

EMS01 Mk2



Product Description

- Wall Mount Fist Microphone
- EN54 Compliant Indicators and Controls
- EN54 Fault List Display
- Speech Level 'VU' Bargraph
- Fully Monitored
- Hardware Bypass Fallback Operation
- Dual Redundant Outputs for A & B Routers
- Additional Voice over IP Interface, with PoE RJ45 Ethernet Port (With IP License)

The EMS01 Emergency Microphone Station is an EN54 compatible emergency microphone which provides All-Call functionality for making live emergency announcements to entire facilities. The microphone provides EN54 compliant emergency functions and all EN54 mandatory indicators and controls.

The microphone is housed in a lockable wall-mounting box and features a graphic LCD display together with indicators for 'Power', 'Voice Alarm', 'System Fault', 'Fault' and 'Speak Now'. The LCD display provides remote access to the list of active faults in the PA/VA system, while the EN54 mandated control keys enable navigation through the fault list, and also provide remote fault acceptance and clearance.

The EMS01 has multiple PA/VA system interfaces. It can be connected directly to either one or two ASL audio routers, enabling multiple options for system redundancy. The EMS01 will operate in an All-Call hardware bypass safety mode even in the event of processor failure within the host Voice Alarm Router. This hardware bypass function also operates across whole facilities when the microphone is used in conjunction with ASL's Intellevac safety audio network. There is also a non-EN54 RJ45 Ethernet IP interface with Power over Ethernet capability³ for VoIP connections to

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ASL IP based PA/VA systems. All interconnect cabling and the microphone capsule is continuously monitored for open and short circuits.

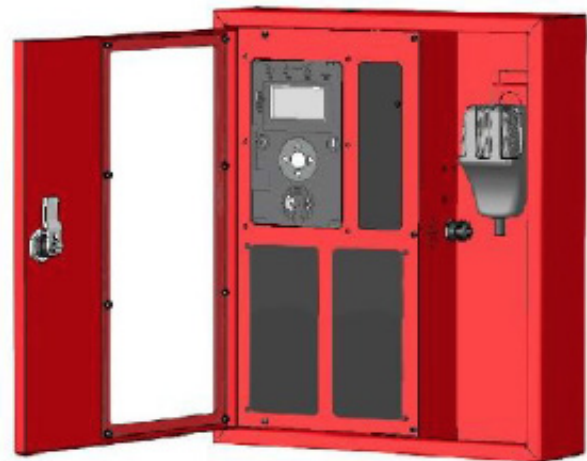
Top, bottom and rear cable entry points are provided by means of 'knock-outs' in the enclosure, while the field connections are provided by means of a set of terminals on the inside rear panel of the back box.

The EMS01 is compatible with the whole range of ASL Voice Alarm and Public Address systems⁴, and is designed to comply with EN54-16, ISO 7240-16 and BS5839-8. Versions with multiple PA/VA zone select buttons are also available for applications which require this.

EMS Microphone Options

The base product of the EMS microphone range is the All-Call EMS01, as described in this Product Overview. The EMS01 can however have one or more button expansion modules added to it, to add up to fifty general purpose programmable select buttons. The product codes of these variants are EMS10, EMS20, and EMS50.

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-IP Option with IP Interface License

The EMS Microphone's built-in RJ45 Ethernet IP port is enabled with the addition of the IP interface license. Note that this interface is not EN54 compliant.

-EC Option with Eurocylinder Door Lock

The standard door lock can be replaced with a door which mounts a Eurocylinder lock. This is used for applications where improved security is required, or where a standard Eurocylinder lock is used for multiple items of equipment around a site.

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Interconnection Options

The EMS microphone range has multiple PA/VA system interfaces, with the physical interfaces formed of terminals located in the inner rear face of the back box. These provide connections as follows:

- Dual 'Router Microphone Ports'
- Analogue Microphone Audio
- RS485 Communications
- DC Power Supply
- 'Router Microphone Auxiliary Port'
- Hardware Bypass Emergency Microphone Connections for both single and dual Routers
- USB Port
- Software and Configuration Update
- Ethernet Port
- RJ45 IP Network Port with PoE
- Built-In VoIP Interfacing (with license)
- Stereo speaker output

Implementation options

Single Router Connection

The most basic connection method uses either the Router 1 or Router 2 Microphone Port connected direct to a single ASL audio router.



Single Router Connection

Connection to Dual Redundant Routers

If the EMS is used with a PA/VA system which has dual redundant 'A' and 'B' audio routers, then both the Router 1 and Router 2 Microphone Ports are used, one connected to each ASL Audio Router. In this installation the PA/VA system will continue to operate even if one of the audio routers suffers a total failure, such as a loss of power to that equipment room.



Connection to Dual Redundant Routers

Dual Redundant Connection to a Single Router

If the EMS is used with a single audio router, then both the Router 1 and Router 2 Microphone Ports can be used, in order to provide dual redundant cabling between the EMS microphone and the router. In this installation the microphone will continue to operate normally even if one of the two connection cables is cut.



Dual Redundant Connection to a Single Router

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Daisy Chain Router Connection

Multiple EMS microphones can be connected to a single VIPEDIA microphone port by 'daisy chaining' the Router 1 and Router 2 Microphone Port connectors.

This enables more microphones to be connected than there are available microphone ports on the router, although only one of the daisy chained microphones can be used at once. Note that this interconnection method is not currently EN54 compliant.

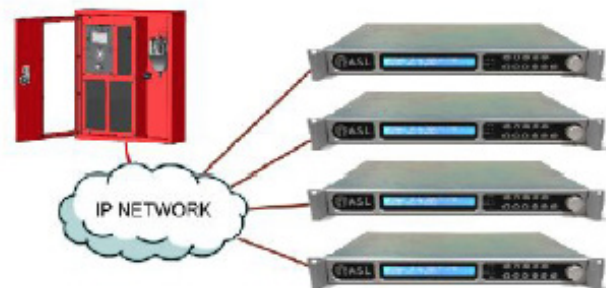


Daisy Chained Router Connection

IP Network Connection

The built-in Ethernet port enables direct connection to a site's IP Network, and enables the EMS microphone to broadcast to any or all PA zones on that network.

The PA IP network may be confined to a single building, or may be a larger network, such as one linking separate buildings across a site or large complex. Note that this interconnection method on its own is not currently sufficient for EN54 compliance.



Connection to an IP Networked PA System

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Hardware Bypass Redundant System Operation

Any of the connection methods above can have additional peace of mind added for critical Voice Alarm applications by the addition of Hardware Bypass functionality, with any of ASL's Audio Routers, and in single or dual router systems.

This uses an extra connection cable to the router, which carries the hard wired PTT and Speak Now connections which are used to provide All-Call broadcast functionality even in the event of the router CPU or DSP failing.

Multiple Connections for Redundancy

Any of the direct router connections can be combined with an IP Network connection to provide redundancy. Therefore an EMS microphone can be connected by both an IP network and local PA/VA system analogue wiring. Thus even if there was a total IP network failure the direct connection to the local PA/VA system would continue to provide local operation.

General

Standards

EN54-16, ISO 7240-16 / BS5839-8

Power Supply Inputs

Dual 18 to 48V DC

Dual Redundant Power Inputs on Router Mic. Ports
PoE on Ethernet Port

Current Consumption

Min - 98mA @ 24V DC supply

Max - 152mA @ 24V DC supply

Format / Colour

Wall mounting metal box / Red RAL3020

Door

Key Locked

Option to use Eurocylinder lock

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User Interface

Front Panel GUI

LCD Display and Buttons
All EN54-16 Mandatory Controls and Indicators
Fault Reporting & Status Display

Buttons

All Touch Sensitive

PTT

No-Click Touch Pad PTT

GUI Navigation

Touch Rotary Selector

Menu Controls

Fault Mode / Setup Mode
Option of additional Message Trigger Button

LED Indicators

EN54 and General

General Indicators

2 Indicators, PTT Touch Indication
VU Level Bargraph (5 LEDs)

EN54 Mandatory Indicators

4 LEDs
Power / Voice Alarm / System fault / Fault

LCD Display

Graphic dot matrix backlit

GUI Languages

English plus Custom Language
Custom Language stored on uSD Card

Installation Connections

Location

Internal Terminals

Direct Router Connections

For 2 Routers
Router 1 Mic. Port & Router 2 Mic. Port

Audio Out

0dBu balanced (nominal) / 66R

Control Data

EIA RS485 / 38400 baud

Hardware Bypass Connections

For 2 Routers (VIPEDIA-12 Mic. Aux Port)

Push To Talk (PTT) switch

Router 1 & Router 2

Speak Now Indicator

Router 1 & Router 2

IP Network Connection

100baseT Ethernet / RJ45
With PoE (Power over Ethernet)

USB Connection

USB Slave / 'B' Socket
(Used for Software and Config Update only)

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Maintenance Support

Microphone

Replaceable

LCD Display and Buttons

Front Panel

EN54 Access Level Control

Fault Buzzer

Fault Reporting & Status Display

Fault Acknowledgement and Clearing

USB Port

Internal

Laptop Configuration and Software Update Port

uSD Card

Internal

Custom Language Storage

Environmental

Temperature Range

Operating Temperature Range - -10°C to +55°C

Storage Temperature Range - -20°C to +55°C

Humidity Range

0% to 93% Non-condensing

Ingress Protection

IP30

Dimensions and Weight

Dimensions

352mm (H) x 344mm (W) x 95mm (D)

Mounting Holes

9mm diameter

Cable Entry Knock-Outs

20mm diameter

Weight

5 Kg

Product Part Numbers

EMS01

All Call Emergency Microphone (Analogue Interfaces)

EMS01-IP

All Call Emergency Microphone (Analogue and IP Interfaces)

Option Part Number Suffixes

-EC

Eurocylinder compatible Door Lock