



CONFIDENTIAL to NPR MEMBERS STATIONS

NPR Labs Field Service Bulletin No. 01.20060110

Issued: 10 January 2006

Subject: HD Radio Supplemental Program Service (SPS) Bit Rate Configurations

Equipment: HD Radio Importers (observed with both Harris and BE Importers)

Type: Anomaly

Symptom: Digital “stutter” and lockup have been experienced on Multicast-capable IBOC receivers (including both the Kenwood KTC-HR100MC and TR models and the Boston Acoustics HD Receiver) when audio bit rates are fully allocated in the MP3 transmission mode. This condition has typically been observed when a station is transmitting three audio channels (one hybrid main audio program and two digital SPS channels), and is believed to result from a receiver data overflow condition. Receivers exhibiting digital stutter and lockup generally require on/off power recycling to resume normal operations. Receivers may occasionally require brief removal of all power to correct the condition.

Recommendation: iBiquity recommends an SPS1 channel bit rate reduction of as little as 512-bits to ensure that the total transmitted HD Radio audio data payload is somewhat less than the maximum permitted by the Importer software for any given HD Radio operating mode. A field report from one NPR member station transmitting in MP3 mode with three program streams found that a 512-bit reduction did not eliminate the problem. In consultation with iBiquity Digital, NPR Labs therefore suggests reducing the assigned bit rate of the first supplemental channel by approximately 1024-bps.

Prognosis: It is anticipated that iBiquity’s future software releases to transmission system manufacturers will avoid this condition, and should provide upgrades in other system specifications and features as well.

NPR Labs will provide updates to this notice as available information warrants.

Please contact mstarling@npr.org for further information concerning this NPR Labs Field Service Bulletin. Refer to FSB No. 01.20060110.

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