MPS10 - MPS50 Amplifier Assembly
Modular Paging and Emergency Microphones

Product Description

- 10, 20, 30, 40, or 50 Selection Buttons
- EN54 Compliant Indicators and Controls
- Live, Store-and-Forward, and Recorded Broadcasts
- Silent 'No-Click' PTT Button
- Speech Level 'VU' Bargraph
- Loudspeaker with PA Zone Listen-In Function
- Background Music Input and Control
- Fully Monitored, with EN54 Fault List Display
- Wall Mount, Headset and Fist Microphone Options
- PA Zone Selection on Buttons or Graphic LCD Display
- Voice over IP, with PoE RJ45 Ethernet Port (With IP License)
- Dual Redundant Audio Outputs for A & B Routers plus Hardware Bypass Fallbackbracket.

The MPS10, MPS20, MPS30, MPS40, and MPS50 are powerful and flexible paging microphones which can provide live, store-and-forward, and recorded message broadcast into user selected zones, and also provide EN54 compliant emergency functions and all EN54 mandatory indicators and controls.

The units each consist of a MPS01 sloping desk console with a flexible gooseneck paging microphone, graphic LCD display, and silent operation 'Touch to Talk' touch pad PTT button, together with one or more additional MPX10 zone selection and control button modules. The number of additional buttons depends on the model, with the MPS10 having ten extra Select buttons, and the MPS50 having fifty. PA zone selection is provided by the Select buttons or by using the rotary selector and graphic LCD display. There is also a VU bargraph which displays the microphone signal level.

The MPS range has multiple system interfaces, and can be

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connected directly to either one or two ASL audio routers.

There is also an RJ45 Ethernet IP interface with Power over Ethernet1 for connection to ASL IP PA/VA systems, and for use with VIPA2 enabled PC workstations. The microphones will also operate in a hardware bypass fallback mode in the event of failure within a host router3. All interconnect cabling and the microphone capsule is continuously monitored.
As well as the main microphone gooseneck, there are 3.5mm jack plug connections for an auxiliary audio input, such as for background music, and for connection of a microphone headset. A general purpose local contact input and output enables use with PTT foot switches and external speak now indicators.

The units can be fitted with a uSD card to hold user recorded or pre-recorded audio messages, and custom user chimes, and can be used to replay these messages over the PA system. A speaker is provided on the underside of the console, and this enables preview of the locally stored DVA messages, and also enables remote PA zones to be listened to. All cable entries are under a protective strain relieving cover on the underside of the microphone, and all interconnect cables and the gooseneck microphone are replaceable to simplify maintenance. As well as a single button variant, a fist microphone variant is available, as is a dual purpose wall or desk mounting bracket.

MPS Microphone options
The base product of the MPS microphone range is the 'single button' MPS01. This Product Overview describes the extended variants in the range. These units have up to fifty general purpose programmable Select buttons, each identified by means of a label which is protected under a clip-in cover. See the separate MPS01 Product Overview for details of the 'single button' unit.

Microphone Mounting Bracket

The MPS microphone range can be used freestanding on a desk as standard, or can be permanently mounted with the optional mounting bracket.

This bracket gives options as follows:

- Wall mounting - Flat on a wall
- Built onto consoles
- Fixed on desks - At a slight slope

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IP Interface License

The MPS Microphone's built-in RJ45 Ethernet IP port is enabled with the addition of the IP interface license.

Fist Microphone

The standard gooseneck can be replaced with a fist microphone if required. This is particularly useful if the microphone is console or wall mounted.

Interconnection options
The MPS microphone range has multiple PA/VA system interfaces, with the main connectors in a bay located under the cable strain relief cover on the underside of the microphone, as follows:

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

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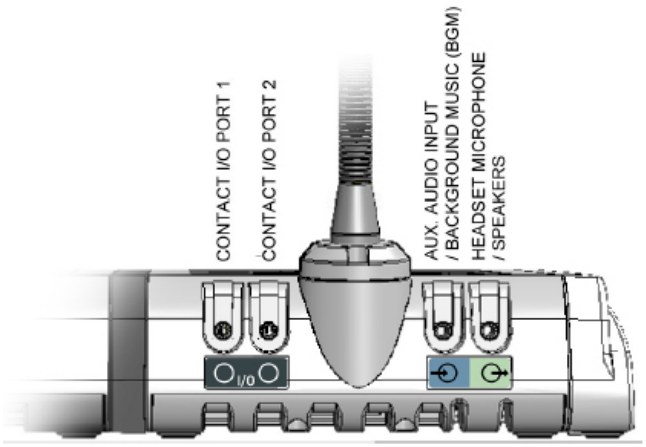
User connections
The MPS Microphones have a row of 3.5mm jack sockets on the rear, designed for user connections.

The signals on these are as follows:

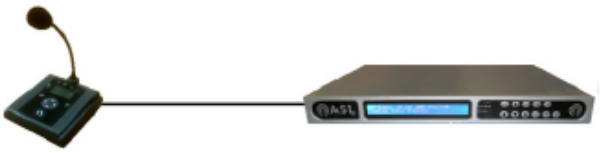
- Contact I/O ports 1 and 2
- Contact output
- Contact input
- 5V power (On one socket)
- Auxiliary Audio Input
- 'Stereo' to mono input
- Suitable for music player use
- Headset / Speaker Audio Output
- Microphone input
- Stereo speaker output



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

Dual Redundant Connection (Single Router)

If the MPS 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 MPS 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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Connection to Dual Redundant Routers

If the MPS 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.

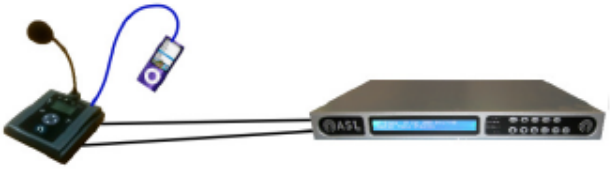
In this installation the PA/VA system will continue to operate even if one of the audio routers suffers a total failure, such as a loss of power to that equipment room.

Connection to Dual Redundant Routers

Dual Connection with BGM Music Feed

If the MPS is used with a local music source connected into its rear mounted 3.5mm audio input socket, then both the Router 1 and Router 2 Microphone Ports can be used, one for the music feed and one for the microphone.

This will provide simultaneous operation of the microphone to make a broadcast to some PA zones while the music feed continues to be played into other PA zones.



Dual Connection with BGM Music Feed

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, together 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.

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Dual Connection with Scheduled DVA Message Playback

If the MPS microphone's uSD card DVA audio message store is used together with the built-in automatic message broadcast scheduler, then both the Router 1 and Router 2 Microphone Ports can be used, one for the automated message playback and one for the microphone.

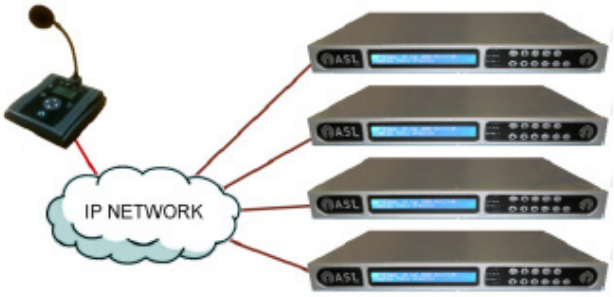
This will provide simultaneous operation of the microphone to make a broadcast to some PA zones while a recorded DVA message is being played into other PA zones.failure, such as a loss of power to that equipment room.

Dual Conections for Automated DVA Playback

IP Network Connection

The built-in Ethernet port enables direct connection to a site's IP Network, and enables the MPS microphone to broadcast to any or all PA zones on that network. The MPS has the capability to stream two channels of audio out to the network and one Listen-In channel of audio in from the network simultaneously, which gives the ability to stream live speech and music or live speech and recorded audio DVAs, to give the same functionality as when using analogue wiring.

The PA/ IP network may be confined to a single site, or may be a wide area network linking many sites, such as stations along a railway line or separate buildings across a large complex.



Connection to an IP Networked PA System

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Daisy Chain Router Connection

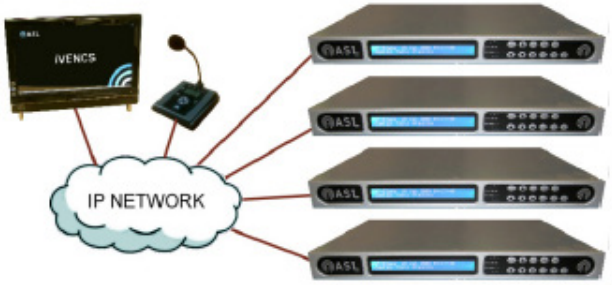
Multiple MPS microphones can be connected to a single VIPEDIA microphone port by 'daisy chaining' the Router 1 and Router 2 Microphone Port connectors. This enables more microphones to be connected than there are available microphone ports on the router, although only one of the daisy chained microphones can be used at once.

Daisy Chained Router Connection

Use with a Control System Workstation

An IP connected MPS microphone can work as a workstation microphone with a VIPA equipped ASL or third party IP PA Control System.

Broadcasts from the MPS microphone will normally be controlled via the workstation GUI; however the MPS microphone will be able to operate independently to broadcast to the destination PA zones as a backup should the PA workstation fail for any reason.



Use with a PA Workstation

Multiple Connections for Redundancy

Any of the direct router connections can be combined with an IP Network connection to provide redundancy. Therefore a MPS microphone can be connected by both IP and analogue wiring. If there was a total IP network failure the MPS would still work locally via its direct connection to the local PA/VA system.

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General

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 (MPS01 Base Unit) - 152mA @ 24V DC supply
Max (Extra per ten button module) - 100mA @ 24V DC

Chimes
1, 2 and 3 Note Chimes, plus User Chime
uSD Card User Wav files or via ASL Router

Format / Colour
Sloping desk console / Black and grey

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

LED Indicators
EN54 and General
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

Emergency Mode Select
Side Panel Keyswitch
Raises priority to Emergency Level
Enables EN54 LED Operation

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

Microphone
Replaceable / Alternate Types Available
Gooseneck or Fist Mic.

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Button Modules

Buttons
Ten Buttons per MPX10 Add-On Module

Button Functions
PA Zone Select / Listen-In Select / DVA Routing / Music Control / Routing Control / Others

Button Label
Printed Label, Under Protective Clip-In Window

Button LEDs
Three LEDs per Select Button

Paging Mode
Green = 'Select' / Yellow = 'Listen-In' / Red = 'Busy'

EN54 Emergency Mode
Green = 'Select' / Yellow = 'Fault' / Red = 'Voice Alarm

Audio Sources and IP Connectivity

Audio Sources
Mic. / Aux. Audio / Recorded DVAs

Microphone
Live Speech Input

Mic. Types
Gooseneck or Fist Mic (Factory Fit options)

Modes
Live / Store and Forward

IP Network
Two simultaneous channels out , plus one in Mic. / Aux. Audio / Recorded DVAs s

Aux. Input Port
Background Music (BGM) (Or Auxiliary Audio Source)

Recorded DVA Message Storage
uSD Card Storage
Routine 'Security' Messages
Custom 'User' Chimes

Environmental

Temperature Range
–10°C to +55°C (Operating and Storage)

Humidity Range
0% to 93% Non-condensing

Ingress Protection
IP30

Installation Connections

Position
MPS Connection Bay on Underside

Direct Router Connections
2 ports / RJ45
Router 1 Mic. Port & Router 2 Mic. Port

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Audio Out
0dBu balanced (nominal) / 66R

Control Data
EIA RS485 / 38400 baud

'Listen In' Audio Input
0 dBu balanced (nominal)

Hardware Bypass Connections
1 port / RJ45
Mic. Aux Port

Push To Talk (PTT) switch
Router 1 & Router 2

Speak Now Indicator
Router 1 & Router 2

Listen-In Audio Input
0dBu balanced (nominal)
On the MIC.AUX Port

IP Network Connection
100baseT Ethernet / RJ45
With PoE (Power over Ethernet)

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

User Connections

Position
MPS Rear

Auxiliary Audio Input
3.5mm Jack Socket
Local Background Music Input
(Stereo Input, mixed to Mono)

Headset Microphone Input
3.5mm Jack Socket (Shared with Speaker Output)

Local Contact Input / Output
2 off 3.5mm Jack Sockets
Input and output commoned onto both sockets

Contact Input
1 External PTT Switch Input
Commoned onto both sockets

Contact Output
1 External PTT Indicator Output
Commoned onto both sockets
Open Collector

Contact Output Power
5V (On one socket only)

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Maintenance Support

Microphone
Replaceable

Installation Cables
Replaceable

LCD Display and Buttons
Front Panel
System Configuration, Fault Reporting & Status Display

USB Port
in Underside Connector Bay
Laptop Configuration and Software Update Port

uSD Card
In Underside Connector Bay
DVA Message / Custom Language / Custom Chime

Product Part Numbers

MPS01 / MPS10 / MPS20 / MPS30 / MPS40 / MPS50
Paging and Emergency Microphones

Option Part Number Suffixes

Microphone Type
00 - None
G0 - Standard Gooseneck Microphone
F0 - Standard Fist Microphone

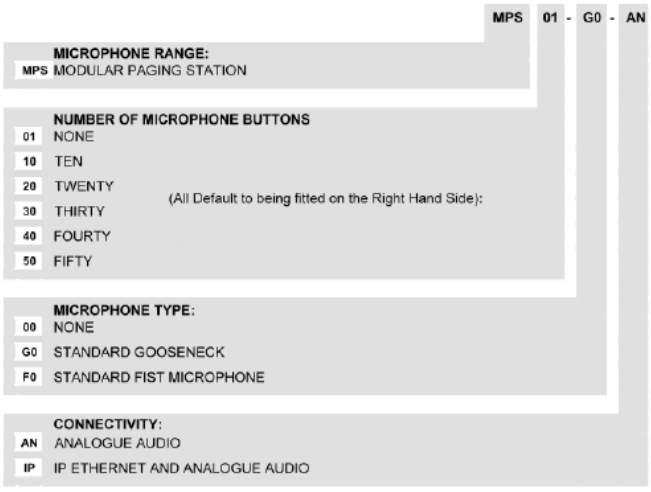
Connectivity
AN - Analogue Audio Connectivity
IP - IP Ethernet License as well as Analogue Audio Connectivity

Dimensions and Weight

Dimensions (excluding gooseneck)
MPS10 - 52mm (H) x 288mm (W) x 200mm (D)
MPS20, MPS30; MPS40; MPS50 - add 110mm Width for every 10 Buttons

Standard Gooseneck length
300mm

Weight
MPS10 - 1.2 Kg
MPS20, MPS30; MPS40; MPS50 - Add 0.2kg for every 10 Buttons



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Accessory Part Numbers

MPS10+MB
Mounting Bracket for MPS10 / 20 / 30 / 40 / 50 Microphones

Functions and Compatibility

The MPS range is compatible with the whole range of Cameo Systems Voice Alarm and Public Address systems, and is designed to comply with EN54-16, ISO 7240-16 and BS5839-8.

However the functionality which is available in any one installation depends on the connections used and on the other equipment used in that installation.

Please note that not all of the functions described in this Product Overview may be available at the current time.

Please contact Cameo Systems to confirm current availability of any particular product features.

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