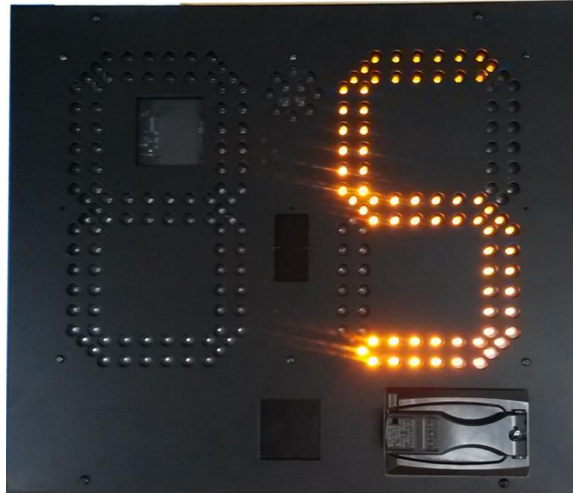




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Houston Radar PNL10 with SLOW DOWN quick start guide



Package contents:

1. Weatherproof enclosure 1:
 - a. PNL10 2 digit speed display preset in mph with on-board traffic statistics collection package enabled
 - b. DB9 female for direct computer connection to configure unit and download collected traffic statistics.
 - c. Thumbwheel switch to change speed limit (speed at which the display flashes and the SLOW DOWN illuminates and flashes).
 - d. Power ON/OFF switch
 - e. Cable to provide 12VDC nominal power
 - f. Long range Bluetooth module for wireless connection (inside enclosure)
2. Weatherproof enclosure 2:
 - a. Houston Radar "SLOW DOWN" message board which is:
 - i. Connected to the PNL10 via cable and receives power from it
 - ii. Triggered via the PNL10 when vehicle speed detected above preset "Speed Limit"
 - iii. Brightness controlled by and matched to PNL10 based on ambient light
3. CDROM containing the Houston Radar Stats Analyzer software for a Windows PC (Windows XP, 7 & 8 are supported for both 32 and 64 bit versions).
4. Straight through serial cable to connect a PC serial port to the DB9 on the PNL10 enclosure.



Operation:

1. Connect the supplied power cable to **+12VDC** nominal power supply, for example a 12V car battery or truck battery. The system is designed to handle up to +18VDC with spikes that may go higher. It will run down to about 9.6VDC. Do not connect to a +24VDC system.
 - a. White is +
 - b. Black is -
2. Flick the rocker switch under the weatherproof cover on the front (the red LED is not connected in this unit and will not illuminate). The unit should power on, count from 01 through 09, then display "88". It will also turn on the "SLOW DOWN" when it displays "88" on the digits. No other operation is required.
3. The display is now ready to measure and display speeds of vehicles coming towards it.



The PNL10 will display the relative speed between the truck it is mounted on and the approaching traffic. For example, if the truck is moving at 5 mph and traffic is coming towards it at 35 mph, the speed displayed will be 30 mph.

This discrepancy will not be too obvious as long as the truck is moving slowly. To display the actual speed of the traffic requires "moving mode" feature in the PNL10. We can investigate adding this if the application develops further.



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Setting the Speed Limit:

The speed limit is the speed value above which the speed display will blink, the white strobe will turn on and flash rapidly and the “SLOW DOWN” message will blink.

Setting Speed Limit Using the thumbwheel:

The thumbwheel is a handy way to change the speed limit on the road. You may preset the speed limit values via the provided Windows software. The unit already has some preset values that are laminated and stuck to the side of the unit.

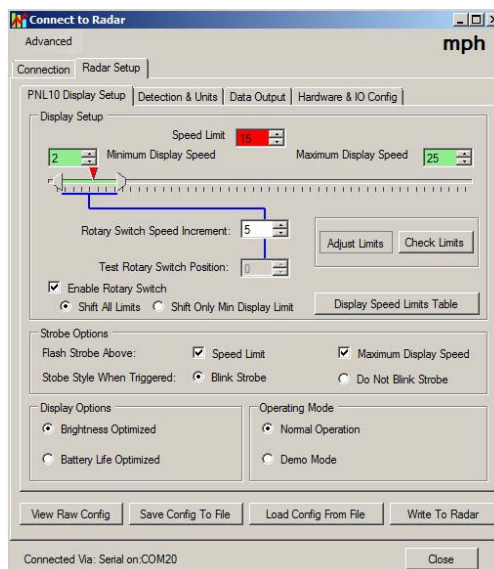
You may change these values as described later in this document.



Thumbwheel positions 0 through 7 are active if enabled in the configuration tool as described below. Positions 8 & 9 are not used in the system and the thumbwheel should not be set to these positions for proper operation of the speed limit setting.

Setting Speed Limit Using the supplied Windows software:

1. Install the supplied windows software and connect to the unit by one of the two methods suggested in the section “Connecting to the PNL10” below. Start the software and go to File->Connect To Radar... menu.
It’s easiest to use the “Auto Detect Port” option.
2. Thumbwheel enable/disable and fixed setting of the speed and display limits:
 - a. To enable the thumbwheel simple check the “Enable Rotary Switch” checkbox. To disable it, simply uncheck it. Now you may directly specify the low speed, high speed cutoff and the speed limit values via the slider or up/down controls.
 - b. If the “Enable Rotary Switch” option is checked, the actual cutoff and speed limit values depend on the position of the rotary switch. To check the different values at different positions, click the “Check Limits” button and then spin the “Test Rotary Switch Position” up/down control. Changing the actual thumbwheel on the unit will **not** be reflected in the software. That will only affect the actual PNL10 (once you save your changes).





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Connecting to the PNL10:




You may use either the Db9 connector under the access cover or the wireless Bluetooth module **but not both simultaneously** as they share the same interface port on the PNL10 internally. Attempting to use both will not damage the unit but you will not be able to connect.

Connect Using the DB9 port:

1. Connect the supplied **straight through** cable to the DB9 under the access cover on one end and to a Windows PC serial COM port on the other end. If a PC does not have a COM port, **you may use a USB to Serial COM adapter cable**. These are readily available.
We highly recommend using a reputable brand from a major store. Many inexpensive cables sold on the Internet are remarked and do not work properly.
2. Install the supplied Windows software. You may use either the Houston Radar Configuration tool or the Houston Radar Stats Analyzer software. Both are compatible with 32 and 64 bit editions of Windows XP, Windows 7 and Windows 8.
3. Start the program and go to File->Connect to radar and select "Auto Detect Port". The radar will be found and you may continue from there.

Connecting wirelessly using the PNL10 Bluetooth Module in the PNL10 enclosure:


You must have a Bluetooth adapter on your computer to make a Bluetooth connection.

Bluetooth is indicated by the  icon in the task bar of your Windows computer.



We highly recommend using an external Class I USB Bluetooth adapter on your computer even if it has a built-in Bluetooth adapter. Built in adapters are usually 10m range Class II adapters and will only allow a connection if you are next to the box. The PNL10 box has a high performance very long range Class I adapter that will perform best when paired with a PC side Class I adapter.

If you have **previously paired** your computer's Bluetooth adapter with the PNL10, you can **skip to the next section**. If this is the **first time** you are connecting to this particular box, you must **first pair the two Bluetooth** adapters.

1. Open the Bluetooth interface on your computer by clicking on the  icon and then scan for devices (or click on "Add a device"). All Houston Radar Bluetooth device names start with "**HR-BT**". **You must pair once with each PNL10 from your PC.**
2. Once the scan locates the PNL10, right click and select "pair" and establish the connection. Windows will then assign a COM port to this paired connection. A pairing key is not required but in case it is requested, **enter 1234**.



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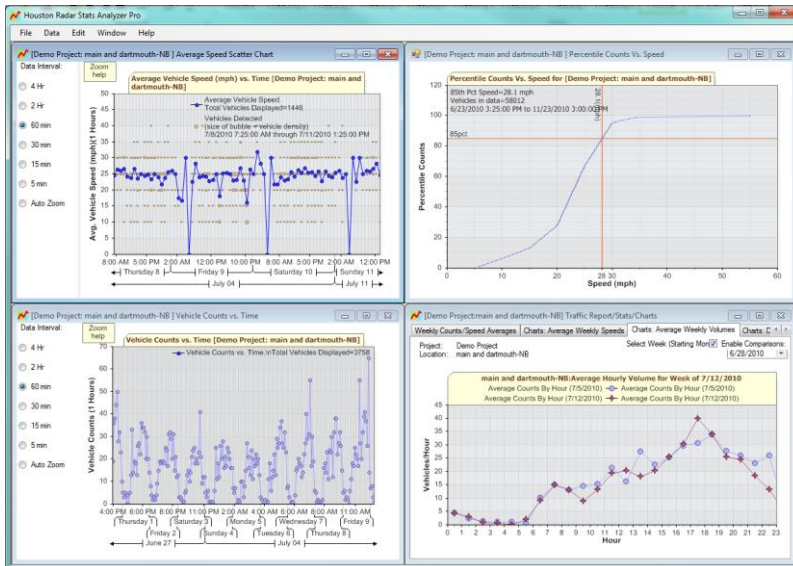
Importing Data

1. Start the previously installed “Houston Radar Stats Analyzer” and then go to *Data->Data Import Wizard...*
2. Select “*Import From Radar...*” option.
3. Drag and drop the data from the pane on the right a project on the left (you can right click to create a new project). If you have more than one
4. Once the traffic stats are read you may choose to erase the data memory. This will avoid the same data being imported next time.
5. Click on OK at which point you may enter either a direction name for this location or a location name. If you do not pick a direction name, the data will be automatically labeled “Incoming Direction”.

Analyzing Data

Please refer to the *Houston Radar Advanced Stats Analyzer user manual* (supplied as a PDF file) on the provided **CD ROM** for a detailed tutorial on analyzing the data. The latest version of this file is always available on our **website** at:

<http://www.houston-radar.com/user-manuals/HoustonRadarAdvancedStatsAnalyzerUserManualRelease.pdf>



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