

## Assembly and Disassembly of Light Guides (LLG) Solar Light simulators 601-300 V. 2.5

In order to prevent and avoid any future unnecessary damage to the simulator due to improper handling of the LLG (Liquid light guides), please find below a short procedure for the correct installation of the LLG and fixation screws as these elements are extremely sensitive and easily damaged.

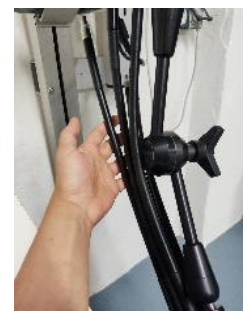
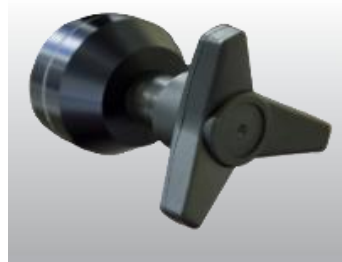
### INSTALLATION OF LIGHT GUIDES IN SEATED OR PRONE POSITION :

The Liquid Light Guides (LLGs) can be positioned for exposures in the seated or prone position. The multiport is shipped with the LLGs installed for use in the seated position. ***If the Multiport is returned for service the LLGs must be installed in seated position in order to bend them to fit into the pre-formed foam in the shipping box. (this is not needed if you have the special designed flying case for multiport transport in your possession)***

Failure to install the LLGs in the seated position and placing the Multiport in the shipping box will damage the LLGs.

Leave the simulator attached to its support.

- 1- When you are positioning the light guides in prone position, always start by holding the Homogenizer block and unlock the arm by turning the knob counter clockwise until the arm moves freely.
- 2- Bend the arm slightly to about a 45° angle pointing away from the column and lock the arm back in place using the knob. This will allow an easier insertion of the light guides. (See picture below)



- 3- Insert the top two LLGs in the homogenizer block into the back two holes under the Multiport. The left hole is port 1 and the hole is port 6. Insure the LLG is inserted all the way. Only a small portion of the black plastic on the LLG should show when inserted correctly.

***Do not do this procedure with the arm locked in prone as there might be a risk of damaging or bending the light guides permanently.***

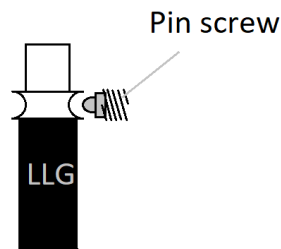
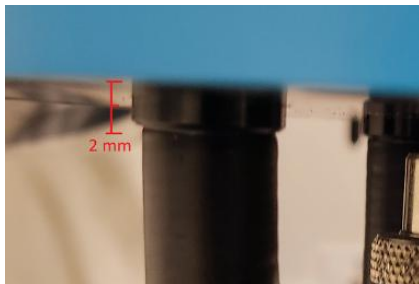
While holding the Homogenizer block, unlock the arm by turning the knob counter clockwise until the arm moves freely. Position the notch en of arm as shown to allow proper range of motion.

Tighten the screw just below each occulter knob, port 1 and 6, to hold the LLG in place. Do not apply a lot of pressure to these screws.

Once a set of 3 light guides are inserted inside the holes under the multiport, gently push the light guides upwards and center them inside the holes so they fit correctly in position.

Warning: Do not “push” the guides too much, because the end of the guides is made of quartz, therefore very fragile.

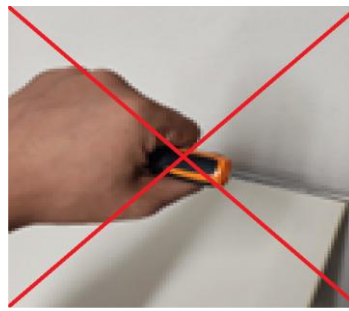
You can check the position of the fibers by comparing the position of the guides on the following photo :



There should be an extending part of the plastic cover of the LLG tube sticking out, at about 2 mm (millimeters) which will indicate you that the light guide is correctly entered in place. There is no need to apply further pressure.

Hold the homogenizer block to keep the light guides in position and lock the arm by turning the knob clockwise so everything stays in place.

- 4- Once the light guides are correctly inserted and the arm is locked into a stable angle, take the flat screwdriver (*it is important to use the screwdriver delivered with the simulator as a larger one will damage the screw threads*) and hold it by using the finger tips and not by the handle (see pictures below) and insert it in the hole below each occulter knob.



These screws are specially made in aluminum and are hollow inside which makes them very fragile and easily breakable.

**Gently turn the screw clockwise, until you feel that the screws can no longer be turned. Do not apply more additional pressure.**

Once you feel that you are in contact with the groove of the head of the LLG, do not turn the screw any further, and unscrew it a half turn to loosen the fiber a little. This will allow much greater maneuverability with LLG light guides.

**Repeat operations 1, 2, 3 and 4 for guides 4, 5, 6.**

## **REMOVING THE OPTICAL GUIDES:**

Conversely, when you want to remove the light guides, just slightly turn the screws counter-clockwise to release the guides, 3-4 turns should be enough. It is not necessary to unscrew to the opposite limit.

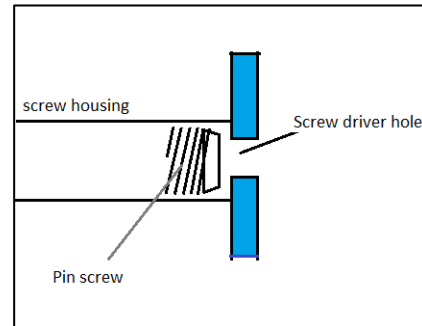
**Warning:** these 6 screws are trapped in the metal cylinder. It is not possible to remove them from the outside. Be careful, when you unscrew them, do not try to get them out of their housing and above all, handle the screwdriver with care and without effort.



Damaged Screw



Screw



Screw mounting