

Product Noise Ratings for Consumer Products

Push by INCE-USA volunteers could soon put noise information for products in hands of more consumers

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The National Council of Acoustical Consultants website notes that manufacturers recognize and appreciate how better-sounding and quieter products are associated with superior quality in the minds of consumers. This fact, [backed by research](#), has created an opportunity for companies to brand a product's sound (or lack thereof) to attract consumers.

Despite the industry's recognition that sound often correlates

with perceptions of quality and value, noise information on most products people buy is lacking. From coffee makers to washing machines, most consumers cannot easily find this information for products they buy in the United States.

In response to this lack of product noise information available to consumers, the Institute of Noise Control Engineering ([INCE-USA](#)) has developed a comprehensive product noise rating (PNR) system for deployment in the United States. The challenge for INCE-USA, as a volunteer organization, is

to take this development to the next level and deploy PNR so it is available to consumers.

PNR has been in development for almost two decades

PNR has been in development since 2004. The INCE-USA [Technical Committee on Product Noise Emissions](#), which Matt Nobile chaired, originally developed the idea. Development of a "noise rating tag" followed. Additional work included developing the label, logo, and website. On the next page you can see the two labels that have been developed.

One is a label with a single-number rating. The other features a scale with a pointer to indicate where the product falls with respect to the range of human hearing. PNR is simply the A-weighted sound power level, given without the unit for ease of understanding by the public. A lower PNR number is better.

The idea is that in addition to the usual attributes of a product—for example, its price, size, weight, appearance, energy use—the product would also have an associated PNR value continued on page 18...

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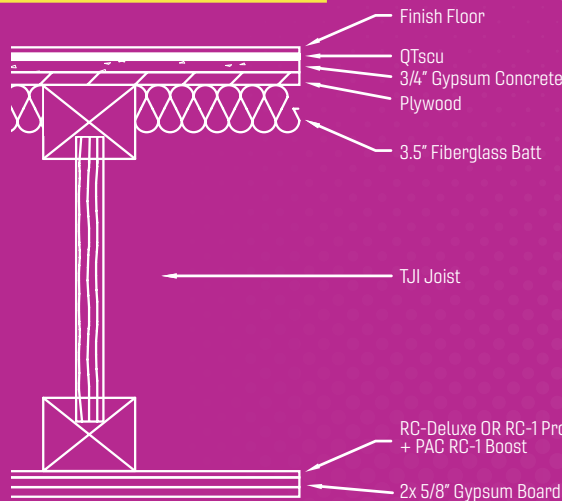
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that would indicate its noise level. By comparing the PNR of two products, the consumer would know which product was quieter before buying. The PNR can be determined using existing International Organization for Standardization (ISO), International Electrotechnical Commission (IEC), and American National Standards Institute (ANSI) standards. In many cases, it would not require additional testing beyond what manufacturers are already doing on their own.

Since 2012, PNR has been tested on hairdryers, tower fans, and dishwashers. These tests have revealed the ease of measurement in most cases. The PNR tests on hairdryers and fans revealed that product noise did not correlate with price.

The tests on dishwashers did find that price correlated with a reduction in product noise. This was hypothesized to stem from the fact that sound level information has been available in the United States for dishwashers since 2004. Since then, higher-end models have been able to achieve even greater noise reduction, further differentiating their offerings in the market.

PNR is ready and tested, but lack of funding constrains deployment

Starting in 2016, INCE-USA workshops and meetings focused on how to implement and fund the program. Many interesting ideas have come out of these discussions, but without more volunteers or funding, implementation has proven difficult.

PNR: Number Only

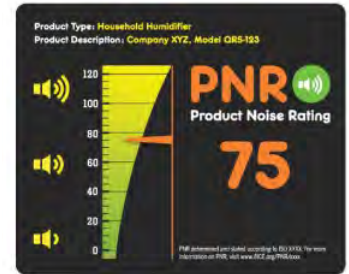


Two of the most promising short-term ideas that may be within the scope of INCE-USA's capabilities involve developing a smartphone app or using existing manufacturer data (as opposed to requiring PNR-specific testing). The app would be searchable by product type and would contain a database of PNR values for various products. The use of internal manufacturer noise data (with permission) would lessen the burden associated with ac-

quiring data through product testing; manufacturers are also more likely to support this.

However, INCE-USA is a volunteer organization with limited funds. For PNR to move more quickly into the consumer domain, more significant funding or sponsorship would be needed.

PNR: Number & Scale



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Government support through grants or direct funding would be ideal, but significant hurdles remain before such funding could find its way into legislation or policy. Members of INCE-USA have also unsuccessfully approached several large retailers and consumer product manufacturers. Without significant new funding or sponsorship, the PNR system remains stuck in its present development phase.

Acoustical consultants have a unique opportunity to lead in an area where both industry and government have lagged.

Acoustical consultants are uniquely positioned to advocate for and support the deployment of a PNR system. Our experience as practitioners is diverse, but our expertise in sound and vibration is universal.

As a Director at RSG and a volunteer with INCE-USA, my focus is on improving people's lives by creating the conditions necessary for better acoustical environments. Deployment of a PNR system in the United States is a natural extension of this focus. I am excited to contribute to the advancement of the work that began with my professional colleagues nearly two decades ago, and I am hopeful that our efforts will result in real change.

If you are interested in lending your skill or expertise to help strategize how INCE-USA can



implement and fund deployment of a PNR system, please reach out. We are always looking for new ideas and would excitedly welcome the insights and contributions of NCAC members.

Dana Lodico, PE, INCE Bd. Cert., is a Director at RSG and Vice President of Honors and Awards of INCE-USA, where she has helped lead the development and deployment strategy for a PNR system in the United States.



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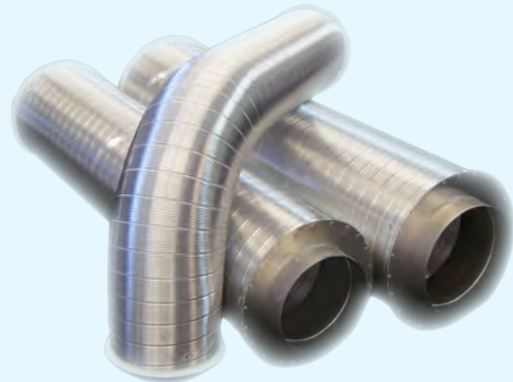
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