

# Dynamic Message Sign Maintenance and Testing Procedures

Preventive maintenance should be completed on all DMS. Maintenance will ensure the signs will be operational when needed. Testing of each DMS will also determine if any maintenance needs to be done with a sign.

## Portable DMS

### Yearly Procedures

- Lube hinges, locks, and jack stands
- Load Test Batteries
- Remove dust and dirt

### Monthly Procedures

- Battery Water level
- Battery and wire connections<sup>1</sup>
- Tire Pressure
- Check inside for water and rodent intrusion
- Clean Display Screen (signs are close to roadway and may require frequent cleaning)
- Ensure all pixels are working by displaying test message

### Weekly Procedures

- Battery Voltage<sup>2</sup>
- Communication/Operational Test<sup>3</sup>

**Note: During winter operations, the solar panel shall be elevated to ensure maximum exposure to solar radiation. The sun is much lower during winter months, and the solar panel needs to be adjusted to accommodate the low angle of the sun.**

1. This is required after moving the sign from one location to another.
2. This can be checked using the Intelligent Control (IC) Software. The sign voltage is reported every time the sign is polled. To check the voltage using IC, logon to system; click "Map View"; click "Maps" down arrow; click on "Summary"; this will display the current status including battery voltage.
3. The signs are called every 6 hours and checked for communication errors and sign status. It is recommended, on a weekly basis, each district connect to their signs to ensure they can communicate with the signs, and to stay familiar with the IC software.

## **Permanent (fixed) DMS**

### **Yearly Procedures**

- Check and clean ventilation fans and filters; ensure they are operational (see manufacturers instructions)
- Inspect temperature and light sensors for obstruction and clean if necessary
- Check for rodent and water intrusion (i.e. water stains)
- Check for any leaks (seal with silicone or suitable sealer)
- Inspect all door gaskets
- Check drain holes in cabinet bottom for obstructions
- Inspect mounting structure for signs of corrosion, loose bolts and overall stability
- Check earth grounding connections (if accessible)
- Clean face panel
- Clean LED's if necessary (see manufacturers instructions)
- LED & Electronic Circuitry Test (see manufacturers instructions)

### **6 Month Procedures (April/May and September/October)**

- Ensure connectors and cables are secure
- LED Diagnostics (see manufacturers instructions)
- LED Power Supply Diagnostics (see manufacturers instructions)
- Check for rodent and water intrusion
- Clean sign display

### **Weekly Procedures**

- Communication/Operational Test<sup>4</sup>

**4. The signs are called every 6 hours and checked for communication errors and sign status. It is recommended, on a weekly basis, each district connect to their signs to ensure they can communicate with the signs, and to stay familiar with the IC software.**