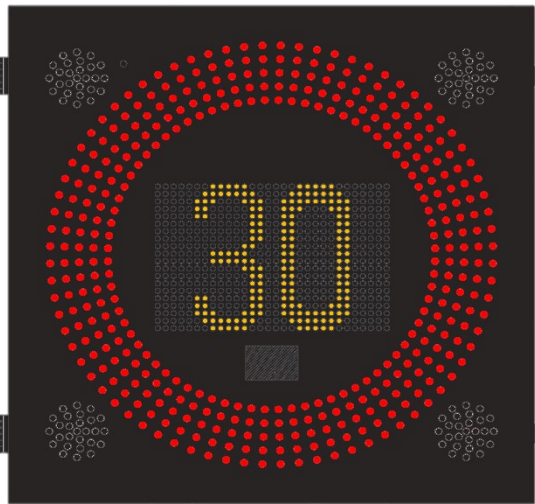




# HTL VARIABLE SPEED SCHOOL ZONE SIGN

Model: MV SZSVS

## Installation Guide



# Index

- Introduction ..... 3
- Installation Instructions ..... 3
  - Step 1: Prepare for Installation ..... 3
  - Step 2: Positioning the Sign on the Pole ..... 3
  - Step 3: Drilling the Pole for Cable Routing ..... 3
  - Step 4: Installing the Solar Panel ..... 4
  - Step 5: Installing the Solar Cable Connector ..... 4
  - Step 6: Installing the Supplementary Sign ..... 4
  - Step 7: Installing the Antenna & Connecting the Solar Cable ..... 4
  - Step 8: Mounting the Pole into the Ground Socket ..... 4
  - Step 9: Installing the Batteries ..... 5
  - Step 9: Activating options ..... 5
  - Step 10: Final Connections and Powering Up ..... 5
- Installation View ..... 6
- Supplied Contents (per sign) ..... 6
- Images for reference ..... 7
  - Solar panel Options ..... 7
  - Inside view examples of “Master” Sign ..... 7
  - Inside view examples of “Slave” Sign ..... 7
- Troubleshooting ..... 8
  - Signs not Working ..... 8

# Introduction



Our Variable Speed School Zone sign is designed to create a safer environment around schools by temporarily reducing speed limits during high-risk periods, such as school start and end times, as well as special school events. The sign features flashing wig-wags and LED components that activate at programmed times, enhancing driver awareness precisely when needed.

Equipped with an advanced in-built photoelectric sensor, the sign automatically adjusts LED brightness based on ambient light conditions, ensuring maximum visibility in bright sunlight and reducing luminosity as lighting changes. A manual setting allows for post-installation adjustments to suit local conditions if required. Powered by solar energy and wirelessly activated, these self-sufficient signs eliminate the need for costly power and communication line installations.

## Instructions

### Step 1: Prepare for Installation

1. Lay out all the components and ensure all necessary parts are present.
2. It is often easier to build the sign to the pole while on the ground and then lift it into the socket, but the installer can choose their preferred method.

### Step 2: Positioning the Sign on the Pole

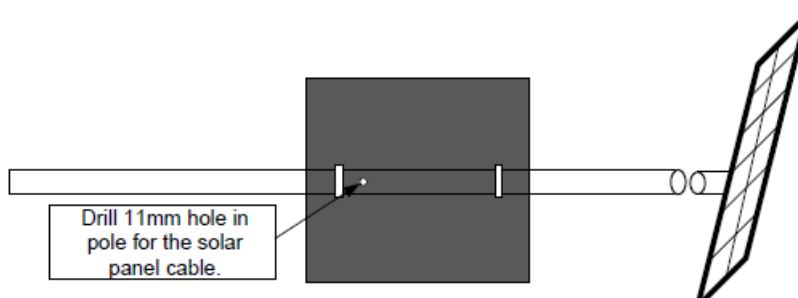
1. Place the sign face down on a flat surface, using protective materials to avoid damage.
2. Measure **3400mm** from the base of the pole; this will be the bottom position for the sign. Measure **2400mm** from ground level if the pole is already in place.
3. Secure the sign to the pole using the supplied **114ARC brackets**.



- **Tip:** Use copper grease on the nuts to prevent them from binding when tightening.

### Step 3: Drilling the Pole for Cable Routing

1. Drill an **11mm hole** just above the bottom **ARC bracket**.
2. Insert a draw cable through this hole and push it up towards the top of the pole.

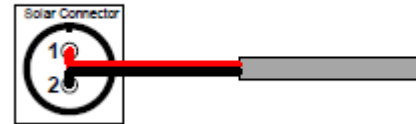


## Step 4: Installing the Solar Panel

1. Attach the solar panel cable to the draw cable and gently pull it down inside the pole, out through the drilled hole.
2. Fit the solar panel into the top of the pole, continuing to pull the cable through the hole as you go.
3. **Orientation:** Ensure the solar panel is facing **North** to optimize energy capture. Secure it using **Tek screws**.

## Step 5: Installing the Solar Cable Connector

1. **Connect the supplied 2-Pin Connector** to the solar cable.
  - Red wire to **PIN 1**
  - Black wire to **PIN 2**
2. Neatly feed any excess cable back into the pole and secure it with cable ties.

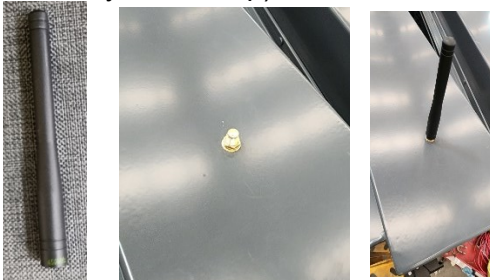


## Step 6: Installing the Supplementary Sign

1. Use the provided **114ARC brackets** to affix the Supplementary Kura sign below the electronic sign on the pole.

## Step 7: Installing the Antenna & Connecting the Solar Cable

1. Screw the Antenna provided to the connector on the top of the sign. (Only applicable on a Master / Slave System setup)



2. Connect the 2 Pin Connector from the solar panel cable to the corresponding solar panel connector at the back of the sign



## Step 8: Mounting the Pole into the Ground Socket

1. Carefully lift the assembled pole (with the sign attached) and insert it into the 1m ground socket.
2. Secure the pole firmly in place.

## Step 9: Installing the Batteries

1. Ensure that all battery and PV fuses are open before starting.
2. Place the batteries into the sign, ensuring they sit comfortably on the back rail.
3. Wire the **batteries** inside the sign.
  - **Yellow Wire = +VCC**
  - **Black Wire = Ground**



4. After connecting the battery cabling, Insert all fuses into the fuse holders;
  - Close the **Battery Fuse holder** first
  - Then close the **PV (Solar) Fuse holder**

**Tip:** Typically, Master Signs require 3 batteries, while Slave Signs require 2 batteries

## Step 9: Activating options

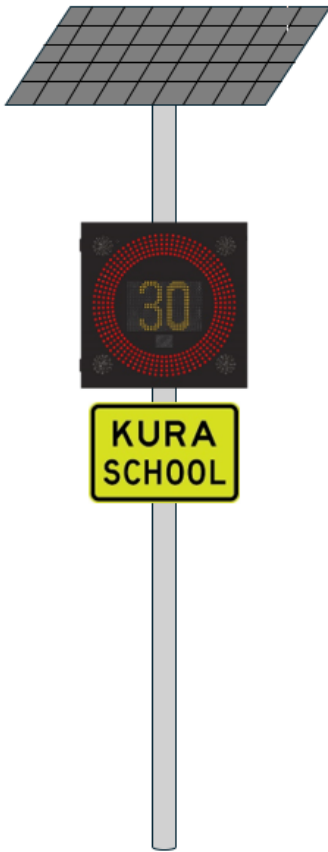
1. Depending on the order requirements, the operational times can be scheduled using either the **SmartSign** system or the **HTL Local Sign Controller**. Please refer to the respective manuals for detailed instructions.

## Step 10: Final Connections and Powering Up

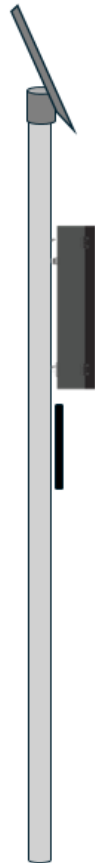
1. Once everything is properly connected, the sign should power up and the lights inside the battery box would be on indicating it is operational.

**Please note: It's important to follow all safety guidelines and instructions provided with the equipment during the installation process.**

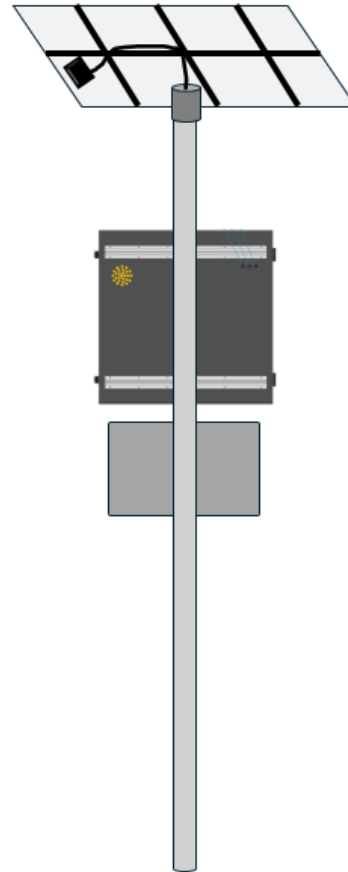
## Installation View



Front View



Side View



Back View

## Supplied Contents (per sign)

- 1 x Variable School Zone Speed Sign
- 1 x PW-32 Kura School Supplementary Signs
- 1 x Pole
- 1 x Socket
- 2 x 114ARC Brackets for the Variable School Zone Sign
- 2 x 114ARC Brackets for Kura Supplementary Signs
- 1 x Solar Panel
- 1 x Solar panel cable connector
- 1 x Key Set
- 1 x Antenna (if mode of operation requires it)
- Fuses for Battery, PV (Solar)
- Battery (Qty subject to order specs)

# Images for reference

## Solar panel Options



60w Solar Panel & Frame



100w Solar Panel & Frame



200w Solar Panel & Frame

## Inside view examples of "Master" Sign



Sign Activated via SmartSign



Sign Activated via Local Controller

## Inside view examples of "Slave" Sign



Sign Activated via SmartSign



Sign Activated via Local Controller

# Troubleshooting

## Signs not Working

**Signs not operating:** Check if the power light is illuminated.

If the sign does not power up:

- Double-check the battery connections and fuse holders.
- Ensure the solar panel is receiving adequate sunlight.
- Verify the integrity of all wiring and connectors.

If the sign does not communicate with the central control system:

- Ensure the antenna is securely connected and the radio module is operational.

If the issue persists, please contact Harding Traffic for support. 0800 427 346