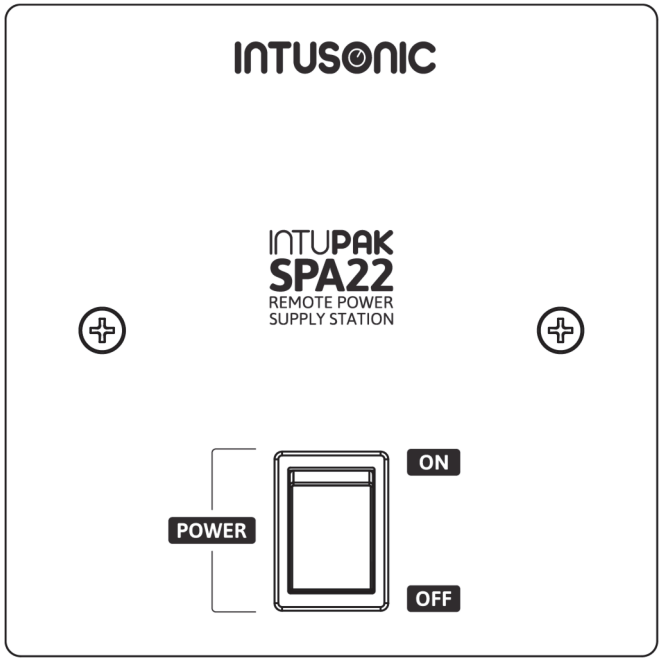
INTUSONIC™ is a brand of
Unitec Industries Limited





INTUSONIC




# INTUPAK SPA22

**Remote Power Supply Station**

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.

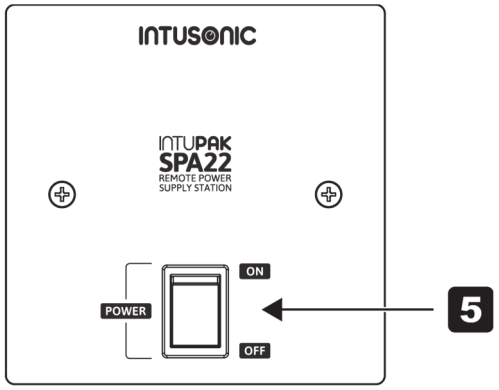
**IT** Questo manuale è scritto in inglese. Per altre lingue, utilizza un servizio di traduzione automatica a tua scelta.

## 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.








**5** **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.

## Technical Data

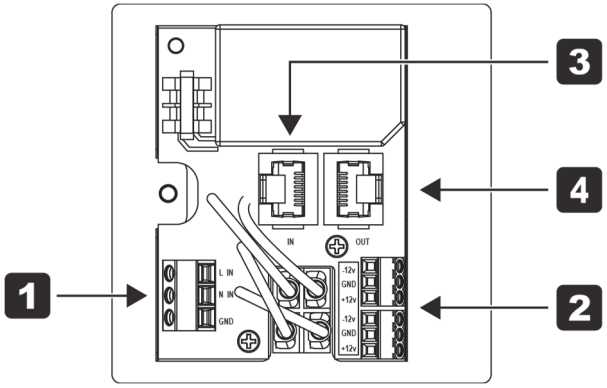
| | |
|---|---|
| Power supply (AC Input) | 85-265V AC, 50-60Hz |
| Power output | +12V, 0.5A / -12V 0.5A (tot. 12W) |
| Dimensions WxDxH (/w switch) | 86x86x50 mm |
| Panel mounting depth | 43 mm |
| Mounting standard | BS5733 |
| Weight | 0.16 kg |

## 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.

## Controls and Connections




**1** **AC Input.** This is a 3-pin 5.0mm terminal strip to connect to the AC supply. Make sure that you only use properly earthed supply lines, and that the L and N denominators are correctly assigned. Do not connect the SPA22 to an unearthed supply line, or omit the earth connection.

**2** **12V DC symmetrical outputs.** These are two 3-pin 3.5mm terminal strip connectors, offering ±12V DC supply voltage. Connect your non-IntuLink™ bus products here. Make sure the polarity designators are correctly assigned. Both of these outputs are in parallel and can be used at the same time.

**3** **IntuLink™ bus input connection.** This is a RJ45 connector using the IntuLink™ connectivity scheme. In an IntuLink™ bus system, connect your central bus processor (e.g. a zoner) to this connector.

**4** **IntuLink™ bus output connection.** This is a RJ45 connector using the IntuLink™ connectivity scheme. In an IntuLink™ bus system, connect your device which needs to be powered (e.g. a remote wall panel) and at the same time needs to be bus-controlled by the device connected to IntuLink™ bus input connection, to this connector. Connections can be used simultaneously with the 12V DC symmetrical outputs (2) as long as the total power draw does not exceed 12W (6Wpr 0.5A@+12V, 6W or 0.5A@-12V).





- 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





The block diagram shows how the functional inputs and outputs relate to the location on the physical product. Depending on the requirements, please make the connections as shown:

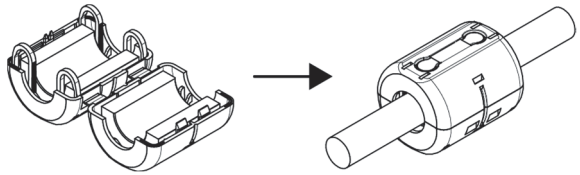
- For non-IntuLink™ bus products, connect one of the ±12V outputs to the target product. Both outputs can be used to feed two separate products, if the application requires it.
- For IntuLink™ bus products, make sure to connect the RJ-45 INPUT connector to the cable going to the central controller, and the RJ45 OUTPUT connector to the remote product that needs to be powered.
- The connectors for non-IntuLink™ bus products and IntuLink™ bus products can be used at the same time.
- Total power of all connected devices shall not exceed 12W.

**WARNING!** Configuring and connecting this product requires opening the product and working on exposed live AC terminals. This work must not be expedited by anyone but a qualified electrician. Disable the AC supply circuit by e.g. pulling the circuit breaker or other suitable means. Use only cables with intact and suitable insulation. Be aware that the warranty may be void unless you are an appointed Intusonic installer, contractor or technical service provider.

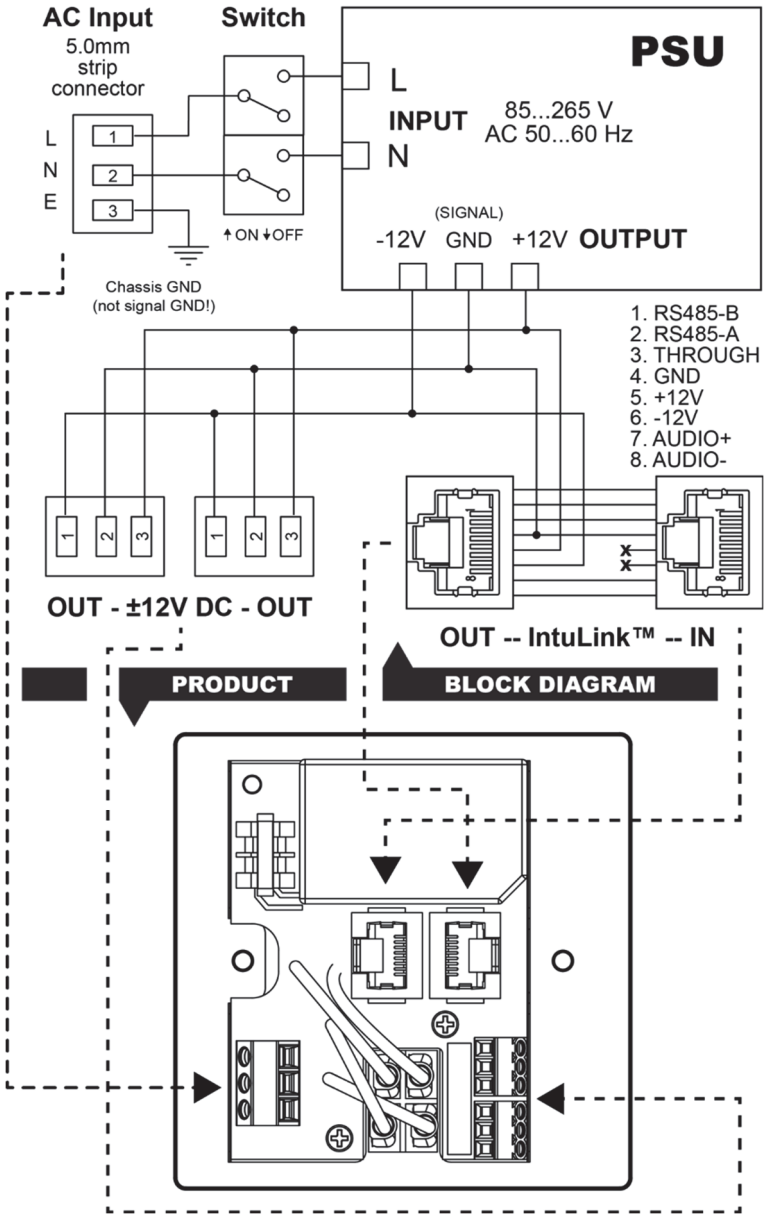
**WARNING!** Do not connect any other devices but Intusonic products with IntuLink™ bus connection to the RJ45 ports of this unit. PC network connections or other manufacturer’s RJ45-based interconnection systems are or may be incompatible, and the attempt of making such connection may result in damage 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 main unit) of the CAT5/CAT6 cable(s).



## Block Diagram & Connections








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:

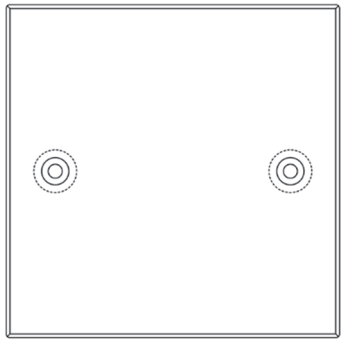
- 1 pc. main unit
- 1 pc. BS5733 rear wall box
- 1 pc. user manual

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

## Mounting options

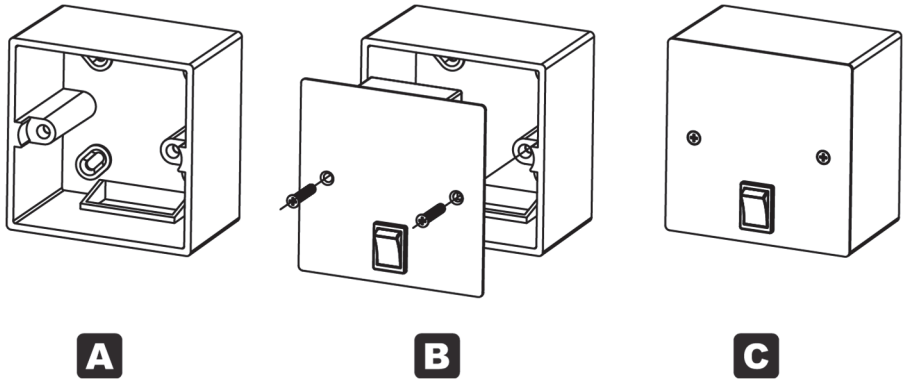
This product is designed to fit a standard UK wall box with 2 center mounting holes, typically a single BS5733-compliant box with 86x86mm dimensions (included with delivery). Multiple wall boxes for specific mounting situations are available as optional accessories.

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

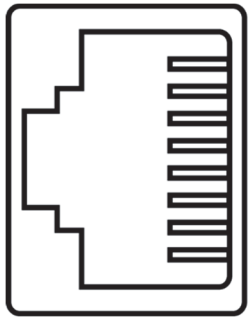
The SPA22 is a wall-mounted power supply module which targets two main applications:

- Supply of power to wall-mounted signal processing products which do not contain any internal power supply. This allows for a neat solution, avoiding hidden unserviceable power supplies in the wall.
- Supply of power to an IntuLink™ bus system, to either make up with loss of voltage by cable length, or to provide power to more IntuLink™ remote control panels than the central unit can provide (central units are typically limited to a maximum of two remote control panels).

The SPA22 is based on a low-noise wide-range switch mode power supply and thus provides cool-running, high efficiency power conversion from any globally common AC supply voltage.

## The IntuLink™ bus system

The SPA22 can provide make-up power to products using 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 -

The SPA22 simply forwards the IntuLink™ data lines and is neither controllable via Intulink™ nor does it constitute a device on the IntuLink™ bus. Nevertheless, the common precautions for connections via the IntuLink™ bus apply.