

FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

PRESS RELEASE

PRESS RELEASE

November 11, 2020 || Page 1 | 3

Sound United Adds MPEG-H 3D Audio format to Denon & Marantz Home Theater Components

Erlangen & Tokyo – Sound United LLC, parent company to Denon, Polk Audio, Marantz, Definitive Technology, HEOS, Classé, and Boston Acoustics, alongside Fraunhofer IIS, primary developer of the MPEG-H Audio standard, today announced the immediate availability of the MPEG-H 3D Audio format across a wide range of home theater products. The selected Denon and Marantz AV amplifiers and AV preprocessors will receive MPEG-H support via a firmware update.¹

MPEG-H Audio, primarily developed by Fraunhofer IIS, is an open ISO standard and the industry's most advanced audio system for UHD-TV and streaming. It supports both immersive sound and the ability for users to adjust elements in the audio to their preferences. MPEG-H has been on the air since 2017 on all TV networks in South Korea under the ATSC 3.0 standard. It was also selected for new broadcast standards to be launched in Europe, China and Brazil. With support for MPEG-H in Denon and Marantz AVRs, consumers can now enjoy immersive and personalized audio in the highest quality and faithful to the creative intent of the creator. This will especially enhance the consumer experience for sports, music, TV drama, and film content.

Head of Corporate Communications

Thoralf Dietz | Phone +49 9131 776-1630 | thoralf.dietz@iis.fraunhofer.de | Fraunhofer Institute for Integrated Circuits IIS | Am Wolfsmantel 33 | 91058 Erlangen, Germany | www.iis.fraunhofer.de |

Head of Marketing Communications Audio and Media Technologies

Mandy Garcia | Phone +49 9131 776-6178 | amm-info@iis.fraunhofer.de | Fraunhofer Institute for Integrated Circuits IIS | www.iis.fraunhofer.de

US Contact

Jan Nordmann | Phone +1 408 573 9900 | Cell +1 408 390 6698 | press@dmt.fraunhofer.org | Fraunhofer USA, Inc. |
Digital Media Technologies* | 100 Century Center Court | Suite 504 | San José, California 95112 | www.dmt.fraunhofer.org

See List of Denon & Marantz AVR models with MPEG-H support

^{*} Fraunhofer USA Digital Media Technologies, a division of Fraunhofer USA, Inc., promotes and supports the products of Fraunhofer IIS in the U.S.



FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

"Sound United abides by a philosophy of giving customers all the tools they need to derive maximum enjoyment from their products. By adding support for the MPEG-H 3D Audio format to our home theater products in key markets, Sound United customers garner another avenue to greater immersive and interactive experiences delivered by this next-generation audio system," said Kazuma Okada, Vice President APAC Commercial Operation.

November 11, 2020 || Page 2 | 3

PRESS RELEASE

Sound United will also leverage the Fraunhofer MPEG-H Audio System Trademark Program to test its MPEG-H Audio home theater products and ensure interoperability with other manufacturers' products that carry the MPEG-H Audio logo.

"We are extremely pleased the MPEG-H 3D Audio standard is now being made available to consumers on Denon and Marantz AVRs," said Bernhard Grill, Director of Fraunhofer IIS. "We've always aimed to create a feeling of 'being there' in the stadium or the concert venue with Fraunhofer's audio innovations, and Sound United has been an excellent partner in this endeavor."

List of Denon & Marantz AVR models with MPEG-H support

Applicable Denon models (*); AVC-A110, AVC-X8500H, AVC-X6700H, AVC-X4700H

Applicable Marantz models (*); AV8805, AV7706, SR8015, SR7015

(*) 220V/230V models only sold in EMEA, China, South Korea, the rest of Asia excluding Japan

About MPEG-H Audio

ISO MPEG-H 3D Audio is the only open standard for next-generation immersive and interactive audio. It is widely used in TV broadcast standards around the world and successfully deployed on video streaming services. Fraunhofer offers MPEG-H software implementations for many popular CPU, SoC and DSP platforms. It is widely deployed today in TV sets, premium soundbars and high-end smart speakers.

About Sound United

Sound United was founded in 2012 with a simple mission – to bring joy to the world through sound. Today, we're one of the world's largest portfolio audio companies and home to several legendary audio brands—Denon®, Marantz®, Polk Audio, Classé, Definitive Technology, HEOS, and Boston Acoustics®. Each brand boasts its own philosophy and unique approach to bringing home entertainment to life.

With centuries of collective experience, Sound United oversees the design and manufacture of a diverse array of premium audio products, including loudspeakers,

About Fraunhofer IIS

For over 30 years, the institute's Audio and Media Technologies division has been shaping the globally deployed standards and technologies in the fields of audio and moving picture production. Starting with the creation of mp3 and continuing with the codevelopment of AAC and the Digital Cinema Initiative test plan, almost all consumer electronic devices, computers and mobile phones are equipped with systems and technologies from Erlangen today. Meanwhile, a new generation of best-in-class media technologies – such as MPEG-H Audio, xHE-AAC, EVS, LC3/LC3plus, Symphoria, Sonamic and upHear – is elevating the user experience to new heights. Always taking into account the demands of the market, Fraunhofer IIS develops technology that makes memorable moments.



FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

sound bars, AV receivers, wireless speakers, amplifiers, turntables, and headphones. We create distinct and memorable listening experiences for a wide range of consumers in more than 130 countries. For more information on Sound United and our mission, please visit www.soundunited.com.

PRESS RELEASE

November 11, 2020 || Page 3 | 3

About Fraunhofer IIS

For over 30 years, the institute's Audio and Media Technologies division has been shaping the globally deployed standards and technologies in the fields of audio and moving picture production. Starting with the creation of mp3 and continuing with the codevelopment of AAC and the Digital Cinema Initiative test plan, almost all consumer electronic devices, computers and mobile phones are equipped with systems and technologies from Erlangen today. Meanwhile, a new generation of best-in-class media technologies – such as MPEG-H Audio, xHE-AAC, EVS, LC3/LC3plus, Symphoria, Sonamic and upHear – is elevating the user experience to new heights. Always taking into account the demands of the market, Fraunhofer IIS develops technology that makes memorable moments.