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HD Radio Rules Take Effect September 14, 2007

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The FCC's HD radio rules are to take effect September 14, 2007. Subject to the limitations noted below, AM stations will be able to broadcast HD at night and FM stations can operate HD2 and HD3 streams without a need for special authorization.

At this point, HD radio remains a "hybrid" IBOC (in-band, on-channel) system that permits the transmission of both analog and digital signals within the spectrum occupied by a single AM or FM channel. Among the benefits of the digital carriers that can be added to a station's analog signal are improved fidelity and reception, added information services, and compatibility with existing receivers (although new HD-capable receivers, currently scarce and expensive, are needed to receive the digital streams).

The Commission anticipates moving toward an all-digital radio service, but intends to rely upon marketplace forces in lieu of a timetable or a formal conversion policy. This seems particularly appropriate since, unlike HDTV, the IBOC technology neither requires new spectrum nor frees up existing radio channels for other uses. The Commission plans to explore technical and policy issues germane to an all-digital radio environment, but once HD receiver penetration reaches a critical mass.

The highlights of the rules that are to take effect September 14 are as follows:

- **Confirmation of iBiquity System** – The Commission rejected numerous challenges to its prior selection of the IBOC DAB (digital audio broadcasting) system developed by iBiquity. However, since iBiquity licenses its patented technologies and is controlled by the major manufacturers and broadcast groups, the Commission plans to monitor its behavior to ensure that the required licensing agreements are reasonable and non-discriminatory.
- **AM Nighttime Operation** – The Commission has now resolved its prior concerns over interference and will extend the permissible hours of IBOC interim operation for AM stations to include all hours during which a given station is currently authorized for analog operation. Prior notification for AM daytime IBOC operation will automatically be extended to include nighttime authority. The Commission notes, though, that many Class D AM stations have such low nighttime authorizations that IBOC operation may not be technically feasible during nighttime hours.

- **Flexible Uses** – The Commission intends that the fundamental use of DAB will be for free over-the-air radio service. Thus each radio station must dedicate at least one free digital stream to simulcasting its analog programming service with at least comparable audio quality. Otherwise, the hybrid system allows FM broadcasters to devote their signals to other services by scaling their audio quality downward from 96 kbps. The AM system offers two levels of audio quality – a core carrier of 20 kbps for monophonic sound and an enhanced 16 kbps layer for stereo or other services. The Commission will leave to broadcasters the appropriate balance between maximizing audio quality and devoting portions of their digital capacity to flexible uses.
- **Authorization for Multicasting** – The Commission is enthused that the multiple audio programming services permitted within an assigned FM channel will enable stations to supplement their traditional programming with specialized services, including reading services for the blind, emergency alerts, datacasting, and foreign language, ethnic, public affairs, cultural and educational programming. The Commission will no longer require special temporary authorizations for multicasting, but rather will permit radio stations to provide multiple audio streams of digital programming upon making required certifications and notifying the FCC of certain technical information. This will enable FM stations to commence HD2 and HD3 broadcasting without a need for individual approval.
- **Time Brokerage** – The Commission both permits and encourages radio stations to time broker their digital streams, so as to increase the diversity of available programming. A station owner who programs more than 15% of the total weekly hours broadcast on a digital audio stream of another station in the market will be considered to have an attributable ownership interest in the brokered station. However, unlike with analog time brokerage agreements, the attributable interest under such circumstances would be equivalent only to the percentage of total broadcast time on each stream that is actually time brokered.
- **Subscription Services** – Digital audio or data content offered under a subscription model will require an experimental authorization granted by the Commission. The Commission notes that it is still considering assessment of a 5% fee on subscription revenue. The Commission also will explore the issue of how non-commercial educational stations can offer subscription services while preserving the fundamental nature of their service.
- **Low Power FM** – The Commission will permit low power FM stations to transmit in digital mode. However, the Commission notes that since the IBOC system broadcasts a digital signal at only 1% of a station's analog power level, the digital signal of a 10 watt LPFM station would fall below the noise floor and would be difficult to receive.

- **Public Interest Obligations** – The Commission has determined that certain of its statutory and regulatory public interest requirements currently imposed on analog radio should also apply to digital broadcasting. These include its rules and policies pertaining to political broadcasting, payment disclosure, contest practices, sponsorship identification, cigarette advertising, station logs, public files and the broadcast of taped or recorded material. The Commission will explore further the extent to which these requirements are to apply to subscription services. With respect to public interest requirements generally, the Commission plans to survey digital audio broadcasters and issue annual reports with appropriate data in order to assess the need for future content regulation.
- **Station Identification** – Each programming stream will be required to make station identification announcements at the beginning and end of each time of operation, as well as hourly. The proper identification is similar to that of an analog station, requiring the call letters, followed by the particular program stream being broadcast and the community of license. At a broadcaster's discretion, the frequency, channel number, name of licensee or name of a network may be inserted before the community of license.
- **Emergency Alert System** – All DAB audio streams will be required to broadcast emergency information to the same extent as analog stations.
- **Operating Hours** – The Commission will leave the hours of DAB operation – both for simulcast and multicast channels – to the discretion of each licensee, so that separate streams may be scheduled without regard to the minimum operating requirements or the actual hours of operation of the analog station.
- **Dual FM Antennas** – In lieu of the former requirement that FM analog and digital signals be combined and fed into the same antenna, dual antenna use will be permitted without prior authority but upon appropriate notification to the FCC. However, a separate digital antenna must be a licensed auxiliary antenna of the station, must be located within three seconds latitude and longitude from the analog antenna, and must have a radiation center height above average terrain between 70 and 100% of that of the analog antenna.
- **FM Translator and Booster Stations** – The Commission will permit, but not require, FM translator and booster stations to engage in digital operation.
- **International Issues** – The Commission cautions that negotiations with Canada and Mexico are continuing with respect to DAB matters. Therefore, all IBOC DAB operation will be subject to the condition of being subject to modification, suspension or termination without the right to a hearing should an international treaty so require.

In addition to the rules being implemented at this time, the Commission has announced a *Second Further Notice of Proposed Rulemaking* to explore the following issues, for which comments will be due by September 14 and replies by October 15:

- ◆ **Subscription Services** – The Commission questions whether it should limit subscription services to 20 or 25% of a station’s digital capacity, whether it should impose a spectrum fee upon certain ancillary or supplementary services, and the extent to which its public interest obligations and requirements should apply.
- ◆ **Public File** – In the context of converting to a digital environment, the Commission questions whether its current requirements for local public inspection files are sufficient to ensure that the public has adequate access to information on how stations are serving their communities. The Commission is considering use of a standardized form in lieu of the currently required issues/programs lists and may require that the contents of the public inspection file be available on the station’s or a state broadcaster association’s website.
- ◆ **Unattended Operation** – The Commission seeks to examine the extent to which unattended, remotely controlled technical operation is consistent with maintaining the technical integrity of the radio service. Notwithstanding the largely automatic Emergency Alert System, increasingly unattended operation generally and elimination of the former rule that main studios originate a majority of programming, the Commission is concerned that widespread reliance on automated operation may limit the ability of law enforcement and public safety officials to use radio broadcast stations effectively during emergencies.

A copy of the Commission’s *Second Report and Order* (including the *Further Notice of Proposed Rulemaking*) can be obtained from the Commission’s website at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-33A1.pdf. We would also be glad to send you a copy or discuss implementation of these rules, including the need to provide notification of new DAB IBOC operation.

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