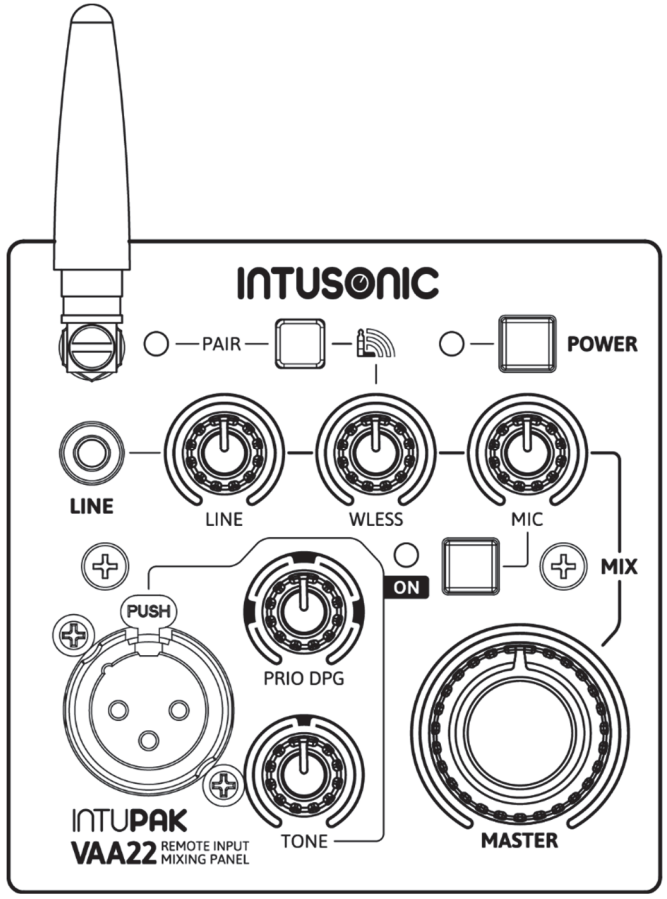
INTUSONIC™ is a brand of
Unitec Industries Limited



INTUPAK VAA22

Remote Input Mixing Panel

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.

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.
- Disconnect the product or its power adaptor/charger from the AC supply (if any) during thunderstorms or longer periods of being unused.

Technical Data

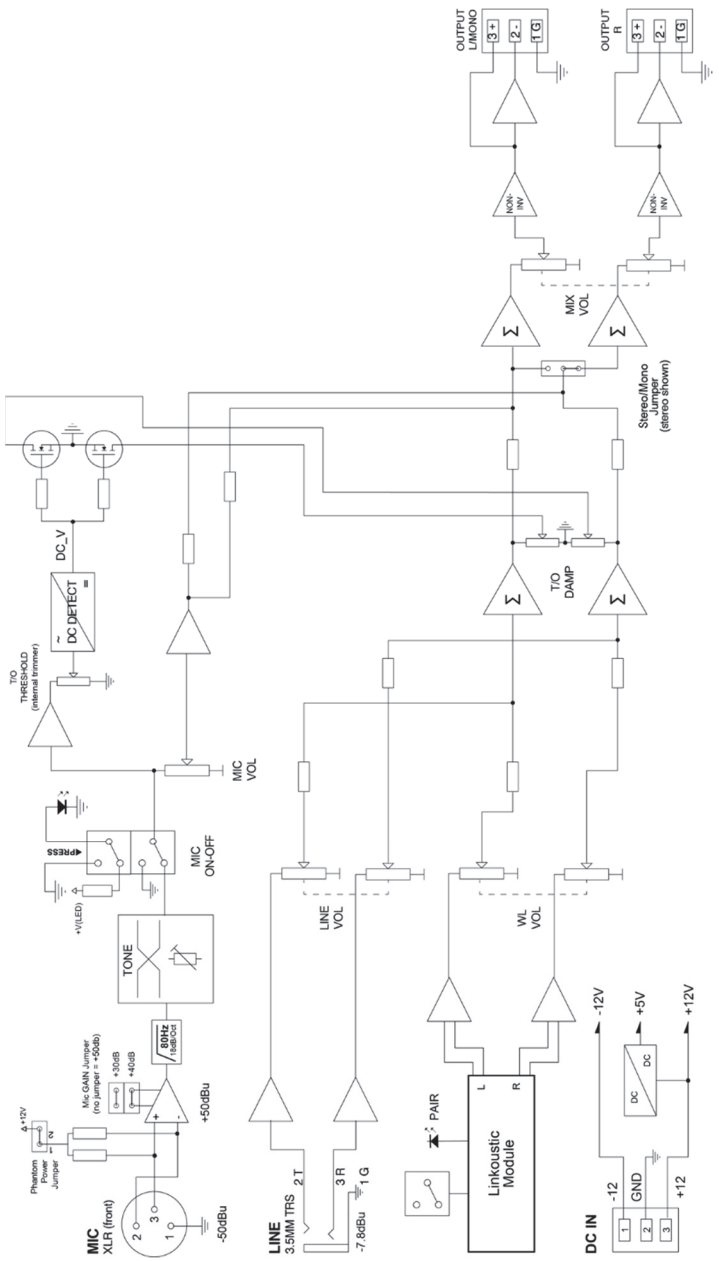
Mic input sensitivity	-50/-40/-30dBu
Line input sensitivity	0dBu
Wireless audio protocol	Linkoustic™
Residual noise (PGM, mic off)	-95dBu
Residual noise (Mic on)	-65dBu @40dB Mic Gain
Max. Output level @1% THD	+18.5dBu
S/N-Dynamics (PGM, Mic off)	113.5dBu
THD (PGM, Mic off)	0.02%
Power requirement	+12V, 71mA / -12V 49mA (tot. 1.5W)
Dimensions WxDxH (/w knobs)	86x86x40 mm
Panel mounting depth	27 mm
Mounting standard	BS5733
Weight	0.15 kg

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.

Block Diagram



- 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.



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

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

12 **Wireless Audio Link status LED.** If your product is fitted with the optional Linkoustic™ wireless audio link, then this LED indicates the current operational status. Refer to the chapter for the operation of the Linkoustic™ wireless audio link.

13 **Wireless Audio Link antenna.** Enhances the signal reception of the Linkoustic™ wireless audio link.

14 **Wireless Signal Level Control.** This rotary control adjusts the contribution of the Linkoustic™ wireless audio link (11/12/13) to the main output signal. The final output volume is then adjusted via the main volume control (15).

15 **Main Output Level Control.** Determines the main output level present at the left and right outputs (2/3). The mixing ratio between the microphone, line and Linkoustic™ wireless audio signal is set beforehand via the controls (5/10/14).

16 **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 the Power LED (17).

17 **Power LED.** Lights up when the unit is switched on.

Linkoustic™ Wireless Audio Link

The following provides a function description of the Linkoustic™ wireless audio link (11/13/13). Operation is simple and convenient:

- When powering the unit on, it will be ready to pair with a Linkoustic™-compatible device, indicated by the pairing LED (12) blinking.
- It will then automatically pair with the previously known compatible device if this device is available. The LED will then be constantly lit.
- If no previously known device is available, the unit will keep being available for pairing, which is indicated by the pairing LED (12) blinking, until a pairing process is executed from a new compatible device. Once paired with this new compatible device, the pairing LED (12) will turn to be constantly lit.
- If during the “ready to pair” status (LED blinking) or the “paired” status (LED on) the button is pressed and held for a prolonged period, the wireless audio link will be turned off. The pairing LED (12) will then be off. Pressing the button again, will turn the wireless audio link on again and the same process starts as from powering the unit on.

4 **Balanced Microphone Input.** This is a locking female XLR type connector to connect a microphone. The sensitivity of this input can be set in three steps (see chapter “configuration”), likewise a 12V DC phantom power source can be activated. After inserting a male connector, make sure to press the release tab for unplugging when required. The contribution of this input to the main mix can be adjusted via the mic volume control (5), the tonal balance can be adjusted via the control (7) and the microphone can be enabled/disabled via the switch (6). Further a microphone-activated music reduction (talkover) can be enabled via the control (8).

5 **Microphone Volume Control.** This rotary control adjusts the contribution of the microphone input (4) to the main output signal. The final output volume is then adjusted via the main volume control (15). This control will have no effect when the microphone is disabled via the Mic On/Off switch (6)

6 **Microphone On/Off Switch.** This switch engages or disengages the microphone signal. When pressed, the microphone is active, which is indicated by the adjacent LED being lit.

7 **Microphone Tone Control.** This rotary control with center detent allows to give the microphone signal a more “bright” or more “dark” tonal characteristic. In the center detent position, the microphone signal remains unaltered. Turning clockwise, the high frequencies will be boosted and the low frequencies attenuated (more “brightness”), turning it counterclockwise the low frequencies will be boosted and the high frequencies attenuated (more “darkness”).

8 **Microphone Priority Damping.** This rotary control engages the auto-talkover function, which attenuates the program signal of the Line input (10) and Wireless Input (14) to increase the legibility of the microphone signal during announcements. In FCCW position, this function is disabled, the more clockwise this control is turned, the more the program material is attenuated when speaking into the microphone.

9 **Stereo Line Input.** This is a 3.5mm unbalanced TRS jack. Connect any unbalanced line-level source here. The contributing volume of this source is adjusted via the control (10).

10 **Line Signal Level Control.** This rotary control adjusts the contribution of the microphone input (9) to the main output signal. The final output volume is then adjusted via the main volume control (15).

11 **Wireless Audio Link pair button.** If your product is fitted with the optional Linkoustic™ wireless audio link, then this button invokes pairing and un-pairing functionality. Refer to the chapter for the operation of the Linkoustic™ wireless audio link.

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:

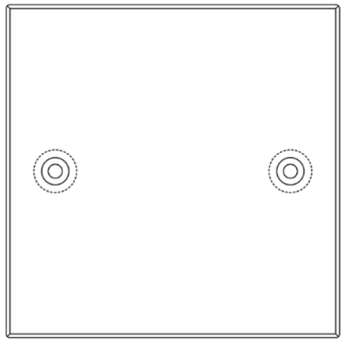
- 1 pc. main unit
- 1 pc. BS5733 rear wall box
- 1 pc. user manual

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

Mounting options

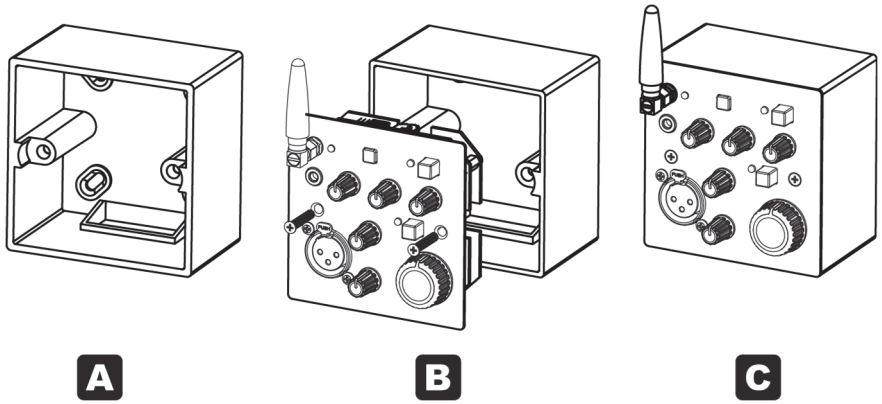
This product is designed to fit a standard UK wall box with 2 center mounting holes, typically a single BS5733-compliant box with 86x86mm dimensions (included with delivery). Multiple wall boxes for specific mounting situations are available as optional accessories.

UK BS 5733
86x86mm Box



Prior to any cabling work:

- Make sure the supplied wall box is securely fitted into or onto the wall (A). If you have to mount several units side-by-side, consider the optionally available multi-gang wall boxes.
- Make sure all cables that enter the wall box, are correctly isolated and cannot wear off their insulation on any sharp edges in the wall aperture at the mounting location or inside the wall box.
- Line up the product with the wall box and insert the product into final position without bending or breaking any of the connected cables (B). Make sure the screw holes are not obstructed by any cables.
- Fix the supplied screws securely to fix the product to its final position (C).

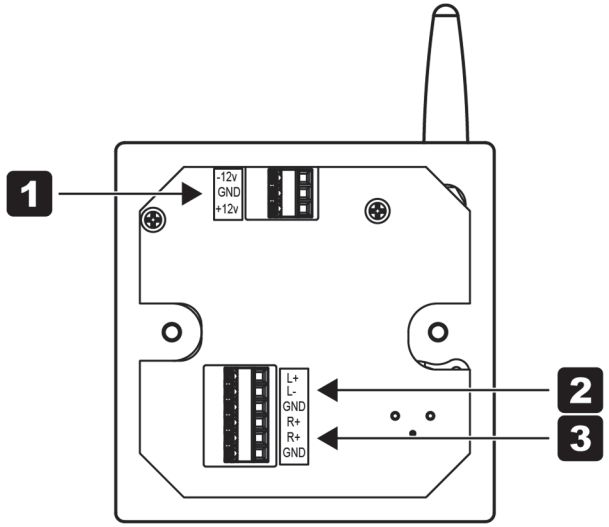


About this product

The VAA22 is a wall-mounted audio mixer with 3 source channels (Stereo-Line, Linkoustic™ Wireless, Microphone) with adjustable Auto-Talkover and tone control for the Microphone input. It can be used stand-alone with its stereo or mono balanced audio output to drive a remote amplifier (provided the amplifier has a balanced input) or in combination with Intusonic™ wall remote control panels of the IntuGrid™ series, where it may replace the external audio input.

The VAA22 does not have an internal power supply and must be fed from a symmetrical ±12V DC power supply with center grounding, with the Intusonic™ IntuPak SPA22 being recommended.

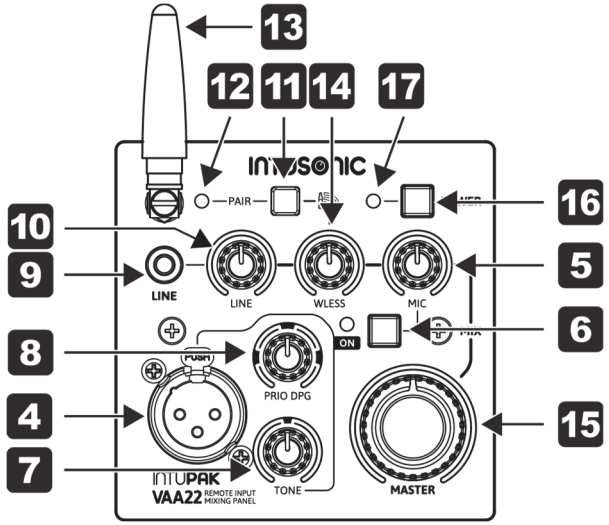
Controls and Connections



1 **±12V DC Power input.** This is a 3-pin 3.5mm terminal strip to connect a symmetrical ±12V DC PSU, like the SPA22.

2 **Balanced Left (Mono) audio output.** This is a 3-pin 3.5mm terminal strip to connect the to-be-fed device.

3 **Balanced Right audio output.** This is a 3-pin 3.5mm terminal strip to connect the to-be-fed device.



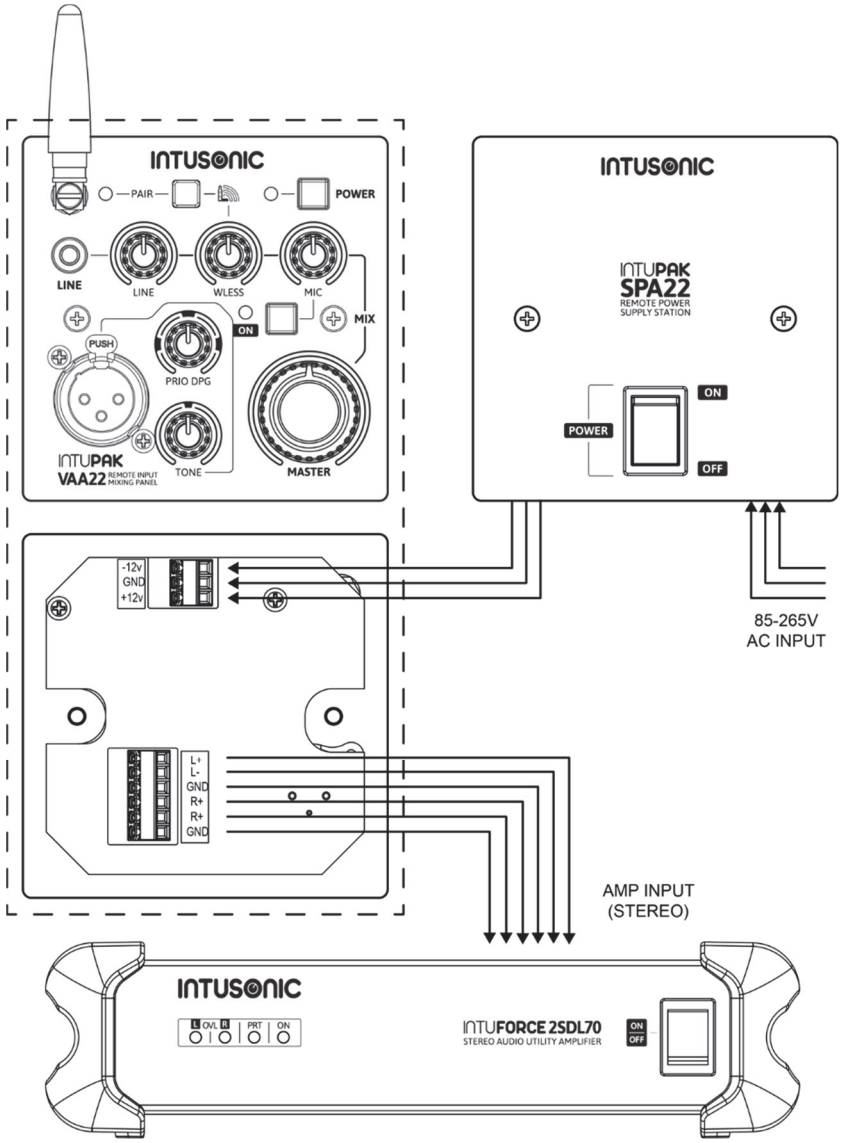
- Microphone gain selection: This is done via three jumpers named JP1, JP2 and JP3, located on the bottom below the main volume control, settable via side access and thus not requiring any disassembly. Please note that one jumper MUST be fitted, not more and not less, in the position of the desired gain. Removing all gain setting jumpers or fitting more than one can lead to undesired results from preamplifier oscillation to insufficient gain. The default factory setting is 40dB, which is suitable for most standard dynamic microphones. In the case of using other dynamic microphones or a condenser microphone, the gain can be increased to +50dB or decreased to -30dB by changing the jumper position respectively.
- Microphone High-Pass Filter selection. By factory default, a 80Hz High-Pass Filter is engaged, which can be disengaged via the change of the JP4 jumper setting on the bottom PCB. This is settable via side access, not requiring any disassembly.

Due to the miniaturization of the VAA22, access to the mono/stereo jumper may involve partial disassembly. In this case, heed the following instructions:

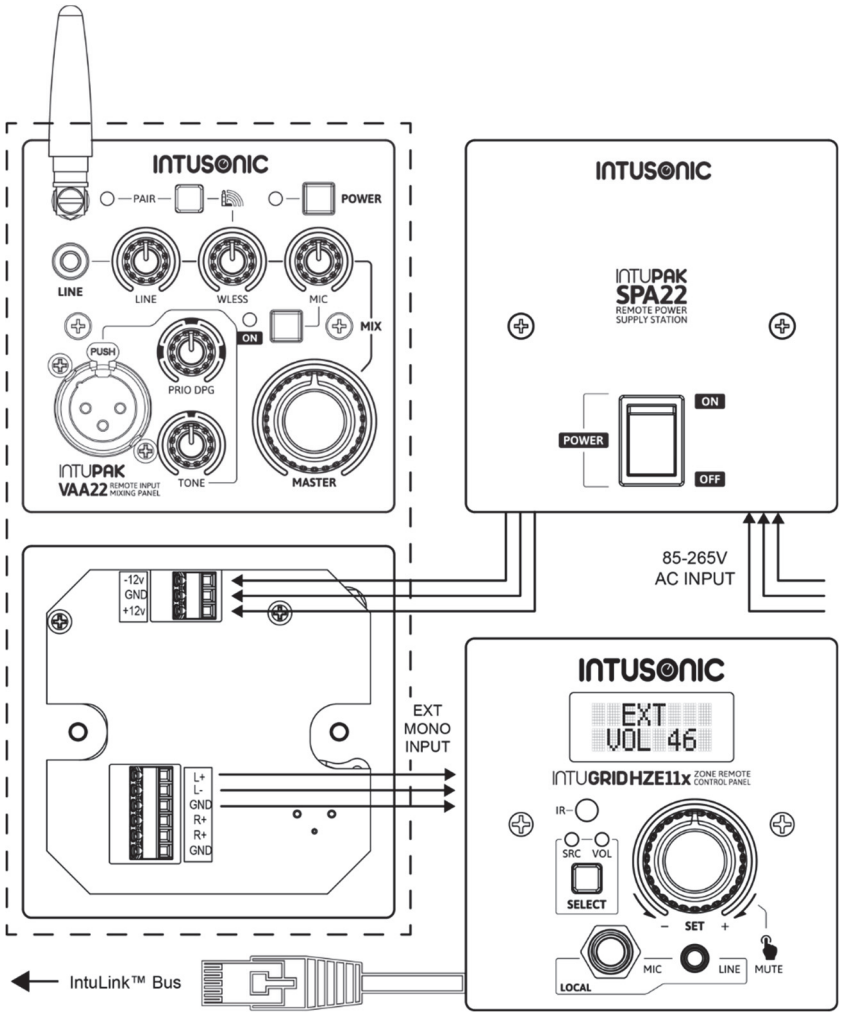
- Remove the two screws holding the microphone XLR connector first.
- Remove the two silver screws which you can from the backside of the unit.
- The lower PCB can now be pulled off. Be careful with the locking tab of the microphone connector, it may require to pull the bottom PCB perpendicularly first until the connectors between the two PCBs are unattached, and then to angle the PCB in order to guide the XLR locking tab through the panel aperture.
- Remove the two standoffs and one screw which hold the top PCB on the face panel.
- Remove all rotary knobs. This can be done via simply pulling on the knob. Do not use any tools between front panel and lower knob plane, to avoid scratching the front panel.
- After this, the face panel can be removed and the jumper JP100 can be set.
- Follow the reverse procedure for re-assembly.

Applications

In a stand-alone application, the VAA22 is powered by a SPA22 and sends a balanced stereo audio signal to an amplifier:

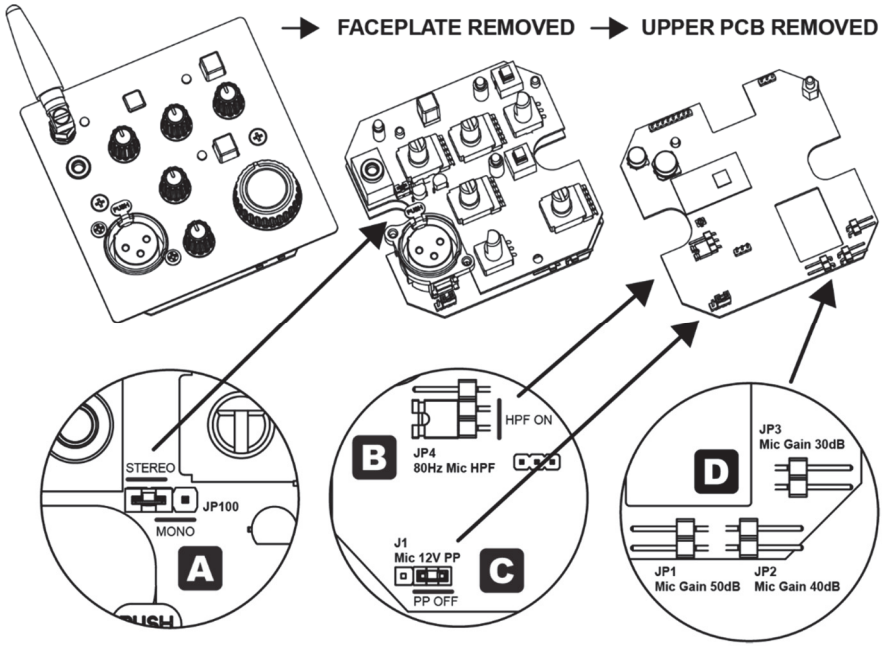


In an IntuGrid™ system, the VAA22 is powered by a SPA22 and is used to replace the EXT audio input of a remote wall control panel (-x Generation wall panel required), which sends the audio signal (mono) to a connected main unit via the IntuLink™ bus:



Configuration

The VAA22 can be configured to adapt to the available sources and functional requirements. Such configuration is achieved via the setting of jumpers. The jumper location is indicated in below illustration:



The following settings can be configured:

- Mono/Stereo output selection: The default factory setting is STEREO, and this can be changed to MONO if required. The related jumper is named JP100 and located on the top PCB. Access to this jumper requires removal of the face plate.
- Microphone phantom power selection: This jumper is named JP100, which is located on the bottom PCB close to microphone input connector, settable via side access and thus not requiring any disassembly. The default factory setting is OFF for the use of dynamic microphones, and this can be changed to +12V DC if required for the use of condenser microphones. Please note that the current delivery of this product, as well as the 12V phantom power voltage, are only suitable for back electret condenser microphones. The phantom power supply of this product is not suitable to supply studio microphones which require 48V voltage and larger currents.