

We set the standard in safety

Vehicle multi-message system

Provide clear and concise audio
messages and alerts to drivers
and passengers



Previously known as Forman

Designed specifically for buses and coaches, the Ardent vehicle multi-message system provides clear and concise audio messages and alerts to drivers and passengers alike. A bespoke messaging unit, it can be interfaced with other systems to provide warnings, status information and advisories, ensuring the safe running of the vehicle.

What does our vehicle multi-message system do?

Linking directly with the Ardent R107-approved bus fire suppression system, our vehicle multi-message system provides 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

For full peace of mind, the Ardent vehicle multi-message system logs specific events, such as fire suppression system deployment and low system pressure.

How does it work?

Our vehicle multi-message system includes a number of input connections, each of which activate the broadcasting of pre-programmed audio clips.

Messages and sound recordings are factory programmed, with an extensive range of spoken messages available. Custom messages and sounds can also be requested, including messages in different languages. The unit audio clip library can hold more than 250 recordings.

The vehicle multi-message system 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 Ardent bus fire suppression system.

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



Example messages

Driver start-up messages (driver speaker)

To ensure safety from the get-go, our vehicle multi-message system can deliver custom messages when the vehicle's power is switched on, providing 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)

To inform and alert the driver, specific messages and sounds can be triggered by hard-wired inputs or the vehicle's CAN-Bus:

"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)

Our system 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 Ardent R107-approved bus fire suppression system integrates fully with the Vehicle multi-message system (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, mitigating the chances of disruption, damage, or injury.

Temperature rise pre-warning

The system warns the bus driver when dangerous temperatures are detected by the temperature rise pre-warn sensors (3). This warning allows the driver to safely stop the vehicle prior to fire ignition, which can give the engine time to cool down, preventing fire.

Low system pressure warning

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

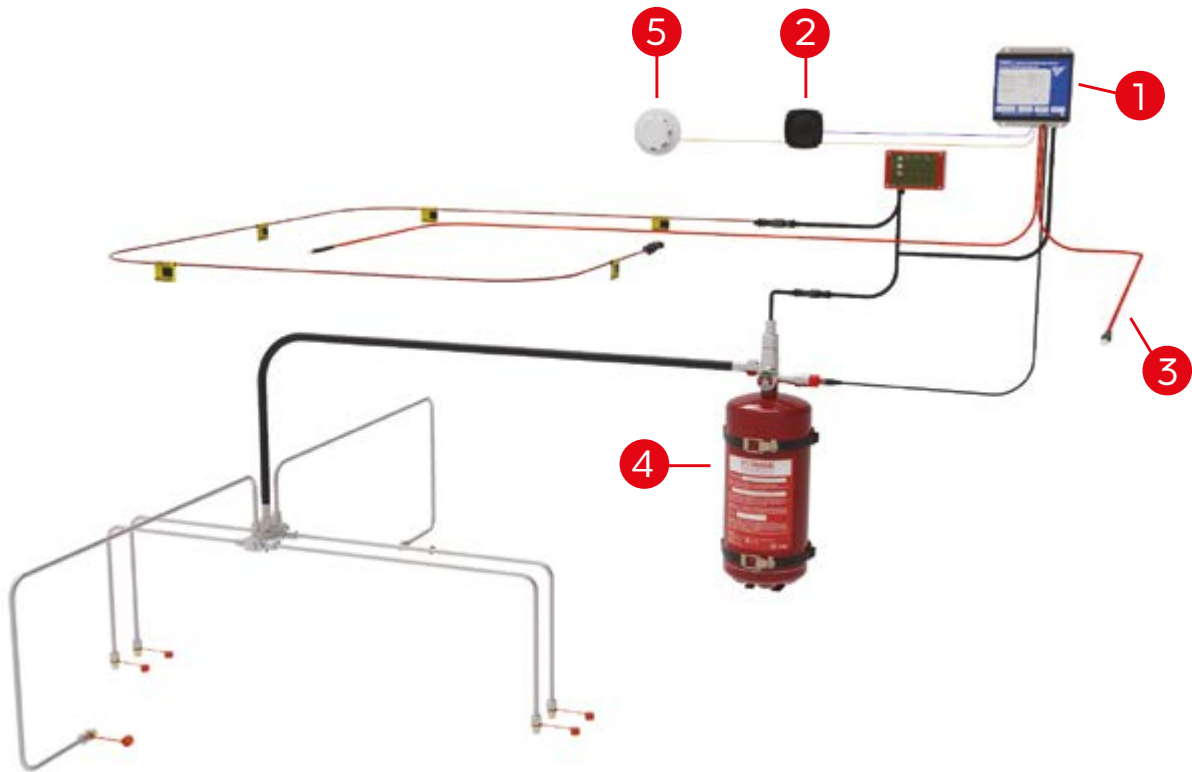
System deployment warning

If the fire suppression system discharges, the driver will receive warnings alerting that the 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 vehicle multi-message system 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.

Sample layout



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

| | |
|------------------------------|--|
| 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) and below 80 mA when quiet |
| Switch contact inputs | x11 or x14; high or low-sided switched |
| Speaker outputs | x1 or x2 (availability depends on application) 1.1W delivered into 4 or 8-ohm speakers Each speaker has a volume control, located inside the VMMS case 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 two smoke alarms may be connected to this interface Trigger current: 15 mA Smoke alarm is powered down for five seconds following alarm detection, then restored: these events repeat until 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 get in touch.

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For help protecting vehicles
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