



HTL INTERSECTION SPEED ZONES - ISZ

Model: MV RIAWS

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About Us

At Harding Traffic, we are more than just a company; we are pioneers in traffic control solutions with a rich history dating back to 1966 when Harding Signals was incorporated. This marked our venture into electronic traffic signals.

In 1997, our area of operations moved away from Traffic Signals and into Electronic Signage and Traffic Management Systems. To reflect this, we changed our name to Harding Electronic Signals Ltd. Harding Traffic's integration into the Traffitech Group in 2007 marked a new era of growth, joining a group of companies boasting a robust financial standing with \$45 million in revenue, assets exceeding \$20 million, and a dedicated team of 180 staff and 6 locations across New Zealand.



Our journey has been marked by a steadfast dedication to innovation and quality, leading the charge in traffic control technology. With 1000's of the country's traffic signs installed by Harding Traffic over 27 years, our impact is undeniable. Yet our ambition extends beyond electronic traffic signs; we've become a comprehensive provider of traffic management/warning systems, car park solutions, integrated traffic management solutions, data capture and analytics along with so much more. We are committed to enhancing urban infrastructure with our cutting-edge solutions.

Today, Harding Traffic stands as a testament to over 50 years of expertise in the traffic industry. Our capabilities extend across the design, manufacture, and installation of high quality, specialised traffic systems. This includes everything from Motorway signs and School Zone signs to Rural Interchange Advance Warning Signs, Illuminated Road Stud technologies, car park systems, electronic warning systems and off-street signage. We take pride in serving a diverse clientele that includes NZTA, local Councils and authorities, commercial entities and contractors.

Quality Guaranteed

Harding Traffic holds AS/NZS 4801 Health and Safety Management certification, ISO 9001 manufacturing quality certification and ISO 14001 Environmental Management System certification. These certifications represent Harding's commitment to providing a consistently high level of service, delivery quality products based on sound management and process controls.

Standard Features

Intersection Speed Zones

At high-speed rural intersections, ensuring safety for all road users is critical. Intersection Speed Zones (ISZs), formally known as Rural Intersection Activated Warning Signs (RIAWs) are an innovative solution designed to reduce the risk and severity of crashes. By temporarily lowering speed limits on the main road when vehicles approach from side roads, ISZs help create safer driving conditions.

How ISZs Work

When a vehicle is detected approaching an intersection from a side road, the ISZ system activates electronic variable speed limit signs to display a reduced speed limit on the main road. This temporary reduction, typically to 60 or 70km/h, significantly lowers the risk of severe crashes, particularly right-angle collisions. Studies show that at impact speeds of 50km/h or below, the likelihood of severe injury or fatality drops dramatically.

Proven Benefits of ISZs

- **Crash Severity Reduction:** ISZs can reduce severe crashes by up to 69%.
- **Enhanced Driver Awareness:** Lower speeds improve driver responsiveness to unexpected events, reducing the likelihood of crashes.
- **Improved Accessibility:** Easier and safer entry or exit from side roads onto high-speed rural roads.
- **Flexible Use:** ISZs can serve as a cost-effective interim safety measure before more expensive treatments, such as roundabouts, are installed.

Key Features of Our ISZ Systems

- **NZTA Compliant:** Fully aligned with New Zealand Transport Agency standards.
- **Advanced LED Technology:** High visibility under all conditions.
- **Smart Vehicle Detection:** Activates only when needed for efficient traffic management.
- **Flexible Power Options:** Solar-powered with mains power backup.
- **Data Management:** Integrated data loggers for performance monitoring and reporting.

Compliance and Quality

- Complies with **EN12966**, the industry standard preferred in New Zealand, ensuring an optimized "viewing window" that prevents unnecessary light overspill and enhances visibility for oncoming traffic.
- Meets **ITS-01-001-202302-STD-AWRS**, the specification for Active Warning and Regulatory Signs.

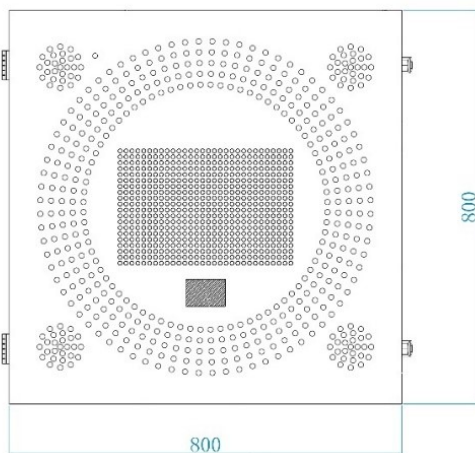
Sign Specifications

- **HTL Code:** MV RIAWS
- **Pixel Pitch:** 16mm
- **LED Colour Specification:** EN 12966:2014
- **LED Optical Performance:** EN 12966:2014
- **Dimensions:** 800mm wide x 800mm high x 165mm deep
- **Colours Standard:** Powder coated black front with aircraft grey on side and rear

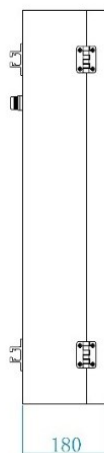
- **Power / Voltage:** 12v DC with 230V AC mains power
- **Weight:** Approx. 23 Kg w/o batteries
- **Mounting:** Pole Mounted
- **Viewing Angle:** 30° horizontal, 10° vertical
- **Enclosure Rating:** IP56
- **Cabinet Material:** Aluminium
- **Sign Design Life:** 10 Years
- **Warranty Period:** 12 Months
- **Corner Wig-Wag Lights:** Yes - 4 x Amber 90mm diameter.
- **Wig-Wag Flash Rate:** 1Hz
- **Sign Activation Indicator:** 90mm diameter amber indicator light on rear of sign cabinet.

- **Operational Display:** The speed can be displayed in either Amber or White. The roundel can be configured to be static or to have the inner three lines of the roundel flash. The Wig Wags can also be set up to flash either diagonally or horizontally, depending on your preference.

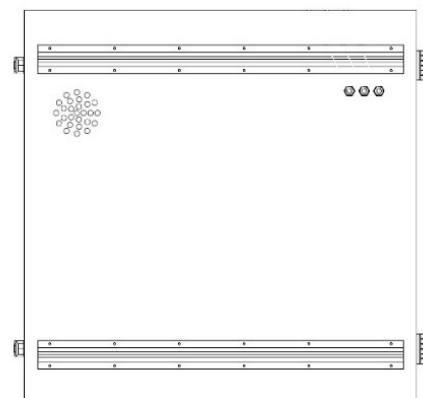
- **Light Sensor:** Photoelectric sensor that automatically controls the luminosity of the sign LEDs



FRONT VIEW

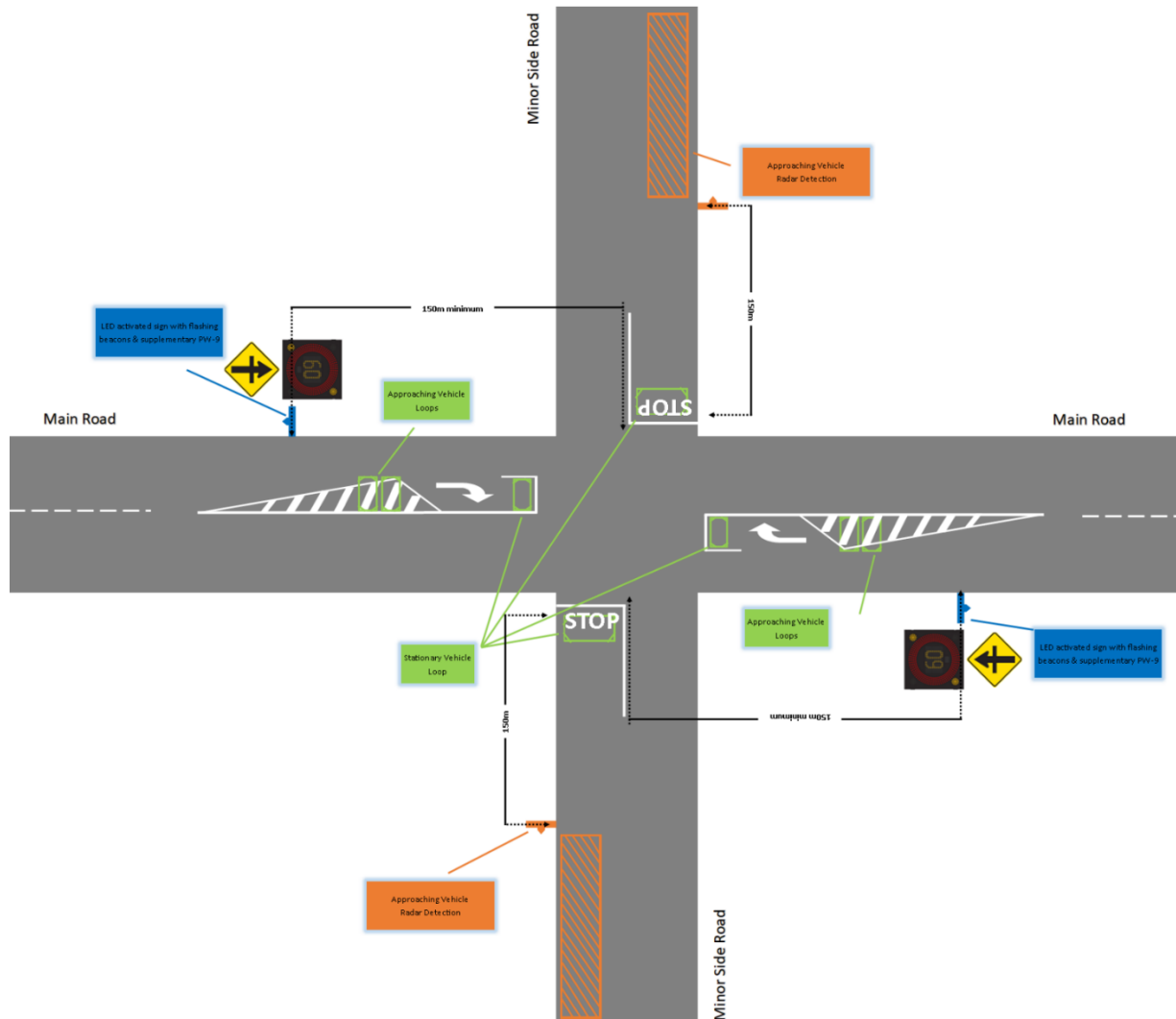


SIDE VIEW



REAR VIEW

Operation of a Crossroad Intersection



System Components:

1. Radar Detectors:

- Positioned on both approaches of the Minor Side Road
- Detects approaching vehicles on the Minor Side Road.

2. Approaching Vehicle Loops:

- Installed on both approaches of the Main Road (150m minimum from the intersection).
- Detects vehicles approaching the intersection on the Main Road.

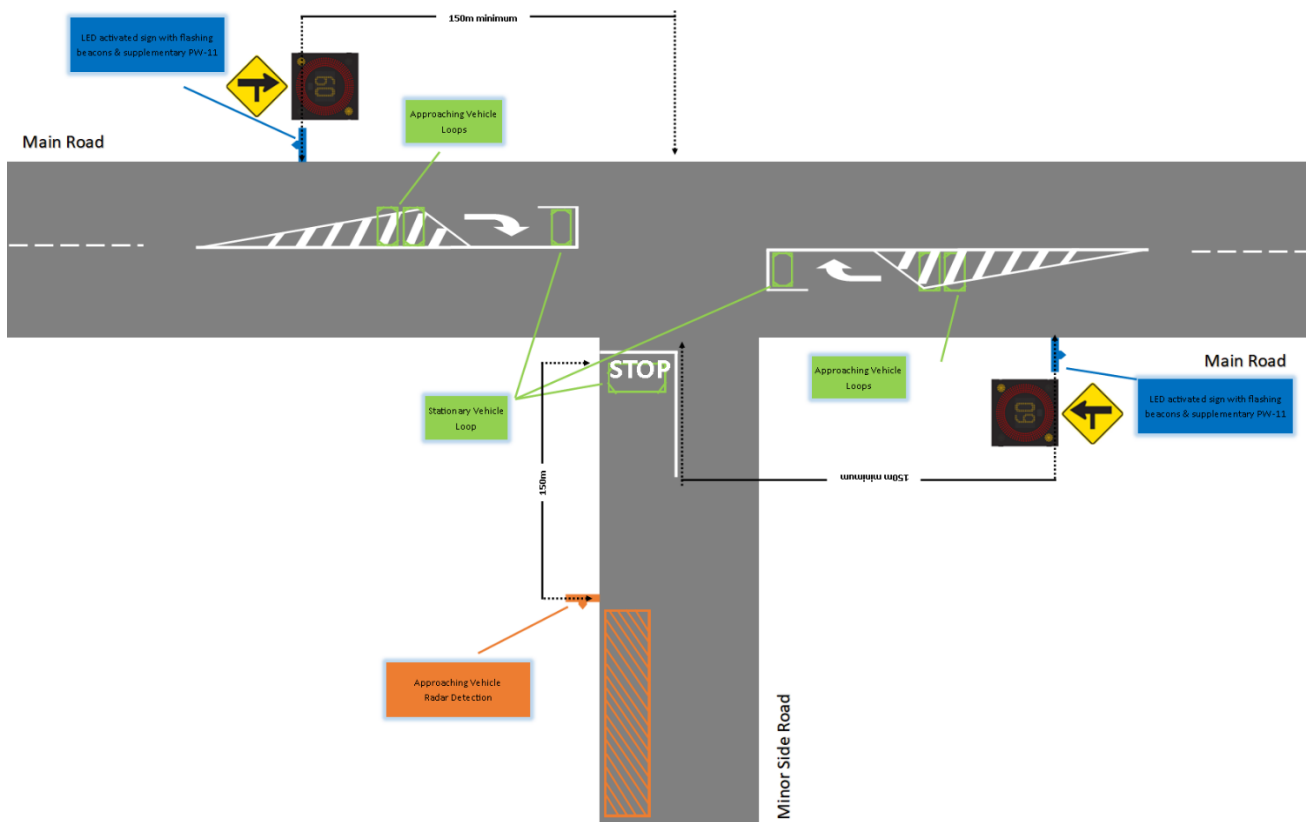
3. Stationary Vehicle Loops:

- Located at the stop lines on both approaches of the Minor Side Road.
- Detects vehicles waiting at the stop signs.

4. LED-Activated Warning Signs:

- Installed on both Main Road approaches, approximately 150m in advance of the intersection.
- Equipped with flashing beacons and a supplementary "Junction Sign " (PW-9) sign.

Operation of a “T” Intersection



Operational Workflow:

1. Detection of a Vehicle on the Minor Side Road:

- **Radar Detectors:** As a vehicle approaches the intersection on the Minor Side Road, the radar detector activates.
- **Stationary Loops:** If a vehicle stops at the stop line, this loop confirms its presence.

2. Activation of Main Road Warning Signs:

- Once a vehicle is detected on the Minor Side Road (either approaching or stopped at the intersection), the system activates the LED-activated warning signs on the Main Road.
- The flashing beacons alert Main Road drivers to the presence of a vehicle intending to enter the intersection.

3. Detection of Approaching Vehicles on the Main Road:

- **Approaching Vehicle Loops:** Detect vehicles travelling on the Main Road towards the intersection.
- These loops ensure that the LED signs on the Main Road only activate when Main Road vehicles are in proximity, preventing unnecessary warnings.

4. Deactivation of Warning Signs:

- Once the vehicle on the Minor Side Road has safely crossed or entered the Main Road, and no further vehicles are detected by the stationary loops, the warning signs on the Main Road are deactivated.
- This ensures the system minimizes unnecessary activations, maintaining driver trust.

Additional Options

SOLAR POWERED BATTERY/SOLAR KITS

At Harding Traffic, our solar systems are meticulously tailored to complement every sign variant. Designed for optimal efficiency, our solar systems are meticulously calibrated to sustain a sign's power requirements for up to two days without sunlight, while efficiently rejuvenating the batteries within a single standard day of sunlight exposure. These systems incorporate state-of-the-art solar power components, all discreetly housed within the sign itself (batteries included) ensuring utmost security through the sign's locking mechanism. What's more, the solar panel is seamlessly affixed atop the very pole that supports the sign, providing an integrated and efficient solution.

- **HTL Code:** MV IBSKL100, MV IBSKL200
- **Solar Capacity (Nominal):** 100w or 200w
- **Junction Box:** IP67
- **PV Cells:** Mono-crystalline silicon cell per panel
- **Dimensions:** Varied depending on option
- **Front Glass:** 3.2mm, low iron, tempered glass
- **Operating temperature** -40°C to ~ 85°C
- **Battery Voltage:** 12V
- **Storage Capacity (Battery)** From 20ah, depending on setup.
- **Battery Type** VRLA

Low sunlight areas (less than 8 nominal hours of sunlight per day) signs will be required to upgrade their solar requirements.



200AH WITH 400W SOLAR

- **HTL Code:** MV EBSKL400 (Field Cabinet)
- **Battery Box Cabinet Size:** 1075H x 750W x 620Dmm
- **Cabinet IP Rating:** IP66
- **Total Batteries:** 2 x 100ah Lithium
- **Solar Charger:** MPPT 40A
- **Solar Panel Size:** 1200H x 540W x 35Dmm x 4
- **Solar Max Power Voltage:** 18 V
- **Solar Max Power Current:** 5.56 A
- **Solar Power Tolerance:** 0~3W
- **Solar Cells:** Monocrystalline Silicon Cells
- **Solar Front Face:** 3.2mm, Low Iron, Tempered Glass
- **Solar Junction Box:** IP67
- **Solar Operating Temp:** -40 °C~ +85°C



MAIN'S POWERED KITS

Harding Traffic's Mains Power Ready kit is integrated directly into the sign, including all necessary components to establish a safe and controlled mains power supply for our wide range of active signs.

- **HTL Code:** MV MAINSP2
- **Output DC Voltage:** 12V
- **Input Voltage Range:** 88 ~ 264 VAC / 124 ~ 370VDC
- **Working Temp:** -30°C to +70°C
- **Protections:** Short circuit / Overload / Over voltage / Over temper

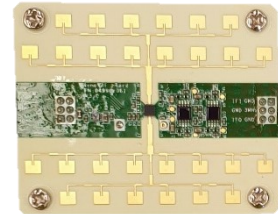


SPEED RADAR

Harding Traffic have thoroughly investigated the global Radar market, seeking the most reliable and cost-effective solutions to incorporate into our Electronic Warning Signs. We now have a range of options to suit all roading / traffic scenarios, catering for urban, rural and motorway speed considerations.

Short Range

- **HTL Code:** MV INRAD100
- **Radar Range:** Up to 100m²
- **Direction options:** Bidirectional
- **Radar Frequency:** 24.15GHz
- **Accuracy:** ±1kph
- **Operating temperature:** 30°C to +70°C
- **Speed Detection Range:** 5kph to 350kph



Long Range

- **HTL Code:** MV INRAD600
- **Radar Range:** 360m typical detection range¹
- **Direction options:** Bidirectional
- **Radar Frequency:** 24.125GHz centre +/- 25Mhz
- **Accuracy:** +/- 0.5%
- **Operating temperature:** -40°C to +85°C
- **Speed Detection Range:** 1kph to 331kph
- **Interface:** Primary and Auxiliary RS232



1. Factory programmable and location dependant

SUPPLEMENTARY SIGNS

Supplementary signs can be purchased with the electronic signs.

Y Junction Controlled Left
TCD Code: WJ6L MOTSAM: PW-12
TCD Rule: W11-5



Y Junction - Controlled Right
TCD Code: WJ6R MOTSAM: PW-12
TCD Rule: W11-5



Side Road Junction Controlled – Left
TCD Code: WJ5L MOTSAM: PW-11
TCD Rule: W11-4



Side Road Junction Controlled - Right
TCD Code: WJ5R MOTSAM: PW-11
TCD Rule: W11-4



T-Junction - Controlled Left
TCD Code: WJ3L MOTSAM: PW-10
TCD Rule: W11-3



T-Junction - Controlled Right
TCD Code: WJ3R MOTSAM: PW-10
TCD Rule: W11-3



Cross Roads Junction - Controlled
TCD Code: WJ2A MOTSAM: PW-9
TCD Rule: W11-2

