



MSM – NEEDLE - SETUP

INTRODUCTION

This document will assist in the fitting and setting up of the needle in your MSM.

PROCEDURE

The following also applies to replacing the needle in situ without the need to remove the tool holder.



Place the tool holder in the Micromanipulator as shown.

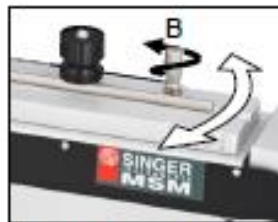
Place the needle in the holder using the forceps provided. For very deep agar the needle can be secured in a low position for agar 5mm deep or less raise the needle 3mm from the base of the holder for best results.

Make sure the lamp is connected and the MSM is turned on.

The intensity control for the microscope lamp is located beneath the main table on the right of the lamp housing. There is also an iris-diaphragm below the condenser lens.



Clamp the tool holder in place using the black clamp knob (A). Fine adjustments can now be made to centre the needle.



North/south adjustment is made by unlocking knob (B) and swivelling the top-slide.



East/west adjustment is made via knob (C).

Place needle in its holder as close to the centre of the condenser as you can by eye. Ensure the needle is perpendicular.

Center the needle in the field-of-view by ensuring that the ellipse (the full movement it describes) is equally distanced from the edge of the field.

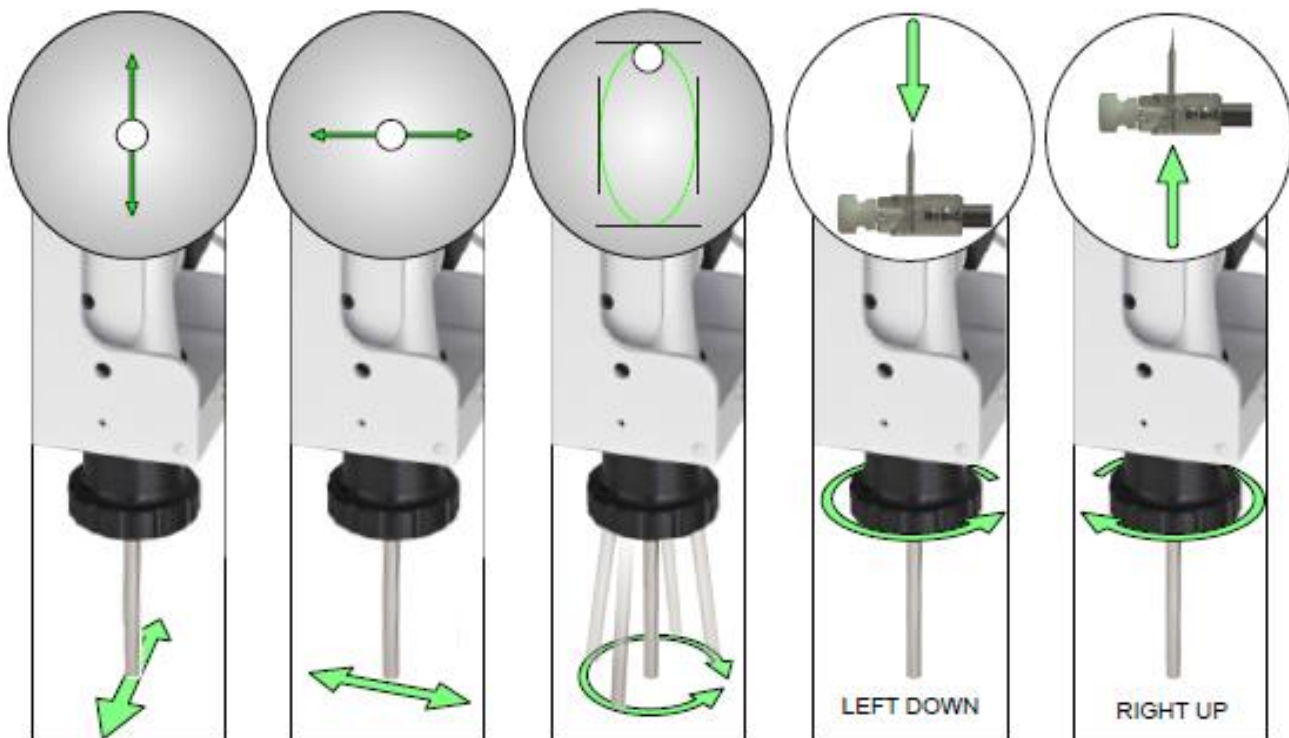
The pendulum joystick should be nominally centred for adjustment then moved to its extremes to fine tune.

Use the X4 objective to find the needle tip, focus and roughly centre the needle changing to the X20 for final adjustment.

Remember: Clockwise towards agar, Counter-clockwise away from agar.



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Needle movement as seen through the eyepieces

CONCLUSION

We hope that this explanation will assist you in performing the above procedure. If you need further assistance do not hesitate to contact the Technical Support Team at Singer Instruments.

CONTACT INFORMATION

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