



The DEQX PDC-2.6 Digital Calibration Processor and PDC-2.6P Preamp offer advanced correction of inherent loudspeaker inadequacies through digital inverse filtering of every driver in the speaker system. This provides matched phase response/time alignment and a truly accurate (flat) frequency response across the entire audio spectrum. The result is a dramatic improvement in any loudspeaker's three-dimensional imaging, accuracy and realism.

The PDC-2.6/P is a 2-input, 6-output digital processor offering individual driver correction with high order digital crossovers (up to 300dB/octave). Speakers can be bi-amped (2-way) or tri-amped (3-way). Speakers with 'bi-wire', or 'tri-wire' connectors are easily adapted to DEQX correction. Alternately, existing crossovers can be bypassed. Single connector speakers (with passive internal crossovers), or active speakers, can also be DEQX calibrated. These corrections provide an accurate frequency response and improvement in imaging due to improved phase coherence between speakers. Crossovers can also be applied to one or two sub-woofers.

Once the loudspeakers are corrected, the PDC-2.6 can perform a detailed measurement of the speakers in the listening environment with automatic or user-definable minimum phase parametric equalization to optimize the room response and speaker setup.

Features - PDC-2.6 & PDC-2.6P

- Digital Speaker Correction (pseudo-anechoic, amplitude and phase)
- Realtime Digital Parametric Equalization (7 band)
- Detailed room measurement capability for optimum room/speaker setup
- Stereo digital crossovers (6dB/octave steps to 300dB/octave)
- Precision 32-bit, floating-point, 240-MFLOPS processing with dual Analog Devices SHARC DSPs
- Extremely low latency processing allows sync with video
- Audiophile grade Op-Amps (Burr Brown) throughout
- Audiophile grade 96/192kHz generation 24-bit ADC/DAC converters
- PC based set up via USB for initial measurement, correction and user-defined options and responses
- Instant selection of 4 user-defined target room/speaker curves
- Downloadable software and firmware upgrades
- Allows all surround formats using multiple PDC units
- Stereo analog inputs, balanced (XLR) and unbalanced (RCA phono)
- Stereo digital inputs, S/PDIF (RCA phono) and AES/EBU (XLR)
- Six analog outputs, unbalanced (RCA phono)
- Digital volume control, allows digital sources to be input directly
- Calibration Kit comprising software & calibrated measurement mic

- Phantom-powered mic input
- Compact 1U design (1 3/4" H x 17" W x 12" D)
- 80-240VAC universal input, 25VA
- No fans

Additional Features - PDC-2.6P Preamp Version

- Analog volume control post DACs - maintains full digital resolution at low volume
- Remote control selects from four inputs - dig XLR, dig RCA, analog XLR (balanced), analog RCA
- Remote control selects profiles, volume, mute, 3-band precision EQ with 100 memories for CDs, DVDs and other media

Options

- Earthworks reference grade measurement microphone
- EITHER Balanced analog outputs (XLR) - OR
- Digital outputs - AES/EBU (XLR), S/PDIF (RCA phono)
- 19-inch rack mount hardware
- High-Resolution Time Domain Room Correction (Offline) Service

PDC-2.6 Rear Panel shown with optional Balanced Analog Outputs
Specifications subject to change



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DEQX Calibrated™

The Elusive 'Being There' Experience

Our hearing is sensitive to the slightest corruption of naturally occurring sound. That's why we're accustomed to recognizing sound from loudspeakers as unrealistic. However, when the signal arriving at the loudspeaker has been processed to correct for the frequency response and phase errors that the speaker is known to introduce, the final sound will be the most accurate reproduction possible. The DEQX Calibrated™ process involves several optional steps:

1. 'Pseudo Anechoic' (near field) measurement of each speaker or driver using DEQX's proprietary measurement system to eliminate room reflections. This provides accurate phase and frequency response knowledge of the speaker's 'native' behavior, especially in the upper bass, mids and high frequencies, which 'room measurements' cannot provide.
2. Computation of the required correction by the DEQX Calibrated™ analysis software running on a PC connected to the unit during set up.
3. Room measurement and user profiling using graphically overlaid seven-band parametric EQ.
4. Media correction (PDC Preamp version only): Provides remote control, 3-band parametric 'tone control' with memory for up to 100 CDs, DVDs and other media.

The DEQX Calibrated™ process can be incorporated into existing speakers using the DEQX PDC-2.6/P Processor/Preamp. Initial set up and installation may require a trained installer.

Speaker Correction and Room Correction

DEQX Calibrated™ provides phase coherence to within a few degrees, even at high frequencies. The frequency response is typically corrected to within 0.5dB. Compared with typical high-end speakers, DEQX improves both of these specification fundamentals by roughly an order of magnitude. DEQX's pseudo-anechoic measurement process allows

measurements to be made without the need for an anechoic measurement chamber.

The DEQX PDC-2.6 unit provides measurement and correction of speakers at very high resolution. The unit allows detailed measurements to be taken at the chosen listening position and the digital parametric equalizer can be used to further optimize the room/speaker setup.

Measurement

The DEQX Calibrated™ PDC-2.6 and 2.6P are supplied with a calibrated measurement microphone and PC software to perform the necessary measurements and analysis. The graphical user interface shows measurement results and allows customization of the correction process.



Get Real and 'Be There'

The result of DEQX Calibrated™ processing is a dramatic improvement of imaging, accuracy and transparency. Getting 'Real' is what DEQX Calibrated™ is all about. Together these improvements greatly increase the elusive 'being there' experience that has previously been almost unobtainable regardless of cost.

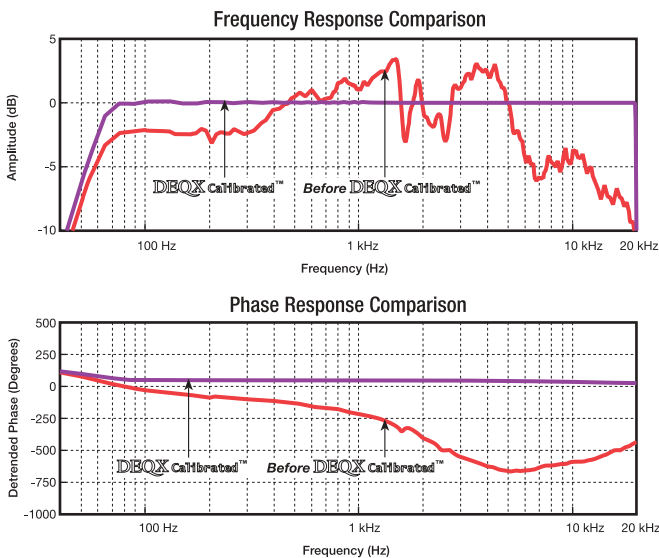
DSP Technology

DEQX Calibrated™ processing employs patent pending proprietary algorithms to provide minimal latency processing (no noticeable delay) and DEQX's unique measurement and analysis techniques.

DEQX's dual floating-point, 32-bit DSPs provide state of the art sound quality with nearly 160dB of processing resolution!

DEQX OEM Solutions

Loudspeaker manufacturers can implement DEQX Calibrated™ certification into existing designs using DEQX's OEM DSP / digital amplifier modules which can be customized to specific physical and IO requirements.



Typical anechoic measurement, 1 meter, 0 degrees