

# LR-15L

## Radar-Activated Rapid Flashing Beacons

### Features

- High-accuracy Doppler radar measures the speed of each vehicle and capable to track multiple vehicles moving in both directions at the same time.
- Virtually unlimited data storage on a removable Micro SD card allows continuous recording of 10+ years of detailed traffic statics. All information is stored in MS Excel compatible files (CSV).
- Onboard graphics OLED display and keyboard allows to set all important parameters of the system and verify proper positioning and functioning of the radar.
- No software required to set up the system or collect traffic data from the device.
- Integrated Solar MPPT charger and advanced power management system ensures long autonomy.

### Our Solution - Focus on Speed Limit

We've combined functionality of a traditional speed display and flashing LED speed limit sign to create an effective tool that brings driver attention to the posted speed limit when it is needed. Our LR-15 radar beacons kit includes compact and power-efficient Doppler radar attached to a pair of high-brightness LED beacons.

The radar is configured to activate flashing beacons when measured vehicle speed exceeds preprogrammed threshold to brings driver attention to the speed limit sign. LR-15L remains almost invisible in stand-by mode reducing driver's habituation and light pollution.



### Problem – Speed Limit Awareness

#### Speed Limit Signs - Unintentional Violation

Drivers are unaware of the speed limit and consistently underestimate their speed. A person can miss a speed limit sign or may not remember the last passed sign.

#### Variable Speed Limit (VSL) and driver's habituation

Study shows - most drivers had failed to notice the speed limit change (58.3%) and 6.25% still to be unaware that the speed limit changed after passing all consecutive signs.

#### Work Zones

Of those drivers who stated that they knew the temporary Speed Limit, 76% identified the speed limit correctly. The limited sight distance in work zones increases the possibility that a driver may be unable to see the temporary speed limit.



## Advantages and Benefits

### Wide road with a dense traffic pattern

Typically, a Radar Feedback Sign is not capable to make a difference between multiple vehicles that are traveling close one to another. The LR-15 can help eliminate the confusion. It will activate in cases if at least one vehicle in a group moving faster than programmed speed threshold.

### Limited real estate on a pole

It happens very often – multiple signposted on the same pole. As result, there is no space to install a Radar feedback sign without obstructing other important information. Thanks to extremely low profile and small footprint, the LR-15 can help in this situation.

### Telespar or U-channel signpost

Commonly used light signpost is not capable to support weight of a full-sized radar feedback signs. At the same time, installation of a stronger wooden or steel post may not be an option. In this case you may consider using LR-15 as an efficient alternative to a Radar Feedback Sign.

### Need for effective traffic calming measures on small budget?

The LR-15 is the most affordable non-intrusive traffic calming measure on the market. It costs considerably less than a typical radar feedback sign including the installation cost.

### LR-15L collects inbound and optionally outbound traffic:

- Time-stamped records for each target with up to a second resolution.
- The Average, Minimal and Maximal speed of each vehicle.
- Vehicles size estimation.
- Speed variation (acceleration or deceleration).
- Programmable Speed Bins summary.

### LR-15L has proven to be an effective traffic calming tool:

- Over 30% of drivers responded to strobes and slowed down.
- The number of serious speeding accidents was reduced by more than 40%.
- Average speed was reduced by more than 6 km/h.
- 85th percentile speed dropped by more than 10%.



| Feature                       | Value  |
|-------------------------------|--|
| <b>Physical</b>               |  |
| Size of the controller unit   | 7.87 x 3.93 x 2.75 in; 200 x 100 x 70 mm     |
| Unit weight                   | 2.4 lb. / 1.1 kg                             |
| Enclosure rating              | NEMA 4X, IEC529-IP65                         |
| <b>Radar Parameters</b>       |  |
| Operating frequency           | 24.120 GHz - 24.130 GHz, Typical: 24.125 GHz |
| Antenna beam angle            | H24°, V12°                                   |
| <b>Power requirements</b>     |  |
| Integral power consumption    | 0.3 Watt                                     |
| Max. power consumption        | 1.5 Watt                                     |
| Input voltage range           | 5 to 15 Volt                                 |
| Batteries                     | Li-Ion 7.5V, 12500mAh                        |
| Complete darkness autonomy    | 5 Days                                       |
| <b>Other Parameters</b>       |  |
| Operating Temperature         | -20C to +60C                                 |
| Typical radar detection range | 390 ft.; 120 m (for midsize sedan)           |
| Max. speed measurement error  | +/- 0.5 mph; +/- 0.8 km/h                    |



## TNSense Inc.

226 rue Roy, St-Eustache, Quebec, Canada, J7R 5R6  
 email: [info@tnsense.com](mailto:info@tnsense.com)  
 phone: +1 (514) 519-1277

