

DRAG-IT-ANYWHERE®

Set-Up Instructions



THANK YOU FOR PURCHASING DRAG-IT-ANYWHERE® TIMING SYSTEM. THIS INSTRUCTION SHEET WILL WALK YOU THROUGH SETTING UP YOUR PLUG-N-PLAY DIA UNIT, SENSORS AND DISPLAYS. PLEASE CHECK TO MAKE SURE ALL PARTS, DATA CABLES, POWER SUPPLIES, DISPLAYS AND SENSORS HAVE BEEN PACKED CORRECTLY. SEPARATE EACH ITEM ON A TABLE OR FLOOR.

YOUR DIA SYSTEM SHOULD INCLUDE:

1. Main Drag-It-Anywhere® Unit.
2. Starting Tree: Drag and/or Formula F1 Style.
3. Finish Line LED Displays.
4. Data cables: Tree Cable & Display Cables for Right and Left side of Track.
5. Starting Tree/Formula Shield
6. Display Shield
7. 12 VDC Power Supply for DIA main Unit ONLY !
8. 5 VDC Power Supply for Display Shield ONLY !
9. Sensors: You picked desired sensors to be used, these can vary depending on track layout or sport event.
10. Thermal Printer (optional purchase).



DRAG STRIP SENSOR TRAPS LAYOUT

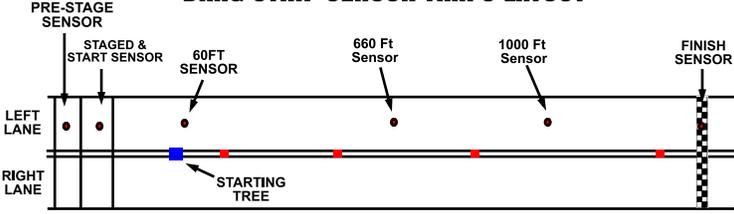


Fig. 1

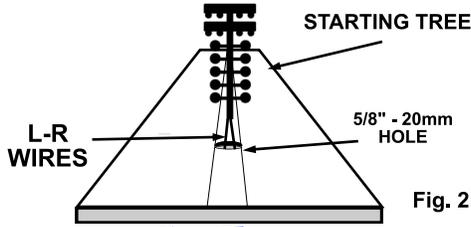


Fig. 2

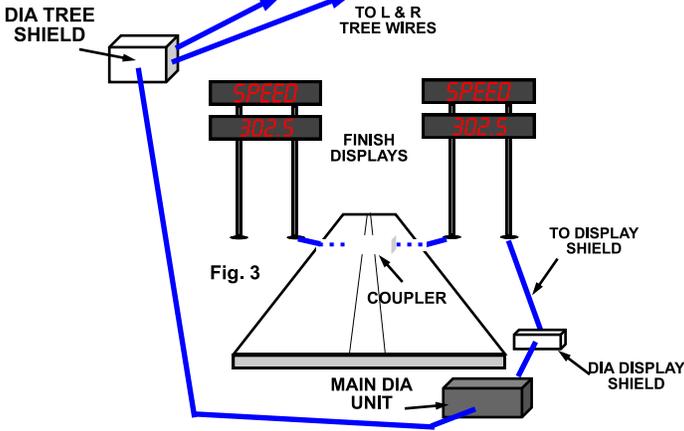


Fig. 3

1. First, position your PRE-STAGED & STAGED SENSORS on your track. The distance between each sensor and the START sensor is based on your Slot Car Guide or other device that will trigger the Sensors. In most cases you would mount each sensor 25-30mm from each other based on a 1/32 scale track. Fig. 7 & Fig. 1

2. On the Main DIA unit there are 12 ports to plug in your Sensor Cables using the 4C4F connector plug.

3. Next position and mount your Starting Tree/Display on your layout by carefully drilling a small 5/8" - 20mm hole in your Track. If setting up on a larger track, run wires as needed. (If using the Formula Display you will ONLY use the LEFT Side plugs on the Main DIA unit.) Push the 6C6P connector one at a time through the hole to be connected to the DIA TREE SHIELD. Note the Right and Left side connection, if lights display wrong just switch connectors. Fig. 2

4. Next mount your Finish Line LED Display at end of track and drill a small 1/2" - 12mm hole to run Data cables below track. The main data cable from shield will connect to the Right input cable on LED Display. The left cable will connect to the Left Side LED Display cable with the Female 6C6P Coupler.

5. Plug your 6C6P Data Cable plug into the DISPLAY SHIELD. NOTE: If your Data cable from Main DIA unit to Finish line is over 35ft you will need to add the 5 VDC booster as the display may be dim or loose data to display. Otherwise the internal power from the DIA will work fine.

7. Begin by positioning your track sensors on your track. There are 4 Sensors for each side of the track Right & Left Sides. The first sensor is the 60ft Sensor. This detects the cars speed after leaving the Staged area and will start the timing system. NOTE: If you are LAP Racing the 4 Sensors act as Staging and LAP count sensors for 1 to 4 lanes. Fig. 1

8. Now power up your Main DRAG-IT-ANYWHERE® Unit, you will see a Start-Up Screen and hear a BEEP confirming power.

9. If any Sensor is not working or miss-aligned, or not receiving enough light, the DIA unit will show you what side and what # Sensor needs correction. Please adjust Sensor to make sure it is working correctly and DIA unit will let you know when it's correct.

10. Using the Main MENU on Screen and LED Display, select your style of racing and the number of Drivers by pushing the POWER Button. If you make a mistake, push the AUTO Button to go back.

11. If you need to set the DATE & TIME Press the MENU Button at any time to enter this mode. Set according to your location.

12. At the end of each race, if you choose to print out a TIME SLP, push the POWER button and it will print it out. You must have our DIA THERMAL PRINTER Attached for printing Race Results. For Customized Club or Track Names on Printout Contact us at time of Purchase so we can enter in your Track Name.

13. The DIA unit will keep your stored settings in its memory even if powered down.

The next sensor is for the 660ft Sensor, next the 1000ft, and last is the FINISH Sensor which will stop the timing system and record the data for ET (Elapsed Time and Speed). The distance for each trap is shown on the Sensor Distance Guide. (Separate Sheet). Track-Check the car or racing vehicle first for distance then separate the Sensors. If DEEP STAGING is planned, then separate the sensors enough to allow the Pre-Stage Sensor to clear Slot Car Guide. Once the Car is STAGED and a Green Light is lit, the car will leave the STAGED sensor and START the Timing System. If LAP Racing, you must place each sensor accordingly for your racing style. See Quick Start Guide

WIRING HOOR UP

14. Using the main **MENU** on the DIA is simple, see diagram below for what buttons will do as they act as multiple functions depending on what mode you are in. Fig. 4

AUTO BUTTON: Resets DIA for next race after a race.
Goes back to **MAIN** screen.

MENU BUTTON: Enters Set-Up Mode for Date, Time, Screen Bias, and Sensor Detection High or Low modes.
Brings you back to Main front screen to select race mode if in racing mode Only after a Race.

LEFT: Downs a # or selection or returns back if wrong entry

RIGHT: Ups a # or selection

POWER: Acts as **ENTER** Button during programming.
After a Race if pushed will start Printer for Time Slip.

STARTERS HANDHELD KEYPAD: Buttons work the same as above.



Fig. 5

15. The **TOP Side** or **Printer Side** is the **LEFT Side** of the Track Plug-Ins. Each port either takes a 4C4P or 6C6P, Style Plug. The Connections for each are listed below. Fig. 6

TREE: This port connects the Starting Tree or Formula Display.

PRE-STAGE: This port connects the Sensors for Pre-Staging

STAGE/START: This port connects the Sensors for Staging and Starting Timer once the car leaves the Sensor.

60FT / LANE # 1: This port connects the 1st Sensor for the 60FT Trap, you can set it from the START sensor based on the Scale of your track, see List. and is used in **LAP Mode** as **LANE # 1** Sensor. This sensor does not need to be used if just Start to Race is being set-up.

660FT / LANE # 2: This port connects the 2nd Sensor for the 660FT Trap, you can set it from the 60FT sensor based on the Scale of your track, and is used in **LAP Mode** as **LANE # 2** Sensor. This sensor does not need to be used if just S-F Race.

1000FT / LANE # 3: This port connects the 3rd Sensor for the 1000FT Trap, you can set it from the 660ft sensor based on the Scale of your track, see List. and is used in **LAP Mode** as **LANE # 3** Sensor. This sensor does not need to be used if just S-F Race.

FINISH / LANE # 4: This port connects the 4th Sensor for the **FINISH** Trap, you can set it from the 1000FT or the START sensor based on the Scale of your track. and is used in **LAP Mode** as **LANE # 4** Sensor. This Sensor **MUST** be used to STOP the Timing System.

USB: This port is for Upgrade Programming if Updates are available. Never connect anything else or you may damage the DIA Unit.

PRINTER: This port connects to our **DIA THERMAL PRINTER** and has an internal power supply of 5-7 VDC. It only works with our Printer, connecting another Thermal Printer may not work, or damage the DIA unit.

STARTER KEYPAD: This is used to Start, Program & reset the main DIA unit. Fig. 5

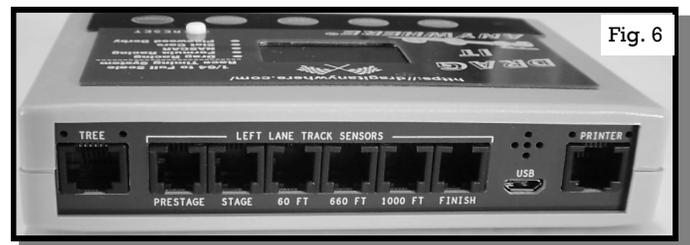


Fig. 6

15. The **BOTTOM Side** or **DISPLAY Side** is the **RIGHT Side** of the Track Plug-Ins. Each port either takes a 4C4P or 6C6P, Style Plug. The Connections for each are listed below. Fig. 6

DISPLAY: This port connects the MAX7219 Displays or **FINISH LINE DISPLAY**, it also connects for the Formula Racing display. A **DISPLAY SHIELD** Must be used between the output and the Displays.

DC POWER: This port connects to the Supplied 12 VDC 1 AMP Power supply, do not use any other supply or you may damage the DIA unit.

KEYBOARD: This port connects to our DIA **HANDHELD KEYPAD** sold separately. The rest of the ports act the same as the **LEFT Side**.



Fig. 7

What the Entree Modes Do !

Each button will store information in the memory for each race. This information is printed out on the **TIME SLIP** for your records of each race. Race # uses the Time as race number !

RACE TYPE: You can pick either **DRAG RACING** for 1-2 Drivers, or **LAP Mode** for 1 to 4 Drivers.

DRIVERS: Select from 1-2 drivers for **DRAG MODE** and from 1 to 4 Driver Lanes for **LAP MODE**.

CAR CLASS: This mode is **ONLY** for **DRAG RACING** and will not appear in **LAP MODE**. Select Car Class from: **TF** = Top Fuel, **FC** = Funny Car, **PS** = Pro Stock, **TA** = Top Alcohol, **ST** = Stock or Street, **BK** = Bike.

TREE TYPE: Depending on you race style you can choose from a **PRO TREE** = All Yellow 1-2-3 Lights light up at once. Or a **SPORT TREE** = Yellow Lights light .5 sec between each 1-2-3. You can select .4 or .5 timing.

DIAL-IN: Select **LEFT** or **RIGHT LANE Dial-In**. Enter in the **DIAL-IN** Times for each Lane, this will cause a delay in the Starting tree. You **MUST** not exceed the Dial-In time of your car or you will Brake-Out and loose the race, closest one to their Dial-in will Win the Race. Example Delay: 4.75 seconds = 4.750. If no entry is made = 0 then no delay will be made on the tree for that lane. If that car runs a 4.650 then that car will Brake out and loose. You **MUST** save the Data at end of entrees for it to lock in the new Delays. **If a "NO" Dial-In is selected this option will not be shown.**

CAR SCALE: Select your Vehicles Scale, this information will affect the calculations and adjust the **MPH/KPH** based on scale and **CLASS** selected and will show on your **TIME SLIP** Print out for your Records. Choose from: 1/64, 1/32, 1/24, & Full Scale.

SAVE CONFIG: This will save all data into the DIA computer even if powered down or reset. You must enter all new data in if Bracket racing or new Drivers are racing.

Gentleman Start Your Engines !



RACING SCALES



To correctly place your sensors for true racing action you first need know your scale size and distance. A standard NHRA® Race Track is 1320 Ft from start to Finish and some tracks are 1000 FT so you divide that number by the scale to get a true distance needed for your layout.

Example: I am using a 1/32 Scale Slot car for a 1/4 mile Dragstrip

Answer: 1320 Ft % 32 = 41.25 Feet

So I would place my 60Ft Sensor 11.25 ft from my STAGED sensor, next my 660FT Sensor 19.75Ft, and my 1000FT at 31.3 and the FINISH Sensor 41.3 Ft from Stage Sensor.

DEEP STAGING

If you plan on allowing your car to **DEEP STAGE**, this means rolling your car past the Pre-Stage Sensor, then you must check the distance needed based on your Cars Slot Blade. In most cases this is 1" between Pre-Stage and Stages Sensors but may vary.

The DIA unit will calculate the Scale Speed based on your Menu Data input of what scale you are racing. Now Scale does not matter for TIME so this information is more for the TIME SLIP Results and your records because a 1/64 scale car vs. a Full scale car will still take the same time and speed from start to finish in the Scale World !

See the chart Right, for Sensor distances based on a 1/4 Mile 1320 Ft Track.

Full Scale Drag racing distance

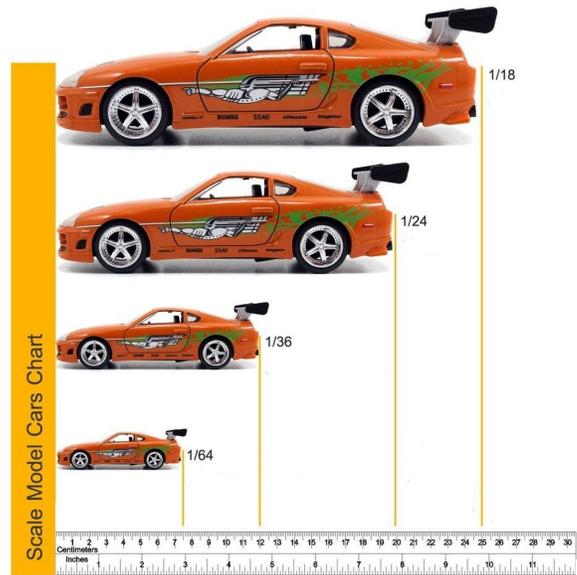


Fig. 7

Distance & Scales	PRE STAGE	STAGE	60 Ft	660 Ft	1000 Ft	FINISH
1/64	- 30mm	-15mm	11'-1/4"	10'-4 3/4"	15'-7 1/2"	20'-7 1/2"
1/43	- 38mm	- 18mm	1'-4 5/8"	15'-4 1/8"	23'-2"	8'-1/4"
1/32	- 50mm	- 25mm	1'-10 1/2"	19'-7 1/2"	31'-3"	41'-3"
1/24	- 60mm	- 30mm	2'-6"	27'-6"	41'-8"	55'
1/18	- 90mm	-45mm	3'-4"	36'-8"	55'-6 5/8"	73'-5/8"
1/10	- 120mm	- 58mm	6'	66'	100'	132'
1/8	- 160mm	- 80mm	7'-5/8"	82'-6"	125'	165'
FULL	- 200mm	- 178mm	60'	660'	1000'	1320'

Drag-It-Anywhere Trouble Shooting:

This information will help you if you find your having trouble with your DIA System.

PROBLEM	FIX
Unit not starting race	Check Sensors, screen will indicate what sensor is not working or aligned. Also try Resetting.
Unit Froze Up	Press Reset Button
Finish Line Display words Displaying weird	Check Data Cables, make sure all connections are secure and tight. If over 35 Ft run please add 5 VDC power to Display Shield.
DIA Unit won't come on ?	Are you using the correct 12 VDC 1 Amp Power supply ? If it still will not operate call us and ask for a Tech.
Thermal Printer Not Printing or Printing light words	Check cable connection. Is Red Light on Printer ON ? Make sure paper is installed and Lid Closed correctly. Clean roller head with damp alcohol on a cloth, let dry. Thermal Paper old replace with fresh new paper.
DIA Buttons not working	Reset unit. Call for repair.
MPH coming out wrong	Check Sensor distance apart is correct !!!
Won Race but received no Trophy	Join the Club !

Drag-It-Anywhere

VOLTAGE REQUIREMENTS

MAIN DIA UNIT = 12 Volts DC @ 2 AMPS

STARTING CHRISTMAS TREE & FORMULA F1 DISPLAY = 5 VOLTS DC @ 200mA

SENSORS OUTPUTS = 5 VOLTS DC @ 100mA

THERMAL PRINTER = 5-7 VOLTS DC @ 2AMPS

WIN DISPLAY = 5 VOLTS DC @ 200mA

OPERATING TEMP: 5-45c

RECOMMENDED SLOT CAR TRACK VOLTAGE FOR MOST TRACKS 14-16 VOLTS DC @ 1 AMP



Left Side of track wiring, repeat same as Right.
Left side used ONLY for LAP Racing

Basic Wiring Layout based on Track

DRAG

FORMULA or NASCAR

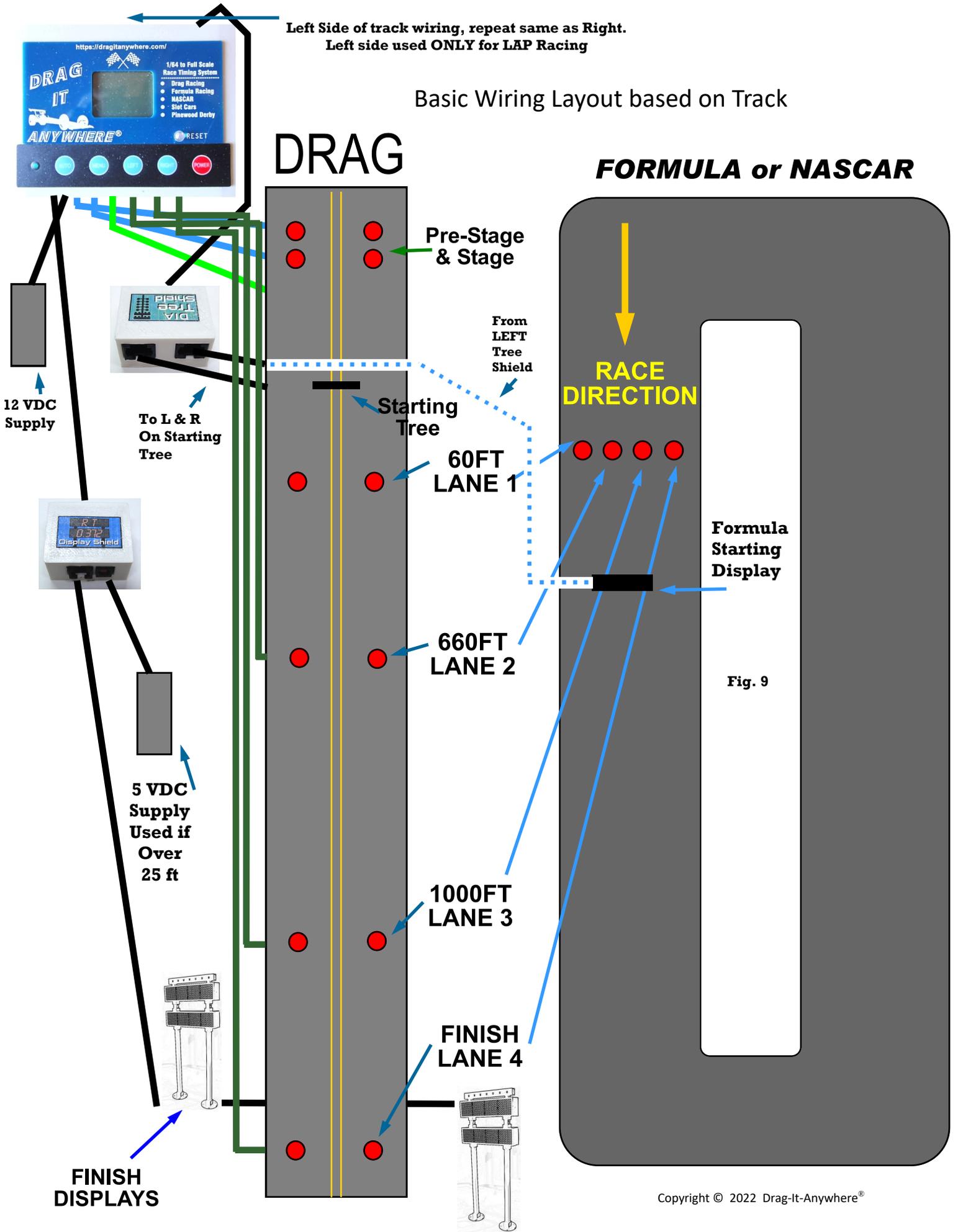


Fig. 9