

SMS Messaging Manual

If using a 'Non Data Signs' SIM Card for your DataSign-VMS, you can communicate via the SMS Messaging service of your own SIM Card service provider. This can be used as an alternative method of manual-monitoring and controlling messaging for your VMS. *Note; as this is an earlier, outdated and non-subscription method of Messaging for VMS Signs, limited support is available.*

Further Note: All SMS Charges, SMS Messages and responses from the VMS Sign are charged to your SIM Card, as a user and SIM card account holder, these charges are your responsibility!

Messages sent to your sign(s) via the DS-Live™ Subscription platform is a more advanced method of actively monitoring and controlling messaging for your VMS. Contact Data Signs via the Help Desk link shown below if you want to activate and use this subscription programming platform to program and monitor your VMS Sign.

<https://www.datasigns.com.au/ServiceSupport/HelpDesk>

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First, you will need to know the SMS number of the DataSign VMS that you wish to send an SMS message to. *This number is provided by your SIM Card Service provider, please do not contact Data Signs for this information.*

SMS Command Codes

Apart from the normal message text which you may want to show on your VMS display, there are command codes that need to be included in the SMS message that you send. These codes are used by your VMS display to ensure security and for other functions. Each command code is preceded by the . symbol (the period, or *full stop*). These command codes are **case-sensitive**. To use the period in a message, enter two periods one after the other, e.g. **end of sentence**.

SMS Message Format and Commonly used Codes

Start each SMS you send to the Sign with the .S security password code. Then add the SMS code for the function you wish to perform. For example, if you want to Blank the Sign, you would send the following SMS to the Sign:

.SXXXXXX.B Where **XXXXXX** is the 6 digit security number.

This 6-digit security number can only be changed via the DS-Live™ Subscription Platform.

If no security code has been set, then the default is normally 123456

Other useful SMS codes are provided below.

- .Z** **Sleep.** The Sign will enter sleep and the display will be blank
- .X** **Re-awake.** Awake the sign and shows last message
- .Q** **Query Status.** The Sign will send you an SMS containing status data info

See the next page for Programming Assistance Sheet to create a message for your VMS



PROGRAMMING ASSISTANCE SHEET

 Fill out in blue pen. Then read down the page and type all in **blue** text as required:

Password: **.S** The password must exist at the start of every message.

Frame 1

Frame Time: **.T** In seconds. 1 to 9, only specify if not 2 (default).

The Sign can automatically choose the font size based on the text you enter, otherwise **specify a font size**, where: **.1** is 1 Line Font (largest), **.2** is 2 Line Font, **.3** is 3 Line Font, **.4** is 4 Line Font (smallest)
For 5-Colour DataSigns, optionally enter a Colour where: **.W** is white, **.R** is red, **.B** is blue, **.G** is green, **.Y** is yellow.

1st line of text **.N**

2nd line of text **.N**

3rd line of text **.N**

4th line of text **.N**
The **.N** code only required if text goes to a new line.

.F If you need a second frame, type in this code first, and continue ...

Frame 2

Frame Time: **.T** In seconds. 1 to 9, only specify if not 2 (default).

The Sign can automatically choose the font size based on the text you enter, otherwise **specify a font size**, where: **.1** is 1 Line Font (largest), **.2** is 2 Line Font, **.3** is 3 Line Font, **.4** is 4 Line Font (smallest)
For 5-Colour DataSigns, optionally enter a Colour where: **.W** is white, **.R** is red, **.B** is blue, **.G** is green, **.Y** is yellow.

1st line of text **.N**

2nd line of text **.N**

3rd line of text **.N**

4th line of text **.N**
The **.N** code only required if text goes to a new line.

.F If you need a third frame, type in this code first, and continue ...

Frame 3

Frame Time: **.T** In seconds. 1 to 9, only specify if not 2 (default).

The Sign can automatically choose the font size based on the text you enter, otherwise **specify a font size**, where: **.1** is 1 Line Font (largest), **.2** is 2 Line Font, **.3** is 3 Line Font, **.4** is 4 Line Font (smallest)
For 5-Colour DataSigns, optionally enter a Colour where: **.W** is white, **.R** is red, **.B** is blue, **.G** is green, **.Y** is yellow.

1st line of text **.N**

2nd line of text **.N**

3rd line of text **.N**

4th line of text **.N**
The **.N** code only required if text goes to a new line.

.F If you need a fourth frame, type in this code first ... follow the format above for additional frames.

Overview of Codes

- .S **Password.** Use this code to specify the password used to update your VMS display. This code and password is required at the beginning of each SMS message.
- .T **Frame Time.** Use this code to specify the frame time. Can be in the range 1-9 seconds. Enter this code before the text for a particular frame. By default, each frame of your message will show for two (2) seconds.
- .L **Left Justify Frame.** Use this code to justify the text you enter for a frame to the left. Enter this code before the text for a particular frame.
- .1 **One Line Font.** This code is used to explicitly specify that the text for this particular frame should be rendered using the One Line Font. Enter this code before the text for a particular frame.
- .2 **Two Line Font.** This code is used to explicitly specify that the text for this particular frame should be rendered using the Two Line Font. Enter this code before the text for a particular frame.
- .3 **Three Line Font.** This code is used to explicitly specify that the text for this particular frame should be rendered using the Three Line Font. Enter this code before the text for a particular frame.
- .4 **Four Line Font.** This code is used to explicitly specify that the text for this particular frame should be rendered using the Four Line Font. Enter this code before the text for a particular frame.
- .N **Next Line.** Use this code in the message text where you want to force the text to be rendered on a new line.
- .F **Next Frame.** Use this code in the message text where you want to start a new frame.
- .= **Use Colour on Line.** Follow this with the Colour code, i.e. R=Red, Y=Yellow, B=Blue, G=Green, W=White. This code allows you to specify which colour to display on the line. Available only on 5-Colour Signs manufactured from July 2011. For example, .S123456.1.=BBLUE
This will show one frame with the word BLUE displayed in blue on the Sign.
- .P **Pre-defined Frame.** Use this code immediately followed by the pre-defined frame number (2-digit, e.g 03 or 11) to select a pre-defined frame.
- .D **Retrieve Message List.** Use this code to request a list of the messages currently stored on your VMS display. You may receive multiple SMS messages if there are a large number of message files stored on your VMS display.
- .R **Run Loaded Message.** Use this code immediately followed by the message name to run a particular message from the list of messages stored on your VMS display. These are messages that were send to the sign using DS-Live™
- .O **Resume VMS Message.** Resume last message send from DS-Live™
- .Q **Retrieve Status Data.** Use this code to request the current status of your VMS display. This is further discussed elsewhere in this manual.
- .B **Blank Display.** Use this code to stop any messages from showing on your VMS display. All 'alarms' will still be active. You may want to blank the display if you no longer require messages to be shown or you wish to save battery power.
- .X **Re-Awake.** Use this code to set your VMS display back into the mode it was in before Sleep. If a message exists on your VMS display this will begin to show again, or if SMS functionality is in use this will begin again. When this command is sent, the GPS position of your VMS display is reset to the current location of your VMS display. This is done with the idea that once the Re-Awake command is sent, your VMS display has been moved to a new location where you want to be showing messages again.
Note: If you update your VMS display with a new message or some other sort of update, this will also re-awake your VMS display if it was asleep.
- .# **Retrieve Current Showing SMS.** Send this SMS to your Sign to retrieve the SMS message currently showing on it.
- .A **Acknowledge Alarm.** Cancel further Alarm Message from VMS Sign. Note Alarm functions are no longer supported, but in the event of earlier software versions and an Alarm is issued, use this code to acknowledge and stop alarm SMS's. **See Note regarding SMS Charges on 1st Page**

Message Text Lengths

All text you send to your VMS display must not exceed the following text lengths:

12 Characters Wide X 4 Lines Down

For example, the text below would be valid:

SLOW
DOWN
ACCIDENT
AHEAD

However, if you attempted to send the following text to show on your VMS display, you would receive an SMS error message (*Invalid Word Length*):

CAUTION
HIPPOPOTAMUS
AHEAD

To show the following three-line message on the Sign:

Frame 1:
ROAD
WORKS
MON 1/7

Frame 2:
SEEK
ALT
ROUTE

Send the following SMS: `.S123456.3ROAD.NWORK.NMON 1/7.F.3SEEK.NALT.NROUTE`

SMS Pre-defined Images

 01 - 40 Speed Limit	 02 - 60 Speed Limit	 03 - 70 Speed Limit	 04 - 80 Speed Limit
 05 - 90 Speed Limit	 06 - Accident Ahead	 07 - Arrow1	 09 - Bike Only INVERT
 09 - Bike Only	 10 - Bike Pedestrian	 11 - Blasting	 12 - Bridge Down
 13 - Bus Lane Only	 14 - Bus	 15 - Danger Gas	 16 - Exit Closed
 17 - Flagman	 18 - Form 1 Lane	 19 - Form 2 Lanes	 20 - Giveway
 21 - Keep Left	 22 - Lane Closed II-	 23 - Lane Closed I--	 24 - Lane Closed -II
 25 - Lane Closed -- I	 26 - Lane Closed Merge Right	 27 - Left Lane	 28 - Left Only
 29 - Line Marking 1	 30 - Line Marking 2	 31 - Loose Stones (Pic)	 32 - Loose Stones
 33 - No Buses	 34 - No Cars	 35 - No Left Turn	 36 - No Right Turn

 37 - No U Turn	 38 - One Way (Left)	 39 - One Way (Right)	 40 - One Way 3
 41 - One Way 4	 42 - Parking Disabled	 43 - Plane	 44 - Rail X'ing
 45 - Railway X	 46 - Right Only	 47 - Road Narrows I-	 48 - Road Narrows -I
 49 - Road Work Ahead	 50 - Round About	 51 - Slippery When Wet (Pic)	 52 - Slippery When Wet
 53 - Slow (Invert)	 54 - Slow (Solid)	 55 - SLOW DOWN	 56 - Steep Climb
 57 - Steep Descent	 58 - STOP	 59 - Stop (Solid)	 60 - Stop (Invert)
 61 - Straight Only	 62 - TOO FAST slow down	 63 - Tway	 64 - U-Turn Permitted
 65 - Warning 11	 66 - Warning 12	 67 - Warning 13	 68 - Warning Arrows Left
 69 - Warning Arrows Right	 70 - Warning Bendy Road	 71 - Warning Bump	 72 - Warning Corner Right
 73 - Warning Cross-roads	 74 - Warning Fork	 75 - Warning Giveway	 76 - Warning Hairpin bend
 77 - Warning Lights	 78 - Warning Road Joins	 79 - Warning Road Narrows	 80 - Warning Road Narrows2
 81 - Divided Road Ahead	 82 - Warning Roundabout	 83 - Warning Sharp Right	 84 - Warning Sharp Road bend
 85 - Warning Stop Sign	 86 - Warning T Intersection	 87 - Warning T Intersection2	 88 - Warning Truck
 89 - Warning Right Bend	 90 - Workman	 91 - DataSigns Logo	 92 - Left Arrow Dots
 93 - Right Arrow Dots	 94 - Left Arrow	 95 - Right Arrow	 96 - Detour Left
 97 - Detour Right	 98 - Up Arrow	 99 - Down Arrow	(blank)

Displaying DS-Live™ Messages

You can update your VMS display with multiple messages using the DS-Live™ Subscription Programming Platform. Contact Data Signs if you want to activate and use this subscription programming platform to program and monitor your VMS Sign.

<https://www.datasigns.com.au/ServiceSupport/HelpDesk>

To retrieve a list of all the messages currently loaded on your VMS display, use the **.D** code. For example, if you send the SMS message: **.S123456.D** your VMS display will send an SMS with the list of files. By default, the first message selected in the list will be the one actually shown on your VMS display.

Note: If you have many message files loaded on your VMS display, you may receive multiple SMS files containing the message file names.

To show any one of the DS-Live™ loaded messages on your VMS display, use the **.R** code followed by the name of the particular message you want to run. The names of each of the messages are case sensitive. For example, if your VMS display has a message called **ROADWRKS** loaded, and you wanted to show this message, you would send an SMS message like the following: **.S123456.RROADWRKS**

VMS Enquiry and Status Codes Described

To receive the **current status data** from your VMS display, use the **.Q** code.

Your VMS display will SMS you the display status data which will appear on your mobile phone. To find out more about what each value represents see below.

The SMS would be by default: **.S123456.Q**

Status Data

'**Sign Serial Number**': Serial number is unique to each VMS display.

'**Message Currently Showing**': If there is a VMS message showing (a message created using the DS-Live™ Subscription Platform), the filename for the message will appear here.

'**Current Voltage**': Shows the voltage level of the batteries. If this level gets too low, battery damage may occur. Ensure sign operation is above 10.8V as a minimum.

'**Sign Temperature**': Is the ambient temperature inside the VMS display. If this temperature gets too high, this may indicate that the fans have failed and may need replacing.

'**Light Output Level**': A percentage of the total light output level.

'**Tamper**': The Tamper status of the VMS display. This should be 'OK'. If the Tamper status is not OK, your VMS display will require attention.

'**Firmware**': This shows the version of the Firmware running the Controller on your VMS display.

SMS Radar functions

For signs fitted with a Data Signs Supplied Radar Only and where only SMS Messaging is used. **Note: Radar Hi/Lo Messages is only settable via VMS Computer or DS-Live™.**

If the Radar on your Sign has been disabled, any of the commands below will re-enable the radar; except for the Disable Radar command. The Radar Display Options mentioned below allow you to specify that a certain type of message will be shown. Please formulate a complete radar SMS command by including **all** the options below;

- .S Password.** Use this code to specify the password used to update your Sign.
- .CO Disable Radar.** Use this code to disable the radar. When radar is disabled the SMS message is displayed on the Sign if one has been uploaded. '0', not zero.
- .CM Radar Message Interrupt.** Specify *either* this code or Radar Display Only code (see below), not both. When this code is used the SMS message is shown *except* when a speed is detected by the Radar. When a speed is detected, the Sign displays a message or speed depending on other Radar settings.
- .CR Radar Display Only.** Specify *either* this code or Radar Message Interrupt code, not both. When this code is used the SMS message is **NOT** shown. Only when a speed is detected by the Radar does the Sign display something. *However, if an SMS message is displaying on the Sign, this will continue to display.*
- .CTnnn Trigger Speed.** 2 - 199 (km/h)*. All speeds are detected by the Radar attached to your Radar Sign. However, you may only want to display a message where the detected speed is above a certain value. For example, your Radar Sign has been placed in a section of road undergoing roadworks. Therefore, the Sign may only need to display messages when speeds at or above 40 km/h have been detected. In this case set the Trigger speed to 40 (040). Note: Ensure you always specify 3 numbers in this field, for instance 50 km/h would be 050.
- .CCnnn Set Speed.** 2 - 199 (km/h). While the Trigger Speed allows you to specify the detected speed at or above which you want a message/speed to be displayed, the Set Speed enhances this functionality. The **Radar Display Options** allow you to specify that you want to display a Radar Hi/Lo message. The *Radar Lo* message will be shown on the Sign when the detected speed is at or above the Trigger Speed and at or below the specified Set Speed. The Radar Hi message will be displayed when the detected speed is above the Set Speed and at or below the Max Speed (see below). The *Radar Hi* message will be shown for all detected speeds if the Set Speed is 0 (zero). Note: Ensure you always specify 3 numbers in this field, for instance 80 km/h would be 080.
- .CXnnn Max Speed.** 3 - 199 (km/h)*. Use this code to set the Max Speed. All speeds are detected by the Radar attached to your Radar Sign. The Trigger Speed code allows you to specify the speed at or *above* which you want a message/speed to be displayed on the Sign. However, if a speed is detected at or above the Max Speed, then no speed will be displayed. The RadarHi message will still be shown, though. This feature prevents your VMS display from being used by those irresponsible drivers who want to check their top speed as they race past. Note: Ensure you always specify 3 numbers in this field, for instance 99 km/h would be 099, while 110 km/h would be 110.
- .CSn Display Speed Direction.** This must always be 2.

Radar Display Options.

Due to legacy conditions, this option is only available via a VMS Computer or DS-Live™

- .CDabcd** **Radar Display Options.** Combine various radar display options for your Sign using this code. There are four Display options, two groups of two (A and B). These display options come into effect when a speed is detected by the Radar. For example, option **a** allows you to specify whether you want to display a message or the detected speed (where it is equal to or above the specified Trigger Speed) first (Message/Speed A). Later, option **c** allows you to specify what you want to display next (Message/Speed B). Each option will be discussed further below (please ensure you read all following sections together as this may make things a little clearer).
- a [1,2]** **Message/Speed A.** 1 = Speed (detected), 2 = Radar Hi/Lo Message. Specify whether you want to display the Speed or the Radar Message first by using values 1 or 2 in Display option **a**.
Radar Hi/Lo Message is only settable via VMS Computer or DS-Live™.
- b [0 - 9]** **Speed A Duration** (seconds). This Display option allows you to specify how long Speed A will be displayed, in seconds. Use 0 in this option if you have selected a Radar Message in Display option **a**.
- c [0,1,2]** **Message/Speed B.** 0 = Nothing, 1 = Speed (detected), 2 = Radar Hi/Lo Message. Specify whether you want to display the Speed or the Radar Message next by using values 0,1 or 2 in Display option **c**, or use 0 to do Nothing next.
Radar Hi/Lo Message is only settable via VMS Computer or DS-Live™.
- d [0 - 9]** **Speed B Duration** (seconds). This Display option allows you to specify how long Speed B will be displayed, in seconds. Use 0 in this option if you have selected a Radar Message in Display option **c**.

Radar Logging

Radar Log files can be retrieved via DS-Live without Subscription having been activated using you own SIM Card

- .CLn** **Data Logging Direction.** 0 = No Logging (default), 2 = Logging enabled
The Data Log can be retrieved from the SD Card, or Via
- .CAⁿⁿ** **Minimum Data Logging Speed.** 1 - 199 (km/h)*. Use this code to set the Minimum data logging speed. This code allows you to specify the minimum detected speed that will be logged to the Radar Log file. Note: Ensure you always specify 3 numbers in this field, for instance 20 km/h would be 020.
- .CZⁿⁿⁿ** **Maximum Data Logging Speed.** 1 - 199 (km/h)*. Use this code to set the Maximum data logging speed. This code allows you to specify the maximum detected speed that will be logged to the Radar Log file. Note: Ensure you always specify 3 numbers in this field, for instance 20 km/h would be 020.
- .CIⁿⁿ** **Reading Interval.** 1 - 65 (seconds)*. This setting allows you to specify how often speeds that are detected by the radar are logged. Note: Ensure you always specify 2 numbers in this field, for instance 2 seconds would be 02.

Example: .S123456.CM.CT020.CC050.CX080.CS2.CD1202.CL2.CA010.CZ100.CI01****

This command will setup the sign to use radar message interrupt mode, with trigger speed at 20km, set speed at 50km and max speed at 80km. The sign will interrupt a shown message with a detected speed for 2 seconds before returning to the normal message.

Data logging is enabled and will log any speed between 10km to 100km every 1 second interval.

Disclaimer

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As the instructions used in this Manual are an alternative method of manual-monitoring and controlling messaging for your VMS and this is an earlier, outdated and non-subscription method of Messaging for VMS Signs, limited support is available.

Note: All SMS Charges, SMS Messages and responses from the VMS Sign are charged to your SIM Card, as a user and SIM card account holder, these charges are your responsibility!

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