DAYTON AUDIO

HIGH PERFORMANCE SUBWOOFER AMPLIFIER

Model: SA230 User Manual

DAYTON AUDIO

POWER

PHASE

FREQ

GAIN

SA230   SUBWOOFER AMPLIFIER
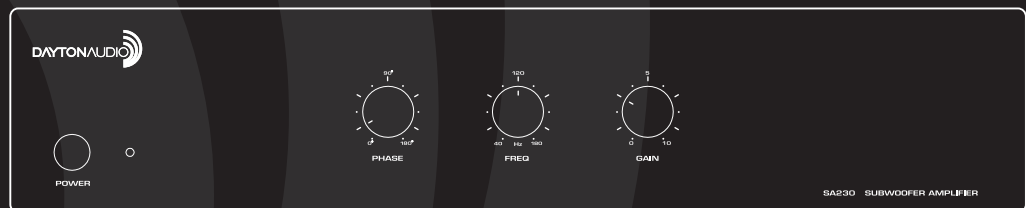
Thank you for purchasing the Dayton Audio® SA230 subwoofer amplifier. Its tabletop design is compatible with many other popular electronic devices and multimedia furniture. The SA230 offers its owner the freedom to use a stand-alone, high quality amplifier to operate a subwoofer speaker system

FEATURES:
• Low-level, high-level, and LFE inputs
• Mono Class AB output stage for solid, well defined output
• Manual, auto, or triggered on/off modes for integration into any automated system
• Selectable bass boost
• Draws less than 1 watt in stand-by mode
• Heavy-duty steel chassis with brushed aluminum faceplate
• Adjustable phase, gain, and crossover
• Pop-out adjustment knobs keep settings from being disturbed easily
• Switchable 120/240V input voltage

INSTALLATION:
The SA230 is designed to provide high fidelity subwoofer amplification and is tailored for home audio and home theater audio systems. It is not recommended for use in DJ, pro sound, or other high-duty-cycle applications. For home audio systems, use the unit as it comes out of the box. Care should be taken to leave some room for air circulation above the amplifier. Stacked components that utilize rubber or plastic feet should provide adequate clearance in most situations.

NOTE: The SA230 features an adjustable bass boost control that is preset for a 9 dB boost @ 40 Hz, which optimizes the Dayton Audio® VS8 8" Universal Low-Profile Subwoofer. The control may be readjusted or bypassed as desired, please see Section 7.

FRONT PANEL:
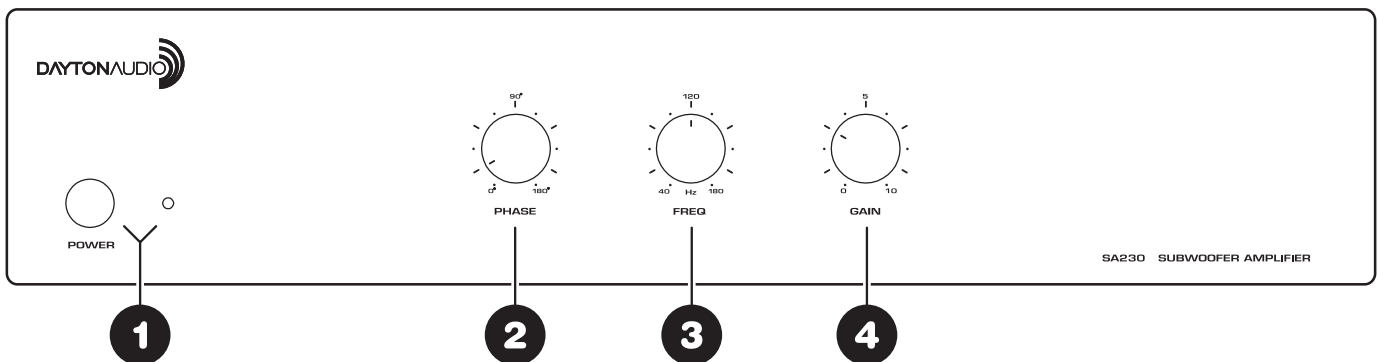
1. Power Switch / Indicator LED
Front panel pushbutton power switch turns the amplifier on and off. When the indicator LED is lit dimly, the amplifier is in standby mode. When the LED is lit brightly, the amplifier is fully active.

2. Phase
Adjustable phase compensation from 0 to 180 degrees. Corrects phase anomalies that result from differing listening distances between the subwoofer and main speakers, which can cause poor acoustic summation around the crossover point. In most situations the control knob should be left at 0 degrees, but for the advanced user it can be set either by ear or with the aid of measurement instruments.

3. Frequency
Adjusts the low-pass crossover frequency from 80 Hz to 180 Hz. When using the Left/Right inputs, this adjustment will allow you to properly integrate the subwoofer with the satellite or main speakers. It is recommended to experiment with different settings until the smoothest transition between subwoofer and speakers is achieved.

4. Gain
Sets the overall level of the amplifier, used to match the output of the subwoofer to the rest of the speakers in the system. If the source output has a variable control, we recommend that the user spend a moment or two determining the best balance between the two controls. When a balance is found between low noise, linear level control, and sufficient level to drive the amp to the required output, the gain knob can be considered to be the "volume control" for the subwoofer system.

REAR PANEL:
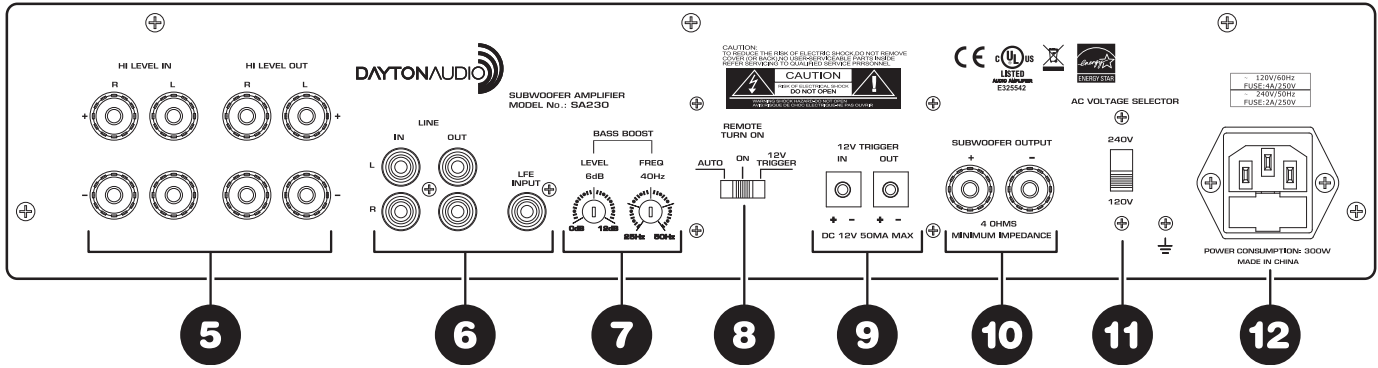
5. High-Level Inputs

Speaker level inputs terminated with binding post jacks that are compatible with banana-type plugs, bare wires, or spade terminals. These inputs facilitate connection of a full-range amplifier's speaker level output to the input of the subwoofer amp, using standard speaker wire. A mono signal is derived from the stereo source, which then feeds the subwoofer amplifier crossover input.

6. Line Inputs

RCA-style jacks receive the audio signal from standard line-level audio sources. When used in a two-channel stereo system, both the left and right audio inputs should be connected and are internally summed to a mono output. The adjustable crossover is in effect when using the left or right inputs. When using an amplifier with an audio source that is mono and pre-filtered, the LFE input should be used; this bypasses the onboard low-pass crossover for more accurate reproduction of the incoming signal.

NOTE: Bass Boost is active on LFE and L/R inputs.

7. Bass Boost

Allows the user to add boost to the low end response by selecting a bass boost frequency from 25 Hz to 50 Hz and a boost level from 0 to 12 dB. The controls are preset for a 9 dB boost @ 40 Hz, which optimizes the Dayton Audio VS8 8" Universal Low-Profile Subwoofer, but may be readjusted as desired. Simply remove clear acrylic cover to access controls.

8. Remote Turn On

Selects the turn-on stimuli that will put the amplifier in "Ready" mode. "12V trigger" setting relies on voltage going into the 12V trigger input to activate the amplifier. "Auto" setting senses a signal on the RCA line-level inputs and automatically puts the amp in ready mode. "On" setting puts the amp constantly in "Ready" mode so that it can be controlled by the master power switch on the front panel. In "Auto" mode, the amplifier will take approximately 15 minutes to turn off from "Ready" to "Standby" mode.

9. 12V Trigger Input

The 12V trigger input is a handy feature when connecting the amplifier to an automated audio system. The Phoenix connectors will accept up to a 12V DC output from another device, or from a separate power supply. When the trigger input is energized, the amp turns from "Standby" to "On" mode. When using the SA230 with a home theater receiver without a trigger output, the voltage can come from a 12V "wall wart" plugged into the receiver's switched outlet and the amplifier's trigger input.

10. Speaker Outputs

Speaker level output connections carry the amplified signal to the subwoofer drivers. The binding posts will accept bare wire, banana plugs, or spade plugs.

NOTE: The output load must have a minimum of 4 ohms impedance!

11. Voltage Selector Switch

This switch allows the user to select 120V or 240V operation. The unit is set at the factory for 120V operation and contains a 5A, 250V fuse. When operating at 240V be sure to change the fuse to a 2.5A, 250V fuse.

12. AC Power

The SA230 is shipped standard for U.S. operation; simply connect the included IEC power cord to your wall outlet. For overseas operation, a separate power cord may be required and is not included. In stand-by mode it draws less than 1 watt.

SPECIFICATIONS:

Rated Power Output:	(1 % THD) 156 Watts RMS into 8 ohms, 233 Watts RMS into 4 ohms
Signal to Noise Ratio:	85 dB A-weighted
Input Impedance:	12K ohms
Bass Boost:	25 Hz – 50 Hz
Low Pass Adjustment:	40 Hz – 180 Hz
Phase Adjustment:	0° – 180°
Gain:	0 dB – +10 dB
Dimensions:	17-1/4" W x 3-3/4" H x 13-7/8" D
Power Requirements:	120/230 VAC, 50 Hz/60 Hz
Stand-by Power Rating:	120V 0.82W
Weight:	18 lbs.

ENERGY STAR

NOTES ABOUT HUM:

While the SA230 has been designed to minimize the possibility of hum in the subwoofer system, it is still possible that a hum will occur in rare circumstances. Its safety grounding can create a path for small amounts of 60 Hz energy to travel trough the line-level audio system. While not dangerous, this energy can cause difficulty with the subwoofer auto signal sensing circuit, and at the very least will interfere with the quiet enjoyment of your system. The first course of action should be trying to ensure that all of the audio components are connected to either the same electrical outlet, or at least into the same circuit branch. Next, cable TV systems are notoriously the culprit, so be sure to try disconnecting all coaxial feeds that are connected to the system. If this solves the problem, install a coaxial line isolator and reconnect the system. In the very worst case, a line-level audio isolator/transformer connected to the line-in of the subwoofer amplifier will usually solve the problem.

Important Safety Instructions

To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified personnel. To reduce the risk of fire and shock do not expose unit to rain or moisture. The unit should be connected to an earth grounded AC electrical socket. The unit should be operated in a well ventilated area. Minimum clearance is 2 inches from the ventilation openings.

CAUTION
RISK OF ELECTRICAL SHOCK
DO NOT OPEN
WARNING:SHOCK HAZARD-DO NOT OPEN.
AVIS:RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR.

Note: Unit is set at the factory for 115V operation. Be sure to change the fuse to a 2.5A rating before switching to 230V operation.

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