Note: Power is default on!

INSTRUCTIONS - PROFESSOR MOTOR 4-LANE DEAD STRIP LAP COUNTER SYSTEM INTERFACE (PMTR6862)

1st Step – If not purchasing a preconfigured computer – load and register the PC Lapcounter Windows Software with the computer to be used prior to wiring the track and installing the system – the computer must be internet connected

Track wiring directions for positive polarity controllers :
#1 Wire to + power : main power feed from (red) power supply
#12 Wire to - power : main power feed from (black) power supply
#2 Wire to the white post (power) for lane #1
#4 Wire to the white post (power) for lane #2
#5 Wire to the white post (power) for lane #3
#7 Wire to the white post (power) for lane #4
#8 Wire to the red post (brake) for lane #1
#10 Wire to the red post (brake) for lane #2
#11 Wire to the red post (brake) for lane #3
#13 Wire to the red post (brake) for lane #4
#9 Wire to left side braid/rail of track lane #1
#14 Wire to left side braid/rail of track lane #2
#15 Wire to left side braid/rail of track lane #3
#16 Wire to left side braid/rail of track lane #4
#17 Wire to left side of dead strip lane #1
#18 Wire to left side of dead strip lane #2
#19 Wire to left side of dead strip lane #3
#20 Wire to left side of dead strip lane #4
#21 Wire to right side of dead strip lane #1
#22 Wire to right side of dead strip lane #2
#23 Wire to right side of dead strip lane #3
#24 Wire to right side of dead strip lane #4

Other wiring (not connected to wiring center) :
 Wire black (track) controller post for lane #1 to right side braid/rail of lane #1
 Wire black (track) controller post for lane #2 to right side braid/rail of lane #2
 Wire black (track) controller post for lane #3 to right side braid/rail of lane #3
 Wire black (track) controller post for lane #4 to right side braid/rail of lane #4

 Plug the 12 volt power supply (provided) into the socket as indicated on the red board

 Install and register the PCLapcounter software when hooked up to an internet connection (instructions with CD) Plug the 6 foot USB cord (supplied) from the electronics into the Windows computer.

This lap counter system includes a "wiring center" to provide protection against short circuit and overload conditions that may be encountered due to misconnected controllers, track wiring issues or any slot car related issue that might cause excessive current draw. The self-resetting circuit breakers used will restore power automatically without any need for a manual reset or fuse replacement after the electrical issue is resolved. Ring type wire terminals are included in this kit (not shown in illustration). We recommend that all wire to wire terminal connections are soldered for the best reliability using electrical type rosin core solder (do not use acid core solder or acid flux). 14 to 16 gage wire is recommended for all connections.

This Lapcounter system uses an electronic USB connected "Phidget" board. This board allows the computer software to count laps and record times as cars pass over the "dead strip" and also allows the software to turn the track on and off by energizing a relay mounted into the system so that proper races can be run.
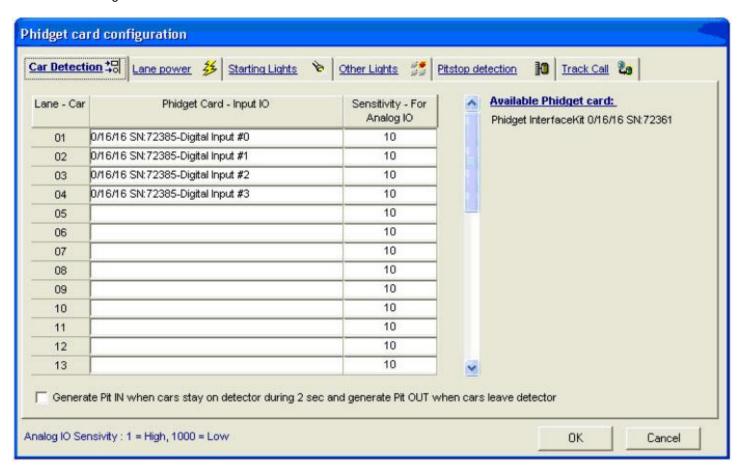
Mounting the lap counter board – mounting screws and "standoffs" are provided to mount the board under the track upside down after the system is all wired and tested, but CAUTION !! DO NOT USE A POWER DRIVER to drive the screws for mounting as this will likely damage the red plastic board used.

Features of the PC Lap Counter software include custom sounds and many other sophisticated capabilities. Watch for possible upgrades to your Lap counter system to be released by Professor Motor in the future to take advantage of some of these more sophisticated features.

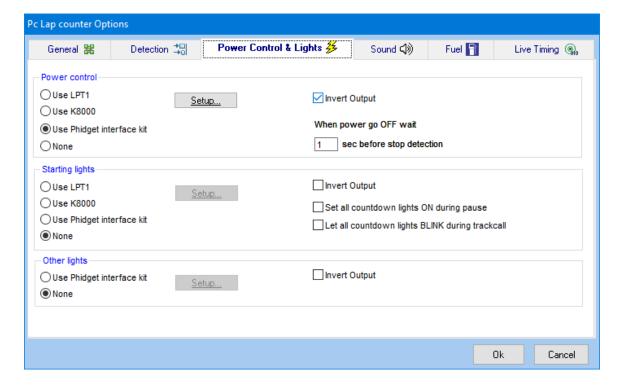Web site for PC Lap Counter system information if interested is : www.pclapcounter.be

Configure the windows for the "Phidget" board as shown for the 4 lanes (no track power) within the PC Lap Counter Software with the USB cable from the electronics interface connected:
- Start PC Lap Counter software
- Click Options
- Click Detection tab
- Ensure Detector Type is "Phidget Interface Kit"
- Click Setup
- Configure similar to shown

Phidget card configuration

Car Detection	Lane power	Starting Lights	Other Lights	Pitstop detection	Track Call

Lane - Car	Phidget Card - Input IO	Sensitivity - For Analog IO	Available Phidget card:
01	0/16/16 SN:72385-Digital Input #0	10	Phidget InterfaceKit 0/16/16 SN:72361
02	0/16/16 SN:72385-Digital Input #1	10	
03	0/16/16 SN:72385-Digital Input #2	10	
04	0/16/16 SN:72385-Digital Input #3	10	
05		10	
06		10	
07		10	
08		10	
09		10	
10		10	
11		10	
12		10	
13		10	

☐ Generate Pit IN when cars stay on detector during 2 sec and generate Pit OUT when cars leave detector

Analog IO Sensivity : 1 = High, 1000 = Low

OK   Cancel

For Lane Power configure as shown:
- Start PC Lap Counter software
- Click Options
- Click Power Control & Lights tab
- Ensure Invert Output is checked

- Click Setup
- Configure similar to shown