clearblue preamplifier

Eight channel pre-amplifier and monitor section

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Instructions for use and installation

Welcome

At DACS we are very pleased that you have chosen to purchase one of our products. We take a pride in our products and are sure that this **clearblue** pre-amplifier will give you years of exemplary service. If you have any suggestions or comments about this product please call, fax, write or e-mail us with your thoughts. **Thank you.**

Introduction

The **clearblue pre-amplifier** is an eight channel pre-amplifier for microphones (with or without phantom power), keyboards and other low output level devices; synthesiser modules, samplers, drum machines etc can all benefit from high quality pre-amplification. Each channel has a fully floating balanced output. It also has two high impedance guitar inputs for magnetic pickups (channels 1 & 2).

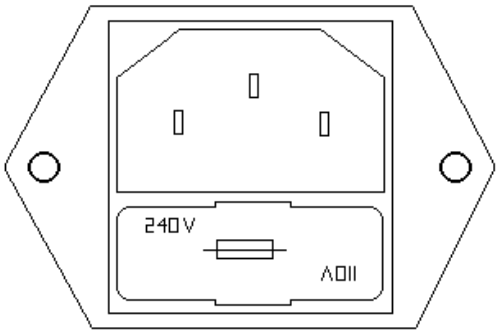
The separate monitor section consists of a stereo input with the outputs switchable between a headphone socket on the front and two unbalanced outs on the back; these will feed an amplifier or powered monitors.

Using the DACS Clearblue pre-amplifier

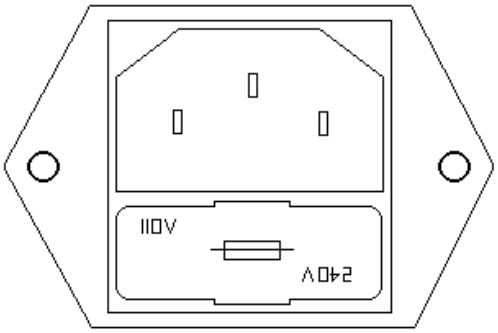
Connecting the Power

The unit will accept 240VAC and 110VAC mains supplies. The IEC inlet's fuse holder is used as a selector as shown in Fig 2.

Figure 2



Set for 240VAC



Set for 110VAC

Outputs

Connections

The outputs are on three pole ¼" jack, tip=hot, ring=cold, sleeve=0V. These balanced outputs can be used unbalanced either by connecting with two pole jacks or shorting the hot or cold to the screen/ground. In either case, the level will remain the same. NB Never leave either the hot or cold unconnected. This will result in a 6dB drop in signal level and a deterioration in signal quality.

The monitor output on the rear panel is an unbalanced signal, with the tip hot and ring/sleeve 0V. The headphone output on the front panel is wired conventionally (tip=left, ring=right, sleeve=0V).

Levels

The maximum output level is around +21dBm.

Inputs

Connections

The XLR connections at the top have 48V phantom power to pins 2 and 3 and are intended for the connection of microphones requiring phantom power. The jacks below are intended for microphones not requiring phantom power, and other low level signals (keyboards, samplers etc). The phantom power input is decoupled using high value large bipolar electrolytic capacitors, and the other input bypasses these.

Levels

The input stage has a minimum gain of +15dB, so the maximum input level is around +6dBm.

Gain Adjustment

The input gain of all channels is adjusted using the rotary switch on the front panel. This is achieved with a 12-position switch giving steps of 4dB. Level is shown by two LEDs – the first indicates signal levels up to +12dBm and the top red LED indicates signals above this.

Monitoring

As well as being a versatile pre-amplifier, the clearblue also handles control room monitoring. The intention is that your DAW's output is fed into the balanced inputs on the rear panel. The control knob on the front controls the volume, and the white switch allows the signal to be monitored either via the speaker output on the rear or the headphone outputs on the front panel.

Power

The blue LED on the top left of the front panel is illuminated when AC mains is present. The unit comes with a spare fuse in the fuse carrier (T100mA).

Specifications

Maximum output level	+21dBm
Maximum Input level	+6dBm

Distortion @ +15dBm output into 100k with 35dB gain
< .0002% THD+N (20Hz to 22kHz)

Frequency response Flat <15Hz-20kHz

Compliance to European Standards

This unit complies with the following standards (see Declaration of Conformity):

Radiated Emissions to Specification EN50081-1
Conducted Emissions to Specification EN50081-1
Electro Static Discharge to Specification EN50082-1
Fast Burst Transients to Specification EN50082-1

Clarity from DACS Ltd

A new philosophy, a new range of devices

Other products from DACS

MicAmp - two channel mic pre-amplifier

The **DACS MicAmp** is a 2 channel **ultra low noise** discrete-component-based microphone amplifier. Technically its performance is flawless. Does it sound good? The answer in tests has been an unequivocal "YES!". According to Calum Malcolm (Blue Nile, Prefab Sprout...) it has "..great detail, depth and clarity in the sound with a wonderful *easy* quality to it".

Each channel has two microphone inputs, one with 48V phantom power and one without. The non-powered input by-passes the high value polyester (not electrolytic) input capacitors minimising the signal path for microphones that are not phantom powered. The input stage has very fast protection built in that will prevent any damage being caused to the amplifier by over-voltage or phantom power short circuit.

The main gain setting is in seven 6dB steps from +20dB to +62dB or 0dB to +42dB when the gain factor is set to -20dB. There is also a 0dB to +10dB trim with 21 scale marks to allow accurate repetition of settings. For bass roll-off there is a very smooth two stage roll-off filter which gives no noticeable coloration to signals above its cut-off frequencies.

The **MicAmp**'s metering consists of a unique tri-segment LED which one field tester[i] said gave him the clearest sense of the signal level he'd seen on such a piece of equipment. It also includes an ultra bright overload LED which remains on for a few seconds after overloading or clipping, ensuring that if an overload has occurred it doesn't get missed by the engineer.

[i] Calum Malcolm particularly liked the meters; he said that they gave him a really clear sense of what was happening with the signal, better even than PPMs.