

Sound Masking Solutions for Call Centers

The Call Center Challenge - Maximize Worker Density; Maintain Productivity And Privacy

Open floor plans are commonplace in call centers. These layouts allow facility managers to maximize their existing space while keeping construction costs to a minimum. Call center workstations are typically small, arranged in 4 ft. by 4 ft. (1.22 m x 1.22 m) sections with short partitions. This translates into a space with a lack of acoustic blocking and absorption, creating an environment full of distractions and privacy concerns.

In their presentation at the 2008 IC BEN conference, Drs. Valtteri Hongisto and Annu Haapakangas presented the results from their acoustic environment and work performance survey. The survey included 689 employees from 11 companies ranging from customer service call centers to general open offices. 48% of respondents reported speech as the most disturbing source of noise.¹ In addition, the survey found that employees on average wasted 21.5 minutes per day due to noise distractions.¹

Call centers in the healthcare, financial and legal industries have an additional obligation to maintain client confidentiality. In addition to noise canceling headsets and other acoustic treatments, call centers have a need for employing sound masking technology to meet their obligation of providing their clients privacy. Our QtPro™ system is a budget friendly option to increase the privacy level within your space.

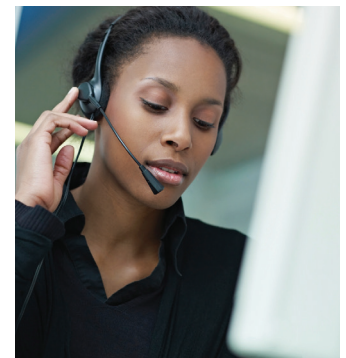


21.5

Minutes per day wasted on average by noise distractions

8.7

Percentage of increase in worker's ability to recall a sequence of numbers correctly after sound masking installed



What is sound masking and how does it work?

Sound masking is the addition of an unobtrusive background sound, similar to airflow, to reduce the intelligibility of human speech and reduce distractions. Imagine looking up at the stars on a clear night. The stars shine brightly against the night sky. As dawn breaks, the stars appear to dim as the ambient light increases. The intensity of the starlight has not changed, but as the ambient light increases, it becomes more difficult to discern the light from the stars. This applies to sound as well; conversations in a quiet room are more noticeable than in a room with background noise.



QtPro™ sound masking - A Simple Solution To Increase Productivity And Privacy

The Qt Pro system is centered on the deployment of small direct field, omni-directional emitters that are installed directly into the user's environment, providing uniform coverage. Unlike in-plenum systems installed above the ceiling tile, Qt Pro systems offer the flexibility of providing sound masking only in the spaces in which it is needed, eliminating unwanted spill over into adjacent spaces.

Acoustic consultants use the Privacy Index (PI) to measure the effectiveness of various forms of sound dampening. The range for PI scores is 0% (No Privacy) to 100% (Confidential Privacy).

Drs. Hongisto and Haapakangas conducted a series of laboratory experiments between 2006 and 2008 focusing on the effect of speech intelligibility on task performance.² This two-year study measured participants short-term memory recall in a variety of speech privacy environments. The environments ranged from a sound masking fully deployed (PI: 90%). The researchers found a 8.7% increase in the participants' ability to recall a series of numbers and a 7.8% increase in recollection of words.² This study highlights the effectiveness of sound masking in decreasing distraction and improving worker performance.

Call Centers Using QtPro

CSM has installed QtPro sound masking systems in hundreds of millions of square feet of space, including call centers for:

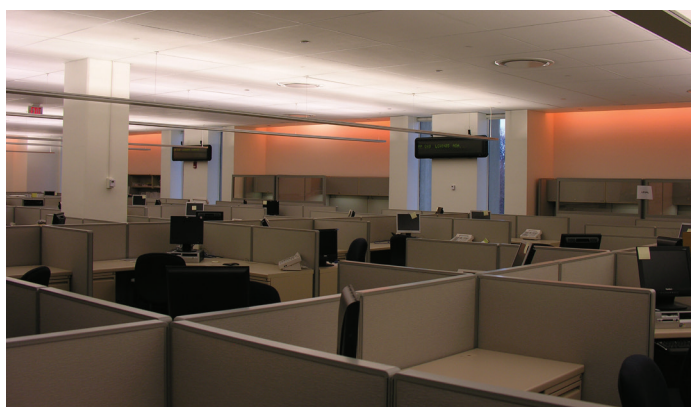
- Bank of America
- Copyright Clearance Center
- Covidian
- FM Global
- Harley Davidson
- Shell
- Social Service Coordinators
- TD Bank
- Urban Lending Services

// Bank of America's National Helpline site in Boston houses over 200 associates. Even with all that talking, our work environment is private and productive thanks to sound masking from Cambridge Sound Management. Their solution is straightforward and effective. I wouldn't open a call center without it. **//**

Edward (Ted) Klemm
Vice President, National Helpline
Bank of America

References:

1. "Perceived Acoustic Environment, Work Performance And Well-being - Survey Results From Finnish Offices," A. Haapakangas, R. Helenius, E. Keskinen, Valtteri Hongisto. Performance: 9th International Congress on Noise as a Public Health Problem (ICBEN) 2008 Foxwoods, CT
2. "Effect of Speech Intelligibility on Task Performance- An Experimental Laboratory Study," A. Haapakangas, M. Haka, E. Keskinen, V. Hongisto. Performance: 9th International Congress on Noise as a Public Health Problem (ICBEN) 2008 Foxwoods, CT



QtPro™ Line of Products

Qt Pro direct-field sound masking systems are ideal for call center environments. All QtPro systems are GreenSpec listed, consume less than 24 watts of power and can contribute to LEED Certification. These versatile systems are available with a variety of control module options suitable for small spaces to multi-site facilities.

| Room Size | Product | Zones | Max Coverage | Paging and/or Music Inputs | System Control |
|-----------|---------|---------------------------|--|------------------------------------|--|
| Small | Qt® 100 | 1 Zone 1-120 Emitters | 12,000 ft ² / 1,115 m ² | 1 Input for Paging or Music | - LCD Front Panel Control - iOS via Bluetooth |
| Medium | Qt® 300 | 3 Zones 1-360 Emitters | 36,000 ft ² / 3,344 m ² | 2 Input for Paging and/or Music | - Pre-installed software via LAN direct PC connect - LCD front panel control |
| Large | Qt® 600 | 6 Zones 1-720 Emitters | 73,000 ft ² / 6,689 m ² | 2 Input for Paging and/or Music | - Pre-installed software via LAN direct PC connect - LCD front panel control |



Cambridge Sound Management, Inc. (CSM) is the developer of QtPro sound masking systems currently deployed in hundreds of millions of square feet of space throughout the world. CSM offers innovative, simple and intelligently designed solutions to the problems of privacy and acoustic distractions based on over 50 years of research started by Bolt Beranek and Newman (BBN) that result in improved productivity and comfort. Qt Pro combines exceptional audio performance, low impact installation and affordability with lowest total

cost of ownership. Qt® systems are extremely reliable and consume less than 24 watts of power per 72,000 square feet (6,689 m²) of space, are GreenSpec listed, and can contribute to LEED Certifications. For more information about the Qt Pro family of products, or to learn more about how sound masking can help your business improve privacy and worker productivity (and patient comfort), visit our website at www.cambridgesound.com.

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