USING DATA-FUELED RADAR SPEED DISPLAYS FOR OPTIMAL TRAFFIC CALMING

AllTrafficSolutions.com

ALL TRAFFIC
SOLUTIONS
™

CONTENTS

> "
> Installing a radar speed display to make drivers aware of how fast they are traveling is probably the single most effective way to calm traffic on a busy road. Easily installed by one person, radar display signs do not generally require an approval process or lengthy DOT study, making them ideal for use at different locations as you see fit.
> "

Today's web-enabled radar speed displays are not only powerful traffic calming tools; these high performers have robust reporting capabilities as well. Cloud-based traffic data capturing automates the once laborious process of manual data collection and analysis, saving time and freeing up resources for other duties.

The One-Two Punch of Web-Enabled Radar Speed Displays

With web-enabled signs, data is collected and analyzed, and reports can be generated from a single Internet-ready device. No more dispatching personnel to each sign to download data, enter it into spreadsheets and distribute the reports to the right people; the best radar speed displays have built-in software that performs the data collection, calculations and analysis, and distributes user-friendly reports that are current, relevant and accurate—with data organized any way you need to view it.

You can use these reports to enable resource prioritization and traffic mapping, support DOT studies, help clear complaints and inform decision making. By using your radar speed display to gather traffic data for reporting and analysis, you can make highly informed, verifiable decisions that can have a positive impact on the safety of citizens.

Maximizing Your Investment

For a radar speed display to be an effective component of your traffic safety initiative, you need to first take the time to gather baseline data so you can measure your success. To make sure your data is accurate, your sign must be installed and positioned properly at the right location and be utilized with precision. This paper provides best practices and tips to ensure that you get the most from your web-enabled radar display sign.

Best Practice #1:
# Use your radar speed display to gather baseline data

It's a very good idea to collect baseline speeding data before turning on your sign so you can measure the sign's effectiveness once it's activated. You may also wish to gather speed data to understand trends, such as average speed at a particular time of day or week, or the 85th percentile speed during peak vs. non-peak hours.

When you initially deploy your sign, set the display to "stealth mode" where the sign appears to be off but is in fact still collecting data. Because the sign is not flashing vehicle speeds, drivers assume it is not operational; they continue to travel at their current speeds rather than hit the brakes. This will give you the most accurate profile of your current speeding issues and enforcement priorities and help to ensure that you can clear complaints most effectively.

Understand the count

Keep in mind that speed displays will only count vehicles accurately when placed on a road with one lane of approaching traffic. If there are multiple approaching traffic lanes, the data will reflect the road's speed profile accurately, but the traffic count will not be accurate. If you require a sign that can track vehicles and speeds from multiple lanes in both directions, you will need a more versatile tool made specifically to count and classify vehicles. StatTrak is a portable, easy to install counter classifier that collects bi-directional traffic in up to four lanes at once and can be mounted to a pole on either the side of the road or in the median.

If you have concerns that your radar speed sign in stealth mode isn't "stealthy enough," the unobtrusive profile of one of these counters is an ideal solution to collect information without the potential influence of the radar sign.
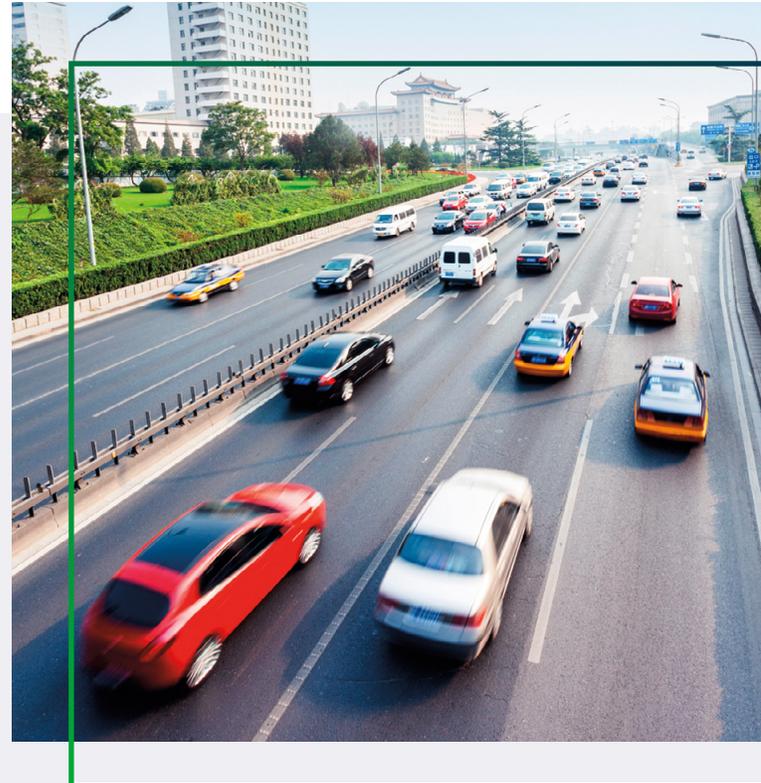
Best Practice #2:
Choose the best location

Straight road, free-flowing traffic and no entrances or exits

You'll want to scout out the best location for your radar display sign. The most effective location is a straight stretch of road where traffic is free-flowing because it offers the best visibility for drivers. A location such as this is not always available, but it will give you the best results. Your location should also be without turnoffs, entrances or driveways, which have a tendency to skew the data lower. These lower speeds can be filtered out when generating reports, but it's better to avoid the extra work and any possibility of error by choosing a good location in the beginning.

Visible with no distractions

Make sure the approach to the sign is long enough so that drivers can see and process their speeds and slow down accordingly. Look for locations where there are not many other distractions. In a neighborhood setting this is not generally a problem, but on an arterial road, look for locations without a lot of other traffic or commercial signage so that your speed display stands out. To ensure that your sign is clearly discernable and properly set up to collect accurate data, install and approach the sign in your own vehicle and note visibility, as well as the speed it displays as you pass.
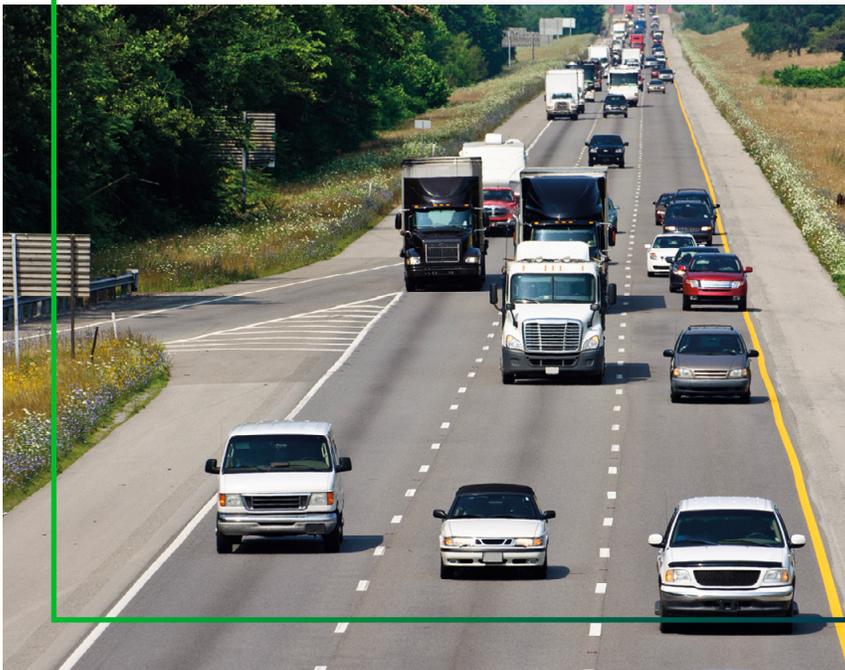
"

...it's better to avoid the extra work and any possibility of error by choosing a good location in the beginning.

„
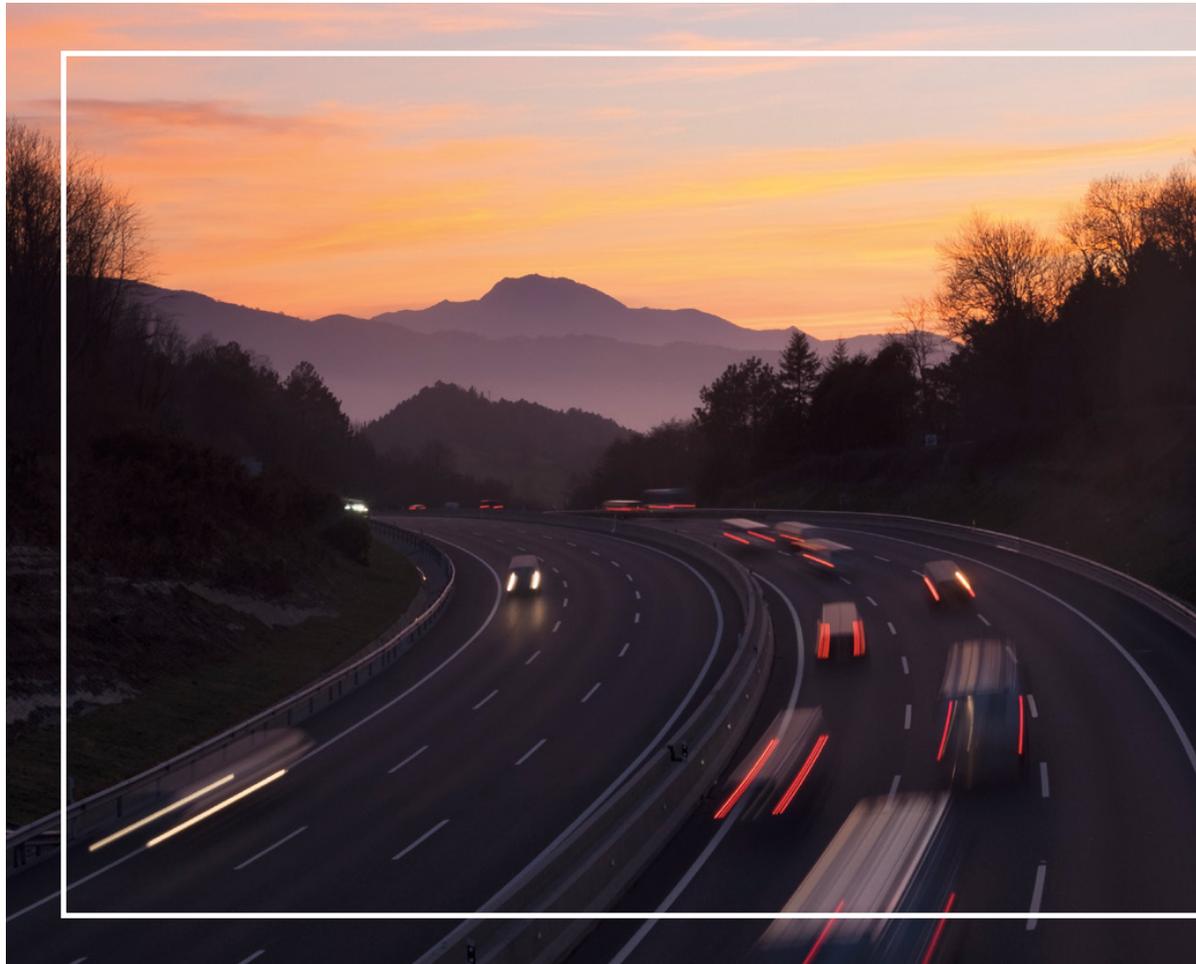
In proximity to speed limit sign

If possible, mount the sign near or on the same pole as a speed limit sign so drivers know the posted speed limit and there's no question as to whether they are exceeding it. Drivers often don't realize they are speeding, so the visual reminder can be a much-needed jolt to slow down.

Avoid mounting in problem areas

Mount the sign in advance of a problem area, such as a curve. Drivers should be encouraged to slow down before, rather than on the curve itself where braking suddenly could have negative consequences.

Avoid cross streets, curves and hills

Because radar speed displays are sensitive to all traffic, they cannot always discern between vehicles that are close and those that are farther away. For example, if there is a busy intersection or cross street within view of your radar speed display, it may pick up vehicles from the cross street in addition to those you are trying to calm. If this happens, move the sign as far away from cross streets as practical and reduce the display's radar sensitivity so cross traffic is not detected. Otherwise, if the sign were to display the speed of vehicles other than those approaching, drivers could become confused and not trust the sign.

Best Practice #3: Use care in positioning your sign

Mount it high

Typically, if you're using a portable radar speed display, it needs to be at least five to six feet from the ground so that it is positioned above every car that parks or pulls over in front of it and cannot be blocked. This ensures that the sign is always visible to approaching drivers.

Angle it properly

Most LEDs on radar speed displays have a 20- to 30-degree viewing angle, so as you drive by, they fade out of view. This prevents drivers from confusing their speeds with the speed of the cars in front of or behind them and keeps them from looking at the display rather than looking ahead down the road as they drive past the sign.

For best results, you should aim the sign toward cars that are approximately 500 feet down the road. If you angle the sign too close, the radar will shoot across the road instead of down the road, which can reduce the pick-up range as well as provide incorrect readings. Also, make sure the radar speed display is close to the side of the road so the wide angle does not affect the readings. This is known as the cosine angle. If the angle is too great, the readings may be incorrect. Try to keep this angle under five degrees to avoid a problem.

Best Practice #4: Adjust the sensitivity

Finding the right sensitivity level takes some experimentation, but it's important that you take care to identify the optimal level. Radar speed displays can pick up approaching vehicles from 100 to 1,000 feet away, depending on the sensitivity level of the radar detection, and you want to give approaching drivers plenty of time to see the sign and react appropriately. Your sign will detect larger vehicles more easily, so you may get a reading from a box truck at a farther distance than the closer, speeding motorcycle; adjusting the sensitivity gives you the ability to reduce or increase the relative distance.

As with visibility level, you'll want to assess the sensitivity of your sign by driving past it to observe how the sign responds, and adjust the sensitivity accordingly until you are comfortable it's right.

Conclusion

Follow these tips to get the most from your web-enabled radar speed display. You will achieve strong results for your traffic calming initiative, as well as gather accurate data and reports to support traffic studies, clear complaints, provide documentation for traffic court and ensure better safety for citizens.

Ask us for a personal demo of TraffiCloud™, our traffic management solution that lets you control your traffic devices and data from any Internet-ready device 24/7, providing a new level of awareness while reducing the amount of time needed to manage your traffic devices and information.

For information on our web-enabled devices including the Shield 12 and Shield 15 radar speed displays, our SpeedAlert radar sign with variable message display and our versatile InstAlert variable message displays, contact us today.

Call 866.366.6602 or email us at sales@alltrafficsolutions.com

TraffiCloud leverages our patented technology (US Patents 8,417,442; 8,755,990; 9,070,287; 9,411,893) to deliver unique cloud-based management, features and functionality.

All Traffic Solutions delivers cloud-based traffic management solutions, including radar speed and variable message displays, imaging products and intelligent transportation systems for law enforcement, transportation and communities.

Our innovative TraffiCloud™ traffic management platform is changing the way communities solve their most complex traffic, transportation and parking challenges by allowing them to manage all their traffic equipment remotely, as well as leverage data to increase traffic safety, streamline their operations and achieve lasting results.

ALL TRAFFIC
SOLUTIONS