

# Type A Variable Message Sign (48 x 96) - MC20 Controller

---

## Operator's Manual



# CONTENTS

	<b>Page</b>
General Information & Specification	3
Parts & Accessories	4
Installation of the Variable Message Sign	4
Installation of the Controller	5
Cabling	5
Functions of the Controller	6
Operating Instructions	7
Power Draw	7
Special Notice	7
Preventative & Remedial Maintenance	7
Trouble Shooting	8
Service & Repairs	9

## GENERAL INFORMATION & SPECIFICATION

The Variable Message Sign can be powered from a 24V vehicle battery or from a special (24V) auxiliary battery, if powering from a 12V battery a 24V power supply is required.

The Variable Message Sign is used in conjunction with other signs and devices to give advance warning of road/traffic incidents or changes. The sign comprises of a matrix of RGB LED's which can display full colour symbols & text as a warning with provision for automatic dimming of the display at night.

### Construction

<b>VMS Frame Colour</b>	Matt Black Powdercoated
<b>Rear Panel Colour</b>	White Powdercoated
<b>VMS Size</b>	910mm x 1710mm x 131mm

### Display Matrix

<b>VMS Resolution</b>	48 pixels high x 96 pixels wide
<b>Display Modules (24px x 24px)</b>	2 Modules high x 3 Modules wide
<b>Display Size</b>	800mm x 1600mm

## **PARTS & ACCESSORIES**

<b><u>PART NUMBER</u></b>	<b><u>DESCRIPTION</u></b>
VMS-48X96	Variable Message Sign with MC20 Controller, Power Cable & Communications Cable
VMS CNTROL	MC20 Controller

## **INSTALLATION OF THE VARIABLE MESSAGE SIGN**

Assembly and mounting of the Variable Message Sign will vary depending on the type of vehicle and the mounting location. Further information is available from the Supplier.

The variable message sign is designed with nutserts to be used to fix the variable message sign to the vehicle.

## INSTALLATION OF CONTROLLER

The MC20 controller is usually mounted inside the drivers' cab or trailer (if trailer mounted). A location should be selected so that it is easy to reach and in the line of sight for the operator to enable them to readily alter the display and monitor the operational status of the variable message sign.

## CABLING

When routing the variable message sign cables we recommend following the vehicles existing wiring loom and securing the cables by use of cable ties or similar every 30cm. Take particular care when routing the cables in close proximity to heat sources such as exhaust, engine and driveline parts.

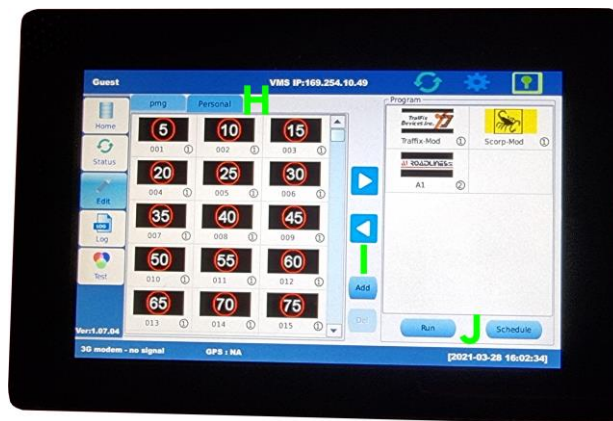
## FUNCTIONS OF THE CONTROLLER

The MC20 controller is designed to be used with the Variable Message Sign.

Picture 1.



Picture 2.



- A Home Screen (Picture 1)
- B Status Screen
- C Edit Screen (Picture 2)
- D System Log
- E Test Patterns
- F Current Display
- G Power On/Off & Brightness Controls
- H Message Tabs/Available Messages
- I Add/Delete Message From Current Program
- J Run or Schedule Current Program

## OPERATING INSTRUCTIONS

1. Upon starting the vehicle power is supplied to the VMS automatically or by use of an override switch to control the power, upon power up the system will run through its booting cycle (System boots with a blank display)
2. Select Edit (C) to enter the edit menu where you can browse available messages to be added/deleted (I) from your current program.
3. Once messages are added to your current program select Run or Schedule (J) to then run this message.
4. Return to the Home Screen (A) and power up the VMS display (G) to display the program selected.

## POWER DRAW

Input voltage

DC 24V

## SPECIAL NOTICE

Never unplug the cables while connected to power source.  
Consult authorised personnel for servicing.

## PREVENTATIVE & REMEDIAL MAINTENANCE

The Variable Message Sign requires minimal maintenance but the following inspections are advised to ensure optimal performance.

### Daily Inspection to include the following:

- Check the frame for signs of damage and ensure mounting bolts are secure.
- The power and control cables are in good condition and secure.
- Run test pattern to ensure all LED's are operational.

### Monthly Inspections to include the following:

- Clean the LED's & Daylight Sensor – use a damp, soft cloth only. **DO NOT** use solvents.

### Variable Message Sign and Controls

- Regular inspection of the Variable Message Sign for signs of corrosion due to exposure to adverse weather conditions.

## TROUBLE SHOOTING

The following situations may cause the Variable Message Sign to malfunction:

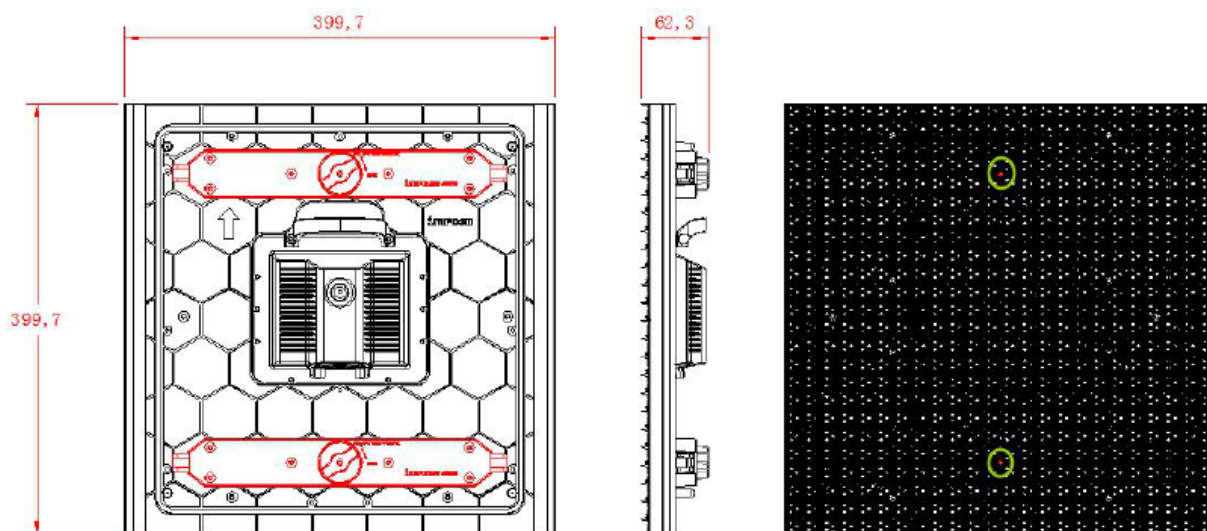
<b>PROBLEM</b>	<b>POSSIBLE CAUSES</b>	<b>ACTIONS</b>
VMS not working.	Faulty battery. Cables not connected.	Check battery voltage. Ensure cables are firmly connected to the sign.
LED Display Module not working.	Faulty wire connection. Loose Comms cable.	Ensure cable is secure.
LED's "Dull" or "Dim" during day.	Dirt/dust on light sensor.	Clean area around the light sensor.

## SERVICE & REPAIRS

The Variable Message Sign itself requires very little service if the inspections outlined above are carried out.

### LED Display Module Replacement

- Isolate the power to the Variable Message Sign via the power cable.
- Locate the faulty LED Display Module and using a 2.5mm T-Handle Allen key unlock the two locking bars on the module as shown below.
- Disconnect the communications cable by unscrewing the two support screws.
- Replace the LED Display Module by reconnecting the communications cable and screws.
- Reposition the LED Display Module in the Variable Message Sign.
- Lock the two locking bars using the 2.5mm T-Handle Allen key.
- Reconnect the power cable.



For further information, service or repair contact:

A1 Roadlines Pty Ltd  
Telephone: 1300 A1ROAD  
Email: [sales@a1roadlines.com.au](mailto:sales@a1roadlines.com.au)