

Type B Flashing Arrow Sign - MC30 Controller

Operator's Manual



CONTENTS

	Page
General Information & Specification	3
LED Cluster Sequences	4 – 5
Parts & Accessories	6
Model Identification	7
Installation	8 – 10
Functions of the Controller	11
Power Draw	12
Special Notice	12
Operating Instructions	13
Preventative & Remedial Maintenance	13
Trouble Shooting	14
Service & Repairs	14

GENERAL INFORMATION & SPECIFICATION

The Type B LED Flashing Arrow Sign has been designed and manufactured to comply with the requirements of Australian Standard AS4192-2006.

The Type B LED Flashing Arrow Sign can be powered from the vehicle battery (12V or 24V), from a special auxiliary battery, from a motor-generator set or a combination of these.

The Flashing Arrow Sign is used in conjunction with other signs and devices to give advance warning of a short-term road closure. The sign comprises of a matrix of amber LED Clusters which are switched to display a flashing arrow or an obstruction warning with provision for automatic dimming of the display at night.

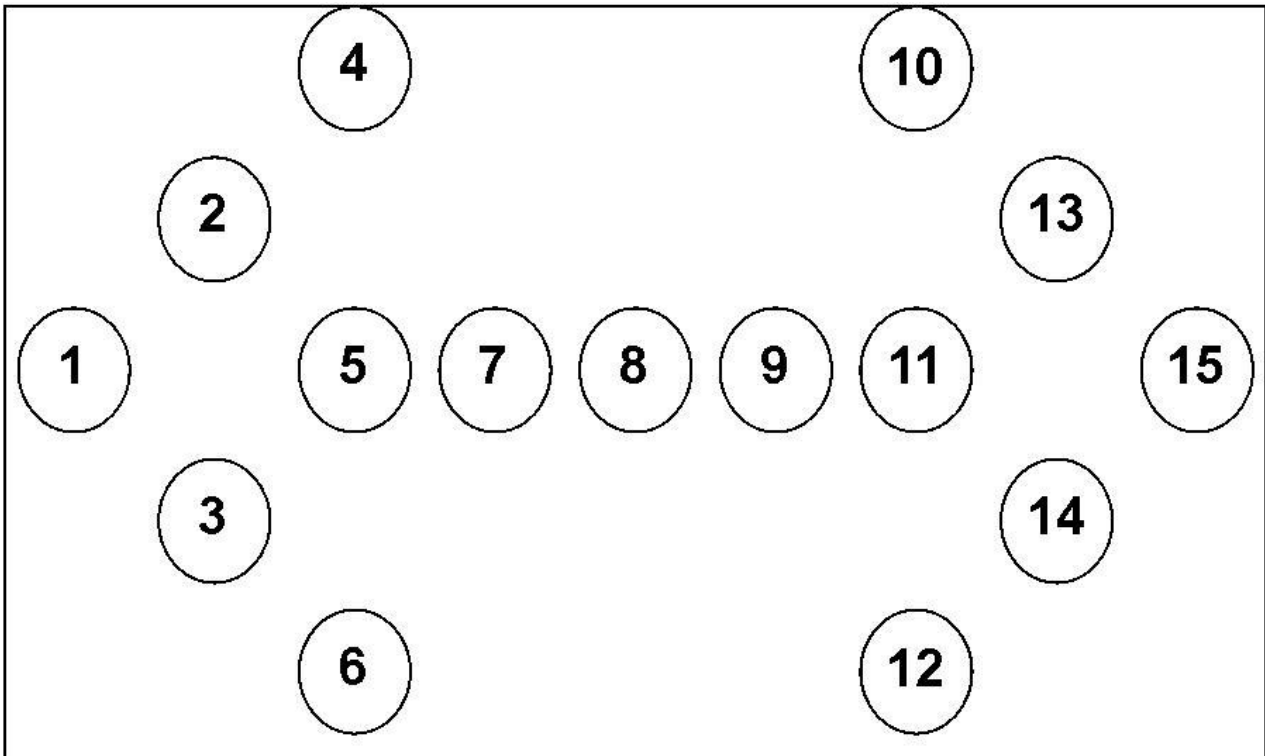
Construction

Panel Colour	Matt Black Powdercoated
Panel Size	1500mm x 770mm x 160mm
Panel Face	2mm Aluminium
Panel Support	2mm Aluminium

LED Cluster

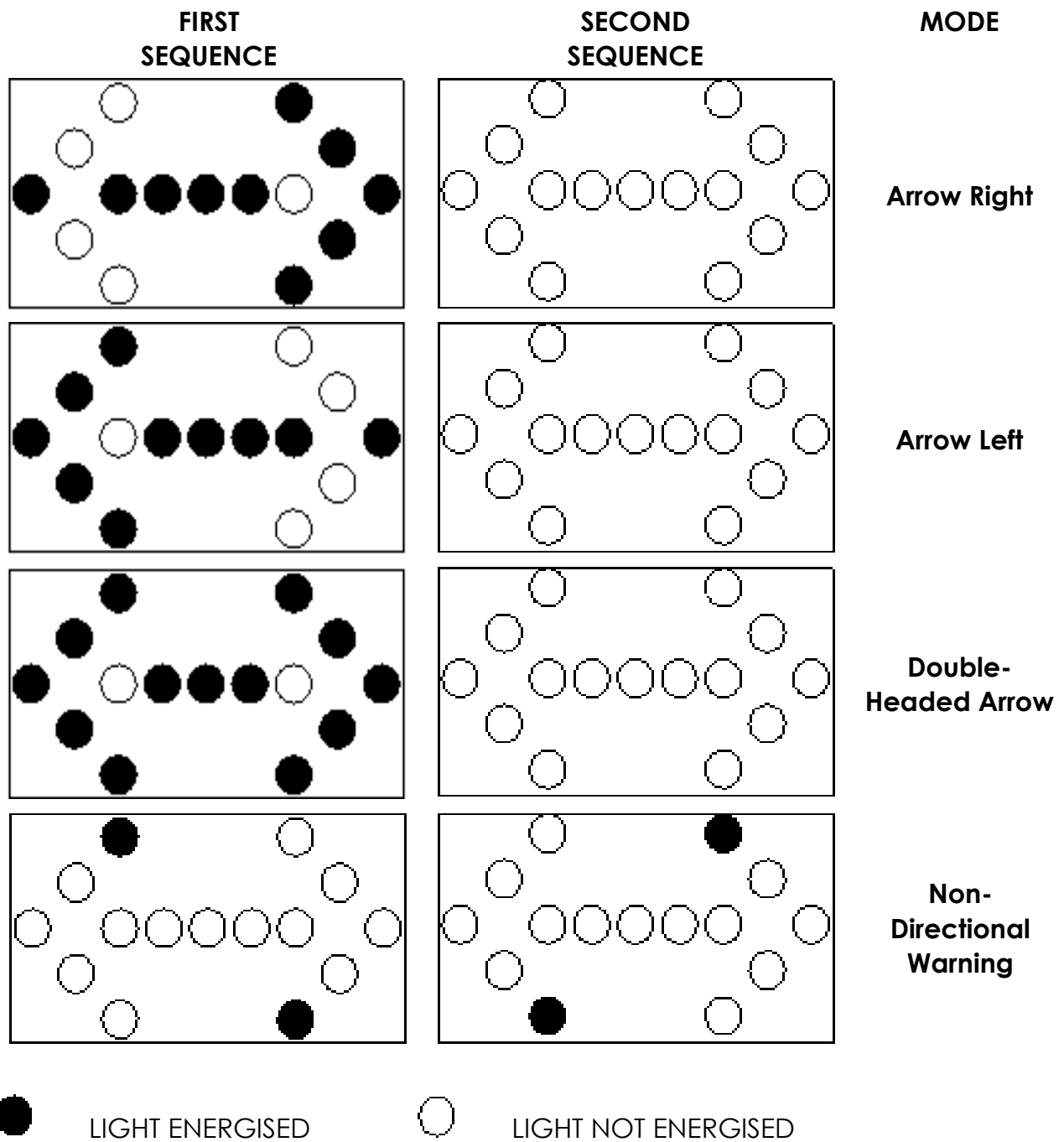
Number of LED per Cluster	32
Number of LED Clusters	15
LED Cluster Visors	High Impact Polycarbonate

LED CLUSTER SEQUENCES



MODE	PART OF CYCLE	LED CLUSTER ENERGISED
Arrow Right	First Sequence	1, 5, 7, 8, 9, 10 12, 13, 14, 15
	Second Sequence	NONE
Arrow Left	First Sequence	1, 2, 3, 4, 6, 7, 8, 9 11, 15
	Second Sequence	NONE
Double-Headed Arrow	First Sequence	1, 2, 3, 4, 6, 7, 8, 9 10, 12, 13, 14, 15
	Second Sequence	NONE
Non-Directional Warning	First Sequence	4, 12
	Second Sequence	6, 10

LED CLUSTER SEQUENCE FOR TYPE B FLASHING ARROW



PARTS & ACCESSORIES

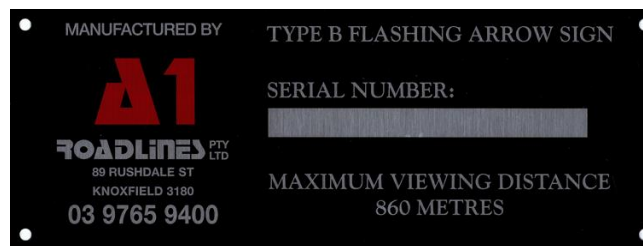
<u>PART NUMBER</u>	<u>DESCRIPTION</u>
TYPE B V2	Type B Single Sided Flashing Arrow Sign with MC30 Controller, Power Cable & Control Cable
CNTROL MC30	MC30 Controller
CPC3	Power Cable Assembly – 3m
SC12	Signal Cable Assembly – 12m
LAMPAB-01	Type A & B LED Cluster & Visor Assembly
SL1004	Actuator – 12 Volt
SL1005	Actuator – 24 Volt

MODEL IDENTIFICATION

The Type B Flashing Arrow Sign has been manufactured to comply with AS4192-2006.

On each flashing arrow sign you will find a metal build plate. Embossed on this plate will be:

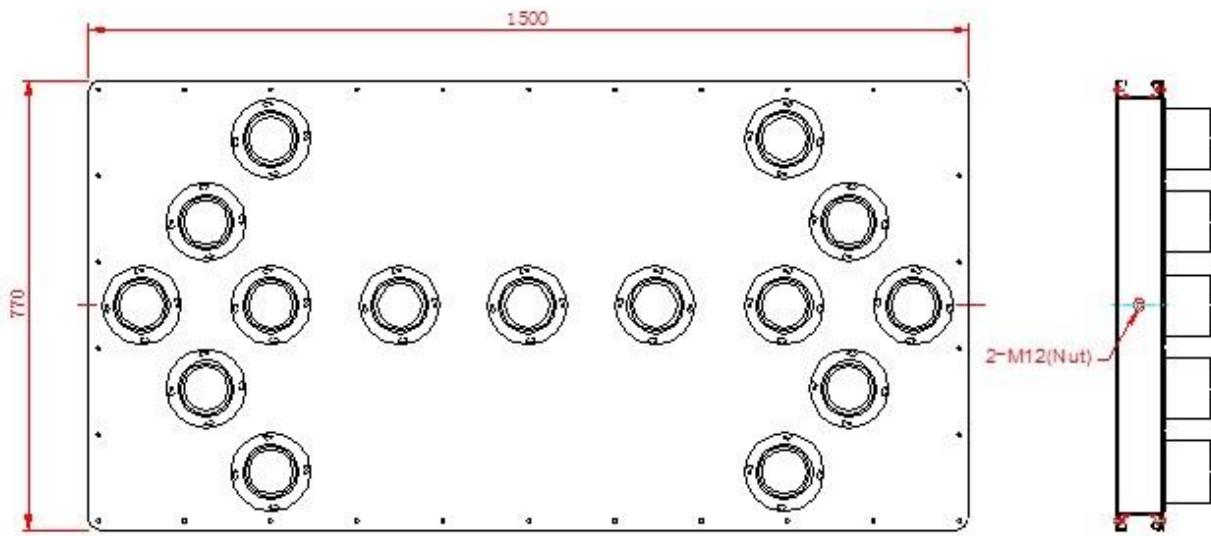
- Flashing Arrow Sign Model
- Serial Number
- Maximum Viewing Distance



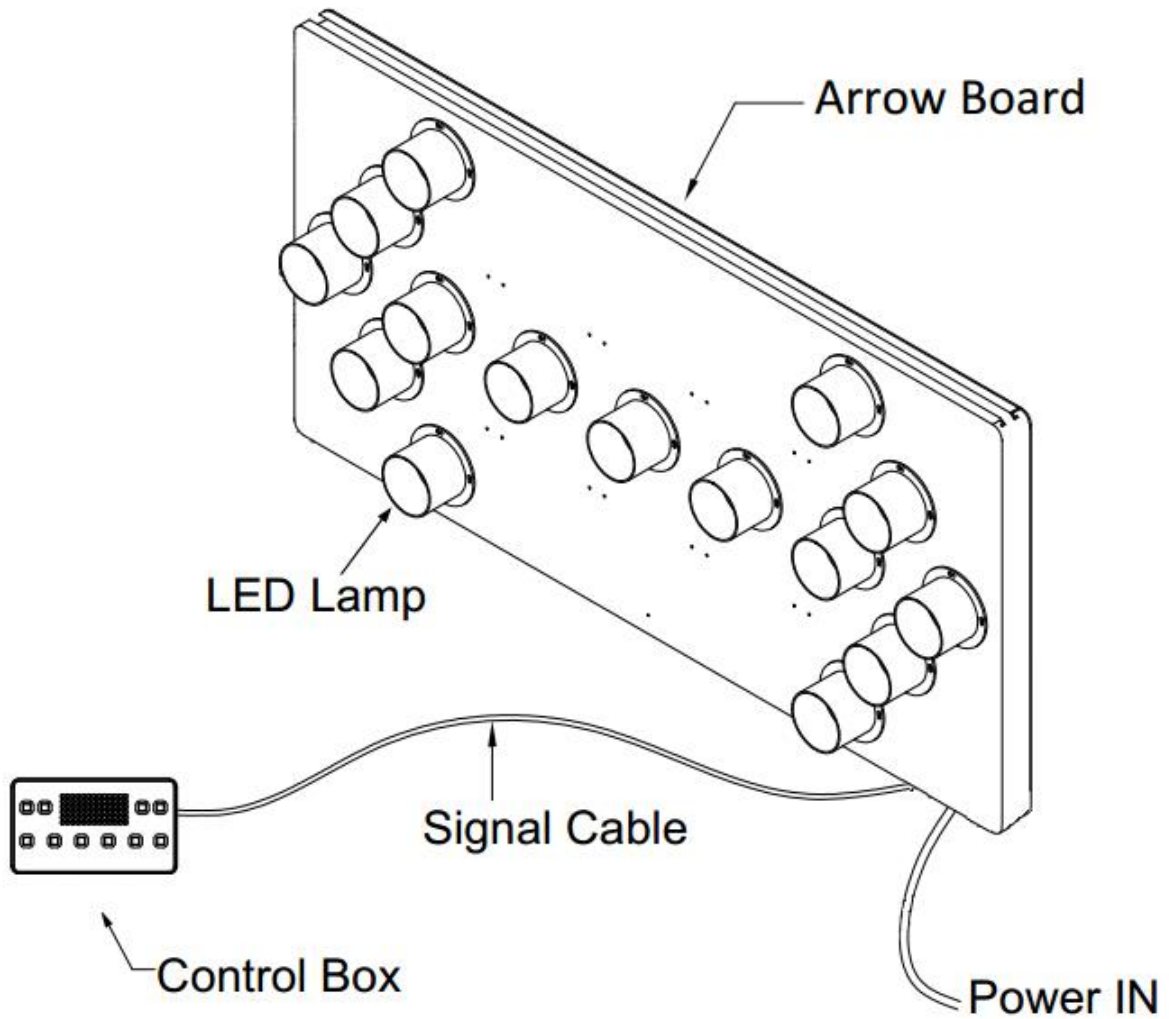
INSTALLATION OF THE ARROW SIGN

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

When mounting the arrow sign please note the positions of the 2 nuts on side of the board.



INSTALLATION OF THE ARROW SIGN – CONT'D



INSTALLATION OF CONTROLLER

The 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 arrow sign.

CABLING

When routing the arrow 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

This controller is designed to be used with a Type B Flashing Arrow Sign.



- A Power Button
- B Beacons Power Button (Not Used)
- C Arrow Board Operational Display
- D Work Lamps Power Button (Not Used)
- E Raise & Lower Arrow Board (For Power Lift Versions)
- F Left Arrow
- G Double Arrow
- H Non Directional Warning
- I Right Arrow
- J Front or Rear Board Controls (For Double Sided Arrow Boards)

POWER DRAW

Input voltage	DC 12V or DC 24V
Maximum current draw	2.2 Amps
Display mode with maximum average current	Double Arrow
Current per Cluster, 100% Brightness	0.24A
Flash rate, cycles per minute	35
Working Voltage	10.5V — 30V DC, with reverse polarity protection
Luminous Intensity	≥250cd/ [100% Brightness]

SPECIAL NOTICE

Never unplug the cables while connected to power source.
Don't try to open the cabinets. Consult authorised personnel for servicing.

OPERATING INSTRUCTIONS

1. Position the vehicle in the required location facing on-coming traffic.
2. Turn the Power Switch (A) to "ON".
3. Select the required "Display Mode" (F,G,H or I).
4. Check the sequence to ensure all LED Clusters are working and the correct sequence has been selected.

PREVENTATIVE & REMEDIAL MAINTENANCE

The Type B Flashing Arrow Sign requires minimal maintenance but the following inspections are advised to ensure optimal performance.

Daily Inspection to include the following:

- Visually check the frame for signs of damage and ensure frame attachment bolts are secure.
- The power and control cables are in good condition and secure.
- Test the actuator (if fitted) by raising the arrow sign.
- Test all display modes.
- Visually check all LED Clusters are working.

Monthly Inspections to include the following:

- Clean the LED Clusters/Visor – use a damp, soft cloth only. **DO NOT** use solvents.

Arrow Sign and Controls

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

TROUBLE SHOOTING

The following situations may cause the Type B Flashing Arrow Sign to malfunction:

PROBLEM	POSSIBLE CAUSES	ACTIONS
Arrow Sign not working.	Faulty battery. Controller cable not connected.	Check battery voltage. Ensure controller cable is firmly connected to the sign.
Arrow Sign actuator (if fitted) not working.	Actuator cable not connected. Faulty relays.	Ensure actuator cable is firmly connected. Ensure relays are working.
LED Clusters not working.	Faulty wire connection. Loose control cable.	Ensure wires are tightened in terminals. Ensure control cable is secure.
LED Clusters "Dull" or "Dim" during day.	Dirt/dust on light sensor. Faulty battery.	Clean area around the light sensor. Check battery voltage.

SERVICE & REPAIRS

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

If the Arrow Sign is fitted with an actuator the function originates from the control through the cable however there are 2 circuit board relays located in the Arrow Sign. If a fault occurs with the actuator first assess the actuator then check the relays.

LED Cluster/Visor Replacement

- Isolate the power to the Arrow Sign via the power cable.
- Locate the faulty LED Cluster/Visor and loosen the four stainless steel cap screws that secure the visor.
- Turn the LED Cluster/Visor anti-clockwise and remove the wiring harness.
- Replace the lamp by attaching the harness to the rear of the lamp.
- Reposition the visor over the screws.
- Twist clockwise and tighten the screws.

For further information, service or repair contact:

A1 Roadlines Pty Ltd
Telephone: 1300 A1ROAD
Email: sales@a1roadlines.com.au