

C30-ANC

Active Noise Cancelling
Club Loudspeaker

Pro Audio Development

quint audio



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www.quintaudio.com



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2x15" ANC / 2x15" / 1x4" - 1x2.5" coaxial

Active Noise Cancelling full range audio system

The Quint Audio C30-ANC is a very high performance full range Active Noise Cancelling (ANC) loudspeaker designed for mid field PA applications in clubs and medium halls.

The Active Noise Cancelling is created by the use of two 15" woofers in each side of the C30 that are working together with two 15" woofers in the front in order to create a tightly controlled dispersion pattern with maximum full range output on the front side and minimum overspill on the area around and behind the system.

With this unique Quint Audio ANC technique you will be able to create more sound pressure on the dance floor while the amount of sound energy that will leak through the walls to the neighbors, is minimized. For many club owners in urban areas this loudspeaker can be a 'life saver'.

The Active Noise Cancelling C30-ANC can be used with standard settings or can be tuned in to a specific room with specific distances to the walls for maximum ANC efficiency.

For even more output performance, the C30-ANC can be combined with an ANC subwoofer.

The Problem:

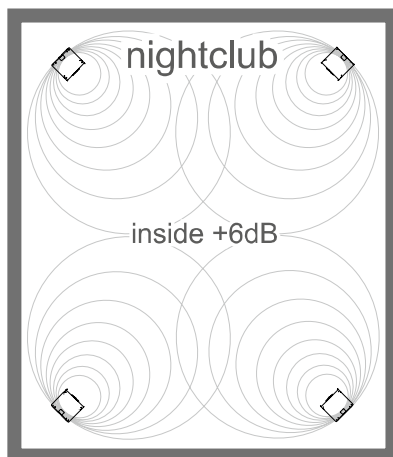
Noise disturbance, and in particular due to annoying low tones that seem to go straight through every wall, into adjacent buildings and throughout the neighborhood of a club or music hall (often in a busy urban area), is for many municipalities, residents and entrepreneurs a difficult problem to tackle and often requires a comprehensive solution.

The rigorous application of physical sound insulation and damping can be one solution, but this is time- & space-consuming and expensive.

For club owners who don't want costly renovations and hassle with authorities and local residents, we have some good news: an affordable and smart solution is now available.

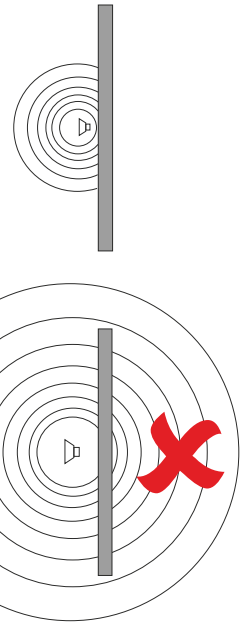
The Solution:

With the simple purchase of Quint Audio's C30-ANC club loudspeakers, a large part of the mentioned problems above can be solved immediately for you, with no need for structural or electronic modifications. The principle is quite simple; bring the sound to where you need it and keep it away from the walls and ceilings. How we do this and how it works, we will explain you on the following pages.

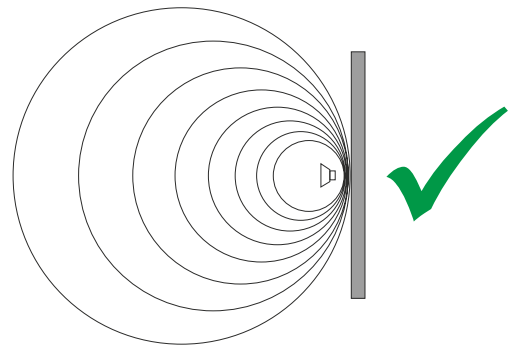


Example (results may vary)

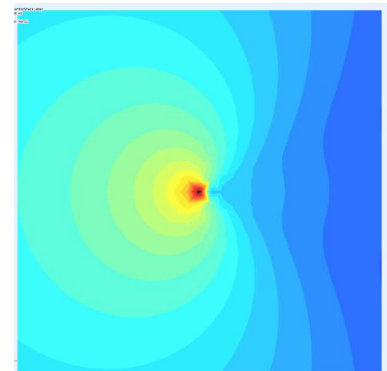
High frequencies produced by your audio system, with short wave lengths and relatively low energy can be stopped by a wall, floor or ceiling quite easily.



Low frequencies produced by your sound system with long wave lengths and relatively high energy, are very hard to stop by a wall, floor or ceiling. For these long waves it is quite easy to penetrate obstacles or bend around them.



By directing the audio energy away from the ceilings, floors and walls and bring it to the desired spots, less overspill to adjacent rooms and buildings occur and more energy is available where you really want it.



Polar plot of the C30-ANC measured in a real life situation

How does Quint Audio ANC work?

Quint Audio introduces its proprietary ANC principle, or Active Noise Canceling, to its ANC club loudspeaker range. For ANC we place the woofers in different pre-calculated spots in the loudspeaker cabinet and thereafter influence the phase behavior and the frequency behavior of the loudspeakers amongst each other in such a way that the components will work together in a pre-determined direction.

Meanwhile we create anti-noise in spots where we want as least as possible audio, thereby extinguishing the acoustic energy, for example behind the loudspeaker box or, if you wish so, even exactly in the bedroom of the neighbors.

For maximum efficiency the C30 has to be measured and set to every individual location.

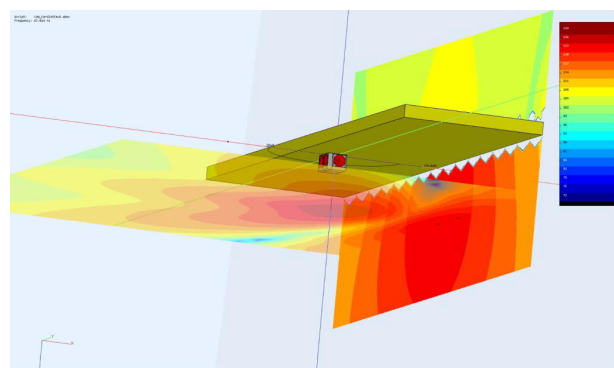
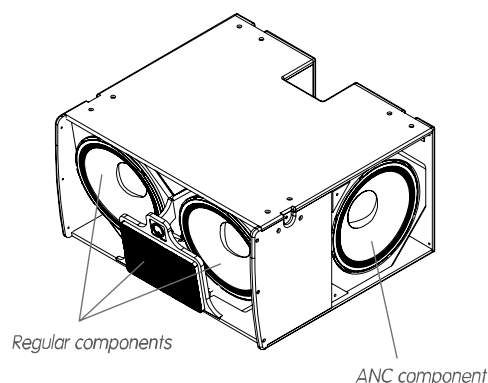
Depending on the placement of the speaker, this control over the radiation pattern can provide a damping of up to 25dB over the entire bass frequency spectrum of 40-250Hz (Remember, these are the frequencies penetrating walls when using ordinary loudspeaker systems!).

Practically this means you will have a profit of 6 to 8dB measured inside, which implies that the sound level inside the club or hall can be at least twice as loud as before, without any further physical damping provisions. For comparison: this is possible for 1/10 of the price of 6dB gain inside with physical damping. The C30 thus gives you a very healthy return on investment.

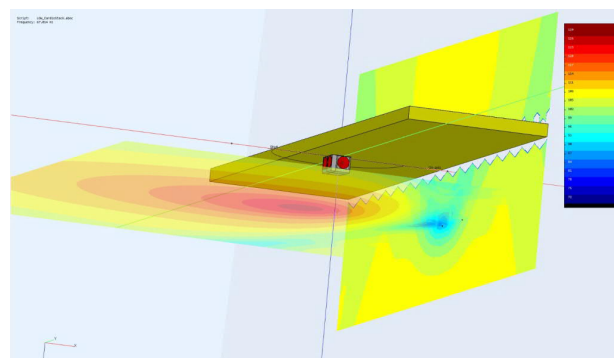
Full-range

For maximum ANC performance, the loudspeaker needs to offer real full-range capability. Therefore the C30-ANC covers the entire frequency spectrum from 40Hz to 19.000Hz.

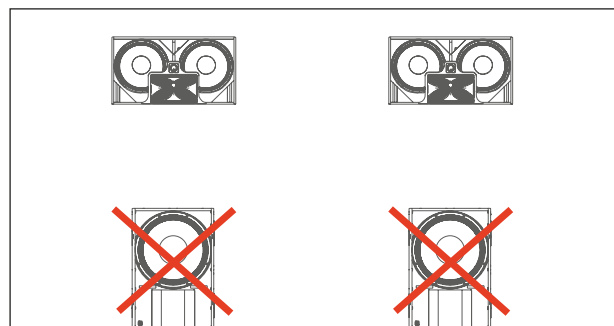
As a result, separate extra bass cabinets are not particularly necessary. This saves space on the floor and the cost of separate subs and amps.



On wall SPL measurement without ANC



On wall SPL measurement with ANC (note the difference of sound pressure on the wall, red is =125dB, yellow =100dB)



No bass cabinets needed

Mounting

The C30 has a very precise beam pattern of 70 degrees horizontal x 40 degrees vertical. Due to the arrangement of the loudspeakers in the front at a downwards angle of the front, the loudspeaker can easily be mounted against the ceiling and thus precisely radiate onto the audience surface, which saves installation space on the walls.

Signal processing & amplification

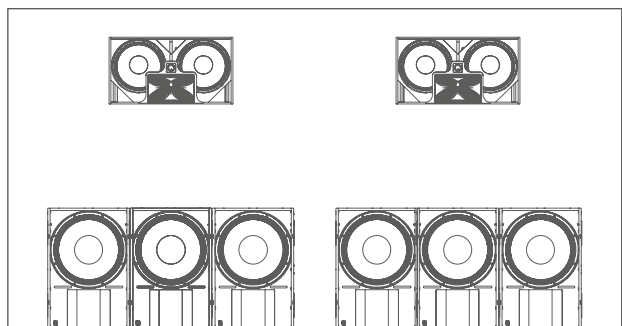
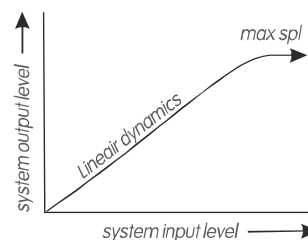
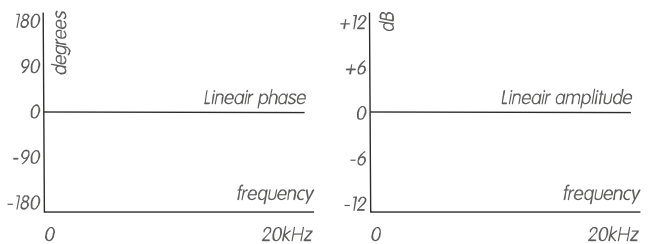
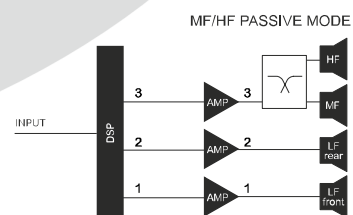
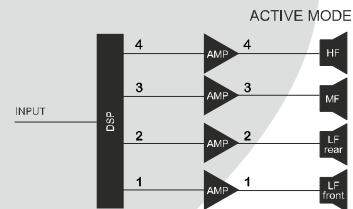
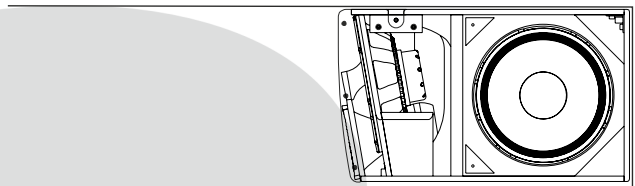
The speaker comes with matching amplifiers and digital FIR sound processors. Each C30-ANC is controlled by 3 amplifier channels per speaker (tri-amping), or for even more phase linearity by 4 amplifiers channels (this is optional for the true enthusiast), with each amplifier channel also having its own digital FIR DSP-channel. As a result, the C30 produces a phase, frequency and dispersion linear, rich sound that can be adjusted for you per room and per speaker and (on demand) according to your personal taste.

Linear dynamics

Using four 15" woofers per box in combination with a coaxial 4"-2.5" high frequency driver, the C30 is a speaker capable of producing very high sound pressures with plenty of bass when required. But when the loudspeaker plays softly, the sound is also sweet, full and open. Whether you have a DJ in the house, a band, a singer a speaker or a music player, the C30 gives a beautiful sound image at all volumes. Your visiting artists and acts will be happy to use your house system.

Non ANC and non full-range use

Can this speaker be used for power set ups? Of course! The Active Noise Canceling in the C30 not only works against energy overspill but it also gives the loudspeaker much more output at the front, making a super powerful full-range system at your disposal. Despite the C30-ANC is already very powerful you still want more sound pressure out of it? No problem. Each quint audio C30 system is expandable with both quint audio regular and ANC subs and fills.



No bass cabinets needed, but if you want, the sky is the limit.....

Style

The C30-ANC comes standard in black polyurea impact resistant and moisture repellant coating. Custom RAL-colours are available on demand*.

There are many situations where a presentation of the sound system without grilles gives a more technical and functional look. For this purpose, the designers engraved the Quint Audio logo into the middle front plate in which the horn section is mounted so it is always very well recognizable as a genuine Quint Audio product.

* Please take into account prolonged delivery times and an additional costs.



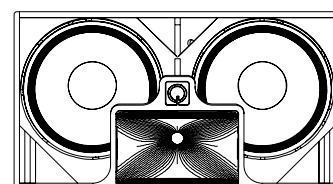
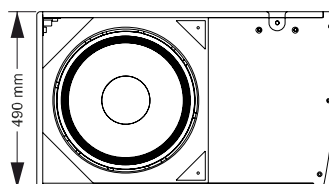
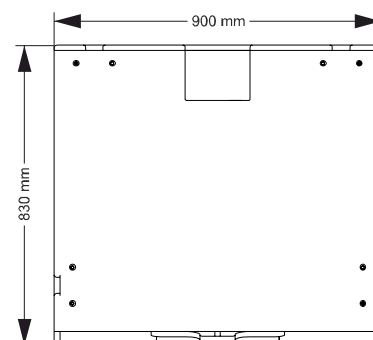
Specifications

components	2x15" / 2x15" ANC / 4" - 2.5" coaxial
filter	tri-amplified (mid-high passive) quad-amplified (mid-high active)
max power handling	Front 2400W / ANC 2400W / 110W MF-HF
program power	Front 4800W / ANC 4800W / 220W MF-HF
impedance	LF 4Ohms / ANC 4Ohms / MF 8Ohms / HF 8Ohms
sensitivity	Front 100dBWm / ANC 100dBWm / MF-HF 109dBWm
program SPL	Front 134dB 1m / ANC 134dB 1m / MF-HF 130 dB 1m
frequency range	40-19.000 Hz
dispersion	70°x40° hxv
weight	85 kg
size (wxhxd)	900 x 490 x 830 mm

Recommended applications / sources

club sound
electro acoustic challenges
nearfield-midfield FOH
high power top
fill for large systems

mechanical music
live music
vocals
speech



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Designed, engineered and made by Quint Audio The Netherlands

