



HD RADIO AT 2007 CES

HD Radio™ technology was abundant at this year's international Consumer Electronics Show (CES) held from January 8-11, 2007 in Las Vegas, NV (www.cesweb.org). In addition to all of the products on display, there were live HD Radio broadcasts from seven AM and FM stations in Las Vegas, airing a total of 12 channels of digital programming. A complete listing of all of the manufacturers exhibiting HD Radio products is shown here:

Alpine Electronics	Daewoo Electronics America, Inc.	iBiquity Digital Corporation	Polk Audio
Audio Design Associates	Delphi	JVC Mobile Co. of America	Peripheral/AAMP
Boston Acoustics	DICE Electronics	Kenwood USA Corporation	Russound
C & C Tech. Co.	Directed Electronics	Metra Electronics	Sangean America Inc.
Cambridge SoundWorks	Eclipse	Navteq	Visteon

Unveiling of the HD Jump™ by Visteon, the first transportable HD Radio product: Visteon, a major manufacturer of OEM radios for automobiles, showed three new receivers at CES including the "HD Jump" (shown here in leftmost photo). The HD Jump, not yet available but expected to list for \$249, rests in either a car cradle (shown in the photo) or a home cradle, is multicast capable (as was true of all HD Radio receivers shown at the 2007 CES), features a 5-line graphics display for song title, artist, album, and other text information broadcast in the HD Radio signal, has 12 FM and 6 AM presets, remote control, and includes an auxiliary input for other devices such as MP3 players. A Visteon table radio (middle photo) and the Visteon "HD Radio EZ Connect" radio were also on display—the EZ Connect can be used with existing OEM auto radios, and has a three line text display as well as a remote control. For more information on the HD Jump, go to Visteon's Web page at www.evisteon.com/prod_serv/mobile_electronics/products/hd_jump/index.shtml.



Demonstrations of next-generation HD Radio features: these included real-time traffic updates (a prototype receiver using the HD Radio Advanced Application Services feature was on display in the Navteq booth), store-and-replay and an electronic program guide. Shown below (at left) is a photo of the iBiquity "store and replay" receiver reference design, which will allow for "on the fly" recording of digital audio. It also supports "VCR style" playback and recording controls, and is capable of scheduled recordings. The inset of the photo is a close-up of the reference design's display. At right is a photo of

a prototype receiver that was on display in the Delphi booth which includes the store-and replay features (Delphi is another major manufacturer of OEM radios for automobiles).



Tabletop radios and a prototype USB HD Radio product: on display in the iBiquity booth was an array of tabletop and hi-fi radio products (photo below, at left), including the Visteon HD Jump (discussed above) as well as a new tabletop radio from Cambridge SoundWorks (the SoundWorks 820HD) which retails for \$299 and can be pre-ordered on the Cambridge SoundWorks Web site (www.cambridgesoundworks.com/store/category.cgi?category=landing_radio820hd). Also in the iBiquity booth, for the first time at a trade show, was a USB HD Radio Receiver reference design (shown below in photo at left). While not quite as compact as the USB digital TV products now available (see the [August 28, 2006 issue](#) of *TV TechCheck* for information on a number of these), this receiver plugs into a computer's USB port and streams digital audio to the PC, with all radio control accomplished via a PC-based application.



Is Your AM DA Ready for HD Radio?



NAB Science & Technology is hosting a two-day course at NAB headquarters on March 5–6, specially developed to instruct broadcast engineers on how to prepare their AM stations for HD Radio™. There is no similar educational opportunity for engineers to learn the proper techniques to maintain complex AM antenna systems ensuring that their stations comply with

the FCC rules and enjoy optimum coverage and fidelity. The course will be taught by Ronald Rackley, a principal in the firm of du Treil, Lundin & Rackley, Inc. Consulting Engineers and Ben Dawson, President/Senior Electrical Engineer of Hatfield and Dawson of Hatfield and Dawson. Together they have collaborated to instruct the next generation of AM broadcast engineers and pass along the art of AM directional antenna system design and maintenance. They were awarded NAB's highest engineering honor in 2006, the NAB Engineering Achievement Award for Radio. For more information on how to register go to [AM DA Seminar](#) information on the NAB Website.

NAB2007 Registration Open

Excitement is building for the world's largest electronic media show — NAB2007

April 14 - 19, 2007, in Las Vegas. [More than 15 conferences](#) will be offered this year, from radio management and engineering to post production and podcasting. [Register now](#) and head to the essential destination for growing your business. Visit www.nabshow.com for the latest details.

