

What you have to know:

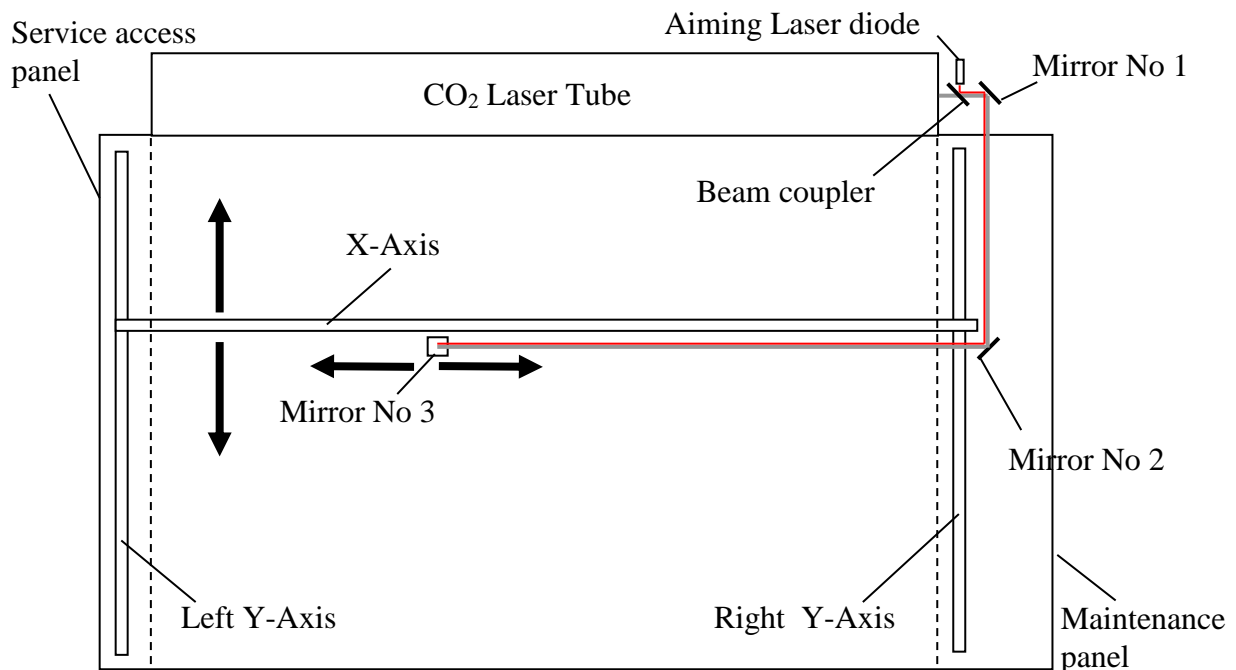
The number of the mirrors is counted from the outlet of the laser tube to the engraving head from one to three.

The whole alignment is done while your machine is running. To make sure the system works at a suitable power level switch your machine off and on again.

The laser beam is invisible. To make it visible, you use adhesive tape. It is burned at the spot, where it is hit by the laser beam and shows so a mark.

The tolerable displacement (distance from burned dot to the centre) is one sixth of the diameter of the mirror or hole where you check the position.

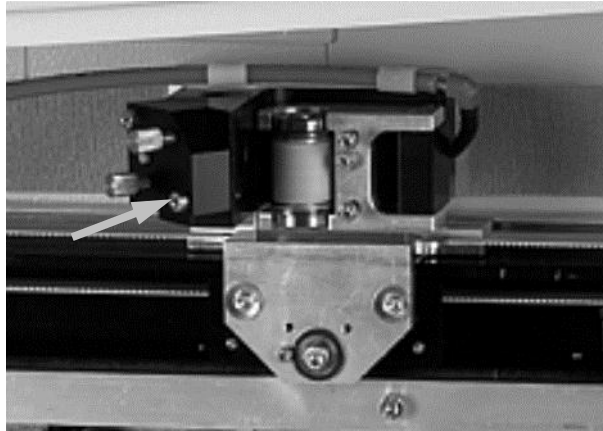
Beam path of the Speedy:



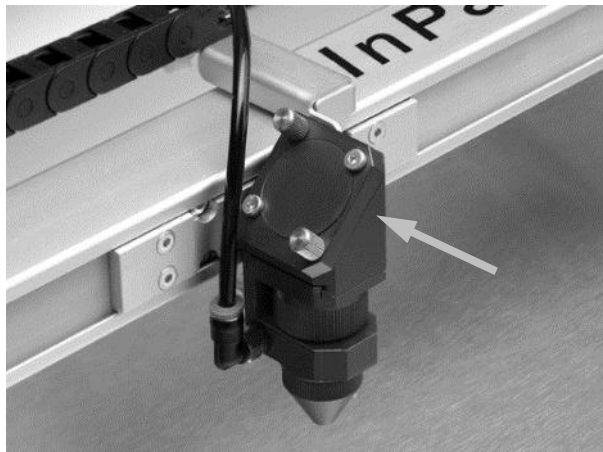
Beam path of the Speedy model

What you have to do:

1. Disassemble the cover on the right side of the machine (10mm allen key).
2. Take your laser protection glasses and remove the grey cover of the first mirror at the rear of your laser (right side) wearing the sign „DANGER. INVISIBLE LASER RADIATION WHEN OPEN. AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION.“
3. Remove mirrors #2 and #3.

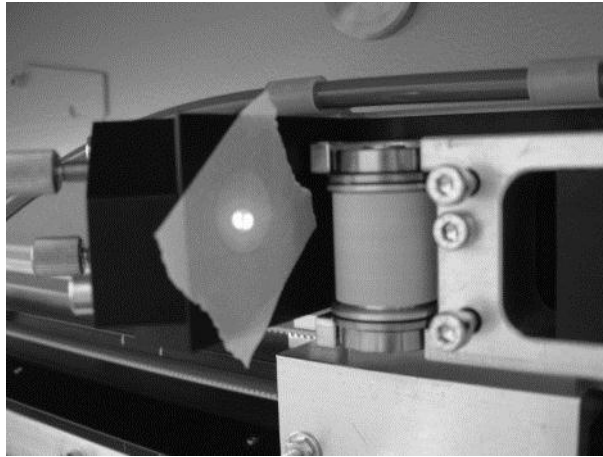


mirror #2



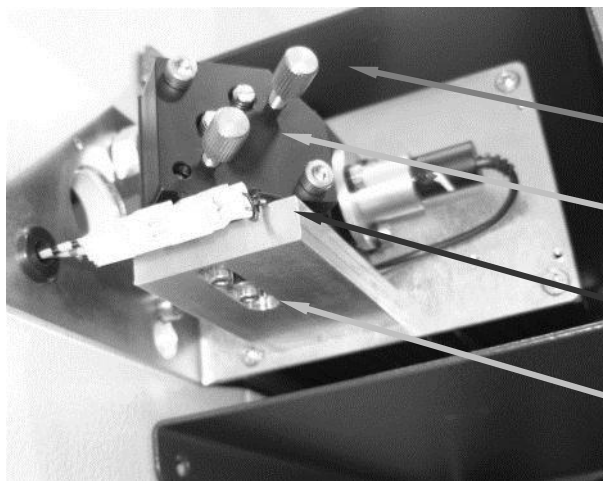
mirror #3

4. Put a piece of masking tape on the hole of mirror unit #2 (black anodized aluminium part).



alignment of mirror no.1

5. Move the x-axis to the top position.
6. Press the test button, keep it pressed and then press the repeat (service) button until you see a little mark on the adhesive tape. (This is only possible if all doors are closed or a service plug is put into the socket). The mark should be in the centre of the hole. (If you don't see a mark adjust the two brass screws at mirror #1 until you can see one).



left-right adjustment
screw

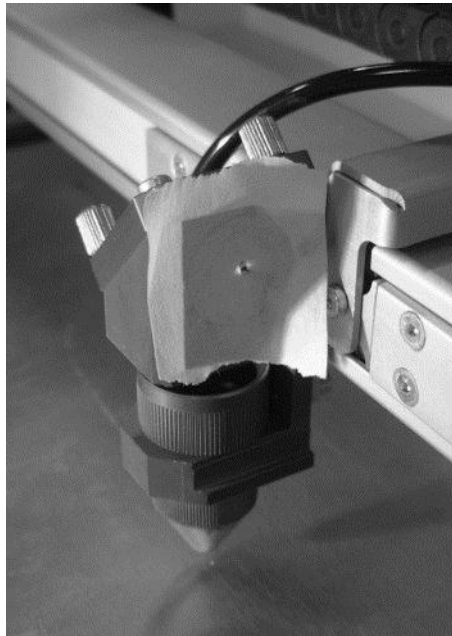
height adjustment
screw

slider

slider fixing screws

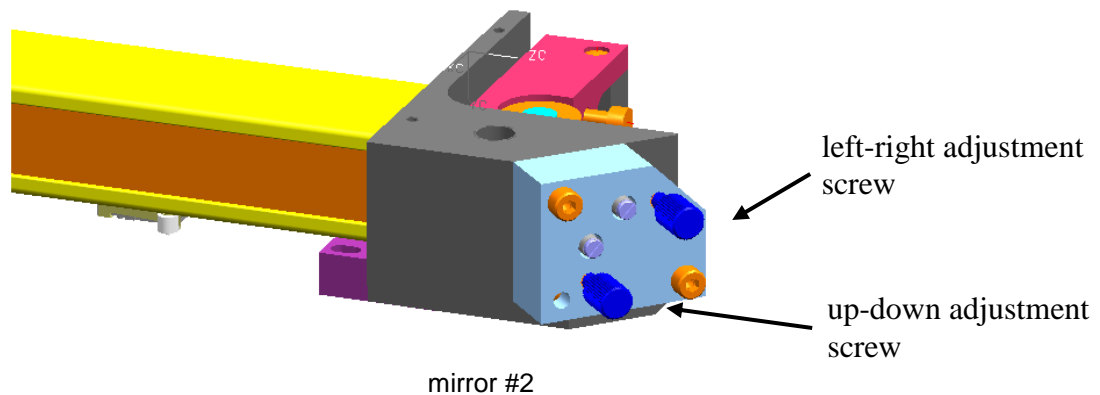
adjustments at mirror #1

7. Move the x-axis to the bottom position.
8. Repeat step 6, but this time try to hit the spot that you've created first.
9. Repeat steps 5 to 8 until the two spots are exactly at the same place.
10. If the spot is not centered bring it to the center by moving the slider of mirror#1.
11. Replace mirror #2.
12. Put a piece of masking tape on the beam entrance hole of mirror unit #3.



checking the beam position at mirror #3

13. Move the engraving head to the top right corner.
14. Again press the test button, keep it pressed and then press the repeat (service) button until you see a little mark on the adhesive tape.
15. Move the engraving head to the top left corner and adjust the two brass screws at mirror #2 until you hit the spot created in step 14.



16. Repeat steps 13 to 15 to check the position. If necessary readjust mirror #2.
17. Move the x-axis to the bottom position and check the alignment on the bottom left position. If necessary do small corrections at mirror #1.
18. Check the alignment on all four corners.
19. Assemble all parts again.
20. Now your engraver is aligned properly.