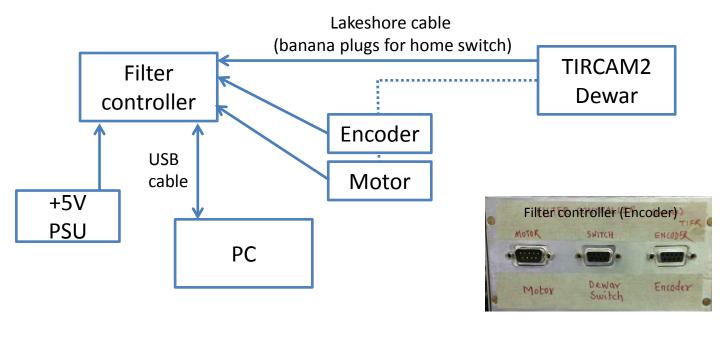
# TIRCAM2 FILTER CONTROLLER (ENCODER VERSION) OPERATIONS & CALIBRATION JAN 2019

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#### Schematic of filter controller connections



^ fig.1

<u>Warning:</u> Ensure that connections are correctly done and with necessary antistatic precautions otherwise damage may result.

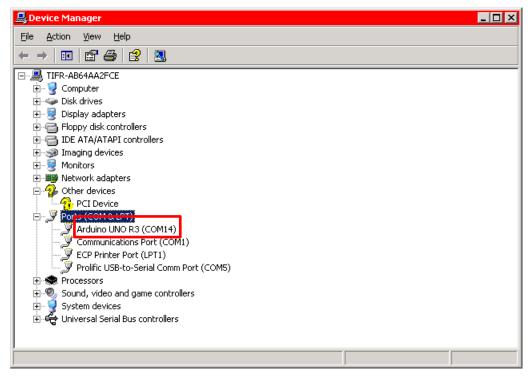


# TIRCAM2 FILTER CONTROLLER (ENCODER VERSION) <u>OPERATIONS</u> JAN 2019

### A1

Ensure filter controller is powered on and USB (to PC), encoder, motor and switch cables are connected.

Check com port allotted to filter controller Arduino Uno . E.g. COM14 as shown in fig 2.





In Voodoo, assign previously noted com/ser. port number e.g. 14 as shown in fig.3. To change filter, Check, check box <u>Filter control</u> and click <u>NEXT</u> button. Click ok in message box shown in Fig. 4.

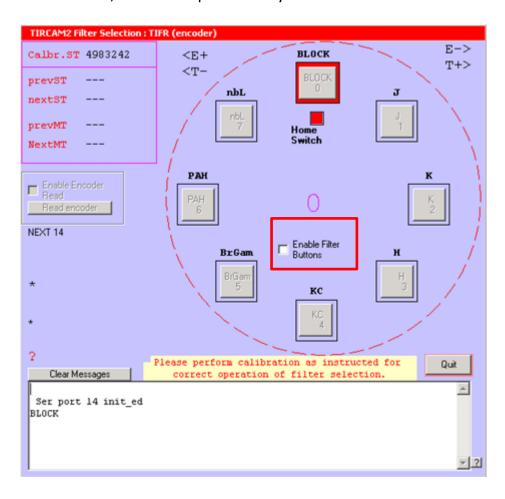
Voodoo	_ 0
Program Debug Setup Parameters Subarray FITS E	×it
Exposure Options  Multiple Exp: Delay (secs):  Beep  Ser.Port  14	Clear Array Idle Array Power On
✓ Display Image ✓ Filter Control   Save To Disk:    PATH  C:\Documents and Settings\TIRCAM\Desktop/  FITS  Auto Incr Type:  FITS  FITS  FITS  PREV  NEXT  PREV  NEXT  NEXT  NEXT  NEXT  NEXT  PREV  NEXT  NEXT	Reset Controller Reset PCI Write To Disk Read Temp Temp: 0 C
Exp Time sec): 0.050 Expose III	
Welcome To Voodoo Setup loaded.  Mardware byte swapping off. Resetting the controllerdone. Stopping camera idledone. Schecking system iddone. Soading Timing filedone. Siming file OK. Soing power ondone. Setting image dimensionsdone. Schecking controller configurationdone.	



^ fig.4

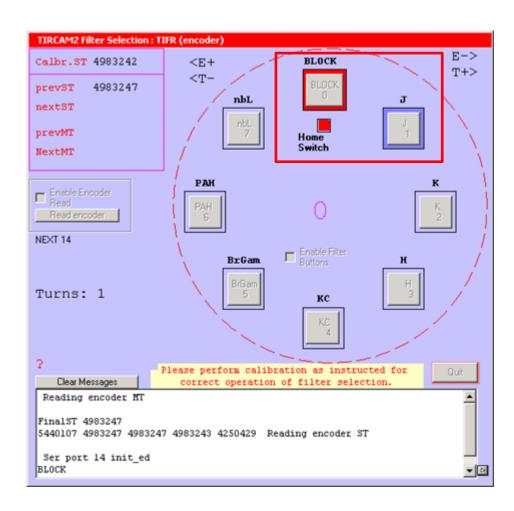


Screen shown in Fig 5 will appear. Click **Enable filter buttons** and click desired Filter button. Note: Home switch red box indicates that internal switch in the camera is correctly sensed and filter is Block. So while block filter is selected, Home switch box should be red. If its not the case, calibration process may be needed.



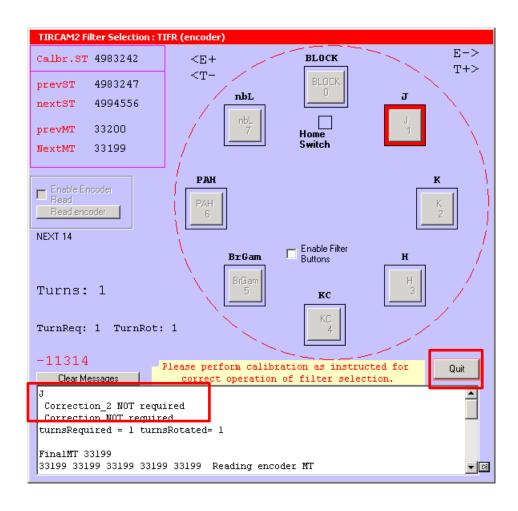


Program will start operation of setting new filter e.g. in fig. 6, program is switching from Block Filter (current, red backlight) to J filter (required, blue backlight).





On completing operation of selecting filter, new selected filter is backlighted with red colour. Text messages will show the related messages. Click Quit to exit program.



^ fig.7



Repeat step A2, A3. This step is for software acknowledgment. Click Quit to exit program. Now filter selection process is complete.

#### **Error checks:**

[1]

In case Encoder readings are not satisfactory, operator is given message to retry reading. This would be a rare case.



# TIRCAM2 FILTER CONTROLLER (ENCODER VERSION) <u>CALIBRATIONS</u> JAN 2019

### B1

Filter calibration is three step process as described below.

```
[1]
Run Filter calibration shortcut given on desktop.
(D:\mbnFilterJavaVbProgs\DOT_FilterCalibration__01__14dec2018Fri.exe).
Select com port assigned to arduino (refer A1). Click calibrate.
Wait for calibration to finish. Quit after calibration done.
```

[2] Follow all steps in A (A1 to A6) to bring filter to 'J'.

[3]
Run Filter calibration shortcut given on desktop.
(D:\mbnFilterJavaVbProgs\DOT\_FilterCalibration\_\_01\_\_14dec2018Fri.exe).
Select com port assigned to arduino (refer A1). Click calibrate.
Wait for calibration to finish. Quit after calibration done.
This finishes calibration.

Warning: The files in above mentioned folder should never be disturbed.