

PreSonus Digimax D8 Preamp | £369

The PreSonus Digimax microphone preamp range gets a new addition for the budget conscious.

Robbie Stamp considers the bang/buck ratio

WHAT IS IT?

1U eight-channel Class A microphone preamplifier with two instrument DIs and ADAT output

CONTACT

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HIGHLIGHTS

- 1 Clean and full-sounding preamps
- 2 Quick and noiseless sample rate changes
- 3 Good quality A/D



PreSonus have now added a fourth eight-channel mic preamp to their Digimax range, all based around

similar Class A dual servo preamp stages. The D8 is the new budget version that forgoes the luxuries of 88.2/96kHz digital outputs and channel inserts, as found on the next model up, the Digimax FS. This stripped down approach brings the well-received XMAX mic preamp to a lower price, but we have to ask whether the result is still worth the cash.

On the front the D8 presents eight gain knobs with a backlit -20dB pad switch for each. The first two channels also feature a ¼" TRS (used unbalanced as a TS) for Hi-Z instrument inputs. The metering section provides four LEDs per channel (-30dB, -18dB, -6dB and 0dB) and there is a four LED sync clock display with a button to toggle between internal and external clock synchronisation and the two sample rates (44.1kHz and 48kHz).

At the rear, there are the eight XLR balanced mic/line inputs with +48v phantom power switches between each pair. Next in line are eight ¼" TRS line outputs for analogue connection, while the digital output section features a single ADAT Toslink optical socket and

a BNC wordclock input. Even though this is a budget conscious unit the power is still provided via an IEC socket and not a horrid external PSU.

I'd rather Jack

Simplicity comes at some cost to flexibility as there are some features conspicuous by their absence. There

are no high-pass filters or phase flip options, which in the former case means that unwanted low frequencies will eat up some of the precious amplifier headroom. Though providing +48v per input pair instead of per channel is fine, locating the switches to the rear makes rack mounting problematic. Instead of the ubiquitous XLR/TRS combo sockets the D8 only uses XLR for the inputs, which is fine for mics, but some users may have to get a TRS to XLR cable for line inputs.

My only other gripe is that the only means for external digital syncing is via wordclock. Though this is not a bad way to do it, many lower price interfaces only have ADAT and S/PDIF outputs. The wordclock input is also not self terminating like some designs so a 75 terminator may well be another expense, though I tried it without and found no evidence of clocking problems.

Before launching into the 'how does it sound' bit there are a few operational

What is Class A and Does It Matter?

Without getting too technical a class A amplifier works over the entire of the wave input to it, which is achieved by having the amplifying component (valve, transistor, etc.) permanently working to remain in its most 'linear' region, i.e. where it can amplify the whole wave without distortion. The downside of this is that the amplifier dissipates much more than half its drawn electrical current into heat.

Class B only works over half of the input wave and is turned off during the other half cycle, which means it can be up to

78% efficient, but it creates a major distortion in audio terms. To overcome this two class B amplifiers are used to work over half of the cycle each (i.e. the positive and negative portions of a wave cycle). Though this 'push-pull' configuration is more efficient than class A it suffers from 'crossover distortion' where the two amplifiers hand over the signal.

If they are not perfectly matched (which is quite tricky to do) the wave doesn't join up right and becomes distorted. A compromise is class A/B where 'push-pull' is used but with both amplifier

halves working a very small amount in their 'off' phase to smooth the hand-over and reduce, if not eliminate, the crossover distortion. This is less efficient than class B, but more so than class A. With regards to audio equipment this means that well-made class A/B amplification circuits can exhibit just as low distortion figures as a well-made class A circuit, but it all comes down to the quality of design, implementation and components. Without these the classification means nothing to anyone, so judge with your ears and not your eyes.





observations to note. Firstly, I found the four LED metering to be useable but not all that informative as regularly hitting the 0dB mark could be under or over by quite a margin.

Obviously the dynamic character of the source has a large part to play in this matter and I found that short transients that crossed the 0dB line were not creating an audible distortion so I would still prefer the four LEDs to

that muddy low-mid response that is the hallmark of poor audio circuitry.

The D8 passed the test with condensers, dynamic mics and ribbons on the Dog and many other sources (drums, guitar and bass amps and vocals). The 60dB of gain is easily enough, though it did run flat out with the ribbons on acoustic guitar which is pretty normal. The noise floor is admirably low and is no more

the bill. With regard to sound quality, I would happily recommend it to project studios, live rigs and anyone who needs some extra channels they can rely on without blowing £1,000 or more. My concerns about the +48v switches on the back panel, the lack of phase flip and high pass filters still stand, but they are outweighed by the audio quality available at this price.

If you want to work at higher

sample rates then the Digimax FS would be a better bet, but do consider whether you are really going to benefit at an audible level – it's not that

clear cut. The feature set of the other Digimax models may have been tempered to create a cheaper option, but it is nice to note that the sound has not been skimmed on.

For the price, you'd be hard pushed to match this and would have to spend well over £1,000 to get an appreciable qualitative difference. **FM**

There is plenty of gain even for the most weedy of guitars and the noise floor is low

not having them at all. Despite my grumble about the lack of digital clocking sources I found the D8 very quick to change sample rate when clocked externally and it made no noise when doing so – other units are far less forgiving.

XMAX the spot

So, what does the XMAX preamp sound like? In a word – clean. In several words – clean, full and really rather pleasing. Across the frequency range, there are no over-hyped areas, no telltale roll offs at the extremities and a quick transient response that sorts the men from the boys when it comes to drum and percussion recordings.

I have an old classical guitar called 'the Dog' (as a dog chewed the headstock and it sounds really 'woofy') that I use to challenge preamps, EQs and microphones – if they don't make it sound worse then they don't have

pronounced than much higher priced preamps that I compared it with. The D8 is not a characterful preamp, nor should it be. The extreme high and low frequencies are well proportioned to the rest of the frequency range and overall tend towards a flat response.

The instrument input is similarly good quality, though there is a slight roll off at the low end compared to other more costly units. There is plenty of gain even for the most weedy of guitars and the noise floor is low. The A/D conversion via ADAT is more than adequate and doesn't seem to restrict the quality of the preamps.

Running tests at line level to compare the digital and analogue outputs, there was almost no obvious audible difference.

Bang vs Buck

The Digimax D8 is aimed at a budget minded market place and easily fits

FutureMusic

VERDICT

BUILD

VALUE

EASE OF USE

VERSATILITY

RESULTS

A simple set of preamps with a quality sound beyond its price and feature set.

SPECS

- Mic/Line Inputs:** 8 XLR sockets (rear)
- Instrument Inputs:** 2 1/4" TS sockets (front)
- Line Outputs:** 8 1/4" TRS (rear)
- Mic Input Impedance:** 1600Ω
- Instrument Input Impedance:** 1MΩ
- Line Output Impedance:** 51Ω
- Frequency Response:** 20Hz to 50kHz (±0.5dB), 20Hz to 150kHz (±3.0dB)
- THD (Total Harmonic Distortion):** <0.003% (unweighted, 1kHz @ +4dBu output, unity gain)
- Equivalent Input Noise:** -126dBu (unweighted, 55dB gain, 150Ω input, 20Hz to 22kHz)
- S/N ratio:** >101dB (unweighted, ref.= +4dBu, 20Hz to 22kHz)
- Gain Range:** -4dB to +50dB (±1dB)
- Max Input Level:** +14dBu (unity gain, 1kHz @ 0.5% THD+N)
- Digital Output:** 8 channel ADAT on optical TosLink
- Wordclock Input:** 75Ω BNC (unterminated)
- Sample rates:** 44.1kHz and 48kHz (24bit word length)
- ADC Dynamic Range:** 107dB (A weighted, 48kHz sample rate)
- Dimensions**
483 x 154 x 445mm
- Weight**
2.72kg

ALTERNATIVES

Focusrite OctoPre LE
£350
In the same price range and offering decent preamps, though not as nice as the XMAXs. Switchable low mic impedance on two channels, a phase flip and high-pass on every channel, but the digital output is only optional.

focusrite.com

ART TubeFire8

£399

Packed with two-stage gain, phase flip and high-pass on every channel. This valve-based preamp offers two instrument DIs, wordclock In and Out, XLR/ TRS combo inputs and FireWire digital connection instead of ADAT, so it works as a full AD/DA front end. The preamps are not as good as the D8 though.

artproaudio.com

