audiolab DC BLOCK – Direct Current Blocker User Manual

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DC BLOCK Direct Current Blocker

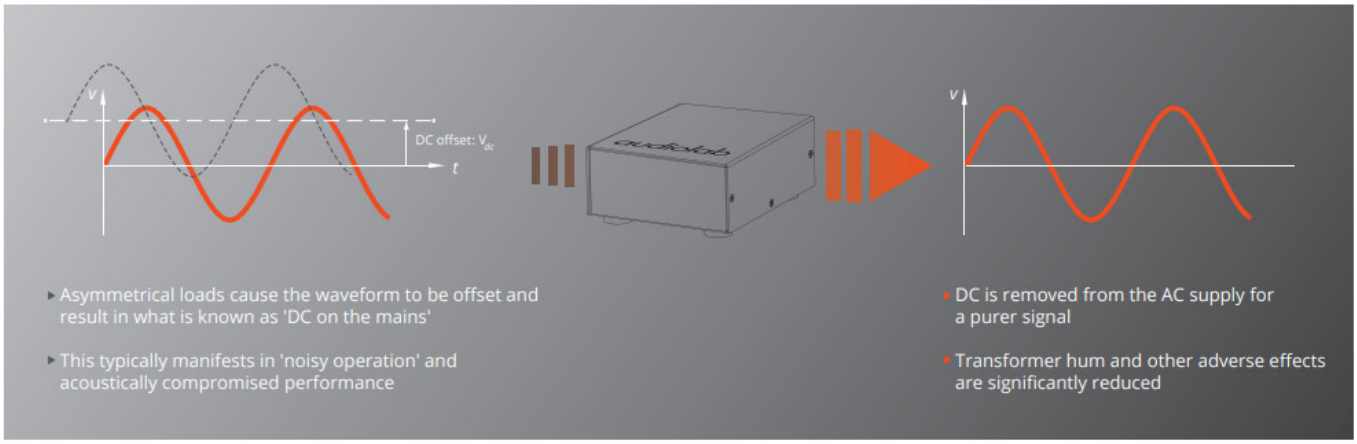
Above: **Audiolab 'DC BLOCK'** all-in-one DC blocker and mains filter in silver finish

A dual-action device ensures power does not corrupt
audio labs new DC BLOCK removes RFI/EMI whilst banishing 'DC on the mains' to deliver pure, rebalanced power to audio and AV system components

Famed for its amplifiers and digital source components spanning four decades, Audiolab is now releasing its first product designed to improve the quality of AC electricity we feed our audio and AV systems – the dual-action DC BLOCK.
Mains electricity has a fundamental influence on the audio signal as it passes through a system, from source to amp to speakers. The mains supply in a typical dwelling is subject to interference induced by a range of issues, causing the AC waveform to distort before it reaches each component. This creates noise in the audio signal,

which degrades sound quality – a situation that continues to worsen as the electrical devices we use in our homes proliferate.
One common issue is ‘DC on the mains’ – a problem well known to affect the performance of audio equipment, especially amplifiers. In theory, the mains electricity we obtain from the sockets in our homes should be pure AC, with a perfectly symmetrical sine wave alternating between positive and negative phases. However, the presence of ‘asymmetrical loads’ – myriad household devices that use
the AC energy available in the mains cycle unevenly, from dimmer switches to kitchen appliances to computer power supplies – causes the waveform to become offset, resulting in the presence of DC voltage on the AC supply.

The AC transformers commonly used in home audio equipment cannot tolerate the presence of significant levels of DC voltage without being compromised. Less than 500mV of DC – typical in an average household electricity supply – can be sufficient to cause toroidal transformer of the kind often found in amplifiers to become saturated, which adversely affects sonic performance and may cause audible mechanical vibration.



By blocking, or cancelling, DC voltage found within the AC mains supply, the **Audiolab DC Block** corrects the DC offset and rebalances the mains sine wave (see illustration above). But tackling ‘DC on the mains’ is not the only benefit delivered by this dual-action device – it also contains a high-performance audio class filtering circuit that removes RFI/EMI contaminants from the mains supply. This is effective in reducing both differential-mode noise (exacerbated by cheap switch-mode power supplies used by many home appliances) and common-mode noise (aggravated by airborne interference from phones, Wi-Fi networks and Bluetooth).
This combination of technologies ensures that the **DC BLOCK** does more than solve the problem of transformer saturation caused by DC on the mains; it also helps to unlock the sonic potential of any audio component to which it is connected. The noise floor drops and the sound gains greater focus, with reduced grain, improved clarity, better-defined bass and ‘airier’ treble.

Above: Audiolab **DC BLOCK**, all-in-one DC blocker and mains filter in black finish

Using the **DC BLOCK** is simple – plug its output into the IEC power socket of an audio/AV component, then connect its input to a
mains socket (both cables are provided). The device is designed
for use with a single audio or AV system component – Audiolab recommends that if one **DC BLOCK** is purchased, it should be used with the integrated amp or power amp component within the user’s system to obtain the greatest benefit from the DC-blocking technology. If desired, further units may be purchased to use with other electronics in the system – preamps, source components and so on. With each additional DC Block, further incremental improvements in overall system performance can be expected.
Above: Audiolab **DC BLOC**K, all-in-one

audiolab DC Block specifications

- Power requirements: 100-240V
- Maximum peak load: 600VA
- Amplifier power compatibility: up to 2x150W or 1x300W
- Dimensions (WxHxD): 113x59x140mm
- Weight: 0.7kg

Above: Audiolab DC BLOCK, all-in-one DC blocker and mains filter in silver finish, paired with 6000A integrated amplifier

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Audiolab HiFi

IAG House, 13/14 Glebe Road, Huntingdon, Cambridgeshire, PE29 7DL, UK

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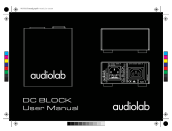	audiolab DC Block [pdf] User Manual DC Block

References

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