

Weiss DAC1

With the tip of the top-end in its sights, Daniel Weiss' new digital-to-analogue convertor offers no compromises. **Dave Foister** counts the bits

IF THERE'S ONE NAME you find in top-end digital rooms and nowhere else it's Daniel Weiss. When digital EQ was viewed by many with suspicion, Weiss' was the exception, and the versatility, performance and repeatability of Weiss designs has made them standard equipment in mastering and elsewhere. Now the processing units are joined by a reference digital-to-analogue convertor which has a place in mastering and duplication facilities as well as studio control rooms.

Sporting the Gambit badge common to the familiar processors, the DAC1 shares their laboratory styling and simplicity. Virtually everything you need to know about what it does can be gleaned from the few front panel controls, which are neatly and clearly laid out but have something of a home-built look about them. The back is more densely populated than the front, since it has no less than three AES-EBU inputs with associated loop-through output connectors. The total of four inputs is completed by an optical SPDIF terminal with no corresponding output. Digital signals at sampling rates of up to 96kHz are automatically recognised, and LEDs on the front indicate not only the frequency of the selected input but its bit depth as well, a useful check in case you've forgotten to dither something down for a 16-bit medium.

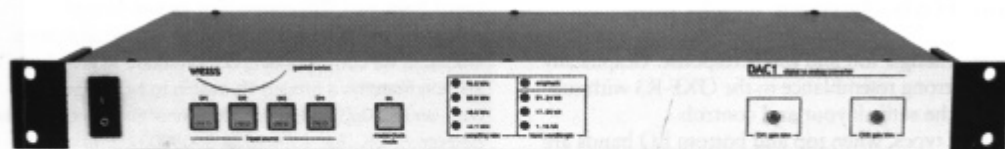
The DAC1 is software based, allowing Weiss to con-
uses two convertors per channel; the correlation technique is intended to give superior signal-to-noise and distortion figures. The analogue output stage is a discrete class-A circuit designed with a very high drive capability, almost zero output impedance, and no-compromise audiophile performance that is quoted as going all the

tinue to upgrade the features and performance. The current version runs everything at double sampling rates, using upsampling in DSP to multiply the standard base rates to 88.2kHz or 96kHz before hitting the convertors themselves. A development in the pipeline will accept 192kHz signals, using Inputs 1 & 2 in a two-wire configuration.

Currently the unit will provide a master word clock if required. For this it has to be switched to Master mode, and the sample rate selected with the input buttons. However, as part of a policy of continuous improvement, Weiss is actually going to take this feature out, as the jitter rejection of the convertors is claimed to be so good that it makes no difference to the quality of the output whether the DAC1 is slaved to a less-than-perfect input signal or holding everything together with a precise reference. Since it never tries to mix sources, but locks to the selected input, this is all that is needed. Several re-clocking schemes are used to achieve this, and it's claimed to be virtually immune to jitter frequencies from a fraction of a Hz to tens of kHz.

The inputs are switched with simple illuminated push-buttons, and the output thoughtfully mutes for a few seconds (perhaps a few too many some might say) while the new input is accepted and synchronised. It is then fed to a conversion circuit that, like the companion ADC1, can't wait for a commercially-available remote, or who want to build its functions into a custom desk, full technical details of the remote pin-outs are given in the manual.

If you've used outboard D-As you'll be familiar with the kind of difference they can make to the performance



way down to DC. The output level from this stage is adjustable by means of screwdriver multiturn pots on the front panel, up to a maximum of +27dBu.

With an eye to the kind of installations that might make best use of the facilities the DAC1 has to offer, there is a remote control connector on the back that can be used to integrate the front panel functions into a central monitoring console, adding features not found on the unit itself. Weiss is considering making a dedicated remote available, although there is nothing currently on offer apart from a very home-built demo remote that was supplied to me to show what could be done. Connections for source select switches and mimic LED feeds are provided on the connector, but the big bonus is the facility to strap a straightforward analogue fader across the appropriate pins to control level. The demo unit had a simple rotary control for this function, which is carried out in the digital domain complete with the necessary dither, and it was remarkably smooth and natural in operation. For those who

of even quite decent professional gear. Any expectations that a Weiss D-A would do this and more are emphatically confirmed by its sonic behaviour, with the kind of clarity that should be mandatory listening for those who underestimate the effects of jitter. There's no question that the performance of both digital and analogue elements in the DAC1's signal path warrants its description as a reference convertor, and its ability to get the best out of disparate sources makes it an ideal component in a multi-machine monitoring system. An electrical SPDIF input would have been a useful addition—perhaps more so than the optical connector provided—but otherwise this is a very complete and useful box. □

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