

loud & proud

DACS MICAMP DUAL-CHANNEL MIC PREAMP

Tyneside-based DACS have been building high-quality equipment for people on a one-off basis for years, but now they've launched a range of equipment that anyone can buy. HUGH ROBJOHNS explains why he'd rather buy British.

DACS is a small British company based in Gateshead who have built up a substantial reputation by constructing custom equipment for audio professionals. Recently, they have branched out into the open market with some very high-quality, fastidiously designed studio and stage signal devices under the banner of the Clarity Range. Currently, the new range contains two products: a 4-in, 4-out headphone amplifier called the HeadLite, and the subject of this review, the dual-channel MicAmp. DACS boast of sonic and functional clarity in their products, and claim to use high-quality (i.e.. expensive) components where they are important, but they nevertheless keep overall costs down to reasonable levels by not wasting money on cosmetics.

THE BOX

The MicAmp is certainly a striking piece of equipment. Built into a substantial steel 1U rackmounting case, the unit has a lilac-coloured ovoid graphic on the front panel, which contains all of the operational controls. The large illuminated red mains power switch is situated on the right-hand side and is vaguely reminiscent of Focusrite's Red modules -- a not unnatural association, as it turns out...

To the left of centre, each channel provides four controls and two indicators. The large rotary switch on the left sets the gain in coarse 6dB steps calibrated from +20 to +62dB, and next to it is a much smaller knob providing a continuous gain trim of between 0 and +10dB. This control has 19 markings around it (if you imagine the dial as a clock face, the markings are located on every hour and half-hour position between six and three o' clock), so it's an easy matter to reset a channel's gain to a logged position with remarkable accuracy.

The third rotary control is a three-position switch offering flat (a point I'll return to shortly) or bass rolloff from 80Hz or 30Hz, with a gentle 12dB/octave slope. The controls so far described all have a solid feel to them, and look expensive -- a point I'm making only because the last operational control is a cheap-looking toggle switch! In fact, this control (which simply inserts a polarity reversal in the signal path) is far from cheap, with its gold-plated contacts -- but it does look out of place on the otherwise very high-class panel. Perhaps miniature versions of the mains power button would look more the part?

Between the filter knob and the phase switch are two indicators -- at least it looks like there are just two until a signal is passed through the channel, and then you realise that there are four -- the top one is divided into three in a manner reminiscent of the old Mk I Ford Cortina tail lights, or the roaming eye of the Martian ships in the original War of the Worlds film [or a CND sign, for the benefit of our younger readers -- Ed]. The lower indicator (marked with a '!') glows bright red when the channel is overloaded, and remains illuminated for a few seconds just to make sure you see it.

One third of the upper, divided indicator is green and indicates the presence of an input signal. The next section glows yellow when the signal reaches +5dBm, and the third part is red and illuminates at +13dBm. Although the metering idea is not new, this arrangement of LEDs is most unusual, attractive, and very effective. Everyone who saw the review machine commented on it, which has to be a good thing from DACS's point of view.

CONNECTORS

The rear panel also contains a few unusual features. Each channel has not one, but two XLR input connectors. One is labelled Phantom, the other Non-Phantom. Their functions are hopefully self-explanatory, and they are provided so that the large DC-blocking capacitors (needed to protect the input stage from the 48V phantom-power supply) can be removed from the signal path for dynamic or self-powered (ie. non-phantom-powered) mics. It has long been argued that capacitors in the signal path affect audio quality, and this dual-input arrangement allows the capacitors to be avoided if required.

In fact, the Non-Phantom input is connected directly to the first input transistors, and has a frequency response that descends all the way to DC if the bass rolloff filter is left in its flat position (this also explains why the 30Hz position is much more useful than it might at first have appeared). The Phantom input is flat to 20Hz, and then the effect of those DC-blocking capacitors is to introduce a very gradual 6dB/octave rolloff.

Both inputs are electronically balanced, as is the channel output, which is also presented on an XLR. Between the audio connectors for the two channels is a very large and sturdy binding post which provides the signal earth, should you wish to tie this to a technical earth in a studio installation. The only other connector on the rear panel is the IEC mains inlet with an integrated fuse and voltage selector.

IN USE

The MicAmp is very easy to set up and use, as there are very few controls involved and the metering is very clear. The ability to wind in 72dB of gain is

unusual -- very few professional mic preamps provide this much gain, but it is surprising how often it is needed in real-world location recordings. Gain-matching across the two channels was remarkably accurate, and I had no problems in setting the unit up for working in stereo. The high-pass filter sounds completely transparent, even at the 80Hz setting, and I found I would leave it at 30Hz when using ribbon and self-powered mics (simply to remove any sub-sonic signals), but run it flat when using phantom-powered devices (which are effectively filtered below 20Hz by the input stage anyway).

The first thing that struck me on listening was how quiet the MicAmp is. In the specifications for the unit, under 'Noise' it says 'negligible' -- and it really is! I gather the triple-transistor-pair input stage is run with a very high quiescent current, and that apparently has a lot to do with both the eerily silent background, and the astonishing level of detail that this unit produces. This was the second thing that struck me -- given a good microphone, every nuance of the original sound source is faithfully captured and amplified.

Until I played with the MicAmp, I believed the Focusrite Red preamps to be amongst the finest ever made. Well, they remain so in my book, but the DACS is definitely up there with them. According to Philip Hobbs (who makes recordings for Linn Records, Gimell Records, and Hyperion), the DACS "perform significantly better than the Reds". I was not in a position to make a direct comparison, so I can't confirm this bold statement, but the MicAmp is certainly extremely accurate, clean, and faithful, and yes, it has all the clarity that DACS promised when they named their new range.

If you are on the lookout for a very high-quality dual mic preamp, you have to try this one alongside the other established quality products such as the Focusrites and the Amek RCMA, or even the refurbished classic Neve front ends. It's simply stunning!

HARDWARE

The internal workings of the DACS MicAmp are not what I was expecting. The unit is obviously hand-built with five separate circuit boards, all interconnected with a neat wiring loom. Each channel has a main amplifier board and a subsidiary metering card, and the power supply section has its own PCB.

The input and output connectors are chassis-mounting Neutrik XLRs, with screened wiring to the main circuit boards of each channel and all earths are taken back to a single 'star' earth point on the rear-panel earth terminal.

The input circuitry uses three SSM2220 chips 'piggy-backed' on top of one another. These chips contain matched low-noise transistor pairs, and by paralleling three of them in this way, DACS have achieved stunningly low input noise and a remarkable degree of 'openness' in the sound quality. There are

trimmers for both middle and high-frequency common mode rejection, plus another for accurate output balancing, and aside from the input transistor packs, all other active components are Burr Brown OPA604As -- very high quality audio-optimised amplifiers.

It is immediately obvious that DACS have spent the budget wisely on the MicAmp. Although high-quality components are used throughout, critical components have been very carefully specified -- high-value polyester capacitors on the Phantom inputs, silver mica capacitors across the amplifier feedback loops, and high-quality self-cleaning switches on the gain controls. A great deal of attention has also been paid to the mechanical design to ensure that the circuit boards can't be put under stress -- the XLRs are not PCB-mounted, but wired, and the switches and pots are all mounted through supporting plates with long control shafts to minimise any flexing actions.

DACS MICAMP

pros

- The stunning sound quality makes this a bargain at the price.
- Phenomenal amounts of detail and resolution.
- Eerily quiet noise floor.
- Attractive and ergonomic control panel.
- Hand-built with quality components.
- Unique tri-LED level metering.

cons

- Toggle switch on front panel looks out of place [*replaced in subsequent models* - *DACS Ltd*].

summary

This product is an extremely high-quality mic preamp with a totally neutral character. Attention to detail in every aspect of its design has paid dividends in the sonic quality.