

# MPS01

## Paging and Emergency Microphone

- EN54 Compliant Indicators and Controls
- Live, Store-and-Forward, and Recorded Message Broadcasts
- Silent 'No-Click' PTT Button
- Speech Level 'VU' Bargraph
- PA Zone Selection on Graphic LCD Display
- 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
- Voice over IP, with PoE RJ45 Ethernet Port (With IP License)
- Dual Redundant Audio Outputs for A & B Routers plus Hardware Bypass Fallback



The MPS01 Modular Paging and Emergency Microphone is a powerful and flexible paging microphone which can provide live, store-and-forward, and recorded message broadcast into user selected zones, and also provides EN54 compliant emergency functions and all EN54 mandatory indicators and controls.

The unit consists of a sloping desk console with a flexible gooseneck paging microphone, graphic LCD display, silent operation 'Touch to Talk' touch pad PTT button, and a rotary selector touch control. PA zone selection is provided using the rotary selector and graphic LCD display<sup>1</sup>. There is also a VU bargraph which displays the microphone signal level.

The MPS01 has multiple PA/VA system interfaces. It can be connected directly to either one or two ASL audio routers, enabling multiple options for providing system redundancy. There is also an RJ45 Ethernet IP interface with Power over Ethernet capability<sup>2</sup> for VoIP connections to ASL IP based PA/VA systems, and which enables the use of the MPS01 together with ASL or third party VIPA<sup>3</sup> enabled PC workstations. The MPS01 will also operate in an All-Call hardware bypass mode in the event of processor failure within a host Voice Alarm router<sup>4</sup>. All interconnect cabling and the microphone capsule is continuously monitored for open and short circuits.

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 unit 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 expansion button modules, a fist microphone variant is available, as is a dual purpose wall or desk mounting bracket.

1 If physical zone buttons are required then the MPS01 can be expanded by the addition of up to five MPX10 ten button Microphone Expansion Modules. See the MPS10 – MPS50 Product Overview for Details.  
2 IP Interface functionality is enabled for the MPS01-IP variant, with an additional IP license.  
3 ASL's VIPA PA/VA over IP technology is used by all ASL iVENCs Control Systems and PA workstations, and by selected third party manufacturers also.  
4 Hardware bypass is provided on ASL VAR and VIPEDIA Router inputs 1 and 2. If connected to any other router input ports then the MPS01 will operate normally, but without the option of this function.

### Product Overview

## MPS MICROPHONE OPTIONS

The base product of the MPS microphone range is the 'single button' MPS01, as described in this Product Overview. The MPS01 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 MPS10, 20, 30, 40 or MPS50 as appropriate.

See the separate MPS10 – MPS50 Product Overview for details of these units.

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### Microphone Mounting Bracket

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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



**Wall Mounted MPS Microphone**

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### IP Interface License

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

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### Fist Microphone

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

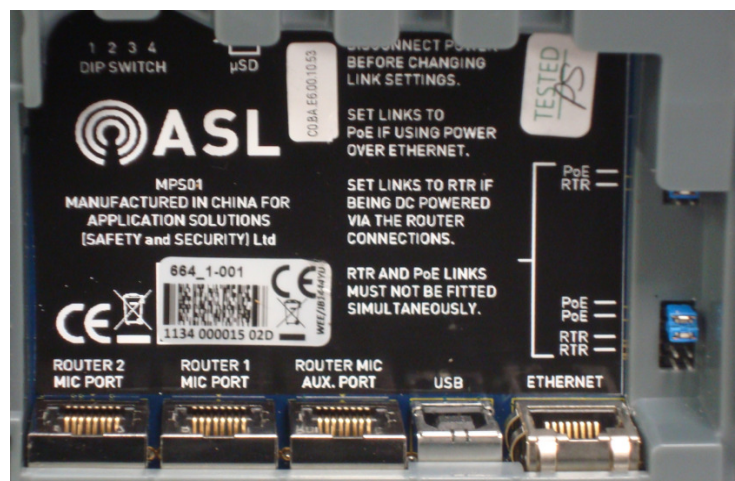


**MPS01 fitted with a Fist Microphone**

## INTERCONNECTION OPTIONS

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

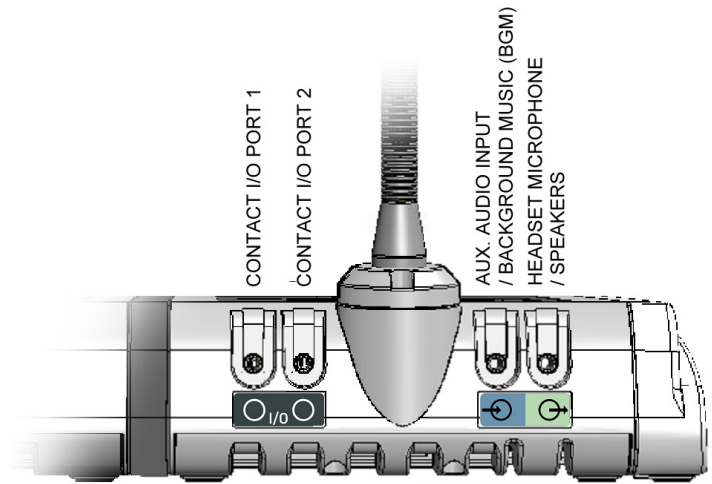
- Dual 'Router Microphone Ports'
  - Analogue Microphone Audio
  - RS485 Communications
  - DC Power Supply
- 'Router Microphone Auxiliary Port'
  - Hardware Bypass Emergency Microphone Connections for dual Routers
  - Analogue Listen In Audio Input
- USB Port
  - Software and Configuration Update
-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



## USER CONNECTIONS

The MPS01 has a row of 3.5mm jack sockets on the rear, designed for user connections. The signals on these are as follows:

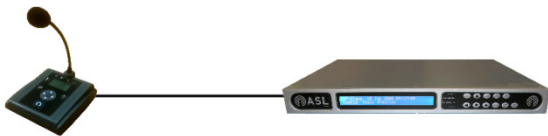
- Contact I/O ports 1 and 2
  - Contact output
  - Contact input
  - 5V power (On one socket)
- Auxiliary Audio Input
  - 'Stereo' to mono input
  - Suitable for music player use
- Headset / Speaker Audio Output
  - Microphone input
  - Stereo speaker output



## IMPLEMENTATION OPTIONS

### Single Router Connection<sup>5</sup>

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

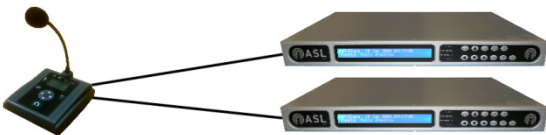


Single Router Connection

### Connection to Dual Redundant Routers

If the 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.

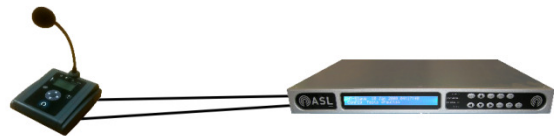


Connection to Dual Redundant Routers

### Dual Redundant Connection to a 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.

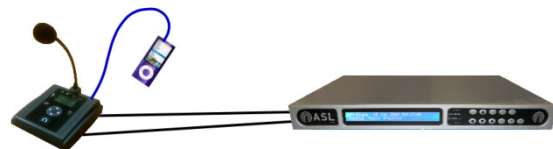


Dual Redundant Connection to a Single Router

### Dual Connection with BGM Music Feed<sup>6</sup>

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

<sup>5</sup> Single connections to any router can be used in installations where the DVA message scheduler is to be used and / or the auxiliary audio input is used for Music broadcast, but only one audio source will play at once. This will operate on a priority basis with the live microphone speech at the highest priority.

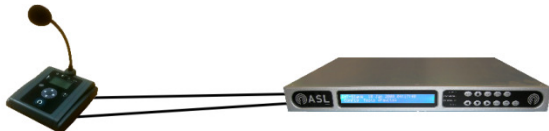
<sup>6</sup> Music should only be played in public areas under the terms of an appropriate broadcast license.

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### Dual Connection with Scheduled DVA Message Playback<sup>7</sup>

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.



**Dual Connections for Automated DVA Playback**

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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, 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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### 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.



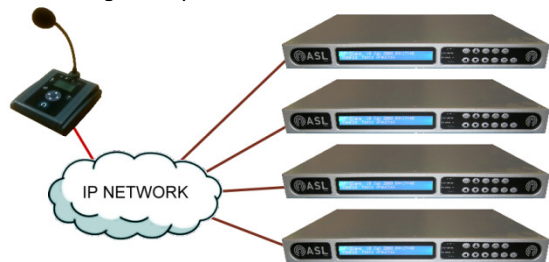
**Daisy Chained Router Connection**

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### IP Network Connection<sup>8</sup>

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.



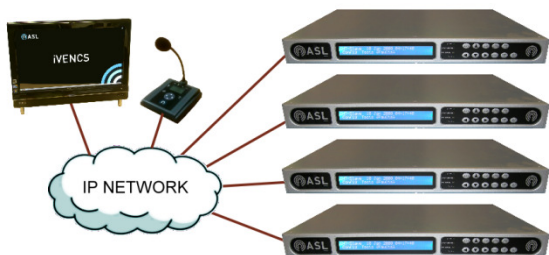
**Connection to an IP Networked PA System**

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### 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**

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### 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 a wide area IP network and local site 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 building operation.

<sup>7</sup> The DVA message scheduler can be used as well as using the aux music nut for Music broadcast, but the automated announcements will be controlled on a priority basis and will not be made while the microphone is being used.

<sup>8</sup> The IP Networking license is required for a MPS Microphone in order to enable the IP Networking interface..

## SPECIFICATION

### 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.....	152mA @ 24V DC supply
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
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
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.

### 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 .....	
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

### Installation Connections

Position .....	MPS Connection Bay on Underside
Direct Router Connections.....	2 ports / RJ45 Router 1 Mic. Port & Router 2 Mic. Port
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 Provided on one socket only

### Maintenance Support

Microphone .....	Replaceable
Installation Cables.....	Replaceable
LCD Display and Buttons .....	Front Panel EN54 Access Level Control Fault Reporting & Status Display Initial System Setup Parameters Audio Monitoring Built-In Audio test tones Fault Buzzer Fault Acknowledgement and Clearing
USB Port.....	In Underside Connector Bay Laptop Configuration and Software Update Port
uSD Card .....	In Underside Connector Bay DVA Message Storage Custom Language Storage Custom 'User' Chime Storage

### Dimensions and Weight

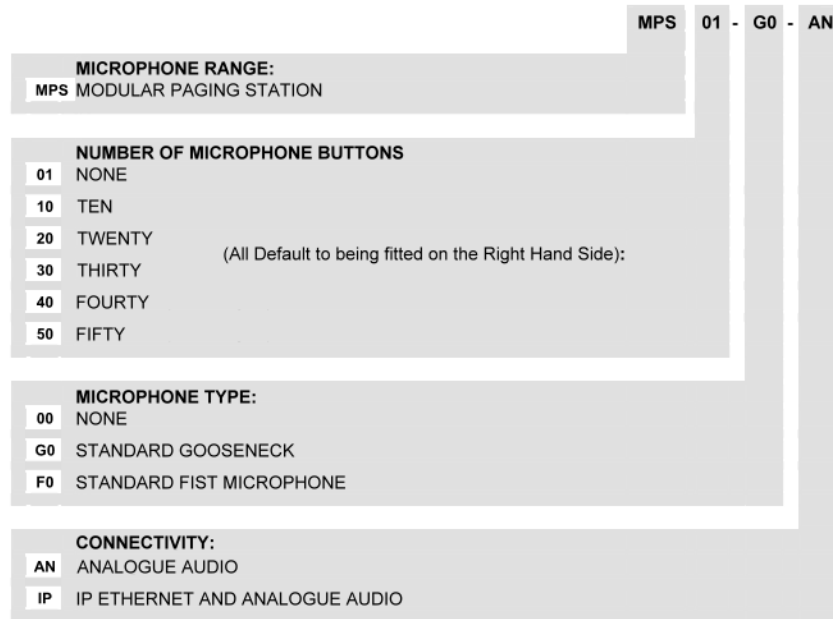
Dimensions (H x W x D) .....	52mm x 178mm x 200mm (Excluding gooseneck)
Standard Gooseneck length .....	300mm
Weight.....	1kg

**PRODUCT PART NUMBERS**

MPS01 ..... Paging and Emergency Microphone

**OPTION PART NUMBER SUFFIXES**

Microphone Type ..... None  
 00 ..... None  
 G0 ..... Standard Gooseneck Microphone  
 F0 ..... Standard Fist Microphone  
 Connectivity ..... Analogue Audio Connectivity  
 AN ..... Analogue Audio Connectivity  
 IP ..... IP Ethernet License as well as Analogue Audio Connectivity



**ACCESSORY PART NUMBERS**

MPS01MB ..... Mounting Bracket for MPS01 Microphone

**Functions and Compatibility**

The MPS01 is compatible with the whole range of ASL Voice Alarm and Public Address systems<sup>9</sup>, 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 ASL to confirm current availability of any particular product features.

9 The MPS01 EN54 fault display functionality is supported by all ASL VIPEDIA-12 routers, and by the following ASL VAR Router software versions: VAR4/12/20 V6.1 or later ; VAR8/DAU V3.1 or later ; VAR8-ACU V3.1 or later.

**CE** This equipment is designed and manufactured to conform to the following EC standards:  
 EMC: EN55103-1/E1, EN55103-2/E5, EN50121-4, ENV50204  
 Safety: EN60065

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