



mobile telephone



GS-MPI005HD MKII
Broadcaster's Mobile Phone

Highlights

- HD Voice
7kHz Bandwidth
- MKII
Fully Updated
Re-Design
- Dante®/ AES67
Option
- Colour
Touchscreen
- Handset
Interface For Call
Screening
- GSM
UMTS (3G)
LTE (4G)

Overview

Glen sound invented the Broadcaster's mobile phone and our GS-MPI005 and GS-MPI005HD mobile phone racks have been hugely popular with broadcasters and can be found in daily use in outside broadcast trucks around the World.

The completely updated GS-MPI005HD MKII is a mains powered 1RU subrack that can be fitted with up to two mobile phones featuring professional audio interfaces for interfacing broadcast audio equipment to cell phone networks.

On the surface the new GS-MPI005HD MKII looks different as it has touch screen colour displays for each phone module fitted. A traditional telephone handset interface is also now provided to allow an operator to communicate off air before handing the call over to broadcast. The handset interface can also dial and answer calls.

No new modern piece of audio broadcast equipment is complete without an AoIP solution so the new GS-MPI005HD MKII has an optional Dante®/ AES67 card.

Of course the crystal clear sound and audio inputs & outputs that are interference free of cell phone noise that made the original units so popular also feature in this new design.





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Advantages of HD Voice

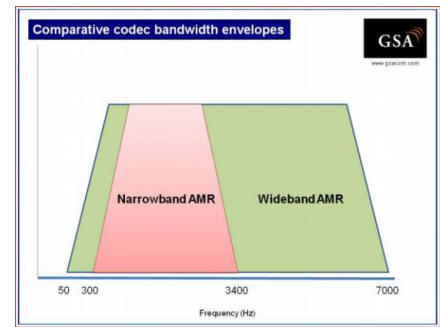
- **Glensound HD Voice - 7kHz Audio Bandwidth**

Glensound HD Voice is an automatic feature available around the world on compatible mobile networks using 4G LTE or 3G UMTS. Connecting two Glensound HD Voice broadcasters mobile phones in the same country, across a compatible 4G LTE or 3G UMTS network, will give a clear 7kHz of audio bandwidth.

- **HD Voice Is AMR-WB (Adaptive Multi Rate Wide Band)**

Also known as G.722.2. This is the algorithm more commonly known as HD Voice. It offers significant advantages for broadcasters:

- Doubles voice bandwidth over 2G GSM to 50-7000Hz (2G narrow band speech codec is 300-3400Hz)
- 12.65 kbit/s or higher coding bit-rates provide high quality wideband audio
- Gives a better lower frequency response, down to 50Hz (2G is 300 Hz), for more natural sounding voices



- **Glensound HD Voice Does Not Require The Data Network**

With HD Voice, the GS-MPI005HD MKII connects as a voice call, not a data call.

- Bandwidth is consistent once connected. With data connections, bandwidth varies during a connection, but on a HD Voice call it does not. Once you are connected your call quality will remain consistent.
- No extra call charges. As the network sees the connection as a voice call, there are no extra charges and no data usage as part of a data charging package.
- The GS-MPI005HD MKII will still operate at 7 kHz HD Voice even in busy locations where there is little available data - HD Voice doesn't need data!



- **Configurable To Operate On 2G GSM, 3G UMTS or 4G LTE**

Calls can be locked to 2G, or 3G only with any calls made on HD Voice automatically dropping down to 2G when moving outside a 3G area without disconnecting the call. The GS-MPI005HD MKII also operates as a standard 2G mobile phone, and with advances in performance and noise reduction capabilities found on the unit, improvements in call quality can still be heard.

- **Accommodates A Broader Range Of Audio Frequencies**

Glensound HD Voice can accommodate a wider range of audio frequencies thus improving the overall call quality. This will aid ultimate clarity in noisy environments with reduced background noise from the background noise suppressor.

- **A Cost Effective Upgrade**

Glensound HD Voice is one of the most cost effective upgrades that can be made to improve audio quality using mobile phones. This makes the GS-MPI005HD MKII perfect as a remote live reporting or talkback tool.

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New Features

- All New MKII Broadcaster's Mobile Phone**
 The all new GS-MPI005HD MKII is a completely new modern design with extra features and functionality to enhance and improve the much loved original GS-MPI005HD. It however keeps the inherent crystal clear mobile phone audio and interference free circuits that made the original so popular with so many broadcasters.
- Touch Screen Display**
 A front panel touchscreen display is provided for each mobile phone fitted. Each touchscreen allows the operator to make and receive calls, transfer the call between the broadcast circuits and telephone handset and a detailed setup menu is also accessible via the touchscreen.
- Telephone Handset Interface**
 For flexibility an optional traditional telephone handset can be connected to the GS-MPI005HD MKII. For simplicity of use one handset is used for each phone module fitted. The audio to/ from the handset is separate to the audio to/ from the broadcast outputs and an operator can make or answer a call using the handset and then transfer (divert) this call to the broadcast circuits. If a call is currently being routed to the broadcast circuits then it can be transferred to the handset.
- Optional Dante®/ AES67 Network Audio Interface**
 As many broadcaster's have already adopted Dante® (and some AES67) as their network audio infrastructure of choice it made sense to future proof the GS-MPI005HD MKII by allowing an optional Dante®/ AES67 module to be fitted to allow full AoIP connectivity of both the broadcast and off air 'handset' audio circuits.



- Assignable GPIO**
 Each phone has 5 loops for connection to external equipment. These can be set as either inputs or outputs. The inputs can be used for things such as Answering/ Ending an incoming call, Turning the sounder off, Diverting the call between broadcast and handset and the outputs can be set to indicate an Incoming Call or to show when a call is in progress.



- Diversity Antennas**
 The GS-MPI005HD MKII is fitted with twin diversity antennas which provide improved signal reception and range when operating on 4G LTE networks.

- Web Page Remote Control**
 Each fitted phone has its own Ethernet port for providing a web page for remote control. Please note that the web page is not expected to be released until summer 2019. Units shipped prior to this point will be fully updatable to include this feature when it is released.

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Features

- One or Two Phones in a Subrack**
 The GS-MPI005HD MKII can be purchased with as a single phone unit or twin phone unit. If purchased as a single then it can be updated at a later stage to be come a two phone unit.
- Unlocked Mobile Phone**
 The GS-MPI005HD MKII is an unlocked mobile phone and can be used on any network with any SIM card.
- Front Panel SIM Card Slots**
 For ease of change, SIM card slots for each phone are located on the front panel, these like their predecessors, are set such, that when fitted the SIM card is flush to the front panel and must be pushed in from this position to change it. This positioning makes it im possible to knock the SIM card by accident.
- Audio Level Controls & Meters**
 The touchscreen display menu system allows the line level audio input & output signals to be adjusted to match the connected equipment. When in this mode simple audio meters are also provided to indicate the current input/ output levels.
- Audio Compressors**
 Being a digital audio circuit it is very important not to present the cell phone network with a signal greater than full scale, therefore a compressor limiter circuit is fitted to ensure that you have great sounding outgoing audio circuits. The same much respected compressor characteristics used on previous versions of the GS-MPI005 are used on this new MKII version.



- Headphone Output**
 For easy monitoring of your audio signals a 6.35mm stereo headphone socket is fitted to the front panel for each phone. In the menu system it is possible to setup a mix of any of the units' phone's audio sources to appear in the headphone output mix.
- SMA Antenna Connectors**
 The SMA sized antenna connector used on the original GS-MPI005 have proved reliable and convenient in allowing customers to change the antennas to a type that suits their installation. Therefore the new MKII unit continues to use this connector, however as there are now diversity antenna outputs there are 2 SMA connectors for each phone module.
- Balanced Line Level Audio Inputs/ Outputs**
 Each phone has its own XLR balanced audio inputs and outputs. These are the 'Broadcast' audio circuits and are completely free of any mobile phone interference noise.
- Mains Powered 19" 1RU Subrack**
 A wide input range (100 - 240 VAC) switch mode power supply is fitted terminated in an IEC plug with an internal fuse for Worlwide compatibility. The GS-MPI005HD MKII is a 19" wide 1RU high subrack.

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Touchscreen Menu

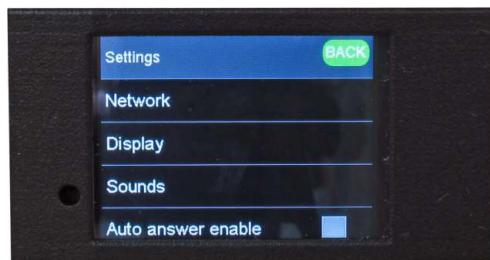
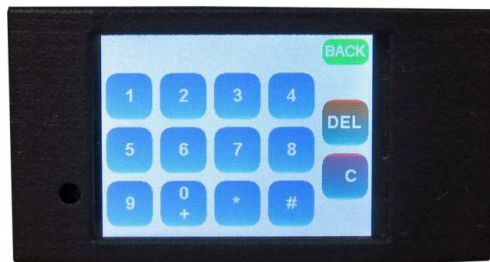
New Touch Screens & Menu System

The GS-MPI005HD MKII has a full colour touchscreen for each fitted phone module. These colour touchscreens provide the interface for both day to day control, such as making calls and transferring calls between the handset and broadcast circuits.

The touchscreens also provide access to an extensive menu system designed to provide the broadcaster with the functionality to set the phone up to their own desired way of operation.

A selection of the items that the menu system allows you to change are detailed below:

- Contact list
- Call history
- Network settings (2G, 3G, 4G on/ off)
- Setup audio levels to/ from different circuits
 - Setup GPIO
 - Set autoanswer on/off
- Transfer/ Divert the call between broadcast/ handset
 - Set display settings (brightness)
 - Enter SIM card pin
 - Change sounds
- See details such as own number & firmware version



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Specifications



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Specification

AUDIO

| | |
|--------------------------------------|---|
| Analogue Input Type | Electronically balanced (can be wired unbalanced) |
| Analogue Input Impedance | >20kOhms |
| Analogue Input Connectors | Neutrik XLRs |
| Analogue Input Line Up | Line level (0dBu) |
| Analogue Input Gain Range | +10/ -30 dB |
| Maximum Input Level | +17dB |
| Analogue Output type | Electronically balanced (Can be wired unbalanced) |
| Analogue Output Connectors | Neutrik XLRs |
| Analogue Output Impedance | +<50 Ohms |
| Analogue Output Gain Range | +10/ -30 dB |
| Maximum Analogue Output Level | +17.4dBu |
| Headphone Impedance | 100 - 1000 Ohms |
| Maximum Headphone Level | +17dBu into 600 Ohms |

SIZE & POWER

| | |
|--------------------------|--|
| Dimensions | 19" wide 1RU high 164mm deep (chassis) |
| Weight | 1560g (2 Channel with Dante® card) |
| Mains Input | 100 to 240VAC 50/60Hz |
| Power Consumption | <10 Watts (2 Channel with Dante® card) |
| Shipping Weight | 4Kg |
| Shipping Carton | Export quality cardboard carton 62 x 41x 12 cms |

INCLUDED ITEMS

| | |
|----------------------|---|
| T Bar Antenna | 2 x 2.5M per phone fitted |
| Handbook | A4 user guide (download also available) |
| Mains Cable | 1 x IEC Mains cable (UK & Europe Only) |

OPTIONAL ITEMS

| | |
|--------------------------------|--|
| Magnetic Mount Antenna | Magnetic Mount ariel with 2.5M cable |
| Network Audio Interface | Dante®/ AES67 AoIP module (4 audio circuits) |
| Telephone handset | Traditional analogue telephone handset (white) 1 required per phone |

EU PHONE FREQUENCIES

| | |
|------------------|--|
| LTE (4G) | Bands 20, 8, 3, 7 & 1 800, 900, 1800, 2600 & 2100 MHz |
| UMTS (3G) | Bands 8, 3 & 1 900, 1800 & 2100 MHz |
| GSM (2G) | Bands 8 & 3 900 & 1800 MHz |

US PHONE FREQUENCIES

| | |
|------------------|---|
| LTE (4G) | Bands 17, 5, 4 & 2 700, 850, 1700 & 1900 MHz |
| UMTS (3G) | Bands 5, 4 & 2 850, 1700 & 1900 MHz |
| GSM (2G) | Bands 5, 8, 3 & 2 850, 900, 1800 & 1900 MHz |

PHONE MODULE GENERAL

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|-----------------------------|--|
| VOICE SUPPORT | HR, FR, EFR, AMR narrowband & AWR wideband (HD Voice) LTE (Via VoLTE (Voice over LTE)) and CSFB (Circuit-switched fallback) |
| Maximum Output Power | 2 Watts |
| Approvals | R&TTE, GCF, CE, FCC, IC, PTCRB, UL AT&T and Verizon operator approvals |
| Antenna Type | Diversity |
| Antenna Connectors | SMA (2 per phone module) |

NETWORK AUDIO (Optional)

| | |
|-----------------------------------|---|
| Network Protocol | Dante® (DDM certified)/ AES67 Compliant |
| Full Scale | 0dBu = -18dBFS |
| Sample Frequency | 48kHz |
| Resolution | 24 Bit |
| Network Interface Type | 100 Mbps Ethernet |
| Network Interface Physical | 1 x RJ45 copper |

ORDER CODES

| | |
|------------------------------|--|
| GS-MPI005HD/1 MKII EU | Rack with 1 x EU frequency module fitted |
| GS-MPI005HD/2 MKII EU | Rack with 2 x EU frequency module fitted |
| GS-MPI005HD/1 MKII US | Rack with 1 x US frequency module fitted |
| GS-MPI005HD/2 MKII US | Rack with 2 x US frequency module fitted |
| GS-MPI005HD MKII NC | Optional Dante®/AES67 module |
| GS-MPI005HD MKII TH | Optional Telephone handset (1 required for each phone module fitted) |

E&OE