

HELIX DSP PRO MK3

State-of-the-art Technology and TwinDSP power for the ultimate High-Res sound experience

The DSP PRO MK3 is equipped with two of the most powerful 64-Bit audio signal processors from Analog Devices. The incredible processing power of 2.4 billion MAC operations per second, combined with the high sampling rate of 96 kHz (resulting in an audio bandwidth of over 40 kHz) and AKM Velvet Sound A/D and D/A signal converters, ensure outstanding sound in High-Res quality.

ACO – Advanced 32 Bit CoProcessor Platform

The DSP PRO MK3 is now equipped with our proprietary 32 Bit ACO platform, which doesn't just take over all control tasks ultra-fast, but also handles a bunch of audio functions: Now, fantastic sound effects such as Augmented Bass Processing or Real Center are implemented as well as a channel-separated Input EQ including Input Signal Analyzer (ISA) for easy analysis and compensation of input signals of OE radios, which already include a sound setup ex works.

All you need for optimal connectivity

With its wide range of in- and outputs (8 x high level, 8 x RCA, 1 x optical, 1 x coaxial, 1 x HEC slot & 10 x line output), the DSP PRO MK3 offers everything for an easy adaptation to existing factory radios or multi-channel OE sound systems. Additionally, the extended voltage range allows the combination with almost any imaginable analog signal source, even with high-power OE amplifiers.

DSP PC-Tool 5 feat. TuneEQ – Powerful features for ultimate sound experiences

Of course, the HELIX DSP PRO MK3 can be easily configured via our new, professional and exceptionally intuitive DSP PC-Tool 5. The well-known, numerous setting options with their extensive sound processing functions leave nothing to be desired and guarantee an extremely precise sound adjustment even under the most difficult conditions. And thanks to the new, proprietary TuneEQ function for automated frequency response correction, you also save a lot of time when optimizing your sound.

DSP features

TuneEQ

TuneEQ is an extremely flexible and particularly easy-to-use function for automated frequency response correction. A single measurement per audio channel or channel pair with a suitable measurement microphone (e.g. our MTK1) is sufficient for TuneEQ to independently and precisely adjust the equalizers to the desired reference curve. TuneEQ uses the full function set of the parametric equalizer including center frequency, Q-factor

and gain adjustment. And since the highly complex arithmetic operations required for this run in the background, you also save a lot of time when optimizing your sound with TuneEQ.

RealCenter

The "RealCenter" feature is an algorithm, developed by Audiotec Fischer, that emphasizes the music information which is present in both the left and right front channel to create an unique center signal. In contrast to common procedures, in which only the channels are summed up, the intensity of the center signal is also dynamically controlled by the stereophonic informational content of the left and right channel.

Sounds complicated but this effect is astonishing: That means if solely the left or right channel delivers an audio signal, the center channel will not reproduce a signal. In the case of common algorithms, the volume level of the center channel is only reduced by 6 dB (= half volume level). Audiotec Fischer's "RealCenter" allows a unique, broadened sound staging for both driver and co-driver at the same time! Therefore, the disadvantages of a conventional center channel, such as an intrusive, small sound stage, are things of the past.

Augmented Bass Processing

Audiotec Fischer's proprietary "Augmented Bass Processing", consisting of the two revolutionary sound features "Dynamic Bass Enhancement" and "SubXpander", has been especially developed to dramatically improve the bass reproduction of subwoofers. The "Dynamic Bass Enhancement" ingeniously combines maximum deep bass and highest sound pressure – regardless of the music style or the tone controls in the head unit. Depending on the input signal, the "Dynamic Bass Enhancement" gains the lower frequency range and varies the cut-off frequency of the subsonic filter. The result is a significantly more powerful and deeper bass response at low and medium volume levels without the risk of overloading the subwoofer neither mechanically nor electrically at high volume levels. It is simply fascinating which bass performance is suddenly possible. If you want an even lower and "darker" bass reproduction, the "SubXpander" can be additionally activated. Therefore, subharmonic tones are added to the fundamental tones in the frequency range between 50 and 100 Hz.