

VMMS

VEHICLE MULTI-MESSAGE SYSTEM

Designed specifically for buses and coaches, the VMMS provides clear and concise audio messages and alerts to drivers and passengers alike.

The VMMS is a bespoke messaging unit that can be interfaced with the vehicle's CAN-Bus and other Forman V-Series products to provide warnings, status information and advisories, ensuring the safe running of the vehicle.

The Forman VMMS links directly into the Forman Fire Suppression System, providing real time warning audio messages to the driver on high engine bay temperature, low system pressure or system deployment status. Live updates mean the driver can react faster to any alerts.



Fully programmable to customer specification

An extensive range of messages are available, but custom messages or sounds can also be factory programmed into the unit.



Independent driver/passenger audio messages

The system can broadcast specific audio clips through two separate speaker outputs to allow driver/passenger audio separation.



Retrievable event history memory log

The VMMS logs specific events such as fire suppression system deployment and low system pressure.

How Does VMMS Work?

The VMMS includes a number of input connections, each of which activate the broadcasting of pre-programmed audio clips.

The messages and sound recordings are factory programmed. An extensive range of spoken messages is already available, but custom messages and sounds can be requested, including messages in different languages. The unit audio clip library can contain over 250 recordings.

The VMMS can be linked to the vehicle CAN-Bus interface, which can trigger the playback of any message in the library. Additionally, messages can be triggered by hard-wired inputs, for example from the vehicle handbrake or the Forman Fire Suppression System.

The system displays specific audio clips through two separate speakers, allowing different messages to be delivered to driver and passengers.

Driver Start-Up Messages (Driver Speaker)

The VMMS can deliver custom messages when the vehicle's power is switched on to provide driver notifications specific to that vehicle.



Mobile phones are not to be used whilst driving.



This is a hybrid vehicle - are you trained in its functions?



Caution! This is a double deck vehicle and is fourteen feet six inches high. Please be aware of height restrictions and particularly low bridges.

Driver Warning Messages (Driver Speaker)

Specific messages and sounds can be triggered by hard-wired inputs or the vehicle's CAN-Bus to inform or alert the driver.



Please apply handbrake.



Bus in gear.



Bus in reverse.



Sensitive edge active.



Flat battery, please restart engine.



Low lighting levels, turn on headlights.

Passenger Messages (Passenger Speaker/s)

The VMMS offers a separate speaker output to deliver passenger specific messages.



Doors closing.



Please stand clear of the doors.



Ramp extending.



CCTV is in operation in this vehicle.



Please remain seated until the bus has stopped completely.

Fire Suppression System Integration

The Forman Fire Suppression System integrates fully with the VMMS (1), allowing for system warnings to be given to the driver via the speaker in the driver's cab (2). The system integration is designed to reduce the likelihood and impact of a fire on the vehicle, and to mitigate disruption, damage and injury.

Temperature Rise Pre-Warning

The VMMS warns the bus driver when dangerous temperatures are detected by the Temperature Rise Pre-Warn Sensors (3). This warning is designed to allow the driver to safely stop the vehicle prior to fire ignition. Stopping the bus may give the engine time to cool down and prevent a fire.

Low System Pressure Warning

The system alerts the driver in case of low pressure in the fire suppression system. The driver is alerted when the pressure in extinguishing agent tank/s (4) drops below acceptable levels, so a service can be arranged to reinstate the system.

System Deployment Warning

If the fire suppression system discharges, the driver will receive warnings alerting the driver that system has been activated, and the engine will shut down. This allows the driver to safely stop the vehicle and evacuate the passengers.

Smoke Detection Warning

The VMMS is connected to the smoke detector (5), which is fitted in the upper deck of double decker buses, allowing the system to alert the driver if smoke is detected.

Forman Fire Suppression System Sample Layout

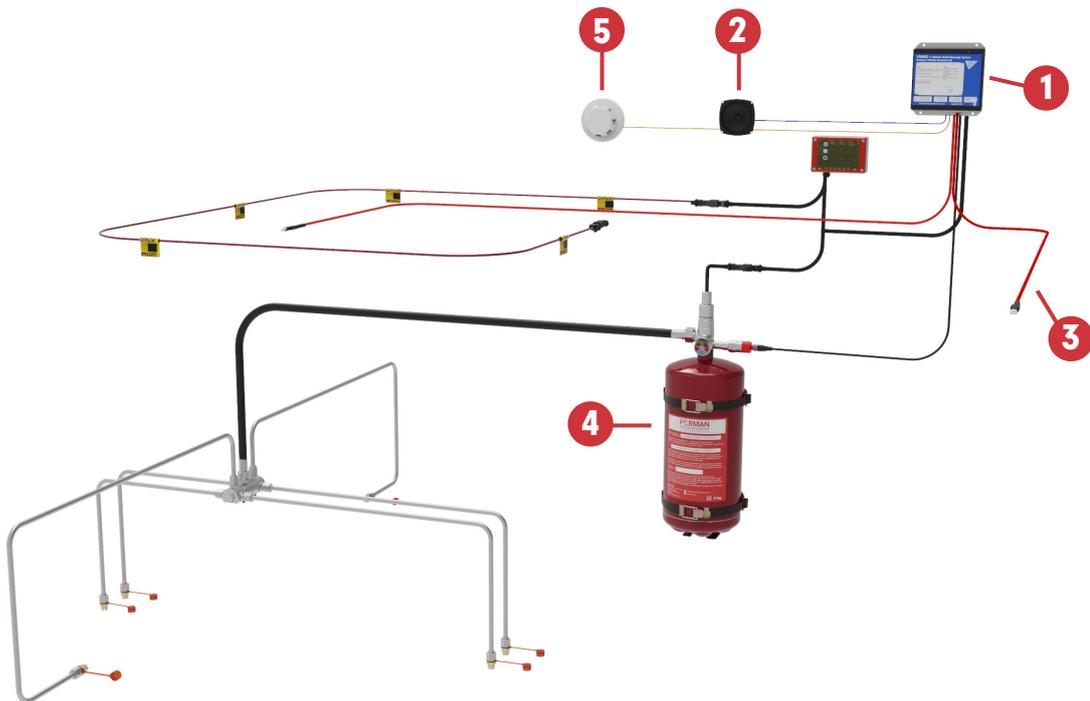


Image for visual representation only.

Driver Fire Suppression System Messages (Driver Speaker)

-  Fire system pressure ok.
-  Fire system pressure low.
-  Warning! Engine bay temperature high.
-  Warning! Smoke detected.
-  Engine fire suppression system deployed, engine shutting down.

Key Technical Specification

VMMS Vehicle Multi-Message System

Dimensions	Case: 146 x 132 x 32 mm
Connections	AMP .070 series connectors: 18W x 12W
Power	Supply voltage: 20Vdc -> 30Vdc. Protected against reverse polarity and transients. Supply current: 400 mA (playing a loud recording at full volume); below 80 mA when quiet.
Switch Contact Inputs	x 11 or x 14; high or low-sided switched
Speaker Outputs	x 1 or x 2 (availability depends on application). 1.1W delivered into 4 or 8-ohm speakers. Each speaker has a volume control, located inside the VMMS case. The main speaker output has tamper protection (senses speaker disconnection).
Relay Driver Outputs	Purpose defined by application. High-side switched (unregulated). 130 mA drive capability; short circuit protected; current monitored. Driver output voltage: 23 V when supply is 27 V, 17 V when supply is 20 V (driving 250 Ω relay coil).
Smoke Alarm Interface	Up to 2 smoke alarms may be connected to this interface. Trigger current: 15 mA. Smoke alarm is powered down for 5-secs following an alarm detection, then restored; these events repeat until the alarm clears.
CAN-Bus Interface	VMMS3-C
Front Panel Indicator	Used as a power indicator and to display firmware version.
Approvals	e-marking: e11 03 5981, e11 10R - 045981

For the complete technical specification and operating instructions, please contact Forman Vehicle Services.

**To find out how we can help you enhance
the safety of your vehicles, call us on
+44 (0)1642 713530**

Forman Vehicle Services
a division of Ardent Limited
Unit 3 Becklands Close,
Bar Lane, Roecliffe
North Yorkshire, YO51 9NR
United Kingdom

Telephone +44 (0)1642 713530
Email enquiries@formanvehicleservices.com
Website www.formanvehicleservices.com

FORMAN[®]
Vehicle Services

FVS-PF-1001