
THORBURN ASSOCIATES INC.
ACOUSTIC AND TECHNOLOGY CONSULTANTS
Design and Engineering
eNewsletter

February 2006

In this issue:

- Greetings
 - Where We'll Be – C.A.S.H. Conference, NSCA Expo, TEA Summit
 - Dial It DOWN – Earbuds can cause hearing loss
 - Recent Natural Disasters Spark a Renewed Interest in Emergency Generators
 - The Plaza Apartments – Low Income doesn't mean Low Design Standard
 - Safer Earbuds with Quality Sound
-

Greetings

Welcome to the February 2006 issue of our eNewsletter. Happy New Year! We hope that 2006 is off to a great start for you. Under the Chinese calendar, it is the Year of the Dog. If you were born in 1922, 1934, 1946, 1958, 1970, 1982, 1994, or 2006 - you were born under the sign of the dog. Like the dog, you are honest and faithful to those you love, although you also can be somewhat eccentric and very stubborn at times!

Whatever year you were born, make the most of your time. Henry Ford said, "It has been my observation that most people get ahead during the time that others waste time." That thought applies to all aspects of life—invest time in your loved ones and those relationships will teach you how to reach your goals. Look forward to a year in which to really shine, both personally and professionally.

As always, it is our goal to make sure that Thorburn Associates is your single point of contact for all of your acoustical and technology engineering services. If you have an idea, question, or suggestion please drop us a note at TA@TA-Inc.com for general information or eNews@TA-Inc.com for specific comments about our eNewsletter.

**Where We'll Be
Presenting at C.A.S.H. Conference and NSCA Expo
Attending TEA Summit**

C.A.S.H. Conference: California's Coalition of Adequate School Housing is offering clinics in Sacramento, February 20 to 23, 2006, at the Convention Center and Hyatt Regency Hotel. Steve Thorburn will be a panelist in the discussion moderated by Mary Morris of HMC Architects on the topic of the "Seven Deadly Architectural Sins: We Know What They Are and Yet We Do Them Anyway." Join us to discuss the practical design realities facing school districts that drive so many architectural decisions.

NSCA Expo 2006 is in Vegas this year! Pick up four Learning Units on Friday, March 17 at the Convention Center. Steve Thorburn will address Acoustics in Architecture, focusing on the aspects of room acoustics. When developing the acoustical design for large boardrooms or lecture halls, issues of reverberation criteria, absorption, wall construction, distribution of low frequencies, echo control and more should be reviewed. A workbook will be provided.

The TEA Summit will be held in Anaheim on March 17 and 18 at the Disneyland Grand Californian Hotel. Newcomers and industry icons alike participate in this collaborative event. With a focus on global markets, this year's summit will help you explore new marketing opportunities and grow your business. The summit design encourages networking, frank discussions and open participation.

If you are attending any of the following events, we'd love to meet with you. It's always a pleasure to meet face-to-face in a non-office environment.

Dial It Down – Earbuds Can Cause Hearing Loss

Mom was right, again. "Turn down that godawful music," sound familiar? Nowadays that truism should come with the caveat, "and wear the right earbuds, dear."

We've heard for years that when a person is exposed to high sound levels they are at risk for hearing loss. Noise-induced loss is the leading cause for permanent ear damage. "Instead of the iPod we're turning up, it will be a hearing aid." Bay Area Hearing Aid Dispenser John Diles admits, "while good for business, I'd much rather see people protecting their ears, like wearing sunglasses protects your eyes."

There are two categories of hearing loss, conductive and nerve loss. Conductive occurs when the bones in the ear fail to carry sound such as when fluid collects in the ear. Nerve loss, often not reversible, is caused when the nerve or tiny hairs inside the ear are damaged by "over stimulation." The ear cells fracture and can't pick up sound. This type of hearing damage is cumulative and permanent. Nerve loss is usually painless, gradually destroying hearing without warning—but totally preventable with hearing protection and knowledgeable listening practices.

The use of earbuds over headphones increases the hearing damage since standard earbuds allow some background noise to intrude on the music, often resulting in a person turning up the volume even more. According to Australia's National Acoustic Laboratories, over 5,250,000 people worldwide are currently going deaf from listening to their iPods at excessive volumes.

The iPod manual claims permanent hearing loss may occur at high volume, but also, "You can adapt over time to a higher volume of sound, which may sound normal but can be damaging to your hearing. Set your iPod's volume to a safe level before that happens."



As we are unlikely to give up music and the technology that lets us parade around with it, we must rely on better listening habits to protect us:

- Wear hearing protection when unavoidable noise is excessive.
- Take 15-minute quiet breaks to ease fatigued ears when exposed to high noise environments.
- Be aware of common sources of sound that with repeated or prolonged exposure can cause hearing loss: hair dryer, loud concerts, sirens, jet engines, chainsaws, firecrackers, motorcycles, leaf blowers and lawn mowers.
- When exercising with earbuds be especially aware of the volume as your body is concentrating on the work and not defending itself from loud noise.

The construction industry can be synonymous with loud noise but it doesn't have to result in hearing loss. Make it a habit to protect your ears at work and at play—and don't forget to put your shades on.

Update – Lawsuit against Apple's iPods

In our February eNewsletter we included an article on the dangers of using earbuds to play music at excessive levels. While the article was not specific to Apple's iPods, it did reference the iPod manual's warning that hearing loss can occur at high volume.

Imagine our surprise when we heard Wednesday evening's lead news story regarding a lawsuit filed Tuesday in U.S. District Court in San Jose, CA, on behalf of John Kiel Patterson of Louisiana. According to an Associated Press article:

The lawsuit states:

- The devices can produce sounds of more than 115 decibels, a volume that can damage the hearing of a person exposed to the sound for more than 28 seconds per day.
- The iPod players are "inherently defective in design and are not sufficiently adorned with adequate warnings regarding the likelihood of hearing loss.
- Patterson wants the lawsuit certified as a class-action, and seeks compensation for unspecified damages and upgrades that will make iPods safer.
- Apple was forced to pull the iPod from store shelves in France and upgrade software on the device to limit sound to 100 decibels, but has not followed suit in the United States.
- The headphones commonly referred to as ear buds, which ship with the iPod, also contribute to noise-induced hearing loss because they do not dilute the sound entering the ear and are closer to the ear canal than other sound sources.

An Apple Computer Inc. spokeswoman, Kristin Huguet, declined to comment.

The article continues to state that although the iPod is more popular than other types of portable music players, its ability to cause noise-induced hearing isn't any higher, experts said. "We have numerous products in the marketplace that have the potential to damage hearing," said Deanna Meinke, an audiology professor at the University of Northern Colorado. "The risk is there but the risk lies with the user and where they set the volume."

While we won't know the outcome of the lawsuit for several months, if not years, remember you heard it hear first – turn down those players when using earbuds!

Recent Natural Disasters Spark a Renewed Interest in Emergency Generators

Hurricanes, earthquakes, tornados, blizzards—severe weather can interrupt power service for hours or even days. Without electricity, business usually comes to a complete halt while costs escalate. A reliable power source can keep computers, lights, heating units, pumps, freezers and medical equipment running. Your electrical load determines what type of generator suits your needs.

Emergency generators are either permanently installed or portable. Permanent generators must be professionally installed, as they are hard-wired into the electrical system of your house or business. Portable generators require manual start up and fuel re-supply for extended use.

Both types of generators can produce upwards of 115dB, while most Sound Ordinance laws limit extended noise to 60dB during daylight hours and 50dB at night. Limitations vary greatly, especially for evening hours, so check your local codes and have your unit measured for sound output. Some generators are equipped with the manufacturer's acoustic enclosure; others may require one of the following solutions to comply with code.

- Sound Isolation packages blanket the unit to absorb the sound and keep it from escaping.
- Barriers, such as a properly ventilated housing unit or building, block the sound while preventing toxic exhaust fumes from accumulating.
- Fencing, such as cement block, creates a wall that reduces excessive sound.

Preparing your home or business for an emergency should include your reliance on electricity. If an emergency generator fits your needs, be sure to check local sound ordinance laws and the options available for meeting those limits. When the unexpected strikes, a generator will be on guard for the safety of your home or business--quietly.

The Plaza Apartments – Low Income doesn't mean Low Design Standard

The Plaza Apartments, located in San Francisco, CA has sharp lines and a colorful facade that boasts solar panels, recycled building materials, bamboo floors, paneling made with recycled wood products and plenty of natural light and ventilation.

Designed by Leddy Maytum Stacy Architects and Paulett Taggart Architects, the \$22 million building has 106 small studios on the north corner of Howard and Sixth Street in the South of Market District. The 300 square foot units include a full bath and kitchenette with energy efficient appliances including a disposal, refrigerator, stove and microwave. The nine-story building was constructed for affordable housing while allowing ground floor retail space. The mixed-use building contains a reception area, offices, kitchen pantry, community room, courtyard with barbeque and a laundry/lounge room with deck. Plans also include a non-profit theatre in the basement.

Under the guidance of the city's Department of Public Health's Direct Access to Housing Program, acclaimed as an effective means for ending chronic homelessness, residents have on-site support

services. Six employees will focus on social skills, money management and vocational opportunities as well as medical and mental health.

Thorburn Associates' involvement began with a site visit to conduct noise measurements in the surrounding neighborhood. California Uniform Building Code Title 24 requires that the interior noise level within dwelling units be limited to 45 dBA. The noise measurements provide the information necessary for cost effective recommendations to reduce outside noise sources.

TA included recommendations for exterior window and wall constructions to isolate environmental noise, providing a higher quality of living. In our own modern offices and houses we often take this sound abatement for granted, yet blocking out the outside world—the rushing traffic, blaring sirens and screaming stereos—is a reprieve. Continuing those standards to the walls and ceilings between the units provides a true sense of personal space: a quiet studio, a home.

A successful project – with close cooperation of all the entities involved– opened its doors last month. You can read more about the project in the upcoming issue of the Northern California Real Estate & Construction Review.

Safer Earbuds with Quality Sound

If you want quality sound without the old fashioned look of headphones, consider the ER-6 Isolator earbuds. Etymotic Research, Inc., in Elk Grove Village, Illinois has long been in the business of creating compact designs that produce a clear, pure sound.

The ER-6's plug into most airline audio systems, CD, DVD and MP3 players. The performance benefits over standard earbuds are considerable. The ER-6 uses noise isolation rather than active noise cancellation. These earbuds slide in the ear like earplugs to block out external noise. This noise reduction allows the listener to keep the volume down at safer ranges.

The ER-6 Isolators produce plush tones that don't "leak" out and bother others. Large sound in a lightweight design—its good protection without a high price tag.

STAY SUBSCRIBED & TELL A COLLEAGUE

If you change your e-mail address, remember to re-subscribe – just follow this link:

<http://www.ta-inc.com/eNewsletter.htm>.

Feel free to pass this eNewsletter on to your friends and colleagues. If you are getting this second hand and want your own copy – just follow the link above.

Feel free to quote any part of this newsletter, just give us credit and let us know how and where the quote will be used.

TO UNSUBSCRIBE

Follow this link <http://www.ta-inc.com/eNewsletter.htm> and click on the unsubscribe link; if you have any problems drop us a note at eNews@TA-Inc.com.

THANK YOU FOR READING OUR eNewsletter

We publish our eNewsletter about once every two months. We are always looking for new topics and ideas. Please drop us a note at eNews@TA-Inc.com with any comments or suggestions.

Copyright 2006

THORBURN ASSOCIATES INC.

ACOUSTIC AND TECHNOLOGY CONSULTANTS

Design and Engineering

Corporate Office: Castro Valley, California Tel: 510-886-7826

Regional Office: Burbank, California Tel: 818-569-0234

Regional Office: Morrisville, North Carolina Tel: 919-463-9995

TA@TA-Inc.com General Information Email Address

www.TA-Inc.com Web Site

eNews@TA-Inc.com Newsletter Issue

