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Vice President / Engineering

August 27, 2010

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

Dear Ms. Dortch:

Charles River Broadcasting Company, licensee of FM broadcast station WKLB-FM, Waltham, MA, in accordance with section 73.1510 of the Rules, hereby requests experimental authority to conduct testing of asymmetrical digital (IBOC) sideband transmission in conjunction with iBiquity Digital Corporation using the main antenna facilities of WKLB-FM. It is felt that the results of such testing will be of significant value to the broadcast industry as the possible future routine use of asymmetrical sideband transmission could allow all FM stations transmitting IBOC signals to maximize, to the greatest extent possible, digital coverage while protecting stations on adjacent channels from interference.

WKLB-FM is a class B FM station operating on 102.5 MHz with main antenna facilities of 14 kW ERP and an antenna HAAT of 276 meters and, as such, is a maximum class B facility. WKLB-FM utilizes an omnidirectional ERI Model 1183-4-CP dual feed antenna with separate antenna inputs for analogue and digital signals. The WKLB digital transmission plant was constructed so as to readily allow -10 dBc operation with normal symmetrical digital sidebands. As such, it is ideally suited for testing of asymmetrical sideband operation. A Harris Model ZX-1000 and precorrector will be used to generate the asymmetrical IBOC low level signal that will be fed to the normal WKLB-FM Broadcast Electronics digital transmitter and subsequently to the normal WKLB-FM antenna system.

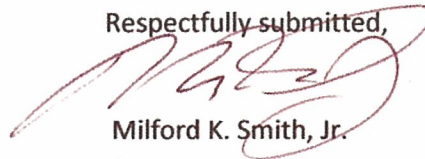
WKLB-FM is notified to the Commission as operating with digital carriers at -14 dBc. Proposed for the test period is operation with the lower sideband digital carriers at power levels between -20 dBc and -10 dBc and upper sideband digital carriers at power levels between -14 dBc and -20 dBc¹. WKLB-FM, at 102.5 MHz, is short spaced to WRNI, Narragansett Pier, and RI at 102.7 MHz on the WKLB-FM upper first adjacent channel. Therefore, at no time during the proposed testing will WKLB operate with more than the currently authorized -14 dBc power level of its upper digital sideband, thus preserving the status quo. It is believed that all test objectives can be accomplished in this configuration. A portion of the field test plan, developed by iBiquity Digital Corporation, is attached and summarizes the proposed testing methodology.

¹ By convention, all power levels noted in this request are expressed referencing normal symmetrical sideband operation. Actual individual (upper/lower) sideband power levels are 3 dB below the values noted.

WKLB-FM respectfully requests that the experimental authority requested herein, be granted for a period of 90 days, commencing September 6, 2010. In as much as testing of a separately authorized digital booster system will be underway at WKLB-FM during this same general time frame, being able to directly transition into the asymmetrical sideband tests will allow for maximum efficiency and best use of resources

Please do not hesitate to contact the undersigned should further information be required.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'MKS', is written over the typed name. The signature is fluid and stylized, with a large loop at the end.

Milford K. Smith, Jr.



HD Radio™ Asymmetric Sideband Field Test Plan

August 27, 2010

iBiquity Digital Corporation does not make any warranty or representation whatsoever as to the sufficiency or accuracy of information contained in this document. It is further acknowledged that there can be no assurance that this document will not change, perhaps substantially, in the future. Accordingly, iBiquity Digital Corporation assumes no responsibility arising from any present use or misuse of this document.

1 Scope

This document describes Test Methodology by which iBiquity's FM Asymmetric Sideband Implementation may be tested for Performance and Compatibility with current HD Radio™ Receivers.

2 Executive Summary

In order to provide FM broadcast stations using HD Radio Technology with the ability to tailor sideband power to meet protection requirements, iBiquity Digital developed a method by which the power of each sideband may be individually adjusted. Until now, the upper and lower IBOC sidebands were transmitted at equal power. The ratio of the total integrated digital power to that of the analog carrier was set using variable attenuators (for common amplification), and transmitter power control (for separate amplification). These methods may still be employed to set total digital power, but the power ratio of the upper to lower sideband may also be set on the exciter/excine's graphical user interface.

This document outlines methods by which the performance and compatibility of the Asymmetric FM HD Radio signal may be fully characterized in the field.

3 Field Tests

3.1 The following HD Radio Receivers are representative of typical Consumer Devices.

The following HD Radio receivers will be characterized at various combinations of sideband power levels:

- Texas Instruments Chipset / Jacinto / Pioneer 5200 or 7200
- Cayman / NXP Dual Tuner / KWNT-3HDT
- SiPort / SP1010 / Dual XHDR6435 w/ HDM90 Tuner

3.2 Field Tests – WKLB, Boston, MA

Field testing will use Greater Media's WKLB, a Boston commercial station. This station has been extensively characterized in the 2008 NAB IBOC high power tests. Another advantage is that WKLB has a first adjacent interferer in Narragansett, RI, which will allow testing of a real-world implementation of asymmetric sideband power level adjustment. At no time will the upper sideband power exceed the maximum power level of -17 dBc (equivalent to the power of one symmetrical sideband when operating at a total power -14 dBc).

The three HD Radio receivers listed in 3.1 will be fed by the test vehicle's antenna and have their individual blend status recorded with GPS locations.

A two route subset of the four routes used for the 2008 high power tests will be used. Routes 1 and 2a start at the same intersection (I-95 & I495 in Attleboro MA). Route 1 follows I-95 south through Providence, RI to Warwick, RI. Rt. 2a follows I-495 east to West Wareham, MA. Each of the two routes will be run six times at various power levels as shown in Table 1.

Route 1 tests the effect of lowering the upper sideband to potentially mitigate interference to the analog carrier of the 102.7 station in Narragansett, RI. Route 2a is a control, without any interference.

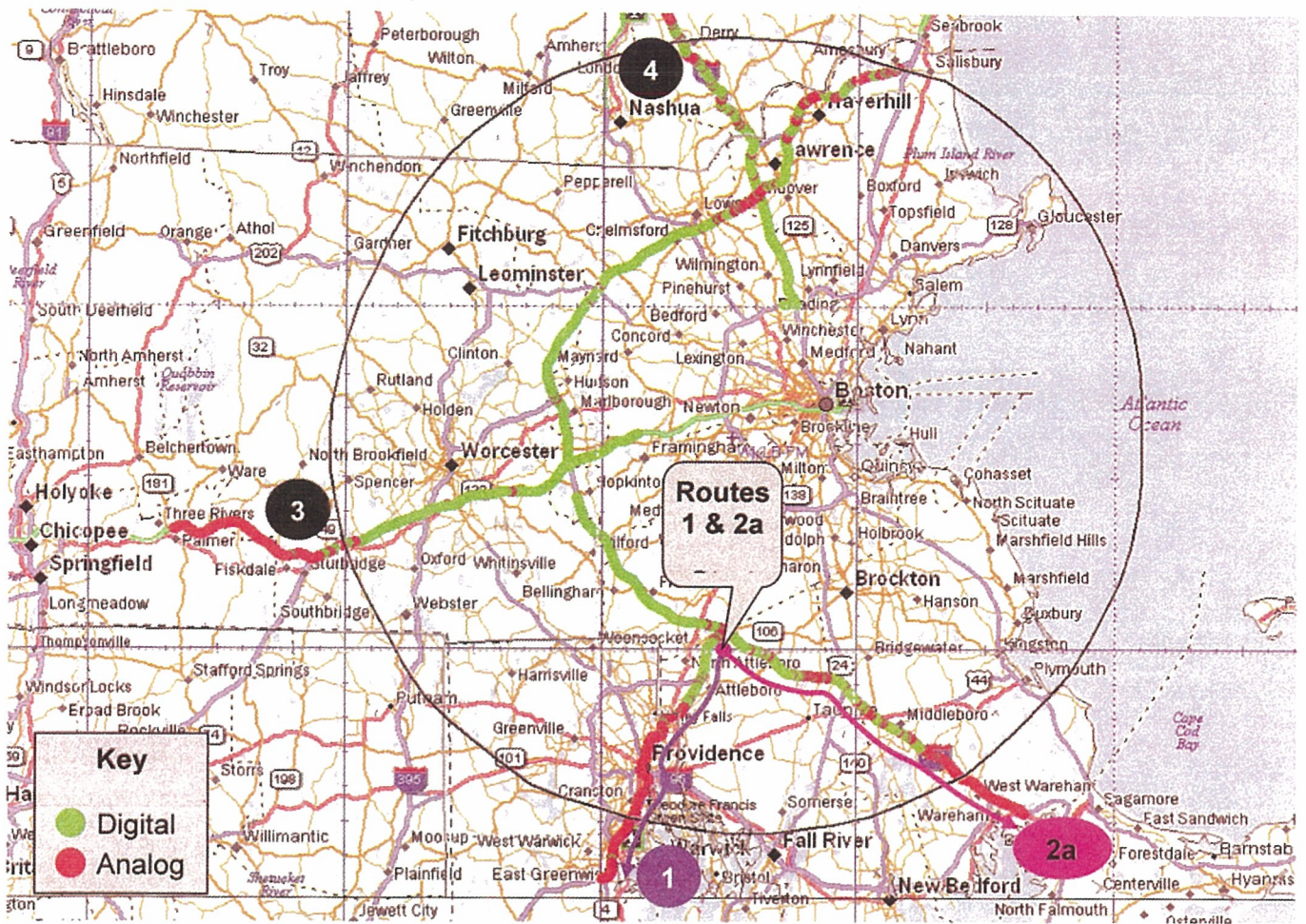


Figure 1 - WKL B Asymmetric Sideband Performance Test Routes

Routes	Run #	Asymmetric Power		Run #	Equivalent Symmetric Power		Total Power
		LSB (dBc)	USB (dBc)		LSB (dBc)	USB (dBc)	
1,2a	1	-17	-23	2	-19	-19	-16
1,2a	3	-13	-23	Not Run (USB > -17 dBc)		-12.5	
1,2a	4	-13	-17	Not Run (USB > -17 dBc)		-11.5	
1,2a				5	-23	-23	-20
1,2a				6	-17	-17	-14
1,2a				Use Data from Previous HP Tests		-10	

Table 1 - Routes, Test Runs and Sideband Powers