EMS10 - EMS50

Product Description

· Wall Mount Fist Microphones
· 10, 20 or 50 Selection Buttons
· 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 EMS10, EMS20 and EMS50 Emergency Microphone Stations are EN54 compatible emergency microphones which provide live and pre-recorded message broadcast into user selected zones. The EMS10 provides 10 button selection capability whilst the EMS20 provides 20 buttons, and the EMS50 is formed from a 20 button EMS20 together with an additional 30 button EMX30 expansion unit. All microphones also provide EN54 compliant emergency functions and all EN54 mandatory indicators and controls.

The microphones are housed in a lockable wall-mounting box and feature 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 microphones have multiple PA/VA system interfaces and can be connected directly to either one or two ASL audio routers, enabling multiple options for system redundancy. The microphones will operate in an All-Call hardware bypass fallback 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
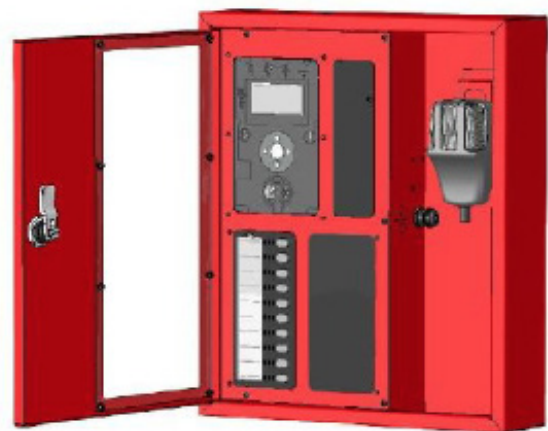
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microphones are used in conjunction with ASL's Intellevac safety audio network. There is also a non-EN54 RJ45 Ethernet IP interface with Power over Ethernet capability for VoIP connections to ASL IP based PA/VA systems. All interconnect cabling and 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.
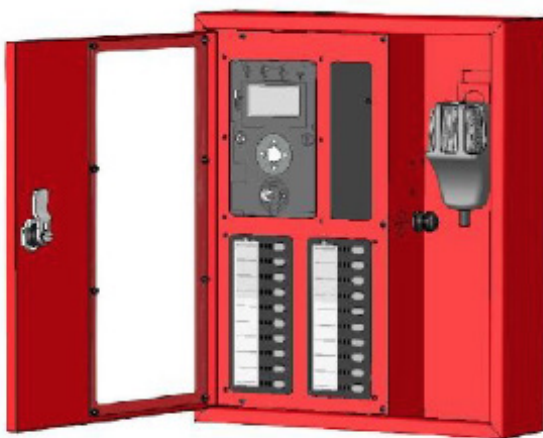
The EMS10, EMS20 and EMS50 are compatible with the whole range of ASL Voice Alarm and Public Address systems3, and are designed to comply with EN54-16, ISO 7240-16 and BS5839-8. An All-Call version is available for applications which require this.

EMS10 Emergency Microphone

EMS50 Emergency Microphone

EMS20 Emergency Microphone

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EMS10 - EMS50

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, for applications where improved security is required on the EMS door.

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)

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.

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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 (EMS10) - 252mA @ 24V DC supply
Max (EMS20) - 352mA @ 24V DC supply
Max (EMS50) - 652mA @ 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
EMS10, EMS20 - 353mm (H) x 344mm (W) x 95mm (D)
EMS50 - 600mm (H) x 344mm (W) x 95mm (D)

Mounting Holes
9mm diameter

Cable Entry Knock-Outs
20mm diameter

Weight
EMS10, EMS20 - 5 Kg
EMS50 - 6.5 Kg

Product Part Numbers

EMS10 / EMS20 / EMS50
10 / 20 / 50 button Zoneable Emergency Microphones
(Analogue Interfaces)

EMS10-IP / EMS20-IP / EMS50-IP
10 / 20 / 50 button Zoneable Emergency Microphones
(Analogue and IP Interfaces)

Option Part Number Suffixes

-EC
Eurocylinder compatible Door Lock