

Coolback Sub Subwoofer Amplifier

Features

- 2 input Digital Crossover
- 1 High performance Class H amplifiers
- Sophisticated Power Supply
- Automatically On/Off via signal sensing
- Soft Start - fuse saver
- Silent Design Toroidal Transformer 600VA
- XOverWizard II software
- Optical isolated USB interface
- 180 biquads total processing power
- 2000W Peak Power
- Very Low overall Noise and Distortion
- High current capability Supply for the amp
- 40mm High Quality Aluminium Heat Sink

Applications

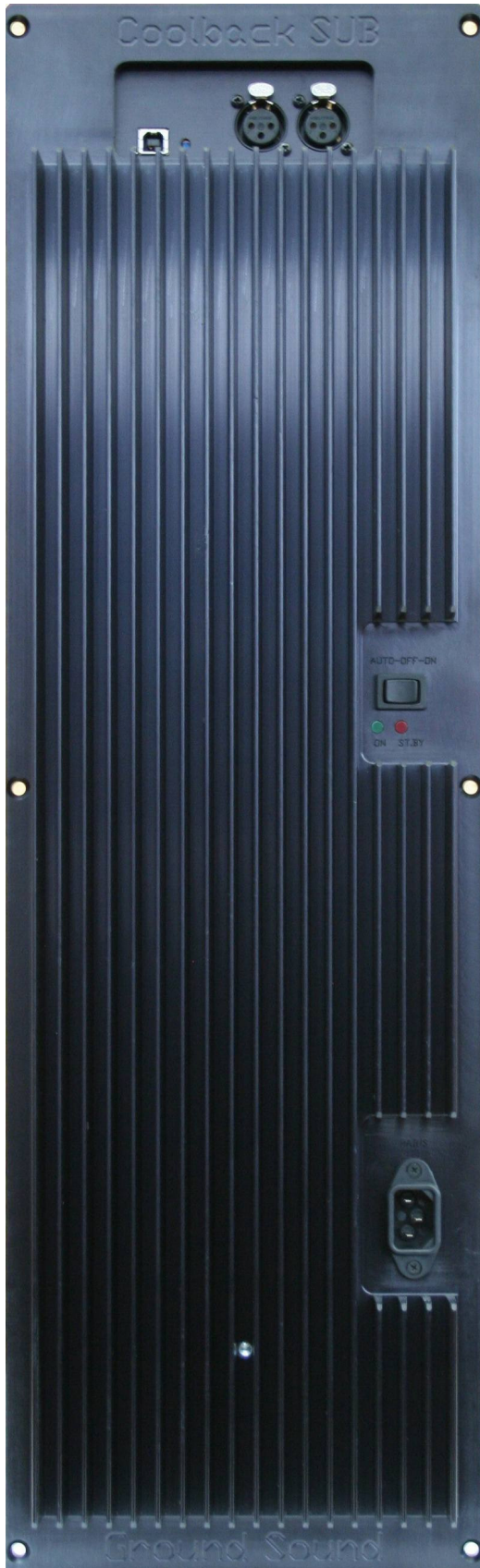
- High-End Active Subwoofers
- High Performance Surround Loudspeakers

Description

Coolback Sub is a sophisticated, luxurious and powerful subwoofer “plate amplifier” intended to be a part of the loudspeaker. All electronics assembled on it and acting as a heat sink for the amplifier modules. The only visible on the outside are the connectors (2 x Balanced Input - Neutrik XLR, PC Communication - Neutrik USB and IEC mains Power inlet), Operation Switch (ON-OFF-AUTO) and LED Indicators (ON-StandBy). The Coolback Sub is 200mm wide and 650mm high - 40mm heat sink profile - a flange of maximum 17mm for mounting.

Coolback Sub





Coolback Sub front

Balanced Input A & B

Neutrik 3-pol XLR female
Pin1 Screen, Pin2 Positive, Pin3 Negative

PC-Interface

USB connector connects the PC to the onboard www.FTDIchip.com circuit (FT232R driver can be downloaded at the FTDIchip web site). The digital crossover DCN14 is optically isolated between the FTDI circuit and the rest of the circuitry on DCN14, which prevents ground loops and here by avoids hum problems. The Coolback 800 is programmed via the XOverWizard II software: www.groundsound.com/XOWII.php

Operating Switch

Automatically powering On/Off at signal present
Off - forced OFF.
On – forced ON

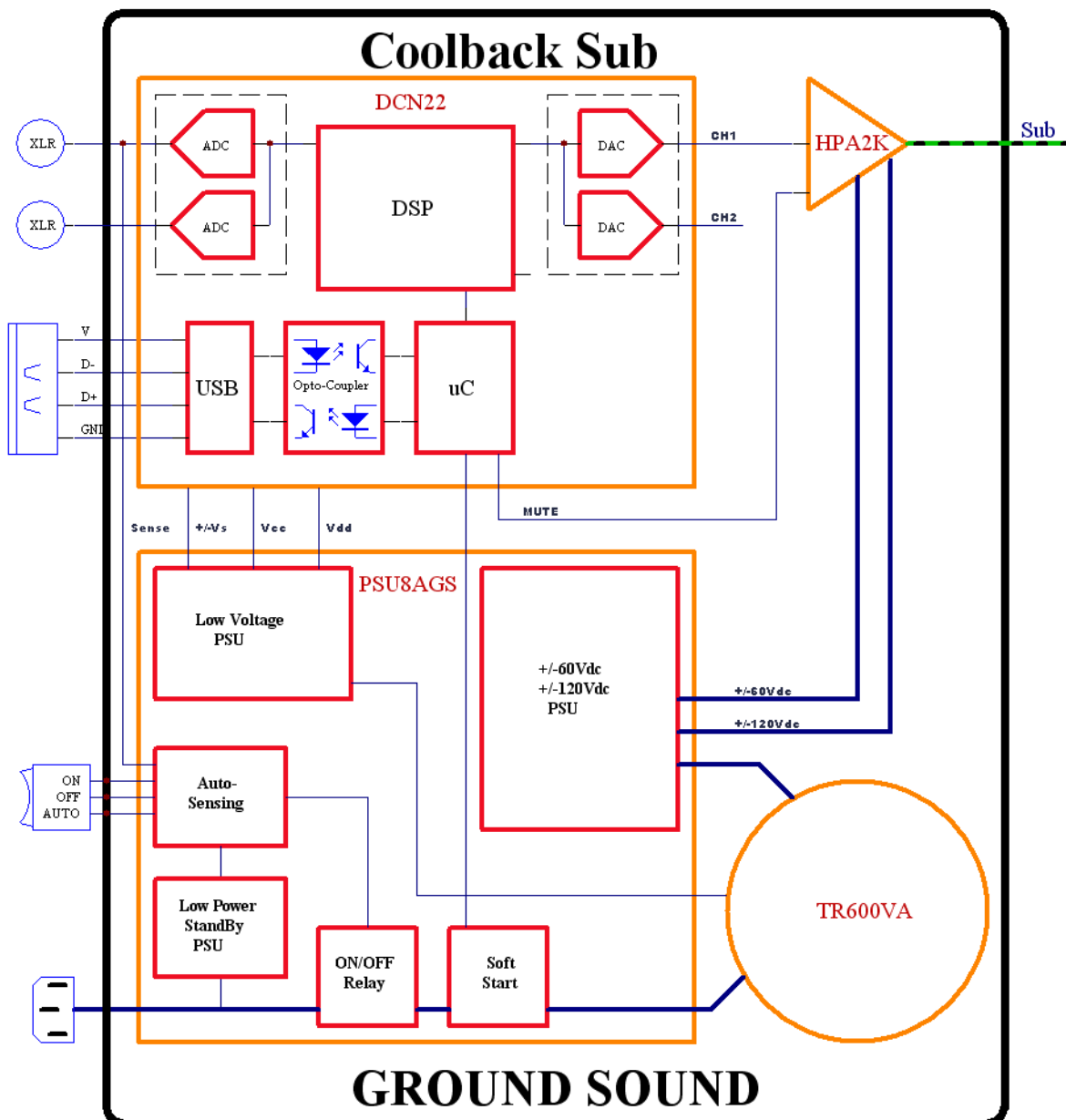
Power Indication

On – Green LED
St.By – Red LED

Mains Inlet

230Vac 50/60Hz IEC power connector.
Mains earth pin is connected to Chassis (Aluminium plate). Electronics ground is ground lifted from Chassis.

Functional Block Schematic of Coolback Sub



Specifications

650W (8Ω) / 1200W (4Ω) / 2000W (2Ω) - minimum load 2Ω

24 bit/96kHz Processing

60 biquads total Processing Power

Frequency Response : 5-20kHz (-3dB)

Distortion : <0.08%

Signal/Noise Ratio : >105dB

Dual slope output limiter in the digital domain

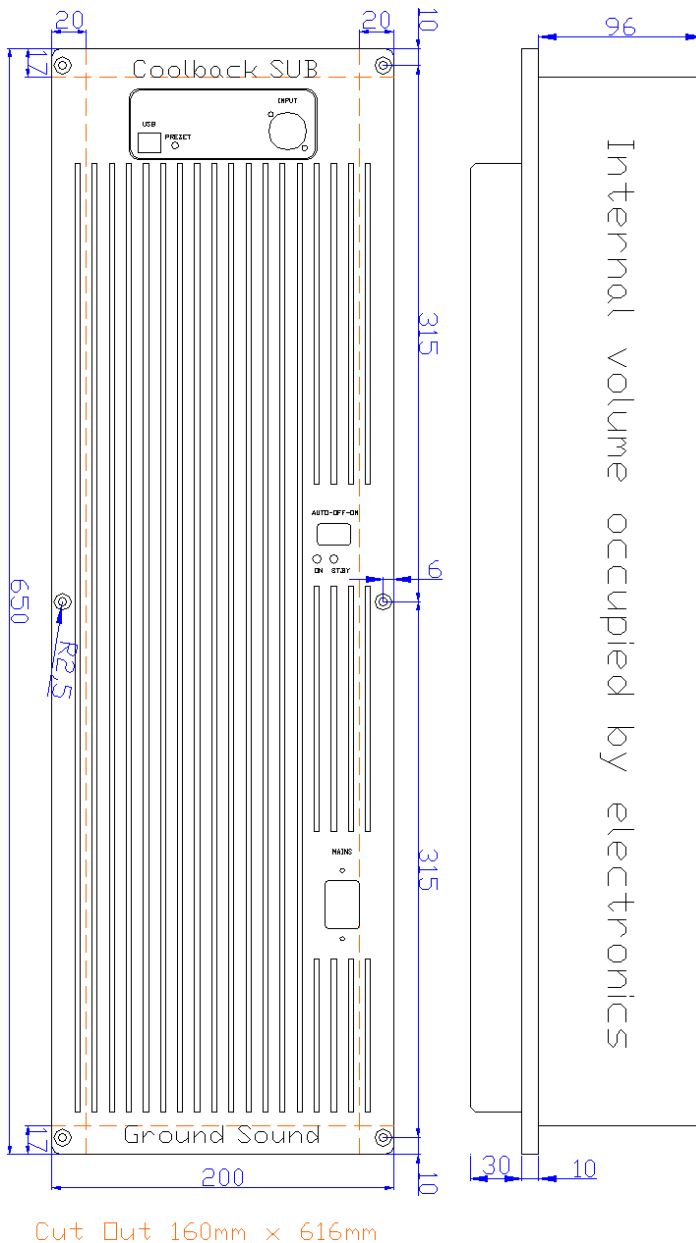
Thermal Protection above 80°Celsius

Idle "ON" Power Consumption: 30W

StandBy Consumption: <1W

Maximum Consumption: 600W

Weight: app. 14kg



Mechanical dimensions

The mounting of Coolback Sub requires 6 pcs 5mm screws either self-drilling woodscrew or full threaded screw.

The Coolback can be used with or without separate internal box in the loudspeaker. If the Coolback Sub is mounted in the main box, remember to seal between flange and aluminium plate. Especially make sure that a safe distance between the electronics and damping material etc. is held at all time. If you have the slightest doubt of safety risks, then it is better to make a separate internal box for the Coolback. Ground Sound takes absolutely no responsibility for any customer mounting and assembly of/with the Coolback Sub.

Wiring

The only thing you have to wire before mounting the Coolback is the loudspeaker cables and you can either use the appropriate size FastOn or better solder the wire to the terminals of the driver. In rare cases the driver has spring terminals and in this case you simply have to strip the cables to make the connection.

Outout (Channel 1) = Twisted Green/Black Connect coloured to + terminal and black to – terminal of the driver.

Remarks and Revision history

Ground Sound reserves the rights to make alterations without prior notice.

Please notice that Ground Sound will not be held responsible for any property damage. It's assumed that the customer is aware of the danger of high voltage and takes the necessary precautions to avoid personal injury and fully understands the consequence of dealing with high voltage.

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