gambit series DAC1 / DAC1-MK2

24bit / 96kHz (192kHz) D/A Converter

The Weiss Gambit Series DAC1, DAC1-MK2

The **DAC1** is a D/A converter designed with the aim of keeping an absolutely uncompromised audio signal path. Much detail and thought was spent on the digital input as well as the analogue output stage. Both have in common the purest possible approach in audio design, aspiring for nothing less than excellence. This is coupled with an ergonomic design that gives the user immediate access to all necessary functions, while keeping an uncluttered and thus easy-to-use front panel. This combination makes a truly professional D/A converter catering for the highest expectations.

Digital
There are three digital inputs on XLR connectors, and one on Toslink (optical). Each input is actively routed to a corresponding XLR digital output, allowing monitoring at multiple stages in a digital studio setup.

Clocking
Several signal reclocking schemes are combined for extremely high jitter attenuation, making the DAC1 immune the jitter over a very wide bandwidth.

Analog
The correlation technique (using two converters per channel) which was already successfully employed in th ADC1 now gives the DAC1 an edge over other D/A converters with similar wordlength and sampling rate specifications, resulting in improved SNR and THD. Add to that a virtually zero Ω impedance, class A output stage, which can drive large loads without stability problems, then you know why we call this unit no less than excellent.

"This is without any doubt the best D/A so far."

**- Goran Finnberg,
The Mastering Room
Sweden**

"For the first time [..] I have the distinct feeling that I am finally hearing what is on the tapes and CDs delivered to me."

**- Maarten de Boer,
The Masters
Netherlands**

"...sounds stunning!"

**- Randy LeRoy,
Finalstage Mastering
Nashville**

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DAC1, DAC1-MK2

Processing

- Sampling freq.: 44.1 / 48 / 88.2 / 96 kHz (DAC1)
- Sampling freq.: 44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz (DAC1-MK2)
- Maximum input wordlength: 24 bit
- DSP / VCXO multistage jitter reduction
- Virtually zero Ohm output impedance
- Symmetrical output, no degrading servo
- Output level range: -infinity to +27 dBu
- Class A amplifiers
- DSP based upsampling for 44.1 / 48 kHz input signals

Frontpanel Elements

- Four switches for input selection
- Four LEDs for sampling frequency display (44.1 / 48 / 88.2 / 96)
- Three LEDs for input wordlength display (1..16, 17..20, 21..24 bits)
- One Emphasis LED
- Two 25 turn trim potentiometers for fine trimming of the output level

Backpanel Elements

- Three digital inputs on XLR, one digital input on Toslink
- Three digital outputs on XLR, actively generated from inputs
- Two outputs (channel 1,2) on XLR
- Output level range switch (high / low)

- "Digital Output # 3" - mode switch, selects either "Input 3 to Output 3" or "Selected Input to Output 3"
- Remote connector with:
  - Power supply to external faders
  - Tapers from two external faders
  - four input selection switches
  - LEDs for input selection switches

Specifications

- Linearity:
0 ... -100 dBFS input level: < +- 1dB deviation from ideal
0 ... -130 dBFS input level: < +- 1.5 dB deviation from ideal

- Frequency response:

fs=44.1 kHz:	0 Hz - 20 kHz +- 0.05 dB
fs=48 kHz:	0 Hz - 20 kHz +- 0.05 dB
fs=88.2 kHz:	0 Hz - 40 kHz +- 0.5 dB
fs=96 kHz:	0 Hz - 40 kHz +- 0.5 dB

- THD+N @ 1kHz:
-107dBr @-3dBFs input (0dBr=+27dBu)
-105dBr @ 0dBFs input (0dBr=+27dBu)

- SNR @ -40 dBFS input:
-114dBr unweighted (0dBr = +27dBu)
-117dBr A-weighted (0dBr = +27dBu)

Application example for the Gambit Series DAC1:

DAC1 used as multiple tap digital monitor router