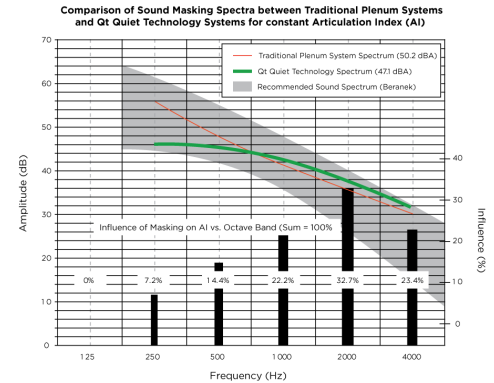# cambridge™
SOUND MANAGEMENT

What is Qt Quiet Technology™?

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Behind all Cambridge Sound Management's products is our patented Qt Quiet Technology, a lowvoltage, distributed audio system that is a generation ahead in sound masking, paging and voice distribution. Qt Quiet technology overcomes significant design and installation issues with previous generations of sound masking systems. The result is a technology that is flexible, uncomplicated and effective and can be installed at the lowest cost in the industry.
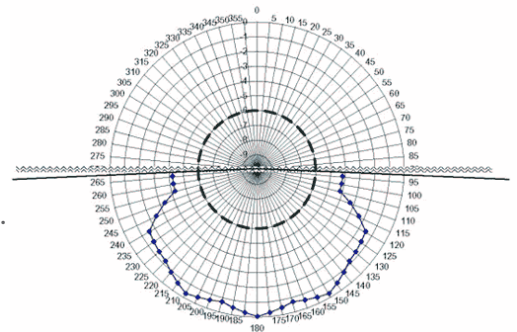
The Sound

- The sound spectrum produced by a Qt Quiet Technology based system is the ideal sound masking sound as identified by Leo Beranek.

- Since Qt Emitters™ are direct field, located effectively within the target office area, we are able to preprogram the right sound spectrum into the system. We guarantee delivery of the optimal sound spectrum to the targeted workspace—no on-site tuning, retuning or programming is necessary.

Comparison of Sound Masking Spectra between Traditional Plenum Systems and Qt Quiet Technology Systems for constant Articulation Index (AI)

- As can be seen in the graph below, to achieve the same AI (Articulation Index) the sound produced by a Qt Quiet Technology based system is quieter than the sound produced by a typical plenum system (even after extensive tuning).

- Qt Quiet Technology delivers more energy in the octave bands that contribute the most to speech privacy (1000Hz, 2000Hz and 4000Hz) and less energy in the lower frequency bands (125Hz, 250Hz and 500Hz) that contribute significantly less to masking speech. The result is a quieter sound for equivalent speech privacy.

The Delivery

- We achieve superb spatial uniformity by locating miniaturized Qt Emitters with 170 degrees of dispersion on a 10 by 10-foot grid, assuming a 9-10 foot ceiling. This combination of emitter density and dispersion assures spatially uniform sound delivery as the listener hears sound from approximately 6 emitters at any point in the workspace.

- A control module produces 4 channels of uncorrelated sound and the Qt Emitters, with programmed circuitry, automatically sequence through all four channels assuring extremely pleasant and smooth sound by eliminating acoustical interference effects.

System Specification, Layout and Installation

• Since Qt Emitters are located directly in the target area, system layout and installation is simple and straightforward-unlike with plenumbased systems no complicated design compensations are needed for walls that don't extend to the deck, for open HVAC grills or for other acoustical elements in the associated plenum.

• Standard CAT 3-computer cable with factory pre-wired plugs snap into the Qt Smart emitter prewired with standard RJ-45 plugs. Custom length cables are easily made on the fly by any installer.

• Qt Emitters are daisy-chained together and creation of separate zones (open plan or private office, large or small) is simple.

The Qt Quiet Technology™ Sound Masking System Difference

The following objectives guide our design and development of the Qt Quiet Technology Sound Masking System

1. Guarantee delivery of the most effective and pleasant sound spectrum possible.
2. Make the background sound as uniform as possible throughout the coverage area.
3. Avoid acoustical "spill" of the background sound from open office areas to adjacent private offices.
4. Greatly simplify the layout and design of masking systems.
5. Use pre-assembled and tested industry standard, inexpensive data cables and connectors in order to simplify installation and avoid errors in the field.

Cambridge Sound Management has created a paradigm shift in sound masking technology with these guiding principles in mind.