

INTRODUCTION

Thank you for purchasing a pair of Spirit Absolute 4 P powered speakers, brought to you with pride by the SPIRIT team of Andy, Colin, Chris, James, Simon, Trevor, Martin and Tony, with the support of many others - we hope you will have as much fun using them as we did designing them.

SAFETY PRECAUTIONS

The wires in the mains lead are coloured in accordance with the following code:

Earth: Green and Yellow (Green/Yellow - US)

Neutral: Blue (White - US)

Live: Brown (Black - US)

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The wire which is coloured Green and Yellow must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol.
- The wire which is coloured Blue must be connected to the terminal in the plug which is marked with the letter N.
- The wire which is coloured Brown must be connected to the terminal in the plug which is marked with the letter L.

Ensure that these colour codings are followed carefully in the event of the plug being changed.

To avoid the risk of fire, replace the mains fuse only with the correct value fuse, as indicated on the power amp panel.

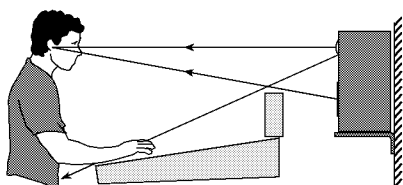
ABOUT ABSOLUTE 4P (4 Power Amplifiers)

Absolute 4P nearfield monitors are designed to provide clean, undistorted sound without the need for acoustically perfect environments or special amplification. To achieve this, only the highest quality components are used. The 25mm catenary-profile ferrofluid-cooled soft-dome tweeter ensures minimal distortion, with extended high frequency characteristics. Not only does this mean a more accurate sound, it also puts less strain on your ears after long periods of high-volume monitoring. The LF driver features a long throw Aerogel (acrylic polymer gel) 170mm cone with a 30mm voice coil for optimum efficiency and power handling. The electronic design of Absolute 4P's constant voltage active crossover, with time compensation for driver alignment, uses high quality components in a circuit that embodies classically simple design principles. The vented cabinet employs a special port design that does more than simply deliver extended bass response; as a result of its carefully chosen dimensions, air turbulence is reduced, contributing to Absolute 4P's smooth, uncoloured low frequency characteristics. The internal powered 100W (LF) and 100W (HF) low distortion power amplifiers, with full protection/limiting for both drivers and amplifiers, will always ensure quality results. The choice of Balanced XLR connector and Unbalanced RCA Phono connector (which can be used simultaneously if desired!) will cover all applications. A selectable 40Hz @ 18dB/Octave High Pass Filter is fitted to allow higher sound levels from bass-heavy music signals, along with a stepped input level control for accurate setup.

Although Absolute 4P is very adaptable, a few basic considerations will ensure the best results:

SPEAKER POSITIONING

Absolute 4P is designed for nearfield monitoring or multi-speaker installation applications, such as recording studio, video editing, multimedia and HiFi/AV systems, so the distance from the speakers to your ears should be shorter than for traditional monitors. This means that the reverberation time and general acoustics of the listening room are less critical. Hard surfaces will, however, reflect higher frequencies, so try to avoid putting Absolute 4P close to side walls, and well away from corners. The control surface of your mixing console may also cause a reflection problem. To minimise control surface reflections, position Absolute 4P as shown in diagram 1.0, using the meter bridge or rear panel to stop sound from both drivers reaching the control surface.



Make sure that your ears can "see" both HF and LF drivers. If your console has no meter bridge, try positioning the Absolute 4P's higher or further behind the desk and keep away from corners of the room. Absolute 4P is designed to be used in the upright position, but if horizontal placement is unavoidable, position them with their high

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frequency drivers to the outer edges. Absolute 4P's low frequencies will generally sound better if the cabinet is near the wall. If possible, provide a rigid surface (e.g. shelf) that is separate from the mixing console and other equipment. The speakers should form an angle of approximately 60(in the listening position, (i.e. should be angled towards the listener(s)).

TERMINATIONS & CABLES

The speaker drivers are connected to the amplifier within the Absolute 4P speaker cabinet. This reduction in the wire length ensures low cable impedance's and low voltage losses between the amplifier and speakers which gives better efficiencies within the system.

The Absolute 4P has balanced XLR connections to minimise external interference to the amplifier. It also allows the connection of unbalanced RCA Phono cables for connecting semi-professional or Hi-Fi products without the use of special conversion leads.

It is possible to operate the Absolute 4P speakers with both balanced XLR and unbalanced RCA Phono input being used at once. (This will not cause any degradation of sound quality.)

STARTING UP/OPERATION

- Ensure Absolute 4P speakers are switched OFF and plugged into the mains supply.
- Connect the audio source to XLR/RCA Phono input and set level control to Minimum.
- Select the 40Hz High Pass Filter (if required).
- Switch ON the Absolute 4P speakers - Note: 'Blue' Power led will permanently be ON. 'Red' Protect LED will come on for 2 seconds then switch OFF, indicating that your 4P's are ready for use.
- Set the level required using the Level control.

Note:

If Protect LED comes on during operation; the speaker is automatically limiting the level into the speakers to prevent damage to them. Turn down the input level!

If Thermal LED comes on during operation; the amplifier is running too HOT!! Turn down the input level.

FAULT FINDING

There are no user serviceable parts

No Power ON Led - Check mains supply, Mains fuse blown, mains lead fuse blown.

Thermal LED ON - Check Heatsink fins are vertical, Uncover speakers, ensure free movement of air.

No signal - Check input cables, try alternative input (XLR or Phono input).

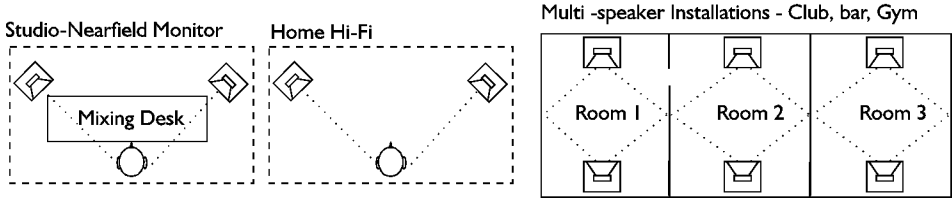
Hum present on signal when using Phono input - Ground loop problem. Use XLR Balanced input.

FEATURE DESCRIPTIONS

- **Power ON LED** - Indicates mains is plugged IN and amplifier is ready.
- **Protect LED** - Indicates the amplifier is in protect mode. The speakers are automatically being limited by internal limiting circuit for the protection of the amplifier and speakers.
- **Thermal LED** - Indicates the heatsink has reached 65(C and is warning the user that the amplifier will shutdown (within 5-10 minutes) if the speaker is continuously used in this way.Overheating can be caused by many things: Speaker too close to a heat source, Heatsink is covered, Speaker is positioned on its side without the heatsink repositioning (see below) etc.
- **Balanced XLR Input**-Nominal +4dBu input level. Pin 1: Ground; Pin 2: Hot (+); Pin 3: Cold (-).
- **Unbalanced RCA Phono** - Nominal -10dBV input level. Inner - Hot (+); Outer - Ground.
- **40Hz High Pass Filter switch** - It is recommended that this switch should be in. The High Pass Filter is designed to give you more power. Note: The protection circuit is likely to 'cut-in' at lower frequencies (<40Hz).
- **Level control** - This control sets the speaker amplifier gain. Adjust this level to set the preferred operating level.

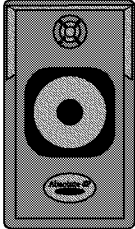


APPLICATION



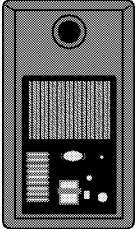
ROTATING THE AMPLIFIER

If the Absolute 4P speakers are positioned horizontally, it will be necessary to rotate the internal amplifier by 90° to allow the heat to disperse from the amplifier heatsink fins. This is a simple task and only requires the use of a screwdriver to remove 8 screws.



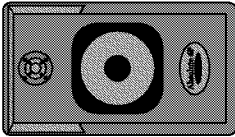
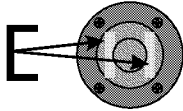
▲ Normal Vertical Positioning

- Remove 8 screws.
- Carefully remove the amplifier
- Rotate the amplifier
- Re - screw the 8 screws into the speaker cabinet

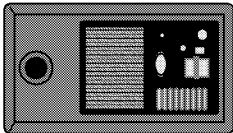


Fitting Tweeter Protection Bars

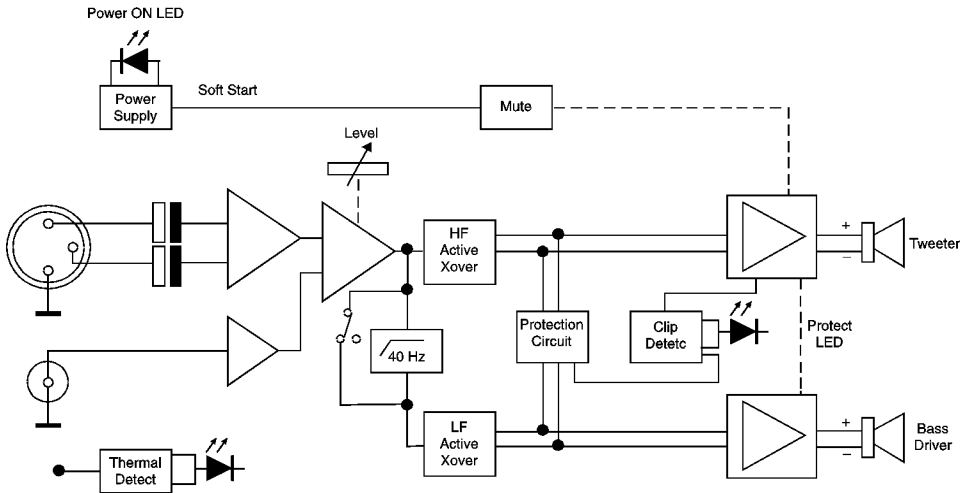
Absolute 4P speakers are supplied with two chrome "U" bars which are magnetic and fit on the screws which hold the tweeter in. The bars prevent accidental damage to the tweeter.



▲ Horizontal Speaker Positioning (N.B: Amp has been rotated by 90°)



BLOCK DIAGRAM



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Specifications	
Driver complement	170mm LF 25mm HF
Power Amplification Distortion (Power amplifier/crossover) @ 3dB below clipping	100W (HF) + 100W (LF) RMS <0.01% @ 1kHz
Frequency response	40Hz - 20kHz, +1/-3dB (half space on axis, filter out)
Crossover	2.4kHz (4th order constant voltage linear phase)
Input impedance	10k Ohm nominal balanced
Maximum input level	+22dBu
Efficiency (Max. SPL)	115dB SPL @ 1m (half space)
Power Supply	230V AC 50Hz, 150VA max. (UK)
Dimensions (HxWxD)	400 x 250 x 305 mm 16 x 9.9 x 12"
Weight	26kg (57lbs) per pair

WARRANTY REGISTRATION

- Owner means the purchaser of the Equipment from Spirit by Soundcraft or its dealer, who is the legal and beneficial owner at the time the Warranty claim is made.
- Dealer means the person other than Spirit by Soundcraft (if any) from whom the owner purchased the equipment, provided such a person is authorised for this purpose by Spirit by Soundcraft.
- Equipment means the equipment sold with its warranty sheet.
- If within the period of twelve months from the date of the delivery of the equipment to the owner, it shall prove defective by reason only of faulty materials and/or workmanship to such an extent that the suitability for the purpose for which it has been designed is materially affected, the equipment or, with the consent of Spirit by Soundcraft or the dealer, the defective component should be returned to the dealer or to Spirit by Soundcraft and subject to the following conditions the dealer or Spirit by Soundcraft will repair or replace any defective component. Any equipment or component replaced will become the property of Spirit by Soundcraft.
- Any equipment or component returned will be at risk of the owner whilst in transit (both to and from the dealer or Spirit by Soundcraft) and postage and/or delivery charges must be prepaid.
- This warranty shall only be available if:
 - the warranty registration has been returned to Spirit by Soundcraft within thirty days of purchase of the equipment by the owner.
 - the equipment has been properly installed in accordance with instructions contained in Spirit by Soundcraft's manual.
 - the owner has notified Spirit by Soundcraft or the dealer within fourteen days of the defect appearing.
 - no persons other than authorised representatives of the Spirit by Soundcraft or the Dealer have effected any replacement of the parts or carried out maintenance, adjustments or repairs to the equipment.
 - the owner has used the equipment only for such purposes as Spirit by Soundcraft recommends, with only such electrical and operating supplies as meet Spirit by Soundcraft's specifications and otherwise in all respects in accordance with Spirit by Soundcraft's recommendations.
- Defects arising as a result of the following are not covered by this warranty: mishandling, chemical, Electro-chemical, Electro-magnetic or electrical influences, accidental damage, acts of God, neglect, deficiency excess or surges in electrical power, air-conditioning or humidity.
- The benefit of this warranty may not be assigned by the owner.
- Owners who are consumers should note that their rights under this warranty are in addition to and do not affect any other rights to which they might be entitled against the seller of the equipment.



Absolute 4P - Warranty Registration

Name.....	What application will you use your
Company Name.....	Absolute 4P speakers for?
Address.....
.....
Post Code.....Country.....
Date of Purchase.....
Purchase Price.....

Please send this warranty registration to: Spirit Registrations Unit (address below)

Spirit Dealer

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