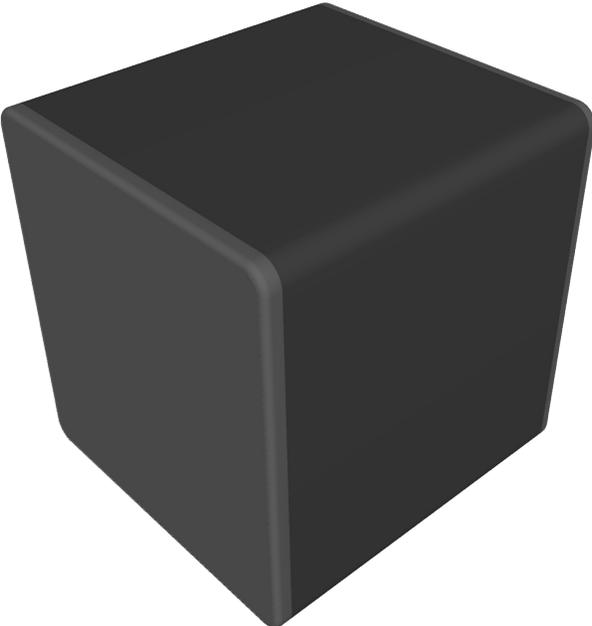


PRO SUB



1. Introduction

Welcome to the ProSub. Please take a little time to read this manual and to follow, as far as practical, the guidelines it contains. We would also draw your attention to the **Important Safety Instructions** on this page.

Careful installation will help ensure that your ProSub performs optimally. Should you have any questions not covered in this manual we are happy to try and answer them either by telephone or email. Contact information can be found on the back page,

The ProSub is a relatively delicate precision engineered product that can be damaged by inappropriate handling. It is also large and heavy. Please take great care therefore when unpacking or moving it. Plan any handling in advance of carrying it out - ideally with a second person to help. Please take care when unpacking or moving the ProSub not to touch any of the drivers. Damage to a driver will at best degrade performance and at worst result in complete failure.

The enclosure surfaces should also be handled sympathetically. Any cleaning should only require a lint-free cloth or a soft brush. Be wary of using any polishes or solvent based cleaning agents.

Important Safety Instructions

Ensure that your ProSub is set to the appropriate mains input voltage before it is connected to a mains socket. The warranty does not cover damage caused by incorrect mains voltage.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
16. The MAINS plug is used as the disconnect device, the disconnect device shall remain readily operable.
17. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.



2. Applications

The ProSub is intended to be used in either a stereo monitoring systems to extend low frequency bandwidth, or to reproduce the LFE channel in a 5.1 channel monitoring system.

The ProSub is intended primarily to partner the Acoustic Energy ProSat, however ProSubs may also be used in pairs to partner the AE22 or AE1 Classic nearfield monitors.

Note: The ProSub may also be used to partner other manufacturers' nearfield and compact monitors.

The ProSub is not magnetically shielded and may cause picture distortion if located too close to a CRT screen or data loss if magnetically sensitive media is brought too close.

2. Positioning

If you are already familiar with the characteristics of your studio and the way speakers perform in it, you may already have a good feel for where to position ProSub. However, installing any new component provides a good opportunity to review an existing set-up and perhaps make improvements.

In principle there is great freedom of position with sub-woofers. In practice, however their performance is fundamentally influenced by the room and their location. Small changes of location, or of the acoustic character of items in the immediate vicinity of a subwoofer, can significantly influence its performance.

If using a single ProSub, place it on the floor along the front wall of the studio room between the front channel satellite speakers. It should be well away, but not equidistant, from the room corners.

If using a pair of ProSubs with AE22 or AE1 Classic nearfield monitors locate each ProSub on the floor, if possible, directly beneath, its corresponding satellite.

In either application, to keep ProSubs clear of any large resonant objects - furniture panels, heating radiators, etc.

Don't worry if, thanks to the architecture or layout of your room, it is not practical to follow these guidelines exactly. The most important thing is to experiment with the different options that are practical and find the best one.

Once your ProSub or ProSubs are connected and working, and you begin to become familiar with their performance, it is likely to be worthwhile experimenting a little more with positioning. For example, moving ProSubs towards walls and corners will increase the level of low bass. This gain may however be at the expense of bass definition and consistency over the listening area.

4. Connecting



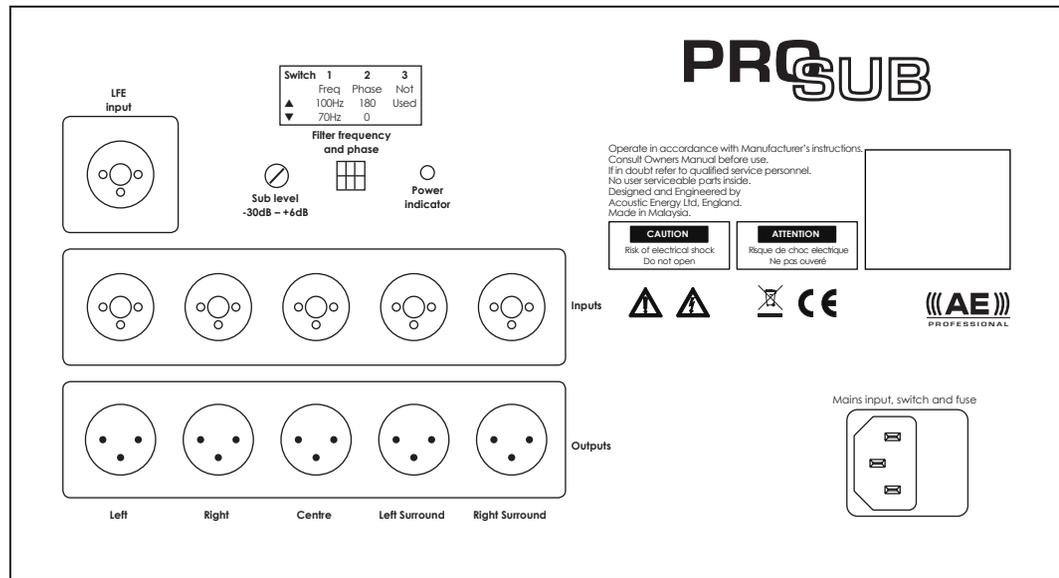
ProSub requires connection to both to mains power and appropriate audio signals. The connection sockets are located on the back panel and illustrated on the adjacent diagram. Leave ProSub switched-off at the mains until all connections are made, and ensure that its level control, also located on the back panel, is initially turned fully anti-clockwise.

Mains Connection

After checking that the mains voltage specified on the rear panel is correct, connect the ProSub via its IEC mains input to a mains wall socket. Use only the supplied mains cable.

Audio Connections

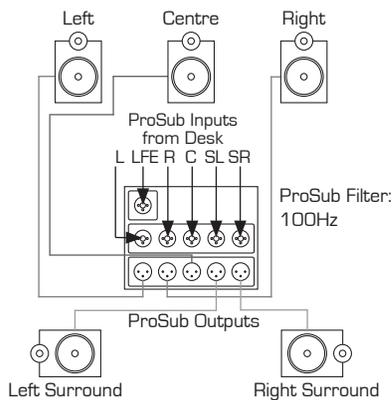
ProSub audio inputs may be on balanced XLR or unbalanced jack connectors. ProSub audio outputs require balanced XLR connectors.



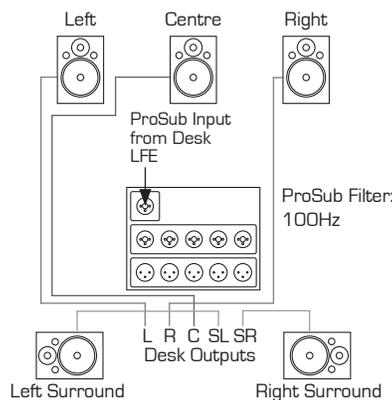
ProSub Connection Schemes

There are a number of connections schemes possible with ProSub. The appropriate one for your installation will depend on the specific monitoring application that ProSub is required to perform. Six typical connection schemes are illustrated below.

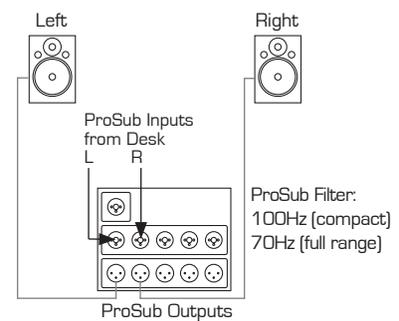
Note: The low frequency element of signals connected to the ProSub's Left, Right, Centre, and Surround inputs is reproduced by the ProSub in parallel with any LFE signal.



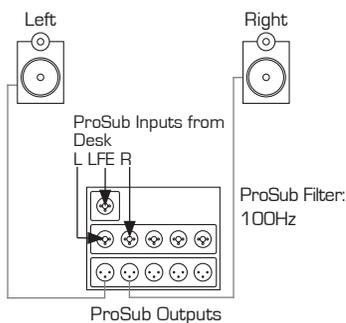
ProSub Connections:
5.1 system with compact satellite monitors: ProSat.



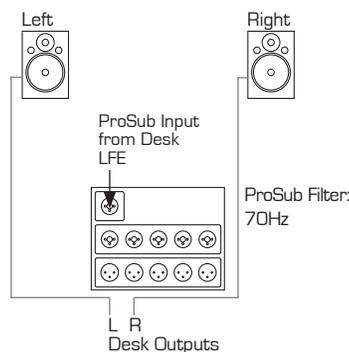
ProSub Connections:
5.1 system with full-range satellite monitors: AE1 Classic via power amplifier (not shown).



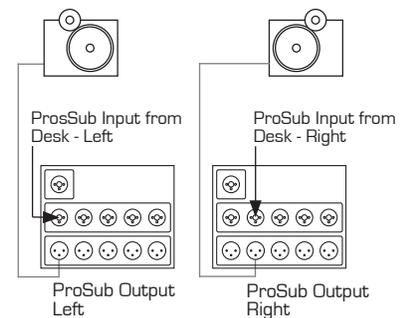
ProSub Connections:
Stereo (music) system with compact (ProSat) or full-range satellite monitors: AE1 Classic via power amplifier (not shown) or AE22 Active.



ProSub Connections:
2.1 [AV] system with compact satellite monitors: ProSat.



ProSub Connections:
2.1 [AV] system with compact satellite monitors: AE1 Classic via power amplifier (not shown).



ProSub Connections:
Stereo (music) system with twin ProSubs and full range satellite monitors: AE22 Active.

5. Control and Setup



ProSub Controls

Accompanying the mains and audio sockets on the ProSub rear panel are a **level control**, a **filter frequency switch**, and a **phase reversal switch**. Their function and use is described in the following paragraphs. If multiple subwoofers are used in monitoring system ensure that each one operates with the same control settings.

Level

The level control adjusts the volume of the ProSub. Begin with the level control set to around 50%. Further level adjustment guidelines can be found in the following paragraphs.

Filter Frequency

The filter frequency control adjusts the upper frequency at which the subwoofer output is filtered. If the ProSub is to be used with ProSat satellite speakers the filter frequency should be set at 100Hz. If the ProSub is to be used with AE22 or AE1 Classic nearfield monitors the filter frequency should be set at 70Hz. The AE22's low frequency extend function should be disengaged.

Phase

The phase switch reverses the subwoofer acoustic polarity. With the switch set to 0° the subwoofer output is in phase with the full range speakers. With the switch set to 180° the subwoofer output is out of phase. Reversing the subwoofer phase can help optimise the sound of subwoofer systems. Further subwoofer phase advice can be found in the following paragraphs.

ProSub Setup

Before listening to your monitoring system make one final check of the cables and connections.

The most important aspect of ProSub setup is its integration with the satellite speakers. Assuming the locations chosen for these are satisfactory, adjusting the subwoofer's **location** in the room, its **level** and **phase** should enable a good results to be achieved.

Select a few short examples of familiar programme material while adjusting the setup. Listen also from a variety of different positions in the studio. Check for balance and consistency of sound - neither too much nor too little bass across the range of programme material and listening positions. Experimentation and careful listening is the key to finding a good subwoofer setup.

ProSub Volume

Setting the ProSub volume is important in terms of both overall system balance and the demands of different types of programme material. You may find that material with an emphasis on music works better with a lower ProSub volume than movie material with an emphasis on "effects". Finding a compromise between the two is a matter of ProSub volume adjustment in parallel with adjusting its position in the room.

ProSub Location

Broadly speaking, the closer ProSub is to the corner of the room (assuming the walls are solid) the more bass it will generate in the room (and the lower its volume need be set). Moving the ProSub closer to a corner however will also tend to reduce the consistency over the listening room (a corner location being the worst in this respect). Positions closer to the corner will also tend to change the character of the bass produced by the ProSub - it will emphasise the very lowest signals more. This change in bass character with location is the key variable that enables a good compromise position for the ProSub to be found.

ProSub Phase

Switching the ProSub phase should be left till last. If a good ProSub location is proving difficult to find, try again with the phase reversed.

6. Specification

Type: Closed box, active subwoofer.

Drivers: Twin 250mm aluminium cone. High-power long-throw magnet system.

Low Frequency Cut-off: - 6dB @ 25Hz

Amplifier: 200 Watts

Low Pass Filter: 2nd order, 70Hz or 100Hz

Input Sensitivity: 600mV for rated output. Level @ 0dB

Dimensions (H x W x D): 350mm x 350mm x 330mm

Weight: 14kg (single, unpacked)

Acoustic Energy reserves the right to modify product specifications.

7. Warranty

The Acoustic Energy ProSub is guaranteed against original defects in materials, manufacture and workmanship for 3 years from the date of purchase.

Under this warranty Acoustic Energy agrees to repair any defect or, at the company's discretion, replace the faulty component(s) without charge for parts or labour. This warranty does not imply any acceptance by Acoustic Energy or its agents for consequential loss or damage and specifically excludes fair wear and tear, accident, misuse or unauthorised modification.

This warranty is applicable in the United Kingdom only and does not in any way limit the customer's legal rights. Claims and enquiries under the warranty for Acoustic Energy products purchased outside the UK should be addressed to the local distributor. If you have reason to claim under the warranty please contact your dealer in the first instance.

8. Contact

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