## **NAB** Radio TechCheck

The Weekly NAB Newsletter for Radio Broadcast Engineers

## An "Explosion" of Wi-Fi Radios

Since 2004, NAB *Radio TechCheck* has featured occasional updates (see table) on the status of so-called "Internet radio" appliances, stand-alone devices that use Wi-Fi technology to access streaming audio on the Internet, without the need for connection to a computer. The number and variety of Wi-Fi radios has increased dramatically since the last update in late 2006–some of the latest products (most available now) are described below.

Typically, these devices are designed to access a specific Internet site; many access a site maintained by Reciva, <u>www.reciva.com</u>, which at last count provides access to 9,975 Internet radio stations and 21,242 ondemand streams in 269 locations and 65 genres. Additionally, many of these devices also provide access to the listener's own music collection existing on their personal computer (as long as the computer and the Wi-Fi radio are connected to the same Wi-Fi network).

**AUDIOVOX** – at the 2008 International Consumer Electronics Show (CES), AudioVox unveiled two tabletop Internet Wi-Fi radios, the RIR200 and RIR205 which reportedly will have suggested retail prices of \$99 and \$149, respectively. Each radio features an analog AM/FM receiver, Wi-Fi 802.11b/g compatibility, and direct access to a custom Web radio service and to the Slacker Internet radio service (see the May 7, 2007 issue of Radio *TechCheck* for additional information on Slacker). Not yet available.

**REVO** – the Revo Pico Wi-fi (shown below at left) accesses the Reciva Web site, is compatible with Windows Media Audio (WMA), MP3, MPEG-4 AAC, AU, WAV and AIFF formats, supports the ASX, RAM, M3U, RPM, and PLS playlist formats (a discussion of the different types of playlist formats can be found on the Internet <u>here</u>) as well as RTSP, MMS, and HTTP streaming protocols. Additionally the Pico has a built-in FM tuner. Cost - \$350 (available now), more information available online at <u>www.revo.co.uk</u>.

**SANYO** – the unit shown in the photo below was on display in the Sanyo booth at CES. To be marketed under the Fisher brand name, the NE-5101 is not only a Wi-Fi radio but an FM radio and media player as well, accommodating USB flash drive storage devices with a connector on the front panel. Not yet available.

**SANGEAN** – Sangean had a number of Wi-Fi radios on display at CES (see photo below, at right). The Sangean WFR-20 uses the Reciva Web site, is 802.11g/b compatible, and works using a wired connection, as well (10/100 Mbps using an RJ-45 connector). Supported audio formats include MP3, WMA, MPEG-4 AAC,



Radio TechCheck Issue date	Featured Wi-Fi devices
<u>May 31, 2004</u>	Reciva, Linksys Wireless-B, Philips Streamium
<u>June 6, 2005</u>	Reciva, Torian InFusion
<u>Dec. 5, 2005</u>	Solutions Radio, Acoustic Energy
<u>Dec. 26, 2006</u>	Torian InFusion, Acoustic Energy



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WAV, AIFF, FLAC, and REAL. Cost - \$250 to \$350 (available now).

**CAMBRIDGE CONSULTANTS** - the Iona "Cube" (see photo below) developed by Cambridge Consultants, is a new concept in low-cost, Wi-Fi enabled internet radio, and will reportedly sell for about \$50. The Cube's design allows the listener to personalize the device to play just their favorite radio stations or podcasts, and greatly simplifies the way people select which Internet radio stations they listen to, while significantly reducing the cost of the radio at the same time. According to research, the average person listens to between three to four radio stations regularly. The Cube has been designed with this in mind. By turning the Cube onto one of four sides, it will change to the desired radio station. A fifth side is dedicated to the speaker and the final remaining side is dedicated to play a listener's top four stations. Not yet available. A press release on the Cube is available on line at www.cambridgeconsultants.com/news\_pr198.shtml.

**ROKU** – the Roku R1000 SoundBridge Radio (see photo at right) is a WiFi/AM/FM clock radio which has an SD/MMC card slot and a volume ramping alarm that can play digital music, Internet radio, AM/FM radio, playlists, podcasts or a choice of several alarm tones. The SoundBridge has technologically advanced speakers, using two patented LMD (Linear Magnetic Drive) stereo speakers in a tuned enclosure powered by a 20 watt RMS digital amplifier, and a LMD subwoofer powered by a 30 watt RMS digital amp. Cost is \$300 (available now). For more information go to www.rokulabs.com/products\_soundbridgeradio.php.

**PHOENIX** – developed by Com One, a subsidiary of Baracoda (specializing in Bluetooth wireless barcode and RFID readers), the Phoenix WiFi radio uses the Phoenix WiFi Internet portal and is powered by four rechargeable Ni-Mh AA batteries. It supports MP3



(sample rates up to 320 kbps), WMA, and WAV audio formats, the SHOUTcast, MMS / MMSH -Microsoft® Media Streaming protocols, and M3U, PLS and ASX playlist formats.. Cost is \$200 (available now). For more information go to www.wifi-radio.biz.



**GRACE** and **QUATTRO** – the Grace (by Intellitouch) and Tangent Quattro (both at left) are more "traditional" tabletop-style radios. The Grace is distinguished by its relatively low cost (available now for \$170) while the Quattro has a real walnut veneer case but is more expensive (available now for \$350). The Quattro also has a built-in FM tuner.

## Don't Miss NAB's AM DA Seminar



NAB Science & Technology is hosting a two-day course at NAB headquarters on March 6-7, 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. 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, will teach the course. 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 and housing go to <u>AM DA Seminar</u> information on the NAB Website or contact Sharon Devine <u>sdevine@nab.org</u> or (202) 429-5338.

Radio TechCheck will not be published on February 18 but will return on February 25.

Welcome to the place where creativity originates,

