



High Definition Power Amplifiers

A250x3

A250x2

A500x1

User Manual

IMPORTANT INFORMATION

DISCLAIMER AND LIMITATION OF LIABILITY

DEQX Pty. Ltd. ('DEQX') assumes no responsibility for loss or damage resulting from the use of any of its products.

Refer to the license supplied with the DEQX® Calibration software (pages 3 and 4).

Specifications are subject to change without notice.

Contact DEQX Support at <http://www.deqx.com/support/> for installation and operational support. We highly recommend using the DEQXpert™ on-line installation and/or training service.



The exclamation point within a triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.



The lightning with arrowhead symbol within a triangle is intended to alert the user to the presence of un-insulated "dangerous voltage" within the products' enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to person.

WARNING



To prevent fire or shock hazard, do not expose the unit to rain or moisture. To avoid electrical shock, do not open the unit. No user-serviceable parts are inside. Refer any servicing to qualified personnel.

ALWAYS TURN THE DEQX UNIT AND ANY ASSOCIATED AUDIO EQUIPMENT OFF BEFORE CONNECTING OR DISCONNECTING AUDIO CABLES.

ANY AUDIO EQUIPMENT REQUIRING GROUNDING MUST BE GROUNDED TO THE SAME POINT (CIRCUIT) AS THE DEQX UNIT.

FAILURE TO OBSERVE THESE WARNINGS CAN RESULT IN DAMAGE TO THE DEQX UNIT AND OTHER AUDIO EQUIPMENT AND MAY NOT BE COVERED BY WARRANTY.



Caution: Damage may result to your speaker drivers and other equipment if your audio system is connected incorrectly or if the unit is used incorrectly. Read this user manual in full before configuring your hardware and refer to your speaker manufacturer's specifications to ensure correct connection. If you are in doubt as to as the connection of your audio equipment, seek assistance from a professional audio installer or contact DEQX at

<http://www.deqx.com/support/>.



IMPORTANT SAFETY INSTRUCTIONS

Read these instructions entirely before installing or operating this product. Keep these instructions. Heed all warnings. Follow all instructions.

Do not use this product near water. Clean only with a dry cloth.

Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

Do not install near any heat source such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Do not defeat the safety purpose of the grounding-type safety plug. A grounding-type plug has two blades and a third grounding prong or blade. The third prong or blade is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched, particularly at the plug and the point where the cord exits from this product.

Do not use this product with a damaged cord or plug.

Only use attachments and accessories specified by the manufacturer.

Unplug this product during lightning storms or when unused for long periods of time.

Refer all servicing to qualified service personnel. Servicing is required when the product has been damaged in any way, such as when the power cord or plug are damaged, liquid has been spilled or objects have fallen into the product, the product has been exposed to rain or moisture, does not operate normally, or has been dropped.

CLEANING AND MAINTENANCE

Always unplug the product from the electrical outlet before cleaning. Do not use abrasive cleaners. Simply wipe the exterior with a clean soft cloth. A small amount of non-abrasive cleaner may be used on the cloth to remove any excessive dirt or fingerprints.

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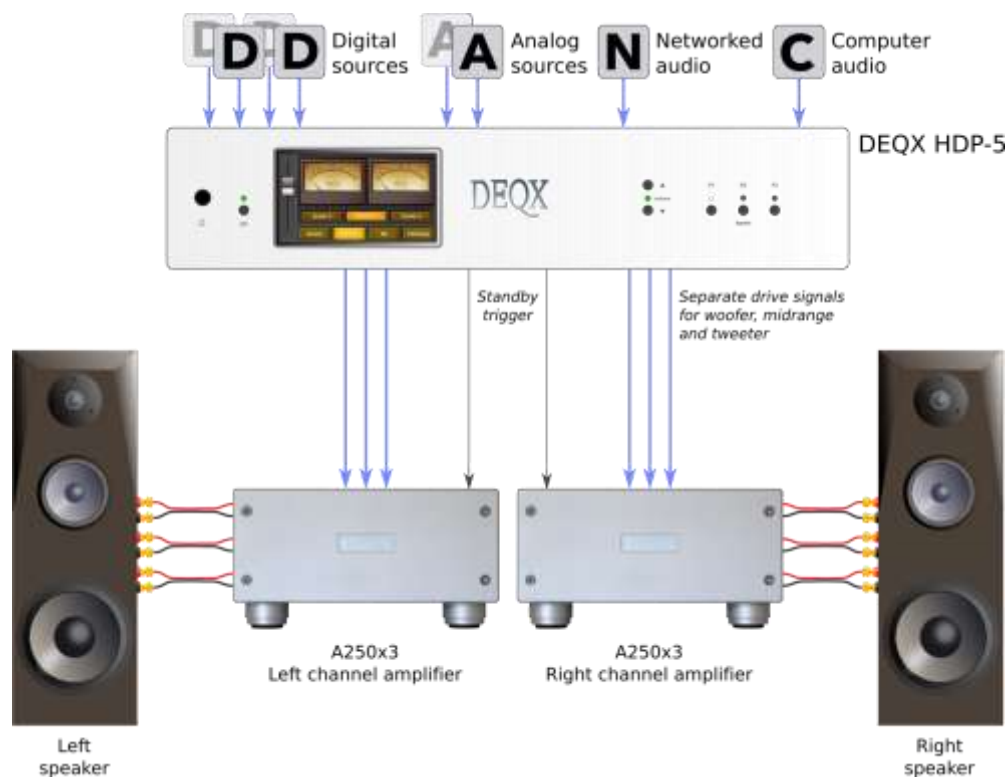
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1 PRODUCT OVERVIEW

Congratulations on purchasing a DEQX® High Definition Power Amplifier. Based on N-core D-class technology, these fully balanced amplifiers provide state-of-the-art D-class musicality due to unusually low harmonic, intermodulation and Impulse-response distortion.

The DEQX power amplifiers are designed to perfectly complement the DEQX range of high definition audio processors. They are available in three versions: A250x3 (250W x 2 + 100W) for tri-amped configurations; A250x2 (250W x 2) for stereo, bi-amped and subwoofer configurations; A500x1 (500W x 1) for high-power speaker applications.

An example system using a DEQX HD-Active™ tri-amp configuration is illustrated below.



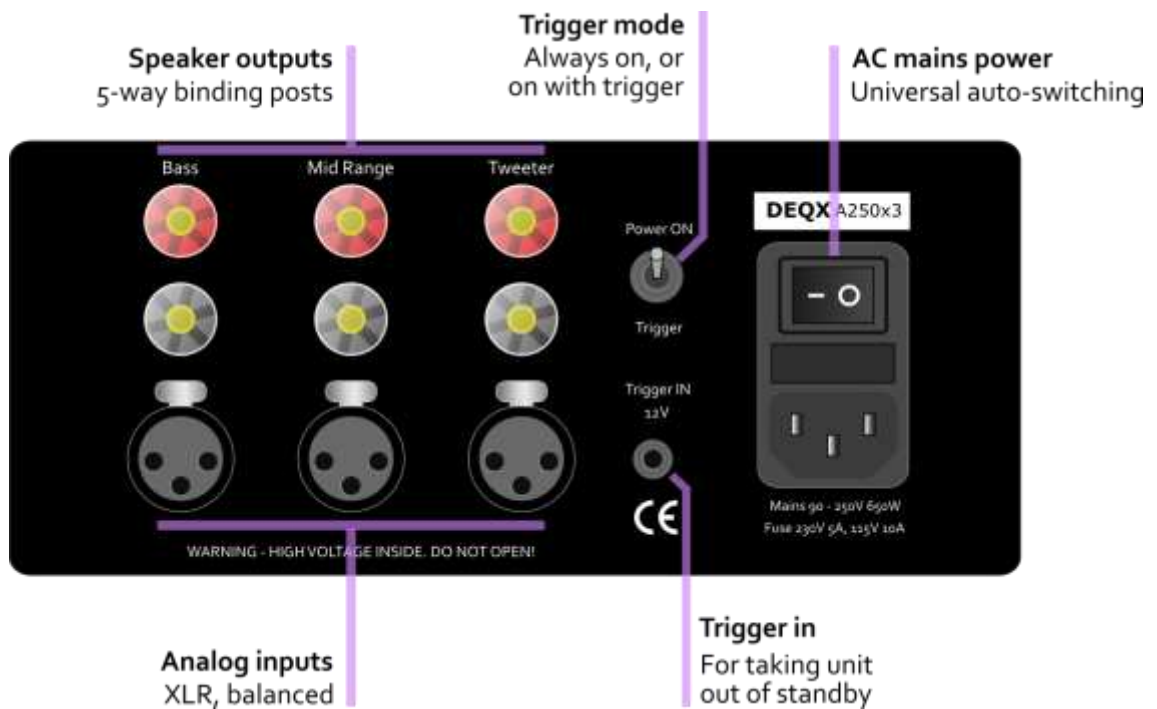
2 FRONT PANEL

The DEQX logo illuminates when the amplifier is turned on and active. Amplifiers can be purchased with black or silver faceplate.



3 REAR PANEL

Make all connections with the power cord removed from the unit. Shown here is the A250x3 rear panel:



Trigger mode

When switched to "Power ON," the main power switch turns the amplifier on and off.

When switched to "Trigger", the main power switch places the amplifier into standby mode only. The amplifier is active when the Trigger IN input becomes active. This is the normal operating mode with a DEQX HDP-5.

Trigger IN

Connect this input to one of the two trigger outputs on a DEQX HDP-5 or PreMATE Plus. The Trigger mode switch must be set to "Trigger".

Analog inputs

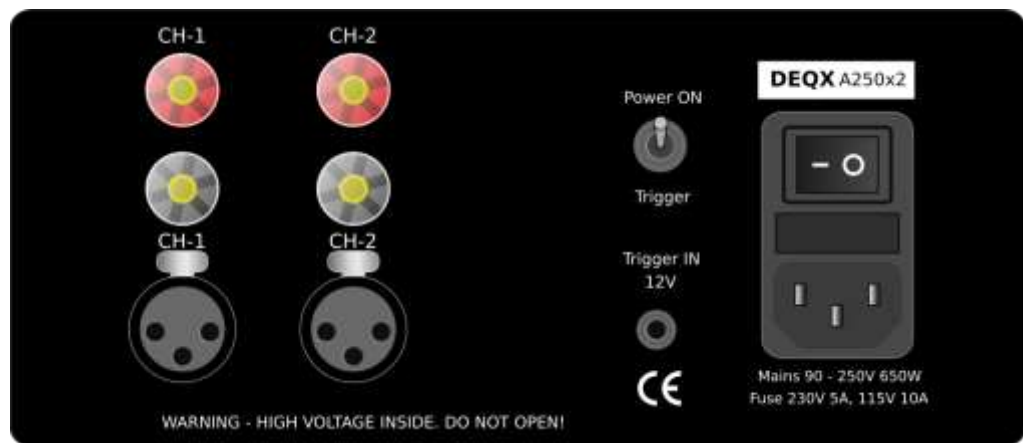
Connect each input to the corresponding output of the DEQX HDP-5, HDP-4, PreMATE, or PreMATE Plus.

Speaker outputs

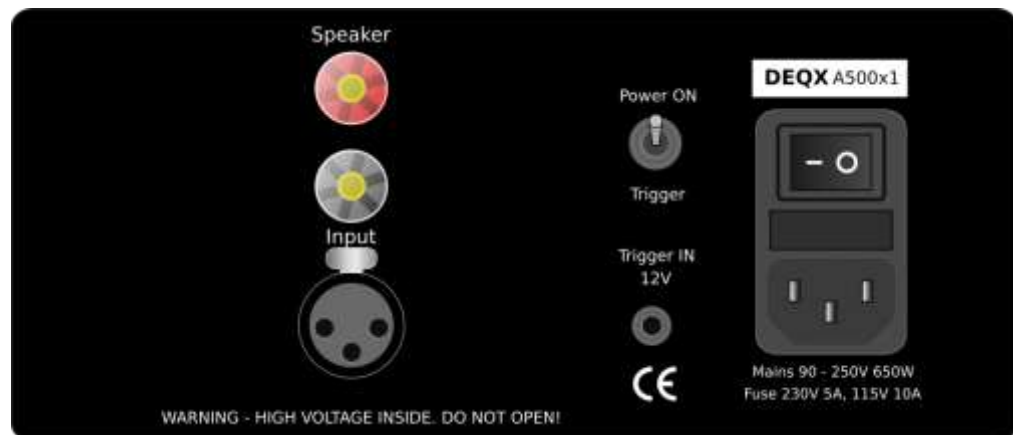
Connect the speakers or speaker driver to the 5-way binding posts. Ensure that each output is connected to the correct driver.

AC mains power

The amplifiers are equipped with a universal power supply, so no mains voltage selection is required on the part of the user. Connect a standard IEC power cable and turn on the main power switch.

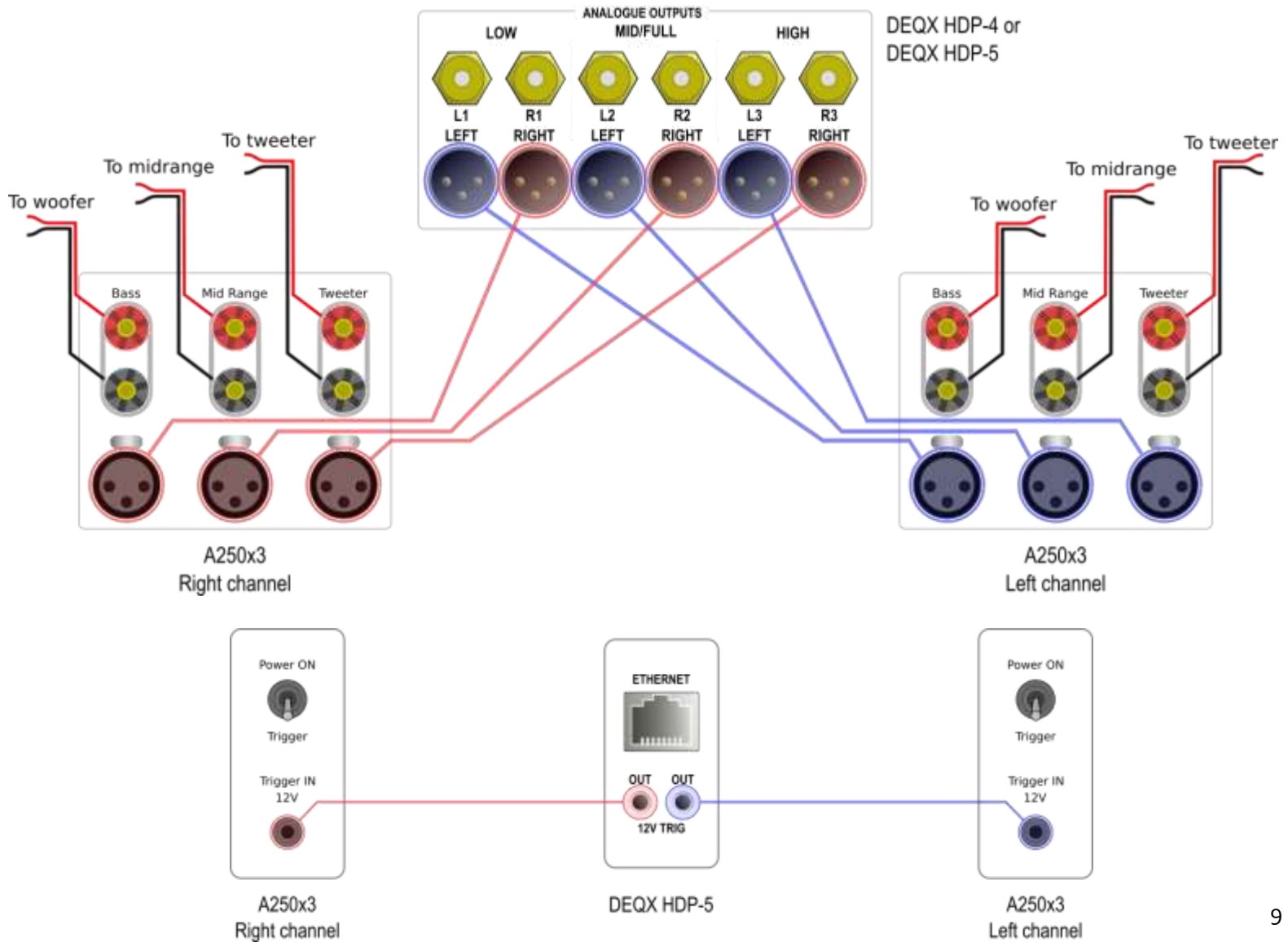


A250x2 rear panel



A500x1 rear panel

4 TYPICAL CONNECTION DIAGRAMS



5 SPECIFICATIONS

5.1 A250X2 AND A250X3

Parameter	Bass/midrange (A250x3) CH-1/CH-2 (A250x2)	Tweeter (A250x3 only)
Input impedance	47 k Ω	47 k Ω
Voltage gain	25.5 dB	25.5 dB
Input voltage for full power (4 ohms)	1.7 V RMS	1.05 VRMS
Input voltage for full power (8 ohms)	2.1 V RMS	1.5 V RMS
Distortion <10Hz-20kHz AES17 Pout=1W	< 0.0015%	< 0.0018%
Damping factor f < 20 kHz, Load = 4 Ω	> 1000	> 1000
Frequency response, +0/-3 dB	10 Hz to 50 kHz	10 Hz to 50 kHz ¹
Signal to noise ratio <10Hz-20kHz AES17	121 dB	106 dB
Minimum speaker impedance	2 Ω	2 Ω
Max output power (4 ohms) 1kHz, THD=1%, both channels driven	250 WRMS	100 WRMS
Max output power (8 ohms) 1kHz, THD=1%, both channels driven	200 WRMS	100 WRMS
Continuous/average output power Thermally limited, 25°C ambient	50 WRMS	20 WRMS
Maximum power consumption	650 W	

¹ Recommended operation is from 500 Hz upwards.

5.2 A500X1

Parameter	Speaker
Input impedance	23.5 k Ω
Voltage gain	31.5 dB
Input voltage for full power (4 ohms)	1.06 V RMS
Input voltage for full power (8 ohms)	1.7 V RMS
Distortion <10Hz-20kHz AES17 Pout=1W	< 0.0018%
Damping factor f < 20 kHz, Load = 8 Ω	> 1000
Frequency response, +/-3 dB	10 Hz to 50 kHz
Signal to noise ratio <10Hz-20kHz AES17	106 dB
Minimum speaker impedance	4 Ω^2
Max output power (4 ohms) 1KHz, THD=1%	400 WRMS
Max output power (8 ohms) 1KHz, THD=1%	500 WRMS
Continuous/average output power Thermally limited, 25°C ambient	100 WRMS
Maximum power consumption	650 W

² 4 ohms is the **minimum** allowed load . The **recommended** load is 8 ohms.