

DESKTOP LASER ALIGNMENT

Revision: March 2018

WHAT THIS GUIDE IS ABOUT

This guide is designed to help perform the laser beam alignment on the desktop series VLS2.30 and VLS3.50 Universal Laser Systems.

You should perform this laser beam alignment each time you install a different laser tube and as part of an annual maintenance schedule to ensure you are achieving the best results possible on your laser machine.

If you own a VLS platform, PLS series, a PLS6.150D, PLS6MW with a Fiber Tube or a ILS series Universal laser machine or if you require further help with the information contained in this guide, please contact the LST Group support department at support@lstgroup.com.au

ITEMS REQUIRED

- Masking tape
- Imperial allen keys

TIME REQUIRED

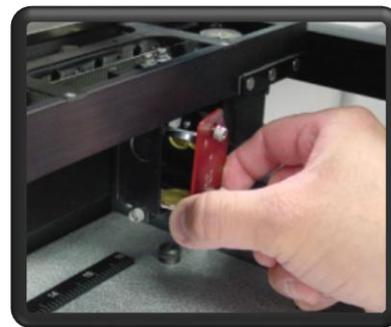
Approximately 10 minutes

WARNING!

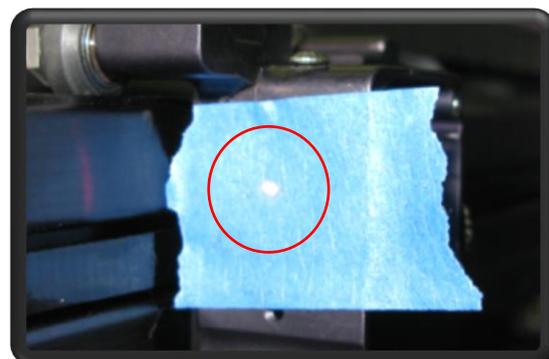
BE AWARE THAT THE MASKING TAPE MAY CATCH FIRE AND TO BE READY TO EXTINGUISH.

INITIAL TESTING

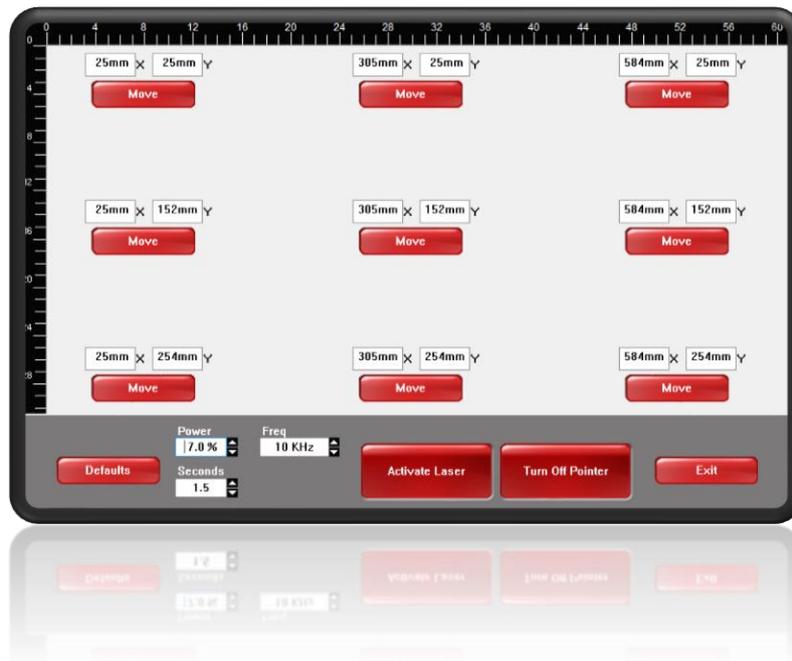
- 1- Power **ON** your Universal Laser System and allow the machine to perform its initial homing procedure.
- 2- Remove the **LENS ASSEMBLY** from the carriage by unscrewing the 2 thumbscrews and pulling the assembly out.



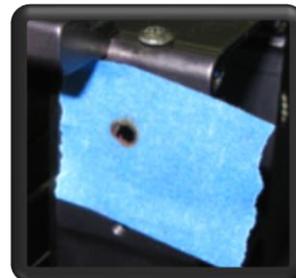
- 3- Place the lens assembly in a safe place.
- 4- Place **2 STRIPS** of masking tape about 30mm long over the hole on the left side of the carriage, the red beam should be seen on the tape. The red beam should be close to the centre of the hole, as shown.



- 5- On the **SYSTEM** tab of the UCP, click the **LAUNCH** button underneath the alignment heading, a new window will appear.

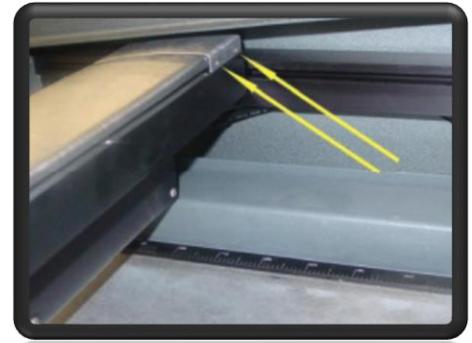
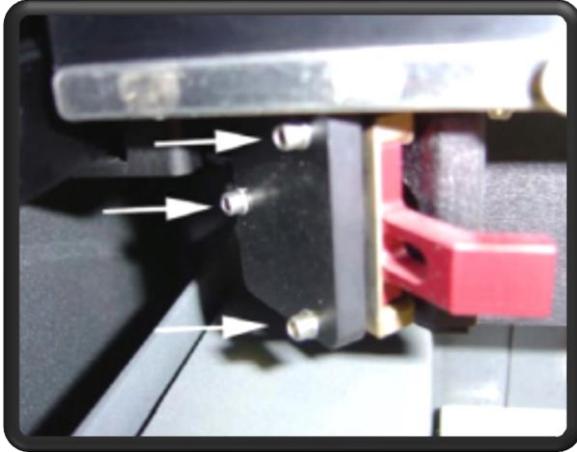


- 6- Click on the **TOP LEFT** button to move the lens carriage to the first position.
- 7- Adjust Power to **7%** and the Seconds to **1.5**.
- 8- Close the top door and click **ACTIVATE LASER**.
- 9- Place another section of tape on top of the existing tape, **DO NOT** remove the tape.
- 10- Click on the **TOP RIGHT** button to move the lens carriage to the second position.
- 11- Close the top door and click **ACTIVATE LASER**.
- 12- Place another section of tape on top of the existing tape, **DO NOT** remove the tape.
- 13- Click on the **BOTTOM RIGHT** button to move the lens carriage to the third position.
- 14- Close the top door and click **ACTIVATE LASER**.
- 15- Remove the all the tape in **ONE PIECE** and observe the burn marks. If all the holes are aligned (right picture below), congratulations your laser machine is aligned. If the holes are not aligned (left picture below), proceed to the next section.



ADJUSTING THE NO.2 MIRROR

- 1- Repeat Steps 5 to 8 above to create a reference point.
- 2- Click on the **MIDDLE RIGHT** button to move the lens carriage.
- 3- Remove the No.2 mirror cover by removing the two screws securing the cover on the rear left-hand side of the x axis arm as shown.
- 4- Locate the three adjusting screws on the back of the No.2 mirror mount.



- 5- Using the appropriate allen key, adjust the red dot visible by moving each of the 3 adjustment screws
- 6- The red dot should now be on top of the burn mark you created.
- 7- Perform Steps 9 to 14 from the section above.
- 8- Remove the all the tape in one piece and observe the burn marks. If all the holes are aligned, congratulations your laser machine is aligned. If the holes are not aligned, repeat this section till the burn marks are aligned.
- 9- Replace the No.2 mirror cover back using the two screws.
- 10- Reinsert the lens assembly into the carriage.

CONTACT US

LST GROUP

109 Bonds Rd Punchbowl NSW 2196
Phone: 61 2 9584 9499 Fax: 61 2 9584 9550
LSTGroup.com.au
Sales: sales@lstgroup.com.au
Support: support@lstgroup.com.au

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