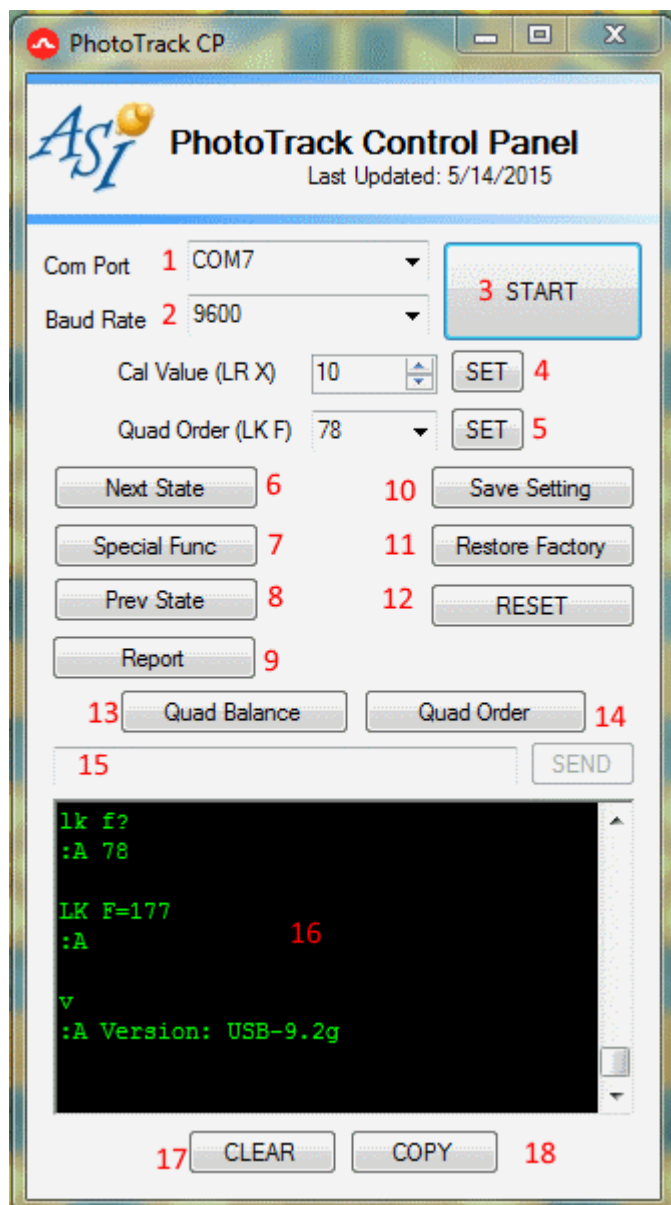


Phototrack Control Panel



Phototrack Control Panel Main UI, controls are numbered #1 #2 etc for easy reference

ASI's Phototrack Control Panel is a windows .net framework based GUI to help user use ASI Phototrack system. It connects to ASI's MS2000 controller over serial port and uses serial commands to interact with MS2000.

[Click to Download \(Save link as\)](#)

Below are the descriptions and usage for the various controls on GUI

Control #1) Com Port, drop down box to indicate the serial port MS2000 controller is connected to. If unsure, go to Windows system properties>Device Manager to figure out what port MS2000 is on.

Control #2) Baud Rate, drop down box to pick the baud rate MS2000 controller will respond to.

Default is 9600

Control #3) Start/Stop Button, once Com Port and Baud rate are selected , clicking this button will connect the GUI to MS2000. If unsuccessful an error message will pop up saying “Unable to open comm port”. This could be because of multiple reasons , either another program is connected to MS2000 , or simply a wrong comport or baud rate were selected. If successful , text on the button will now say “Stop”, clicking it now will disconnect the GUI from MS2000.

Control #4) Cal Value , used to set the calibration factor , [more info here](#) .Setting is only applied when SET button is clicked. Setting doesn't read and show current Cal value.

Control #5) Quad Order, drop down box , lets the user pick the Quad order , [more info here](#) . Setting is only applied when SET button is clicked. Setting doesn't read and show current Quad order value.

Control #6) Next State button , Same function as [LK](#) command or short @ button press. Advances controller to next phototrack state Idle>Monitor>Ready etc.

Control #7) Special Func button , same function as [LK Y](#) command or extra long HOME button press. Example moves controller from Monitor state to Balance state.

Control #8) Prev State button , same function as [LK X](#) command or long @ button press. Moves controller to previous phototrack state , Ready>Monitor>Idle

Control #9) Report Button, same function as [LR Z](#) , prints out useful diagnostic info like this

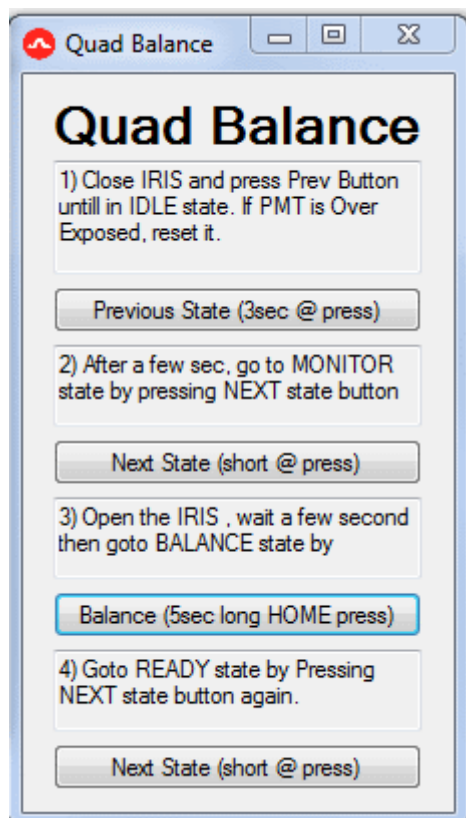
```
X+Y+:1 X+Y -:0 X-Y -:3 X-Y+:2
XY CAL FACTOR:10 (LR X=n)
Z CAL FACTOR:30 (UL Y=n) on Axis 2
QUAD_ORDER:78 (LK F=n)
QD BAL BKGND PMT CORR
0 33 0 15 495
1 32 0 17 544
2 32 0 15 480
3 44 0 16 704
Yplus:1024 Yminus:1199
Xplus:1039 Xminus:1184
Zplus:975 Zminus:1248
XY Lock_range: 5.0000 (LR Y=mm)
Z Lock_range: 0.1000 (LR Z=mm)
Cal_range: 0.0400 (LR F=mm)
Min_Sum_Sig: 100 (LK Z=n)
focus_offset: 0
closeness: 100 close_factor: 0.5405
Z gain factor: 0
```

Control #10) Save Setting Button, same function as [SS Z](#) . Saves current settings like Cal Value, Quad order , Quad balance into non volatile memory, settings will remain unchanged with system reset or restart. Good idea to save settings once your happy with the Phototrack performance.

Control #11) Restore Factory button, same function as [SS X](#) . Reset all settings to factory defaults.

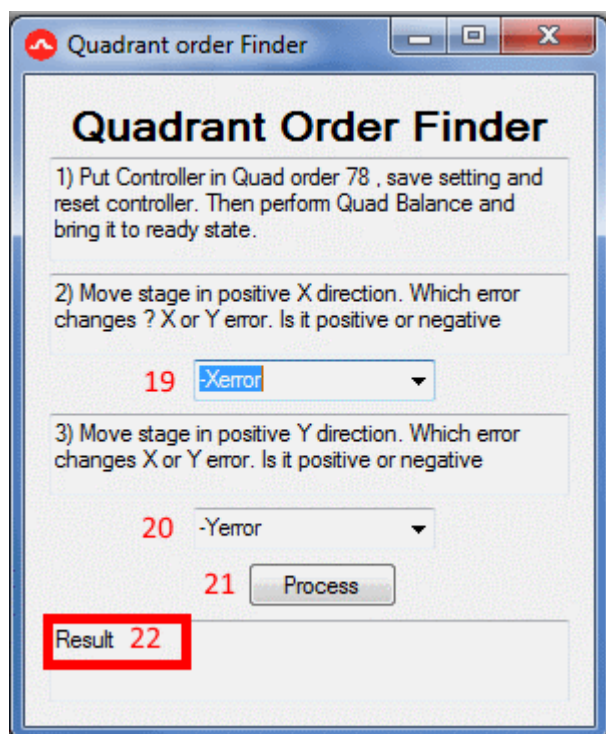
Control #12) Reset button , same function as pressing the reset button. Current position will be zeroed.

Control #13) Quad Balance button, brings up the Quad balance GUI , it helps user thru the Quad balance procedure. [More info on quad balance is here](#) . Quad balance procedure get the background reading and zeros it.



Quad Balance GUI

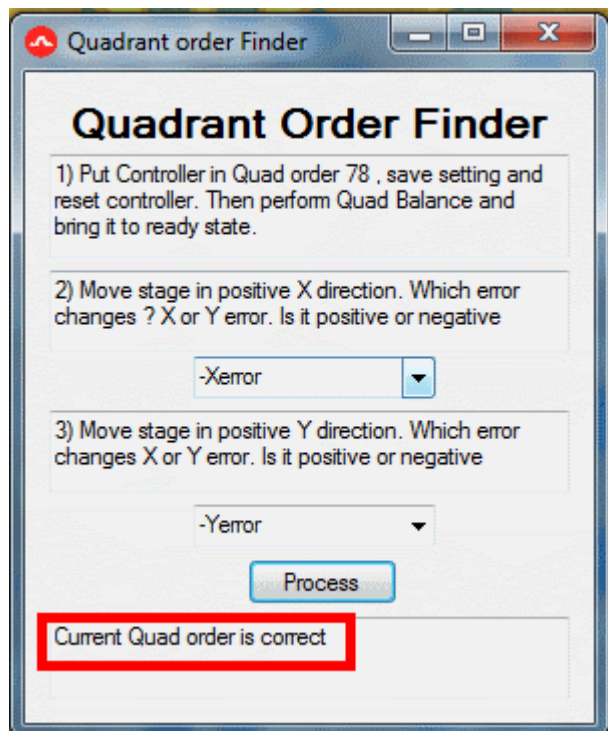
Control #14) Quad order button, brings up the Quad order finder GUI. Finding the quad order is a trial and error process, this GUI is meant to ease that a bit by figuring out the quad order needs to be by asking the user how the error signs work. [More Info on Quad order setup procedure is here](#)



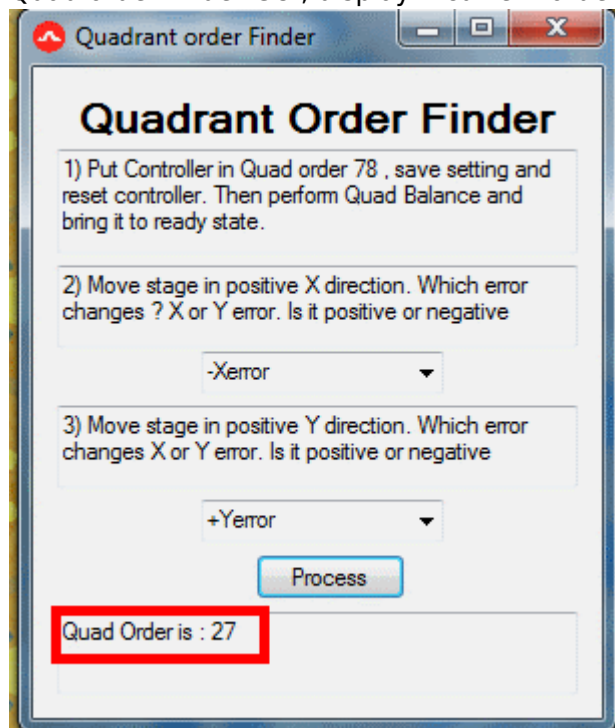
Quad order finder GUI

With a nice bright stationary sample in view , The GUI asks the user to set the Quad order to default settings of "78" , save and reset the controller. Then Quad Balance and put the controller in Ready state.

It then asks user to move the stage in positive x direction , then check and see how the error changed, was it X error or Y error and the sign of the error. Same thing in Y axis too. User puts in the findings with drop box control #19 and #20 . Then pressing the "Process button"(control #21) , the GUI displays the result in control #22 .



Quad order finder GUI, display if current order is correct



Quad order finder GUI, display if order needs to be change

User can then Input the correct Order thru Control #5 the Quad order setting.

Control #15) Serial Command , this control provides serial terminal function , lets the user send any input or commands to the MS2000 controller. Command is only sent after “Enter” key or “Send” button is pressed.

Control #16) Controller Reply text box, displays all the data/replies sent by the MS2000 controller.

Control #17) Clear button , clears all the data in Controller Reply text box (control #16)

Control #18) Copy button , copies all the data in Controller Reply text box (control #16) to windows clipboard.

[phototrack](#), [software](#), [manual](#)

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