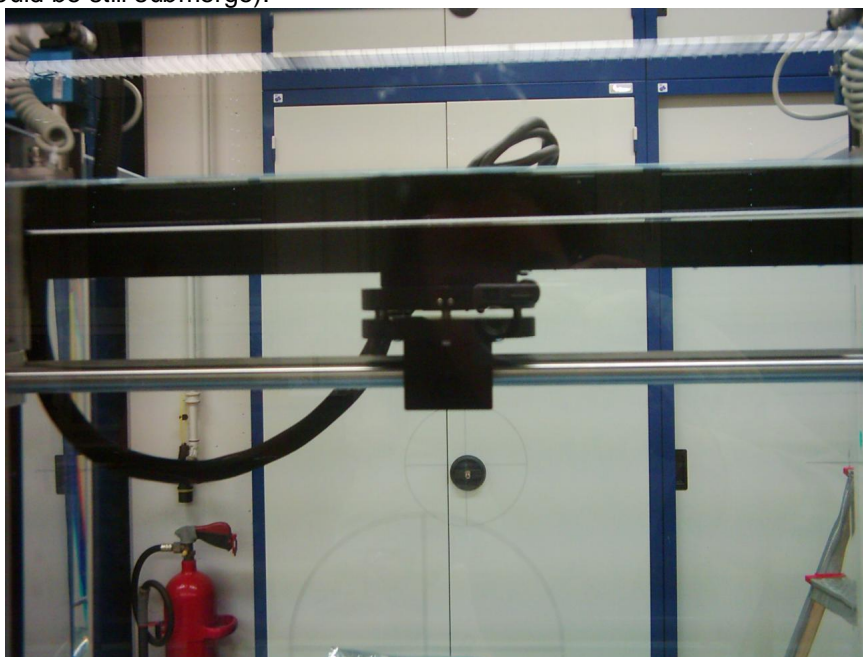
2. Fasten the LDA-99 with a 2.5mm hexagonal screwdriver through the drilling holes on at the adapter lower side carefully, but strong.



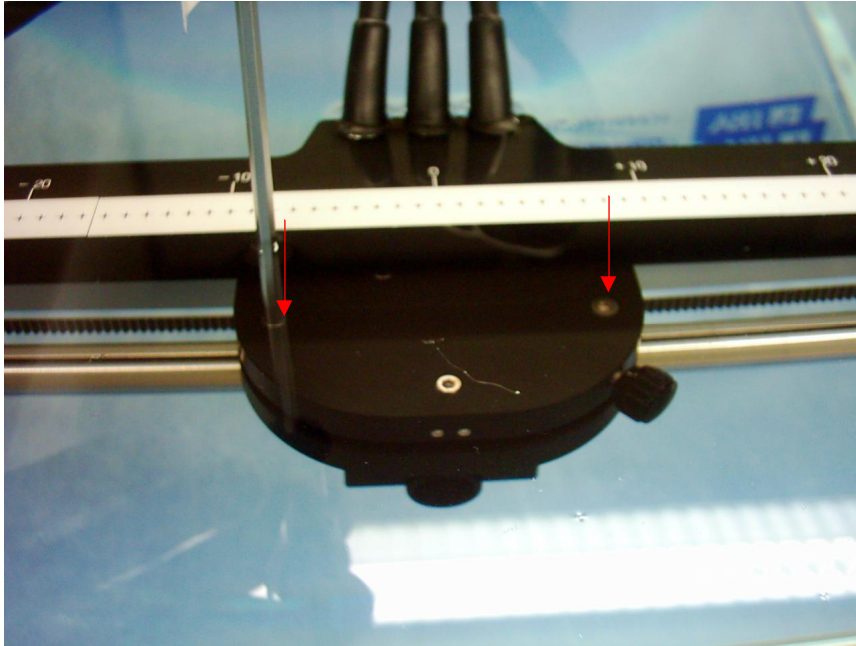
3. Fill water into the phantom as much necessary for the measurement. Carry out the phantom alignment as known and adjust the mechanic.
4. Insert the adapter with the array from left into the fixation pin of the X-carriage until the carriage fixation screw of the adapter matches to the winding drilling of the carriage. Fasten it by turning the raffle screw quite strong.



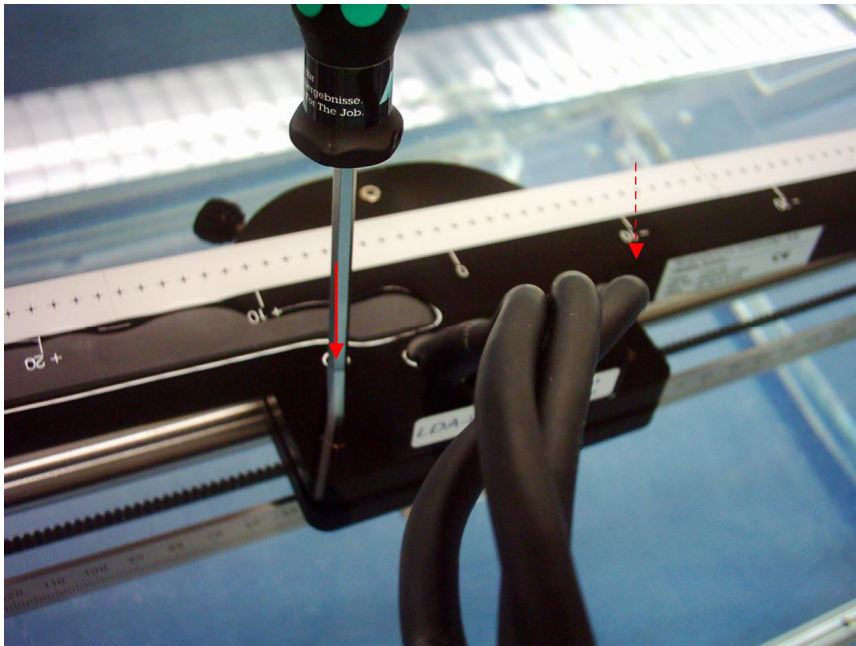
5. Move the LDA-99 with the remote control from down under to the water surface until there is a small gap to the surface (spend attention to the water surface tension, the array's surface should be still submerge).



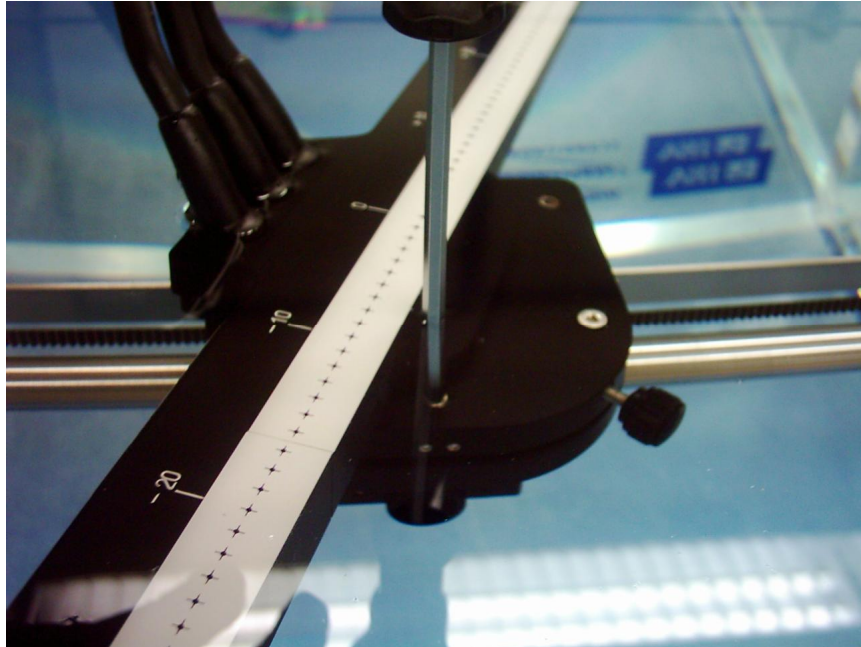
6. Open the two alignment fixation screws a little bit with a 3.0mm hexagonal screwdriver.



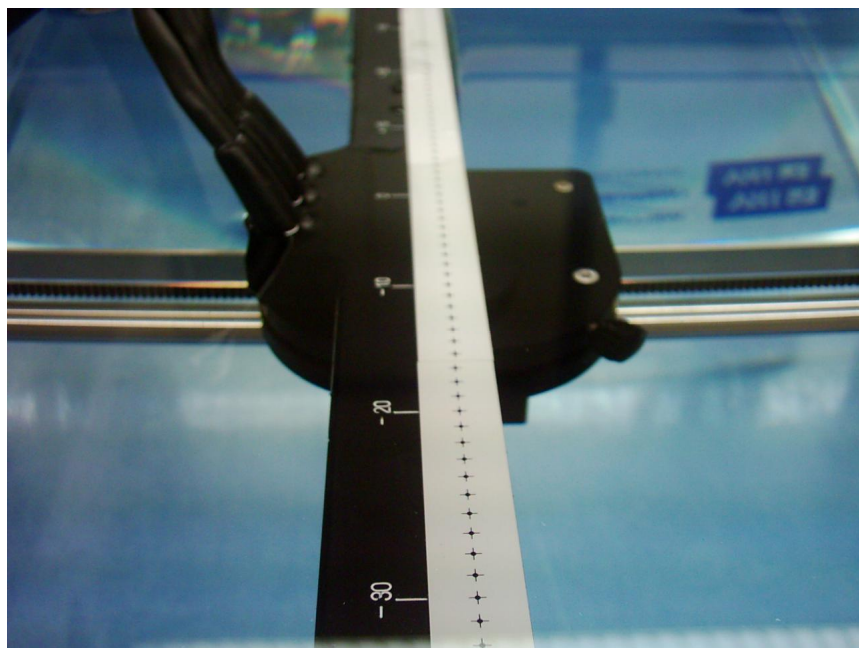
7. After this, check the orientation of the LDA-99 to the water surface. If there is a tilt (not parallel), use the same screwdriver for alignment of the array by turning the two associated alignment screws on the LDA-adapter until the array is parallel to the surface.



8. Unfasten now the angle fixation screw and turn the array approximately 90° to the x-axis. (The 90° alignment screw of the holder should not be covered by the LDA and just be arriving able for the 3.0mm hexagonal screwdriver.)



9. Check the parallelism of the array to the water surface (should still be covered by water, if not, move downwards with the remote control and carefully back until you see a small gap between the array and water surface). Turn the alignment screw into the corresponding direction to align the LDA-99 in this orientation.
10. Remove the screwdriver and complete the 90° turn. Fasten the angle screw and check once again if the array is parallel to the water surface (keep a small gap of a few millimetres for a better observation).



11. If the alignment result is OK, open the angle fixation screw and turn the LDA-99 back to 0° position to check the alignment to the water surface in this orientation, too. If necessary, re-align the holder as described in the steps before. Turn the array than back to the 90° position for alignment check and repeat the procedure as explained above.
12. Or you turn the LDA-99 to 45° position and fasten the angle screw. Turn the 90° and 0° alignment screw if required.
13. After ensuring that the LDA-99 is well aligned to the water surface in all orientations, don't forget to fasten carefully the two alignment fixation screws (whose also can be used for a final fine alignment of the LDA-99).