



VEHICLE MESSAGE SIGN USER MANUAL

11 Boeing Place, Mount Maunganui 3116 Ph: 07 575 0505

2/11 March Place, Belfast, Christchurch 8051 Ph: 03 323 7507

Email: admin@trafficsigns.co.nz www.trafficsigns.co.nz PO Box 4366, Mount Maunganui South 3149

VMS 1B, VMS 1C AND VMS 5C OPERATION AND PROGRAMMING



VMS TOUCH SCREEN HAND CONTROLLER



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1.1 Definitions

Daylight Saving Time (DST)

Also known as summer time, this is the practice of advancing clocks so that evenings have more daylight and mornings have less. Typically, clocks are adjusted forward one hour near the start of spring and are adjusted backward in autumn.

Device ID

Device ID is a distinctive number associated with any VMS.

Emitter

The basic light-emitting component used. This can be a single LED, or a cluster of LEDs bound together and energized as a single component.

FTP

File Transfer Protocol (FTP) is a standard network protocol used to transfer files from one host or to another host over a TCP-based network, such as the Internet.

LOG

Computer data logging is the process of recording events; with a computer program usually application software in a certain scope in order to provide an audit trail that can be used to understand the activity of the system and to diagnose problems.

Message

A series of frames constituting a single message.

Message ID

Message ID is a text identifier for a VMS message.

Pixel

For any given font on any given sign, the smallest switched unit from which active messages are created. It may consist of a single emitter or multiple emitters switched simultaneously.

Screen

Any stable state displayed on a variable message sign (VMS) unit that is preceded by and followed by a change of state. It will typically consist of text, symbols, a combination of the two, or a blank display.

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UTC

Coordinated Universal Time (UTC) is the primary time standard by which the world regulates clocks and time. It is one of several closely related successors to Greenwich Mean Time (GMT). For most purposes, UTC is synonymous with GMT, but GMT is no longer precisely defined by the scientific community.

VMS

VMS stands for Variable Message Sign. A sign, including control equipment that can display at least three messages, the transition between messages being caused by electrical means. For the purpose of this definition, an intentionally blank display constitutes a message.

1.2 IMPORTANT SAFE WORK INSTRUCTIONS

- Always use the VMS unit in a safe manner as per AS 4852.2.
- Do not use the Sign programmer unit or any connective internet device at any time while the vehicle is in motion.
- Sign must not be raised unless stabilizer legs have been deployed.
- All electrical work should be carried out by a qualified auto electrician. Failure to do so may void the warranty.
- The VMS must be turned off lowered and stowed correctly whenever the trailer is to be moved. Damage caused to the sign or vehicle will not be covered under the warranty for failure to do so.
- Ensure that the area surrounding and ABOVE the sign is clear of obstructions and OVERHEAD POWER LINES BEFORE raising or lowering the sign head.
- Keep ALL body parts clear of the sign head when raising or lowering the sign.
- Disconnect the both battery power and solar power feeds to the computer before commencing any wiring work or removing/inserting the SIM card.
- Always tow the Sign in a safe manor.
Empty ballast tanks BEFORE Towing
For more information, please refer to the safe towing guide:
<http://www.tmr.qld.gov.au/safety/vehicle-standards-and-modifications/loads-and-towing/safe-towing.aspx>

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- **DO NOT USE THE EQUIPMENT FOR ANY OTHER PURPOSE THAN IT WAS INTENDED FOR!**
- **READ ALL Instructions before using this equipment.**

Note! - Once raised and rotated into position, and BEFORE leaving the sign unattended, the mast locking pin and brake locking device MUST be securely key locked (pad locked) in position, and the winch handle removed to prevent potential unauthorised tampering with the sign.

2. Maintenance

- Solar panels should be cleaned weekly (more often depending on environmental factors) for best performance.
- The sign and programmer units contain no user serviceable parts. Should a malfunction occur, please contact the supplier of the system for assistance. Any tampering with the internal parts of the sign or programmer unit will void the warranty.
- The sign and programmer unit cannot be damaged by incorrect operation. If there is no response, please check that the battery voltage is above 10 volts, then disconnect and reconnect the communication cable on the sign.
- If the battery voltage is below 10 volts, the unit will need to be recharged by exposing the solar panels to direct sunlight or connecting a suitable battery charger.
- The touchscreen hand controller (where supplied) is not weatherproof, and must not be allowed to get wet. Store the controller in the weather resistant container supplied at all times when not in use.
- Clean the polycarbonate screen with a damp soft, non-abrasive cloth and water to remove any dust or dirt that may impair light clarity as needed. DO NOT use and harsh or abrasive chemicals or cloths.
- Check the securing bolts are tight where the sign mounts to the trailer monthly.
- Perform a visual inspection of the mechanical fastenings that hold the sign head to the mast monthly.
- Check the wiring and wiring glands for signs of wear or damage monthly, and replace as necessary.
- Maintain wheel bearings as you would with any vehicle or trailer.
- Check that all wheel nuts are tightened before transporting the sign.
- Read **ALL INSTRUCTIONS** before using this VMS.

3. Transportation/Lifting of the Sign

Due to the specific nature of this item of plant, it is not designed or intended for lifting purposes, rather, was designed to be towed behind a suitable vehicle or winched on board a tilt tray truck for transportation.

The trailer and VMS have a combined ATM of 650kg and is classified as a light trailer, and may be towed by any vehicle with a suitable towing capacity.

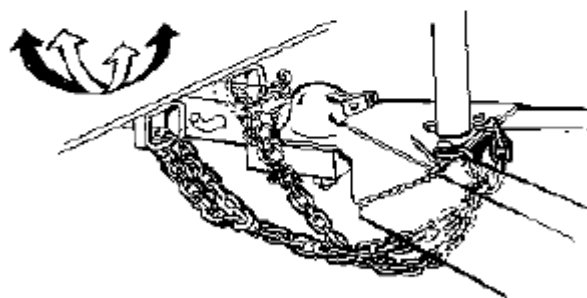
Transportation by means of a tilt truck/trailer must **ONLY** be performed by a trained operator, as incorrect loading may cause loss or death.

3.1 Coupling the trailer to the tow vehicle

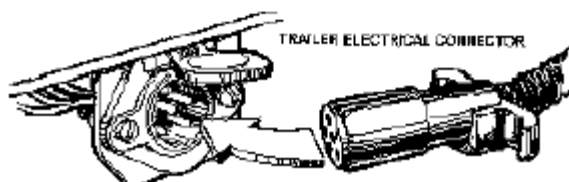
- Before towing, ensure the tow vehicle's hitch and tow ball have been inspected by a qualified mechanic to be adequate and in good working order.
- Ensure the drawbar pins are inserted and locked into the removable drawbar.
- Fit the trailer tow hitch securely to the vehicles tow ball and ensure the locking tongue (retainer) is closed on the ball. The ball should be lightly greased so the hitch rotates smoothly on it.
- Fit the R Clip to ensure the coupling cannot become detached whilst towing.
- Fit the supplied safety chains to the tow vehicle via correctly rated D shackles.

- Cross the safety chains over (right to left and left to right). As per diagram to the right. This will help create a "saddle" should a tongue failure occur and will help maintain control while stopping.

Note: Do not allow the chains to drag on the pavement, because they can be ground to an unsafe condition in a very short amount of time.



- Next connect the trailer electrical connector and check the operation of all trailer lights.



- Finally ensure the jockey wheel and all jack legs are swivelled up into their horizontal position before towing the trailer.

4. On Site Preparation

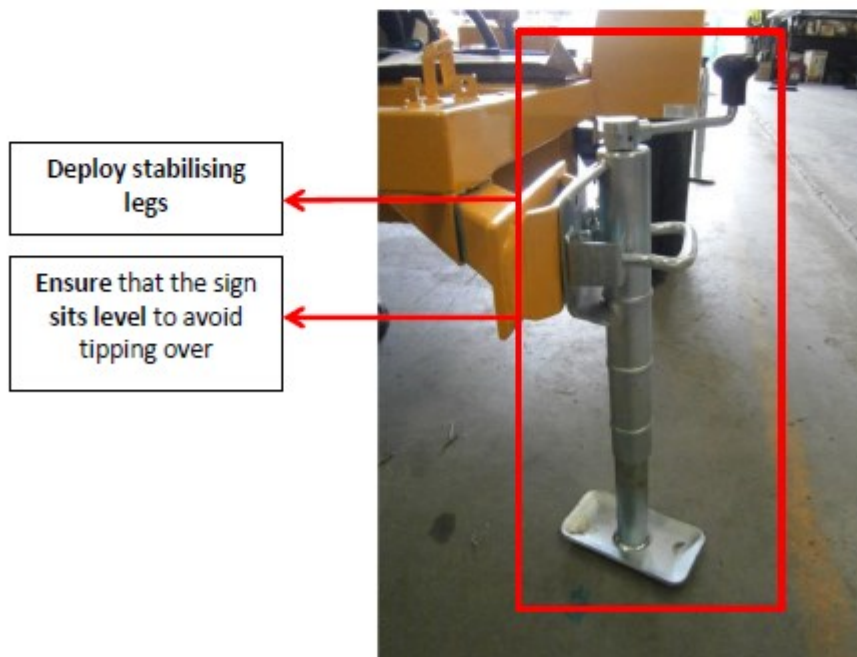
4.1 Sign Positioning

The sign must be positioned on reasonably flat, stable ground in a safe position clear of obstructions, traffic and pedestrians.

- Before removing the trailer from the tow hitch of the tow vehicle, the stabilising legs of the trailer should be deployed to prevent the possibility of the trailer from rolling once unhitched.
- Deploy the stabilising legs from their travelling position (horizontal) to their set up position (vertical) by pulling out the spring-loaded leg locking pin, and pivoting the leg 90 degrees until the locking pin re-locks the leg in position.
- Wind the leg down until a firm footing is made with the ground.
- Fill water ballast tanks (forward and rear) (option) with water to aid stability and comply with AS 4852.2.

Note! - All 4 legs MUST be deployed BEFORE raising the mast!

Level the sign by adjusting opposing leg heights. The trailer wheels should be just touching or clear of the ground.



4.2 Raising the Sign

- To raise the sign, first lift up the battery box cover at the base of the mast. Inside this compartment located next to the batteries is an UP/DOWN button for the electric mast.



Electric Winch

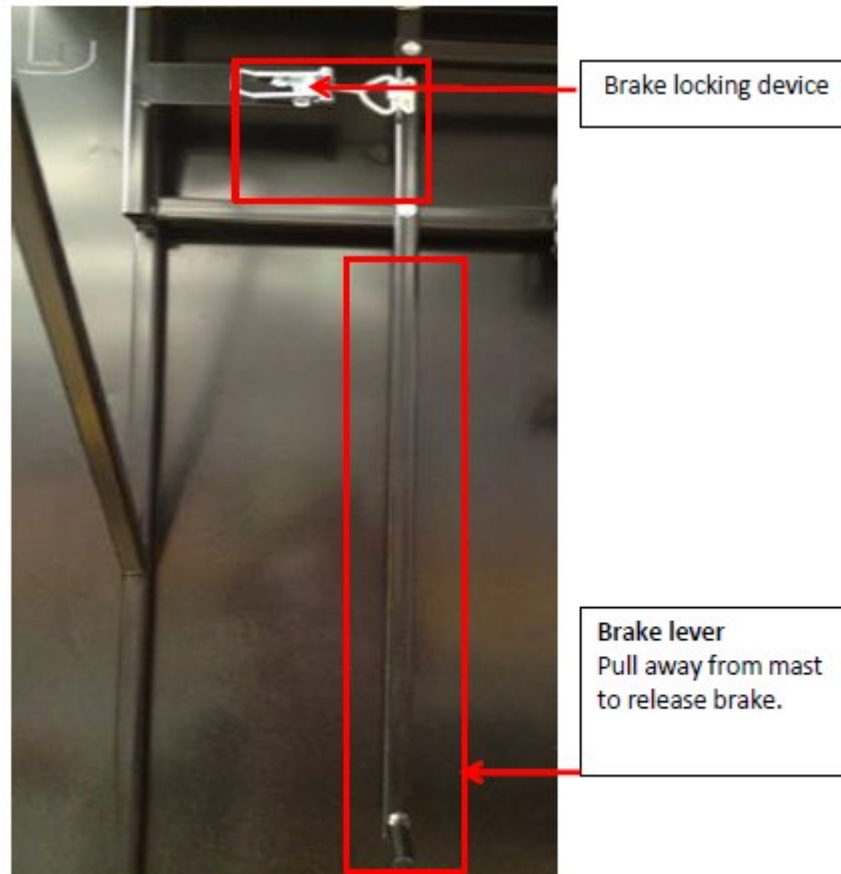
- To erect the mast, press the up button until it reaches its desired height.
- To lower the mast, press the down button until the mast is fully lowered.



Press the **UP** button on the winch for erection and **DOWN** button to lower the electric mast.

4.3 Rotating the Sign

- Once the sign is raised and locked into raised position with the mast locking pin engaged, the sign can be rotated through 360 degrees to the desired position (facing approaching traffic).
- As the sign has a disk brake system to prevent the sign from rotating unexpectedly, the brake lever must be pulled (away from the mast) while rotating the sign. When the lever is released, the brake is re-applied as a fail-safe.
- To rotate the sign, first release the brake locking device.
- Position the sign to the desired viewing angle while pulling the brake lever and then release.
- Use the Sighting Device per AS 4852.2 to align the sign to approaching traffic.
- Apply the brake locking device as a failsafe for the brake.
- Secure with a pad lock to prevent tampering.

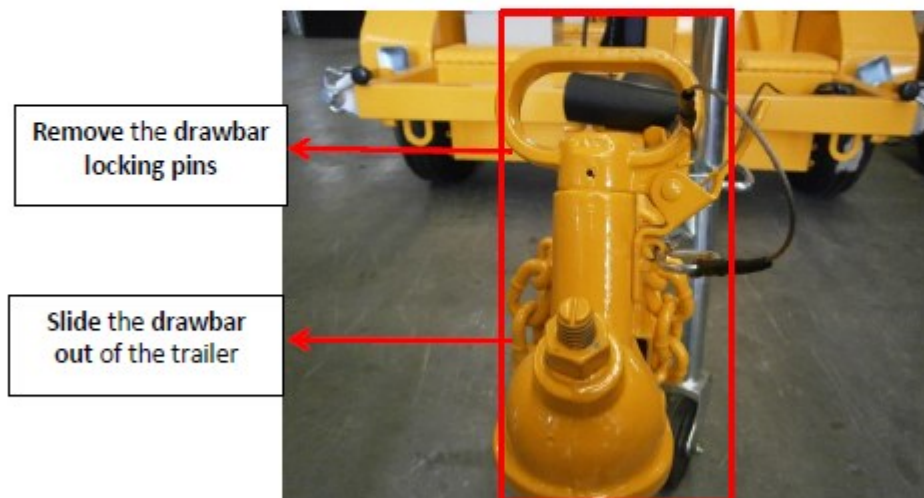


4.4 Leaving the Sign Unattended

Note! - Once raised and rotated into position, and BEFORE leaving the sign unattended, the mast locking pin and brake locking device MUST be securely key locked (pad locked) in position, and the winch handle removed to prevent potential unauthorised tampering with the sign.

As a further failsafe measure, the tow hitch drawbar maybe removed to prevent possible theft and to reduce the trailer footprint in the workspace.

- To remove the drawbar, remove the two drawbar locking pins and slide the drawbar out of the trailer.



To remove/relocate the trailer, complete the above steps in the reverse order.

5. Set up for Programming

Before the VMS is able to send or receive text messages (SMS) a valid Sim Card (with credit) needs to be installed in the sign. The new boards have a modem (AirPrime) that will support different Telecommunication service providers and will be covered below. The older VMS Computer boards used a modem (marked HILO-850) that only supported the NextG (850MHz) band for communication. This band is only supported by Telstra. So it is therefore recommended that a Telstra SIM be used in the signs that have the older VMS computer installed in them.

SIM CARD SIZE

The SIM Card accepted by the VMS is the LARGE or 'normal' type as commonly used in some mobile phones. (Some mobile phones now use Micro or Nano SIM cards - these are the wrong size). The SIM card **MUST BE** the Normal size, refer opposite.



NB! - BEFORE inserting the SIM card into the sign, The SIM card PIN number **MUST BE DISABLED!**

NOTE: FOR OLDER VMS COMPUTER WITH (HILO 850) USE ONLY TELSTRA SIM CARD or 850MHz Band supported SIM CARD. THE NEW VMSCOMPUTER WITH (AIRPRIME) WILL SUPPORT OTHER TELECOMMUNICATION NETWORK PROVIDERS.

The SIM card by default will be issued with a PIN number by the telecommunications provider. When inserted into the sign, without disabling the PIN number first, the sign will not work as the pin security interferes with the sign communications. The PIN number must be disabled first.

Note: Never touch the Golden Pins of SIM Card

NOTE: USE ONLY TELSTRA SIM CARD or 850MHz Band supported SIM CARD WITH HILO-850 MODEM.

AIRPRIME MODEM WILL SUPPORT OTHER TELECOMMUNICATION PROVIDERS.

5.1 Disabling the SIM card PIN number

Disabling the SIM card PIN number can be done when ordering the SIM card from the Telecommunication Services provider or by inserting the card into any compatible mobile phone (usually an older style phone) and usually going into the phone/SIM card security settings, although all mobile phones are different in this process.

Refer to your specific phones instruction manual for further information if needed. You could also ask your provider to disable the PIN upon purchase at the shop.

5.2 Inserting the SIM Card

The SIM card needs to be inserted into the VMS computer of the sign as shown below.

1. To begin, raise the sign around 100mm so it is out of and clear of the support stirrups.
2. Release the screen case catches around the 3 sides of the sign case.
3. Open the sign screen (this is mounted on gas struts to assist).
4. Remove the LED tile in front of the VMS computer so as to access it.
This is the 3rd LED Tile board down in the second row as shown below. To remove the tile board, gently squeeze the tops of the 6 retainers (stand offs). Do NOT remove any wiring.



5. Ensure the sign **power is OFF** before inserting the SIM card. This can be done by disconnecting the Orange connector from the VMS Computer board as shown in the diagram below. The solar is disconnected automatically when the power to the VMS computer board is removed.

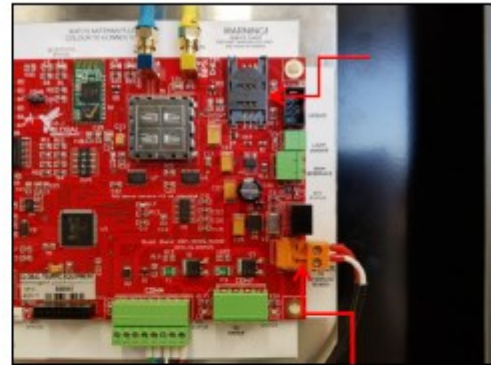
SIM card holder

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6. Open the SIM card holder by sliding the outer retainer downwards, and open the holder outwards.
7. Insert the SIM card gold side towards the pins and close the outer retainer again.

Reconnect Orange Power connector.



Disconnect Orange Power

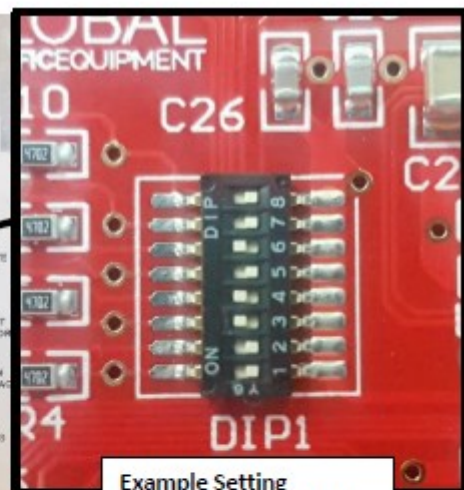
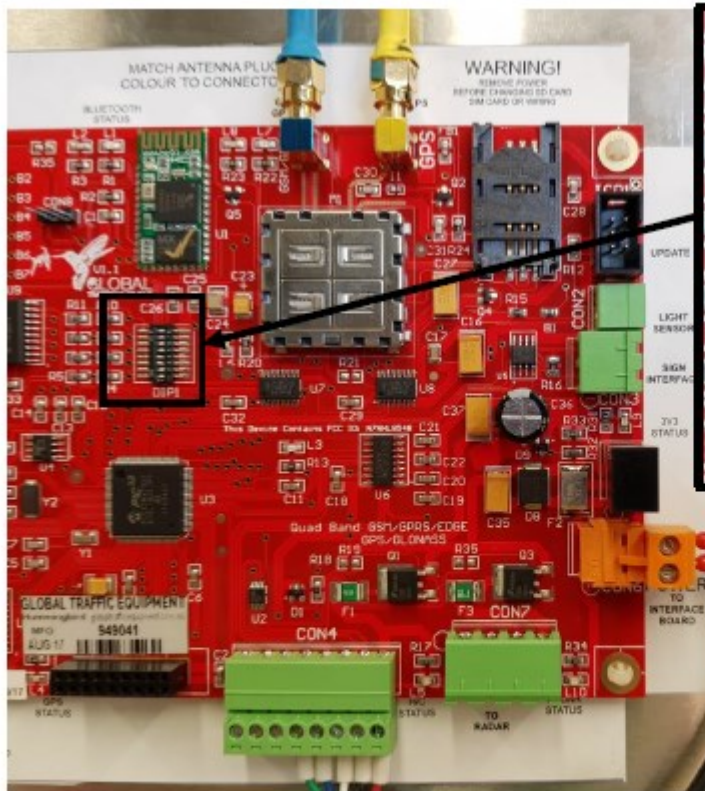
NB! - Never touch the Gold Pins of SIM Card or SIM holder.

NB! - Ensure the power is OFF at the fuse BEFORE inserting SIM card!

NB! - Ensure the SIM card PIN number has been DISABLED BEFORE inserting SIM card.

Hardware DIP Switch Configuration Settings

The hardware DIP switches are used to configure the sign for a particular board type and Telecommunication Provider. Care must be taken when changing the DIP switch configuration as an incorrect setting can affect the operation of the board.



Example Setting
VMS1C [CUSTOM APN]

VMS1C [TELSTRA]

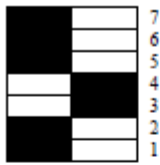
VMS1C [OPTUS]

VMSSC [TELSTRA]

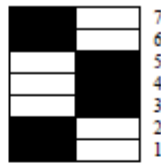
VMSSC [OPTUS]



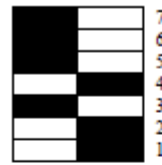
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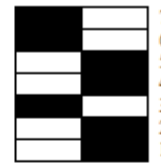
ON



ON



ON

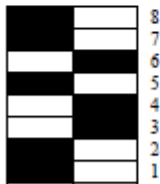


ON

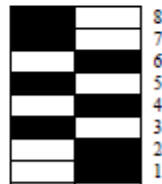
White position indicates top of switch

VMS1C [CUSTOM APN]

VMS5C [CUSTOM APN]



ON



ON

White position indicates top of switch

Programming

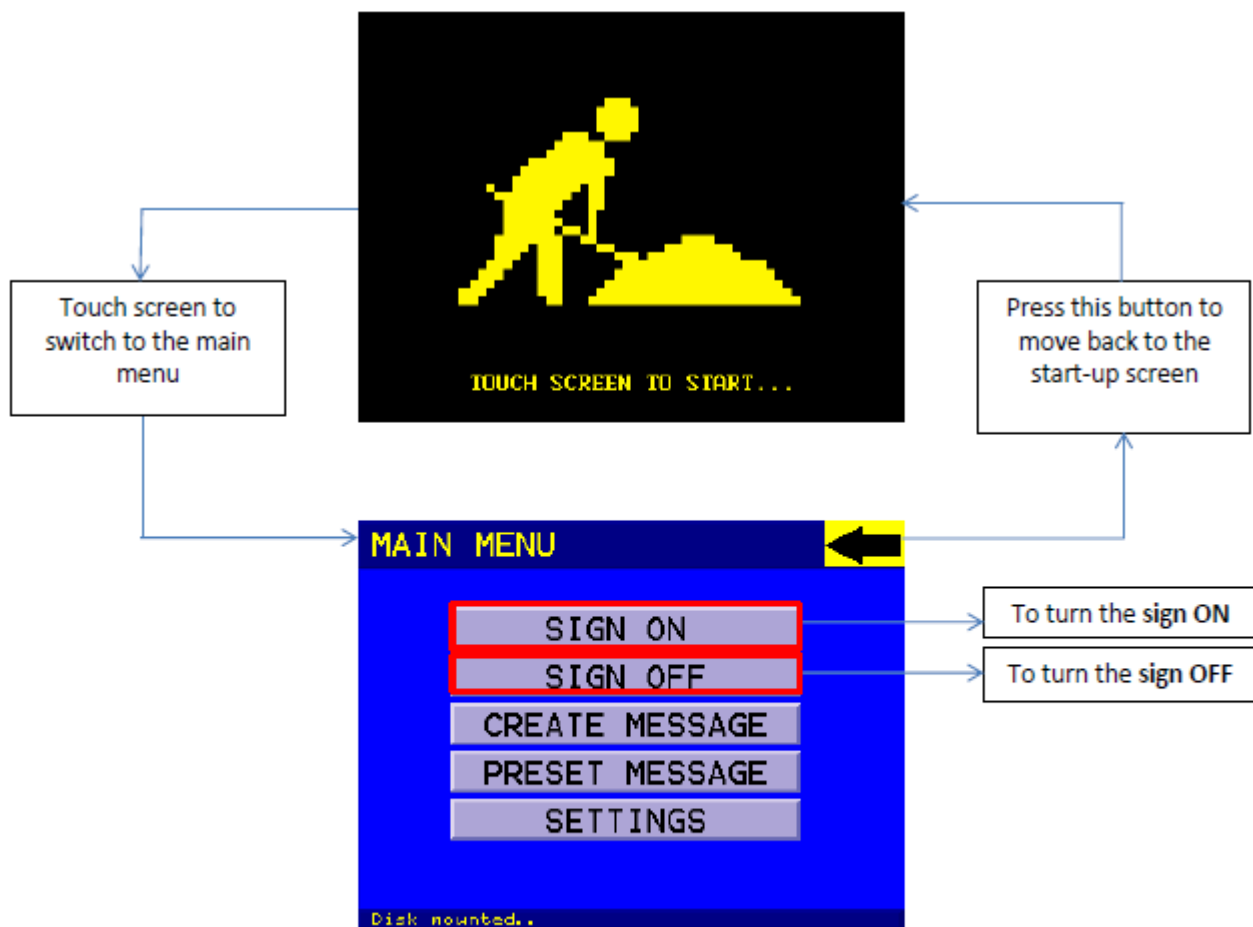
5.3 Introduction

This VMS is 48 pixels wide by 28 pixels high, and input may be sent to the sign by 3 different methods:

- Local Hand controller (as outlined below)
- Remote access to sign via PC-based program (VMS Director)
- Remote access using SMS

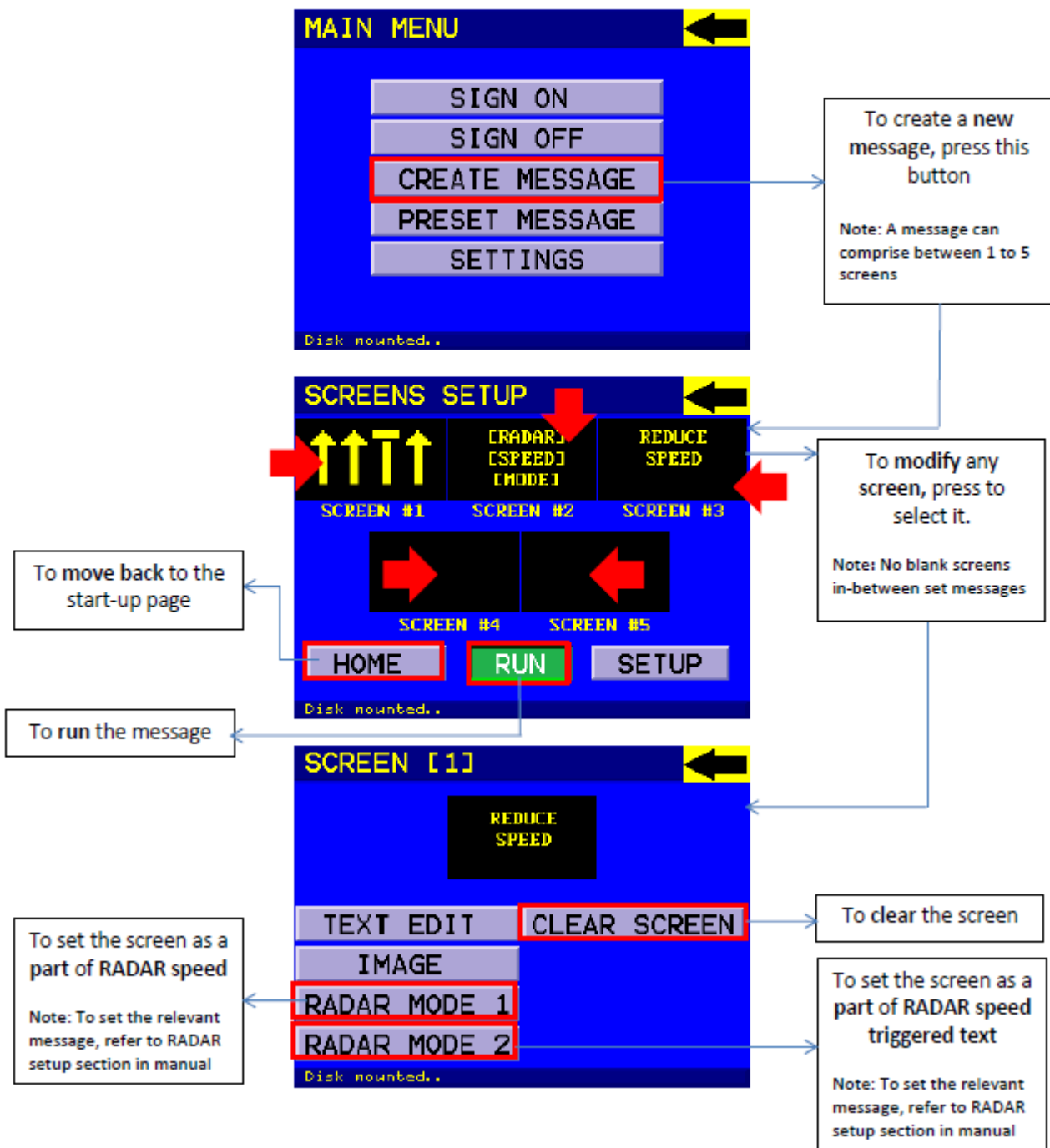
5.4 Local Hand Controller Operation

When the hand controller plugs into the sign, the below representation screen appears on the controller.

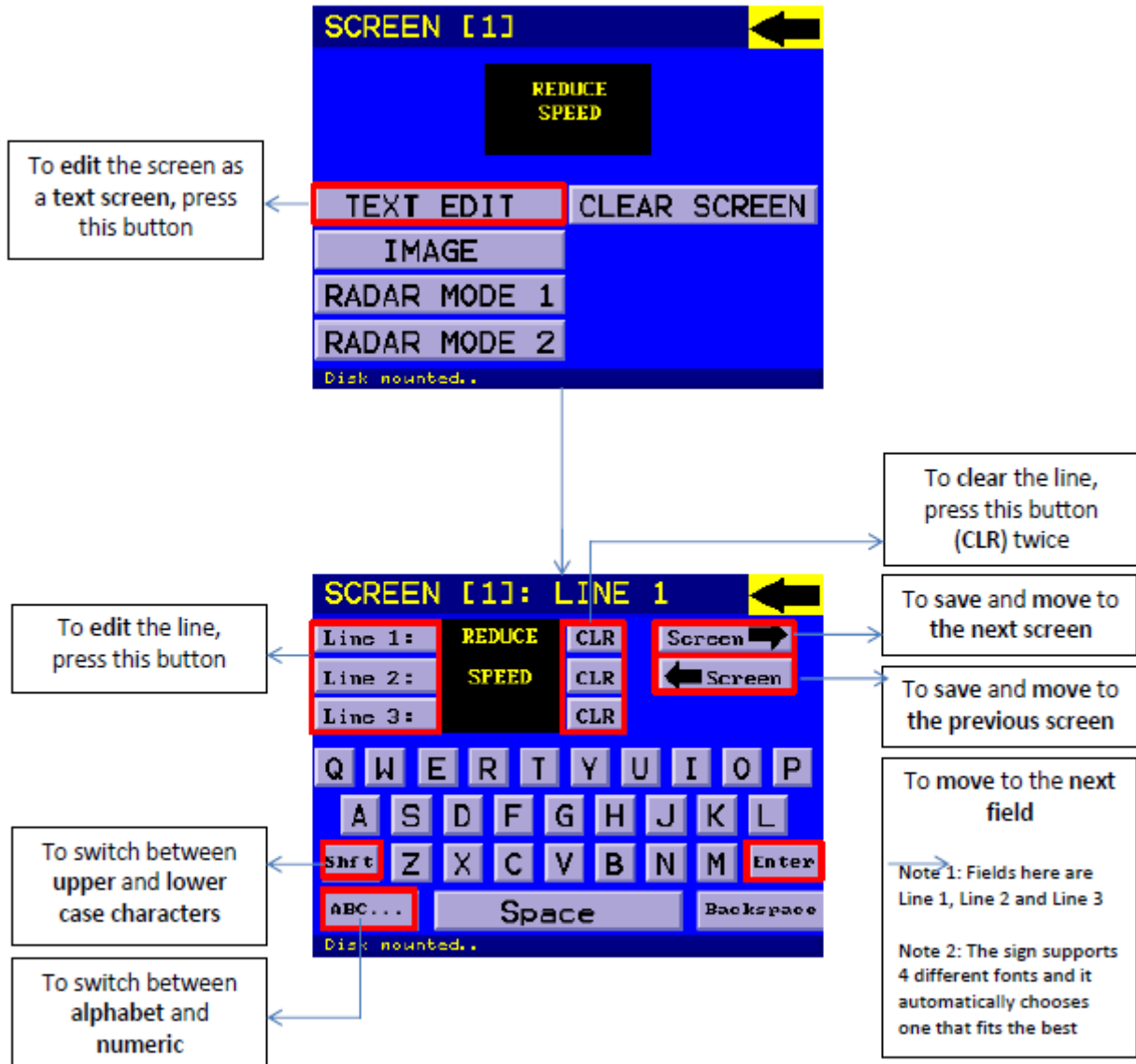


5.4.1 Message Creation

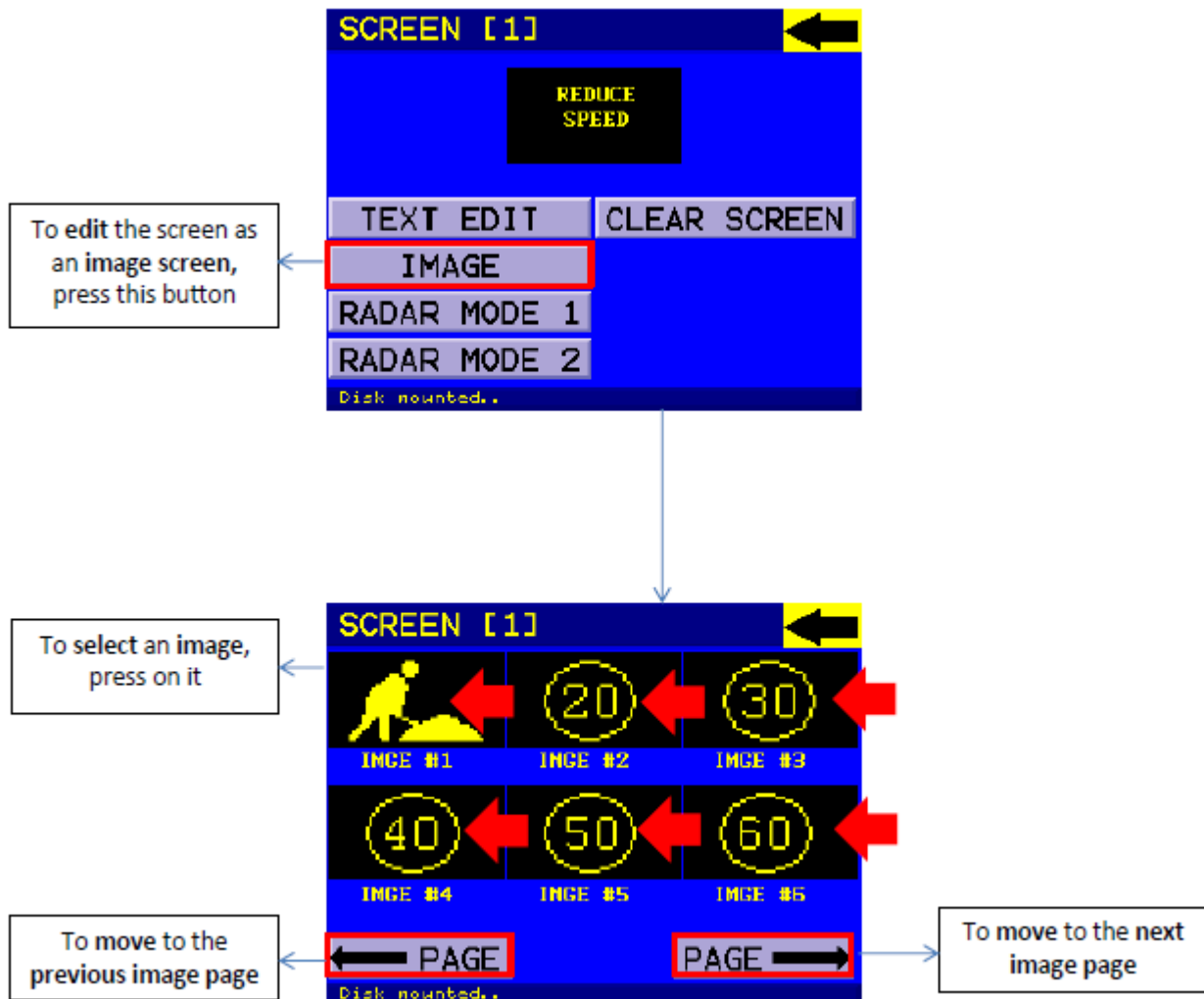
You can access pre-set or common messages through the 'PRESET MESSAGE' function OR create your own custom message or sequence of screens through the 'CREATE MESSAGE' function.



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To setup message parameters, press this button

To modify the message file name
 Note: Any message can be run by its file name from PRESET MESSAGE menu

To modify the message ID

To justify the text to the centre, right or left

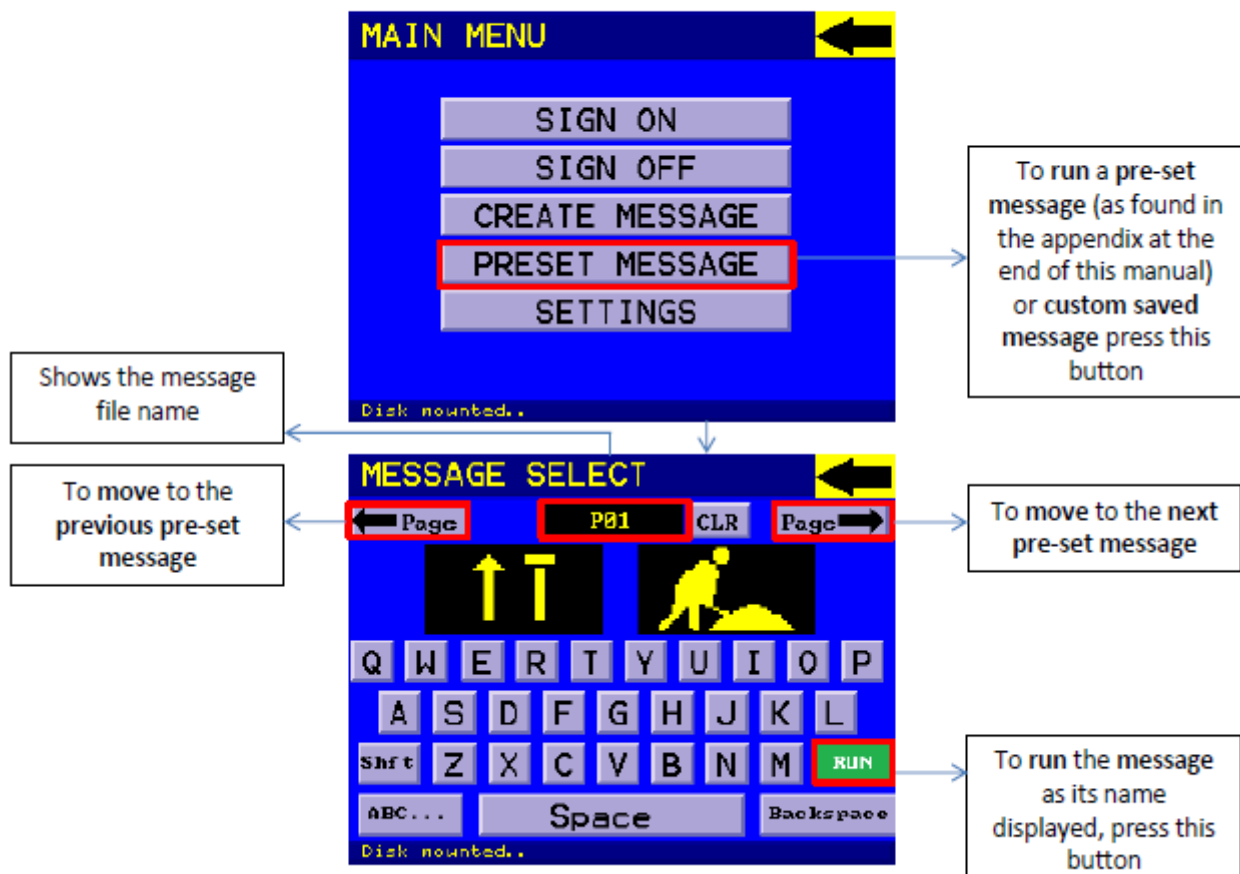


To set the ON Time (The display time of screens)
 Note 1: For an infinite display set the On Time to zero
 Note 2: The time unit is 1/10th of a second

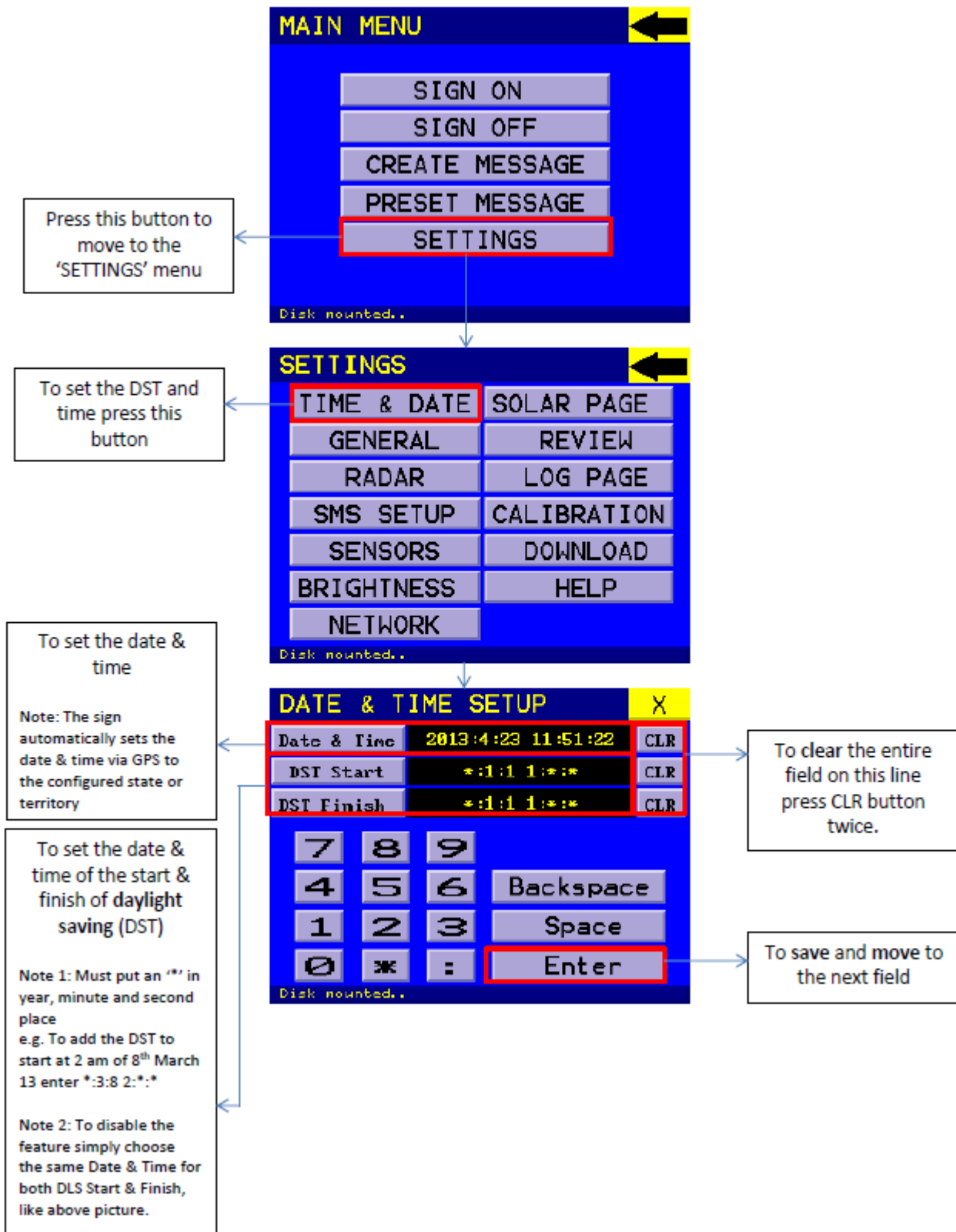
To set the OFF Time (The blank time between screens)
 Note 1: The time unit is 1/10th of a second

To save and move to the next field

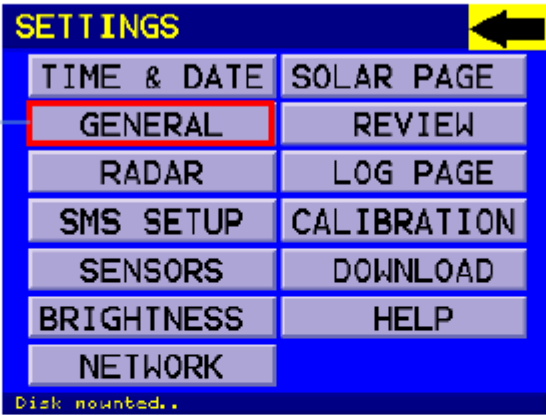
5.4.2 Run Pre-set or Saved Messages



5.4.3 Time & Date Setup



5.4.4 General Settings




To set general parameters press this button

SETTINGS ←

TIME & DATE	SOLAR PAGE
GENERAL	REVIEW
RADAR	LOG PAGE
SMS SETUP	CALIBRATION
SENSORS	DOWNLOAD
BRIGHTNESS	HELP
NETWORK	

Disk mounted..



Enter the product ID X

Requires the device ID to be entered (e.g. 1306P132)

Q W E R T Y U I O P
A S D F G H J K L
Shft Z X C V B N M Enter
ABC... Space Backspace

Disk mounted..

To enable or disable the FTP feature

To enter the state or territory

Note: To calculate the local time from GPS UTC, the sign needs this parameter

GENERAL SETUP ←

Remote	ENABLE	On Time	15
State	QLD	Off Time	0
Device	LDCCA-100	CLR	

To set the default 'ON' time (display time) & 'OFF' time (blank time)

Note: Wherever the ON/OFF time is missed then the sign picks up these default values

To enter the new ID

Note: The FTP client (the sign) works out its remote destination address by this parameter which is a unique ID and issued by the manufacturer. Any change must be authorized by the manufacturer or selling agent

Q W E R T Y U I O P
A S D F G H J K L
Shft Z X C V B N M **Enter**
ABC... Space Backspace

Disk mounted..

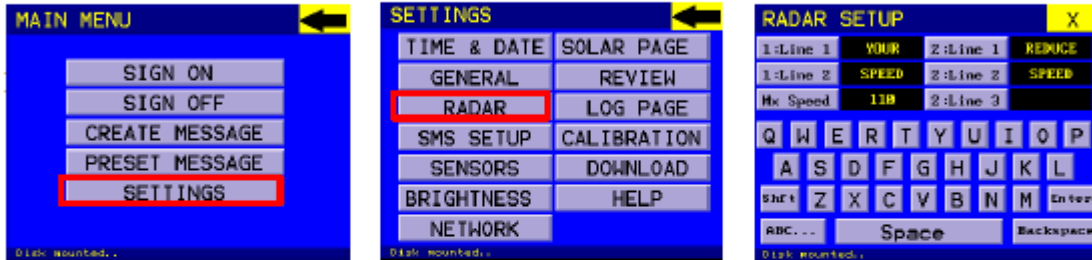
To save and move to the next field

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5.4.5 RADAR Setup (Applicable if Radar fitted to sign)

Press SETTINGS>> RADAR>> RADAR SETUP



RADAR MODES:

MODE 1:

Radar Mode 1 is used to display the Radar Speed of the vehicle detected. The value displayed by this mode is in km/h. When running the Radar Mode 1 message on the sign, the default message that will be displayed when the speed is detected is YOUR SPEED XXX. Where XXX is the current speed detected.

MODE 2:

Radar Mode 2 is used to display a set message when the vehicle speed detected is above the MX speed set by the hand controller.

RADAR SETUP OPTIONS



NOTE: MX Speed is used only for Radar Mode 2; this value sets the maximum radar speed (km/h) before RADAR MODE 2 is triggered. Any Radar speed detected OVER this value will display the message set in RADAR Mode 2, in this case REDUCE SPEED.

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RADAR MODE 1 MESSAGE EXAMPLE:

1. Select CREATE MESSAGE,
2. Press SCREEN 1, Select the IMAGE, press the backwards arrow ←
3. Press SCREEN 2, Select RADAR MODE 1, press the backwards arrow ←
4. Press SCREEN 3, Select the IMAGE, press the backwards arrow ←
5. Press RUN when completed message

HAND CONTROLLER



VMS will display Screen 1 and Screen 3 until a vehicle speed is detected.



RADAR MODE 2 MESSAGE EXAMPLE:

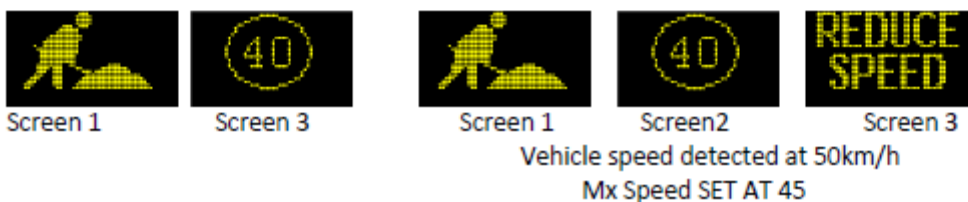
1. Select CREATE MESSAGE,
2. Press SCREEN 1, Select the IMAGE, press the backwards arrow ←
3. Press SCREEN 2, Select the IMAGE, press the backwards arrow ←
4. Press SCREEN 3, Select RADAR MODE 2, press the backwards arrow ←
5. Press RUN when completed message

HAND CONTROLLER

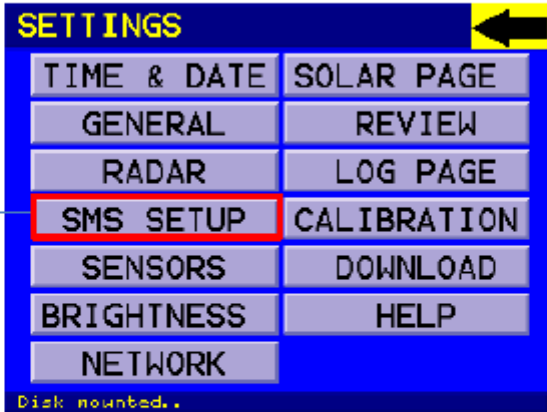


VMS will display Screen 1 and Screen 2 until a vehicle speed is detected.

If the vehicle speed is higher than MX Speed in Radar settings then Screen 3 will be displayed



5.4.6 SMS Passwords Setup




SETTINGS ←

TIME & DATE	SOLAR PAGE
GENERAL	REVIEW
RADAR	LOG PAGE
SMS SETUP	CALIBRATION
SENSORS	DOWNLOAD
BRIGHTNESS	HELP
NETWORK	

Disk mounted..

To set the SMS Passwords press this button




Enter the password X

█ CLR

Q W E R T Y U I O P
A S D F G H J K L
Shft Z X C V B N M Enter
ABC... Space Backspace

Disk mounted..

Requires the first password to be entered



SMS PASSWORDS SETUP X

1st Password	2277	CLR
2nd Password	4691	CLR

Q W E R T Y U I O P
A S D F G H J K L
Shft Z X C V B N M **Enter**
ABC... Space Backspace

Disk mounted..

To set the SMS passwords

Note: The sign answers to either passwords. Any change to the first password must be authorized by the manufacturer or selling agent

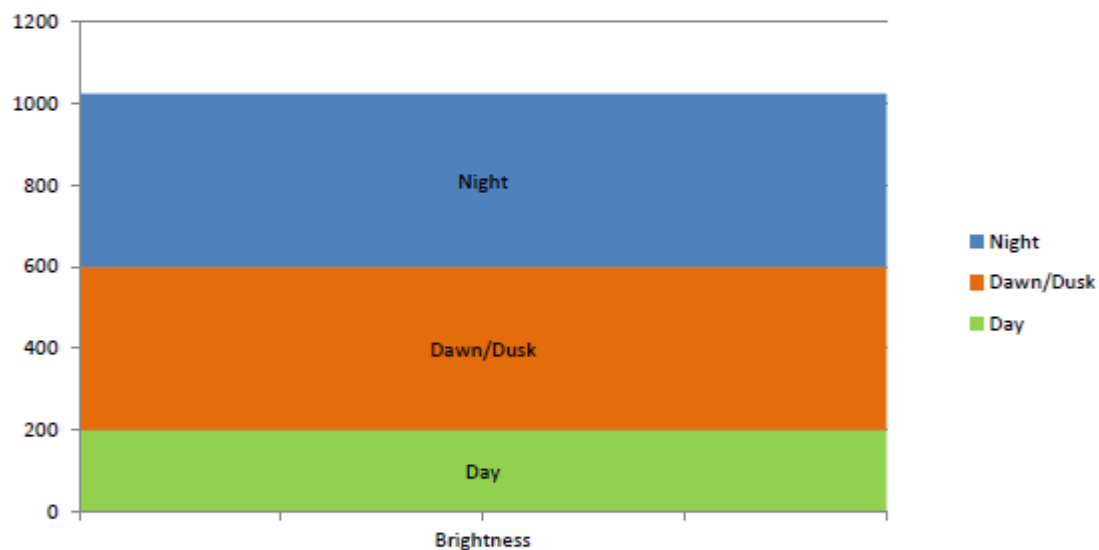
To save and move to the next field

5.4.7 Sensors Setup

This allows modification of the light sensor reading and brightness values of the sign.



On the left hand side of the page are the 1st factor and second factor values and the hysteresis time.



On the Right Hand side of the page will appear the sensor levels that need to be adjusted to suit the sign.

The 3 levels are Min Level, Mid Level and Max Level. These levels refer to the Dimming Level.

Min Level is the Daytime Setting.

Mid Level is the Sunrise/Sunset Settings

Max Level is the Night Time Setting

The values that are suggested are as follows

Min level – 3 Mid Level – 200 Max Level – 252

1st Factor – 400 2nd Factor – 900 Hyst Time -100

5.4.8 Brightness

Changing this setting will force brightness of the sign and will not dim with the current light sensor reading. Care must be taken when forcing the brightness as it can affect traffic conditions. E.g. Too bright at Night time.

Setting the brightness to high can also affect battery life of the sign.

To force the dimming [Min brightness = 3 Max brightness = 255] press this button

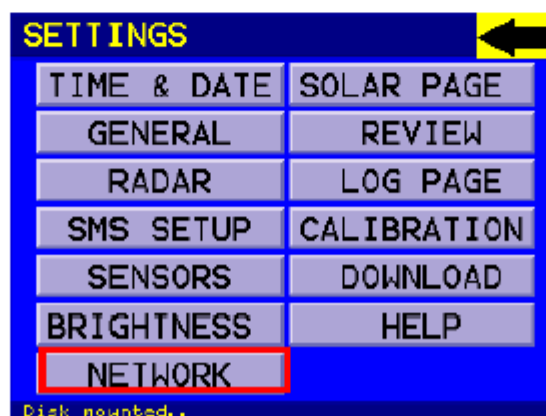


Note: To switch dimming to auto mode, the value must be set to 0, 1 or 2

5.4.9 Network (Telecommunications Mobile Data)

This section allows the user to place in the custom Network configuration for mobile data applications into the sign. This configuration will only need to be set once, not unless the Service Provider has been changed.

There are preconfigured dip switch configurations set for Telstra and Optus (Australia), check the dip switch settings on the device



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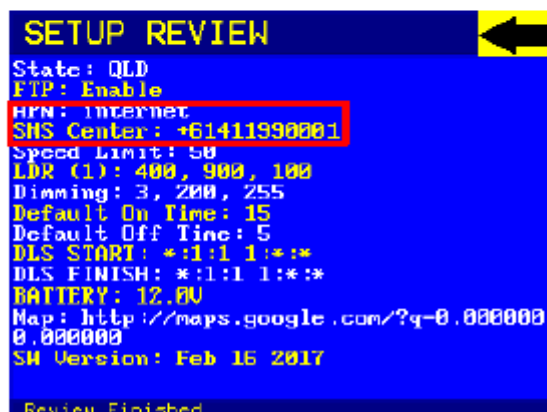
The password is set to the Device ID of the VMS.

Enter appropriate SMS CENTER number and APN relevant to SIM card provider to configure network to the relevant provider. DIP Switch 6 configuration Set for ON will read the APN and configuration from the Network Setup file.



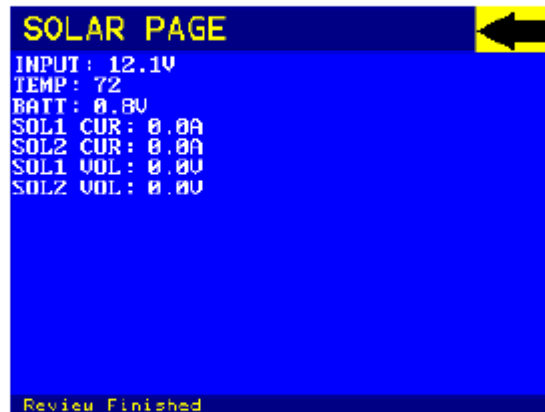
PROVIDER	APN	SMS CENTER
Optus	internet	+61411990001
Telstra	telstra.internet	+61418706700
Spark (NZ)	internet	+64277439010

To check if number setup was successful enter SETTINGS then REVIEW, APN and SMS CENTER values should be the same as what was entered in the network setup page.

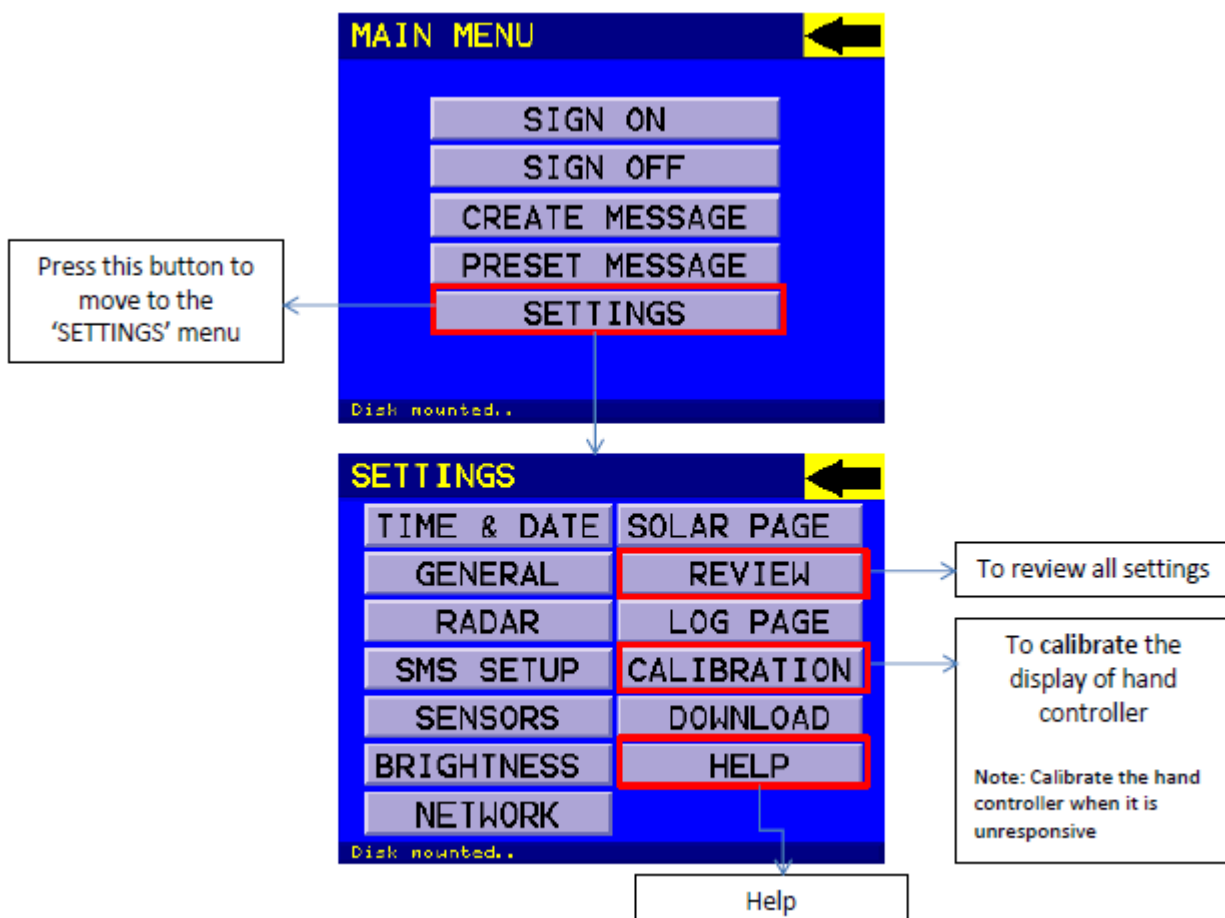


5.4.10 Solar Page

This displays the current values being read from the Solar panel. This includes the current Input voltage, battery temperature reading, Battery Voltage, Current from Solar Panel 1 and 2 and Voltage from Solar Panel 1 and 2.



5.4.11 Other Features



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LOG PAGE

This currently shows the debug log of the sign, It will show the communication with the server as well as sign information and constantly scroll through the status and debug log.

NB!

The touchscreen hand controller (where supplied) is not weatherproof, and must not be permitted to get wet.

Store the controller in the supplied weather resistant container at all times when not in use.



5.5 PC-Based Program (VMS Director)

For a detailed description of Cloud based programming, please refer to the separate "Cloud Director" programming manual.

6. Power Supply and Auxiliary Charging (Option)

The power supply system is designed to allow the sign to operate unattended in any of its modes and simultaneously charge the battery from a discharged condition to full charge, as required.

The power supply is a solar powered system comprising the following key components:

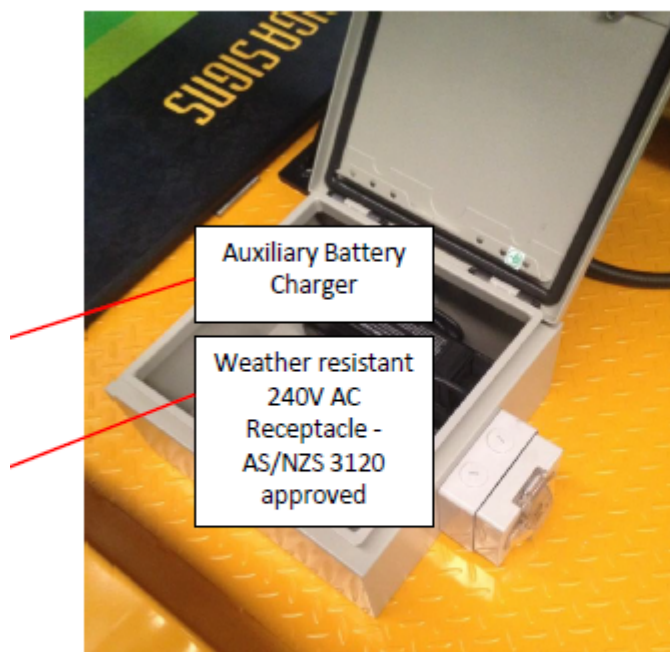
- (a) Solar panel array.
- (b) Solar supply regulator (integral to the VMS computer).
- (c) Reservoir batteries – Sealed, Maintenance free
- (d) Optional - Auxiliary 3 stage 240 V AC battery charger with provision for connection to external 240 V AC supply.

The solar power system provides uninterrupted continuous operation with a minimum of seven-day battery backup.

- **Optional - Auxiliary 3 stage 240 V AC battery charger:**

Should battery charging via 240V AC be needed, plug a 10 Amp power lead into the water resistant socket on the rear side of the control storage box and the battery charger will charge the batteries.

*Please ensure the battery charger is turned on at the switch also.



Note. When the battery charger is in operation, it is recommended that the lid of the box is left open to allow air flow where possible.

Note. It is recommended that the control box be padlocked for security when not in use.

7. Electric Mast

The Electric mast is designed to allow the sign to be raised and lowered without the use of a hand winch. The mast can be controlled by the switch located in the control box.

The electric mast system comprising the following key components:

- (a) Electric Mast
- (b) Electric Mast Control box.
- (c) Electric Mast Switch

7.1.1 General Operation

The electric mast operates with internal limit switches which are activated when the mast has reached both minimum and maximum travel. In order to raise or lower the mast the buttons on the switch located inside the control box will need to be held down until the limits are met or the desired position is achieved.

7.1.2 Safety

- Watch out for overhead hazards when operating winch
- Keep hands clear of winch cable at all times.

7.1.3 Maintenance

The following maintenance should be checked and carried out a regular basis.

- The condition of the main mast should be checked on a regular basis or before and after each operation.
- Electrical connections should be checked on a regular basis to ensure they are clean and tight.

7.1.4 Troubleshooting

<i>Problem</i>	<i>Possible Cause</i>	<i>Solution</i>
Mast won't raise	Flat Battery	Recharge battery
	Fuse broken	Replace 30A fuse

8. Standards Compliance

8.1 AS 4852.2 – 2009

The Global Traffic Equipment VMSC is supplied as a self-contained item of plant, mounted on a trailer and complete with a power supply system (e.g. batteries, photovoltaic panel), control equipment and associated cables, ready for immediate use in the field. It complies in full with AS 4852.2 – 2009 with the following exceptions to Specification:

- AS 4852.2 states that VMS boards must have tilting and rotating solar panels so that they can be angled up to capture the most sunlight.

Global Traffic Equipment have chosen deliberately not to do this (ours sit flat), as a tilting solar array allows for the opportunity to be set up incorrectly by the user (facing the wrong way). This may result in the solar array receiving less than the required amount of sunlight, as well as creating a situation where the solar array may be towed behind a vehicle in an incorrectly stowed position, which may in turn damage the equipment or cause injury or death to the public.

We have designed our product to be more efficient in power use, as well as have added additional solar capacity with the choice of the solar panels, installed in a flat arrangement. We have kept it simple so users cannot get it wrong.

- AS 4852.2 states that a VMS board's sign face shall be capable of rotation through 360° on the vertical axis with reference to the trailer orientation.

The Global Traffic Equipment VMSC will only rotate through 320° due to the nature of the manual winch used to raise the sign head into the raised position. We have chosen deliberately to do this because:

1. There is no known application where the sign face is needed to be oriented in the rear facing direction.
2. It allows us to keep the operation simple and cost effective for the owner/user and eliminates the need for hydraulics which may leak and require a reasonable amount of maintenance.

We have kept it simple, so that maintenance and environmental costs are kept to a minimum.

8.2 RMS/ RTA Specification TSI-SP-030

The Global Traffic Equipment VMSC complies in full with RTA Specification TSI-SP-030 with the following exceptions to specification:

As Above

Note: There is currently no RMS Type Approval for Portable VMS boards.

9. Spare Parts Listing

PART #	DESCRIPTION	COLOUR
DT7063	Touchscreen hand controller	Grey/Black
GT7096	LED Tile board – 5 Colour (16 per sign)	Black
BS1139	Polycarbonate Screen (polycarbonate only)	Clear
GM5044	VMS programming Port	Black
GM5134	VMS Hand Controller Port	Black
BW3063	VMS Programming iKey	Yellow
BS1164	Screen Strut - Gas 300N	Black
BS1042	Screen catch – Over centre - Small	Stainless Steel
BS1126	Mast Locking Pin	Silver
GM5032	Removable Drawbar - Complete	Yellow/silver
BS1027	19mm Drawbar Pin	Silver
BW3066	Jacking leg	Red Handle
BS3005	Jockey Wheel	Red Handle
BS1030	Brake winch	Silver
BS1031	Brake winch handle	Yellow/Orange
BW3015	Brake winch cable	Stainless Steel
BS1001	Spare wheel and tyre	BLACK
BW3004	Radar	BLACK
BS1048	Tail Light – Multi Voltage	Yellow/Red
GM5126	7 Pin Electrical Trailer Lead	Black
GM5096	Battery Box Lid	Black
BS1059	Battery 6 VOLT DC250-6	Blue
GM5087	Battery Temperature Sensor	Silver

Note: The VMS touch screen hand controller, contains no user serviceable parts.



10. VMSC – Specifications

- Primary Power Supply: 250AH@12V (2 x 6V Series wired) AGM, Deep Cycle
- Nominal Operational Voltage Range: 10.6V to 14.4V
- Power Source: Solar Array 240W (2 x 120W @ 12V)
- Optional - Auxiliary Battery Charger: 240VAC, 230W, 3 Stage
- Power Consumption (3 Lines Text with 8 Characters):
 - Output @ 100% Brightness (Full Sunlight): 66.5W
 - Output @ 3% Brightness (Night): 3.8W

11. Disclaimer

This document provides information on our products and all efforts are made to ensure the accuracy of the information contained within. The specifications of the products are subject to change and continual improvement without notification.

12. Appendix A. SMS Graphics

@G00		@G13	
@G01		@G14	
@G02		@G15	
@G03		@G16	
@G04		@G17	
@G05		@G18	
@G06		@G19	
@G07		@G20	
@G08		@G21	
@G09		@G22	
@G10		@G23	
@G11		@G24	
@G12		@G25	

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Appendix A. SMS Graphics (CONTINUED)

@G26		@G39	
@G27		@G40	
@G28		@G41	
@G29		@G42	
@G30		@G43	
@G31		@G44	
@G32		@G45	
@G33		@G46	
@G34		@G47	
@G35		@G48	
@G36		@G49	
@G37		@G50	
@G38		@G51	

Appendix A. SMS & Hand Controller Graphics (CONTINUED)

@G52		@G55	
@G53		@G56	
@G54		@G57	










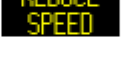













13. Appendix B. Pre-set Messages

P01	WRK ↑T		
P02	WRK T↑		
P03	WRK ↑TT		
P04	WRK TT↑		
P05	WRK ↑↑T		
P06	WRK T↑↑		
P07	WRK ↑TTT		
P08	WRK TTT↑		
P09	WRK ↑↑TT		
P10	WRK TT↑↑		
P11	WRK ↑↑↑T		
P12	WRK T↑↑↑		
P13	FLAGMAN		
P14	LEFT ARR		

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Appendix B. Pre-set Messages (CONTINUED)

P15	RGHT ARR		
P16	CTN RDWK		
P17	PREPSTOP		
P18	EXPDELAY		
P19	PTSEXDEL		
P20	CHNGTRAH		
P21	DTRAH RS		
P22	TRAF HZD		
P23	EXITCLSD		
P24	ROADCLSD		
P25	WRK ↑T↑		
P26	WRK ↑TT↑		
P27	WRK ↑T↑↑		
P28	WRK ↑↑T↑		
P29	RDWKRAMP		

14. DOCUMENT REVISION HISTORY:

Date	Document Version	Document Revision History	Document Author/Revisor
11/11/2013	1.0	Document created from Draft	J. A.
28/11/2013	1.1	Included chapter on SIM Card Formatting and Install	D. E.
03/10/2014	1.2	Giga Signs Version created – New images etc.	D.E.
06/02/2015	RMS 1.3	Giga Signs – RMS Version created – New images etc <ul style="list-style-type: none"> • Radar Section updated 	D.E. J.S.
28/04/2015	V1.4	Updated SIM card section specifying that the modem we are using only supports 850MHz band (NextG)	J.S
28/04/2015	V1.5	RMS Version Updated SIM card section specifying that the modem we are using only supports 850MHz band (NextG)	J.S
6/05/2015	V1.6	Safe Work instructions added Safety Amended	D.E.
20/11/2015	V1.7	Ballast tank details added.	D.E.
26/10/2016	V1.8	ISO Certification updated	B.B
16/05/2017	V1.9	Electric Winch added Ammended SIM Card installation	J.S
07/09/2017	V2.0	Installation of VMS Control Board (HB) Changed SIM card Installation process Added APN setup section for different Telecommunication Service Providers	J.S
02/07/2019	V2.1	Electric Mast Operation Cloud Director Reference changed	M.M and J.S

FOR TECHNICAL SUPPORT PLEASE CONTACT OUR ELECTRONICS TEAM

SERVICE PLANNER

M: 027 365 4452

E: service@trafficsigns.co.nz



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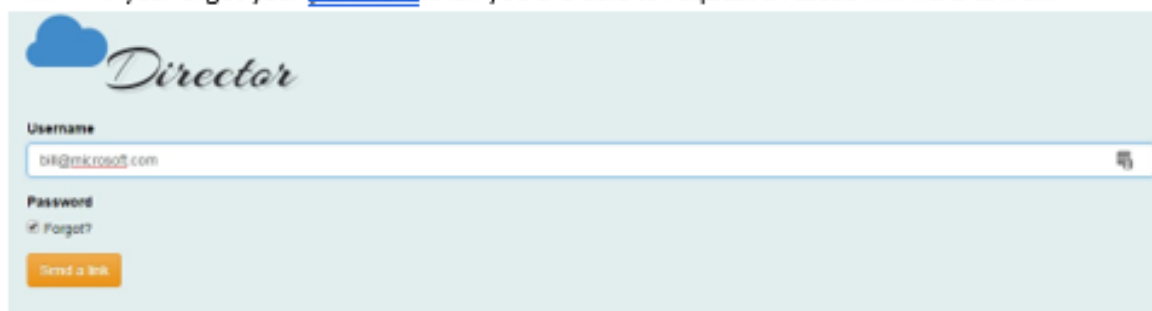
Cloud Director Cookbook

Log in

- I. Type '<https://www.clouddirector.com.au>' in the address bar of your browser (Chrome, Firefox or Safari)
- II. When you see below page, enter your email and password



- III. If you forgot your password then you are able to request a rescue link here as well.



Security Tip: Never save your credentials on public machines!

Log out

- I. Click here



- II. Then click here

Security Tip: When your job is done on Cloud Director, make sure you have logged out from public machines. Otherwise, you leave a valid token there which gives access to anybody else on the machine.

Monitor the signs

- I. Click on the desired group/branch name

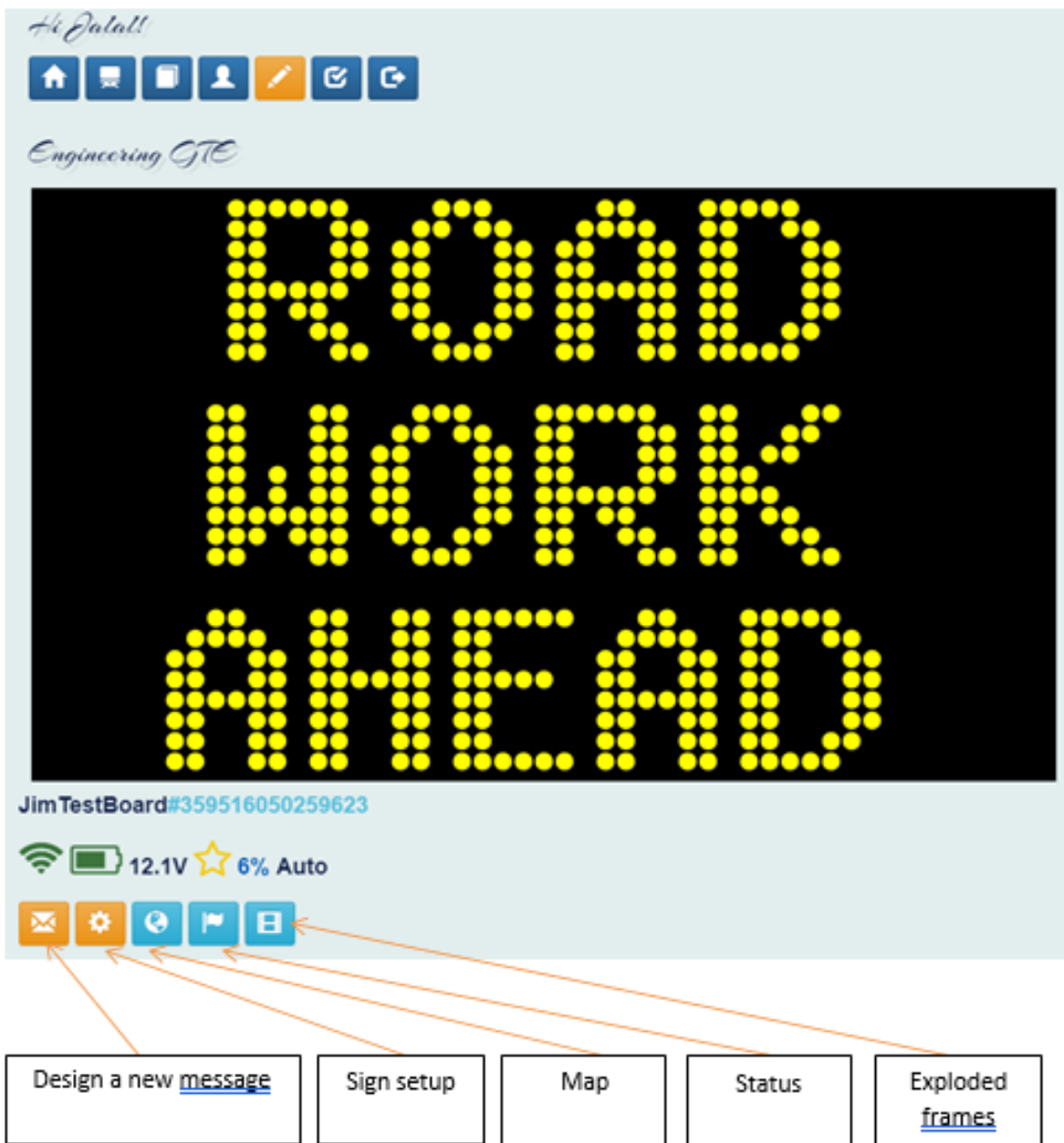


- II. You will see something like [below](#)

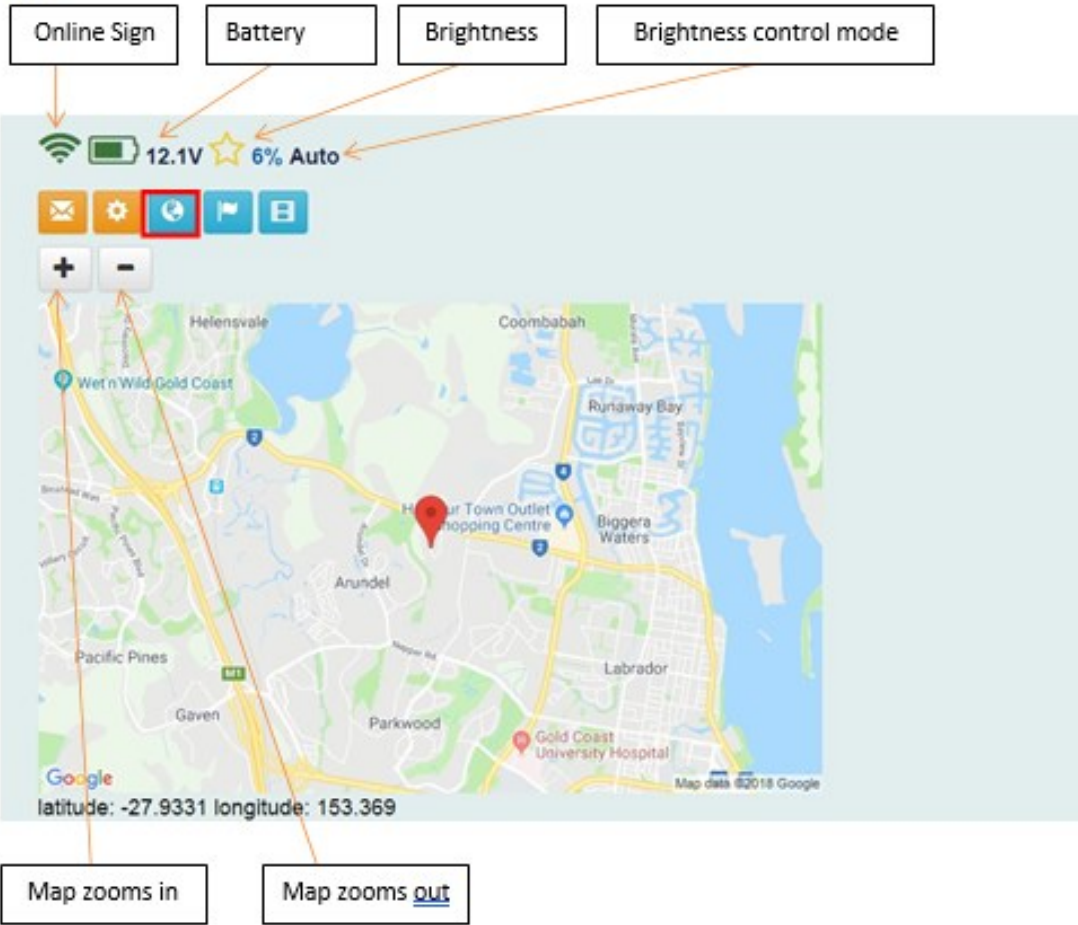


Click on any
sign to see
more

III. Then you will see something like below



Map



Status

JimTestBoard#359516050259623

📶 🔋 12.1V ⭐ 6% Auto

📧 ⚙️ 🔄 📡 📄

Local Time	2018-8-24 11:9:0 (10)
Battery	1.2V Boost
Solar (1)	3.1V, 0A
Solar (2)	1.6V, 0A
Temperature	139C
Message	Fri, 24 Aug 2018 01:05:40 GMT - 1st Scheduling
Message Status	Msg Updated Successfully
Query	[1] Scheduling Downloaded
Brightness	13 Auto
Brightness Factors	13, 201, 254
LDR Value	1023
LDR Factors	300, 600, 100

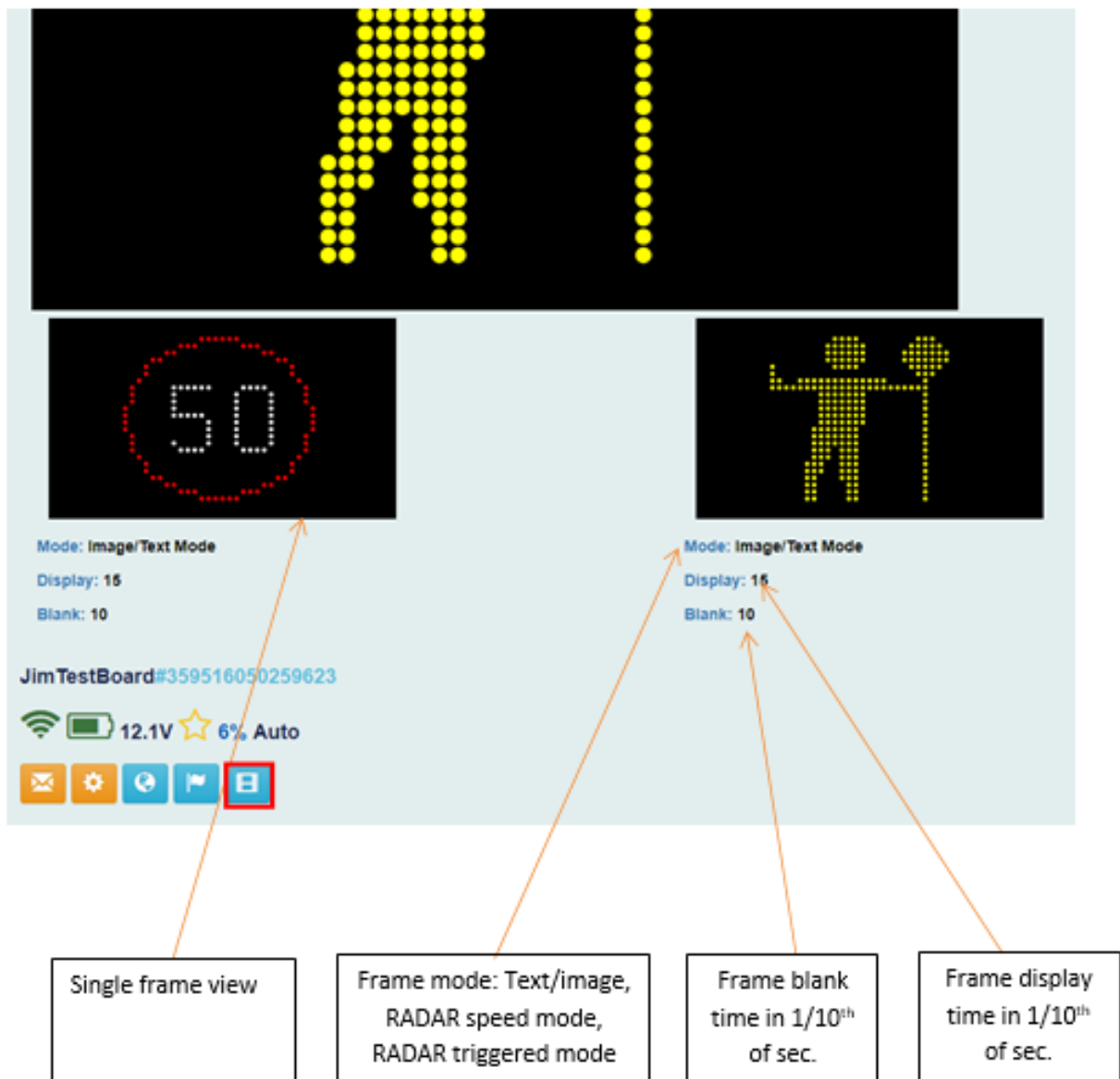
Status time stamp according to the sign local time

Message status

Brightness level (0~255)

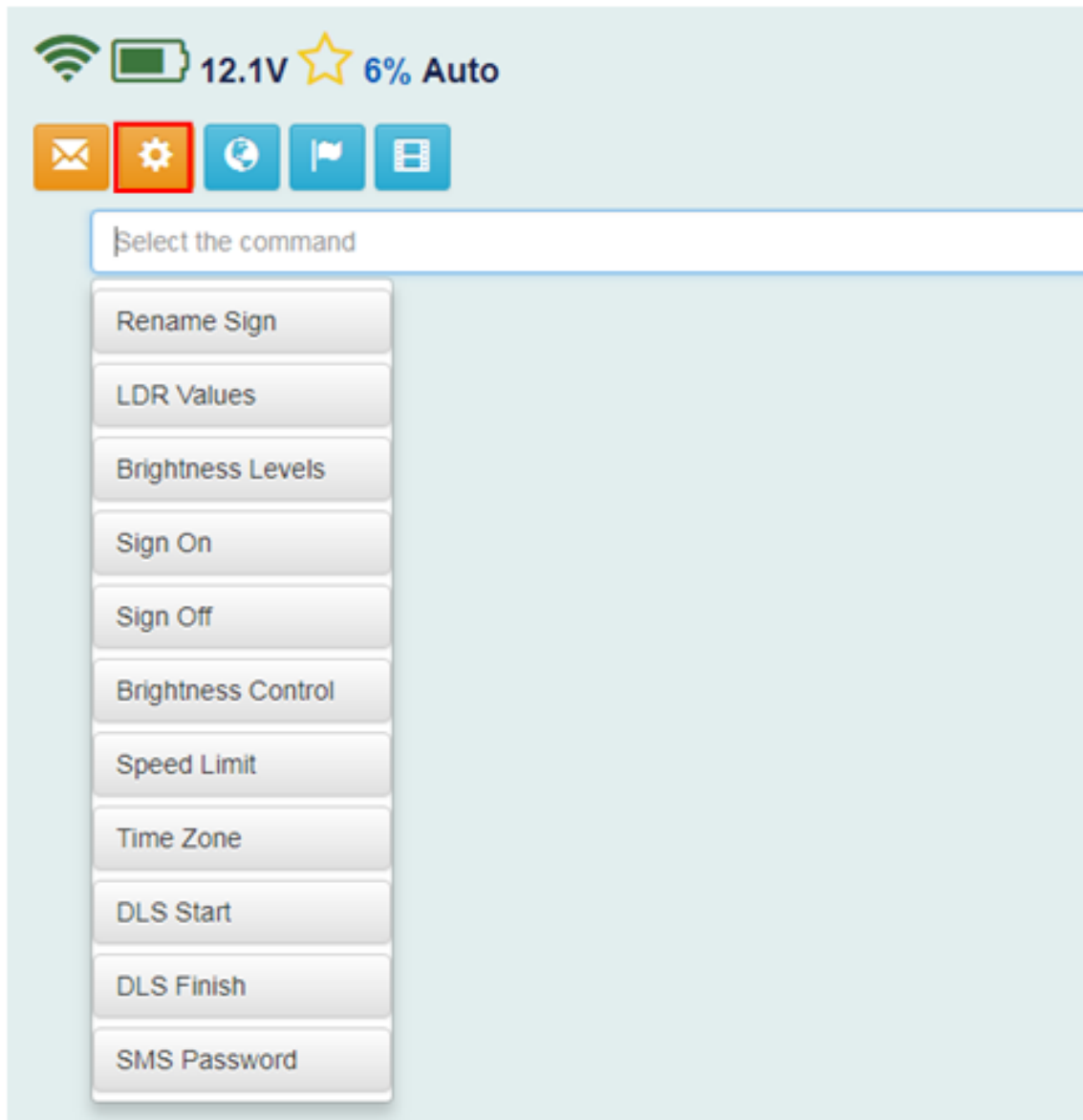
Time stamp of the latest message based on GMT time

Exploded frames



Command

1. Here you are able to switch on/off the sign and set up the brightness level, time zone, DLS start, DLS finish, SMS password, RADAR speed limit...



Create a new message/scheduling

Text mode

5: Enter your text here.

6: Readjust your text (new click could show a new adjustment)

7: Switch to next or previous frame

4: Select your text colour here.

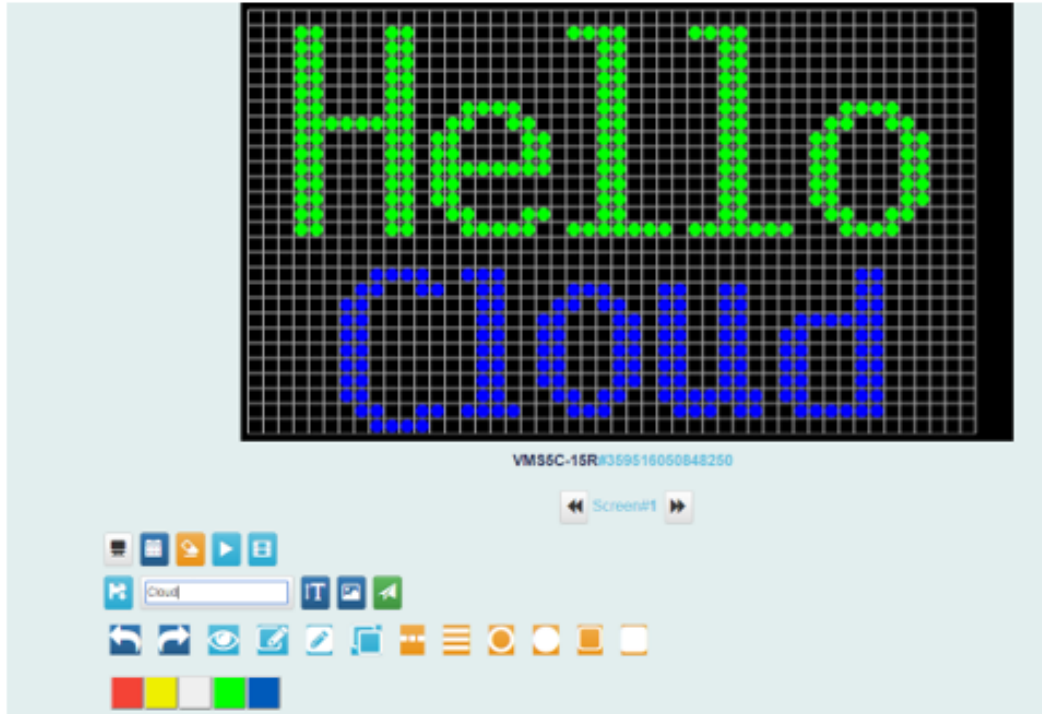
1: Select frame mode here from a drop box if needed: Text/image, RADAR speed mode, RADAR triggered mode

2: Choose frame display time in 1/10th of sec.

3: Choose frame blank time in 1/10th of sec.

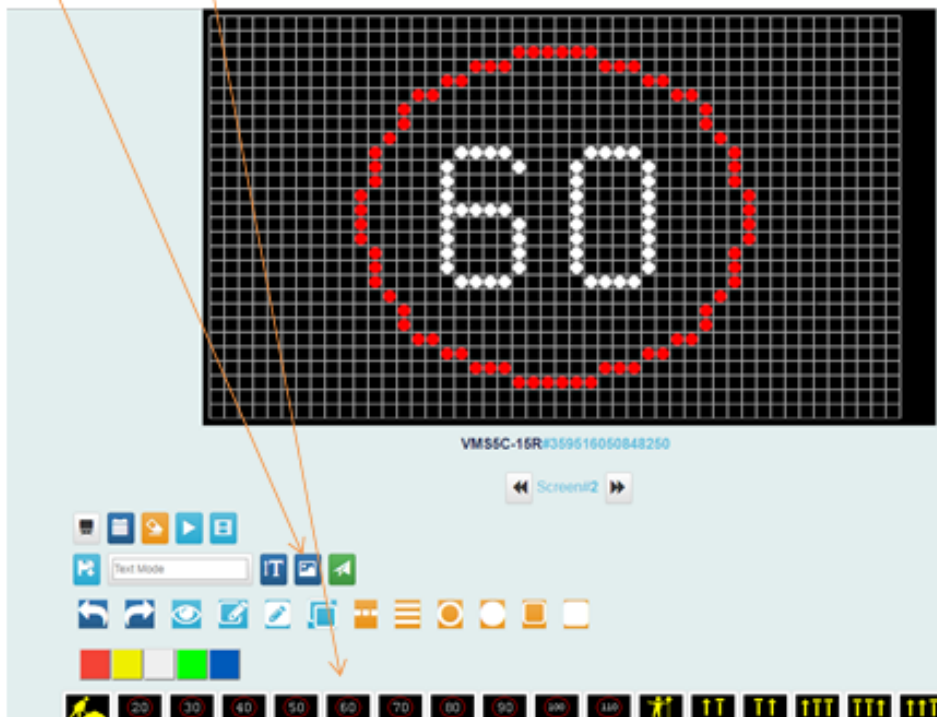
Clear frame Mimic message Exploded view

Back to display page **8:** Send message



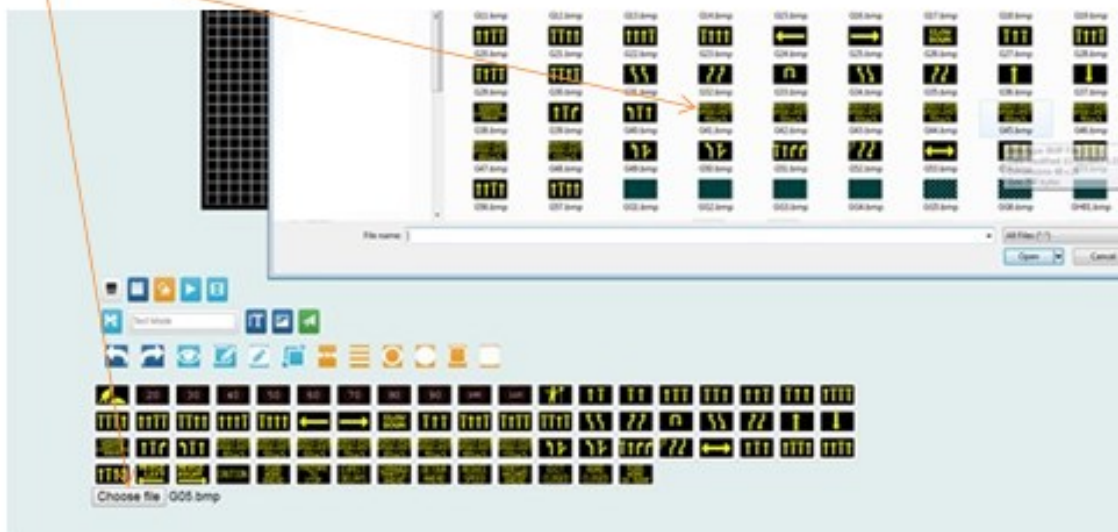
Pre-set image

Click here then select the desired image



Custom image

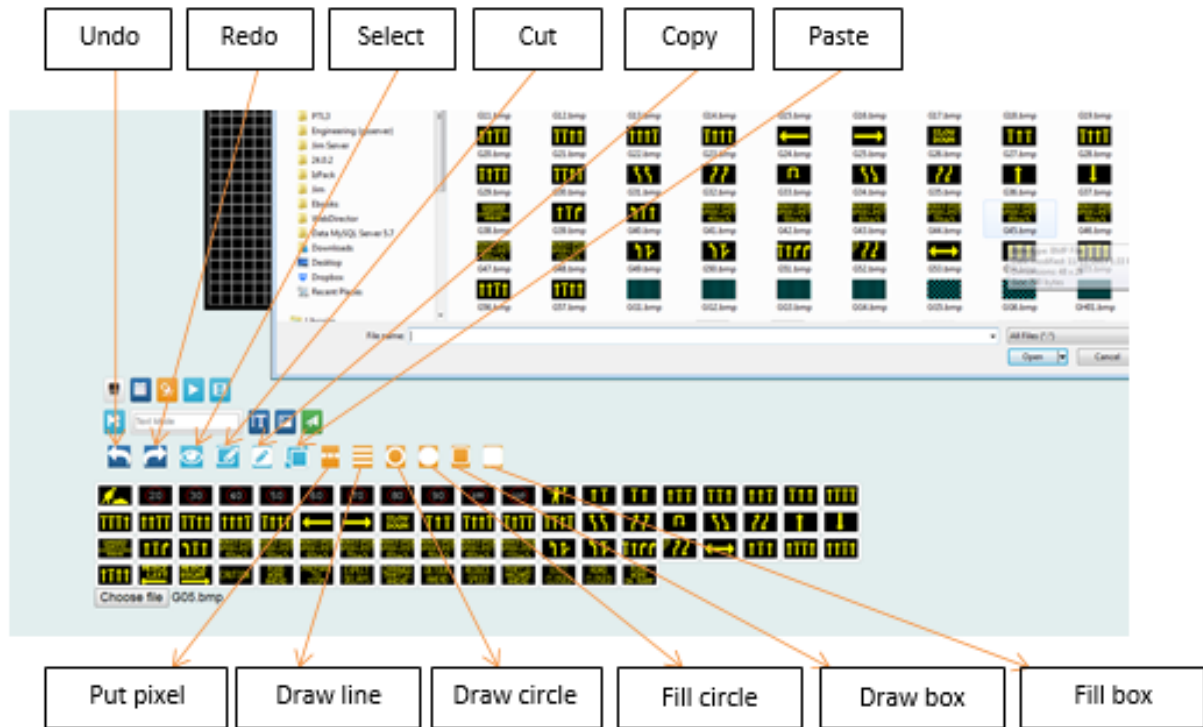
Click here then select a file



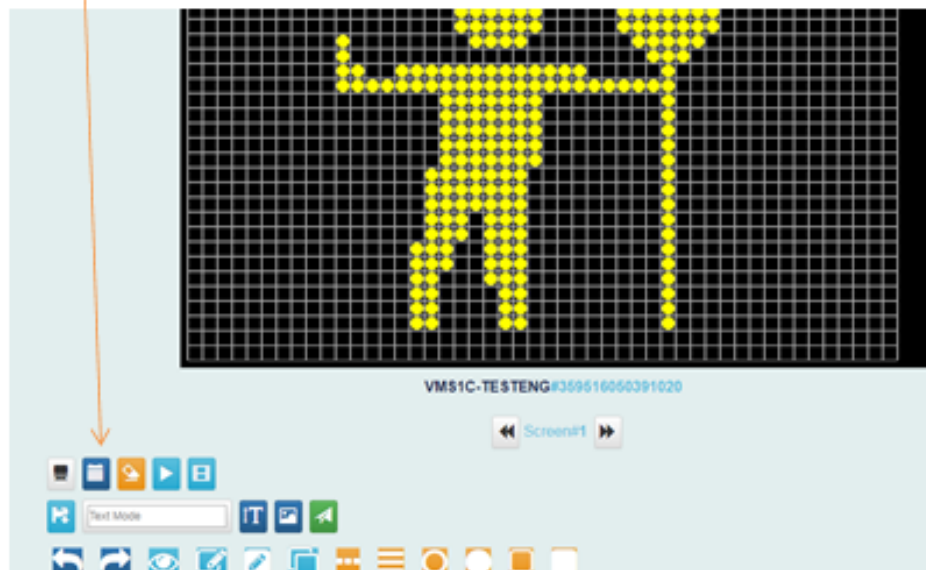
Custom image has to be

- '48X28 16-color bmp' format for VMS5C/VMS1C/1208P
- '52X26 16-color bmp' format for 1306P
- '60X35 16-color bmp' format for 1508P
- '60X32 16-color bmp' format for 1508E.

Painting toolbar



Click here to show scheduling form



Scheduling

The screenshot shows the configuration page for 'Scheduling #1'. At the top, there are navigation arrows and a title 'Scheduling #1'. Below this are several input fields: 'Scheduling Mode' (set to 'Continuous'), 'Speed Limit' (set to '40'), 'Scheduling Start Date' (format 'dd/mm/yyyy'), 'Scheduling Start Time' (format '--:--'), 'Scheduling Finish Date' (format 'dd/mm/yyyy'), and 'Scheduling Finish Time' (format '--:--'). Below the form are three canvas preview areas labeled 1, 2, and 3. Canvas 1 shows a speed limit sign with the number '50' inside a red dashed circle. Arrows point from callout boxes to these elements: Callout 1 points to the 'Scheduling Mode' dropdown; Callout 2 points to the 'Scheduling Start Date' field; Callout 3 points to the 'Scheduling Start Time' field; Callout 4 points to the 'Scheduling Finish Date' field; Callout 5 points to the 'Scheduling Finish Time' field; Callout 6 points to the 'Speed Limit' field; Callout 7 points to the navigation arrows at the top.

7: Go to next/previous scheduling

6: Setup RADAR speed limit here if needed

1: Select scheduling mode here:
I: Continuous mode starts a message from 'Start date/start time' to 'Finish date/finish time'
II: Periodic mode starts a message during slot time from 'Start time' to 'Finish time' when date setup allows.
Tip: Scheduling 1 has the highest priority

2: Select scheduling start date

3: Select scheduling start time

4: Select scheduling finish date

5: Select scheduling finish time

Tip: You see a 'Disk Icon' on canvas page next to edit text box. If you click on [it](#) you will save a hard copy of your message/scheduling on your local disk which can be used later.

Retrieve saved message/scheduling

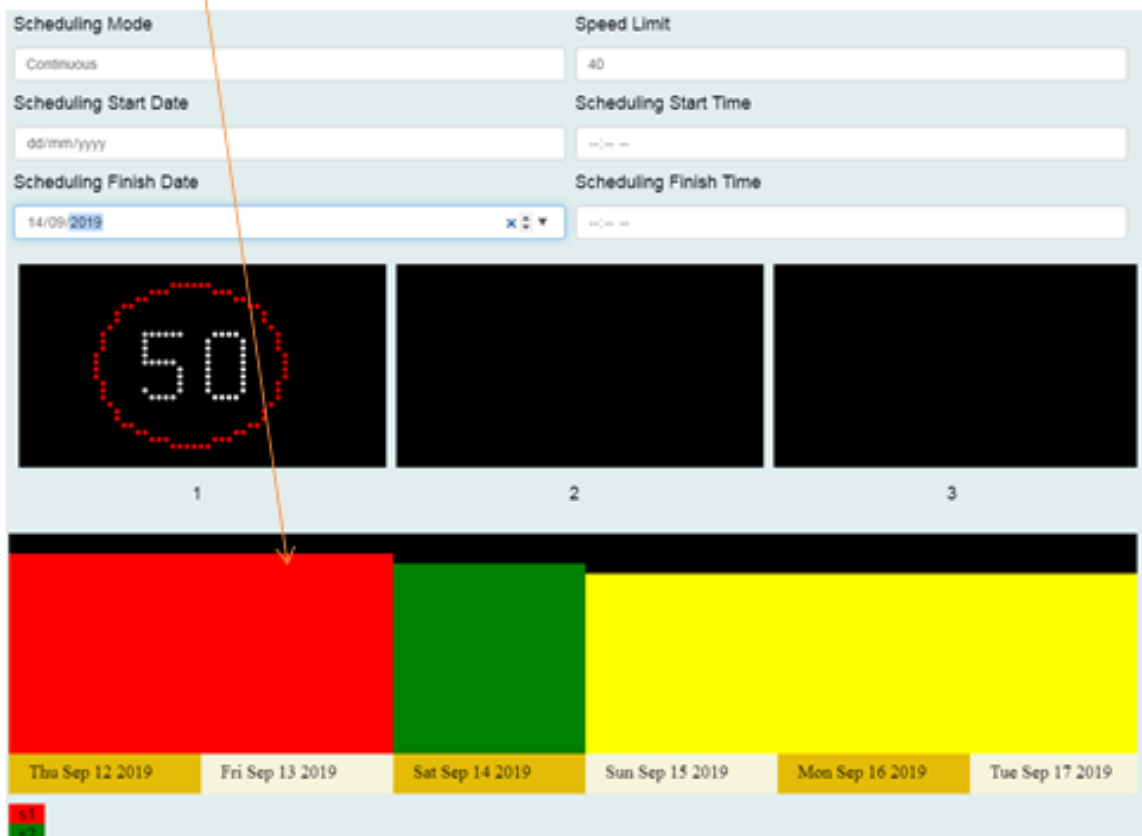
1: Click here to show 'Choose file' button

2: Retrieve saved message/scheduling

The screenshot shows a configuration panel for 'Scheduling # 1'. At the top left, there are two icons: a download icon and a refresh icon. An arrow points from the callout '1: Click here to show 'Choose file' button' to the download icon. To the right, there is a 'Choose file' button and the text 'No file chosen'. An arrow points from the callout '2: Retrieve saved message/scheduling' to the 'Choose file' button. Below these are several input fields: 'Scheduling Mode' (set to 'Continuous'), 'Speed Limit' (set to '40'), 'Scheduling Start Date' (placeholder 'dd/mm/yyyy'), 'Scheduling Start Time' (placeholder '--:--'), 'Scheduling Finish Date' (placeholder 'dd/mm/yyyy'), and 'Scheduling Finish Time' (placeholder '--:--').

1: Click here to retrieve the latest message from Database

Scheduling Graphic Helper



User

1: Click here

2: Click here to add/edit/delete the user



3: Click to add a user

A screenshot of the user registration form in Cloud Director. The form is titled "Engineering GTE" and includes several input fields: "First name" (with placeholder "Enter the first name"), "Last name" (with placeholder "Enter the last name"), "Username (Email)" (with placeholder "Enter the new user (email)"), "Access" (a dropdown menu with "Select the access level"), "Password" (with placeholder "Enter the password" and a toggle icon), and "Confirm Password" (with placeholder "Confirm the password" and a toggle icon). Below the form is a green button with a white arrow pointing right. To the right of the form are two buttons: a blue button with a white pencil icon and a red button with a white 'x' icon. Arrows from callout boxes point to the form fields and the registration button.

4: Fill out the form

Edit the user

Delete the user

5: Register the user

6: Click on any branch tech type user



7: Then select available signs to branch tech type user

Sign

1: Click here 2: Click here 3: Click here

The screenshot shows the Director interface with the 'Sign' and 'Branch' sections. The 'Sign' section has a filter input and a value '1306P-GIGA'. The 'Branch' section has a filter input and a value 'Global Traffic Equipment'. A callout box '1: Click here' points to the home icon in the navigation bar. A callout box '2: Click here' points to the edit icon in the navigation bar. A callout box '3: Click here' points to the share icon in the 'Branch' section.

4: Select a new group/branch

The screenshot shows the Director interface with the 'Sign', 'Branch', and 'Serial No' sections. The 'Sign' section has a value '1306P-GIGA'. The 'Branch' section has a value 'Global Traffic Equipment'. The 'Serial No' section has a value '234567891'. A callout box '4: Select a new group/branch' points to the dropdown menu in the 'Branch' section, which currently shows 'Global Traffic Equipment'.

5: Save [it](#)

Company

Edit a company

- 1: Click here
- 2: Click here
- 3: Click here to edit the company name



Add a new company

- 1: Click here to add a new company

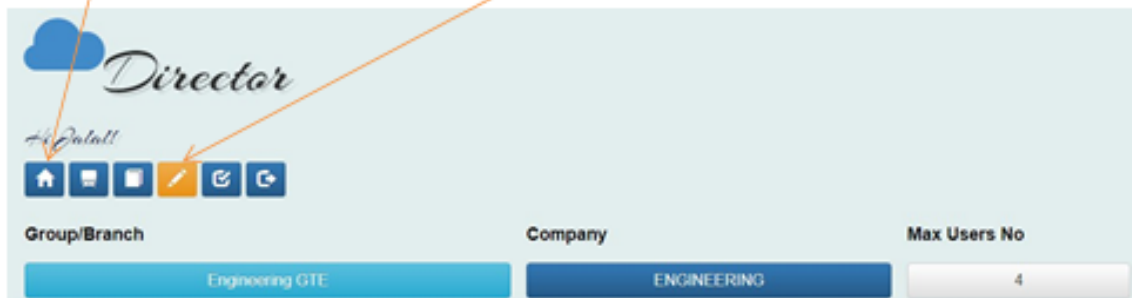


- 3: Save it
- 2: Enter a new name here

Branch/Group

Add a new branch/group

- 1: Click here
- 2: Click here to add a new group/branch



3: Click here



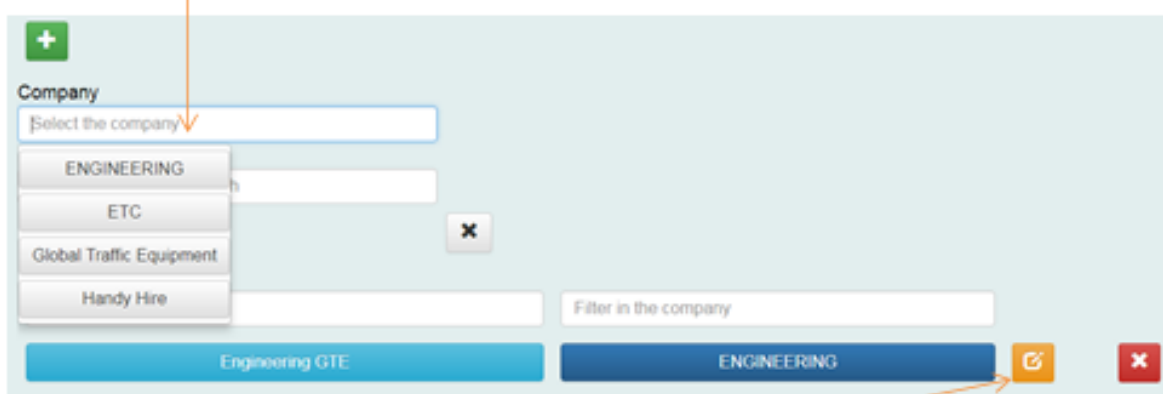
4: Enter a new branch/group



Filter in the group/branch

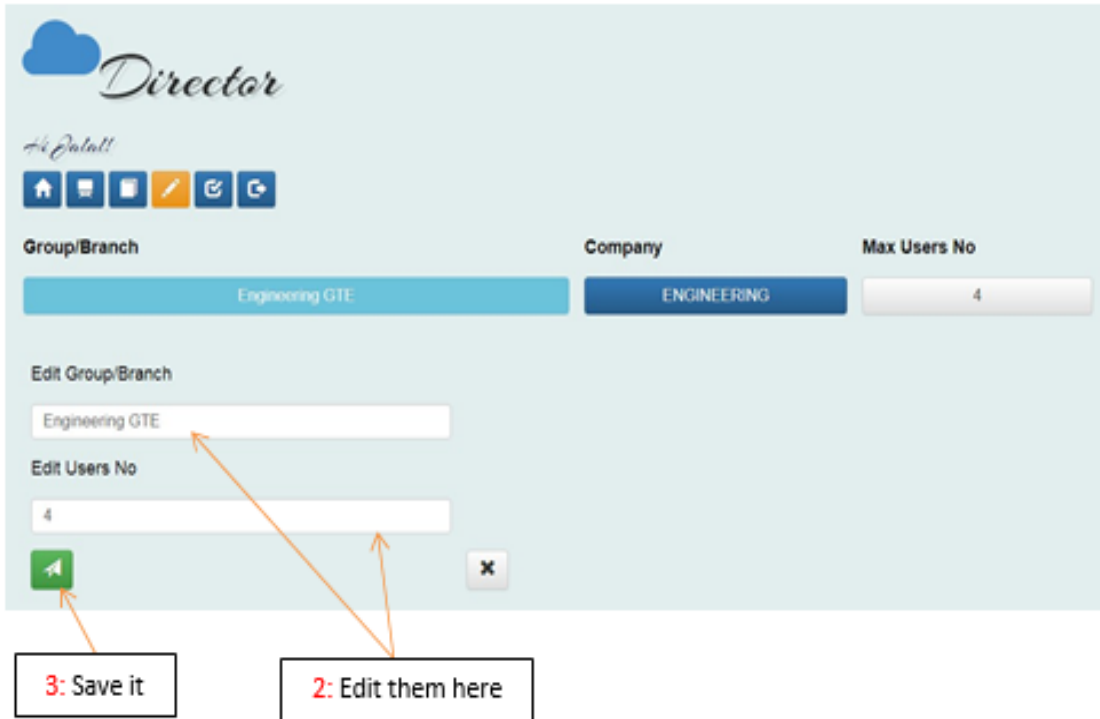
Filter in the company

5: Select the company and save it



Edit a branch/group attributes

1: To edit the branch/group name or users number click



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SERVICE PLANNER

M: 027 365 4452

E: service@trafficsigns.co.nz

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ISO 45001



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ISO 14001

