

Topic:

Filter Wheels

- a) Not Homing Properly
- b) Obstructing View

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Solution Report

Symptoms/Conditions:

Filter Wheels not homing properly, or obstructing the camera's view.

Additional Solution Reports Required: Matrox Board, Live Display; vxdiag.

Solution:

- 1) Initialize "live" matrox display (*See Solution Report - Topic: Matrox Board, Live Display*).
- 2) After you have acquired the "live" matrox display, start **vxdiag** in another window (*See Solution Report - Topic: vxdiag*).

Command (or 'x', 'r'):	r on
Command (or 'x', 'r'):	r home_color
Command (or 'x', 'r'):	r home_density

NOTE: If filter wheels do not home at all (i.e., spin continuously), go to step 4.

- 3) We need an unobstructed view through camera. If view is not obstructed go to step 7. If the view is obstructed, gain unobstructed view by:

Command (or 'x', 'r'):	5mr20
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This moves the color wheel clockwise 20 motor ticks. Repeat "**5mr20**" until the view is unobstructed, or:

Command (or 'x', 'r'):	6mr20
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Which moves the density wheel clockwise 20 motor ticks.

With an unobstructed view, home both wheels again:

Command (or 'x', 'r'): **r home_color**
Command (or 'x', 'r'): **r home_density**

- 4) If color wheel homes in position which occludes camera vision, "**decrease**" sensitivity. Turn R1 on lens interface board (on top of camera) one full turn counter-clockwise (CCW R1) and repeat homing command. Continue the above decreasing sensitivity steps until home position is unobstructed.

If color wheel does not home at all (i.e., spins continuously), "**increase**" sensitivity. Turn R1 clock-wise (CW R1) until it does stop.

NOTE: Color wheel must be homed before proceeding.

- 5) Home the density wheel:

Command (or 'x', 'r'): **r home_density**

- 6) If density wheel stops in a position which occludes camera vision, "**decrease**" sensitivity (CCW R2) and repeat.

If density wheel does not stop, "**increase**" sensitivity (CW R2) until it does stop.

- 7) Home both wheels:

Command (or 'x', 'r'): **r home_color**
Command (or 'x', 'r'): **r home_density**

- 8) Now to verify that the view is completely unobstructed, execute the following commands:

Command (or 'x', 'r'): **5mr230**
Command (or 'x', 'r'): **6mr130**

Then home both wheels and verify that the view is unobstructed.:

Command (or 'x', 'r'): **r home_color**
Command (or 'x', 'r'): **r home_density**