

HVAC SYSTEMS SOUND AND VIBRATION PROCEDURAL GUIDE



**SHEET METAL AND AIR CONDITIONING CONTRACTORS'
NATIONAL ASSOCIATION, INC.**
www.smacna.org

This is a preview. [Click here to purchase the full publication.](#)

HVAC SYSTEMS SOUND AND VIBRATION PROCEDURAL GUIDE

FIRST EDITION – OCTOBER, 2013



**SHEET METAL AND AIR CONDITIONING CONTRACTORS'
NATIONAL ASSOCIATION, INC.**

4201 Lafayette Center Drive

Chantilly, VA 20151-1219

www.smacna.org

This is a preview. [Click here to purchase the full publication.](#)

HVAC SYSTEMS SOUND AND VIBRATION PROCEDURAL GUIDE

Copyright © SMACNA 2013
All Rights Reserved
by

**SHEET METAL AND AIR CONDITIONING CONTRACTORS'
NATIONAL ASSOCIATION, INC.**

4201 Lafayette Center Drive
Chantilly, VA 20151-1219

Printed in the U.S.A.

FIRST EDITION – OCTOBER 2013

ISBN 978-1-61721-101-0 (Print)
ISBN 978-1-61721-103-4 (PDF)

Except as allowed in the Notice to Users and in certain licensing contracts, no part of this book may be reproduced, stored in a retrievable system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

[This is a preview. Click here to purchase the full publication.](#)

FOREWORD

We humans have always valued places of quiet. With the advent of Green Building Rating Systems, noise pollution has become a concern and sound level requirements have been added to building rating systems. Now, the new and emerging building codes are including requirements that mandate specific levels of quiet—spaces with allowable upper limits of sound and vibration (S&V).

Codes require measurement and verification for proof of compliance. This procedural guide details methods and processes that, when followed, will provide repeatable measurement and verification of sound and vibration levels. It is intended to be used by trained technicians.

Trained and experienced testing, adjusting, and balancing (TAB) technicians have many of the requisite skill sets to conduct S&V testing. Since TAB work is often one of the last steps in the completion of a building, that same time-frame may represent an opportune time to also conduct S&V measurement and verification.

SHEET METAL AND AIR CONDITIONING CONTRACTORS'
NATIONAL ASSOCIATION, INC.



SOUND AND VIBRATION TECHNICAL WRITER AND STAFF

Christopher A. Fulton, LEED AP
Greencastle, IN

Peyton Collie, Staff
SMACNA, Inc.
Chantilly, VA



NOTICE TO USERS OF THIS PUBLICATION

1. DISCLAIMER OF WARRANTIES

a) The Sheet Metal and Air Conditioning Contractors' National Association ("SMACNA") provides its product for informational purposes.

b) The product contains "Data" which is believed by SMACNA to be accurate and correct but the data, including all information, ideas and expressions therein, is provided strictly "AS IS," with all faults. SMACNA makes no warranty either express or implied regarding the Data and SMACNA EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

c) By using the data contained in the product user accepts the Data "AS IS" and assumes all risk of loss, harm or injury that may result from its use. User acknowledges that the Data is complex, subject to faults and requires verification by competent professionals, and that modification of parts of the Data by user may impact the results or other parts of the Data.

d) IN NO EVENT SHALL SMACNA BE LIABLE TO USER, OR ANY OTHER PERSON, FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING, DIRECTLY OR INDIRECTLY, OUT OF OR RELATED TO USER'S USE OF SMACNA'S PRODUCT OR MODIFICATION OF DATA THEREIN. This limitation of liability applies even if SMACNA has been advised of the possibility of such damages. IN NO EVENT SHALL SMACNA'S LIABILITY EXCEED THE AMOUNT PAID BY USER FOR ACCESS TO SMACNA'S PRODUCT OR \$1,000.00, WHICHEVER IS GREATER, REGARDLESS OF LEGAL THEORY.

e) User by its use of SMACNA's product acknowledges and accepts the foregoing limitation of liability and disclaimer of warranty and agrees to indemnify and hold harmless SMACNA from and against all injuries, claims, loss or damage arising, directly or indirectly, out of user's access to or use of SMACNA's product or the Data contained therein.

2. ACCEPTANCE

This document or publication is prepared for voluntary acceptance and use within the limitations of application defined herein, and otherwise as those adopting it or applying it deem appropriate. It is not a safety standard. Its application for a specific project is contingent on a designer or other authority defining a specific use. SMACNA has no power or authority to police or enforce compliance with the contents of this document or publication and it has no role in any representations by other parties that specific components are, in fact, in compliance with it.

3. AMENDMENTS

The Association may, from time to time, issue formal interpretations or interim amendments, which can be of significance between successive editions.

4. PROPRIETARY PRODUCTS

SMACNA encourages technological development in the interest of improving the industry for the public benefit. SMACNA does not, however, endorse individual manufacturers or products.

5. FORMAL INTERPRETATION

a) A formal interpretation of the literal text herein or the intent of the technical committee or task force associated with the document or publication is obtainable only on the basis of written petition, addressed to the Technical Resources Department and sent to the Association's national office in Chantilly, Virginia. In the event that the petitioner has a substantive disagreement with the interpretation, an appeal may be filed with the Technical Resources Committee, which has technical oversight responsibility. The request must pertain to a specifically identified portion of the document that does not involve published text which provides the requested information. In considering such requests, the Association will not review or judge products or components as being in compliance with the document or publication. Oral and written interpretations otherwise obtained from anyone affiliated with the Association are unofficial. This procedure does not prevent any committee or task force chairman, member of the committee or task force, or staff

