



**Field Report
AM IBOC Nighttime Performance**

October 20, 2003

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1. Performance Testing Overview and Conclusions:

iBiquity, in conjunction with the NAB's Ad Hoc Committee on Nighttime AM IBOC, conducted measurements on the nighttime IBOC digital performance of WOR and WLW. The WLW measurements were made during the summer measurement period, Phase I, and the WOR performance measurements were during Phase II, in the winter. In these tests four routes were driven approximately representing paths to the North, East, South, and West. Each route started near the transmission site and ended beyond the point where the digital signal blended to analog. The tests were generally conducted during times where the skywave interference would be at its peak. During Phase II, both WLW and WOR were configured to transmit IBOC, affording an opportunity to demonstrate WOR's digital performance with both analog and digital interferers. Performance testing was conducted on both WLW and WOR following the identical methodology employed for NRSC sponsored daytime AM tests. Vans equipped with signal recording equipment and HD Radio reference receivers were used to record the extent of digital coverage. Details on the performance test procedures and results are in Appendix A.

These performance tests demonstrate the AM HD Radio™ system will provide a digital upgrade to the primary nighttime analog service area for AM stations. Both WLW and WOR have extensive nighttime groundwave coverage. The performance tests established although digital coverage will not extend to all areas currently able to receive analog signals, the digital signal will cover the primary service areas of these stations. These performance tests also demonstrate that first adjacent digital skywave interference will not materially impact nighttime digital coverage.

2. Summary of WLW's Nighttime Digital Performance:

Nighttime reception of hybrid IBOC was found to approximately replicate WLW's groundwave service area due to the relatively low levels of skywave reception and high levels of co and adjacent channel interference in the nighttime AM band. Figure 1 is a map depicting the WLW market with the predicted 2 and 5 mV/m contours highlighted. The map also shows the routes and the recorded digital performance. Averaged across the four radials, the digital signal was received to the measured 3.7 mV/m, as measured by the spectrum analyzer, which for WLW is well beyond the Cincinnati market. The predicted field intensity at the point of digital to analog blend was higher than that measured by the spectrum analyzer. This differential may very well be explained by varying groundwave propagation conditions and skywave interference.

-WLW Performance

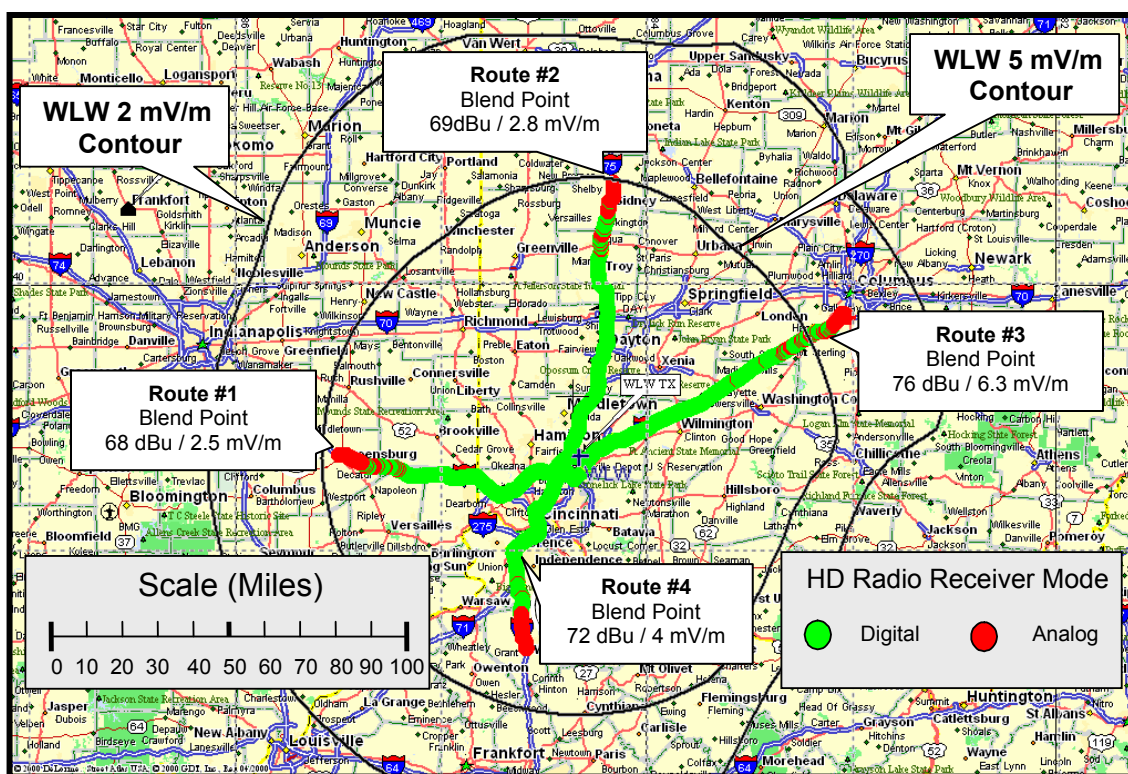


Figure 1: WLW IBOC Digital Nighttime Coverage Performance

3. Summary of WOR's Nighttime Digital Performance:

Figure 2 shows the coverage of WOR's digital signal throughout the New York metropolitan area including Long Island, the Jersey Shore, Western New Jersey and within the directional antenna null to the north. Digital coverage was reliable across the New York metropolitan area, except for regions in Manhattan where severe noise problems prevented the reception of both the digital and analog signals. The point where the digital signal blended to analog, averaged across the four radials, was at the 3.28 mV/m, as measured by the spectrum analyzer. The predicted field intensity at the point of digital to analog blend was higher than that measured by the spectrum analyzer. This differential may very well be explained by varying groundwave propagation conditions and skywave interference.

A second test was conducted to determine whether skywave first adjacent IBOC interference would impact digital coverage for WOR. In this test WLW transmitted with the hybrid IBOC waveform while WOR's groundwave IBOC service area was measured. Figure 3 shows that WLW's digital signal had no noticeable impact on WOR's digital service. The average digital to analog blend point rose only 0.1 mV/m to 3.38 mV/m.

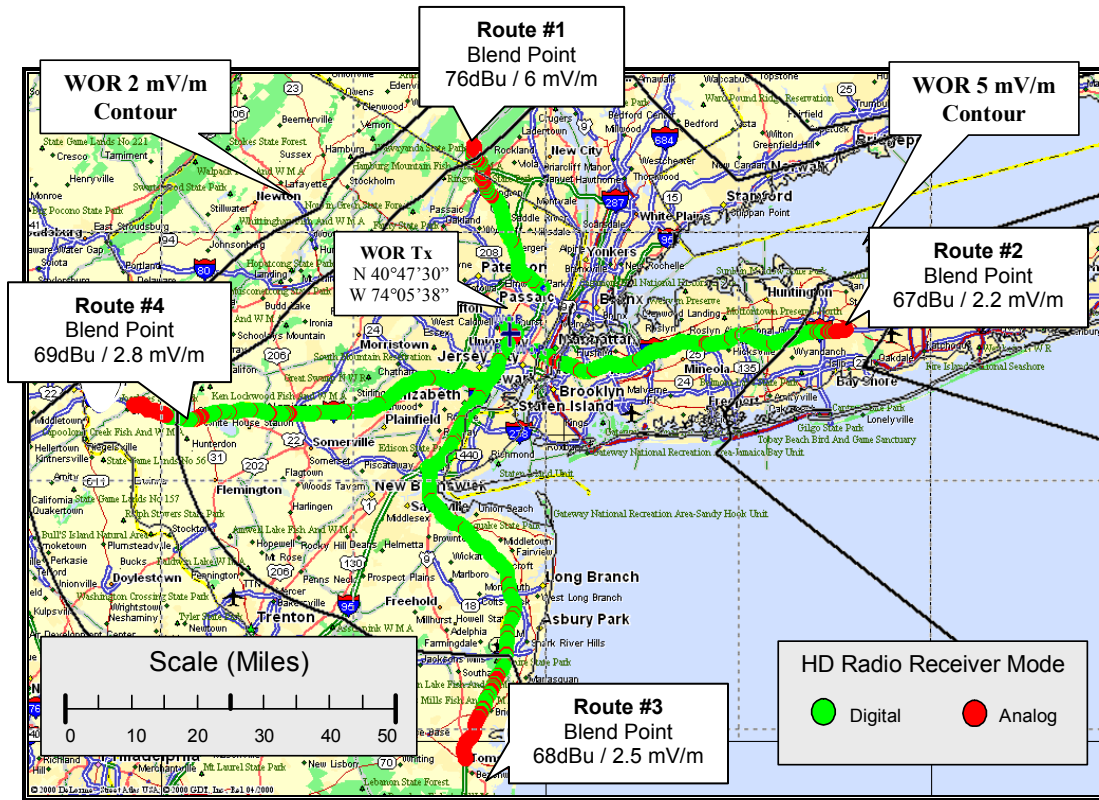


Figure 2: WOR IBOC Digital Nighttime Coverage Performance (w/o WLW hybrid)

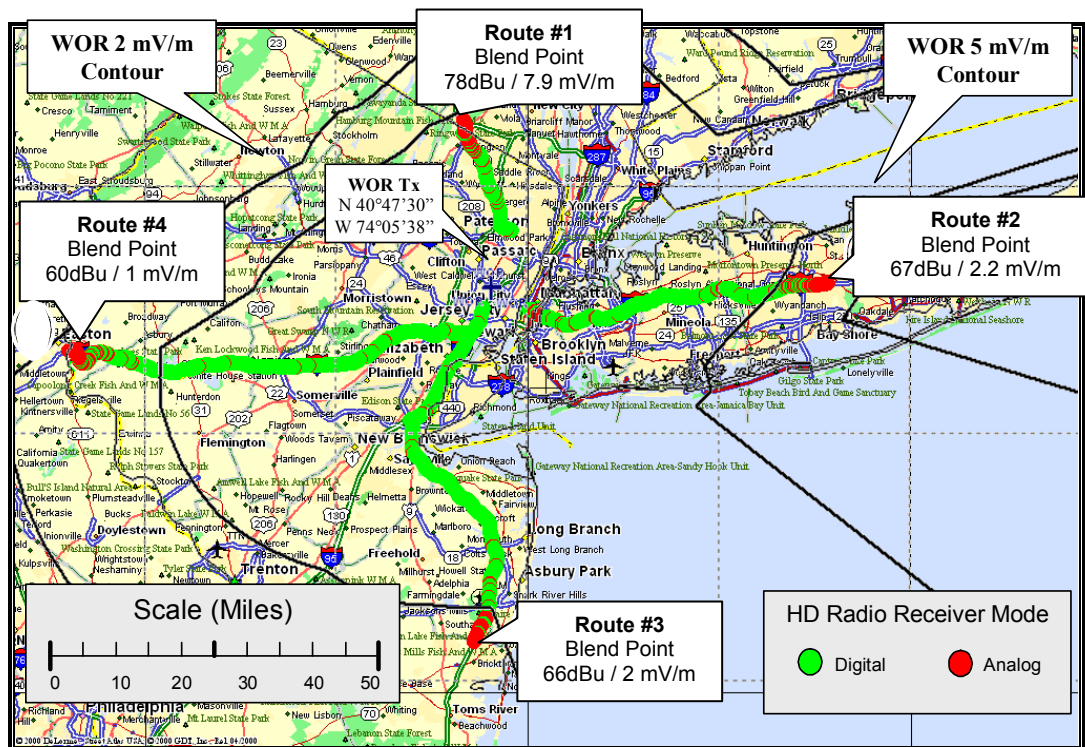


Figure 3: WOR IBOC Digital Nighttime Coverage (with WLW hybrid)