



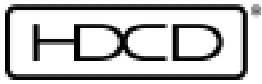
# HDCD<sup>®</sup> Certification Process Checklist

(Guidelines to Make the HDCD Equipment Certification Process as Efficient as Possible)

- 1) Please provide us with a contact within your organization who will assist Pacific Microsonics with certifying your equipment. This contact will be used throughout the certification process for answering questions and providing additional information. We need the individual's name, title, phone/fax numbers and email address, if available.
- 2) When we receive your signed license agreement, we ship you an "HDCD Developer's Kit". It contains, among other things, the HDCD Equipment Certification Procedure, HDCD Certification Process Checklist (this document), a Pacific Microsonics Certification Test Disc and Certification Test Disc Data Sheet. Please use this CD. The HDCD code detect and level decode functions are rigorously verified here at Pacific Microsonics.
- 3) Work with us early in your products design stages. The best time to resolve problems is before you go into production. The HDCD Equipment Certification Procedure outlines very specific electrical and trademark inspection tests. Please read and understand it. The HDCD OEM Certification Requirements Summary lists all certification requirements and is located at the end of this document.
- 4) When you're ready to submit your product to us, please contact Philip Nielsen at +1(510) 475.8000, Ext. 124 between the hours of 8am and 5pm Pacific Coast Time, E-mail: [pnielsen@hdcd.com](mailto:pnielsen@hdcd.com) or FAX: +1(510) 475.8005 to schedule the tests. When scheduled, the certification process typically takes less than 5 working days to complete. If you ship us your product without scheduling it, we will not know if shipping problems have occurred.
- 5) Please send us your front and rear panel artwork PRIOR to tooling. We will review it to determine if your implementation is in accordance with the license agreement and will get back to you with any comments or issue a preliminary approval. We will file this artwork for future reference.
- 6) Please send us your product literature (service/instruction manuals) PRIOR to printing. We'll review it and get back to you with any comments or issue a preliminary approval. We will file it for future reference.
- 7) Please send us your product's packaging drawing PRIOR to tooling. We'll review it and get back to you with any comments or issue a preliminary approval. We will file it for future reference.
- 8) When you send us your product to be tested, please include the schematics and manual. We need to know how the HDCD decoder is implemented. Often times, there are relatively minor problems with meeting the certification tests that can be resolved using the schematics you send us. The schematics you provide will allow us to work together to resolve any issues in meeting the certification tests. We will file these schematics with your other materials. All test results and product documentation are kept strictly confidential. If there are any HDCD detect/decode problems after production shipments begin, we'll already have all the necessary information on hand to help you resolve them in a timely and efficient manner.
- 9) If there is anything you don't understand regarding the HDCD Certification Process or Developer's Kit, please ask questions. We are here to help you be successful. Call Philip Nielsen at +1(510) 475.8000 Ext. 124 between the hours of 8am and 5pm Pacific Coast Time, E-mail: [pnielsen@hdcd.com](mailto:pnielsen@hdcd.com) or FAX: +1(510) 475.8005.

## **Pacific Microsonics, Inc.**

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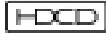








# OEM Certification Requirements Summary

## **REQUIREMENTS FOR INCLUDING HDCD® IN YOUR PRODUCT:**

The use of HDCD technology requires a license from Pacific Microsonics Inc. The license agreement calls for specific requirements. One requirement is that Pacific Microsonics test and certify the unit, **BEFORE** mass production begins. Another requirement is the proper use of Pacific Microsonics' logos and trademarks on the unit, on the packaging and in product literature. These requirements are summarized below. This information is accurate as of June 1, 1999. For complete details on Certification, see the document called "HDCD Equipment Certification Procedure, PN 9300-0003-00". Before production or printing begins, please check with Pacific Microsonics for any updates or changes.


### **On the front panel of the unit:**

The  logo must be located on the front panel of the unit and displayed near the HDCD indicator light. However, if the HDCD indicator is an illuminated alpha display of the letters HDCD, then the  logo can appear away from the indicator. If the illuminated display is the  logo, then it must meet all of the requirements in #1 below, however the  logo must still be present on the front panel of the unit. The  logo should be visible to anyone who uses the unit in a normal manner, easy to read, and of a size equal to other logos such as those for Dolby®, THX®, or other features in the unit.


1. The  logo must be a minimum of 4mm in height and **derived exactly** from the HDCD logo file supplied with the HDCD licensee materials. The registered symbol ® must be used with the following trademarks: HDCD®,  logo and High Definition Compatible Digital®. However, it does not have to appear with the  logo on the front panel of the licensed unit.

### **On the rear panel of the unit:**

The following acknowledgement must be on the rear panel of the unit. If it does not fit it can be put on the bottom:

, HDCD®, High Definition Compatible Digital® and Pacific Microsonics™ are either registered trademarks or trademarks of Pacific Microsonics, Inc. in the United States and/or other countries. HDCD system manufactured under license from Pacific Microsonics, Inc. This product is covered by one or more of the following: In the USA: 5,479,168, 5,638,074, 5,640,161, 5,808,574, 5,838,274, 5,854,600, 5,864,311, 5,872,531, and in Australia: 669114. Other patents pending.

### **In Product Literature:**

The **instruction manual** must have the following statement on the same page as the  logo, or any other PMI trademark, first appears:

, HDCD®, High Definition Compatible Digital® and Pacific Microsonics™ are either registered trademarks or trademarks of Pacific Microsonics, Inc. in the United States and/or other countries. HDCD system manufactured under license from Pacific Microsonics, Inc. This product is covered by

"Dolby®" is a registered trademark of Dolby Laboratories Licensing Corp.


"THX®" is a trademark of Lucasfilm Ltd.

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one or more of the following: In the USA: 5,479,168, 5,638,074, 5,640,161, 5,808,574, 5,838,274, 5,854,600, 5,864,311, 5,872,531, and in Australia: 669114. Other patents pending.

### **On the Box:**

If other third party logos, such as Dolby or THX, are used on the package (box for the unit), then the  logo must also be used.

### **Other Literature:**

All descriptive, instructional, advertising, or promotional literature that uses the HDCD trademarks must include the following trademark acknowledgements:

, HDCD<sup>®</sup>, High Definition Compatible Digital<sup>®</sup> and Pacific Microsonics<sup>™</sup> are either registered trademarks or trademarks of Pacific Microsonics, Inc. in the United States and/or other countries.

### **HDCD 20 Bit Digital Output:**

If the unit can output 20 bit decoded HDCD data on any digital output, then the statement: **HDCD<sup>®</sup> 20 Bit Digital Output<sup>™</sup>** must also be on the unit itself (typically on the rear panel) and in all product literature, including instruction manuals and service manuals, where this feature is explained. Furthermore, this EXACT phrase must be in all literature that accompanies the UUT:

When the \*AES3, S/P DIF, Optical digital output of the UUT is connected to the digital input of an external HDCD decoder, it is recommended to set the UUT to its default 16 bit digital output mode.

\* Choose appropriate digital output type

### **HDCD Electrical Test Requirements:**

There must be an HDCD process indicator light on the front panel of the unit.

The unit must correctly decode all HDCD encoded material and light the HDCD process indicator light. This can be tested by using the Pacific Microsonics Certification Test Disc (Part number 9200-0001 Rev. B0); it must not falsely illuminate the HDCD indicator.

All analog outputs must be within +/- 0.1 dBr if Digital Gain Scaling is used and within +/- 1.0 dBr if Analog Gain Scaling is used when referenced to Track 1 of the Test Disc.

All digital outputs must pass unaltered 16 bit HDCD data. If the unit can output 20 bit decoded HDCD data, then the default mode must be 16 bits, not 20 bits.

If the unit can record MiniDiscs, then the letters "HDCD" must be added to the MiniDisc track titles, when the source material is HDCD encoded.

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