October 31, 2011

Radio TechCheck

NAB NATIONAL ASSOCIATION OF BROADCASTERS

The Weekly NAB Newsletter for Radio Broadcast Engineers

Nine Days and Counting until Nationwide EAS Test

The first nationwide test of the Emergency Alert System (EAS) is only 9 days away. Now is the time to make sure your station is fully prepared. The test will be conducted by the U.S. Department of Homeland Security Federal Emergency Management Agency (FEMA) and the Federal Communications Commission (FCC) on **Wednesday, November 9, 2011 at approximately 2 p.m. (EST).**

All radio and television stations must participate in the Nationwide EAS Test, and should take immediate steps to prepare for the test. For all of the important information and guidance needed to successfully prepare your station for this test, please visit NAB's Nationwide EAS Test.

This resource includes two new critical pieces of information that the FCC released this week:

1. **Nationwide EAS Test Handbook**. All stations must download this handbook and place a copy at normal duty positions or EAS equipment locations when an operator is required to be on duty. This handbook must be immediately available to staff responsible for administering the Nationwide EAS Test. This new handbook will supersede all other EAS handbooks for the duration of the November 9, 2011 Nationwide EAS Test.

2. **Nationwide EAS Test Reporting System**. FCC rules require all participants in the Nationwide EAS Test to submit certain test result data to the FCC no later than Tuesday, December 27, 2011. Although you may file this information in paper form, the FCC has launched an online system intended to simplify the process of reporting your test results, together with instructions for completing the online reporting system.

The Nationwide EAS Test Handbook and Reporting System can be found on the FCC's EAS Nationwide Test webpage, as well as NAB's Nationwide EAS Test website.

Please make sure to consult the FCC's Public Notice announcing the Handbook and Reporting System for further information.

All stations should air public service announcements (PSAs) designed to increase public awareness of the Nationwide EAS Test. NAB's Nationwide EAS Test website features a variety of radio and television PSAs, as well as sample scripts stations may use to tailor and produce their own PSA. All stations should download and air one or more of these PSAs, starting immediately and with increasing frequency as November 9 approaches. NAB is now creating its own TV PSA and more information will be available on NAB's EAS Test Website.

Additional information is available on our website, including a Nationwide EAS Test visual slide that television stations should insert during the test to help persons with hearing disabilities and other viewers fully comprehend that the November 9 event is merely a test. Stations will also find an EAS Best Practices Guide and EAS Toolkit produced by FEMA, tips for getting ready for the test, and other useful guidance. Please bookmark NAB's website and visit it regularly for additional information that may be released before the test on November 9.

Broadcasters are the backbone of the Emergency Alert System. We are a critical lifeline for many Americans during times of disaster, and given our indispensable role as first informers during emergencies, it is imperative that we work with our federal partners to regularly test the EAS system.

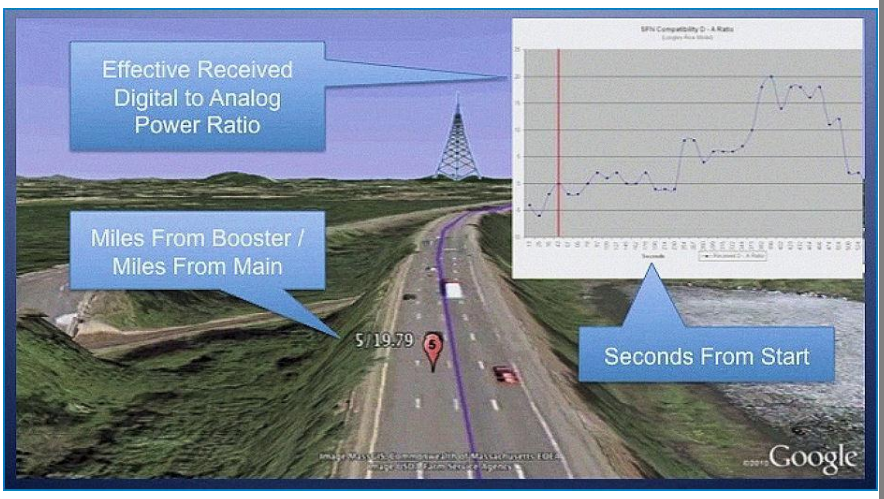
Please visit NAB's Nationwide EAS Test NAB's Nationwide EAS Test website to learn more. NAB's Legal and Regulatory Department (866) 682-0276 or (202) 429-5430 or Technology Department (202) 429-5346 are also ready to help.

Audio Recordings of FASTROAD SFN FM HD Radio Tests Now Available

In August 2011, a technical report containing the final results of an FM IBOC digital booster test program was released by NAB FASTROAD (see the August 1, 2011 issue of *Radio TechCheck* for additional information). Last week, three streaming video files containing audio recordings from the Boston, Mass. area field test portion of this program were made available on the FASTROAD Web page. These were authored by iBiquity Field Test and Implementation Manager Russ Mundschenk, who was also in charge of the laboratory and field testing of the digital booster technology.

These recordings offer an opportunity to experience how the digital booster impacts the received *analog* audio quality for three different scenarios as a test vehicle drives towards the booster site. Since the digital-to-analog signal ratio will be increasing above the nominal -20 to -10 dBc value as the receiver gets closer to the booster, the quality of the received analog audio in this situation is of interest.

In each case the booster signal is augmenting the hybrid HD Radio signal from WKLB's main transmitter. The first two scenarios involved use of a digital-only (*i.e.*, no analog component) booster's effect on the main transmitter's analog signal as received on a Chrysler and a Delphi automotive receiver. The third scenario examines the effect of adding a low-power, synchronized, FM-modulated, analog carrier to the digital booster signal, to reduce the analog host interference caused by the digital carrier in the immediate vicinity of the booster. The recording for this third case was of analog audio as received on a Delphi automotive receiver.



Each receiver's audio was integrated with an animated Google Earth rendering of the route and an animated, synchronized copy of a chart indicated the predicted digital-to-analog signal power ratio at the receiver, as shown in the image at right. For all three scenarios, the digital-only booster was operating at a power level of 27 watts ERP; for the third scenario, a 3 watt ERP analog signal component was added to the digital booster's output.

To access these video files, go to the FASTROAD projects Web page and scroll down to the "Single Frequency Network Analysis" project. The hyperlinks for the individual files are as follows:

WKLB SFN Compat Dig-Boost - Delphi
WKLB SFN Compat Dig-Boost - Chrysler
WKLB SFN Compat Hybrid-Boost - Delphi

NAB Accepting Nomination for 2012 NAB Engineering Achievement

Awards

NAB is currently accepting nominations for the 2012 NAB Engineering Achievement Awards. Established in 1959, the NAB Engineering Achievement Award is presented each year to an individual for their outstanding accomplishments in the broadcast industry. In 1991, NAB began giving awards separately for achievements in radio and television. The award winners will be recognized at the Technology Luncheon at 2012 NAB Show on April 18 in Las Vegas, Nev.

Additional information and a nomination form are available on NAB's website. The deadline for nominations is January 23, 2012.