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EIN: 20-2033813

## Houston Radar SpeedLane® Pro Commissioning Report

10/25/2023, Version 1.1

The purpose of this report is to validate and document commissioning of the SpeedLane Pro multilane traffic radar counter. Parameters to be filled or options to be circled are highlighted in green (pass) or red (fail) color.

### Step 1

Record installation address:

Street/Intersection:

City:

State:

Record radar orientation. Radar points towards (circle one option below):

N S W E NW NE SW SE

Record radar configuration technique used during installation (circle one option below):

WIZARD

MANUAL

Record installation geometry:

(Setback is the distance from the face of the pole to the start of the 1<sup>st</sup> travel lane. Height is the mounting height of the radar from the ROAD SURFACE and NOT from the base of the pole).

Setback=

Height=

### Step 2

Connect a Windows computer running StatsAnalyzer application to SpeedLane Pro using one of the 4 methods (serial, Ethernet, Bluetooth, modem). Note Stats Analyzer Version and radar ID and firmware version in the "Radar System Information" pop-up window and record them below:

Stats Analyzer Version=

REV=

ID=

Serial Number:

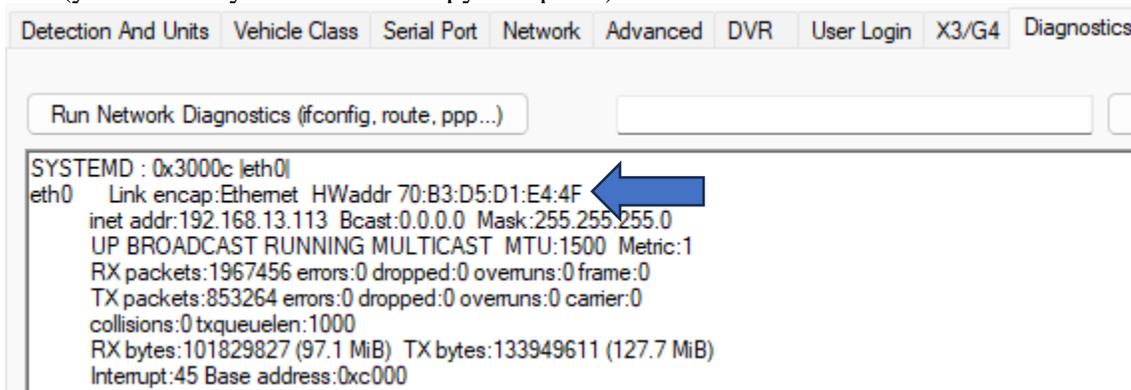
HostName:



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Circle primary infrastructure connectivity method that will be used after installation is complete and fill in relevant information collected from “SpeedLane Setup” tabs:

If using Ethernet, click on SpeedLane Setup->Diagnostics click on “Run Network Diagnostics” button. Copy the Ethernet MAC (HWaddr) address from the data reported from the following line (you can use your cursor to copy and paste):



Ethernet

Static IP=

DHCP

HWAddr (MAC Address):

Click on SpeedLane Setup->Network tab:

10 Mbps

100 Mbps

Serial

Type: RS232

RS485-half-duplex

RS485-full-duplex

Baud=

Bluetooth

Modem

APN=

Carrier=

Modem Static IP=

DHCP





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## Step 7

In the SpeedLane Setup->Advanced tab in the “Voltage, Temperature and Accelerometer” group click on Read Now button. Ensure the Level reading is within +/- 2° of the grade of the road.

Level Reading of SpeedLane Pro:  
Tilt Reading of the SpeedLane Pro:

Within +/- of grade of road:

YES NO

In SpeedLane Setup tab click “Take Photo” button. Verify that the radar is level with the road (road lanes are parallel to the bottom/top of the picture frame).

YES NO

Verify that red cross on the picture lands between 1/3 and 1/2 of the road.

YES NO

Verify that traffic is at least partially visible in the picture for all the configured lanes:

YES NO

## Step 8

In “Speedlane Setup” -> “Advanced” tab make sure that “Multipass Rejection Options” are all enabled. In rare cases there may be a reason to disable one or more option as an exception.

YES NO EXCEPTION

## Step 9

Click on “SpeedLane Plot” tab.  
Verify that correct number of lanes has been configured:

YES NO

Verify that traffic direction on the plot matches the traffic direction on the road.



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YES

NO

Verify that any gaps in the lanes on the setup plot are reflective of actual gaps between lanes on the road and vice-a-versa.

YES

NO

Click the SpeedLane Plot tab. Enable (check) “Show RSS” box. Verify that vehicles have 3 or more bars of signal strength.

YES

NO

#### Step 10

Collect data in specified intervals on a per-lane basis and compare against manual tally counts and LIDAR gun. The interval time is usually specified by the approving authority and may be 1, 5 or 15 minutes.

We highly recommend that you review [training video](#) that explains how to use validation tool built into the StatsAnalyzer. Not all details are presented in the next below:



<https://www.youtube.com/watch?v=upHijHsndSU>

In summary:

Click on SpeedLane Plot and then “Open Validation Tool” button near the bottom center.

The workflow is to record only the lanes you are going to collect manual data for (so as not to confuse the data later when you save it to file).

The system will start a new record and then continue to create new records after the specified record interval or till the Stop button is clicked.

You can then move to the next lane. There is a convenient “insert comment” feature if you want to incorporate contemporaneous notes into the saved file for later use. For example, you can use this feature to record your manual count values.

Monitor traffic in the lane(s) of interest with a tally counter (and/or a) speed gun until you have recorded a statistically significant number of vehicles in each lane. Typically, this would be 100 vehicles/lane or 15 minutes whichever comes first.

In a heavy traffic situation, it is recommended that a person using tally counter and speed gun would monitor no more than one lane at a time as otherwise it may be difficult to ensure



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sufficient accuracy. Person with speed gun should be sufficiently up or down stream of the radar installation point so as to minimize the "[Cosine Error](#)" effect.

Volume and speed accuracy are within SpeedLane Pro specification:

YES

NO

Step 10

Record installer information.

Technician Name:

Technician Signature:

Date: