

# Beale Street Audio

A120

Class D 120W Subwoofer Amplifier

## User Guide



Get Reale. Get Beale.™

# Important Safety Instructions



**CAUTION:** To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.

## • Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

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 a 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 polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are 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.

## PORTABLE CART WARNING



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. **CAUTION:** Servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
17. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
18. Where an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
19. **CAUTION:** Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

<b>APPLICABLE FOR USA, CANADA OR WHERE APPROVED FOR USAGE</b>
<b>CAUTION:</b> TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE PLUG TO WIDE SLOT, INSERT FULLY.
<b>ATTENTION:</b> POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

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# Introduction

Congratulations and thank you for purchasing the Beale Street Audio A120 Subwoofer Amplifier!

The A120 may be small in physical appearance but its got all the muscle you need to drive even the most demanding subwoofers to house thumping levels.

The A120 is a Class D 120 Watts amplifier that when properly installed, runs cool under almost any load.

The A120 features a stereo/mono line level audio input that can receive full band audio from any audio amplifier, receiver or preamp or an LFE input from an appropriately featured device.

The A120 also features a stereo speaker level input. Amplified stereo audio will pass through the A120 full-band and unprocessed to a pair of connected stereo speakers. The speaker level input will also be processed by the A120 crossover, phase and volume controls to enhance and optimize low frequency content. This feature is an easy way to add amplified in-wall or in-ceiling subwoofers to multi-room audio amplifiers that do not have zone-specific line level outputs.

The adjustable crossover allows fine-tuning the A120 Sub OUT setting to properly complement any full-range speakers or room conditions.

In addition the A120 features a phase adjustment that provides sub performance optimization given the sub's placement relative to the main speakers.

The A120 is audio-sensing so anytime an audio signal hits the A120 line or speaker level inputs, the amp will instantly turn ON. The amp will also turn itself OFF after 15 minutes if no audio signal has been detected. There is also a 12VDC Trigger that will turn the A120 ON when 12-24VDC is applied and turn the amp OFF when the voltage is removed.

The A120 is the perfect match for many applications but makes a particularly great running mate with the Beale Street Audio D2.1 Stereo amp with subwoofer out, (see the system illustrations in the Connections section).

Please read and follow the instructions in this User Guide to assure you are getting the most from your new Beale Street Audio D2.1 A120 Subwoofer Amplifier.

# Features

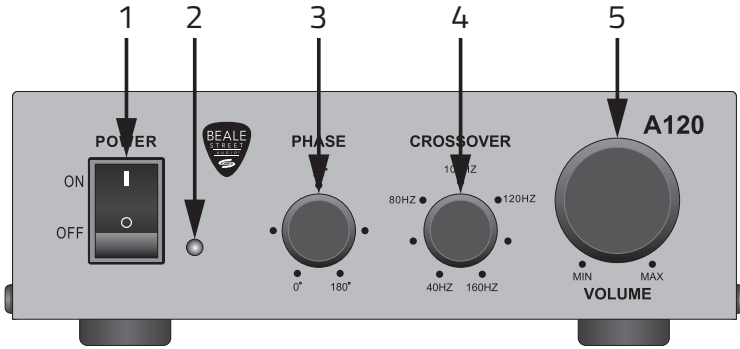
- Compact Size...Fits Almost Anywhere
- Cool, Efficient Digital Design
- Stereo Or Mono Audio Line Level Input (RCA)
- Stereo Speaker Level Input and Passthrough
- Adjustable Subwoofer Crossover Frequency
- Adjustable Phase Settings
- Audio Sensing
- 12/24VDC On/Off Trigger Input
- 110/220V

# What's Included

- 1 - A120 Amplifier
- 1 - AC Power Cord
- 1 - User Guide

# Front Panel Features

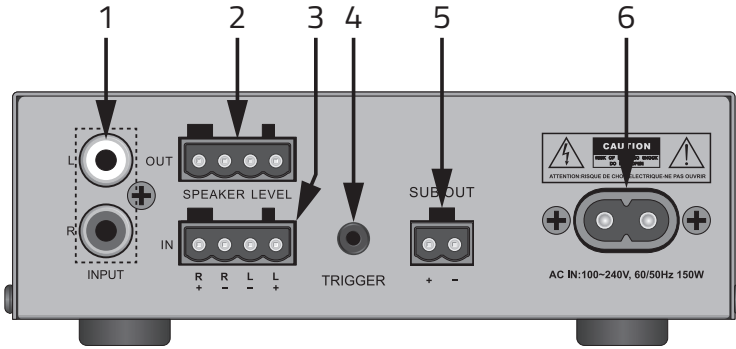
This is the stuff on the front panel...



- 1. POWER** - One, switch. Set to the ON position to turn power to the amp ON. Set to the OFF position to turn power to the amp OFF.
- 2. POWER LED** - One, green LED. Green LED illuminates when the A120 is connected to AC power and turned ON.
- 3. PHASE** - The Phase setting allows compensation for subwoofer location relative to the main speakers. Adjust the Phase setting to the point of highest sub audio output.  
RANGE: 0° to 180°.
- 4. CROSSOVER** - The Crossover sets the frequency at which audio content will pass to the A120 Sub OUT.  
RANGE: 40Hz to 160Hz.
- 5. VOLUME** - Adjusts the A120 audio output level to the connected subwoofer. Set to an appropriate level for a smooth, natural sounding transition to extend and enhance the low frequency output of the full-range speakers connected to Speaker Level OUT. (Oh OK...just go ahead and crank the bass! We know that's why you really bought this!)  
RANGE: MIN (OFF) to MAX (Eyeballs bouncing around in eye sockets.)

# Rear Panel Features

This is the stuff on the rear panel...

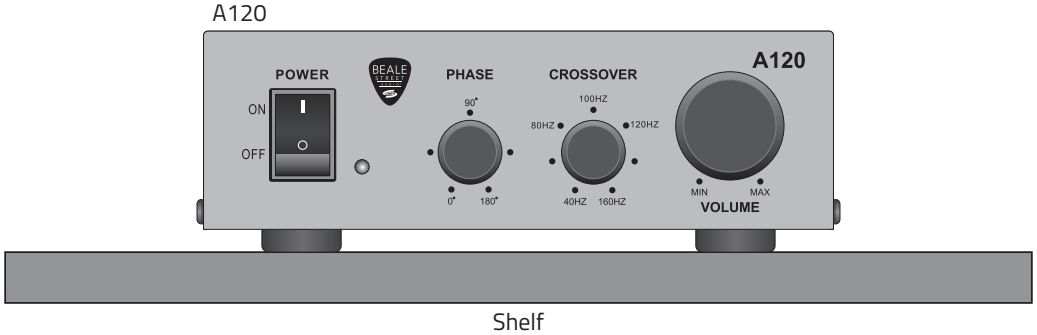


- 1. INPUT** - Two, RCA jacks. Stereo or mono audio sensing line level audio input. The A120 will turn ON when a line level audio signal is present on either jack. Amp will turn OFF after 15 minutes of no audio signal.
- 2. SPEAKER LEVEL OUT** - One, four position plug-in screw connector. The A120 will pass-through full-band speaker-level audio from an amplifier connected to the Speaker Level IN. Connect to full band speakers appropriately rated for the amplifier connected to Speaker Level IN. The front panel Volume Control does not affect the Speaker Level OUT. POWER RATING: 100 Watts RMS, 200 Watts MAX.
- 3. SPEAKER LEVEL IN** - One, four position plug-in screw connector. Connect to the speaker level OUT on an audio amplifier. The A120 will pass-through full-band audio to the Speaker Level OUT. The Speaker Level IN signal will also get processed by the A120 Crossover, Phase and Volume controls and then output via the Sub OUT. POWER RATING: 100 Watts RMS, 200 Watts MAX.
- 4. TRIGGER** - One, 3.5mm mini jack. Connect to the DC voltage Control OUT on an amplifier, AV Receiver or other audio processor to automatically turn the A120 ON/OFF. When DC voltage is applied, the A120 will turn ON. When DC voltage is removed, the A120 will turn OFF. RANGE: +12 to +24V DC. POLARITY: Tip: +VDC, Sleeve: GND.
- 5. SUB OUT** - One, two position plug-in screw connector. Connect to the +/- terminals on a passive (non-amplified) subwoofer. The Volume, Phase and Crossover controls all affect the Sub OUT audio signal. MAX OUTPUT POWER: 80W/8 $\Omega$ ; 120W/4 $\Omega$ .
- 6. AC MAINS** - One, two-prong socket. Use the supplied 2-pin power cable to connect the unit to an external AC power supply.

# Installation

## SHELF MOUNT

The A120 can be conveniently mounted on a shelf top as shown. Leave room for wires. Allow adequate space for airflow. Do not set objects on top of the amp.



## VENTILATION

Even though the A120 will typically run cool, the top and bottom vents allow air to circulate through the chassis allowing optimum performance, and besides...they just look cool...get it...air vents...look *cool*...never mind...

On a serious note...please be sure to not block the vents with wires or other objects that will block the free flow of air through the amp.

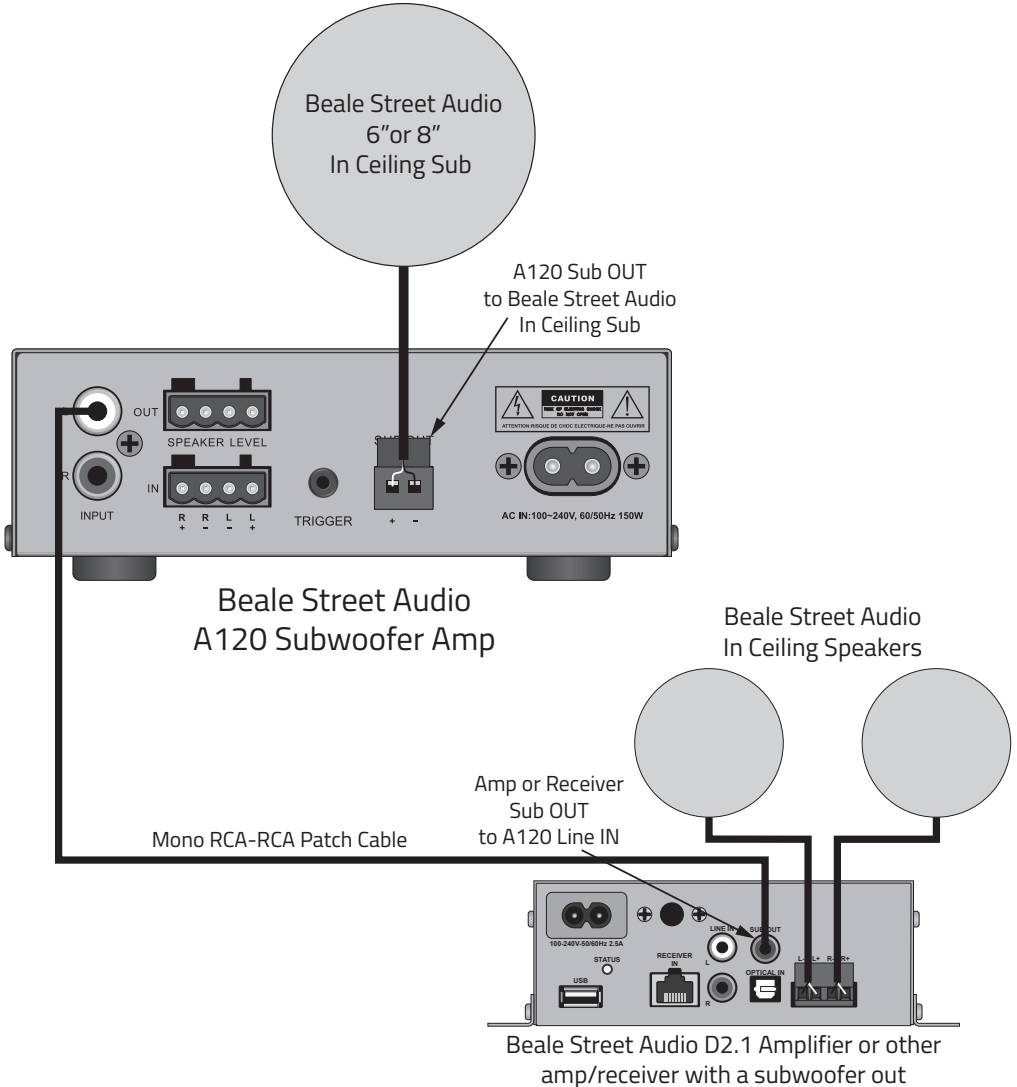
On another serious note, do not remove the feet, and always shelf mount the A120. Mounting the amp vertically against a wall will not allow adequate airflow which may cause damage to the amplifier that is not covered under warranty.



# Connections

All connections are conveniently placed on the rear panel for sane wire management, convenient connections and simple service.

The **Line Level Input Illustration** shows the A120 connected to the Sub OUT on a Beale Street Audio D2.1. Though we'd prefer that you use a Beale D2.1, you can also use the Sub OUT, LFE OUT or L&R Line Level OUT on just about any appropriately featured audio device.



**Line Level Input Illustration**

# Connections

## LINE LEVEL INPUT CONFIGURATION - PAGE 9

In this configuration, the line level audio input will be processed by the Crossover, Phase and Volume Controls and output as an amplified subwoofer channel via the A120 Sub OUT.

**NOTE: Do not connect the AC power cord or turn the amp on until all connections have been made and confirmed. Making connections with the power on can result in...well...undesirable circumstances...that may not be covered under the factory warranty.**

### INPUT (A120)

1. Using a stereo or mono RCA-RCA cable with gold ends, connect the LFE OUT, Sub OUT, or other line level audio OUT on an amplifier, surround receiver or other audio preamp to the Input on the A120.

### SPEAKER LEVEL IN

1. No connection.

### SPEAKER LEVEL OUT

1. No connection.

### SUB OUT (A120)

1. Use 16AWG (min) 2-conductor stranded speaker wire for subwoofer connection
2. Strip approximately 1/2 to 3/4 of an inch off the ends and twist the strands together so there are no loose strands that can cause shorts.
3. While observing proper wire polarity, insert the stripped and twisted ends of the speaker wire into the appropriate + and - terminals on the A120. Be sure there are no loose strands that can cause shorts.
4. Confirm connection and polarity.
5. Connect the speaker wires to the appropriate + and - terminals on the subwoofer.
6. Confirm connection and polarity.

### TRIGGER

1. Using a 2 circuit 3.5mm mini plug, connect +12 to 24VDC from the trigger device to the striped wire (tip). Connect GND from the trigger device to the unmarked wire (sleeve).

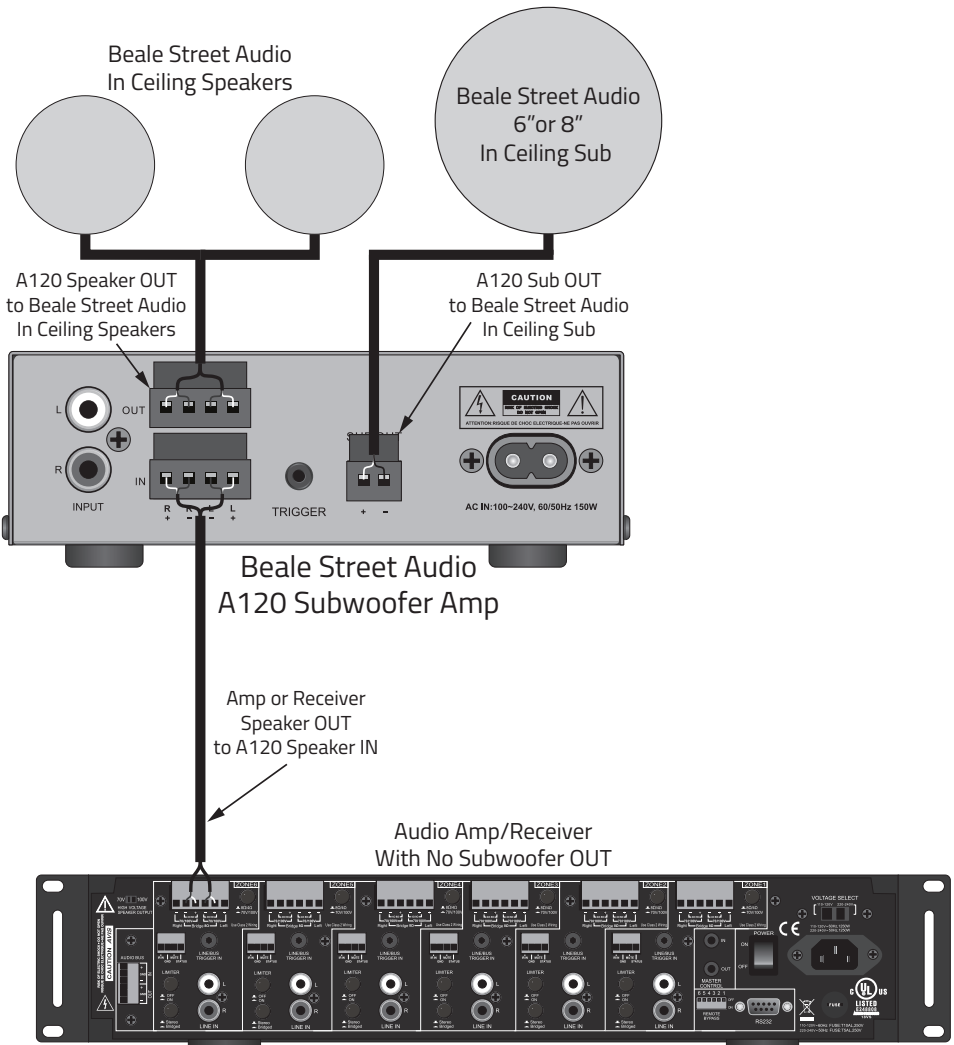
### AC MAINS

1. After all connections have been made connect the supplied AC Power Cord to an unswitched AC power outlet.

# Connections

The **Speaker Level Input Illustration** shows the A120 connected to the Speaker Level OUT on a multi-channel audio distribution amplifier. This configuration provides a simple, cost-effective, and powerful solution to adding subwoofers to multi-room audio applications.

The amplified signal from the distribution amp connects to the A120 and gets passed through to the connected stereo speakers at full bandwidth. The signal also gets processed by the A120 Crossover and Phase settings before getting amplified to the level set by the A120 Volume Control. Once set, the volume control for the distribution amp zone will act as a master volume control for both the stereo speakers and sub.



**Speaker Level Input Illustration**

# Connections

## **SPEAKER LEVEL INPUT CONFIGURATION - PAGE 11**

In this configuration, speaker level audio input will passthrough at full bandwidth to the Speaker Level OUT. It will also be processed by the Crossover, Phase and Volume Controls and output as an amplified subwoofer channel via the A120 Sub OUT.

**NOTE: Do not connect the AC power cord or turn the amp on until all connections have been made and confirmed. Making connections with the power on can result in...well...undesirable circumstances...that may not be covered under the factory warranty.**

### **INPUT (A120)**

1. No connection.

### **SPEAKER LEVEL IN (A120)**

1. Use 16AWG (min) 2-conductor stranded speaker wire for speaker connections.
2. Strip approximately 1/2 to 3/4 of an inch off the ends and twist the strands together so there are no loose strands that can cause shorts.
3. While observing proper wire polarity, connect the Speaker Level OUT of the Audio Amp/ Receiver to the appropriate Speaker Level IN + and - terminals on the A120. Be sure there are no loose strands that can cause shorts.
4. Confirm connection and polarity.

### **SPEAKER LEVEL OUT (A120)**

1. Use 16AWG (min) 2-conductor stranded speaker wire for speaker connections.
2. Strip approximately 1/2 to 3/4 of an inch off the ends and twist the strands together so there are no loose strands that can cause shorts.
3. While observing proper wire polarity, connect the A120 Speaker Level OUT of the A120 to the appropriate Left and Right Speaker + and - terminals. Be sure there are no loose strands that can cause shorts.
4. Confirm connection and polarity.

### **SUB OUT (A120)**

1. Use 16AWG (min) 2-conductor stranded speaker wire for subwoofer connections.
2. Strip approximately 1/2 to 3/4 of an inch off the ends and twist the strands together so there are no loose strands that can cause shorts.
3. While observing proper wire polarity, connect the Sub OUT of the A120 to the appropriate Subwoofer + and - terminals. Be sure there are no loose strands that can cause shorts.
4. Confirm connection and polarity.

### **TRIGGER**

1. Using a 2 circuit 3.5mm mini plug, connect +12 to 24VDC from the trigger device to the striped wire (tip). Connect GND from the trigger device to the unmarked wire (sleeve).

### **AC MAINS**

1. After all connections have been made connect the supplied AC Power Cord to an unswitched AC power outlet.

# Operation

Once installed and setup, the A120 doesn't typically need a whole lot of attention. But just in case you need to tweak something, here's what you'll want to do...

## **ON/OFF**

The A120 is audio-sensing, so typically once the system is installed and setup, the power will automatically turn ON with the presence of an audio signal on either the L & R Line Inputs or the Speaker Level Inputs. The amp will automatically turn OFF when no audio signal has been detected for 15 minutes.

**TRIGGER** - If you are using the Trigger IN, the amp will automatically turn ON when DC voltage is applied to the Trigger jack and turn OFF when DC voltage is removed.

**POWER** - If however you are a major control freak and just have to have the ability to turn the amp ON/OFF, toggle the Power ON/OFF button once to turn the amp ON/OFF.

**VOLUME** - Adjust the volume to the subwoofer until low frequency level has a smooth, natural sounding transition from the left and right speakers.

**PHASE** - The Phase setting allows compensation for subwoofer location relative to the main speakers. Adjust the Phase setting to the point of highest sub audio output.  
RANGE: 0° to 180°.

**CROSSOVER** - The Crossover sets the frequency at which audio content will pass to the A120 Sub OUT. Adjust the crossover so there is a slight overlap with the main speakers low-midrange cut-off to produce a natural sounding transition to low frequencies.  
RANGE: 40Hz to 160Hz.

**MASTER VOLUME** - When properly setup, the Volume Control on the Amplifier, Receiver or other audio device that is feeding the A120 will control the volume for both the Amplifier/Receiver (main speakers) and A120 (subwoofer).

# Specifications

## AUDIO

Maximum Output Power.....	80W/8Ω; 120W/4Ω
THD.....	1%
Frequency Response.....	20Hz-160Hz +/- 1dB
Signal to Noise.....	95dB
Input Sensitivity.....	200mV
Crossover.....	40-160Hz
Phase.....	0-180°

## GENERAL

Trigger Input.....	+12VDC to +24VDC
Line Voltage Range.....	110-120/220-240 VAC
Standby Power.....	1.8W
Max Power Consumption.....	150W
Dimensions.....	5.7"W x 1.8"H x 5" D (143mm W x 45mm H x 125mm D)
Overall Length (including knobs/connectors).....	5.9" (150mm)
Weight.....	1.75lbs (0.79kg)



