

SA300 Amplifier

OWNERS MANUAL

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SAFETY INSTRUCTIONS

Caution:

To avoid the risk of electric shock do not remove the panel from the cabinet. If this unit fails or has a serious deterioration in performance then refer repair to the dealer where you purchased the unit.

- 1) Please read these instructions carefully and keep them for future reference.
- 2) Please heed all warnings.
- 3) Please follow these instructions.
- 4) Do not use this apparatus near water or allow to get wet.
- 5) Keep well ventilated.
- 6) Do not install near heat sources such as radiators, stoves etc.
- 7) Protect the power cord from damage.
- 8) Disconnect from the power supply during lightning storms or extended periods of inactivity.
- 9) Refer all servicing to qualified service personnel. If the unit develops a fault of any sort please refer repair back to your dealer.
- 10) Do not force the controls or switches further than their normal stops.
- 11) Clean with a dry soft cloth. If you do use polish, then apply polish to cloth not directly to the unit.

CONNECTING UP YOUR SA300

Always switch off your system before disconnecting or connecting any wires.

To make connecting up of the SA300 as versatile as possible we have included two separate inputs. One Neutrik Speakon socket and two pairs of gold plated RCA sockets for inputs and another pair of gold plated RCA sockets to daisy chain the signal to another source. This makes the SA300 amp extremely easy to connect simultaneously to both Hi-Fi and AV surround systems.

The high level input, is an unbalanced dual channel (stereo) input that uses a professional touch proof Neutrik Speakon connector. Signals for this input would normally be sourced from the left and right speaker terminals of the main system amplifier. The advantage of this method is that the SA300 receives exactly the same signal as being supplied to the main speakers. This means that the character and tonal balance of the bass from the main speakers is carried through to the sub bass.

The low level input is via one set of the gold plated RCA to RCA connectors marked as "IN" on the front panel. Signals for the low level input are unbalanced and would normally be sourced from the LFE output of an AC3 decoder. Alternatively the low level input can be connected to a dedicated sub out of a processor (for single outputs connect to the input marked "Mono"), or to stereo pre-amp output where available.

CONNECTING UP USING THE HIGH LEVEL INPUT

Figure 1. Shows a diagram on how to connect the high level input. Using the optional Neutik lead, connect the SA300 to the output of your amplifier via your existing speaker plug or to a spare set of speaker terminals if available. In effect you are Bi-Wiring your SA300 to your power amp. Please note that the Neutrik cable has only three leads and is arranged this way to preserve the star earthing of your amplifier (assuming it has a star earth arrangement).

To connect the high level lead you will need to connect the RED wire to the RED terminal of the RIGHT hand speaker terminal of your power amp. Connect the YELLOW wire to the Red terminal of the LEFT hand channel speaker terminal of your power amp. The BLACK wire is connected to either one of the BLACK speaker terminals of your power amplifier. This is important as some power amplifiers do not like their black terminals joined. Now plug the neutrik connector into the high level input of the SA300. The Neutrik plug will fit only one way as it has a key. Next push the plug in then turn clockwise until you feel it latch. To undo the Neutrik plug, pull back the silver lever on the Neutrik plug and turn counter-clockwise.

Please Note: It may not be possible or advisable to connect the high level input directly to an amplifier that has a class d digital output. Please check with the supplier of your amplifier that this form of connection is possible.

Method 1 - To Connect to a Power Amplifier Using the High Level Input

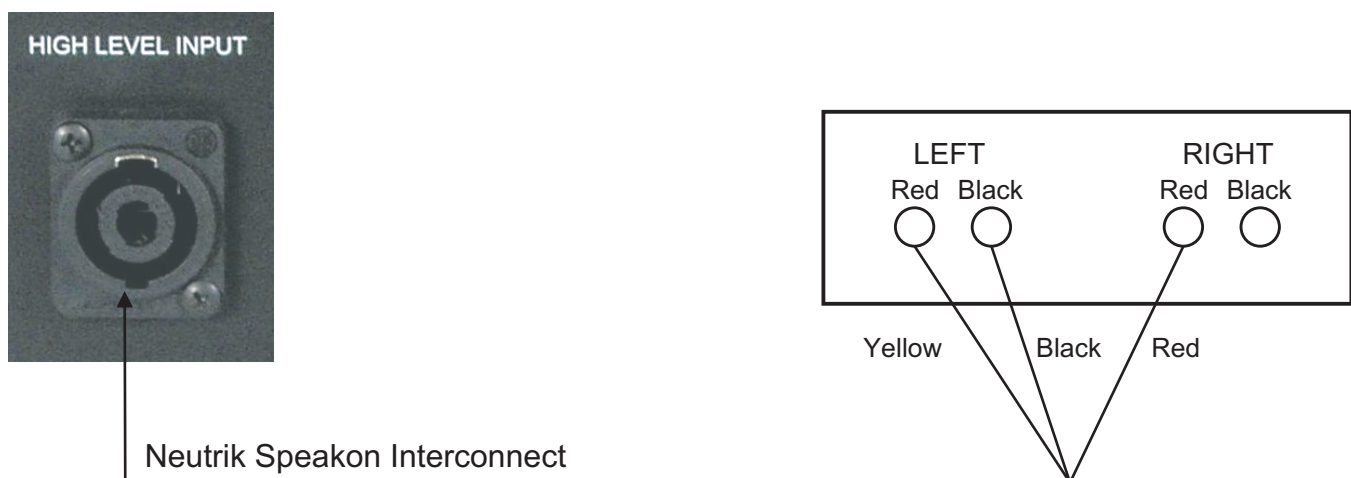


Figure 1.

CONNECTING UP USING THE LOW LEVEL INPUT

Figure 2. Shows a diagram on how to connect the low level input. Using the supplied RCA to RCA interconnect, plug one end into the SA300 low level input and the other end into the dedicated sub output on your amplifier or processor. If a sub out is not available then you can use a spare set of pre-amp outputs.

If you only have a single sub woofer output socket on your equipment, then connect up using one of the pairs of leads. In this instance use the Left input on your SA300 sub.

Please Note that high and low level connections can be used at the same time if required. This has the advantage of being able to connect up a Hi-Fi and AV system simultaneously.

Method 2 - To Connect to the Amplifier Using the low level input

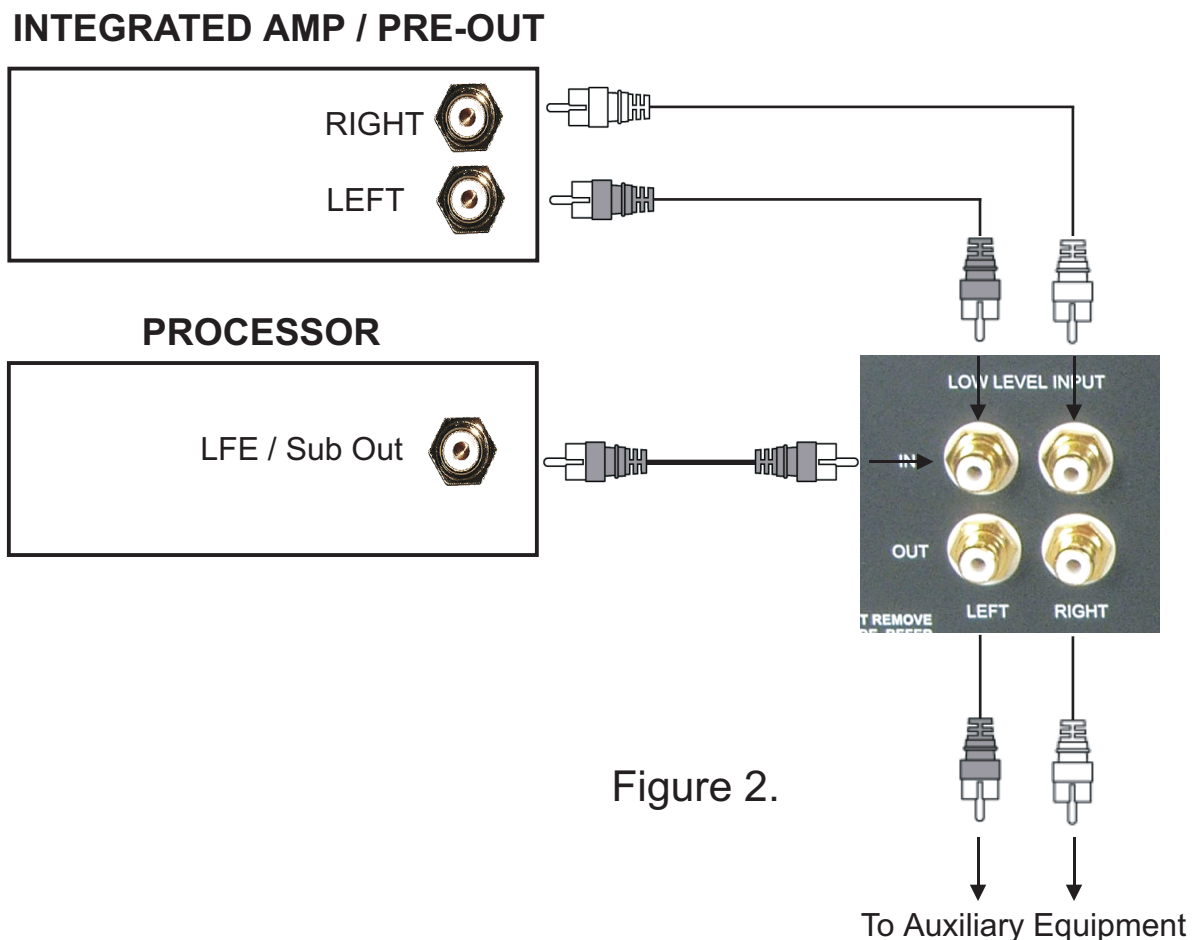


Figure 2.

SETTING UP YOUR SA300

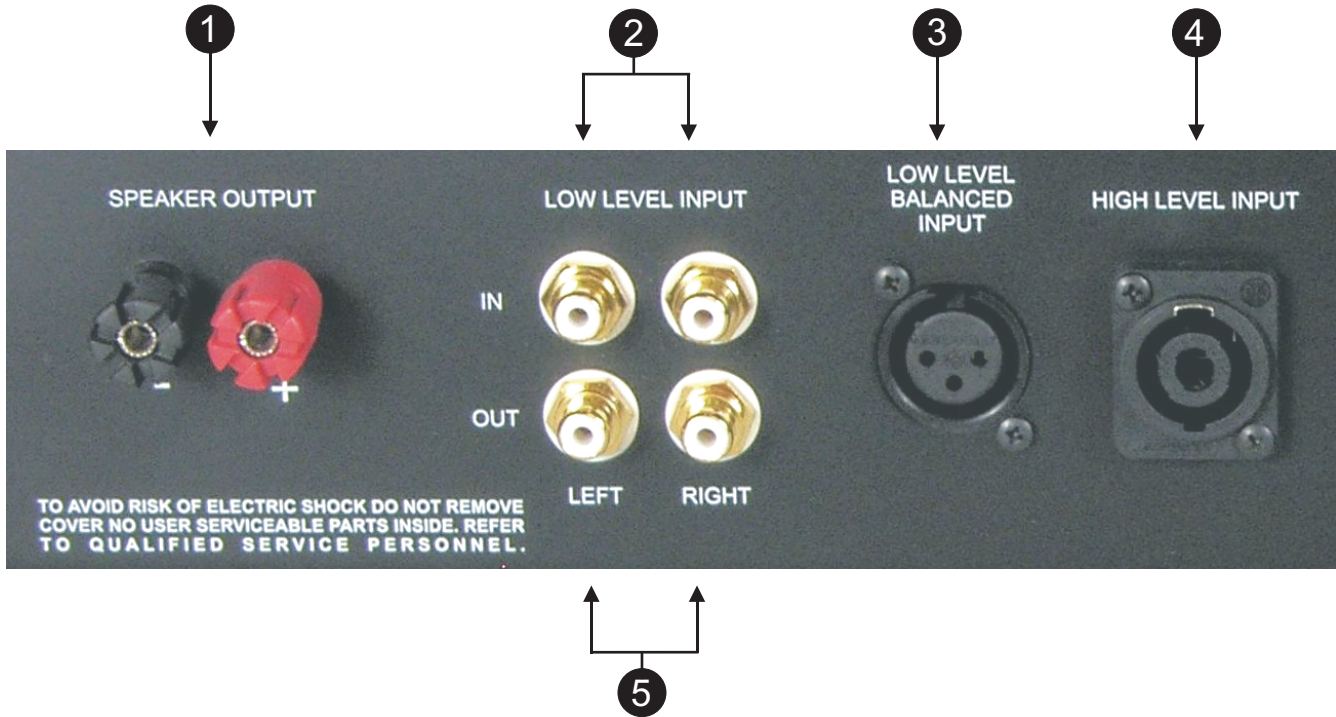
Your SA300 subwoofer has the unique ability to be connected to both a Hi-Fi and AV Processor simultaneously. Allowing you to control both the frequency and gain of each input independently of each other, two sub bass engines in one amp!

- Connect your SA300 as shown in Figure 1 or Figure 2. Then attach your subwoofer to the power supply using the power cable supplied, at this point have the power switch in the off position.
- Now turn both the high level and low level gains to the minimum position, and the frequency control to 120Hz. If using the subwoofer out from an AV Processor then you may select the LFE position. Turn the phase control to position 1.
- Now switch the power on, and play a track which you are familiar with that has bass content (If you are using both inputs then start by setting the high level input first using an audio CD then repeat the setting up procedure on the low level input using a film track).
- Adjust the gain control until the level of the bass from your subwoofer matches the level from your main system speakers. Now slowly adjust the frequency control counter clockwise until the output from the subwoofer meets the lowest notes from your main speakers (the crossover point), you may need to adjust the gain control again to match your main system speakers.
- The SA300 has a fully adjustable phase control to allow partial cancellation of the frequencies around the crossover point between the two systems. Listen to the quality of the bass with the phase in the 0 deg position and then slowly adjust towards the 180 deg position. Choose the position that subjectively offers the tightest cleanest bass.

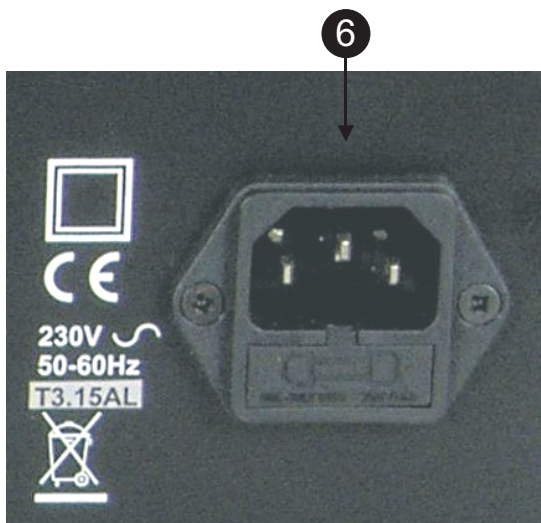
Following these setup instructions will get you up and running, but over a few days with practice and a lot of listening you will be able to fine tune the system for seamless integration.

As a rule it is not usually necessary to have the subwoofer at high volume levels, but to

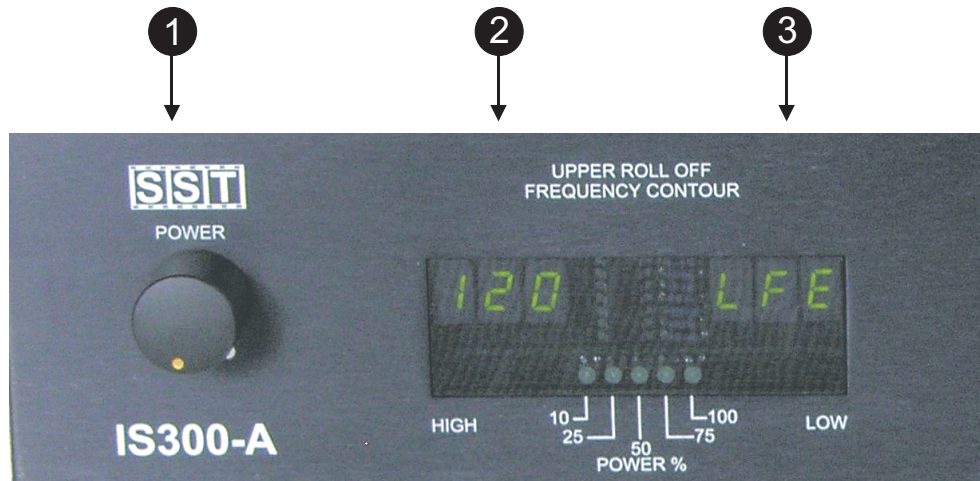
CONTROLS AND THEIR FUNCTIONS REAR



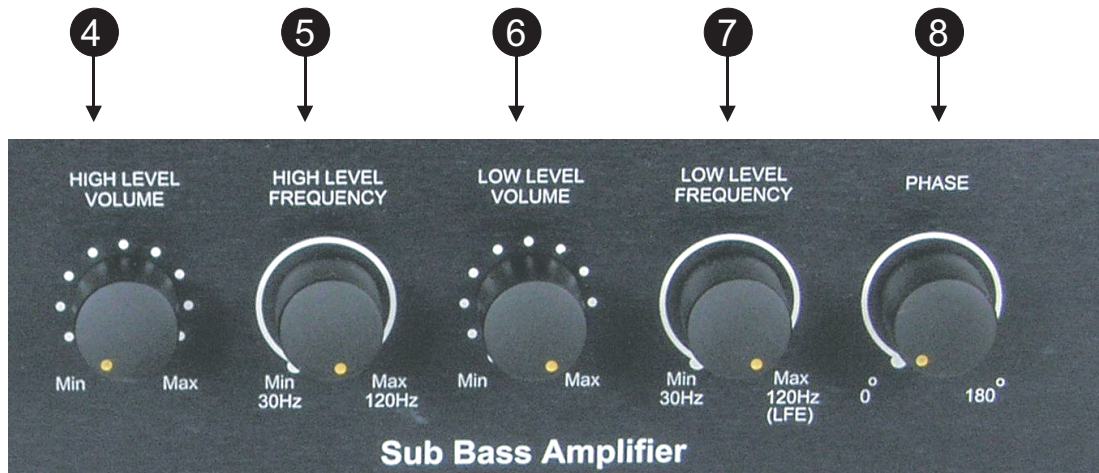
- 1) Amplified output to drive the subwoofer
- 2) Low Level Input RCA connectors for connection to pre-amp output, Dolby output or other dedicated sub outputs
- 3) Low Level Balanced input for connection to professional equipment.
- 4) High Level Input for connection to amplifier outputs
- 5) Low Level Output RCA for linking signal through to other equipment
- 6) Mains power supply input - IEC connector



CONTROLS AND THEIR FUNCTIONS FRONT

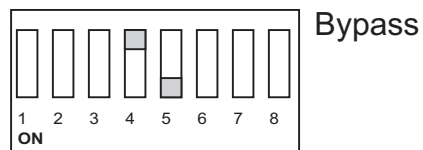
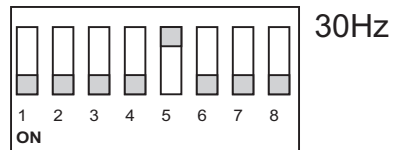
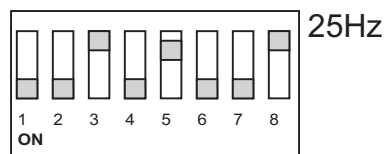
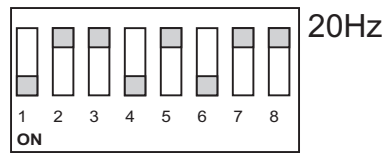


- 1) Power On / Of Switch
- 2) High Level Frequency Display
- 2) Low Level Frequency Display



- 4) High Level Gain Adjust
- 5) High Level Frequency Contour, set up so as to integrate with main loudspeakers.
- 6) Low Level Gain Adjust
- 7) Low Level Frequency Contour, set up so as to integrate with main loudspeakers. In the L.F.E. Position the filter is opened wide to allow the optimum performance from processor built in bass filtering.
- 8) Continuously Variable Phase Control

PARAMETRIC EQ. SWITCHING



For bypass switch 4 must be set to the OFF position and Switch 5 to the ON position when in bypass mode switches 1,2,3,6,7 and 8 have no effect

SPECIFICATION

Features:-

Independent frequency adjust and gain controls
Fully adjustable phase control
Discrete Bipolar DC Coupled
Thermal Protection
S/C Protection
Selectable Eq
LED Vu

Specifications:-

Power Output	200W RMS into 8 Ohms
I/P Sens.	
High Level	1.0V
Low Level Unbalanced	100mV
Low Level Balanced	300mV
Frequency Adjust	
High Level	30Hz to 120Hz
Low Level	30Hz to 120Hz then LFE 2.0kHz
Eq	6dB @ 15,20,25 or 30Hz + Override straight through
S/N	<100dB
Distortion	0.05%
Power Requirements	115 / 230V AC 50 / 60 Hz