MPROBE 60 MAPPING STAGE

ASSEMBLY INSTRUCTIONS

Required tools:

Hex keys (english), flat screw driver **Time:** 30-40 min It is recommended to have 2 persons to do this assembly

Step 1.



Attach bridge holders to mapping platform using 6x 8-32 screws (enclosed). Do not tighten the screws at this time



Place stage on the stage posts and remove the bracket. (The bracket is used during the shipment to protect the stage)

Step 3. Connect cables and power

- 1. Connect Controller to Mapping stage (connectors on the back of the stage) using cable with D-Sub connectors. X axis connector of Controller to X-axis connector of the stage. Use the flat screw driver to tighten the connector it should be fully engaged.
- 2. Connect USB cable between PC (USB hub) and controller
- 3. Connect 24 Power adapter (120W) to Controller

Step 4 Moving stage to fix it to the platform post

- 1. Check that USB dongle is plugged in
- 2. Start TFCompanion. It is not necessary to connect measurement system (there will be error message "Cannot connect to spectrometer" ignore it) we are just dealing with mapping stage now.
- 3. Switch on controller power (from panel switch on Controller)

Step 2

4. Select Actions/Mapping from the main menu – Mapping dialog is displayed.



- 5. Select Connect to Controller. Initialization may take a little time -30 sec. If initialization is successful loaded stage properties are displayed in controller log (text box below the button)
- 6. Select Mapping and Grid Control tabs to display Manual Position Panel



MANUAL MOVEMENT CONTROL

Use up /down arrows to move stage in Y direction. Press and hold the arrow button. Stage should move smoothly in the direction indicated by arrow.

If stage makes loud noise and/or does not move – most likely D-sub connector is not fully engaged. Switch off power and check that connector is fully connected



7. Remove stage insert and move stage in Y direction until cutout in the top plate line up with holes in bottom plate of the stage. You may need to move a little bit in X direction as well.

When holes are lined up – position stage to line these holes with the Posts. Use 8-32 screws to fix stage to the posts. (do not tighten hard the screw yet) There 4 post and 4 holes – move the stage in Y direction to second set of holes and repeat.

Now can tighten the screws....



Fixing the stage to the platform posts

11. Place insert plate back on the stage.

Step 5. Setting the Bridge



Bridge is hollow inside and reflectance probe can threaded inside the bridge (this is optional step)

1. Carefully push common end of reflectance probe inside the bridge. Remove cover on the side of bridge corner. If necessary section of the bridge can be removed to thread probe more easily.

2. Place the Bridge on the platform and fit it in the bridge holders. Guide reflectance probe by hand ti go through the cutout in the platform with minimal bending.



3. Put side holders and secure bridge using long screws/ nuts. Use 8-32 screws to secure bridge to bridge holders



Stage assembly

- 4. Attach the bracket and screw-in lens holder.
- 5. Thread reflectance probe through the lens holder but do not attach to the SMA connector yet.
- 6. Hold the lens and adjust the lens holder, so that the distance between the lens and sample surface is ~ 40mm
- 7. Attach reflectance probe to SMA connector and lightly tighten (not fully) 3 set screw holding adapter.
- 8. Attach visible fiber end of reflectance probe to 5W TH Lamp (MProbeNIR box) and switch on power (switch on the back panel)
- 9. Place black pad (smooth side up) on the stage, hold the lens by hand and rotate/ adjust the position of the lens holder until focused light spot is visible on the black pad (lens should not rotate during this operation)
- 10. . Tighten 3 set screws.
- 11. Connect all fiber ends and follow instruction on the system test. (To adjust the position of the lens, can now rotate lens holder together with lens to achieve optimal position based on the signal monitor in the software)