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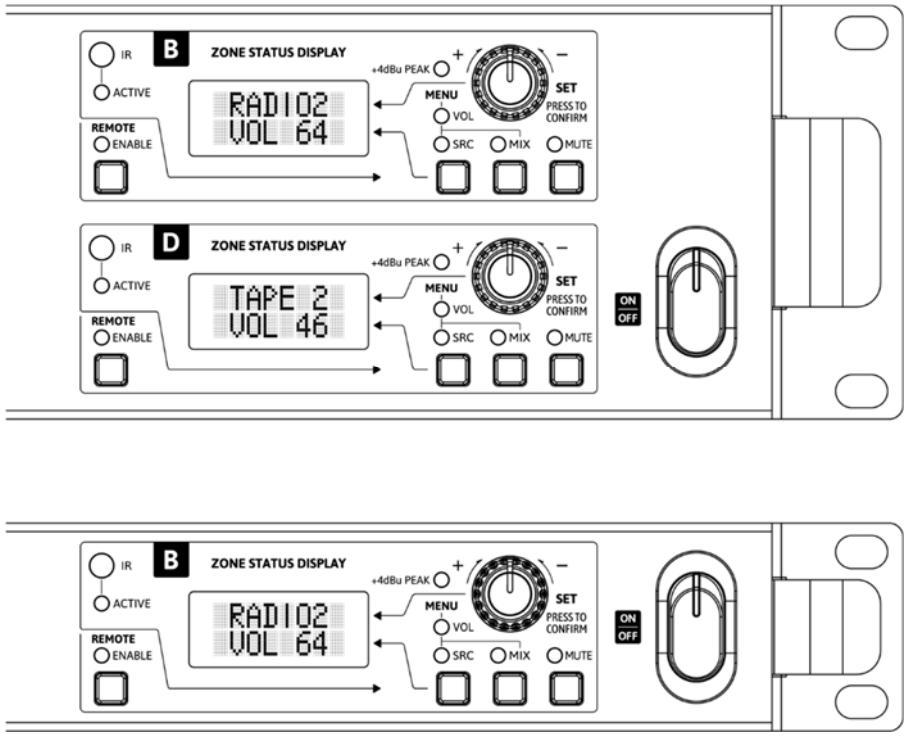


INTUGRID HMA7x

Multi-Zone Audio Router Model HMA72/74

RevA

Welcome

Thank you for choosing INTUSONIC for your sound system. To make sure that this product meets your expectations and provides long-term, reliable performance, please read and follow this instruction manual carefully. Note that models HMA72 and HMA74 only differ in the amount of output zones, but are operated in the exact same way. For the purpose of simplicity, this user manual refers to the operation of the HMA72 model.

Manual language

UK This user manual is written in English. For other languages, please use an auto-translation service of your choice.

FR Ce guide est écrit en anglais. Pour les autres langues, veuillez utiliser un service de traduction automatique de votre choix.

DE Diese Anleitung ist in Englisch verfasst. Für andere Sprachen verwenden Sie bitte einen automatischen Übersetzungsdienst Ihrer Wahl.

ES Este manual está escrito en Inglés. Para otros idiomas, utilice un servicio de traducción automática de su elección.

PT Este manual está escrito em Inglês. Para outros idiomas, use um serviço de tradução automática de sua escolha.

IT Questo manuale è scritto in inglese. Per altre lingue, utilizza un servizio di traduzione automatica a tua scelta.

Important safety instructions

- Read these instructions and all markings on the product. Keep these instructions.
- Heed all warnings and instructions, both in this manual and on the product.
- Clean only with a dry cloth. Unplug the unit or its power adaptor/charger from AC supply before cleaning.
- Do not use this product near water and avoid any exposure to water.
- Before connecting this product to any AC supply (if any), make sure to check whether the AC mains voltage and frequency match the indication on the product and its packaging.
- Only connect this product or its power adaptor/charger to an AC supply (if any) with sufficient power handling, protective earth connection, ground-fault (earth-fault) protection and overload protection.

Warranty

This product is guaranteed to be free of defects in material and workmanship at the time of purchase. Send-in warranty repair is granted for a period determined by

- A period of at least 6 months (from the date of purchase), or the minimum period required by law in the territory of sale, whichever is longer.
- A period of no longer (from the date of purchase) than the specified average lifetime of a component by the component's manufacturer.

- Disconnect the product or its power adaptor/charger from the AC supply (if any) during thunderstorms or longer periods of being unused.
- Make sure any heat sink or other cooling surface, or any air convection slot, is exposed sufficiently to free air circulation and is not blocked.
- Do not operate this product in environmental temperatures exceeding 35 degrees Celsius and/or 85% relative humidity.
- Position the product in a safe and stable place for operation, out of reach of unauthorized persons.
- Make sure any cable connections to and from the product are neither subject to potentially destructive mechanical impact nor present any risk of stumbling or other accident risk to people.
- Audio equipment may generate sound pressure levels sufficient to cause permanent hearing damage to persons. Always start up at low volume settings and avoid prolonged exposure to sound pressure levels exceeding 90dB.
- Do not open this product for service purposes. There are no user-serviceable parts inside.
- Warranty will be void in any case of unauthorized service by the user or other not authorized persons.
- Take any precaution required by local law, applicable regulations or good business practice to avoid injury of people or material damage by use of this product.

Symbols used in this manual

DANGER! Safety hazard. Risk of injury or death.

ATTENTION! Read manual before installation and operation.

WARNING! Hazardous voltage. Risk of severe or fatal electric shock.

WARNING! Fire hazard.

Health Advice

This unit may produce and absorb electromagnetic radiation. The strength of radiation and the sensitivity for disturbing interference matches the CE and FCC requirements. A corresponding sign is printed on the backside of the unit. Any change or modification may affect the behavior of the unit

concerning electromagnetic radiation, with the CE and FCC requirements eventually not to be met any more. The manufacturer takes no responsibility in this case.

Functional Advice (only for powered products)

This unit is immune to the presence of electromagnetic disturbances – both conducted and radiated - up to a certain level. Under peak conditions, the unit is classified to show a “class C” performance criteria and may encounter temporary degradation or loss of function which may need manual help to recover. In such case, switch the unit off and back on to recover.

Environmental Advice

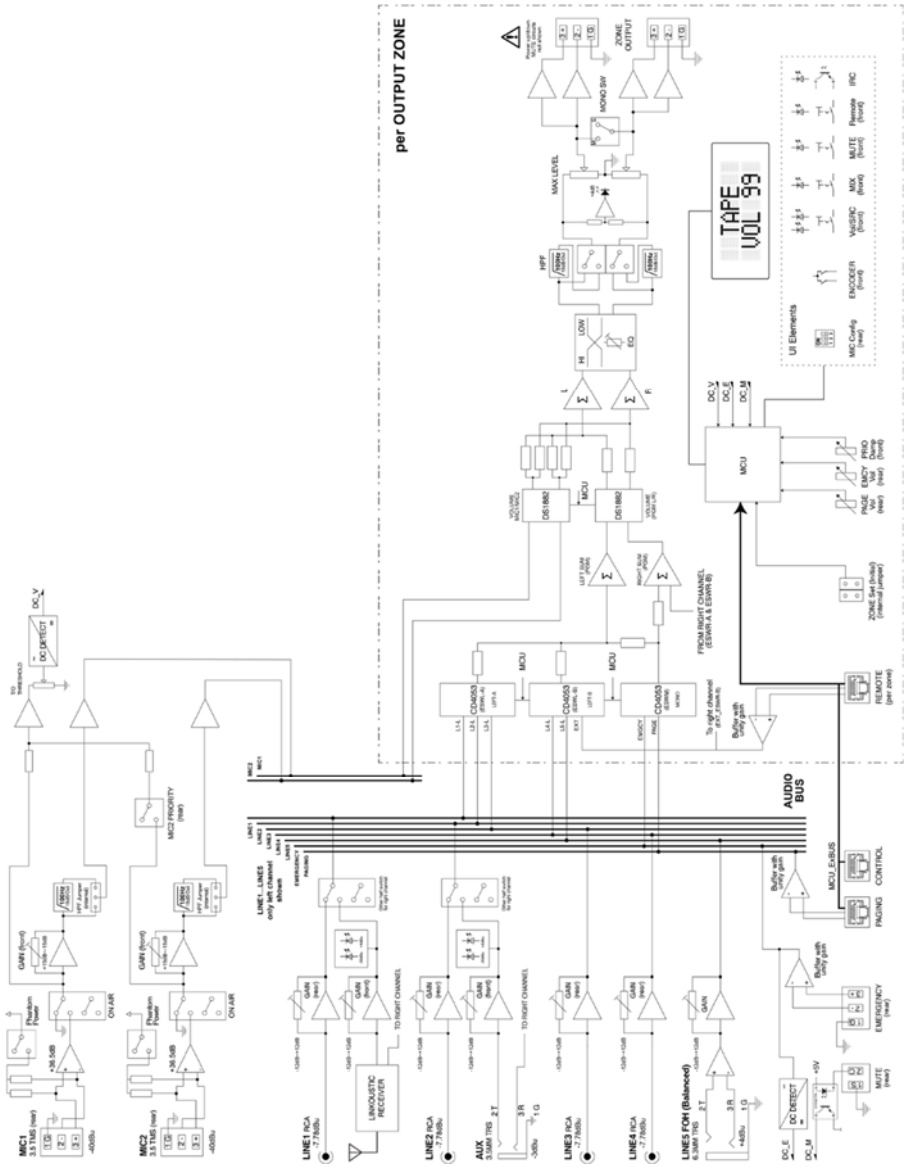
This unit is built to conform to the ROHS-2 standard according to directive 2011/65/EU and the WEEE directive 2012/19/EU of the European Parliament and of the Council of the European Union. Under these regulations, the product shall not be discarded into regular garbage at the end of its life, but shall be returned to authorized recycling stations.

Battery Advice (only for battery-powered products)

- Some products may contain a battery. Refer to the further chapters of this manual to determine whether this product contains a battery, and whether this is removable and/or rechargeable.
- Where applicable, adhere to the relative regulations in aviation transport.
- If the battery is rechargeable, the battery might not be fully charged or partly discharged at the time of purchase. Recharge before use. Only use recommended or included chargers with appropriate voltage/current rating.
- Some products may require a battery, but the battery may not be included for compliance with transportation safety requirements. Acquire a matching battery as indicated on the product and fit where applicable prior to first operation.

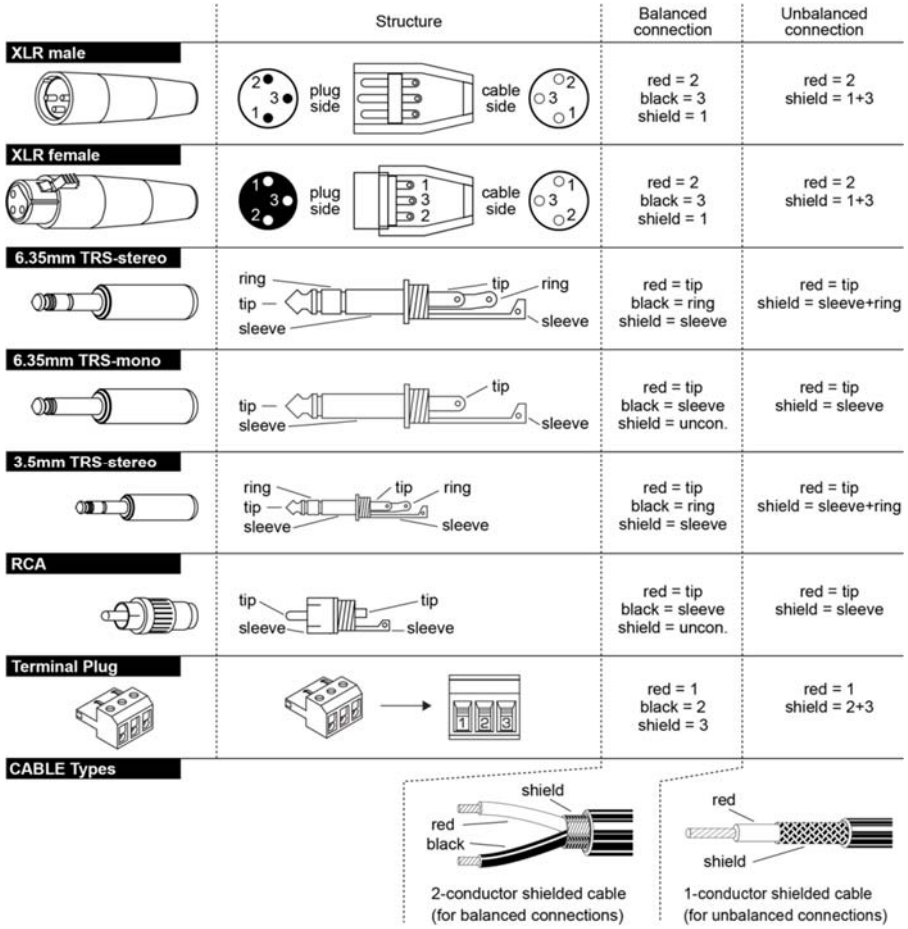
WARNING! Fire hazard. Batteries might heat up during charging. Only charge in a place with sufficient air convection.

Block diagram



Cabling

This product may use all or a selection of the below connector types, for which the pin assignment must comply with the following specification. Always make sure to use good connectors and cables to ensure proper operation. Balanced connections are to be preferred over unbalanced connections where applicable and feasible. Avoid unbalanced connections exceeding 2m of cable length.



Wireless Advice

- Some products may contain a wireless transmitter, receiver or transceiver. Refer to the further chapters of this manual to determine whether this product contains a wireless function, and in which frequency this operates.
- Make sure the frequency of operation does not require a specific license in the territory you operate the product in. If it does, obtain such license prior to any operation.
- Certain wireless technologies are designed for short distance operation. The actual distance will depend on how jammed the frequency band is at the location of use. In adverse cases, operational distances might be as low as 5m. In normal circumstances, 10m can be assumed. Test the operational distance prior to relying on the wireless functionality in a specific application.

Unpacking

Please check that the box contains the following items:

- 1 pc. main unit
- 1 pc. AC cord set
- 1 pc. instruction manual
- 1 pc. IRB44 infrared remote control

If any part is missing, please contact your dealer immediately for replacement.

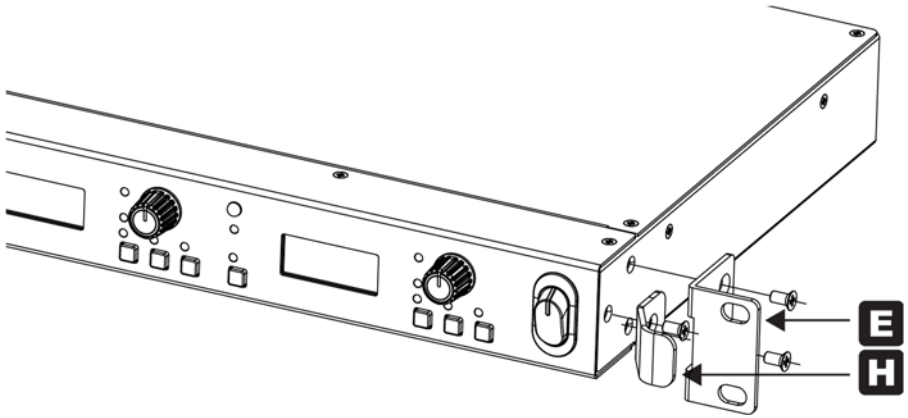
WARNING! After unpacking, and before plugging the AC cord in the wall outlet, check whether the AC mains voltage and frequency is the same as this product is specified for (see rear panel of product). Whenever the specified voltage or your AC plug should not match the local conditions, do NOT plug the AC cord into the wall outlet and contact your dealer immediately.

AC Mains Voltage Setting

This product contains a wide-range switch mode power supply and can be operated at main voltages between 100 and 240V AC without setting or adjustment.

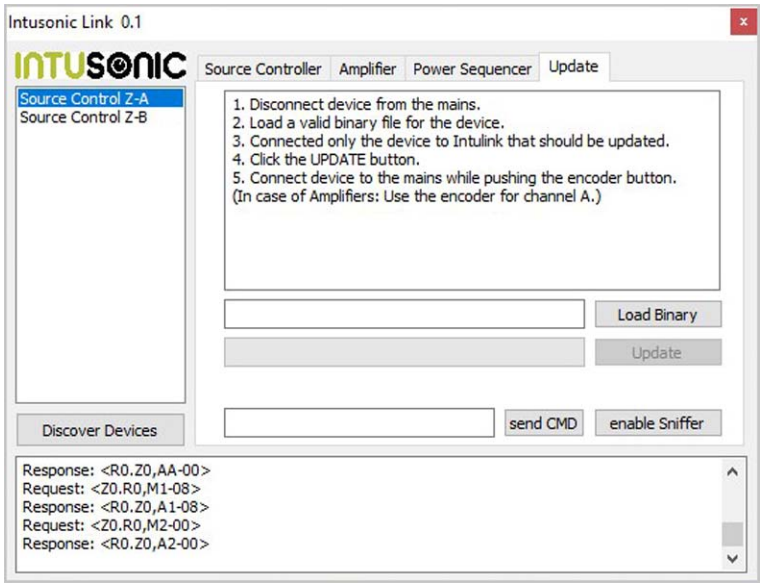
Rack/Cabinet Mounting

This product comes pre-assembled with 19'' rack ears and handles. Depending on the location of installation and use, it might be commendable to remove either only the handles, or both the rack ears and handles. To do so, remove the screws at the side panel of the units as shown: To remove the handle (H), remove the single center screw out of the group of 3 screws at the front side of the metal cabinet. Pull the handles out to the front. To also remove the rack ears (E), remove the remaining two screws and then remove the rack ear.



About this product

The HMA-72 is a 5-stereo/2-microphone-input audio router with 2 output zones. In every output zone, one of the stereo signals can be selected as a source, and can be mixed with the microphone bus at a selectable ratio. Apart from volume settings, flexible options for microphone routing/handling are available per zone. Every zone can be remotely controlled with an optional wall panel. A paging bus enables the connection of an optional paging microphone with selectable zone assignment. The immense flexibility of the HMA series of audio routers commend these as the center piece of any multi-zone audio system, and the ultra-high headroom grants pristine audio quality. Certain versions of this product may be fitted with an additional Linkoustic™ wireless audio receiver module.



In this tab, a new firmware can be transferred to the HMA72. Simply have a binary (.bin) file with the updated firmware ready and follow the on-screen instructions.

Technical Data

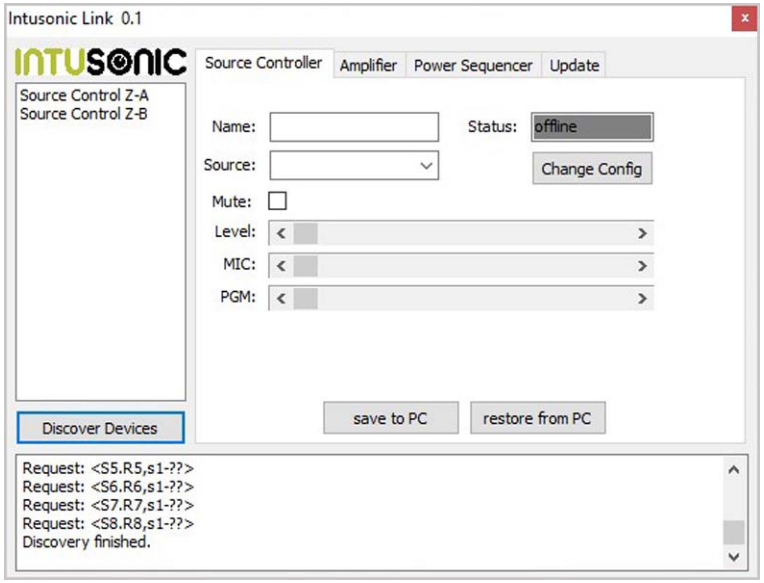
Line Inputs, residual noise	-80dBu
Line Inputs, THD	<0.01%
Mic Inputs, residual noise	-76dBu
Mic Inputs, THD	<0.1%
Main Out, SNR (Line In)	> 92dB
Main Out, Stereo Crosstalk	< -70dBu
Main Out, FQ response	20H-20kHz (+0/-3dB)
AC IN (HMA72/74)	115-230V~, 50/60Hz, 9W/14W
Dimensions WxDxH (HMA72)	482.6x250x44 mm
Dimensions WxDxH (HMA74)	482.6x250x88 mm
Weight (HMA72/74)	3.15/4.2 kg

47 **IRB44 Volume control (“-” and “+”).** Allow the remote control of the volume of the zone selected via the switches (46).

48 **IRB44 mute control.** Allow the remote control of the mute function of the zone selected via the switches (46). The mute LED (37) will be lit when the mute function is activated.

PC Control (IntuLink)

The HMA72 can be remotely controlled by a windows PC via the dedicated INTULINK software. Download the software from the INTUSONIC website and connect a RS485M compatible USB interface to the PC. This interface must be based on a FTDI chipset (FT232RL), other USB-serial converters will not work. Once the interface is connected and the INTULINK software is launched, click the “discover devices” button to see all connected devices. Every zone of the HMA72 will appear as a separate device, as in below screenshot:

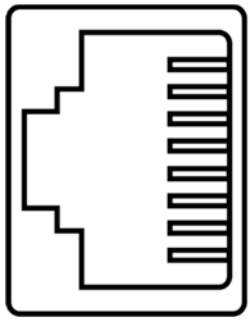


In the “source controller” tab, you can now set name labels for all inputs, and make remote volume settings.

Changing to the “Update” tab, the scree will look as follows:

The Intulink™ bus system

The HMA72 uses Intusonic’s Intulink™ control bus system, which uses standard CAT5/CAT6 shielded cables and combines RS485 control lines with power supply lines and a mono balanced audio connection according to the following pinout:



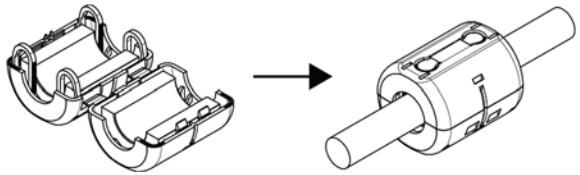
1. TXD/RXD-
2. TXD/RXD+
3. Not Connected
4. GND
5. Power +12V
6. Power -12V
7. Audio Mono Balanced +
8. Audio Mono Balanced -

A documentation of the RS485 commands used for remotely controlling devices with the Intulink™ bus system is continuously updated and hence only available for download from www.intusonic.com.

WARNING! Do not connect any other devices but Intusonic products with Intulink™ bus connection to the RJ45 ports of this unit. PC network connections or other manufacturer’s RJ45-based interconnection systems are or may be incompatible, and the attempt of making such connection may result in damage of this unit or other equipment. The manufacturer accepts no claims towards damages evolving from incorrect connections.

ATTENTION! Do only use shielded CAT5/CAT6 cables with shielded connectors for better suppression of interference (EMI) in long cables runs.

ATTENTION! To make sure that your installation complies with EMC requirements, you must attach snap-on ferrites to both ends or at least one end (recommended close to the HMA72) of the CAT5/CAT6 cable(s).

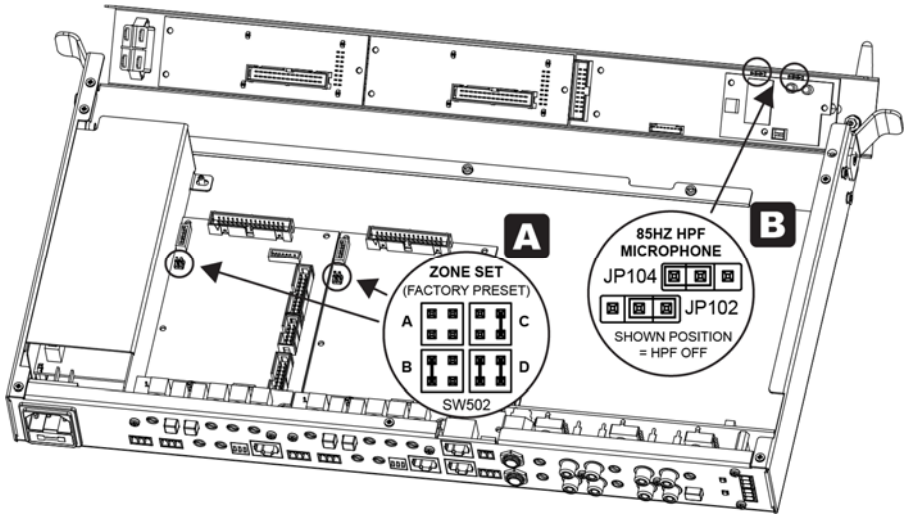


Configuration (Hardware)

The HMA72 can be configured to meet certain operational requirements by setting internal hardware jumpers. As a factory default, all jumpers are set to the OFF position.

WARNING! Any action which requires opening the product shall only be expedited by qualified service technicians. Remove the AC cord before opening the product. Be aware that the warranty may be void unless you are an appointed Intusonic installer, contractor or technical service provider.

To change the jumper settings, unscrew the top lid from the product and remove it. The jumpers are located on the front and output PCB assemblies as per following illustration and functional description:



A **Zone Assignment setting.** Every output zone can be set to one of 4 possible assigned zones (A/B/C/D). For the purpose of proper system operation, any wall remote control panel that is intended to work with a specific output zone, will need to be set to the same zone setting. The jumper SW502 as shown in the picture is only relevant for the first start-up of the product and will afterwards be superseded

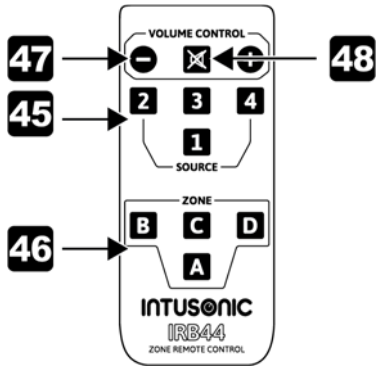
40 **Zone Remote Enable/Disable Button.** Pressing this button enables/disables the connected remote control panel attached to the respective zone via the connector (11). The LED (41) will be lit once the remote panel is active.

41 **Zone Remote Status Indicator.** This LED will be on or off depending on whether the zone remote is enabled or disabled.

42 **IR sensor.** This sensor receives the infrared signals from the included remote control. Make sure there is unobstructed line of sight between the sensor and the IR remote in case the IR remote shall be used.

43 **IR Remote Status Indicator.** This LED will be on or off depending on whether the IR remote is enabled or disabled in the EDIT mode. In the enabled status, the LED will be half dimmed if the respective zone is not preselected via the IR remote zone selector switches (46); it will be fully lit when the respective zone is preselected via the IR remote zone selector switches (46).

44 **Power switch.** Switches the unit on and off. Make sure to switch the unit off when not in use. The ON position is indicated by a backlight.



45 **IRB44 source selector switches.** Allow the remote control to directly select any of the first four inputs after selecting a receiving zone via the switches (46). The new input selection is shown in the display (34) of the respective zone.

46 **IRB44 zone selector switches.** These buttons allow to select the active receiving zone, as long as the IR remote is enabled in the EDIT menu. The IR Remote Status Indicator LED (43) will be fully lit when a zone is selected, and half dimmed when a zone is not selected.

the new choice. During this editing process, the “SRC” LED will be lit. After selection of a source, the display will return to the VOLUME menu.

- MIX – after pressing the “MIX” button (36) the display will show the balance between the microphone signal(s) as a percentage between 00 and 99% volume in the upper line, and the program source as a percentage between 00 and 99% volume in the lower line. Once entering the MIX menu, first the microphone volume can be adjusted by turning the encoder, and the new setting can be confirmed by pressing the encoder; afterwards the program volume can be adjusted by turning the encoder and pressing to confirm. The parameter under adjustment is indicated by a chevron on the left side. After setting the level balance, the display will return to the VOLUME menu.

35 **SOURCE (SRC) Menu Button with LED.** Invokes the source menu, upon which the display (34) will show the selected source, which then can be changed by turning the encoder (38) and pressing the encoder to confirm the new choice. During this editing process, the “SRC” LED will be lit. After selection of a source, the display will return to the VOLUME menu.

36 **MIX Menu Button with LED.** Invokes the MIX menu, upon which the display (34) shows the balance between the microphone signal(s) as a percentage between 00 and 99% volume in the upper line, and the program source as a percentage between 00 and 99% volume in the lower line. Once entering the MIX menu, first the microphone volume can be adjusted by turning the encoder, and the new setting can be confirmed by pressing the encoder; afterwards the program volume can be adjusted by turning the encoder and pressing to confirm. The parameter under adjustment is indicated by a chevron on the left side. After setting the level balance, the display will return to the VOLUME menu.

37 **MUTE Button with LED.** Invokes the zone to be muted. This function can also be invoked via the IR remote control, provided the IR remote is set to active in the EDIT menu (see chapter configuration: software).

38 **Encoder.** Allows to make value settings, depending on the active menu chosen by the buttons (35) and (36), with assistance of the display (34). The encoder also includes a press-to-switch function for value confirmation.

39 **Peak level LED.** This LED indicates the level at the zone output (2). Note the indication is derived from a point prior to the maximum level control (4) on the rear side.

by the zone assignment setting in the software EDIT mode. The jumper SW502 mainly serves factory-default settings and may not need to be reconfigured by the installer.

B **Microphone HPF (high pass filter) setting.** These jumpers allow to enable a 85Hz HPF (high pass filter) separately for each of the two microphone inputs if required. The factory default is OFF. Move the jumper to the relative position as per the shown illustration.

Configuration (Software)

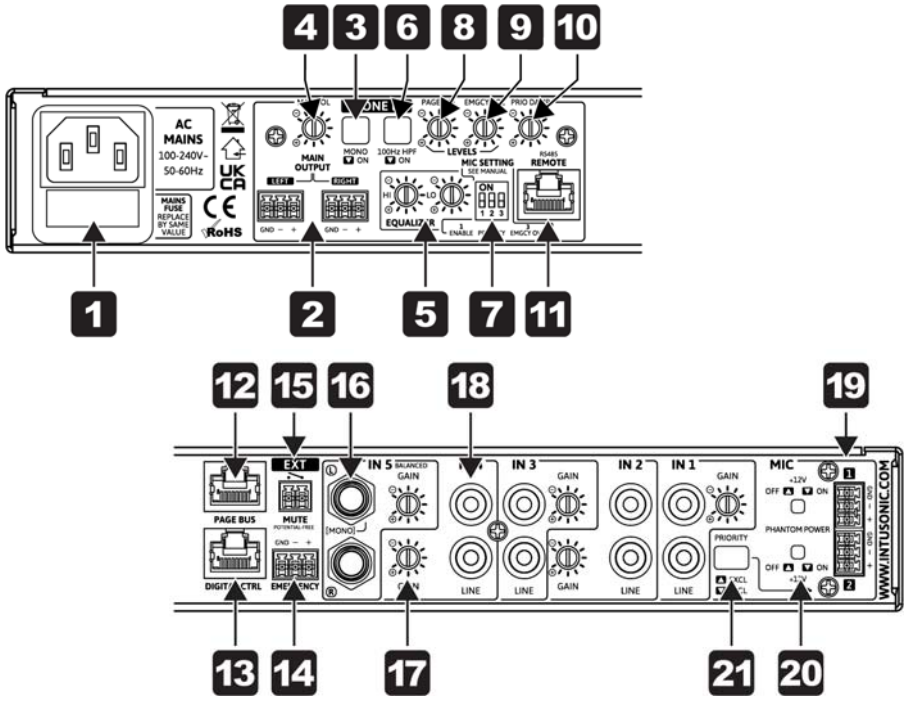
The HMA72 can be configured to meet certain operational requirements by making relative settings in its software EDIT mode. Note that settings are made for every zone separately. Proceed as below:

- Make sure all subsequent equipment (amplifiers etc.) is switched off.
- Switch the HMA72 on.
- Press the SRC (Source) button (35) for at least 3 seconds.
- The display (34) will show “EDIT?”, confirm by pressing the encoder (38). The Display (34) will show “>ZONE: X” with X being the currently assigned zone to this output.
- Select the desired zone by turning the encoder (38) and press the encoder once to confirm the choice. This selection will overrule the hardware jumper setting as show in the previous chapter.
- The display will now show “>PAGING: xxxxxxxx” with xxxxxxxx being either “enabled” or “disabled”. Alter the setting if needed by turning the encoder (38) and press the encoder once to confirm the choice.
- The display will now show “>IR: xxxxxxxx” with xxxxxxxx being either “enabled” or “disabled”. This will enable or disable the option to control this zone via the supplied IR remote control. Alter the setting if needed by turning the encoder (38) and press the encoder once to confirm the choice. Note that if the IR remote is disabled, the status LED for the IR control (43) will turn permanently off and the zone cannot be controlled via the IR remote any more. If this setting is set to enabled, the status LED for the IR control (43) will be lit dimly when the zone is ready for control but not selected; it will be lit brightly when the zone is enabled and selected.
- The display will now show “>LCD ON: xxS” with xx being the time until the LCD backlight turns off automatically. Select a value between 5s and 60s by turning the encoder (38) and press the encoder once to confirm the choice.
- The display will now show “>SRC1: xxxxxxxx” with xxxxxxxx being a zone label which can be selected from a pre-stored list of labels. This setting allows to give SOURCE-1 a more expressive name

which makes the use later easier for the operator. Instead of "SOURCE-1", the source signal may e.g. be labelled "CD-1". Select an entry from the list of available labels by turning the encoder (38) and press the encoder once to confirm the choice.

- The display will now show ">SRC2: xxxxxxxx" with xxxxxxxx being a zone label which can be selected from a pre-stored list of labels. The setting process is the same as for SRC1, and the process will now repeat for SRC3, SRC4, and SRC5.
- After setting the SRC5 label and pressing the encoder to confirm the selection, the display will show "settings updated" for about 5s and the unit will leave the EDIT mode and return to normal operational mode. The same happens if during any stage of the editing process, a period of more than 5s of inactivity occurs. Please note all changes made will be stored, regardless of whether the whole EDIT cycle was concluded or not.
- The unit is now ready for operation. Turn the volumes down and switch on subsequent equipment.

Controls and Connections



set for the correct gain by the rear-panel gain control (17), while the gain for the Linkoustic™ wireless audio link is set by (28).

28 **Linkoustic™ wireless audio link gain control.** This control sets the input gain of the Linkoustic™ wireless audio link in a range of ±12dB. Note that this NOT a volume control but a sensitivity adjustment to make sure that the incoming level through the Linkoustic™ wireless audio link can match all other incoming signals. The level indicator (29) may help to set the correct gain.

29 **Linkoustic™ wireless audio link level indicator.** This is a set of two LED in green and red color with green indicating a signal being present, and amber indicating the signal reaching to +4dBu. Make sure to adjust the gain control (28) so that the amber LED only flashes occasionally.

30 **AUX Socket for Input 2.** This is a 3.5mm Mini-TRS stereo socket which allows the connection of sources like MP3 players etc. without removing the mixer from its mounting position.

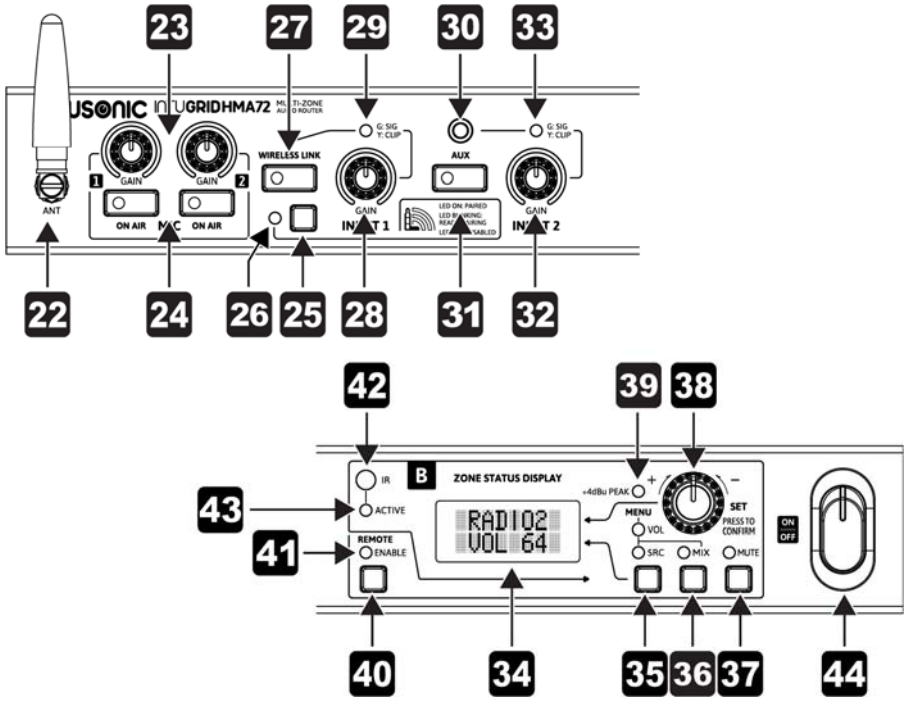
31 **Input 2 Source Selector Switch**. This switch selects between the rear-panel line input (18) and the AUX socket (30). Note that for setting the input gain, the rear-panel line input (18) is set for the correct gain by the rear-panel gain control (17), while the gain for the AUX socket is set by (32).

32 **AUX gain control.** This control sets the input gain of the AUX socket (30) in a range of ±12dB. Note that this is NOT a volume control but a sensitivity adjustment to make sure that the incoming level through the AUX socket can match all other incoming signals. The level indicator (33) may help to set the correct gain.

33 **AUX level indicator.** This is a set of two LED in green and red color with green indicating a signal being present, and amber indicating the signal reaching to +4dBu. Make sure to adjust the gain control (32) so that the amber LED only flashes occasionally.

34 **Zone Status Display.** This is a 2x8 Character LED display, which will show different content based on which menu is active:

- VOLUME – this is the regular operation mode and the setting to which the display will always return. The "VOL" LED will be lit. It will show the selected source label for this zone in the upper line and the set zone volume as a percentage between 00 and 99 in the line. Turning the encoder (38) adjusts the zone volume. Pressing the MUTE button (37) will mute the output and the % sign after the volume value will be replaced by an "M" to indicate the MUTE status.
- SOURCE – after pressing the "SRC" button (35) the display will show the selected source, which then can be changed by turning the encoder (38) and pressing the encoder to confirm



22 **Wireless Audio Link antenna.** This is the antenna mounting position for the Linkoustic™ wireless audio link.

23 **Gain controls for microphone inputs.** Control the gain for each of the two microphone inputs separately in a range of ±15dB. Note that these are NOT volume controls but sensitivity adjustments to make sure that the incoming level through the microphone inputs (19) can match all other incoming signals.

24 **On Air Switches** for microphone inputs. Enable (un-mute) and disable (mute) the microphone inputs (19).

25 **Wireless Audio Link pair button. T**his button invokes the pairing and un-pairing functionality of the Linkoustic™ wireless audio link. Refer to the chapter for the operation of the Linkoustic™ wireless audio link.

26 **Wireless Audio Link status LED.** This LED indicates the current operational status of the Linkoustic™ wireless audio link. Refer to the chapter for the operation of the Linkoustic™ wireless audio link.

27 **Input 1 Source Selector Switch**. This switch selects between the rear-panel line input (18) and the Linkoustic™ wireless audio link. Note that for setting the input gain, the rear-panel line input (18) is

1 **AC inlet and fuse holder.** Use the supplied AC cord to connect the unit to AC mains. Make sure voltage and frequency stated and set on the unit comply with your local AC supply. The fuse can be accessed by the small drawer at the AC inlet. To change the fuse, unplug the AC cord first, pull out the fuse drawer and replace the fuse ONLY with a fuse of SAME voltage and rating. If the fuse blows again after replacement, hand over the unit to qualified service personnel.

2 **Stereo Zone output.** This is a balanced terminal block output carrying the output signal for the relative zone controlled by the zone volume control encoder (38) and the maximum volume control (4). The output can be switched to mono via the switch (3).

3 **Mono switch for zone output.** Sums the left and right channel to a mono signal when pressed. The signal is then available on both the L and R outputs of the stereo zone output (2). This setting can be made individually for every zone.

4 **Maximum level setting for zone output.** This control allows to limit the maximum level at the stereo zone output (2) in order to match the connected sound system. Adjustments made on this control will not be displayed by the output level meter (29). This setting can be made individually for every zone. Adjustments shall be made with a small screwdriver. Note that the total angle is 300 degrees; do not apply excessive force with the screwdriver.

5 **Equalizer for zone output.** Allows the adjustment of the tonal balance for the respective zone output in two music-specific frequency bands to match rooms or speaker characteristics. This setting can be made individually for every zone. The neutral middle position is marked by a center detent. Adjustments shall be made with a small screwdriver. Note that the total angle is ±150 degrees; do not apply excessive force with the screwdriver.

6 **High Pass Filter (HPF) for zone output.** This switch enables a 100Hz HPF with 18dB/octave slope to help cater for smaller loudspeakers which are unable to handle extended low frequency content. This setting can be made individually for every zone.

7 **Microphone operation settings for zone output.** This is a 3-position DIP switch, allowing to make the following settings from left to right:

- ENABLE – this enables the microphone in this zone when being switched ON. Please note that this will set the mic entry in the mic/line level balance menu available via the MIX switch (36) to “off”.
- PRIORITY – the enables microphones priority, and will only work when the ENABLE setting is ON. In this case, the microphone will take priority over the chosen music source,

with the amount of damping set by the PRIO DAMP control (10).

- EMGCY OVR – this enables the microphone to stay “alive” when an EMERGENCY signal is detected at the EMERGENCY input (14). If this is set to OFF, the emergency signal will mute the microphone signal, even if it took priority over the music source due to the PRIORITY being set to ON.

8 **Paging Volume Level for zone output.** This control sets the level in the relative zone of the paging signal which is delivered to the paging bus (12). Adjustments shall be made with a small screwdriver. Note that the total angle is ±150 degrees; do not apply excessive force with the screwdriver.

9 **Emergency Volume Level for zone output.** This control sets the level in the relative zone of the signal fed into the emergency input (14). Adjustments shall be made with a small screwdriver. Note that the total angle is ±150 degrees; do not apply excessive force with the screwdriver.

10 **Priority Damping Control for zone output.** This control sets the amount of damping applied to the program signal when the microphone takes priority. This control is only effective when Microphone operation settings switch (7) is set to ENABLE for the microphone and PRIORITY to ON. Adjustments shall be made with a small screwdriver. Note that the total angle is ±150 degrees; do not apply excessive force with the screwdriver.

11 **Remote Control Panel connector for zone output.** This is a RJ45 jack for the connection of other Intusonic devices featuring the Intulink™ bus system. Do NOT connect any Ethernet signals to this port.

12 **Paging Station connector.** This is a RJ45 jack for the connection of an Intusonic paging station featuring the Intulink™ bus system. Do NOT connect any Ethernet signals to this port. .

13 **Digital control input.** This is a RJ45 jack for the connection of a control device compatible with the Intulink™ bus system. This could for example be a PC with a RS485 interface matching the pinout of the Intulink™ bus.

14 **Emergency input.** This is an auto-sensing, balanced terminal block input which allows the connection to an emergency evacuation system. Once a signal is present on this input, the zone output signals will be muted and the emergency message/signal from this input will become audible at the zone outputs instead. Note that the unit can be set to include or exclude the microphone signals from the muting process, see point (7).

15 **Mute input.** This is a terminal block input which allows to remotely mute all zones by simply shortening the contacts.

16 **LINE input for channel 5 (FOH).** This is a ¼’’ TRS balanced stereo input specifically designed to allow the connection of the output of a stage mixer or any other balanced audio source at larger distance, in order to use the connected sound system for the replay of such source‘s signal. This is useful in applications where e.g. apart from stereo source replay also live music is performed over the same sound system, or where a source signal from a different room/area needs to be replayed.

17 **GAIN control** for input channels 1/2/3/4. This allows the sensitivity (input gain) for every input to be adjusted, so that sources of different output level can be connected at properly balanced levels.

18 **Line input for CH1/2/3/4.** These dual RCA connectors provide inputs for line-level signals.

19 **Microphone input for MIC1/2.** These are balanced terminal block inputs, which can be configured to carry phantom power via the switches (20), thus these inputs can be used both with condenser and dynamic microphones.

20 **Phantom Power Switch for MIC1/2.** These switches allow to enable to apply +12V DC phantom power individually to the mic 1 and mic 2 inputs. ONLY operate these switches with no microphone connected and the HMA72 being switched off. Operating these switches when the HMA72 is operating may result in unwanted and potentially dangerous pop noises. Note that the phantom power is set to 12V DC, which is sufficient for most microphone used in installation applications, but may not work with studio recording microphones which may demand up to 48V.

21 **Microphone Priority** switch for MIC2. This switch allows to include the MIC2 into the microphone priority trigger. Pressing this switch will result in both Mic 1 and Mic 2 triggering the mic priority, releasing this switch will only leave Mic 1 to trigger the mic priority.