



REF10 SE120



The Ultimate Audiophile 10 MHz Reference Master Clock

The great success of the well-established MUTEC REF10 has proven the extremely positive, clearly audible influence such a meticulously developed reference clock generator has got on the sonic performance of a digital audio system. Although the REF10 gained large success worldwide in high end and pro audio environments, we at MUTEC are always driven by the same question: can we do even better?

The positive answer is available in the shape of the REF10 SE120. Because already during the development of the REF10 we noticed how extremely important the selection of the central clock oscillator is. Its quality determines the technical and consequently

also the acoustic result of a reference clock generator to a considerable extent. That is why the renowned German REF10 developer has been appointed to help improving and optimizing the production processes around the new ultra-low phase noise oscillator to make it successfully suitable for being the heart of the REF10 SE120.

The REF10 SE120 is a special version of the REF10 that offers a much more elaborately manufactured oven controlled crystal oscillator (OCXO). This oscillator achieves phase noise values of <-120 dBc measured at 1 Hz offset from the carrier frequency of 10 MHz.

Features

- 10 MHz reference master clock generator with ultimately low phase noise of -120 dBc at 1 Hz
- Improves and enhances compatible DACs, audio re-clockers, music servers and master clocks
- Engineered around an elaborately manufactured and selected OCXO made in Germany with outstanding low noise
- Revolutionary, sub-Hz optimized, lowest noise power supply for every circuit section
- Eight galvanically isolated, individually switchable BNC clock outputs
- Provides simultaneous reference outputs with 50 and 75 Ω impedance for maximum compatibility with clocks and DACs by other manufacturers
- Generates a very high slew-rate square wave signal for superior lock precision compared to the sine wave signals used by competing brands
- Integrated, highest-quality international linear power supply
- Highly efficient power line filtering
- Intuitive user interface with noble aesthetics

Such technical specification also positively influences the phase noise at audio-relevant measuring intervals of 10 Hz and 100 Hz, which leads to a unique jitter performance of average <15 fs in the crucial measuring range between 1-100 Hz!

Naturally, only a small number of those high-end oscillators pass through our demanding multiple-stage test course for selection successfully. That is why the REF10 SE120 will only be available in small batches. Lucky owners of an exclusive REF10 SE120 will gain a fascinating experience. The musical reproduction quality of their high-class audio setup fuelled by this special edition of the REF10 rises significantly – especially in the areas of precision, transparency, spatiality and dynamics. Audible improvements include better timbral accuracy where separate instruments

and voices show up a new degree of life-like realism. Additional benefits offer a larger soundstage with greater depth, width and front-to-back layering of instruments.

The REF10 SE120 is currently not only the absolute top product in MUTEC's Emypreal Class product series, but also claiming the industry-leading position in the field of audiophile reference clock generators.

»The overarching advantage of the REF10 SE120 over its predecessor was one of tighter articulation and focus, or greater coherence and resolution. It all added up to an uptick in realism - a more palpable sense of being there, of instruments sounding more fleshed out and dimensional. To be honest, I was not expecting as big an impact as I heard sounding.«

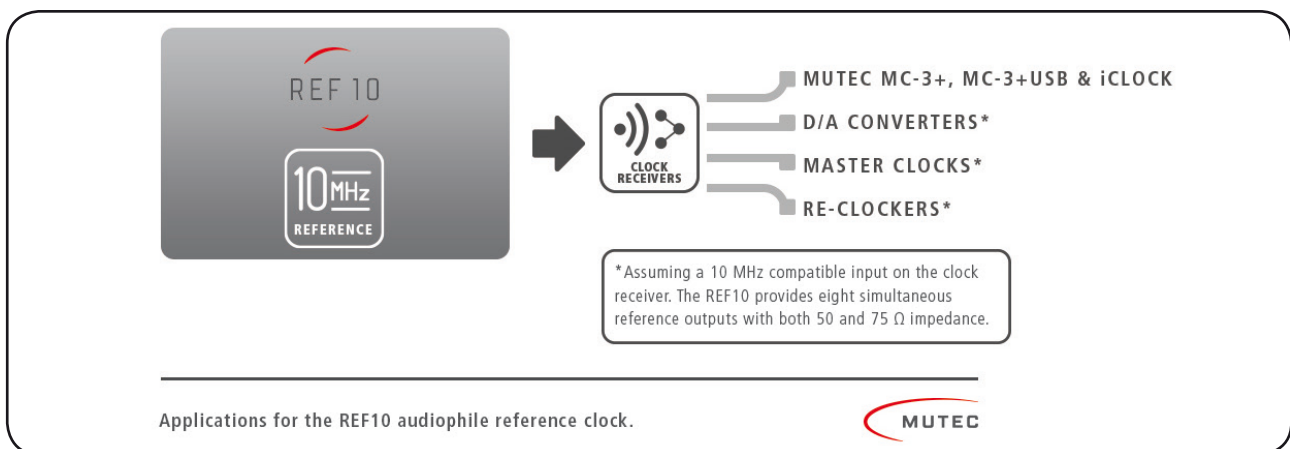
Rajiv Arora, Audiophile Style Forum, USA

Applications

- As an audiophile performance enhancement for compatible DACs, audio re-clockers and music servers by any brand
- As an ultra-low noise, high stability clock reference for the entire digital audio chain at home or in the studio
- As an ideal high end upgrade for MUTEC's own MC3+USB and MC3+ audio re-clockers and iClock master clocks

Phase noise:	dBc/Hz
1 Hz:	≤ -120
10 Hz:	≤ -148
100 Hz:	≤ -162
1000 Hz:	≤ -167
Noise floor:	≤ -170

All measurement were taken at the device's outputs and figures represent average values. Minor production related deviations will be expected.



Learn more about the REF10 SE120 now at www.mutec-net.com