

0 800

Active
Studio Subwoofer





The O 800 active studio subwoofer is the ideal extension to high-quality studio monitors for multi-channel audio production. It extends the frequency spectrum of the system to 27 Hz and significantly raises the peak level of the monitors. But the O 800 is much more than an extension to Klein + Hummel monitors—its LFE (Low Frequency Effects) offer all possible combinations for first-class surround systems. The exceptional dynamics and very precise reproduction give the confidence to make the most critical judgments on the lowest frequency range of the audio material.

Numerous settings:
continuous phase, amplitude,
lower limit levels, LFE filtering



**Extra Long
Excursion Subwoofer**
for frequencies down to 27 Hz

**Integrated bass
management** for 3 monitors



0 800 Active Studio Subwoofer

Uncompromising low frequency driver

- Low-frequency driver with aluminum basket designed for maximum air flow
- Driver constructed with rear ventilation
 - ▶ Higher maximum sound pressure
 - ▶ Minimal power compression
- Exceptionally low-distortion bass reproduction via extremely long excursion (1.6 inch)
- Patented Nomex®-Kevlar® composite cone
 - ▶ Minimal distortion
 - ▶ Maximum self-damping
- Magnetically shielded

Ingenious enclosure design

- Resonance eliminated via solid construction
 - ▶ Taut, articulate bass
 - ▶ Linear frequency response independent from volume
 - ▶ High sound pressure
- Low-compression bass reproduction via generously proportioned bass reflex channel
- Sturdy subwoofer with maximum air flow
- Other colors available upon request

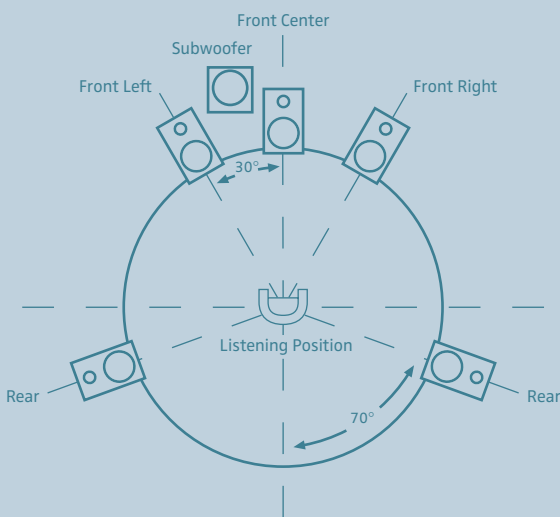
Advanced electronics

- Integrated, switchable electronic limiter
- Precise, active, integrated crossover equalizer (high and low) with 24 dB/oct.
- Adaptable for optimal ultra low bass extension for all K + H monitors up to the O 400
- Bypass function (sub off, tops, full range), optional remote control
- 4-step low-cut filter (30 Hz, 40 Hz, 50 Hz, 60 Hz)
- Continuously variable phase-adjustment control permits setup of subwoofer anywhere in studio

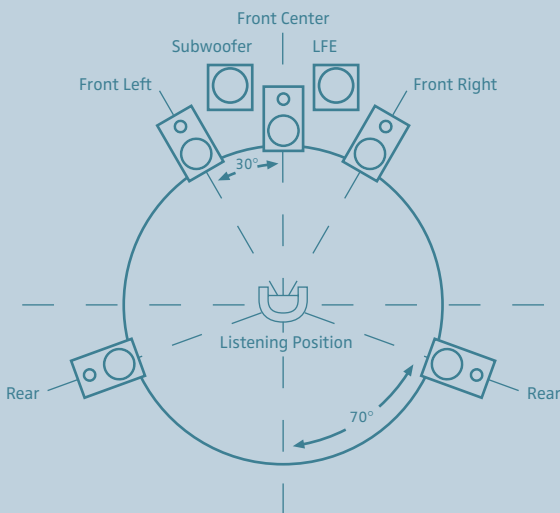
Unlimited installation and connection options

- 3 balanced inputs (left, center, right)
- Connections for mono, stereo, Dolby® Surround, and front or rear channels with 5.1 model
- Center input can be switched to "Sub Direct" for the LFE effect channel with 5.1 model
- Balanced high-pass outputs (left, center, right) connect corresponding front and rear monitors

Surround sound: Customized installation for every room. To get the most out of Surround Sound, installation needs to be customized, individually adapted to the acoustic possibilities of every room. Klein + Hummel's studio monitors and the active O 800 subwoofer offer a flexible variety of potential combinations, so every room's aural possibilities can be exploited to the fullest.

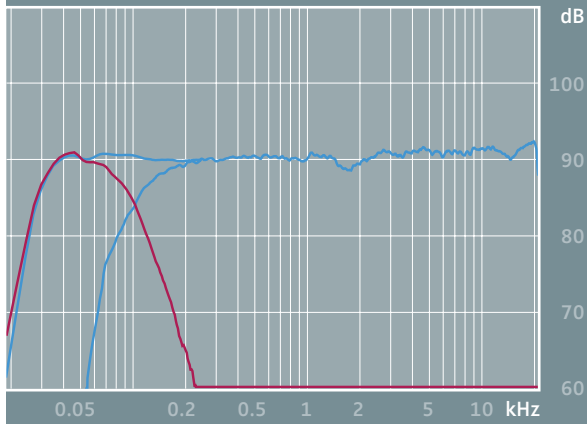


Matrix surround (Dolby® Surround). The smallest surround system consists of five P 110 monitors plus one O 800 subwoofer for the lowest-frequency bass notes on the three front channels. This configuration meets all requirements of a matriculated surround system (Dolby Pro Logic®) in which the front channels carry the whole sound spectrum, while the back channels focus on a limited frequency spectrum.

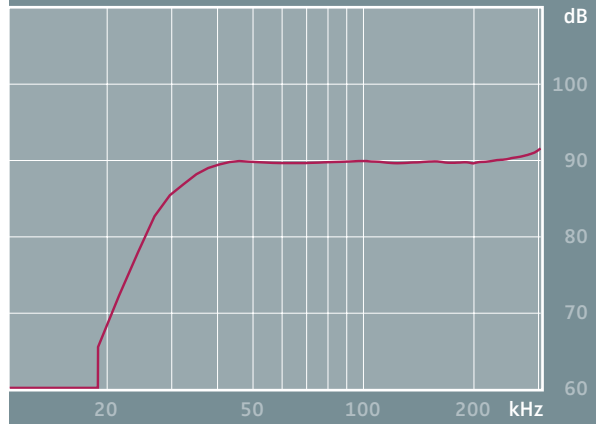


Discreet surround (5.1). The discreet surround system allocates the low bass section from all five channels onto the two subwoofers. One subwoofer takes the bass section from the three front monitors, the second transfers the low-frequency effects channel into the subdirect system. This separates the extreme low bass section, with its potential for distortion, from the main loudspeaker.

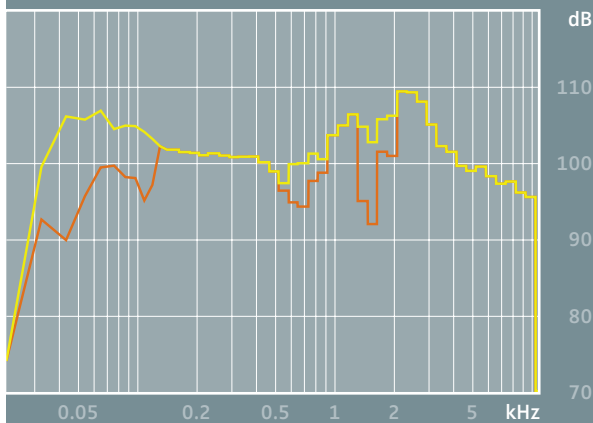
Frequency response 0 800 + 0 110



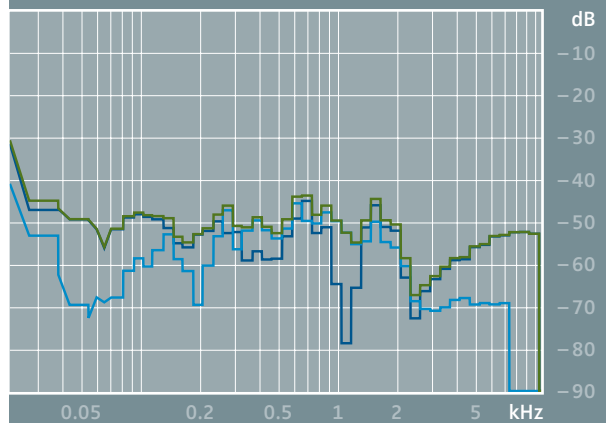
Frequency response 0 800 subdirect mode



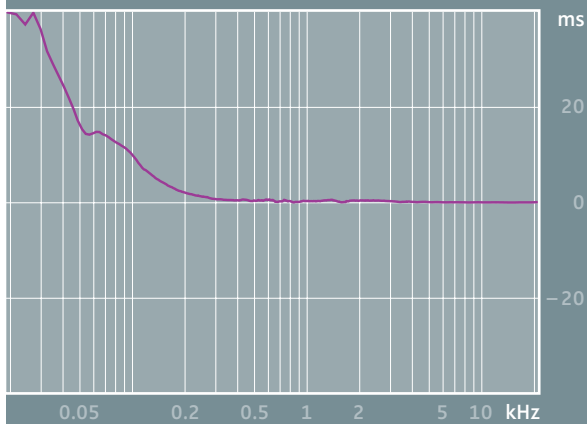
Max. SPL 0 800 + 0 110 in 1 m at 1% and 3% THD



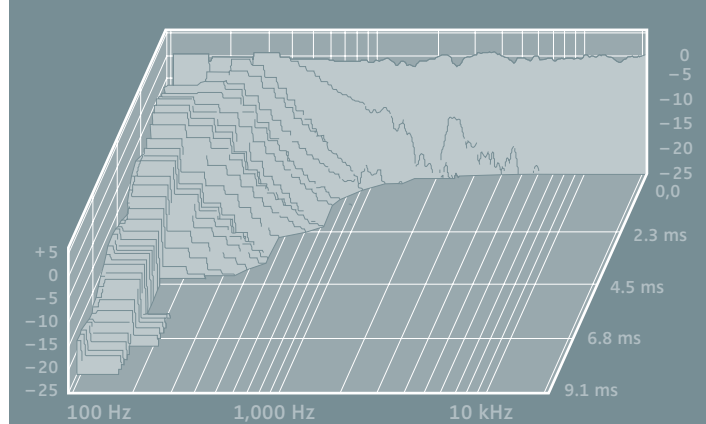
THD 0 800 + 0 110 at 95 dB/SPL in 1 m total k2 k3



Group delay 0 800 + 0 110



Cumulative spectral decay 0 800 + 0 110





Active Room Absorption Module (ARAM). The reproduction of low frequencies in a normal listening room is normally associated with extreme peaks and resonances at different frequencies. Standing waves are often caused by parallel walls, floors and ceilings. Corrections can be made either by adapting the layout of the room or using porous or resonance absorbers to address the room's acoustics. The drawback is that this may require much work and only be able to solve part of the problem. With the Active Room Absorption Module (ARAM) Klein + Hummel has developed a system with which the low-range acoustic problems associated with subwoofers can be almost completely removed, even in square rooms. And the more problematic the room is, the more effectively we can help.

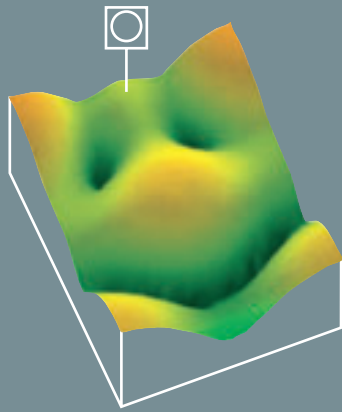


Delay adaption to compensate for acoustical imbalances in room

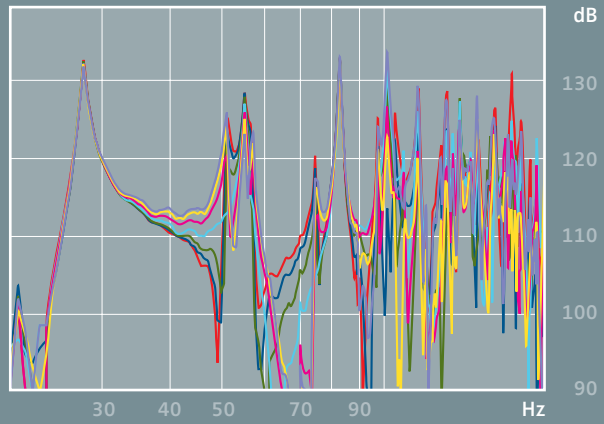
Output for loop connection to additional ARAM

O 800 ARAM

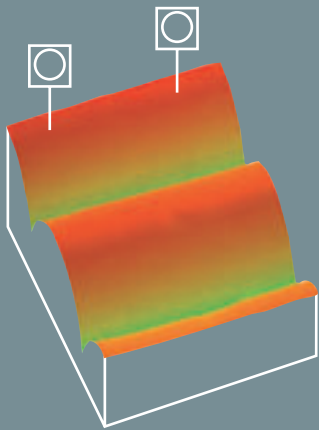
- Dramatic improvement in the bass level especially in rectangular rooms
- Linear bass reproduction in problematic spaces
- No resonance through room's conditions
- Extremely precise, impulse-true bass
- Simple to use
- Mechanical and acoustic properties identical to O 800



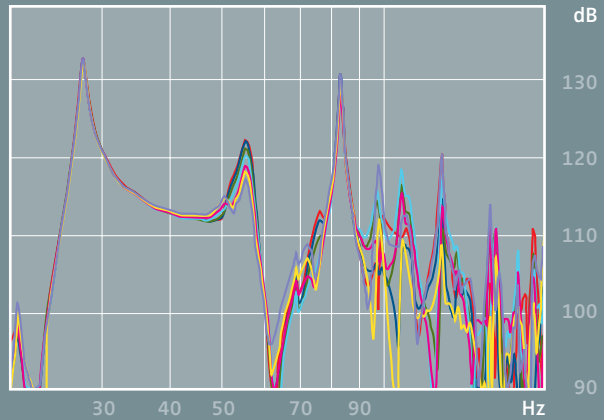
1 box middle front; measuring points diagonally across room at listening position



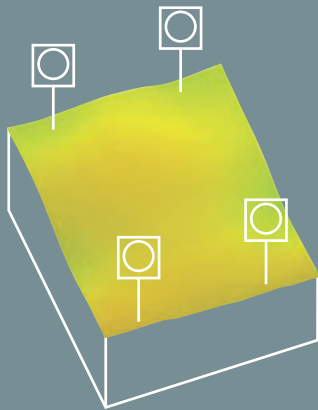
A single subwoofer in a square room causes a very unfavorable acoustic setting with extreme frequency-related peaks and modulations which are markedly different in different parts of the room.



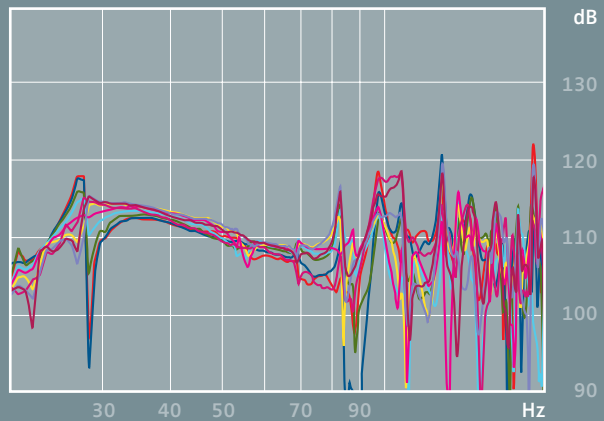
2 boxes middle front; measuring points diagonally across room at listening position



Setting up a second subwoofer at the rear of the room causes bass dispersion in the form of a cylindrical wave. This impedes the room's lateral modality.



Each with 4 boxes middle front; measuring points diagonally across room at listening position



By introducing additional ARAMs, we can compensate for the room's remaining longitudinal modality. The correction can be made parallel to the front subs. The input signal is delayed by the internal electronics and inverted between the front and back of the room. The acoustic signal coming to the back of the room is thus "pulled away." No reflections are created. The result: the bass-level peak stays constant, and resonance is almost completely eliminated.